In the Matter of

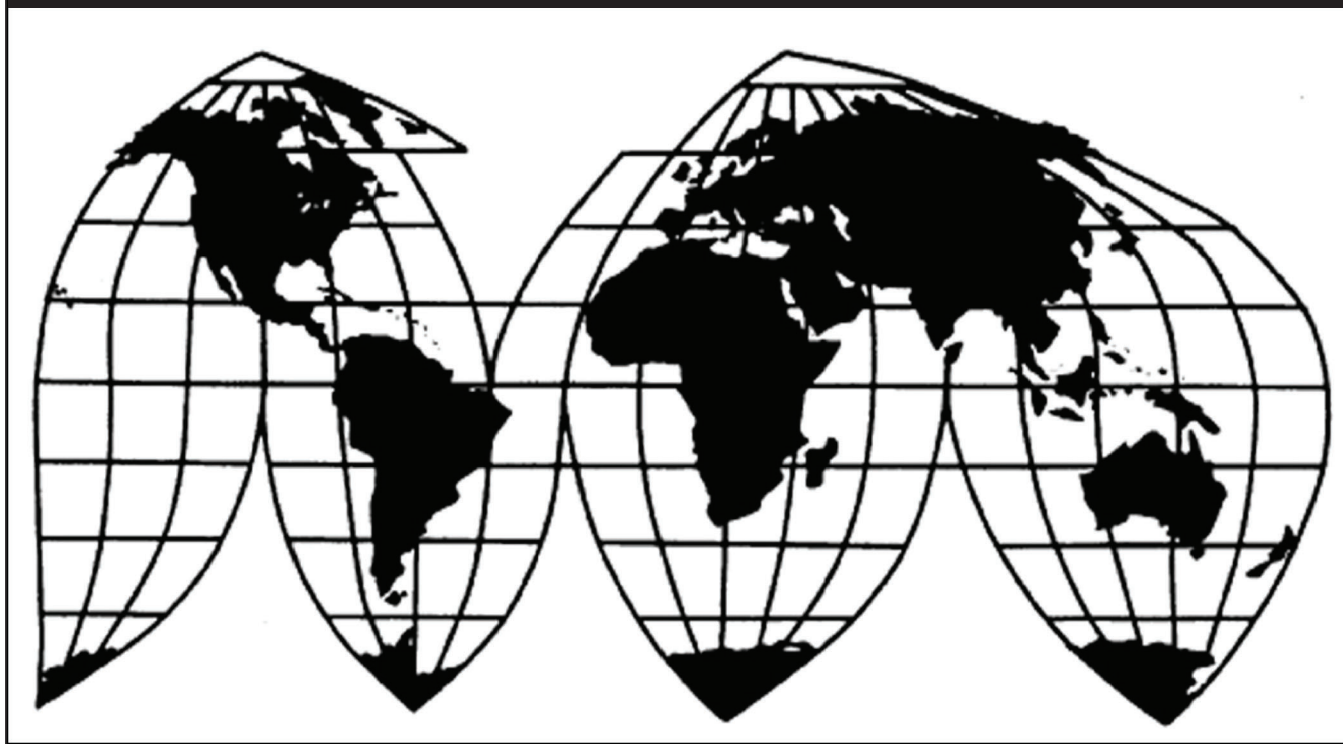# CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I)

337-TA-944

U.S. International Trade Commission

U.S. International Trade Commission

COMMISSIONERS

David Johanson, Chairman
Irving Williamson, Commissioner
Meredith Broadbent, Commissioner
Rhonda Schmidtlein, Commissioner
Jason Kearns, Commissioner

In the Matter of

CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I)

337-TA-944

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matters of

CERTAIN NETWORK DEVICES,
RELATED SOFTWARE AND
COMPONENTS THEREOF (I)

Investigation No. 337-TA-944
(Modification Proceeding)

NOTICE OF A COMMISSION DETERMINATION NOT TO SUSPEND OR MODIFY THE REMEDIAL ORDERS; TERMINATION OF THE MODIFICATION PROCEEDING

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined not to modify or suspend the remedial orders in the above-captioned investigation. The modification proceeding is terminated.

FOR FURTHER INFORMATION CONTACT: Amanda P. Fisherow, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2737. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at *https://www.usitc.gov.* The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at *https://edis.usitc.gov.* Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted the underlying investigation on January 27, 2015, based on a complaint filed on behalf of Cisco Systems, Inc. ("Cisco") of San Jose, California. 80 *FR* 4314-15 (Jan. 27, 2015). The complaint alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain network devices, related software and components thereof by reason of infringement of certain claims of U.S. Patent No. 7,162,537 ("the '537 patent"); U.S. Patent No. 8,356,296; U.S. Patent No. 7,290,164 ("the '164 patent"); U.S. Patent No. 7,340,597; U.S. Patent No. 6,741,592 ("the '592 patent"); and U.S. Patent No. 7,200,145, and alleges that an industry in the United States exists as required by subsection (a)(2) of section 337. The notice of investigation named Arista Networks, Inc. ("Arista") of Santa Clara, California as the respondent. A Commission investigative attorney ("OUII") is participating in the investigation.

On June 23, 2016, the Commission found that a Section 337 violation had occurred as to the '537, '592, and '145 patents and therefore issued a limited exclusion order and a cease and desist order against Arista. 81 FR 42375-76 (June 29, 2016).

On August 28, 2018, Cisco filed a petition pursuant to Commission Rule 210.76, 19 C.F.R. 210.76, to suspend the remedial orders issued in this investigation based on a settlement agreement between Cisco and Arista. Specifically, Cisco requested that the Commission suspend the remedial orders subject to Arista's continued compliance with settlement provisions relating to the removal of certain features from its redesigned products. Neither Arista nor OUII filed a response.

On October 22, 2018, the Commission instituted this modification proceeding and requested briefing from the parties on their positions regarding modification of the existing remedial orders to expressly exempt the Arista redesigned products from the scope of the remedial orders. 83 FR 54137 (October 26, 2018). The parties filed their initial submissions on November 1, 2018. On November 8, 2018, Cisco and Arista filed responsive submissions.

Having considered Cisco's petition and the briefing from the parties, the Commission has determined not to suspend the remedial orders as requested by Cisco. The Commission has only suspended or temporarily rescinded its orders in very limited circumstances involving adjudication in other tribunals. The Commission has considered the parties' filings and declines to extend the rare circumstances in which it suspends or temporarily rescinds its remedial orders to the circumstances presented in this investigation. For various reasons, the redesigned products are not currently being excluded under the limited exclusion order.

The private parties are not precluded from filing a future petition requesting that the Commission modify its remedial orders including to exempt the redesigned products.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).
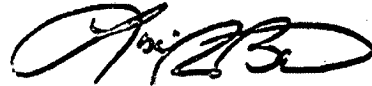
By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: February 8, 2019

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PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **February 8, 2019**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

Adam R. Alper, Esq. **KIRKLAND & ELLIS LLP** 555 California Street San Francisco, CA 94104	☐ Via Hand Delivery ☐ Via Express Delivery ☒ Via First Class Mail ☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Bert C. Reiser, Esq. **LATHAM & WATKINS LLP** 555 Eleventh Street NW Suite 1000 Washington, DC 20004	☐ Via Hand Delivery ☐ Via Express Delivery ☒ Via First Class Mail ☐ Other:_____

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

In the Matter of	
CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I)	**Inv. No. 337-TA-944** (Remand Enforcement Proceeding)

REMAND ENFORCEMENT INITIAL DETERMINATION

Administrative Law Judge David P. Shaw

On June 20, 2017, the administrative law judge issued the final enforcement initial determination finding no violation of a cease and desist order. On August 4, 2017, the Commission issued its Notice of Commission Determination to Review the Final Enforcement Initial Determination in Its Entirety; and on Review to Remand the Investigation in Part to the Presiding Administrative Law Judge. On that date, the Commission also issued its Order: Remand-in-Part of Investigation.

Pursuant to the aforementioned Notice and Order, this is the final remand enforcement initial determination of the administrative law judge.

TABLE OF CONTENTS

TABLE OF ABBREVIATIONS

The following abbreviations may be used herein:

ABBREVIATION	FULL WORD OR PHRASE
ALJ	Administrative Law Judge
Arista Rem. Br.	Respondent Arista Networks, Inc.'s Opening Brief Concerning the Issues to be Determined on Remand
Arista Rem. Reply	Respondent Arista Networks, Inc.'s Reply Brief Concerning the Issues to be Determined on Remand
CDO	Cease and Desist Order
CDX	Complainant's Demonstrative Exhibit
Cisco Rem. Br.	Complainant Cisco Systems, Inc.'s Opening Brief
Cisco Rem. Reply	Complainant Cisco Systems, Inc.'s Reply Brief
Ciscon	Ciscon et al., U.S. Patent No. 5,634,010
[	]
CX	Complainant's Exhibit
Dep.	Deposition
EDIS	Electronic Document Imaging System
EID	Enforcement Initial Determination
EOS	Extensible Operating System
Enf.	Enforcement Proceeding
JX	Joint Exhibit
LEO	Limited Exclusion Order
[	]
RWS	Rebuttal Witness Statement
RX	Respondent's Exhibit
Sysdb	System Database
Tr.	Transcript
WS	Witness Statement

I. BACKGROUND

A. Underlying Investigation

By publication of a notice in the *Federal Register* on January 27, 2015, pursuant to

subsection (b) of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, the

Commission instituted the underlying investigation to determine:

> [W]hether there is a violation of subsection (a)(1)(B) of section 337
> in the importation into the United States, the sale for importation, or
> the sale within the United States after importation of certain network
> devices, related software and components thereof by reason of
> infringement of one or more of claims 1, 2, 8-11, and 17-19 of the
> '537 Patent [U.S. Patent No. 7,162,537]; claims 1, 6, and 12 of the
> '296 patent [U.S. Patent No. 8,356,296]; claims 1, 5, 6, 9, and 18 of
> the '164 patent [U.S. Patent No. 7,290,164]; claims 1, 14, 15, 29,
> 39-42, 63, 64, 71-73, and 84-86 of the '597 patent [U.S. Patent No.
> 7,340,597]; claims 6-10, 17, 18, 20, 21, 23, and 24 of the '592 patent
> [U.S. Patent No. 6,741,592]; claims 1, 3, 5, 7-11, 13, 15-29, 33-37,
> and 39-46 of the '145 patent [U.S. Patent No. 7,200,145], and
> whether an industry in the United States exists as required by
> subsection (a)(2) of section 337.

80 Fed. Reg. 4134 (Jan. 27, 2015).

The Commission named as complainant Cisco Systems, Inc. ("Cisco") of San Jose,

California. *Id.* The Commission named as respondent Arista Networks, Inc. ("Arista") of Santa

Clara, California. *Id.* The Office of Unfair Import Investigations ("Staff" or "OUII") was also

named as a party to the investigation. *Id.*

The administrative law judge held a hearing in September 2015. *See* Order No. 6 (Mar.

9, 2015); Hr'g Tr. 1-1494. On February 2, 2016, the administrative law judge issued a final

initial determination ("ID") finding that a violation of section 337 had occurred in the

importation into the United States, the sale for importation, or the sale within the United States

after importation, of certain network devices, related software and components thereof with

respect to asserted claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537; asserted claims 6,

7, 20, and 21 of U.S. Patent No. 6,741,592; and asserted claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145. *See* ID (EDIS Doc. ID No. 573475). A public version (EDIS Doc. ID No. 575521) issued on March 2, 2016.

Cisco and Arista filed petitions for review in February 2016. Cisco, Arista, and the Staff filed responses to the petitions in March 2016.

On June 23, 2016, the Commission issued an opinion finding that a violation of section 337 had occurred. *See* Comm'n Op. at 60;[1] 81 Fed. Reg. 42375 (June 29, 2016). In particular, the Commission found a violation of section 337 for the '537, '592, and '145 Patents, and no violation for the '597 and '164 Patents. *Id.* The Commission also issued a limited exclusion order ("LEO") and cease and desist order ("CDO") on June 23, 2016. *Id.*

The 60-day Presidential review period ended on August 22, 2016. *See* 19 U.S.C. § 1337(j)(2); Ltrs. to the President of the United States; Michael Forman, United States Trade Representative; and Jacob Lew, Secretary of the Treasury (transmitting LEO and CDO (EDIS Doc. ID No. 584917)).

Arista filed an appeal with the U.S. Court of Appeals for the Federal Circuit in August 2016 (Case No. 16-2563), and Cisco also filed an appeal in September 2016 (Case No. 16-2539). The Federal Circuit affirmed the Commission determination. *Cisco Sys., Inc. v. Int'l Trade Comm'n*, 873 F.3d 1354 (Fed. Cir. 2017).

B.   Enforcement Proceeding

On August 26, 2016, Cisco filed an enforcement complaint requesting that the Commission commence an enforcement proceeding pursuant to Commission Rule 210.75(b) and

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[1] A public version issued on July 26, 2016, and a revised public version (EDIS Doc. ID No. 609119) issued on April 19, 2017.

section 337. Cisco's enforcement complaint alleges that Arista has violated the CDO by
marketing, distributing, offering for sale, selling, advertising, and/or aiding and abetting "other
entities in the sale and/or distribution of, after August 22, 2016, imported products and
components that infringe the '537 Patent." Enf. Compl., ¶ 6.5. The enforcement complaint
asserts the '537 Patent only. *See generally id.*

By publication of a notice in the *Federal Register* on October 4, 2016, pursuant to section
337 of the Tariff Act of 1930, as amended, and Commission Rule 210.75 (19 C.F.R. § 210.75),
the Commission instituted a formal enforcement proceeding to determine "whether Arista is in
violation of the June 23, 2016 CDO issued in the original investigation and to determine what, if
any, enforcement measures are appropriate." 81 Fed. Reg. 68455 (Oct. 4, 2016).

The Commission directed the administrative law judge "to set the earliest practicable
target date for completion of the proceeding within 45-days of institution of the proceeding."
Comm'n Enf. Order at 2 (Sep. 28, 2016). The Commission further directed that "the target date
should be set at no more than twelve months from the date of institution" and that "such target
date is to exceed the date of issuance of the EID [*i.e.*, Enforcement Initial Determination] by
three months." *Id.* On November 2, 2016, the target date was set for September 20, 2017, which
is just under the 12-month deadline for completing the proceeding. *See id.*; Order No. 31
(Setting Target Date). The due date for the Enforcement Initial Determination on violation was
June 20, 2017. *Id.*

On April 4, 2017, the administrative law judge held a pre-hearing conference for the
enforcement proceeding. *See* Order No. 42 (Allocation of Hearing Time); Enf. Pre-Hr'g Tr.
1-14. The evidentiary hearing commenced immediately thereafter, and concluded the next day,
on April 5, 2017. *See* Order No. 43; Enf. Tr. at 1-439. The parties were requested to file

post-hearing briefs not to exceed 125 pages in length, and to file reply briefs not to exceed 30 pages in length. Enf. Pre-Hr'g Tr. 9. On April 14, 2017, the parties filed a corrected joint outline of the issues to be decided in the Enforcement Initial Determination. *See* Corrected Joint Outline of List of Issues to Be Decided ("Joint Outline") (EDIS Doc. ID No. 608656).

On June 20, 2017, the administrative law judge issued the final EID, finding no violation of the June 23, 2016 CDO.

On July 3, 2017, Cisco and Arista each filed petitions for review of the EID. On July 10, 2017, Cisco filed its response to Arista's petition for review. On July 11, 2017, Arista filed a response to Cisco's petition for review. Also on July 11, 2017, the Staff filed a response to the private parties' petitions for review.

C.   Remand Proceeding

On August 4, 2017, the Commission issued its Notice of Commission Determination to Review the Final Enforcement Initial Determination in Its Entirety; and on Review to Remand the Investigation in Part to the Presiding Administrative Law Judge ("Remand Notice"). On that date, the Commission also issued its Order: Remand-in-Part of Investigation ("Remand Order").

In the Remand Notice, the Commission stated:

> Having examined the record of this investigation, including the ALJ's final EID, the petitions for review, and the responses thereto, the Commission has determined to review the final EID in its entirety. The final EID includes analysis comparing the redesigned products to products found to infringe in the underlying investigation to conclude that the redesigned products do not infringe the '537 patent. However, this analysis, while addressing the parties' arguments, does not address the issue of whether the language of the claims reads on the redesigned products. *See e.g.,* EID at 14-20. For example, the EID does not provide a clear application of the claim limitations to the redesigned products or find that the limitations were not met for other reasons (*e.g.,*

waiver).[2] Therefore, the Commission remands the investigation in part to the ALJ to (1) address literal infringement in terms of whether the asserted claims, as construed, read on the redesigned products, and make appropriate findings, and further, if necessary, modify any other affected findings, including findings under the doctrine of equivalents; (2) consider and address, if necessary, the alleged inconsistency between the EID's finding for what constitutes a "client subsystem" and the EID's findings for the "managing subsystem"; (3) identify which accused products are addressed in the EID; and (4) issue a final remand enforcement initial determination.

Remand Notice at 2-3.[3] The Commission further provided, in part, "To the extent a party has waived an argument, the Commission's remand order does not remove any such waiver, and the ALJ may apply waiver as he deems appropriate[,]" and "The administrative law judge may otherwise conduct the remand proceedings as he deems appropriate." Remand Order at 4.

On August 9, 2017, the administrative law judge issued an order that required the parties, by August 16, 2017, to file a statement addressing the following items: the proposed issues to be determined (within the framework of the Commission's Remand Notice and Order), and any

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[2] The EID found that the appropriate analysis to determine whether a violation of the CDO has occurred is the standard two-part infringement analysis, and that the colorable differences analysis is not applicable. EID at 77. The Commission agrees with this determination and will address this issue in its opinion accompanying its final determination. Remand Order at 2.

[3] The Commission's Remand Order provides, in part:

> The investigation is remanded to the presiding ALJ to only (1) address literal infringement in terms of whether the asserted claims, as construed, read on the redesigned products, and make appropriate findings, and further, if necessary, modify any other affected findings, including findings under the doctrine of equivalents; (2) consider and address, if necessary, the alleged inconsistency between the EID's finding for what constitutes a "client subsystem" and the EID's findings for the "managing subsystem"; (3) identify which accused products are addressed in the EID; and (4) issue a final remand enforcement initial determination ("REID").

Remand Order at 3-4.

stipulations agreed to by all parties; a description of specific information or evidence that each party may seek from other parties or third persons, including a description of any information or evidence each party believes can be obtained only by deposition, interrogatory, subpoena, or request for admission; and any other factor that may affect the course of this remand proceeding known to a party at this time. Order No. 54 at 1-2.

On August 25, 2017, the administrative law judge issued an initial determination setting the target date for completion of this enforcement proceeding as September 4, 2018, which is 23 months from institution of the enforcement proceeding, and thus, pursuant to the Remand Order, making the REID due on June 4, 2018. Order No. 55 (initial determination); Commission Determination Not to Review (Sept. 18, 2018).

On September 7, 2017, the administrative law judge issued Order No. 56, noting that in response to Order No. 54, the parties submitted a joint proposal regarding the remand proceedings, which included a list of issues to be determined, indicated that no additional discovery was necessary, and provided proposed briefing schedules.[4] Order No. 54 at 1. The administrative law judge ordered that the parties file briefs addressing the issues to be determined; that the main brief would not exceed 100 pages (and would be due on December 18, 2017);[5] that the reply would not exceed 30 pages (and would be due on January 12, 2018); and that the hearing would be held on February 1, 2018. *Id.*

The hearing was held on February 1, 2018. *See, e.g.,* (Remand) Enf. Tr. 440-540.

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[4] The Joint Proposal Regarding Remand Proceedings (Aug. 16, 2017) is EDIS Doc. ID 620228.

[5] It is noted that each of the parties' main briefs on remand were substantially less than 100 pages in length.

D.   The Parties

The parties in the enforcement proceeding, including this remand proceeding, have not changed from the underlying investigation. The parties are Cisco, Arista and the Staff.

II.   ISSUES PRESENTED ON REMAND

As indicated above, the Commission remanded this investigation in part to the administrative law judge (1) to address literal infringement in terms of whether the asserted claims, as construed, read on the redesigned products, and make appropriate findings, and further, if necessary, modify any other affected findings, including findings under the doctrine of equivalents; (2) to consider and address, if necessary, the alleged inconsistency between the EID's finding for what constitutes a "client subsystem" and the EID's findings for the "managing subsystem"; (3) to identify which accused products are addressed in the EID; and (4) to issue a final remand enforcement initial determination. Remand Notice at 2-3; Remand Order at 3-4.

A.   Accused Products

The Commission remanded this proceeding, in part, to "identify which accused products are addressed in the EID[.]" Remand Notice at 3; Remand Order at 4.

The administrative law judge identifies the accused products addressed in the EID as all of Arista's products that run Arista's redesigned EOS. *See* EID at 99 ("The accused products include all of Arista's products that run Arista's redesigned EOS, including at least the 7010, 7020, 7048, 7050, 7050X[,] 7060, 7150, 7160, 7250, 7250X, 7260, 7280, 7280E, 7300, 7300X, 7320, and 7500 series models, related software and the components thereof."). The EID did point out discrepancies between Cisco's and Arista's briefs with respect to model numbers, *see* EID at 5, yet the EID was not limited to specific model numbers or software version numbers.

In response to the Commission's Remand Notice and Remand Order, the parties'

presented arguments concerning this issue, which are addressed below.

Cisco's entire argument regarding the products at issue follows:

> The Remand Order stated that the EID cited to two lists of products
> from Cisco and Arista that are not identical. As the EID correctly
> noted, Arista itself admits that "the accused products constitute
> nearly all of Arista's products" and argues that due to the redesign,
> all of its products allegedly avoid infringement. *See* Resp. PoBr. at
> 1, 83. Arista's list, as described in the EID, however, is incomplete.
> The Arista Accused Products at issue in this Enforcement
> Proceeding are all Arista networking products and components
> thereof, including at least the 7010, 7020, 7048, 7050, 7060, 7150,
> 7160, 7250, 7260, 7280, 7300, 7320, and 7500 series models, related
> software and the components thereof. All of Arista's networking
> products run the allegedly-redesigned version of EOS, a fact that
> Arista does not contest, and therefore all infringe. Compl. PrHB at
> 24-25.

Complainant Cisco Systems, Inc.'s Opening Brief (hereafter "Cisco Rem. Br.") at 48.

Arista's entire argument is:

> The parties do not dispute which products are accused of
> infringement in this enforcement action. They are any Arista
> switches running Arista's EOS operating system versions 4.16.6 or
> higher sold after August 22, 2016. *See* McKusick Expert Report
> ¶ 12; Almeroth Expert Report ¶¶ 84-85.

Respondent Arista Networks, Inc.'s Opening Brief (hereafter "Arista Rem. Br.") at 63.[6]

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[6] Dr. Almeroth's expert report states, "Arista announced on June 27, 2016, that it had released
EOS version 4.16.6M, which it stated had been redesigned to avoid the ITC's findings of
infringement. *See, e.g.*, ANIITC-944E-00000345 [which was accepted into the record as Exhibit
No. CX-5209]. As described below in this section and in the section regarding infringement,
Arista switches running the redesigned EOS version 4.16.6M and all later versions continue to
infringe the asserted claims of the '537 patent." Almeroth Expert Report, ¶ 85 (EDIS Doc. ID
No. 601230).

Dr. McKusick's expert report states, "I understand that in this enforcement proceeding, Cisco is
accusing certain Arista switches running EOS version 4.16.6M and later of infringing claims 1–
2, **8–9**, 10–11, **17–18**, and 19 of the '537 patent (the 'Asserted Claims'). Almeroth Report ¶ 50.
The numbers in bold and underlined are independent claims. I understand that these switches
include the 7010, 7048, 7050, 7060, 7150, 7160, 7250, 7260, 7280, 7300, 7320, and 7500 series

The Staff's brief does not directly address this issue, and Cisco's and the Staff's replies do not address this issue. *See generally* Cisco Rem. Reply (the issue is not addressed); Staff Rem. Reply (the issue is not addressed).

In reply, Arista argues:

> Looking to expand the LEO and CDO to include things that cannot possibly infringe, Cisco contends in its opening brief that the accused products are "Arista's network devices, all of which run Arista's 'Extensible Operating System,' also called 'EOS.'" Cisco Rem. Br. at 9; *id.* at 48 ("The Arista Accused Products at issue in this Enforcement Proceeding are all Arista networking products and components thereof...."). But not all of "Arista's network devices" actually "run EOS," and Cisco has never alleged—and never even attempted to prove—that any devices that do not run EOS could infringe the '537 patent. Rather, the accused products have always been only those Arista products that actually run the redesigned EOS, *i.e.*, Arista's switches running EOS versions 4.16.6 or higher sold after August 22, 2016.

Arista Rem. Reply at 30 (emphasis omitted).

Cisco's expert, Dr. Almeroth, defined the "accused products" when he provided a summary of his opinions:

> **Q17. What opinions are you giving in this witness statement?**
>
> A17. I am offering two opinions in this witness statement.
>
> First, this witness statement contains my opinions disagreeing with Arista's implicit claim construction arguments.
>
> Second, this witness statement contains my opinions regarding infringement of asserted claims 1-2, 8-11, and 17-19 of the '537 Patent. In my opinion, the Arista's redesigned products infringe the asserted claims, both literally and under the doctrine of equivalents. Arista also indirectly infringes the asserted claims via contributory infringement and inducement of infringement. I will generally refer to Arista's redesigned products using the term "redesigned," "new," "current," or the like, but may also refer to them as *the "accused*

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models (the 'Accused Products'). Almeroth Report ¶ 84." McKusick Expert Report, ¶ 12 (EDIS Doc. ID No. 602526) (emphasis omitted).

products." This refers to Arista's EOS versions 4.16.6M and later, including hardware and components for running such software. When discussing [the] Arista products found to infringe in the underlying Investigation, I will generally refer to them as the "pre-redesign," "prior," "old," or "legacy" products.

CX-5002C (Almeroth WS) at Q/A 17 (emphasis added); *see also id.* at Q/A 27 (discussing CX-5209, which is a letter from Arista to its customers that introduces EOS version 4.16.6M).

Dr. McKusick, Arista's expert, introduced the "Accused Products" as follows:

128. Q: Let's talk about the Accused Products now. What did you mean earlier when you said that the Accused Products are switches?

A: A switch is a type of computer network device that generally connects devices in a local area network by receiving data packets at one port from a device and sending the packets out another port to another device. The Accused Products are switches typically used in computer data centers.

129. Q: You also said earlier that the Accused Products run EOS. What is EOS?

A: The Accused Products run a redesigned version of Arista's Extensible Operating System called EOS. EOS runs on the Linux operating system, which is in the family of UNIX-based operating systems. . . .

. . .

137. Q: Before we turn to discuss specific functionality in EOS, what versions of EOS are considered legacy as opposed to redesigned?

A: The legacy EOS includes versions before 4.16.6M, whereas *the redesigned EOS includes versions 4.16.6M and later.* The ITC previously found that Arista switches running the legacy EOS infringe the Asserted Claims.

RX-5129C (McKusick RWS) at Q/A 128, 129, 137 (emphasis added).

The EID adjudicated Arista's products that run Arista's redesigned EOS, which are the redesigned products also addressed herein. *See* EID at 99. The parties' arguments on remand do not change the products the EID addressed.

To the extent that identifying the redesigned products by software version (rather than model number) might be helpful, the administrative law judge notes that the experts agree that the redesigned products are Arista products running EOS version 4.16.6M and later. *See* CX-5002C (Almeroth WS) at Q/A 17, 27; CX-5209; RX-5129C (McKusick RWS) at Q/A 128, 129, 137. This Final Remand Enforcement Initial Determination, however, is not limited by specific model numbers or software version numbers.

B. Infringement Analysis

The Commission remanded this proceeding, in part, to "address literal infringement in terms of whether the asserted claims, as construed, read on the redesigned products, and make appropriate findings, and further, if necessary, modify any other affected findings, including findings under the doctrine of equivalents[.]" Remand Notice at 2; Remand Order at 3-4.[7]

On remand, Cisco continues to assert independent claims 1, 10, and 19, and dependent claims 2, 8, 9, 11, 17, and 18 of the '537 Patent. *See* Cisco Rem. Br. at 14; JX-0001 at 15:22-18:39. Cisco argues that the redesigned products infringe the asserted claims literally and under the doctrine of equivalents. *See* Cisco Rem. Br. at 14-45. Arista contends that it does not infringe any of the asserted claims. *See* Arista Rem. Br. at 11-55. The Staff argues that the redesigned products do not infringe. *See* Staff Rem. Br. at 7-38.

As discussed below, the administrative law judge has determined that the redesigned products do not literally infringe the asserted claims. The administrative law judge has also

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[7] General principles of law are provided in the ID and EID. *See* ID, Part IV; EID, Part III(B).

determined that the redesigned products do not infringe the asserted claims under the doctrine of equivalents. Thus, pursuant to the Remand Notice and Remand Order, the administrative law judge has determined that the asserted claims, as properly construed, do not read on the redesigned products, literally or under the doctrine of equivalents, and that it is not necessary to modify "any other affected findings" mentioned in the Remand Notice and Remand Order.

1. Claim Construction

Neither Cisco nor Arista presents any self-contained claim construction arguments. *See generally* Cisco Rem. Br. at 14-48; Arista Rem. Br. at 11-55. The Staff notes that the claim construction arguments from the underlying investigation govern. *See* Staff Rem. Br. at 9.

The claim constructions from the underlying investigation govern in this enforcement proceeding. *See Certain Personal Data & Mobile Communications Devices & Related Software,* Inv. No. 337-TA-710, Order No. 128 at 3 (Nov. 1, 2012) ("It is well-established that parties are bound by the Commission's prior claim constructions; neither Apple nor HTC can seek to broaden (or narrow) the scope of the asserted claims during this enforcement proceeding.").

For reference, select, previously construed claim terms from the '537 Patent are reproduced below:

CLAIM TERM & CORRESPONDING CLAIM(S)	ADMINISTRATIVE LAW JUDGE / COMMISSION CONSTRUCTION
"externally managing router data" (1 and 10) "externally manage router data" (19) "external management" (1 and 10) "management of" (19)	No construction necessary
"management registration request" (1 and 10) "management request" (19)	"a request to register to provide external management services"
"router configuration data" (1, 2, 10, 11, and 19)	No construction necessary

CLAIM TERM & CORRESPONDING CLAIM(S)	ADMINISTRATIVE LAW JUDGE / COMMISSION CONSTRUCTION
"said database" (1 and 10)	Not indefinite / no construction necessary
"reducing computational overhead" (1 and 10) "reducing computational overhead in a centralized database system" (1 and 10)	"reducing the amount of computation in a centralized database system"
"said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" (1, 10, and 19)	Requires the storage of router configuration data in said database

See ID at 55-59; Comm'n Op. at 8-10.

2. Literal Infringement

a) Claim 19

Asserted claim 19 is an independent claim, as are asserted claims 1 and 10. Claim 1 is a method claim, claim 10 is directed to machine-executable instructions, and claim 19 is an apparatus claim. Many of the method steps of claim 1 recite limitations similar to those recited in claim 19. The same holds true with the machine-executable instructions recited in claim 10. Therefore, this final initial determination will analyze claim 19 before analyzing claims 1 and 10 (and their associated dependent claims).

Independent claim 19 follows:

> 19. In a router device having a processor and memory, a router operating system executing within said memory comprising:
>
> (a) a database subsystem;
>
> (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and

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(c) a database operatively coupled to said database subsystem, said database configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0001 at 18:21-39. To conduct an infringement analysis, claim 19 can be subdivided into eight limitations, as follows:

19. [1] In a router device having a processor and memory, a router operating system executing within said memory comprising:

[2] (a) a database subsystem;

[3] (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem,

[4] one of said client subsystems configured as a managing subsystem to externally manage router data

[5] upon issuing a management request to said database subsystem; and

[6] (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data

[7] and delegate management of router configuration data to a management subsystem that requests to manage router configuration data,

[8] said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

See JX-0001 at 18:21-39. As discussed below, the administrative law judge finds that the redesigned products do not literally infringe claim 19 because the managing subsystem and management request limitations (i.e., limitations [4] and [5] above) do not read on the redesigned products.

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> (1) In a router device having a processor and memory, a router operating system executing within said memory comprising:

Cisco and Arista do not specifically address the preamble. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff notes:

> Arista does not dispute that the accused devices meet the preamble of claim 19 and so the EID correctly found that accused devices are, in fact, router devices that satisfy the preamble. *See* EID at 11-12.

Staff Rem. Br. at 12.

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the preamble reads on the redesigned products. *See DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1331 (Fed. Cir. 2001) ("*DeMarini*") ("Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when 'the properly construed claim reads on the accused device exactly.'" (quoting *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996)).

In particular, the evidence shows that the redesigned products are router devices as required by the preamble. For example, the data sheet for the 7010T-48 shows that the redesigned products contain a CPU, include system and flash memory, and run Arista's EOS software. *See* CX-0166 (Arista Data Sheet); CX-5002C (Almeroth WS) at Q/A 200. Further, the redesigned products are router devices because they perform routing tasks and run routing protocols. *See* CX-5002C (Almeroth WS) at Q/A 201. Accordingly, the administrative law judge has determined that the preamble reads on the redesigned products.

(2) (a) a database subsystem;

Cisco and Arista do not specifically address the "database subsystem" limitation. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff notes:

> Arista does not dispute that the redesigned EOS is a database subsystem. The EID correctly found that this limitation is satisfied. EID at 12-13.

Staff Rem. Br. at 12.

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the database-subsystem limitation reads on the redesigned products. *See DeMarini, supra.*

In particular, the evidence shows that the redesigned products include a database subsystem as required by the database-subsystem limitation. For example, the database subsystem is part of Sysdb. *See* CX-5002C (Almeroth WS) at Q/A 202; JX-0001 ('537 Patent) at 15:37-40, 16:64-67, 18:29. Accordingly, the administrative law judge has determined that the database-subsystem limitation reads on the redesigned products.

      (3) (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem,

For the "plurality of client subsystems" limitation, the heading of Section IV(A)(1)(a) of Cisco's brief asserts: "The Finding That The [   ] Constitute The Claimed "Client Subsystem" Was Correct And Cannot Be Challenged[.]" Cisco Rem. Br. at 16. Cisco first argues that Arista has waived any argument concerning this limitation. *Id.* at 16-17. Cisco then argues, in part:

To the extent that Arista nonetheless attempts to challenge that
limitation, the EID's original finding was correct. There can be no
real doubt that the [

] form a single subsystem in Arista's redesigned products.
As explained below, the registration function performed by the
[   ] is dedicated to the particular agent it
runs and which transmits the [   ] command. That
functionality has no other purpose but to request registration for that
specific agent, and no other agent, as depicted below:

[

]

CDX-5002-33C. Arista cannot credibly assert that any agent lacks
an individualized [   ], which acts specifically
on behalf of that agent to register it for management. To the
contrary, Arista's own expert repeatedly admitted just that: .... In
reality, Arista has simply relocated the requisite functionality in its
EOS code; but the claims do not specify how the code for the
managing subsystem needs to be implemented.

Cisco Rem. Br. at 17-19 (quotations and citations omitted).

In addressing the second issue[8] from the Remand Notice and Remand Order, Arista

argues:

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[8] In the second issue, the Commission ordered the administrative law judge to "consider and
address, if necessary, the alleged inconsistency between the EID's finding for what constitutes a
'client subsystem' and the EID's findings for the 'managing subsystem[.]'" Remand Notice at 2;
Remand Order at 4.

As the EID notes, "Arista and the Staff do not specifically address the plurality-of-client-subsystems limitation." EID at 14. This is because the "plurality of client subsystems" in and of itself was never a contested limitation and so was mentioned only in passing even by Cisco which needed to show that it addressed every limitation in the claims, and otherwise largely ignored. Cisco Pre Hrg. Br. at 102 ("Arista products continue to include a plurality of client subsystems"); Cisco Post Hrg. Br. at 76 ("Arista's redesigned products continue to meet claim 19(b) of the '537 patent). The ALJ addressed the "plurality of client subsystems" briefly, before turning to the next part of the claim limitation ("one of said client subsystems configured as a managing subsystem to externally manage router data") and concluding that it was not satisfied by Arista's redesigned EOS. EID at 14-17.

But, importantly, Arista never acceded to Cisco's argument that the "plurality of client subsystems" in the claims was formed by some fictitious combination of [

]. In fact, the exact opposite is true: Arista explained instead that "subsystems" are actual things with discernible boundaries and not amorphous and abstract concepts that one can cobble together from discrete elements with hindsight as Cisco does here. Arista Pre Hrg. Br. at 62-66; Arista Post Hrg. Br. at 17-18, 22-24. Arista merely chose not to fight about the "plurality of client systems" because (a) EOS has a plurality of agents which, each alone and not in some imagined combination with anything, is likely a "client subsystem," and (b) the "plurality of client subsystems" is wholly irrelevant to the redesign and its non-infringement because the redesign plainly lacks the essential "managing subsystem" that sends a "management registration request." *See London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1539 (Fed. Cir. 1991) ("There can be no infringement as a matter of law if a claim limitation is totally missing from the accused device.") (citing *Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 798 (Fed. Cir. 1990)).

Arista Rem. Br. at 56-57 (emphasis and footnote omitted).

The Staff, who analyzes subpart (b) of claim 19 as a single limitation, argues that there is no infringement because Arista's redesigned products lack a "'client subsystem[] configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem.'" Staff Rem. Br. at 12-13 (emphasis omitted).

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the plurality-of-client-subsystems limitation reads on the redesigned products. *See DeMarini, supra.*

In particular, the evidence shows that the redesigned products satisfy the plurality-of-client-subsystems limitation. For example, the plurality of client subsystems, which must be operatively coupled to the database for communication, includes agents in the EOS.[9] *See* CX-5002C (Almeroth WS) at Q/A 60-61; *see also* RX-5129C (McKusick WS) at Q/A 73 (Dr. McKusick's non-infringement opinion focuses on the managing subsystem: "In the redesigned EOS, there is no 'managing subsystem' that issues a 'management request.'"), 93-97 (discussing client subsystems); Arista Rem. Br. at 56 ("EOS has a plurality of agents which, each alone and not in some imagined combination with anything, is likely a 'client subsystem[.]'"). Accordingly, the administrative law judge has determined that the plurality-of-client-subsystems limitation reads on the redesigned products.

In any event, the administrative law judge finds that Arista has waived any argument concerning the plurality-of-client-subsystems limitation. Indeed, Arista's brief explains that "the 'plurality of client subsystems' [limitation] in and of itself was never a contested limitation[.]" Arista Rem. Br. at 56. Arista also later explained that it "chose not to fight about the 'plurality of client systems[.]'" *Id.*

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[9] Cisco's post-hearing brief from the enforcement proceeding clearly identified [
              ] as the managing subsystem: "Thus, the 'managing subsystem' in Arista's products—the [   ]—transmits a management request to Sysdb just as in the previous version of the products." Cisco Enf. Post-Hr'g Br. at 77.

As discussed in Part II(C), *infra*, [   ] is used in the redesigned products but not, as Cisco argues, because an [   ] in combination with [   ] is configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem.

(4)   one of said client subsystems configured as a managing subsystem to externally manage router data

For the "one of said client subsystems configured as a managing subsystem to externally manage router data" limitation (*i.e.*, the "managing subsystem limitation"), Cisco argues, in part, that:

> The client subsystem identified in the EID transmits a management registration request and externally manages router data, and is therefore a managing subsystem by virtue of performing these functions. Correspondingly, the alleged management registration request is transmitted from a client subsystem configured as a managing subsystem, just as claimed by Cisco. This is depicted below.
>
> [
>
>
>
>
>
>   ]
>
> It is no answer for Arista to argue—as it might—that Cisco somehow waived the argument that the client subsystem "becomes" a managing subsystem "after the request is sent." Resp. Repl. to Pet. at 23. That was not Cisco's argument. As clearly stated on the very page Arista cited to in support that argument before the Commission, Cisco specifically argued that a client subsystem that transmits a management registration request (and manages) is a managing subsystem precisely because it performs those functions—not that it becomes a managing subsystem at some undefined "later" time. Compl. Pet. at 17. Cisco's brief states in the very next sentence after what Arista cites, "[
>   ] client subsystem configured as a managing subsystem; specifically, the part of the managing subsystem implemented by the [   ]."
> *Id.* Cisco thus clearly stated that the command originates from something that is a managing subsystem (in the claim terms, is a

client subsystem configured as a managing subsystem) by virtue of its carrying out the required activity of a managing subsystem. This is, of course, what Cisco has argued all along, and there is no "waiver." *See, e.g.*, Compl. PrHB at 81 ("But there is no question that the managing subsystem does exist at the time the write mount request message is sent, as evidenced by the undisputed fact that the [

].").

Cisco Rem. Br. at 22-24 (emphasis omitted).

Arista argues, in part:

> Cisco and Arista agree that the managing subsystem has two fundamental characteristics recited in the claims:
>
> 1. It performs external management; and
>
> 2. It "transmits" or "issues" the management request.
>
> The following is a slide from Cisco's opening statement which shows that it reads the claims in exactly this way:

Cisco Op. Slides at 13; *see also* Hrg. Tr. at 20:1-12 (Cisco opening) ("The managing subsystem has two requirements. It's got to transmit a registration request and it's also got to do external management. And those two functions need to form a subsystem.").

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Given this common understanding of the claims, it was Cisco's burden to prove that an actual managing subsystem exists that is both an external manager and the transmitter of the management request. Cisco failed to shoulder this burden and the ALJ correctly found that nothing in the redesign is the "managing subsystem" required by the claims because nothing in the redesign meets both requirements.

Arista Rem. Br. at 16-17 (emphasis omitted). Arista also argues:

[T]he evidence conclusively established that it is the [
            ], on its own and with no help or participation by the agent whatsoever, that sends the [   ] to a software component called [   ]. RX-5131C (Sweeney RWS) at Q/A 70-71; RX-5129C (McKusick RWS) at Q/A 31-32; Hrg. Tr. (Duda) at 358:19-20. Moreover, though Cisco never accuses [   ] of being part of the claimed "managing subsystem," it is worth noting that the evidence precludes that conclusion as well. There is no dispute that [
                                    ] to Sysdb during the process of
[   ]. Dr. Almeroth conceded this point at the hearing. Hrg. Tr. (Almeroth) at 147:14-15 ("Q.
[
            ]."); *see also id.* at 111:20-112:4.

Id. at 18-19 (emphasis omitted). Arista further argues that the redesigned products do not

infringe as "[

].*" Id.* at 22 (emphasis omitted).

The Staff argues that "the redesigned EOS does not have the claimed managing

subsystem to issue a management request." Staff Rem. Br. at 15. The Staff also argues that the

combination of "[   ] . . . is not a managing

subsystem as disclosed and claimed in the '537 patent." *Id.* The Staff further argues that

"[   ] does not create the

claimed managing subsystem[.]" *Id.* at 20-21.

In reply, Cisco argues, in part, that:

> . . . Arista and Staff's implicit restrictions on the claims constitute implementation details that are absent from the claim language and unsupported by the specification. Second, Arista's and Staff's approach—to imply restrictions as part of their non-infringement analysis rather than propose actual claim constructions—is improper and has repeatedly been rejected by the Federal Circuit. *See, e.g., ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 520 (Fed. Cir. 2012) (Defendant was "essentially raising a claim construction argument regarding the meaning of the term 'determining' in the guise of a challenge to the sufficiency of the evidence of infringement," and "if [Defendant] desired such a narrow definition, it could (and should) have sought a construction to that effect."); *Comcast IP Holdings I LLC v. Sprint Commc'ns Co. L.P.*, 850 F.3d 1302, 1311 (Fed. Cir. 2017).

Cisco Rem. Reply at 5. Cisco further argues that the claims do not require "each portion of the managing subsystem to be involved in each of the managing subsystem's activities" and that there is no requirement that "the portion of the subsystem responsible for the external management function [must run] before the management registration request is transmitted." *Id.* at 6.

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the managing subsystem limitation does not read on the redesigned products. *See DeMarini, supra.* In particular, the redesigned products do not include a subsystem that is configured as a managing subsystem because the agents in the redesigned products do not transmit or issue a management request. The management-request aspect of subpart (b) is addressed in Part II(B)(2)(a)(5), *infra*.

With regard to the Staff's argument that the redesigned products do not infringe because the combination of "the [   ] . . . is not a managing subsystem as disclosed and claimed in the '537 patent[,]" *see* Staff Rem. Br. at 15, the administrative law judge finds that the managing subsystem limitation does not read on the

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redesigned products because [   ]. *See*

Duda Enf. Tr. 361. Dr. Duda, Arista's Chief Technology Officer, testified as follows:

> Q. For [   ], there is a [   ] that [
>   ]; correct?
>
> A. No, that's not right. There's [   ].
>
> Q. So there isn't a [   ]?
>
> A. The [   ], but there's [
>   ].
>
> Q. For [
>   ]; correct?
>
> A. Well, [
>
>   ].
>
> Q. And in doing so, it [
>   ]; correct?
>
> A. No, it doesn't [   ]. It [   ], as I
>   said before, in a [   ].

Id.; *see also* RX-5131C (Sweeny RWS) at Q/A 127, 129 ([

]). Accordingly, the administrative law judge further finds that the managing subsystem

limitation does not read on the redesigned products because [

].

With regard to Arista's argument that the redesigned products do not read on this

limitation because the managing subsystem (*e.g.*, an agent) is not running when [

], *see* Arista Rem. Br. at 21-24, the administrative law judge finds that the

managing subsystem limitation does not read on the redesigned products because the claim

requires that the managing subsystem (*e.g.*, an agent) issue a management request. The agents in

redesigned products do not issue a management request as claimed.

In the redesigned products, "[   ] . . . ." *See* RX-

5131C (Sweeny RWS) at Q/A 66. In particular, [

]." *Id.* at Q/A 67; *see also id.* at

Q/A 55-56.

Mr. Sweeny, a Vice President of Software Engineering at Arista, explained that the

redesigned products use "[

]. *Id.* at Q/A 69-71; *see*

also RX-5129C (McKusick RWS) at Q/A 30-35 ("[

]." *See* RX-5131C (Sweeny

RWS) at Q/A 70; *see also* RX-5129C (McKusick RWS) at Q/A 338 ("[

]."). Sysdb then [

]. *See* RX-5131C (Sweeny RWS) at Q/A 69, 91 ("Sysdb uses the [

]."), 106. After receiving a [

]. *See* RX-5131C (Sweeny RWS) at Q/A 74; RX-5129C (McKusick

RWS) at 39, 61-62, 174. The [

]. *See* RX-5131C (Sweeny) at

Q/A 120-22; RX-5129C (McKusick RWS) at 182, 189.

Accordingly, the administrative law judge further finds that the managing subsystem

limitation does not read on the redesigned products because a managing subsystem is not running

when the management request is sent.

> (5) upon issuing a management request to said database subsystem;

The administrative law judge notes that the ID construed "management request" to mean

"a request to register to provide external management services." *See* ID at 57.

For the "upon issuing a management request to said database bubsystem" limitation,

Cisco primarily argues that Arista is wrong, rather than explaining how the redesigned products

allegedly infringe. *See* Cisco Rem. Br. at 24-31. Cisco's reply follows the same strategy. *See*

Cisco Rem. Reply at 16-22. Eventually, in the fourth paragraph of the section discussing

management requests, Cisco asserts that "The evidence, however, conclusively demonstrates that

[   ]." Cisco Brief at 24.[10] Cisco

argues that Dr. McKusick's, Mr. Sweeny's, and Dr. Duda's testimony, along with Arista

documents and internal correspondence, support its arguments. *Id.* at 24-27. Cisco also argues

that the redesigned products indicate "[

]." *Id.*

at 29-30.

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[10] Cisco's conclusion provides the clearest articulation of its argument: "In comparing these facts to the claim limitations, as is required under patent law and the Commission's remand order, [   ] meets the "management registration request" limitation." Cisco Rem. Br. at 31.

Arista argues that [   ] is not a management registration request, given its content, purpose, and location in the redesigned products. *See generally* Arista Rem. Br. at 33-40.

The Staff argues that [   ] is not a management registration request because [

][.]"

See Staff Rem. Br. at 24 ("The evidence also shows that [   ], which is not a management registration request.").

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the management request limitation does not read on the redesigned products. *See DeMarini, supra.*

In the redesigned products, the components identified as part of the managing subsystem (*e.g., inter alia,* [   ]) do not send a management request to the database subsystem because the [   ] does not issue a request to register to provide external management services. In particular, the [   ] includes only the [   ]. *See* RX-5129C (McKusick RWS) at Q/A 33, 329, 335-39. Indeed, the [   ] does not include [

]. *Id.* at Q/A 338. Further, as Arista notes, and as the testimony confirms, the purpose of the [

]. *See* RX-5129C (McKusick RWS) at Q/A 38, 344, 346, 412. Additionally, [   ]

subsystem, as [

]. RX-5131C (Sweeny RWS) at Q/A 69-71; *see also* RX-5129C (McKusick RWS)

at Q/A 30-35 ("the point of the redesign is that an [

]."), 355.

Accordingly, the administrative law judge finds that the management request limitation

does not read on the redesigned products.

> (6)   and (c) a database operatively coupled to said database
>   subsystem, said database configured to store router
>   configuration data

Cisco and Arista do not specifically address the "database operatively coupled to . . ."

limitation. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44

(Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply

at 4-22 (Section III, subparts (A)-(C)).

For the entirety of subpart (c) of claim 19, the Staff notes:

> Arista does not dispute that the final limitation of claim 19 is met.
> The EID correctly found that this limitation is met. *See* EID at
> 20-22.

Staff Rem. Br. at 25.

Having considered the parties' arguments, the Remand Notice, and the Remand Order,

the administrative law judge has determined that the "database operatively coupled to . . ."

limitation reads on the redesigned products. *See DeMarini, supra.*

The evidence shows that the redesigned products include a database that is coupled to the

database subsystem and can store router configuration data. *See* CX-5002C (Almeroth WS) at

Q/A 205 (Dr. Almeroth notes that Arista does not dispute this limitation). Accordingly, the

administrative law judge has determined that the "database operatively coupled to . . ." limitation reads on the redesigned products.

> (7)   and delegate management of router configuration data to a management subsystem that requests to manage router configuration data,

Cisco and Arista do not specifically address the "delegate management of router configuration data . . ." limitation. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

For the entirety of subpart (c) of claim 19, the Staff notes:

> Arista does not dispute that the final limitation of claim 19 is met. The EID correctly found that this limitation is met. *See* EID at 20-22.

Staff Rem. Br. at 25.

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the "delegate management of router configuration data . . ." limitation reads on the redesigned products. *See DeMarini, supra.*

In particular, the evidence shows that the redesigned products satisfy the "delegate management of router configuration data . . ." limitation. *See* CX-5002C (Almeroth WS) at Q/A 206 (opining this limitation is met). Accordingly, the administrative law judge has determined that the "delegate management of router configuration data . . ." limitation reads on the redesigned products.

(8) said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

Cisco and Arista do not specifically address the "router configuration data managed by . . ." limitation. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

For the entirety of subpart (c) of claim 19, the Staff notes:

Arista does not dispute that the final limitation of claim 19 is met. The EID correctly found that this limitation is met. *See* EID at 20-22.

Staff Rem. Br. at 25.

Having considered the parties' arguments, the Remand Notice, and the Remand Order, the administrative law judge has determined that the "router configuration data managed by . . ." limitation reads on the redesigned products. *See DeMarini, supra.*

In particular, the evidence shows that the redesigned products satisfy the "router configuration data managed by . . ." limitation. *See* CX-5002C (Almeroth WS) at Q/A 206-07 (opining this limitation is met). Accordingly, the administrative law judge has determined that the "router configuration data managed by . . ." limitation reads on the redesigned products.

b) Claim 1

Independent claim 1, a method claim, follows:

1. A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:

a) transmitting a management registration request by said first managing subsystem to said database subsystem, said

registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

b) receiving said management registration request by said database subsystem; and

c) registering said first managing subsystem for external management by said database subsystem.

JX-0001 at 15:22-40.

To conduct an infringement analysis, claim 1 can be subdivided into four limitations, as follows:

1. [1] A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:

[2] a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

[3] b) receiving said management registration request by said database subsystem; and

[4] c) registering said first managing subsystem for external management by said database subsystem.

See JX-0001 at 15:22-40. As discussed below, the administrative law judge finds that the redesigned products do not literally infringe claim 1 because limitation 1(a) (which is limitation

[2] above) do not read on the redesigned products. The administrative law judge further finds

that the preamble, limitation 1(b), and limitation 1(c) (*i.e.*, limitations [1], [3], and [4] above) do

not read on the redesigned products because the redesigned products lack a managing subsystem,

and do not issue a management request, as claimed.

> (1) A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:

Cisco and Arista do not specifically address the preamble of claim 1. *See generally* Cisco

Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5));

Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-

(C)).

The Staff argues:

> The redesigned EOS does not practice the preamble of claim 1. Cisco's infringement analysis for the preamble relied on its arguments for the "managing subsystem" and "management registration request" for claim 19. Cisco IPHB at 80-81.
>
> For the reasons discussed above in Section II.C.1.c. these limitations are not practiced by the redesigned EOS. The EID, therefore, correctly found that the redesigned EOS does not satisfy this limitation because they do not include a managing subsystem and do not externally manage data. EID at 24.

Staff Rem. Br. at 32-33.

As discussed above, the redesigned products do not include a managing subsystem, and

do not issue a management request as claimed. *See* Parts II(B)(2)(a)(4) and II(B)(2)(a)(5).

Accordingly, the administrative law judge has determined that the preamble does not read on the

redesigned products, as the redesigned products lack a managing subsystem.

> (2)   a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

In general, Cisco and Arista do not specifically address this limitation (*i.e.*, limitation 1(a)). *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).[11] Cisco and Arista, however, disagree on whether the management request indicates router configuration data. Accordingly, the parties' arguments are addressed below.

> *(a)   Managing Subsystem and Management Request*

The Staff argues:

> The accused products with redesigned EOS do not practice limitation 1(a). Cisco's infringement analysis for the preamble relied on its arguments for the "managing subsystem" and "management registration request" for claim 19. Cisco IPHB at 82.
>
> For the reasons discussed above in Section II.C.1.c. these limitations are not practiced by the redesigned EOS. The EID, therefore, correctly found that the redesigned EOS does not satisfy this limitation because they do not include a managing subsystem and do not externally manage data. EID at 25.

---

[11] The administrative law judge notes that Cisco has referred to claim 19 as "representative." Cisco Rem. Br. at 8 ("Representative claim 19 of the '537 patent illustrates some of these techniques."). Cisco has also argued that its arguments from claim 19 are "equally applicable" to claims 1 and 10. *See* Cisco Rem. Br. at 22 n.5 ("the arguments with respect to 'client subsystem" in claim 19 are equally applicable to "router subsystem" in claims 1 and 10."); *see also* Cisco Enf. Post-Hr'g Br. at 80-81 (Cisco's argument for claim 1 relies on its analysis of claim 19).

Staff Rem. Br. at 33.

The administrative law judge previously found that the redesigned products do not include a managing subsystem, and do not issue a management request as claimed. *See* Parts II(B)(2)(a)(4) and II(B)(2)(a)(5). Accordingly, the administrative law judge has determined that limitation 1(a) does not read on the redesigned products, as the redesigned products lack a managing subsystem and do not send a management request.

(b) *Indicating Router Configuration Data*

With regard to whether the redesigned products indicate data to be externally managed, Cisco argues:

> Arista also argues that the management registration requests in its redesigned system do not "indicate" the data to be externally managed. *See, e.g.*, Resp. PrHB at 87. First, only two of the three independent claims at issue, claims 1 and 10, have the "indicating" requirement. Likewise, there is no requirement in claims 1 and 10 that the management registration request must contain router configuration data in the request itself, as Arista's expert argues. *Compare* RX-5129C (McKusick RWS) at Q327-336 *with* JX-0001 at 5:22-25, 10:47-52. Second, there is no question that [
>] to Sysdb the data to be externally managed. As Dr. McKusick confirmed, the term "indicating" in the claims means indicating "to Sysdb," not to an outside observer in the abstract:
>
> > Q. We're not talking about them indicating just to anyone out there. The indicating is for Sysdb. It's got to indicate it to Sysdb; right?
> >
> > A. Yes.
>
> Hr'g Tr. (McKusick) at 271:5-8; CX-5002C (Almeroth WS) at Q184. When the [
>
>
>]. CX-5002C (Almeroth WS) at Q188. The [
>
>
>   ]. CX-5043C
> ("[   ]"); CX-5042C; CX-5013C (Sweeney Dep.) at

154:8-156:20, 160:17-161:23; CX-5015C (Duda Dep.) at 81:25-82:6, 83:9-84:11, 150:18-151:1, 195:1-20; CX-5002C (Almeroth WS) at Q188.

In comparing these facts to the claim limitations, as is required under patent law and the Commission's remand order, the [
] meets the "management registration request" limitation.

Cisco Rem. Br. at 30-31; *see also* Cisco Rem. Reply at 17 (arguing that "[

]").

Arista argues that the [   ] does not indicate router configuration data. *See* Arista Rem. Br. at 35-36 ("Specifically, neither the [

]," or "indicate router configuration data for which said first managing subsystem is requesting to provide external management services.'"); *see also id.* at 40.

The administrative law judge previously found that the redesigned products do not issue a management request as claimed. *See* Part II(B)(2)(a)(5). This alone is sufficient to conclude that the redesigned products do not issue a management request that "indicat[es] router configuration data" as limitation 1(a) requires.

To the extent a separate ruling on whether the [

], the administrative law judge would find that [

] does not indicate router configuration data as limitation 1(a) requires. In particular, the [

]. *See* RX-5129C (McKusick RWS) at Q/A 334-58 ("[

].”), 412 (“[

].”). Cisco's argument that “[

]” does not address the

requirement that the request itself specifies the data the agent seeks to manage.

Accordingly, the administrative law judge has determined that limitation 1(a) does not

read on the redesigned products, as the redesigned products lack a managing subsystem, do not

send a management request, and do not send a management request that indicates the pertinent

router configuration data.

> (3)   b) receiving said management registration request by said
> database subsystem; and

Cisco and Arista do not specifically address this limitation (*i.e.*, limitation 1(b)). *See*

generally Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A),

subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section

III, subparts (A)-(C)).

The Staff argues:

> The accused products with redesigned EOS do not practice
> limitation 1(b). Cisco's infringement analysis for the preamble
> relied on its arguments for the "managing subsystem" and
> "management registration request" for claim 19. Cisco IPHB at 83.
>
> For the reasons discussed above in Section II.C.1.c. these limitations
> are not practiced by the redesigned EOS. The EID, therefore,
> correctly found that the redesigned EOS does not satisfy this
> limitation because they do not include a managing subsystem and
> do not externally manage data. EID at 27.

Staff Rem. Br. at 33.

The administrative law judge previously found that the redesigned products do not include a managing subsystem and do not issue a management request as claimed. *See* Parts II(B)(2)(a)(4) and II(B)(2)(a)(5). Accordingly, the administrative law judge has determined that limitation 1(b) does not read on the redesigned products, as the redesigned products do not receive the claimed management request.

> (4)   c) registering said first managing subsystem for external management by said database subsystem.

Cisco and Arista do not specifically address this limitation (*i.e.*, limitation 1(c)). *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues:

> The accused products with redesigned EOS do not practice limitation 1(c). Cisco's infringement analysis for the preamble relied on its arguments for the "managing subsystem" and "management registration request" for claim 19. Cisco IPHB at 83.
>
> For the reasons discussed above in Section II.C.1.c. these limitations are not practiced by the redesigned EOS. The EID, therefore, correctly found that the redesigned EOS does not satisfy this limitation because they do not include a managing subsystem and do not externally manage data. EID at 28.

Staff Rem. Br. at 34.

The administrative law judge previously found that the redesigned products do not include a managing subsystem and do not issue a management request as claimed. *See* Parts II(B)(2)(a)(4) and II(B)(2)(a)(5). Accordingly, the administrative law judge has determined that limitation 1(c) does not read on the redesigned products, as the redesigned products do not include a managing subsystem.

c) Claim 2

Dependent claim 2 follows:

> 2. The method of claim 1 further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

JX-0001 at 15:41-43.

Cisco and Arista do not specifically address claim 2. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues:

> Arista did not dispute that the redesigned EOS practices this limitation and the EID correctly found that the limitation was met. EID at 28-29. But claim 2 is not infringed because independent claim 1 is not infringed.

Staff Rem. Br. at 34.

The evidence shows that claim 2 would read on the redesigned products. In particular, Arista's redesigned EOS uses a tree structure having a plurality of tuples. *See* CX-5002C (Almeroth WS) at Q/A 241. However, the administrative law judge has determined that claim 2 is not infringed because claim 1 is not infringed. *See Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) ("Because we hold that the asserted independent claims of Ferring's patents are not infringed, the asserted dependent claims are likewise not infringed.").

d) Claim 8

Dependent claim 8 follows:

> 8. The method of claim 1 further comprising:
>
> (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;
>
> (b) receiving said change request by said database subsystem;

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(c) determining whether said router data is externally managed by a second managing subsystem; and

(d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

JX-0001 at 16:27-39.

Cisco and Arista do not specifically address claim 8. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues:

Although Arista did not specifically argue that dependent claim 8 is not infringed, the EID analyzed the limitation and determined that Cisco had not proven that the redesigned EOS practices the limitations of claim 8. EID at 29-31.

The EID credited Arista's expert testimony that [

]." *Id.* at 31. This finding was correct and well-reasoned.

Staff Rem. Br. at 35.

The administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that claim 8 reads on the redesigned products. In particular, Cisco's brief does not address claim 8 or whether the redesigned products transmit a change request, receive the change request, include a second managing subsystem, or request a data change when the router data is externally managed by a second managing subsystem. Accordingly, Cisco has not met its burden of showing that the redesigned products infringe claim 8.[12]

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[12] Order No. 56 (Concerning Supplemental Briefing) allowed the parties 100 pages for their main brief. Cisco's brief totaled 49 pages. *See generally* Cisco Rem. Br. at 49. It is not clear why Cisco continues to assert claim 8 when it offered no argument for it, especially inasmuch as the EID did not find infringement of claim 8. *See id.* at 9 (asserting claim 8); EID at 31; *see also*

e) Claim 9

Dependent claim 9 follows:

> 9. The method of claim 8 further comprising:
>
> a) determining whether said router data is locally cached; and
>
> b) updating the cache value to said router data when said router data is locally cached.

JX-0001 at 16:40-44.

Cisco and Arista do not specifically address claim 9. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues that "[t]he EID found that Cisco did not prove that the redesigned EOS practices claim 9 for the same reasons it does not practice claim 8. EID at 32." Staff Rem. Br. at 35.

The administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that claim 9 reads on the redesigned products. In particular, Cisco's brief does not address claim 9.[13] Accordingly, Cisco has not met its burden of showing that the redesigned products infringe claim 9.

f) Claim 10

Independent claim 10 follows:

> 10. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to

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Joint Proposal Regarding Remand Proceedings at 2 (EDIS Doc. ID No. 620228) (Cisco did not identify infringement of the dependent claims as an issue "to be addressed on remand").

[13] It is not clear why Cisco continues to assert claim 9 when it offered no argument for it, especially inasmuch as the EID did not find infringement of claim 9. *See* EID at 33; *see also* Joint Proposal Regarding Remand Proceedings at 2 (EDIS Doc. ID No. 620228) (Cisco did not identify infringement of the dependent claims as an issue "to be addressed on remand").

perform a method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, said method comprising:

> (a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

> (b) receiving said management registration request by said database subsystem; and

> (c) registering said first managing subsystem for external management by said managing subsystem.

JX-0001 at 16:45-67.

In general, Cisco and Arista do not address claim 10 independently of claim 1 and claim

19. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section

III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22

(Section III, subparts (A)-(C)).

The Staff argues:

> The redesigned EOS does not practice claim 10 because it does not have a managing subsystem and does not issue a management request. None of the parties analyzed claim 10 on a limitation-by-limitation basis. Cisco's brief infringement analysis for claim 10 expressly relied on its arguments for the "managing subsystem" and "management registration request" for claim 19. Cisco IPHB at 82.

> For the reasons discussed above in Section II.C.1.c. these limitations are not practiced by the redesigned EOS. The EID, therefore, correctly found that the redesigned EOS does not infringe this claim because they do not include a managing subsystem and do not externally manage data. EID at 34.

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Staff Rem. Br. at 36.

The administrative law judge previously found that the redesigned products do not include a managing subsystem and do not issue a management request as claimed. *See* Parts II(B)(2)(a)(4) and II(B)(2)(a)(5). The administrative law judge also previously noted that to the extent a separate ruling on whether the [   ] is necessary, the administrative law judge would find that the [

] as limitation 1(a) requires. *See* Part II(B)(2)(b)(2)(b).

Accordingly, the administrative law judge has determined that the preamble of claim 10, limitation 10(a), limitation 10(b), and limitation 10(c) do not read on the redesigned products for the same reasons provided with respect to claim 1.

g)   *Claim 11*

Dependent claim 11 follows:

> 11. The program storage device of claim 10, said method further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

JX-0001 at 17:1-4. Claim 11 is analogous to claim 2. *Compare id. with id.* at 15:41-43 (both claims use the exact same phrase, "further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.").

Cisco and Arista do not specifically address claim 11. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues that "[t]he EID correctly concluded that claim 11 is not infringed. EID at 35." Staff Rem. Br. at 37.

The administrative law judge previously found that the redesigned products would read on claim 2, but do not infringe claim 2 due to its dependency on claim 1. *See* Part II(B)(2)(c). Accordingly, the administrative law judge has determined that claim 11 is not infringed due to its dependency on claim 10. *See Ferring*, 764 F.3d at 1411.

h) Claim 17

Dependent claim 17 follows:

> 17. The program storage device of claim 10, said method further comprising:
>
> (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;
>
> (b) receiving said change request by said database subsystem;
>
> (c) determining whether said router data is externally managed by a second managing subsystem; and
>
> (d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

JX-0001 at 18:1-13. Claim 17 is analogous to claim 8. *Compare id. with id.* at 16:27-39 (both claims use the exact same phrases in subparts (a)-(d)).

Cisco and Arista do not specifically address claim 17. *See generally* Cisco Rem. Br. at 14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem. Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues that "[t]he redesigned EOS does not infringe claim 17 because it does not infringe claim 10. The EID correctly concluded that claim 17 is not infringed. EID at 36." Staff Rem. Br. at 37.

The administrative law judge previously found that Cisco has not shown, by a preponderance of the evidence, that the redesigned products infringe claims 8 or 10. *See* Parts

II(B)(2)(d) and II(B)(2)(f).[14] Accordingly, for the reasons provided above, the administrative

law judge has determined that the redesigned products do not infringe claim 17.

i)   Claim 18

Dependent claim 18 follows:

> 18. The program storage device of claim 17, said method further
> comprising:
>
> (a) determining whether said router data is locally cached; and
>
> (b) updating the cache value to said router data when said router
> data is locally cached.

JX-0001 at 18:14-19. Claim 18 is analogous to claim 9. *Compare id. with id.* at 16:40-44 (both

claims use the exact same phrases in subparts (a) and (b)).

Cisco and Arista do not specifically address claim 18. *See generally* Cisco Rem. Br. at

14-31 (Section IV(A)); Arista Rem. Br. at 11-44 (Section III(A), subparts (1)-(5)); Cisco Rem.

Reply at 4-22 (Section II(A)); Arista Rem. Reply at 4-22 (Section III, subparts (A)-(C)).

The Staff argues that "[t]he EID correctly held that claim 18 is not infringed because

claim 17 is not infringed. EID at 36-37." Staff Rem. Br. at 38.

The administrative law judge previously found that Cisco has not shown, by a

preponderance of the evidence, that the redesigned products infringe claims 9 or 17. *See* Parts

II(B)(2)(e) and II(B)(2)(h).[15] Accordingly, for the reasons provided above, the administrative

law judge has determined that the redesigned products do not infringe claim 18.

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[14] It is not clear why Cisco continues to assert claim 17 when it offered no argument for it,
especially inasmuch as the EID did not find infringement of claim 17. *See* EID at 36; *see also*
Joint Proposal Regarding Remand Proceedings at 2 (EDIS Doc. ID No. 620228) (Cisco did not
identify infringement of the dependent claims as an issue "to be addressed on remand").

[15] It is not clear why Cisco continues to assert claim 18 when it offered no argument for it,
especially inasmuch as the EID did not find infringement of claim 18. *See* EID at 37; *see also*

3. Doctrine of Equivalents

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. "Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21 (1997) (citing *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 609 (1950)). "The determination of equivalence should be applied as an objective inquiry on an element-by-element basis." *Id.* at 40.

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused device 'performs substantially the same function in substantially the same way to obtain the same result' as the claim limitation." *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1139-40 (Fed. Cir. 2011).

Cisco argues that Arista's "Redesigned System Infringes The '537 Patent Under The doctrine of equivalents[.]" Cisco Rem. Br. at 31 (Section IV(B)) *see also* Cisco Rem. Reply at 22 (Section II(B)(1)). Cisco also argues that "Prosecution History Estoppel Does Not Prevent Application Of The Doctrine Of Equivalents[.]" Cisco Rem. Br. at 39 (Section IV(B)(2)).

Joint Proposal Regarding Remand Proceedings at 2 (EDIS Doc. ID No. 620228) (Cisco did not identify infringement of the dependent claims as an issue "to be addressed on remand").

As discussed below, the administrative law judge finds that prosecution history estoppel bars Cisco's equivalency argument. The administrative law judge also finds that the redesigned products do not infringe claims 1, 10, or 19 under the doctrine of equivalents.

a)   *Prosecution History Estoppel*

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex*, 419 F.3d at 1382. In particular, "[t]he doctrine of prosecution history estoppel limits the doctrine of equivalents when an applicant makes a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner." *Id.* (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1344 (Fed. Cir. 2005)).

(1)   Amendment-Based Estoppel

"A patentee's decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740 (2002) ("*Festo*"). A complainant can rebut the presumption by showing the equivalent would "have been unforeseeable at the time of the application[,]" "the rationale underlying the amendment [bore] no more than a tangential relation to the equivalent in question[,]" or that there was "some other reason" why "the patentee could not reasonably be expected to have described the insubstantial substitute in question." *See id.* at 740-41. The complainant bears "the burden of showing that the amendment does not surrender the particular equivalent in question." *Id.* at 740.

The EID described the prosecution history in detail and determined that the September 6, 2005 amendments to claim 19 narrowed the scope of claim 19, thus creating a rebuttable

presumption that estoppel applies to claims 1, 10, and 19. *See* EID at 43-45, 47 (citing *Warner-Jenkinson*, 520 U.S. at 33-34; *Festo II*, 344 F.3d at 1370 n.4).

For reference, original claim 19 is reproduced in the following table:

Original Claim 19
19. In a router device having a processor and memory, a router operating system executing within said memory comprising: (a) a database subsystem;   (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data; and   (c) a database operatively coupled to said database subsystem, said database structured and configured to store router configuration data.

JX-0007 at CSI-ANI-00098149.000044-45.

The September 6, 2005 amendments to claim 19 are reproduced in the table on the following page:

Amended Claim 19

19.   (Currently Amended) In a router device having a processor and memory, a router operating system executing within said memory comprising:

(a)   a database subsystem;

(b)   a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data <u>upon issuing a management request to said database subsystem</u>; and

(c)   a database operatively coupled to said database subsystem, said database ~~structured and~~ configured to store router configuration data <u>and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database</u>.

JX-0007 at CSI-ANI-00098149.000471-72. Amended claim 19 would issue, without further amendment, as claim 19. *Compare id. with* JX-0001 at 18:21-39 (claim 19).

The EID also found that the reason the amendment was made was substantially related to patentability. EID at 45-46. The EID concluded that the patentee surrendered subject matter pertaining to management requests and databases that are configured to store router configuration data and "delegate management of router configuration data to a management subsystem that requests to manage router configuration data said router configuration data managed by said database system and derived from configuration commands supplied by a user

and executed by a router configuration subsystem before being stored in said database." *See* EID

at 46-47 (citing JX-0007 at CSI-ANI-00098149.000471-72).

(a)   Claim 19

Cisco argues:

> Second, as to claim 19, the EID conflates two different amendments
> in concluding that the "management request" language was added
> for patentability. There were two additions to claim 19 in the Office
> Action reply in question: (1) the "management request" element,
> and (2) the type of and source of data that is externally managed.
> *See, e.g.,* JX-0001 ('537 patent) at 16:57-63 ("said router
> configuration data managed by said database system and derived
> from configuration commands supplied by a user and executed by a
> router configuration subsystem before being stored in said
> database").   In the office action immediately preceding the
> amendment in question, the Examiner rejected claims 1 and 10
> (containing the management request requirement) and claim 19 (not
> yet containing the management request requirement) on exactly the
> same basis. *See, e.g.,* JX-0007 ('537 Patent File History) at 00426
> ("Claims 10, 19, 22, 23, 32, 35, 36, and 45 are also rejected since
> these claims contain the same or substantially the same subject
> matter as claimed in claim 1."). It is therefore incorrect for the EID
> to find, as it did, that the applicant added the management request
> limitation to claim 19 for reasons of patentability. No reasonable
> applicant would attempt to make a claim patentable by adding an
> element already present in another already-rejected and otherwise
> identical claim, where all claims were just rejected on exactly the
> same basis by the PTO.

> By contrast, the type and source of data limitations were not present
> in claims 1 and 10, and were added to claims 1 and 10 when they
> were added to claim 19 and using the exact same language in each
> claim. It is this element ("said router configuration data managed
> by said database system and derived from configuration commands
> supplied by a user and executed by a router configuration subsystem
> before being stored in said database") that was added for
> patentability and, in fact, resulted in patentability. By contrast, the
> management request element merely added what was already
> existing in other claims to make them consistent.

> . . .

> The EID reaches its result by conflating the two different
> amendments within the same Office Action response and ascribing

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the rationale stated for one amendment to the other. The EID correctly finds that EID the phrase "said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" was added for reasons of patentability, based in part on the applicant's statement that "the present invention performs this claim limitation to manage router configuration data in conjunction with a centralized database." EID at 45-46. However, the EID incorrectly and without explanation concludes that this means that the "management request" element was added for reasons of patentability as well. The applicant's statement has nothing to do with a "management request" and does not support the finding that the addition of that element was made to claim 19 for reasons of patentability—the EID cannot impute the rationale for one amendment to another.

Cisco Rem. Br. at 40-43 (emphasis omitted).

Arista argues that Cisco amended the claims to overcome the rejection based on Ciscon and that the Examiner allowed the claims only after Cisco offered the amendment. Arista Rem. Br. at 45-47. Arista also argues that "even if there were any ambiguity about why Cisco amended claim 19—and there is not—'*Warner-Jenkinson* presumes that the patentee had a substantial reason relating to patentability,' and Cisco has not overcome this presumption." *Id.* at 47 (citing *Festo II*, 344 F.3d at 1366-67). Arista also faults Cisco for citing "no expert testimony about the redesigned EOS and how the alleged equivalent is unforeseeable or that the rationale underlying the amendment bore no more than a tangential relationship to the equivalent." *Id.* at 47.

The Staff argues, in part:

But the evidence shows that the amendment was made for a substantial reason relating to patentability. As the excerpts show, Cisco first tried to distinguish Ciscon from its patent application. When that led to another rejection, Cisco repeated the same argument, but amended the claim. This demonstrates that the amendment was made for a substantial reason relating to patentability. The amendment added a requirement that the "managing subsystem" issues a "management request."

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> Furthermore, to the extent there is any remaining ambiguity—and there is not—the *Warner-Jenkinson* presumption applies and the amendment is presumed to have been made for a substantial reason relating to patentability. Cisco has not rebutted the presumption. Their argument is that the amendment was made "simply to bring claim 19 into line with claims 1 and 10," which already had a management registration request. Cisco IPHB at 70. But this is not why the amendment was made. As discussed above, the amendment was made after Cisco unsuccessfully tried to distinguish Ciscon. Cisco's position also ignores the fact that, even though claims 1 and 10 originally had a management registration request limitation, they must be interpreted consistent with claim 19 for purposes of the doctrine of equivalents. *Builders Concrete*, 757 F.2d at 260. As a result, the management registration requests originating from somewhere other than the managing subsystem are not equivalents for all asserted claims.

Staff Rem. Br. at 31 (emphasis omitted).

In reply, Cisco maintains that "the addition of the 'management request' language was made to bring claim 19 in line with claims 1 and 10[.]" Cisco Rem. Reply at 28.

Having considered the parties' arguments, the administrative law judge has determined that prosecution history estoppel bars Cisco's doctrine of equivalents argument.

First, both aspects of Cisco's amendment to claim 19 (in Cisco's words, "(1) the 'management request' element, and (2) the type of and source of data that is externally managed" (*see* Cisco Rem. Br. at 40)) are substantially related to patentability. Before the September 6, 2005, amendment, the Examiner had issued five office actions and three advisory actions. *See generally* JX-0007 (bulleted summary provided in the EID at 43-44). After the amendment, the Examiner issued another rejection, to which the applicant replied:

> Independent claims 1, 10, and 19 (all pending independent claims) were previously amended to include the claim limitation of
>
> > transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide

> external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and **executed by a router configuration subsystem before being stored in said database**
>
> . . .
>
> Finally, there is no disclosure, teaching, or suggestion in Ciscon that execution of user-supplied configuration commands results in configuration data that is stored in a database. As the present invention performs this claim limitation to manage router configuration data in conjunction with a centralized database, the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands, not properties of data structures, to more effectively configure routers deployed in a network.

JX-0007 at CSI-ANI-00098149.000506-07 (bold emphasis added by applicant). In explaining that "the present invention performs this claim limitation to manage router configuration data" and that "the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands" the applicant related the amendment to patentability. The Notice of Allowance also supports the conclusion that the amendment is related to patentability, as the Notice of Allowance explains that a managing subsystem that externally manages router configuration data differed from the prior art:

> Claims 1-22 are allowed in view of the Applicant's arguments and the cited prior art of record. The independent claims recite registering a managing subsystem with a centralized database to externally manage router configuration data derived from configuration commands supplied by a user which, in addition to the rest of the claim limitations, are distinguished from the prior art.

JX-0007 at CSI-ANI-00098149.000535. Further, the applicant's many unsuccessful attempts to argue over Ciscon also confirm that the amendment was critical to obtaining allowance. Finally, although Cisco argues that the applicant amended claim 19 "to bring claim 19 in line with claims 1 and 10," Cisco does not point to any page in the prosecution history where the prosecuting

attorney made any such claim. Accordingly, the administrative law judge finds that the

amendment was substantially related to patentability, and that the *Festo* presumption applies to

claim 19.

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(b)   *Claims 1 and 10*

</div>

Cisco argues:

> First, the EID is incorrect that claims 1 and 10 are subject to
> amendment-based prosecution history estoppel, because the
> relevant limitation that is a focus of the remand was not added to
> those claims during prosecution. Claims 1 and 10 of the application
> as originally filed included the "management registration request"
> element from the outset. *See, e.g.*, JX-0007 ('537 Patent File
> History) at 0038-52; CX-5002C (Almeroth WS) at Q46-54, 218. As
> such, whether or not prosecution history estoppel is found to apply
> to claim 19, claims 1 and 10 should not be subject to any estoppel,
> as courts have determined in similar situations. Federal Circuit law
> mandates that "there is no surrender of territory as to unamended
> limitations that were present in the original claim." *Honeywell
> Intern. Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1144
> (Fed. Cir. 2004); *see also Molten Metal Equipment Innovations, Inc.
> v. Metaullics Sys. Co., L.P.*, 56 F. App'x 475, 481 (Fed. Cir. 2003)
> (denying application of prosecution history estoppel on a limitation
> present in a claim as filed, where that limitation was added to
> another claim during prosecution). Therefore, the amendment-
> based estoppel has no applicability to claims 1 and 10.

> Arista argues that amendment-based estoppel applies to claims 1
> and 10 by relying on *Builders Concrete v. Bremerton Concrete
> Prods. Co.*, 757 F.2d 255, 260 (Fed. Cir. 1985). *See* Resp. PrHB at
> 100; Staff PrHB at 36-37. But *Builders Concrete* is easily
> distinguishable. As an initial matter, *Builders Concrete* was decided
> in 1985, well before the Supreme Court's decision in *Festo*, so the
> case does not specify whether it is applying "amendment-based"
> estoppel or "argument-based" estoppel. In reality, however, the
> court applied "argument-based" estoppel to the unamended claims.
> *Builders Concrete*, 757 F.2d at 259-260. In *Builders Concrete*, the
> applicant could only overcome prior art by arguing that the claims
> were directed to "transverse passages opening upwardly," as the
> examiner explained during an interview. *Id.* While Claim 10
> already contained that requirement, the other claims did not and
> were amended. *Id.* In litigation, [the plaintiff] asserted claim 10
> under the doctrine of equivalents, arguing that it covered products

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with a transverse passage opening to the side instead of upwardly. *Id.* Although claim 10 had not been amended, the court nonetheless applied prosecution history estoppel because the applicant's arguments during prosecution relinquished the "precise subject matter" over which it now asserted equivalence. *Id.* *Builders Concrete* is thus inapplicable here because Arista's equivalent has no relationship to the arguments the applicant advanced during prosecution to overcome the examiner's rejection around Ciscon. *See supra* § IV.B.2.b. Thus, argument-based estoppel which was at issue in *Builders Concrete* would not apply here to foreclose the equivalent in question.

Cisco Rem. Br. at 39-40.

Arista argues that given the facts presented by this prosecution history, the surrender from the narrowing amendment for claim 19 is imputed to claims 1 and 10. Arista Rem. Reply at 23. Arista also distinguishes *Honeywell* and *Molten Metal Equipment*. *Id.* at 23-24 (citing *Biagro Western Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1305 (Fed. Cir. 2005) and *Glaxo Wellcome, Inc. v. Impax Labs., Inc.*, 356 F.3d 1348, 1356 (Fed. Cir. 2004)).

Similarly, the Staff argues that "even though claims 1 and 10 originally had a management registration request limitation, they must be interpreted consistent with claim 19 for purposes of the doctrine of equivalents . . . As a result, the management registration requests originating from somewhere other than the managing subsystem are not equivalents for all asserted claims." Staff Rem. Br. at 31.

The administrative law judge finds that the *Festo* presumption applies to claims 1 and 10. The applicant treated independent claims 1, 10, and 19 jointly in responding to the Examiner's rejection and described the amendment as relating to "the present invention" rather than any particular claim or claims, thus tying all of the independent claims together. *See* JX-0007 at CSI-ANI-00098149.00506-07. Further, Federal Circuit law instructs that "[p]rosecution history estoppel, however, is not limited to the applicant's own words, but may embrace as well the

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applicant's responses to the examiner's actions. If the patentee does not rebut an examiner's

comment or acquiesces to an examiner's request, the patentee's unambiguous acts or omissions

can create an estoppel." *See Glaxo Wellcome, Inc. v. Impax Labs., Inc.*, 356 F.3d 1348, 1357

(Fed. Cir. 2004).[16] Here, the applicant's responses—treating independent claims 1, 10, and 19

jointly and arguing against Ciscon, many times, and failing to overcome Ciscon until it amended

the claims along with an argument about the "present invention"—give rise to estoppel for

claims 1, 10, and 19.

<p style="text-align:center;">(2) Rebuttal to the Festo Presumption</p>

The Federal Circuit explained that the Supreme Court articulated three ways in which

prosecution history estoppel may not apply to a given case:

> As indicated above, the Court identified the three ways in which the
> patentee may overcome the presumption. Specifically, the patentee
> must demonstrate that [(1)] the alleged equivalent would have been
> unforeseeable at the time of the narrowing amendment, that [(2)] the
> rationale underlying the narrowing amendment bore no more than a
> tangential relation to the equivalent in question, or that [(3)] there
> was "some other reason" suggesting that the patentee could not
> reasonably have been expected to have described the alleged
> equivalent.

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[16] Cisco's reliance on *Honeywell* is not persuasive because the applicant added the management registration request limitation at issue to claim 19 without distinguishing it from the same limitation contained in the other claims. The *Honeywell* case does not stand in opposition to precedent in which it was held that "[t]he presumption of surrender 'applies to all claims containing the [added] [l]imitation, regardless of whether the claim was, or was not, amended during prosecution.' . . . 'The fact that the [the limitation in question] was not itself amended during prosecution does not mean that it can be extended by the doctrine of equivalents to cover the precise subject matter that was relinquished in order to obtain allowance of [another claim].'" *Felix v. Am. Honda Motor Co.*, 562 F.3d 1167, 1183 (Fed. Cir. 2009) (quoting *Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc.*, 347 F.3d 1314, 1325 (Fed. Cir. 2003) and *Builders Concrete, Inc. v. Bremerton Concrete Prods. Co.*, 757 F.2d 255, 260 (Fed. Cir. 1985) and finding estoppel).

Festo II, 344 F.3d at 1368. Cisco presents argument with respect to the second *Festo* exception only. Cisco Rem. Br. at 43-44.

Cisco argues that:

> Third, even if the ALJ were to find that the amendment were made for reasons of patentability, estoppel does not apply if the rationale underlying the amendment bore no more than a tangential relation to the equivalent in question. *Festo*, 344 F.3d at 1368. That is the case here. The applicant argued with respect to claims 1 and 10, and subsequently claim 19, that the request in the Ciscon reference was a "request to be served," whereas the claims contained a request to serve, *i.e.*, a request to manage. *See, e.g.*, JX-0007 ('537 Patent File History) at 0413; CX-5713 (Ciscon) at 2:53-66. Thus, if anything, the patentee disclaimed requests to "be served" by local router—the opposite of a request to serve as a managing subsystem. *See, e.g.*, CX-5713 (Ciscon) at Abstract ("Each router process includes a connection table listing its connections with all other router and application processes, as well as an interest table listing the type of objects that each of the other processes are interested in receiving."), 2:53-66 ("Each application process registers its interest in receiving certain types of objects with its local router."), 8:57-59 ("If an application or router process desires to receive data of a particular type, it registers an interest by invoking a routine . . . ."). This distinction bears no relationship to the equivalent at hand, [
>
>], having nothing to do with and no relationship at all to prior art that requested the opposite. The question here is whether it is equivalent to the claim limitations at issue to send the request from the [
>
>] that it is a request and what data is being identified for external management. None of the issues in the equivalents question here have anything to do with what was being distinguished in the prosecution history, which was that a "request to be served" is different from the claimed request to serve.
>
> The EID's rationale for why the second *Festo* exception does not apply suffers from the same problem as stated above—it conflates the two amendments. The only thing the EID points to is that "[t]he applicant argued that, with regard to the amended claim, 'the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands, not properties of data structures, to more effectively configure routers

deployed in a network' and that the applicant argued that "Ciscon fails to disclose, teach or otherwise suggest executing configuration commands before storing them in a database." EID at 51 n.16. These statements concern the amendment adding "said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" and has absolutely nothing to do with the amendment adding "management request" to claim 19. Again, the EID cannot impute rationale from one amendment (relating to the type of and source of data stored and managed) to another amendment (adding "management request" to claim 19).

Cisco Rem. Br. at 43-44 (emphasis omitted).

Arista argues:

> Cisco next argues (again with no expert testimony) that its "rationale" for narrowing its claims was not more than tangentially related to the alleged equivalent (the [   ]). Cisco Pre Hrg. Br. at 143; Cisco Post Hrg. Br. at 71. Cisco argues that during prosecution, it "disclaimed requests to 'be served' by a local router." Cisco Pre Hrg. Br. at 143; *see also* Cisco Post Hrg. Br. at 71. This only proves Arista's point. Cisco's disclaimer prevents it from asserting that the [   ] is equivalent to the "management [registration] request." CX-5002C (Almeroth WS) at Q/A 123. The [   ], and is thus a command to "be served," namely, with a [   ]. *See supra* at Section IV.B.2. Again, as Dr. Almeroth admits, "[t]he information that's provided to the agent as a [   ] from Sysdb is in the form of an object." Hrg. Tr. (Almeroth) at 113:3-6.

Arista Rem. Br. at 48.

The Staff argues that the amendment to claim 19 was made for a substantial reason relating to patentability. Staff Rem. Br. at 31.

Cisco replies:

> Arista's arguments regarding the second *Festo* exception, that the amendment is no more than tangentially related to the equivalent in question, misses the point for several reasons. Arista argues that the [   ], and that this is more than tangentially related to the alleged disclaimer as to the functionality of the Ciscon reference. But the [   ] is not

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Cisco's alleged equivalent, and so it is not relevant. Cisco's alleged
equivalent is that the [   ] transmission of the
[   ] to Sysdb results in [   ] being put in place
for that agent, which is at least equivalent to the management
registration request of the claims. The transmission of the [
        ] is a request to serve as an external manager of data, which is
no more than tangentially related to the request in Ciscon (which
Arista alleges the applicant disclaimed), which is a request to be
served with data. Further, even if Arista were correct that Cisco's
alleged equivalent is a request for a [   ], the request in Ciscon
is also no more than tangentially related to that equivalent as well.
Ciscon taught a request to be served with data, sometimes referred
to as data objects. *See, e.g.*, Compl. PoHB at 71-72 (citing CX-5713
(Ciscon) at 8:57-59 ("If an application or router process desires to
receive data of a particular type, it registers an interest by invoking
a routine . . . ."). There is no more than a tangential relationship, to
the extent there is any relationship at all, between requesting data
and [   ], and so Arista's argument fails for that
reason as well.

Cisco Rem. Reply at 28-29 (emphasis omitted).

Having considered the parties' arguments, the administrative law judge has determined

that Cisco has not shown the second *Festo* exemption applies. As an initial matter, the

administrative law judge notes that Cisco's opening brief does not cite the prosecution history,

any exhibits, or any testimony.

Apart from failing to cite any evidence, the administrative law judge also finds that the

rationale underlying the amendment of claim 19 is related to the equivalent in question. For

example, the [   ]" rather than a request to

manage, whereas the amended claims pertain to requests to manage data. In other words, the

"management request" amendment bears a direct and substantial relationship to the alleged

equivalent. Accordingly, the administrative law judge has determined that Cisco has fallen short

of its burden of showing that the rationale for the amendment bore no more than a tangential

relation to the equivalent in question.

(3) Scope and Effect of the Estoppel

The EID found that estoppel barred Cisco's doctrine of equivalents arguments. EID at 99

("Amendment-based estoppel applies to Cisco's doctrine of equivalents arguments").

Specifically, the EID stated:

> The prosecution history shows that the patentee surrendered subject matter pertaining to management requests and databases that are configured to store router configuration data and "delegate management of router configuration data to *a management subsystem that requests to manage router configuration data* said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." *See* JX-0007 at CSI-ANI-00098149.000471-72 (emphasis added); *Festo II*, 344 F.3d at 1367 ("the third question in a prosecution history estoppel analysis addresses the scope of the subject matter surrendered by the narrowing amendment"); *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1141 (Fed. Cir. 2004) (finding an amendment adding a new limitation giving rise to estoppel). In other words, the surrendered scope relates to equivalents of databases that delegate management to a managing subsystem that uses management requests. See *Festo II*, 344 F.3d at 1372 (finding disclaimer of "devices that include other than two sealing rings"). This surrender applies not only to claim 19, but also to claims 1 and 10. *See id.* at 1370 n.4 ("the *Festo* presumption of surrender and its rebuttal apply to all granted patents and to all pending litigation that has not been concluded with a final judgment, including appeals."); *Builders Concrete, Inc. v. Bremerton Concrete Prods.*, 757 F.2d 255, 260 (Fed. Cir. 1985).

Id. at 46-47 (emphasis added in the EID).

Arista and the Staff argue that estoppel applies and that it bars Cisco's equivalency

arguments. *See* Arista Rem. Br. at 44 ("Prosecution history estoppel forecloses infringement

under the doctrine of equivalents."); Staff Rem. Br. at 31 ("Because of this estoppel, the

redesigned EOS does not infringe under the doctrine of equivalents."). Cisco's arguments do not

provide a sufficient rationale for modifying the EID's conclusions regarding the scope and effect

of the estoppel. Indeed, Cisco's brief and reply focus on arguing that estoppel does not apply (or

that there was no surrender of scope) rather than fully developing an argument concerning what conclusions must be drawn if estoppel is found. *See generally* Cisco Rem. Br. at 39-45 (Section IV(B)(2)); Cisco Rem. Reply at 27-29 (Section II(B)(2)). In other words, Cisco does not address the third question in a prosecution history estoppel analysis, which assesses "the scope of the subject matter surrendered by the narrowing amendment." *See Festo II*, 344 F.3d at 1367.

Accordingly, the administrative law judge finds that the patentee surrendered subject matter pertaining to management requests and databases that are configured to store router configuration data and "delegate management of router configuration data to *a management subsystem that requests to manage router configuration data* said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." *See* JX-0007 at CSI-ANI-00098149.000471-72 (emphasis added). Thus, amendment-based estoppel applies to Cisco's doctrine of equivalents arguments.

b) *Function-Way-Result Analysis – Managing Subsystem*

Cisco argues that Arista's "Redesigned System Infringes The '537 Patent Under The doctrine of equivalents[.]" Cisco Rem. Br. at 31 (Section IV(B)); Cisco Rem. Reply at 22 (Section II(B)(1)). Cisco does not explicitly clarify what claim(s) or limitation(s) it believes Arista infringes under the doctrine of equivalents. For example, the beginning of Cisco's brief identifies two limitations for consideration—*e.g.*, "Whether Arista's redesigned products infringe *the 'managing subsystem' and 'management registration request' limitations* of the asserted claims under the doctrine of equivalents" is one of the "ISSUES TO BE DECIDED." *See* Cisco Rem. Br. at 14 (emphasis added); *see also id.* at 30 ("As with literal infringement, Arista contends its redesigned products do not infringe the 'management subsystem' and 'management

registration request' limitations under the doctrine of equivalents by masking improper attempts

to limit the scope of the claims as non-infringement arguments."). The substance of Cisco's

brief, however, focuses on the language "transmitting a management registration request by said

first managing subsystem to said database subsystem" (which appears in claims 1 and 10 only),

which Cisco previously argued was a single limitation. *See, e.g.*, Cisco Rem. Br. at 31

("Transmitting an [

] is unquestionably equivalent to 'transmitting a management registration request by said

first managing subsystem to said database subsystem,' to the extent Arista attempts to say it is

not literally the same."), 33-34, 38.[17] Further, Cisco's brief and reply frequently move between

discussing "the limitation" and "the relevant limitations" without completely clarifying the

arguments. For example:

- In a heading, Cisco argues that "Arista's Redesigned Products Perform Substantially The Same Function In Substantially The Same Way To Obtain The Same Result As The ***Disputed Claim Limitations***[.]" Cisco Rem. Br. at 31 (emphasis added); *see also* Cisco Rem. Reply at 22 (the heading is used again, verbatim).

- In framing the issue to be analyzed, Cisco argues that "the analysis needs to consider whether [   ] plays the same role as a managing subsystem in the context of ***the specific limitation***, *i.e.*, transmitting the registration request." Cisco Rem. Br. at 32 (emphasis added).

- In arguing about "function," Cisco asserts that "The 'function' of ***the limitation at issue*** is to transmit a registration request to Sysdb to request to register a subsystem for external management." Cisco Rem. Br. at 32 (emphasis added).

- In arguing about the "way," Cisco asserts that "The EID did not make a finding about how the 'way' of ***the relevant limitations*** should be defined." Cisco Rem. Br. at 33-34 (emphasis added).

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[17] Cisco's post-hearing brief following the enforcement hearing stated: "there is, in actuality, only one claim limitation at issue: 'transmitting a management registration request by said first managing subsystem to said database subsystem,' and Arista's attempt to argue otherwise is legally improper." Cisco's Enf. Post-Hr'g Br. at 62 n.16.

- In its Reply, in arguing about the "function," Cisco argues that "Arista argues that the "function" of *the limitations at issue* is that "the managing subsystem sends a request to the database subsystem. But this merely restates the claim language; it does not perform '[a]n analysis of the role played by each element in the context of the specific patent claim.' . . . Cisco's recitation of the function performs that precise analysis. The 'function' of *the limitation at issue* is to transmit a registration request to Sysdb to request to register a subsystem for external management." Cisco Rem. Reply at 22.

- In a footnote, Cisco argues "When viewing *the limitation* in context, as the Supreme Court has mandated . . . it is clear that the request and the registration are interrelated. To address Arista's and Staff's mischaracterizations, Cisco has clarified its position regarding the "function" *of the limitations at issue* in its opening brief." Cisco Rem. Reply at 23 n.13 (emphasis added).

- In critiquing Arista, Cisco argues that "Arista makes no attempt to explain why the redesign does not perform its operations the same way or in substantially the same way *as the claim limitations*, and its arguments cannot be accepted, because they give no greater scope to DOE than to literal infringement." Cisco Rem. Reply at 23-24 (emphasis added).

- In further critiquing Arista, Cisco argues that Arista "merely restates the claim language and attempts limit DOE to literal infringement, rather than analyzing the result of *the limitation* in the context of the claim." Cisco Rem. Reply at 24 (emphasis added).

As Cisco's list of "ISSUES TO BE DECIDED" presents two limitations for consideration (*i.e.*, "the 'managing subsystem' and 'management registration request' limitations of the asserted claims"), the administrative law judge will decide both issues, even though Cisco's brief from the enforcement hearing only identified one limitation.

Having considered Cisco's brief and reply, the administrative law judge has determined that Cisco has not shown that the redesigned products meet a "managing subsystem" limitation. In particular, Cisco, having belatedly separated "managing subsystem" from "transmitting a management registration request by said first managing subsystem to said database subsystem," does not proceed separately to address a "managing subsystem" limitation, and thus does not present a function-way-result or insubstantial-differences analysis for a particular "managing

subsystem" limitation.[18] Accordingly, it is has not been shown by a preponderance of the evidence that the redesigned products practice a "managing subsystem" limitation under the doctrine of equivalents.

> ### c) *Function-Way-Result Analysis – Management Registration Request*

Cisco argues:

> As with literal infringement, Arista contends its redesigned products do not infringe the "management subsystem" and "management registration request" limitations under the doctrine of equivalents by masking improper attempts to limit the scope of the claims as non-infringement arguments. The doctrine of equivalents analysis here is, in truth, straightforward. Transmitting [
>
>]
> unquestionably equivalent to "transmitting a management registration request by said first managing subsystem to said database subsystem," to the extent Arista attempts to say it is not literally the same.

Cisco Rem. Br. at 31. The administrative law judge previously determined that Cisco did not meet its burden, both in the enforcement proceeding and on remand, with respect to the "management subsystem" limitation alone. *See* Part II(B)(3)(b). The administrative law judge considers Cisco's arguments concerning the "management registration request" as pertaining to its arguments concerning the "only one claim limitation" it identified following the enforcement hearing, which is "transmitting a management registration request by said first managing subsystem to said database subsystem[.]" *See* Cisco's Enf. Post-Hr'g Br. at 62 n.16. Cisco committed to this position in its Petition for Review of the Initial Determination:

> Lastly, the ID commits legal error by finding that Cisco did not perform a limitation-by-limitation analysis of the function-way-result test. For example, the ID states "Cisco does not directly state

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[18] Cisco's expert, Dr. Almeroth, opined about "a single requirement" and "the element" in the portion of his witness statement that introduces his doctrine-of-equivalents testimony. *See, e.g.,* CX-5002C (Almeroth WS) at Q/A 209.

and argue the 'result' of the disputed limitation." 944E ID at 66. That, however, is incorrect. In its brief, Cisco stated that "[i]n the claims, the result is that the subsystem is registered for external management." Cisco PoHBr. at 60; *see also* Cisco Reply PoHBr at 24 ("Third, the 'way' of the claim limitations in the '537 patent is transmitting the request by the managing subsystem, which is at least insubstantially different from transmission of the [
                         ]."). Although the ID criticizes Cisco for referring generally to the result "in the claims," 944E ID at 66, it is clear from the context of Cisco's arguments that it is referring to the specific claim limitations at issue. Cisco PoHBr at 60 (stating that "the 'function' of the 'transmitting a management registration request by said first managing subsystem to said database subsystem' and 'issuing a management request to said database subsystem' claim limitations in the '537 patent is to register a subsystem for management."). *The ID even acknowledges Cisco's position that there is only one limitation at issue for the function-way-result test by citing Cisco's brief.* 944E ID at 60 (citing "Cisco Br. at 62 [*sic*: 61], n.16," which states "there is, in actuality, only one claim limitation at issue: 'transmitting a management registration request by said first managing subsystem to said database subsystem.'"). There is simply no ambiguity that Cisco's doctrine of equivalents arguments were about the specific limitation at issue, not the entire claim. The ID's persistent reliance on its incorrect conclusion to the contrary infects its equivalence analysis, further supporting review.

Cisco Pet. For Review at 25-26 (Cisco's emphasis omitted; emphasis added on "Cisco's position" of "one limitation at issue").

As with the EID, the following doctrine of equivalents analysis applies to:

- subpart a) of claim 1 (*i.e.*, "transmitting a management registration request by said first managing subsystem to said database subsystem");

- subpart (a) of claim 10 (which is identical to subpart (a) of claim 1); and

- the language "configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem" from claim 19.

To facilitate the analysis, the administrative law judge will refer to the "transmitting a

management registration request by said first managing subsystem to said database subsystem"

limitation as the "transmitting limitation."

<div align="center">(1)   Function</div>

Cisco argues:

> The "function" of the limitation at issue is to transmit a registration
> request to Sysdb to request to register a subsystem for external
> management. JX-0001 ('537 patent) at 15:28-29, 18:28-29.
> Contrary to the EID's findings, this function was not "crafted" to
> make Cisco's equivalency argument "palatable"—it is precisely
> what the claim limitation does in the context of the claims. EID at
> 60. The EID and Arista suggest that because the claim also recites
> registering elsewhere in its text, defining the "function" of the
> limitation at issue as causing or enabling that registration is
> incorrect. *Id.* ("Cisco's proposed function imposes on the
> 'registering' limitations that appear later in claims 1 and 10"). This
> needs to be reconsidered in this remand: That the claims tie together
> the transmission of the management registration request from the
> managing subsystem to Sysdb with the requirement that Sysdb
> register the subsystem for management actually confirms that the
> function of the request is to request that Sysdb register the
> subsystem for external management.
>
> This function is met by transmitting the [·   ] in the
> [   ] from the [
>   ]. As explained above, when Sysdb receives the [
>   ] Sysdb to [   ] place for that specific agent,
> so that the agent can externally manage data. Hr'g Tr. (McKusick)
> at 261:25-262:4; CX-5002C (Almeroth WS) at Q/A 208-210. This
> is not an ancillary effect, but rather the exact role the [
>   ] plays in the system Arista redesigned. Hr'g Tr.
> (McKusick) at 261:15-24 (explaining the "role" of the [
>   ]). Thus, even if Arista's arguments regarding what
> contents are required in the management registration request in
> order to literally infringe were correct, the function of the
> [   ] is irrefutably the same function as that of the
> limitation at issue.
>
> The EID's recitation of the "function" should not be adopted in this
> remand in light of the Commission's instructions for yet another
> reason: Where the request comes from is not a part of the function;

it is a part of the "way" the function is carried out. Whether the request comes from the managing subsystem, it has the same function. This further supports that Arista's redesigned products perform the same "function" as that of the claim limitation at issue.

Cisco Rem. Br. at 32-33 (emphasis omitted).

Arista argues:

> Cisco claims without evidence that "the 'function' of the 'transmitting a management registration request by said first managing subsystem to said database subsystem' claim limitation in the '537 patent is to register an agent for management." Cisco Pre. Hrg. Br. at 130; *see also* Cisco Post Hrg. Br. at 60. But this conflates the claim (which never mentions agents) with the accused product (which uses agents). Worse, it confuses the function of one limitation with an entirely separate limitation of the claims. The function of "transmitting a management registration request by said first managing subsystem to said database subsystem" is, as the claim language itself makes plain, that the managing subsystem sends a request to the database subsystem. JX-0001 at cl. 1; *see also id.* at cls. 10, 19; RX-5129C (McKusick RWS) at Q/A 421. By contrast, "registering" a managing subsystem (which Cisco argues is the "function") is a separate, discrete limitation of claims 1 and 10 (step c), and is similarly addressed in the separate limitation of "delegat[ing] management" to a management subsystem in claim 19 (element c). JX-0001 ('537 patent) at cls. 1, 10, 19. The function of having a managing subsystem transmit a management request simply does not exist in the redesigned EOS, where instead, [
>
>   ] is not a
> management request. *Supra* at Section III.4; Hrg. Tr. (McKusick) at 313:4-314:6, 315:10-316:24; RX-5129C (McKusick RWS) at Q/A 421. This disparity in function alone is fatal to Cisco's equivalents theory.

Arista Rem. Br. at 50-51.

The Staff argues:

> After a lengthy analysis of the '537 patent, the prosecution history, the law, and the parties' arguments, the EID held that the redesigned EOS does not infringe under the Doctrine of Equivalents. EID at 37-68. This holding was both correct and well-supported. Nothing in the record has changed and so neither should the EID's carefully considered conclusion.

Staff Rem. Br. at 26; *see also id.* at 34, 37 ("The EID correctly held that there is no infringement

. . . under the doctrine of equivalents.").

Having considered the parties' arguments, the administrative law judge has determined

that the function of the transmitting limitation (*i.e.*, "transmitting a management registration

request by said first managing subsystem to said database subsystem") is to send a management

request from a managing subsystem to a database subsystem. Cisco's proposal for the function

enlarges that scope of the limitation because Cisco's proposal treats a [

] in the redesigned products) as a management request.[19] Arista's argument that the

function is "that the managing subsystem sends a request to the database subsystem" neither

unduly enlarges nor narrows the scope of the functional equivalency.

Moreover, the evidence does not support finding that the [   ] is

equivalent to transmitting a management request, much less transmitting a management request

from a managing subsystem to the database subsystem. Instead, in the redesigned products, the

"command is sent by an entity that is not a managing subsystem." RX-5129C (McKusick RWS)

at Q/A 421. Indeed, the redesigned products do not use managing subsystems as disclosed and

claimed in the '537 Patent. *See* Part II(B)(2)(a)(4).

Further, the complexity of the redesigned products, compared to the claimed invention,[20]

is probative evidence that shows this aspect of the redesigned products is not equivalent to, and

---

[19] For example, Cisco's expert testified that the function pertains to management: "Q210. What is the first element of the analysis, and what is your opinion? A210. . . . The function is to cause registration for management for the agent." CX-5002C (Almeroth WS) at Q/A 210.

[20] For example, claims 1 and 10 pertain to a "method for reducing computational overhead." *See* JX-0001 at 15:22-23 (claim 1), 16:47-48 (claim 10); *see also* Cisco Rem. Br. at 36 ("The invention is a system that reduces computational burden on a centralized database."). The phrase "reducing computational overhead in a centralized database system" was added during prosecution. *See* JX-0007 at CSI-ANI-00098149.000465-.00468.

not insubstantially different from, the transmitting limitation's management registration requests.

See, e.g., RX-5131C (Sweeny RWS) at Q/A 58; Sweeny Enf. Tr. at 249-253; RX-5129C

(McKusick RWS) at Q/A 417-19.

Accordingly, the administrative law judge finds that the redesigned products do not

perform substantially the same function as the transmitting limitation and that the difference

between the redesigned products and the transmitting limitation is substantial.

(2) Way

Cisco argues:

> The EID did not make a finding about how the "way" of the relevant
> limitations should be defined. Instead, the EID found that "Cisco
> d[id] not directly state and argue the 'way' in which the disputed
> limitation operates." But Cisco did state the "way" and did focus its
> analysis on the relevant limitations, not on the claims generally.
> Compl. Pet. at 25-26; Cisco Reply PoHBr at 24 ("Third, the 'way'
> of the claim limitations in the '537 patent is transmitting the request
> by the managing subsystem, which is at least insubstantially
> different from [
>].").
>
> On the merits, the parties largely agree on what the "way" is:
> transmitting the request by the managing subsystem.

Cisco Rem. Br. at 33-34. Cisco then argues against affording "the claims identical scope for

purposes of both literal infringement and the doctrine of equivalents." *Id.* at 34 (emphasis

omitted). Cisco further argues:

> As explained above, [
>
>   ]. Even if the ALJ were
> to change course and find that [   ] not part of the
> managing subsystem, thereby limiting the managing subsystem to
> the agent, there is no substantial difference between [
>
>   ] and transmitting it from the agent itself. As
> explained above, there is a separate, [

] is thus connected to
that agent in function, architecture, and time. The simple and correct
answer is that sending the message from a message from an entity
closely related to the managing subsystem plays exactly the same
role as sending the message from the managing subsystem.

Id. at 35. In total, the "way" section of Cisco's brief cites Dr. McKusick's witness statement and

just seven lines of the hearing transcript. *Id.* at 33-38 (citing RX-5129C (McKusick RWS) and

Almeroth Enf. Tr. 181:18-24).[21] The "way" section of Cisco's Reply fails to cite any evidence.

See Cisco Rem. Reply at 23-24 (no evidence is cited).

Arista argues, in part:

> Cisco spends most of its energy attempting to liken the "way" in
> which the claims require a managing subsystem to send a
> management request to the way in which, in the redesigned EOS,
> [   ]. This is unavailing. The
> way in which the redesigned EOS works unambiguously does not
> involve a managing subsystem sending a management request to a
> database subsystem.   [
>
>   ]. RX-5129C (McKusick RWS)
> at Q/A 422.

Arista Rem. Br. at 51-52.

Having considered the parties' arguments, the administrative law judge has determined

that Cisco has not met its burden of showing that the redesigned products infringe under the

doctrine of equivalents. In particular, the portions of Dr. McKusick's witness statement that

---

[21] Dr. Almeroth testified as follows:

> Q. And when you execute [   ], how long
> does it take before the agent is up and running and managing?
>
> A. [
>
>   ].

Almeroth Enf. Tr. 181:18-24.

Cisco cites—RX-5129C (McKusick RWS) at Q/A 362, 422—opine that "[

] is not equivalent to the management registration request of the claims" and that "the

way" aspect of the function-way-result test is not satisfied. RX-5129C (McKusick RWS) at

Q/A 362, 422. Likewise, the seven lines of the transcript that Cisco cites—Almeroth Enf. Tr.

181:18-24—are not sufficient to show that the redesigned products operate in substantially the

same way as the transmitting limitation; rather, at best, it shows that the redesigned products are

[   ] in achieving the same result. In sum, the scant evidence Cisco cites is not

sufficient to carry its burden.

In addition, the way the transmitting limitation performs its claimed function is

substantially different from the way that the redesigned products operate. To begin, the "way"

the transmitting limitation performs the function is by sending a management request to the

database subsystem. The [   ] in the redesigned products

are not management requests (because they do not request to register to provide external

management services). Dr. McKusick's testimony provides a concise explanation that carries the

day:

> **422. Q: Are the ways in which the functions are performed**
> **substantially the same under the function-way-result test?**
>
> A: No. The function of the claim limitation is performed by the
> managing subsystem sending the request to the database subsystem.
> In contrast, [
>
>].

RX-5129C (McKusick WS) at Q/A 422. Accordingly, the administrative law judge finds that the

redesigned products do not operate in substantially the same way as the transmitting limitation

does. The administrative law judge also finds that the difference between the redesigned

products and the transmitting limitation, with respect to the way in which the redesigned

products and the transmitting limitation operate, is substantial.

(3)   Result

Cisco's entire argument regarding the "result" follows:

> The EID stated that "the result of the 'transmitting a management registration request by said first managing subsystem to said database subsystem' is that a management request is sent to a database subsystem." EID at 66. This is exactly what happens as a result of [   ] to Sysdb. As explained above, [   ], which either is, or is insubstantially different from, a management registration request, to Sysdb. The EID's analysis was based on an incorrect finding that "the redesigned EOS has removed [
>   ]." *Id.* at 67. In the redesign, however, it is undisputed that Sysdb [   ] data for particular agents, as explained in detail above in the literal infringement section. This fact is absolutely uncontested and admitted by Arista—as all witnesses confirmed, Sysdb receives the [   ] and as a result puts [   ] in place for that agent.
>
> The EID also stated that "[   ] and the [
>   ], amongst others, do not contain equivalent functionality" to [   ]. *Id.* at 67. The EID appears to be reasoning that the message that is sent is not equivalent to a management request, but for the reasons discussed with respect to the "way," that is incorrect. To the extent the EID was reasoning that [   ] can avoid infringement, that is also incorrect as stated above, as it is merely a [   ] and not a way to avoid literal infringement, let alone infringement under the doctrine of equivalents.

Cisco Rem. Br. at 38-39.

Arista argues:

> Cisco next claims that the "result" of this claim limitation is that "the subsystem is registered for external management." Cisco Pre Hrg. Br. at 130; *see also* Cisco Post Hrg. Br. at 60. This "result" is precisely the same thing—registration of the managing subsystem— that Cisco also argues is the "function" of the claim limitation, and is wrong for similar reasons. Again, "registration" is an entirely discrete claim limitation and is not the result of this single limitation.

Rather, the "result" of "transmitting a management registration request by said first managing subsystem to said database subsystem" is that the database subsystem receives a request from the managing subsystem, and the claim continues in other limitations to show that the database subsystem then registers the managing subsystem to manage data. RX-5129C (McKusick RWS) at Q/A 423. Such "results" do not exist in the redesigned EOS. In the redesigned EOS, the result of [

]. *Id.* [

]. *See* Hrg. Tr. (Duda) at 359:12-20; RX-5131C (Sweeney RWS) at Q/A 55-57, 72, 75, 85, 104-05; RX-5129C (McKusick RWS) at Q/A 49, 53-67, 148, 151, 158, 224-27; Hrg. Tr. (McKusick) at 299:2-7.

Arista Rem. Br. at 51.

As an initial matter, the administrative law judge finds that Cisco has not met its burden of showing that the redesigned products infringe. In particular, Cisco's brief does not cite any "result" evidence, and the "result" portion of its reply cites solely to Dr. McKusick's witness statement. *See* Cisco Rem. Br. at 38-39 (no evidence is cited); Cisco Rem. Reply at 24-25 (citing RX-5129C (McKusick RWS) at Q/A 362 only). This is not sufficient to show that the redesigned products infringe under the doctrine of equivalents.

In addition, the administrative law judge finds that there is substantial difference between the result of the transmitting limitation and the result realized by the redesigned products. The EID found that "the result of the 'transmitting a management registration request by said first managing subsystem to said database subsystem' is that a management request is sent to a database subsystem." EID at 66. Cisco and Arista agree with this finding. *See* Cisco Rem. Br. at 38 (after quoting the EID at 66, Cisco states, "This is exactly what happens as a result of

[   ]."); Arista Rem. Br. at 51

("Rather, the 'result' of "[

].""). Thus, the inquiry narrows

to whether the redesigned products achieve substantially the same result. Having considered the

parties' arguments, the administrative law judge has determined that the redesigned products do

not do so.

In particular, the evidence shows that the redesigned products effectuate a different result

than the result of the transmitting limitation. Dr. McKusick explained the difference between the

result of the transmitting limitation and the result of the redesigned products as follows:

> **423. Q: Are the results of the functions substantially the same
> under the function-way-result test?**
>
> A: No. The result is the [
>
>].
>
> Another result of the claimed limitation is that the managing
> subsystem has control over managing data, through request-based
> registration. This allows new agents to be added without the need
> to provide the centralized database with information about the agent
> in advance. [
>
>].

RX-5129C (McKusick RWS) at Q/A 423. Dr. Almeroth's testimony contends that [

] sufficient for finding equivalency. *See* CX-5002C (Almeroth WS) at Q/A 211.

However, the redesigned products employ [

]. *See* RX-5129C (McKusick RWS) at

Q/A 423; *see also id.* at Q/A 30-35 ("[

]."); *see also* RX-5131C (Sweeny RWS) at Q/A 55-56, 64-71 ("[

]."). Accordingly, the administrative law judge

finds that the redesigned products do not perform substantially the same function as the

transmitting limitation, in substantially the same way as the transmitting limitation, or achieve

substantially the same result as the transmitting limitation. The administrative law judge also

finds that the difference between the redesigned products and the transmitting limitation, with

respect to the result of the redesigned products and the transmitting limitation, is substantial.

d)   *Vitiation*

Cisco's entire argument concerning vitiation follows:

> Similarly, Arista's argument that to find equivalence would "vitiate"
> the requirements for the request to come from the managing
> subsystem is an improper application of the "vitiation" doctrine,
> because it would render the doctrine of equivalents nothing more
> than a repeat of literal infringement and thus meaningless. *See, e.g.,*
> *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (Fed. Cir.
> 2012) ("[T]he vitiation test cannot be satisfied by simply noting that
> an element is missing from the claimed structure or process because
> the doctrine of equivalents, by definition, recognizes that an element
> is missing that must be supplied by the equivalent substitute. If mere
> observation of a missing element could satisfy the vitiation
> requirement, this 'exception' would swallow the rule.").

Cisco Rem. Br. at 36.

Arista's entire argument is:

In its prehearing brief, Arista explained that Cisco's attempt to equate [

] with the '537 patent claims' requirement that a "management registration request" be sent by a "managing subsystem" would render entirely inconsequential the claims' requirement that the thing that transmits the request be the external data manager. Arista Pre Hrg. Br. at 108; *see also* Arista Post Hrg. Br. at 48-49. Further, [

], to the claimed "managing subsystem," that as its name implies manages data, would likewise vitiate the requirement of having a managing subsystem that does external management. Arista Pre Hrg. Br. at 108; Arista Post Hrg. Br. at 48-49. And equating [

]) with the claimed "management request" would vitiate the requirement that the request actually be one to manage data and indicate the data to be managed. Arista Pre Hrg. Br. at 108; Arista Post Hrg. Br. at 48-49.

Contrary to Cisco's argument, Arista is not relying on vitiation to equate the reasons why it does not literally infringe the '537 patent with the reasons why it also does not infringe under the doctrine of equivalence. In fact, Cisco's own authority establishes a particularly applicable principle here: "[S]aying that a claim element would be vitiated is akin to saying that there is no equivalent to the claim element in the accused device based on the well-established 'function-way-result' or 'insubstantial differences' tests." *Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1347 (Fed. Cir. 2013). The obvious shortcomings in Cisco's function-way-result analysis discussed above underscore why vitiation applies here. Moreover, "[t]he vitiation concept has its clearest application 'where the accused device contain[s] the antithesis of the claimed structure' . . . . This makes sense; two elements likely are not insubstantially different when they are polar opposites." *Id.* (quoting *Planet Bingo, LLC v. GameTech Int'l, Inc.*, 472 F.3d 1338, 1345 (Fed. Cir. 2006)). These concepts apply with full force in this case.

Arista's redesigned EOS is the very "antithesis" of the claimed invention. [

] which even Cisco argues are "management registration requests." And the [

]." *Supra* at Sections IV.A, IV.B; *see also* RX-5131C (Sweeney RWS) at Q/A 83-86; RX-5129C (McKusick RWS) at Q/A 156-57. These are not mere "small variations" as Cisco suggests. Cisco Pre Hrg. Br. at 136. These are

major changes that turned Arista's [
                    ] that was found to infringe to a [   ]
that avoids fundamental limitations of the claims.

Arista Rem. Br. at 53-54.

Cisco replies, in part, that "the Federal Circuit has repeatedly held that one cannot use the

'vitiation' argument to limit the scope of the equivalents only to what is literally claimed." Cisco

Rem. Reply at 25.

The EID concluded:

> The administrative law judge has addressed Arista's vitiation-related arguments within the context of the function-way-result analysis, which follows. *See* Part III(B)(3)(c), *infra.* As reflected in that analysis, the requirement that a "management registration request" be sent by a "managing subsystem" has not lost significance or been rendered entirely inconsequential. *Id.*

EID at 57. Cisco and Arista have not argued that the EID reached an erroneous conclusion. *See*

Cisco Rem. Br. at 31-45 (Section IV(B)); Arista Rem. Br. at 53-54 (Section III(A)(6)(c)).

Additionally, herein the administrative law judge has not equated the redesigned EOS's

transmission of a [   ] with the '537 Patent claims'

requirement that a "management registration request" be sent by a "managing subsystem," which

is the focus of Arista's vitiation argument. Accordingly, the administrative law judge does not

modify the EID's vitiation conclusion.

4. Indirect Infringement

Cisco, Arista, and the Staff address indirect infringement (*see, e.g.*, 35 U.S.C. § 271(b)

and § 271(c)). *See* Cisco Rem. Br. at 45-48; Arista Rem. Br. at 40-44; Staff Rem. Br. at 38-40.[22]

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[22] General principles of law are provided in the ID and EID. *See* ID, Part IV; EID, Part III(B).

Section 271(b) of the Patent Act provides: "Whoever actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C. § 271(b).

"To prevail on a claim of induced infringement, in addition to inducement by the defendant, the patentee must also show that the asserted patent was directly infringed." *Epcon Gas Sys. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033 (Fed. Cir. 2002). Further, "[s]ection 271(b) covers active inducement of infringement, which typically includes acts that intentionally cause, urge, encourage, or aid another to directly infringe a patent." *Arris Group v. British Telecomm. PLC*, 639 F.3d 1368, 1379 n.13 (Fed. Cir. 2011). The Supreme Court held that "induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement." *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 766 (2011). The Court further held: "[g]iven the long history of willful blindness[23] and its wide acceptance in the Federal Judiciary, we can see no reason why the doctrine should not apply in civil lawsuits for induced patent infringement under 35 U.S.C. § 271(b)." *Id.* at 768 (footnote omitted).

Section 271(c) of the Patent Act provides:

> Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

35 U.S.C. § 271(c).

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[23] "While the Courts of Appeals articulate the doctrine of willful blindness in slightly different ways, all appear to agree on two basic requirements: (1) the defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact. We think these requirements give willful blindness an appropriately limited scope that surpasses recklessness and negligence." *Global-Tech*, 563 U.S. at 769.

Section 271(c) "covers both contributory infringement of system claims and method claims." *Arris*, 639 F.3d at 1376 (footnotes omitted). To hold a component supplier liable for contributory infringement, a patent holder must show, inter alia, that (a) the supplier's product was used to commit acts of direct infringement; (b) the product's use constituted a material part of the invention; (c) the supplier knew its product was especially made or especially adapted for use in an infringement" of the patent; and (d) the product is not a staple article or commodity of commerce suitable for substantial noninfringing use. *Id.*

As an initial matter, the administrative law judge has determined that the redesigned products do not infringe the asserted claims. *See* Parts II(B)(2) and II(B)(3). Thus, there is no direct infringement upon which to find indirect infringement. *See Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S.Ct. 2111, 2118 (2014) (Inasmuch as liability for inducing infringement requires an underlying act of direct infringement, the evidence consequently does not show that Arista induced infringement.).

The evidence also shows that Arista lacked the requisite intent or knowledge to induce or contribute to infringement of the asserted claims. In particular, Arista undertook an extensive redesign effort and obtained an opinion of counsel in connection with its efforts to avoid further infringing the '537 Patent. *See* RX-5133C (Duda RWS) at Q/A 17 (describing steps taken to ensure non-infringement), Q/A 31, 35-36. The evidence also shows that Arista lacked knowledge that the redesigned products infringed the asserted claims. *Id.*; *see also* Duda Enf. Tr. 355-356 ("Well, as you know, we're redesigning so that we no longer infringe the patent. . . . Our goal was to comply with the Court's order, to no longer infringe the patent, to create a noninfringing product."). Accordingly, the administrative law judge has determined that Arista lacked the requisite intent and knowledge to infringe the '537 Patent indirectly.

C.   Alleged Inconsistency Between "client subsystem" and "managing subsystem"

The Commission remanded this proceeding, in part, to "consider and address, if necessary, the alleged inconsistency between the EID's finding for what constitutes a 'client subsystem' and the EID's findings for the 'managing subsystem.'" Remand Notice at 2; Remand Order at 4.

In its main brief on remand, Cisco's Introduction refers to "the Commission's second instruction on remand," and states, in pertinent part:

> As set forth below, applying the proper legal framework leads to the conclusion that the redesigned products infringe each asserted claim of Cisco's U.S. Patent No. 7,162,537 ("the '537 patent").
>
> Indeed, in view of the ALJ's previous, undisturbed findings, there are only two claim requirements that remain at issue in this proceeding: "managing subsystem" and "management registration request." *And, as presaged by the Commission's second instruction on remand, these two limitations are satisfied in light the EID's prior factual findings.* With respect to the "managing subsystem" limitation, the EID's prior factual findings confirm that (1) an agent in Arista's redesigned products in combination with the [   ] designated for that agent constitute a "client subsystem" and (2) that client subsystem is configured as managing subsystems because it transmits the alleged management registration request and externally manages router data. That should be the beginning and end of the infringement analysis for that limitation, and the EID concluded otherwise only because it did not even consider the EOS agents in its infringement analysis or take into consideration the ramifications of finding that an EOS agent in combination with the [   ] designated for that agent provide a client subsystem. Once that is corrected, the infringement analysis for this limitation is straightforward.

Cisco Rem. Br. at 1-2 (emphasis added). In addition to its Introduction, Cisco's brief discusses "client subsystem" and "managing subsystem" in the context of its infringement arguments, *see, e.g.,* Cisco Rem. Br. at 1-2, 16-17, but does not have a separate section for the particular question asked by the Commission as to whether the EID contains an inconsistency between the EID's

finding for what constitutes a "client subsystem" and the EID's findings for the "managing

subsystem."

Arista's main brief addresses the issue in detail. Arista argues that there is no

inconsistency between the EID's findings concerning the claimed "client subsystem" and

"managing subsystem." *See* Arista Rem. Br. at 55-63. By way of background, Arista states:

> In describing in the EID a phrase from the claims over which there
> was no dispute—"a plurality of client subsystems, each operatively
> coupled for communication to said database subsystem"—the ALJ
> stated, "[t]he evidence shows that the accused products satisfy the
> plurality-of-client-subsystems limitation. In particular, the plurality
> of client subsystems includes [
>]. *See* CX-5002C (Almeroth
> WS) at Q/A 60-62, 115-118. Accordingly, the administrative law
> judge has determined that the accused products satisfy the plurality-
> of-client-subsystems limitation." EID at 13-14.

Id. at 55. Arista argues that portion of the EID resulted in an argument in Cisco's petition for

review of the EID, as follows:

> Cisco opportunistically seized upon this passage to argue:

> > First, the ID finds that the redesign products lack a
> > "managing subsystem." 944E ID at 17. But the ID's analysis
> > of this requirement is internally inconsistent. It correctly
> > (and explicitly) adopts Cisco's position that the subsystems
> > at issue include Arista's agents, which indisputably continue
> > to perform external management. 944E ID at 14. Yet, at the
> > same time, the ID concludes that Arista's redesign lacks
> > "subsystems" that perform external management, and thus
> > lack the claimed "managing subsystem." 944E ID at 17. That
> > makes no sense. In essence, the ID acknowledges that agents
> > are part of the subsystems of the claims, yet ignores that
> > same fact in finding noninfringement.

> Cisco Pet. for Rev. at 2; *see also id.* at 9 ("As discussed below, the
> ID correctly found that the functionality moved to [   ],
> in combination with the agent it relates to, is all part of the same
> subsystem. 944E ID at 14. And yet, having rightly concluded that
> the 'agents' are part of the subsystem, the ID proceeds to ignore the
> agents in assessing infringement."). When it elaborated later in its

brief, Cisco's argument crystallized to the following: "The client subsystems identified in the ID thus include the [

]…. Yet in analyzing whether that subsystem is a 'managing subsystem' within the meaning of the claims, the ID fails to even consider the agent, which indisputably engages in external management." *Id.* at 11-12.

Arista Rem. Br. at 55-56. Arista argues that Cisco's argument ultimately makes no sense and

fails in several ways. *Id.* at 56. In particular, Arista sets forth four arguments. *Id.* at 56-63.

First, Arista argues that the "plurality of client subsystems" is irrelevant to the parties'

disputes concerning the redesign because it was never in and of itself a contested limitation, and

the EID addressed it briefly before turning to the next part of the claim limitation ("one of said

client subsystems configured as a managing subsystem to externally manage router data") to

conclude that it was not satisfied by Arista's redesigned EOS. *Id.* at 56. Moreover, it is argued:

> . . . Arista never acceded to Cisco's argument that the "plurality of client subsystems" in the claims was formed by some fictitious [   ]. * * *
> Arista merely chose not to fight about the "plurality of client systems" because (a) [the redesigned] EOS has [
>
>] and (b) the "plurality of client subsystems" is wholly irrelevant to the redesign and its non-infringement because the redesign plainly lacks the essential "*managing* subsystem" that sends a "*management* registration request."

Id. at 56-57 (emphasis in original).

Indeed, as its second main argument, Arista argues,

> Even if Cisco were correct that the EID recognized a possible [   ]—
> and as Arista explains below, this is not a correct reading of the EID—that does not mean [
>   ]. It does not and cannot.

Id. at 57 (emphasis in original). Arista's conclusion adds:

In other words, [   ]
somehow be combined to form a client subsystem that is
"operatively coupled to the database," they can never be combined
to form a managing subsystem that "transmits" the "management
request."

For these reasons, there is no "inconsistency" in the EID's
description of the "client subsystem" and its conclusion that there is
no "managing subsystem" in Arista's redesigned EOS.

Id. at 59 (emphasis omitted).

Third, Arista argues that Cisco misreads the EID. *Id.* at 59-60. Arista argues, "The EID

never actually held that [   ] were ***combined with each other*** to make a

client subsystem, as Cisco now intimates. Rather, it says merely that 'the ***plurality*** of client

subsystems' include '[   ].'

EID at 14."[24] *Id.* at 59-60 (emphasis in original).

Fourth, Arista argues that Cisco's reading of the EID cannot be sustained in light or

overwhelming evidence. *Id.* at 60-63. It is argued, "If the EID is read to mean that [

---

[24] Arista elaborates:

As written, the EID merely allows that some client subsystems may
be agents, and others (*i.e.* [
]. And this makes sense for the same reasons discussed
above, namely that "client subsystems" are simply subsystems
"operatively coupled for communication to said database
subsystem" which would include both [
]) on their own. JX-0001 ('537
Patent) at 15:21-41. Moreover, nothing in the EID holds that [
] somehow work "in conjunction" with one
another to form a single subsystem. If anything, the EID's
recognition that the combination of [

]are separate and distinct.

Thus, as Arista understands it, the EID merely recognizes that "a
plurality of client subsystems" can include both [
].

Arista Rem. Br. at 60 (emphasis in original).

] to form a

unitary 'client subsystem,' as Cisco contends, that reading is plainly wrong in light of the

disclosure of the '537 patent and the evidence describing how EOS actually works." *Id.* at 60.

Arista requests that the administrative law judge find in the REID that the "plurality of

client subsystems" limitation was not contested and so was deemed to be met, and expressly to

reject Cisco's contention concerning those subsystems and the [   ]. *Id.* at 63. In the

alternative, it is requested that the administrative law judge hold that even if the "client

subsystems" are met by some alleged combination of [   ]

together, [   ], and so no such

combination meets the limitation of a "managing subsystem" that sends a "management

request." *Id.*

The Staff argues in its main brief, in pertinent part:

> In the enforcement proceeding, the parties mainly disputed
> limitation (b) of claim 19. *See* Cisco IPHB at 76-78; Arista IPHB at
> 12-24. Although the portion reciting "one of said client subsystems
> configured as a managing subsystem" was the focus of the dispute,
> the entire limitation gives context to the disputed phrase.
>
> The Federal Circuit has repeatedly stated that "[i]t is the claim
> limitation, as a whole, that must be considered in claim
> construction." *Anchor Wall Systems, Inc. v. Rockwood Retaining
> Walls, Inc.*, 340 F.3d 1298, 1311 (Fed. Cir. 2003) citing *Apex Inc. v.
> Raritan Computer, Inc.*, 325 F.3d 1364, 1374 (Fed. Cir. 2003).
>
> As OUII explained in its response to Cisco's petition for review, the
> EID's careful analysis of the second part of the limitation should
> have been adopted by the Commission. *See* OUII Pet. Resp. at 9-11.
> Nevertheless, the Commission remanded and asked the ALJ to
> "consider and address, if necessary, the alleged inconsistency
> between the EID's findings for the 'managing subsystem'..."
> Comm'n Remand at 4.
>
> To the extent there is an inconsistency in the EID it is easily resolved
> by addressing the entire limitation, rather than a portion cleaved

from the whole. And when the entire limitation is construed, it is clear that the EID's construction for "one of said client subsystems configured as a managing subsystem" should be adopted for the entire limitation. In the Staff's view, this will also address any concerns raised by the Commission in its remand notice.

Staff. Br. at 22.

In its reply, Cisco discusses client subsystems and managing subsystems in ways that may be relevant to the Commission's specific question in the Remand Notice and Remand Order. *See, e.g.*, Cisco Rem. Reply at 13-15. Yet, in its reply, as in its main brief, Cisco does not have a separate section for, or otherwise directly address, the question of the EID's "alleged inconsistency" asked by the Commission, with apparent reference to certain allegations in Cisco's petition for review of the EID.

Arista's reply immediately addresses the question at issue, and Cisco's arguments in Cisco's main brief, as follows:

> Cisco's opening brief ultimately takes the position that the ALJ got every holding in the EID wrong, with the single exception of Cisco's self-serving read of the single sentence referring to "client subsystems" in claim 19. As demonstrated below, in Arista's opening brief, and throughout these proceedings, the ALJ got it right in the EID: Arista's redesign of EOS does not infringe the '537 patent because, by design, it has no managing subsystem that sends a management request.
>
> Because the record goes squarely against it, Cisco endeavors to rewrite history through a procession of exaggerations and misstatements that find no legitimate support in the evidence or the papers. To this end, Cisco attributes a number of holdings, arguments, and admissions to the ALJ and to Arista that simply never occurred. This misuse of the record is seen most egregiously in Cisco's leading argument that the EID is "internally inconsistent" because it purportedly found that the "client subsystems" of the claims can be comprised of the illusory combination of [
>
>], but the "managing subsystem" cannot. But this, Cisco's showcase argument, is based on a string of false premises. Foremost among these is that *Cisco never argued or presented an iota of*

> *evidence even purporting to establish that the claimed client*
> *subsystems were formed from this nonexistent combination.*
> Indeed, no such combination of [   ] ever
> occurs in reality. And even if one assumed *arguendo* that such a
> combination formed the claimed *client* subsystems, that assumption
> would be wholly irrelevant given the very different requirements in
> the claims for the *"managing"* subsystems.

Arista Rem. Reply at 1 (emphasis in original; footnote omitted which indicates that emphasis in

quotations was supplied unless otherwise noted). Arista argues the Cisco's main brief contains

mischaracterizations, including Cisco's statement that this very remand by the Commission

portends a finding of infringement:

> Cisco contends in its introduction that a finding of infringement on
> remand was somehow "presaged by the Commission's second
> instruction on remand." Cisco Rem. Br. at 1. But the second
> instruction presages nothing. It requires only that the ALJ "consider
> and address, if necessary, the alleged inconsistency between the
> EID's finding for what constitutes a 'client subsystem' and the
> EID's findings for the 'managing subsystem.'" Remand Order at 2-
> 3. This is no endorsement of Cisco's "client subsystem" argument,
> as the Staff notes: "[n]othing has changed since the EID—the
> parties agree that there was no reason to reopen the record. . . . . *Nor*
> *did the Commission remand suggest that the EID's conclusion is*
> *wrong."* Staff Rem. Br. at 1; *see also id.* ("The EID reached the
> correct decision in holding that Arista's redesigned products do not
> violate the asserted claims of the '537 patent.").

Id. at 2 (emphasis in original). Arista continues by arguing, "More troubling, instead of

presenting the merits and letting the chips fall where they may, Cisco resorts to a string of plainly

false misstatements of the record." *Id.* First among Arista's list is: "Cisco alleges that the ALJ

'*did not even consider the EOS agents* in its infringement analysis . . . .' Cisco Rem. Br. at 1-2.

In truth, the ALJ addressed the agents in determining [the redesigned] EOS does not infringe no

fewer than 92 times. *See, e.g.,* EID at 12-20, 23, 25-27, 30-33." *Id.* (emphasis in original).

In arguing in its reply that Cisco should not be allowed to assert that the claimed client

subsystems are met by a combination of agents and [   ], Arista argues:

> In its pre-hearing brief in the enforcement proceedings, Cisco
> addressed the full limitation as a whole, bundling the client and
> managing subsystem sub-limitations together (as the Staff urges
> should be done in its opening remand brief). Cisco Pre-Hrg. Br. at
> 102-105; *see also id.* at 55-56, 68-71, 87-91, 114, 133-34.

Arista Rem. Reply at 5 (footnote omitted, which states, "Staff Rem. Br. at 22 ('To the extent there is an inconsistency in the EID it is easily resolved by addressing the entire limitation, rather than a portion cleaved from the whole.').").

The Staff, in its reply, argues:

> The Commission also wanted the ALJ to "consider and address, if
> necessary, the alleged inconsistency between the EID's finding for
> what constitutes a 'client subsystem' and the EID's findings for the
> 'managing subsystem' . . . " Comm'n Remand at 4. Cisco's brief is
> premised on their arguments that (1) there is an inconsistency, and
> (2) because the EID allegedly found that [   ] and the
> agent form the managing subsystem, the EID's finding that the
> limitation is not met is erroneous. *See* Cisco IRB at 1-2. But if there
> is an inconsistency, then the solution is to re-review the entire claim
> limitation, not to simply declare that the first finding about client
> subsystems is correct.
>
> As discussed above and in the Staff's initial brief on remand, when
> the proper analysis is conducted, a comparison of the claims to the
> accused redesigned products shows that the redesigned EOS does
> not infringe. And, to the extent there is an inconsistency between the
> EID's holding regarding the client subsystem and the managing
> subsystem, this is remedied by issuing a remand initial
> determination that construes the entirety of the limitation. *See*
> *Anchor Wall Systems, Inc. v. Rockwood Retaining Walls, Inc.*, 340
> F.3d 1298, 1311 (Fed. Cir. 2003) citing *Apex Inc. v. Raritan*
> *Computer, Inc.*, 325 F.3d 1364, 1374 (Fed. Cir. 2003). Once that
> analysis is done—to the extent it has not already been done in the
> EID—any alleged inconsistency will be eliminated.

Staff Rem. Reply at 6 (footnote omitted that states: "Cisco also says the EID erred because 'it did not even consider the EOS agents in its infringement analysis.' . . . That argument is difficult to square with the EID's express analysis of the EOS agents in its infringement analysis. *See* EID at 16-17.").

During the hearing, specific arguments were offered concerning the alleged inconsistency in the EID. *See, e.g.*, (Remand) Enf. Tr. 472-482, 504-505, 525-527.

The parties' arguments on remand, including a description of the "alleged inconsistency" placed before the Commission in Cisco's petition for review of the EID, indicate that Cisco's allegations of inconsistency (and consequently the Commission's reference to an "alleged inconsistency") stem from a finding by the administrative law judge on page 17 of the EID that Arista's redesign does not satisfy the requirement for "one of said client subsystems configured as a managing subsystem to externally manage router data," while having found on page 14 that the redesign contains "a plurality of client subsystems, each operatively coupled for communication to said database subsystem," and "[i]n particular, the plurality of client subsystems includes agents in the EOS in combination with the [   ]."

Pages 14 through 17 of the EID are part of a larger discussion of independent claim 19 of the '537 patent, which claim provides, as follows:

> 19. In a router device having a processor and memory, a router operating system executing within said memory comprising:
>
> (a) a database subsystem;
>
> (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and
>
> (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and

> executed by a router configuration subsystem before
> being stored in said database.

JX-0001 at 18:21-39. As seen in the text above, the requirement of "a plurality of client subsystems, each operatively coupled for communication to said database subsystem" and "one of said client subsystems configured as a managing subsystem to externally manage router data" are two portions of element or limitation (b) of claim 19.[25]

As indicated in the EID (*see* EID at 14), and as admitted in connection with this remand (discussed above), Arista did not contest the first portion of limitation (b).[26] Thus, for that reason alone, the administrative law judge could have found that the first portion of limitation (b) was satisfied. Yet, as indicated above, the administrative law judge also found that there was in fact evidence in the record to support such a finding.

Inasmuch as the first portion of limitation (b) was not contested, great detail was not required in the EID, but the administrative law judge did find that a plurality of client subsystems in the redesigned products includes agents in the EOS, which [   ] with the

[   ]. It was not found, however, that [

                    ]. Moreover, the administrative law judge declined to adopt Cisco's argument that "at least one of these managing subsystems, [

                                                                    ].'"

---

[25] The remaining portion of limitation (b) of claim 19 ("upon issuing a management request to said database subsystem") is also discussed in the EID. *See* EID at 17-20.

[26] Arista has not sought belatedly to contest the first portion of limitation (b), nor has any basis been shown to allow it to do so.

See EID at 13-14 (citing Cisco Enf. Br. at 77-78). Thus, the EID's finding for the first portion of limitation (b) is consistent with the EID's findings for the rest of the limitation.

As pointed out by the Staff and Arista, limitation (b) of claim 19 must be understood as a whole. Indeed, the second portion of limitation (b) was contested, and the administrative law judge made specific findings concerning "one of said client subsystems configured as a managing subsystem to externally manage router," and the rest of the limitation.[27]

The role of the agents and the [   ] figured in the parties' arguments, and also in the EID's determination with respect to the second portion of limitation (b). For example, the EID notes that the Staff argued, "the redesigned products avoid infringement because the '[   ], not as part of the agent request' and because [...] 'the [

].'" *Id.* at 16 (quoting Staff Enf. Br. 33 (emphasis added by the Staff)). Subsequently, in holding that the redesigned Arista products do not practice the second portion of limitation (b) of claim 19, the administrative law judge found that updates "occur without the agent ever having asked for a write mount, for permission to externally manage state, or to be registered for external management," and that "the redesigned products lack a managing subsystem, as [   ] do not perform external management by write-mounting data in Sysdb." EID at 16-17. With respect to the remaining portion of limitation (b) ("upon issuing a management request to said database

---

[27] The EID also found that no limitations from claim 1 (*e.g.*, the preamble and subparts (a)-(c)) read on the redesigned products because the redesigned products "do not include a managing subsystem and do not issue a management request." EID at 24, 26, 27, 28. The EID likewise found that claim 10 did not read on the redesigned products for the same reasons. *Id.* at 34.

subsystem"), the administrative law judge found that the redesigned products do not issue a required management request to the database subsystem. *Id.* at 19-20.

Consequently, the administrative law judge does not find an inconsistency between the EID's finding for what constitutes a "client subsystem" and the EID's findings for the "managing subsystem."

*   *   *

III.   FINAL REMAND ENFORCEMENT INITIAL DETERMINATION

As indicated above, the Commission remanded this investigation in part to the administrative law judge to issue a final remand enforcement initial determination. Remand Notice at 2-3.

In light of the preceding analysis finding no infringement by the redesigned products, it is the administrative law judge's final REMAND ENFORCEMENT INITIAL DETERMINATION (REID) that Arista, the enforcement respondent, has not violated the cease and desist order issued on June 23, 2016.
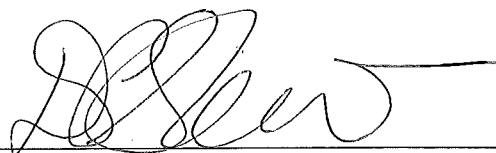
Further, this REID, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is CERTIFIED to the Commission.

In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this REID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order, as amended, issued in this investigation.

To expedite service of the public version, no later than June 18, 2018, the parties shall file a joint copy of this remand enforcement initial determination with the Commission Secretary, with bold, red brackets to show any portion considered by the parties (or their suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the undersigned, and the brackets shall be provided in bold, red text. If a party (and its suppliers of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.[28]

David P. Shaw
Administrative Law Judge

Issued: June 4, 2018

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[28] Confidential business information ("CBI") is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

**CERTAIN NETWORK DEVICES, RELATED SOFTWARD AND COMPONENTS
THEREOF (I):**

<div align="right">

INV. NO. 337-TA-944
(Enforcement Proceeding)

</div>

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **REMAND ENFORCEMENT INITIAL
DETERMINATION (PUBLIC VERSION)** has been served by hand upon the Commission
Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on

JUN 2 9 2018

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, DC 20436

FOR COMPLAINANT CISCO SYSTEMS, INC.:	
Adam R. Alper, Esq. **KIRKLAND & ELLIS LLP** 555 California Street San Francisco, California 94104	( ) Via Hand Delivery (✓) Express Delivery ( ) Via First Class Mail ( ) Other: _____
FOR RESPONDENT ARISTA NETWORKS, INC.:	
Bert C. Reiser, Esq. **LATHAM & WATKINS LLP** 555 Eleventh Street, NW Suite 1000 Washington, DC 20004	( ) Via Hand Delivery (✓) Express Delivery ( ) Via First Class Mail ( ) Other: _____

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

CERTAIN NETWORK DEVICES,
RELATED SOFTWARE AND
COMPONENTS THEREOF (I)

Investigation No. 337-TA-944
(Enforcement Proceeding)

NOTICE OF COMMISSION DETERMINATION TO REVIEW THE FINAL ENFORCEMENT INITIAL DETERMINATION IN ITS ENTIRETY; AND ON REVIEW TO REMAND THE INVESTIGATION IN PART TO THE PRESIDING ADMINISTRATIVE LAW JUDGE

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review in its entirety the final enforcement initial determination ("EID") issued by the presiding administrative law judge ("ALJ") on June 20, 2017. The Commission has also determined to remand the investigation in part to the ALJ.

FOR FURTHER INFORMATION CONTACT: Amanda Pitcher Fisherow, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2737. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at _https://www.usitc.gov_. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at _https://edis.usitc.gov_. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted the underlying investigation on January 27, 2015, based on a complaint filed on behalf of Cisco Systems, Inc. ("Complainant") of San Jose, California. 80 _Fed. Reg._ 4314-15 (Jan. 27, 2015). The complaint was filed on December 19, 2014, and a supplement was filed on January 8, 2015. The complaint alleges violations of section 337 based upon the importation into the United States, the sale for

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importation, and the sale within the United States after importation of certain network devices, related software and components thereof by reason of infringement of certain claims of U.S. Patent No. 7,162,537 ("the '537 patent"); U.S. Patent No. 8,356,296 ("the '296 patent"); U.S. Patent No. 7,290,164; U.S. Patent No. 7,340,597; U.S. Patent No. 6,741,592 ("the '592 patent"); and U.S. Patent No. 7,200,145 ("the '145 patent"), and alleges that an industry in the United States exists as required by subsection (a)(2) of section 337. The '296 patent was withdrawn from the investigation. The notice of investigation named Arista Networks, Inc. ("Arista") of Santa Clara, California as the respondent. A Commission investigative attorney ("IA") participated in the investigation.

On June 23, 2016, the Commission found that a Section 337 violation occurred as to the '537, '592, and '145 patents and therefore issued a cease and desist order ("CDO") against Arista and a limited exclusion order. 81 *FR* 42375-76 (June 29, 2016). The CDO prohibited Arista from importing, selling, marketing, advertising, distributing, transferring (except for exportation), and soliciting United States agents or distributors for certain network devices, related software, and components thereof that infringe the asserted claims of the '537, '592, and '145 patents. *Id.* at 42376.

On August 26, 2016, Cisco filed an enforcement complaint alleging that Arista had violated the June 23, 2016 CDO by reason of infringement of the '537 patent. The Commission instituted this enforcement proceeding on October 4, 2016, based Cisco's complaint. 81 *FR* 68455 (Oct. 4, 2016).

On June 20, 2017, the ALJ issued his final EID finding no violation of the CDO. On July 3, 2017, Cisco and Arista each filed petitions for review of the ID. On July 10, 2017, Cisco filed its response to Arista's petition for review. On July 11, 2017, Arista timely filed a response to Cisco's petition for review. Also on July 11, 2017, the IA filed a response to the private parties' petitions for review.

Having examined the record of this investigation, including the ALJ's final EID, the petitions for review, and the responses thereto, the Commission has determined to review the final EID in its entirety. The final EID includes analysis comparing the redesigned products to products found to infringe in the underlying investigation to conclude that the redesigned products do not infringe the '537 patent. However, this analysis, while addressing the parties' arguments, does not address the issue of whether the language of the claims reads on the redesigned products. *See e.g.,* EID at 14-20. For example, the EID does not provide a clear application of the claim limitations to the redesigned products or find that the limitations were not met for other reasons (*e.g.,* waiver). Therefore, the Commission remands the investigation in part to the ALJ to (1) address literal infringement in terms of whether the asserted claims, as construed, read on the redesigned products, and make appropriate findings, and further, if necessary, modify any other affected findings, including findings under the doctrine of equivalents; (2) consider and address, if necessary, the alleged inconsistency between the EID's finding for what constitutes a "client subsystem" and the EID's findings for the "managing

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subsystem"; (3) identify which accused products are addressed in the EID; and (4) issue a final remand enforcement initial determination.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 C.F.R. Part 210).

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: August 4, 2017

PUBLIC CERTIFICATE OF SERVICE

      I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **August 4, 2017**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

Adam R. Alper, Esq.	☐ Via Hand Delivery
KIRKLAND & ELLIS LLP	☐ Via Express Delivery
555 California Street	☒ Via First Class Mail
San Francisco, CA 94104	☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Bert C. Reiser, Esq.	☐ Via Hand Delivery
LATHAM & WATKINS LLP	☐ Via Express Delivery
555 Eleventh Street NW	☒ Via First Class Mail
Suite 1000	☐ Other:_____
Washington, DC 20004	

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

In the Matter of	
CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I)	**Inv. No. 337-TA-944** **(Enforcement Proceeding)**

ENFORCEMENT INITIAL DETERMINATION

Administrative Law Judge David P. Shaw

Pursuant to the notice of institution of formal enforcement proceeding, 81 Fed. Reg. 68455 (Oct. 4, 2016), this is the Enforcement Initial Determination in *Certain Network Devices, Related Software and Components Thereof (I)*, United States International Trade Commission Investigation No. 337-TA-944.

It is held that respondent has not violated the June 23, 2016 cease and desist order issued in the underlying investigation.

Table of Contents

Table of Abbreviations

The following abbreviations may be used in this Initial Determination:

ABBREVIATION	FULL WORD OR PHRASE
ALJ	Administrative Law Judge
CDO	Cease and Desist Order
CDX	Complainant's Demonstrative Exhibit
Ciscon	Ciscon et al., U.S. Patent No. 5,634,010
ConnMgr	Connection Manager
CPX	Complainant's Physical Exhibit
CX	Complainant's Exhibit
Dep.	Deposition
EDIS	Electronic Document Imaging System
EOS	Extensible Operating System
Enf.	Enforcement Proceeding
JPX	Joint Physical Exhibit
JX	Joint Exhibit
LEO	Limited Exclusion Order
ProcMgr	Process Manager
RDX	Respondent's Demonstrative Exhibit
RPX	Respondent's Physical Exhibit
RWS	Rebuttal Witness Statement
RX	Respondent's Exhibit
SMP	Statutory Maximum Penalty
Sysdb	System Database
Tr.	Transcript
WS	Witness Statement

I.   BACKGROUND

A.   Underlying Investigation

By publication of a notice in the *Federal Register* on January 27, 2015, pursuant to

subsection (b) of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, the

Commission instituted the underlying investigation to determine:

> [W]hether there is a violation of subsection (a)(1)(B) of section
> 337 in the importation into the United States, the sale for
> importation, or the sale within the United States after importation
> of certain network devices, related software and components
> thereof by reason of infringement of one or more of claims 1, 2, 8-
> 11, and 17-19 of the '537 Patent [U.S. Patent No. 7,162,537];
> claims 1, 6, and 12 of the '296 patent [U.S. Patent No. 8,356,296];
> claims 1, 5, 6, 9, and 18 of the '164 patent [U.S. Patent No.
> 7,290,164]; claims 1, 14, 15, 29, 39-42, 63, 64, 71-73, and 84-86 of
> the '597 patent [U.S. Patent No. 7,340,597]; claims 6-10, 17, 18,
> 20, 21, 23, and 24 of the '592 patent [U.S. Patent No. 6,741,592];
> claims 1, 3, 5, 7-11, 13, 15-29, 33-37, and 39-46 of the '145 patent
> [U.S. Patent No. 7,200,145], and whether an industry in the United
> States exists as required by subsection (a)(2) of section 337.

80 Fed. Reg. 4134 (Jan. 27, 2015).

The Commission named as complainant Cisco Systems, Inc. of San Jose, California. *Id.*

The Commission named as respondent Arista Networks, Inc. of Santa Clara, California. *Id.* The

Office of Unfair Import Investigations ("Staff" or "OUII") was also named as a party to the

investigation. *Id.*

The administrative law judge held a hearing in September 2015. *See* Order No. 6 (Mar.

9, 2015); Hearing Tr. 1-1494. On February 2, 2016, the administrative law judge issued an

initial determination ("ID") finding that a violation of section 337 had occurred in the

importation into the United States, the sale for importation, or the sale within the United States

after importation, of certain network devices, related software and components thereof with

respect to asserted claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537; asserted claims 6,

7, 20, and 21 of U.S. Patent No. 6,741,592; and asserted claims 5, 7, 45, and 46 of U.S. Patent

No. 7,200,145. *See* Initial Determination (EDIS Doc. ID No. 573475). A public version (EDIS

Doc. ID No. 575521) issued on March 2, 2016.

Cisco and Arista filed petitions for review in February 2016. Cisco, Arista, and the Staff

filed responses to the petitions in March 2016.

On June 23, 2016, the Commission issued an opinion finding a violation of section 337

had occurred. *See* Comm'n Op. at 60[1]; *see also* 81 Fed. Reg. 42375 (June 29, 2016). In

particular, the Commission found a violation of section 337 for the '537, '592, and '145 Patents

and no violation for the '597 and '164 Patents. *Id.* The Commission also issued a limited

exclusion order ("LEO") and cease and desist order ("CDO") on June 23, 2016. *Id.*

The 60-day Presidential review period ended on August 22, 2016. *See* 19 U.S.C.

§ 1337(j)(2); Ltrs. to the President of the United States; Michael Forman, United States Trade

Representative; and Jacob Lew, Secretary of the Treasury (transmitting LEO and CDO (EDIS

Doc. ID No. 584917)).

Arista filed an appeal with the U.S. Court of Appeals for the Federal Circuit (the "Federal

Circuit") in August 2016 (Case No. 16-2563), and Cisco also filed an appeal in September 2016

(Case No. 16-2539). The Federal Circuit held oral argument on June 7, 2017. The appeal is

currently pending.

B.   Enforcement Proceeding

On August 26, 2016, Cisco filed an enforcement complaint requesting that the

Commission commence an enforcement proceeding pursuant to Commission Rule 210.75(b) and

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[1] A public version issued on July 26, 2016, and a revised public version (EDIS Doc. ID No.
609119) issued on April 19, 2017.

section 337. Cisco's enforcement complaint alleges that Arista has violated the LEO and CDO by marketing, distributing, offering for sale, selling, advertising, and/or aiding and abetting "other entities in the sale and/or distribution of, after August 22, 2016, imported products and components that infringe the '537 Patent." Enf. Compl., ¶ 6.5. The enforcement complaint asserts the '537 Patent only. *See generally id.*

By publication of a notice in the *Federal Register* on October 4, 2016, pursuant to section 337 of the Tariff Act of 1930, as amended, and Commission Rule 210.75 (19 C.F.R. § 210.75), the Commission instituted a formal enforcement proceeding to determine "whether Arista is in violation of the June 23, 2016 CDO issued in the original investigation and to determine what, if any, enforcement measures are appropriate." 81 Fed. Reg. 68455.

The Commission directed the administrative law judge "to set the earliest practicable target date for completion of the proceeding within 45-days of institution of the proceeding." Comm'n Enf. Order at 2 (Sep. 28, 2016). The Commission further directed that "the target date should be set at no more than twelve months from the date of institution" and that "such target date is to exceed the date of issuance of the EID by three months." *Id.* On November 2, 2016, the target date was set for September 20, 2017, which is just under the 12-month deadline for completing the proceeding. *See id.*; Order No. 31 (Setting Target Date). The due date for the Enforcement Initial Determination on violation is June 20, 2017. *Id.*

On April 4, 2017, the administrative law judge held a pre-hearing conference for the enforcement proceeding. *See* Order No. 42 (Allocation of Hearing Time); Enf. Pre-Hr'g Tr. 1-14. The evidentiary hearing commenced immediately thereafter and concluded the next day, on April 5, 2017. *See* Order No. 43; Enf. Tr. at 1-439. The parties were requested to file post-hearing briefs not to exceed 125 pages in length, and to file reply briefs not to exceed 30 pages in

length. Enf. Pre-Hr'g Tr. 9. On April 14, 2017, the parties filed a corrected joint outline of the

issues to be decided in the Enforcement initial Determination. *See* Corrected Joint Outline of

List of Issues to Be Decided ("Joint Outline") (EDIS Doc. ID No. 608656).

C. U.S. Customs and Border Protection Proceedings

The Staff notes:

> On July 22, 2016, Arista requested an administrative ruling from U.S. Customs and Border Protection [("CBP")] concerning whether Arista's products with the redesigned EOS software infringe the claims of the '537 Patent. *See* CX-5060C (July 22, 2016 Reiser to Steuart letter). CBP opened an *ex parte* proceeding that resulted in a ruling letter from CBP finding that the products with Arista's redesigned EOS do not infringe the claims of the '537 Patent. *See* CX-5238C (November 18, 2016 Steuart to Reiser letter).
>
> Cisco sent a December 14, 2016 letter to CBP requesting that it stay and revoke its ruling. *See* CX-5632C (Dec. 14, 2016 Bartkowski to Steuart letter). On January 13, 2017, CBP sent letters to Cisco and Arista informing them that the November 17, 2016 ruling letter was revoked. *See* CX-5092 (Jan. 13, 2017 Steuart to Bartkowski letter) and CX-5093 (Jan. 13, 2017 Steuart to Reiser letter). The letter to Arista stated that the November 18, 2016 ruling "is not in accord with the current view of Customs." CX-5093 (Jan. 13, 2017 Steuart to Reiser letter).
>
> After revocation of the letter ruling, CBP instituted an *inter partes* proceeding. Cisco and Arista submitted briefs to CBP and participated in a one-day oral argument. *See* Arista PrHB at 38.
>
> The Staff did not participate in any of the CBP proceedings. CBP issued an April 8, 2017 letter determining that Arista's redesigned products do not infringe the '537 Patent.

Staff Br. at 5-6.

D. The Parties

The parties in the enforcement proceeding have not changed from the underlying

investigation.

Complainant Cisco Systems, Inc. is a corporation organized and existing under the laws of California, having its principal place of business at 170 West Tasman Drive, San Jose, California, 95134. Enf. Compl., ¶ 4.1.

Respondent Arista Networks, Inc. is a corporation organized and existing under the laws of Delaware, having its principal place of business at 5453 Great America Parkway, Santa Clara, California, 95134. *See* Enf. Compl., ¶ 5.1; Resp. to Enf. Compl., ¶ 5.1.

The Staff remains as a party in the enforcement proceeding. *See* 81 Fed. Reg. 68455.

E.   The Accused Products

Cisco explains that the "Arista Accused Products at issue in this Enforcement Proceeding are all Arista products, including at least the 7010, 7020, 7048, 7050, 7060, 7150, 7160, 7250, 7260, 7280, 7300, 7320, and 7500 series models, related software and the components thereof." Cisco Br. at 8-9. Arista's Table of Abbreviations, however, identifies the accused products as "Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7280E, 7300, 7300X, and 7500E series switches, and components thereof." *Id.* at xi. Arista has noted that "the accused products constitute nearly all of Arista's products[.]" *See* Arista Br. at 83. Arista argues that it has redesigned its Extensible Operating System ("EOS") so that all of its products avoid infringing the '537 Patent. *Id.* at 1. The parties have not raised an issue of whether certain models are representative products. *See generally* Joint Outline; *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1351-52 (Fed. Cir. 2010).

Depending on the context, the briefs and this Enforcement Initial Determination occasionally refer to the accused products as Arista's products, the redesigned products, the redesigned EOS, or simply the "redesign."

II.   JURISDICTION AND IMPORTATION

A.   Subject Matter Jurisdiction

In the underlying investigation, the Commission found a violation of section 337, and issued a limited exclusion order and cease and desist orders. *See* 81 Fed. Reg. 42375 (June 29, 2016). The Commission instituted a formal enforcement proceeding to determine if there has been a violation of these orders. *See* 19 C.F.R. § 210.75(b); 81 Fed. Reg. 68455 (Oct. 4, 2016). The Commission therefore has subject matter jurisdiction over this enforcement proceeding. *See* 19 U.S.C. § 1337(f)(2); *VastFame Camera, Ltd. v. Int'l Trade Comm'n*, 386 F.3d 1108, 1111-13 (Fed. Cir. 2004); *San Huan New Materials High Tech, Inc. v. Int'l Trade Comm'n*, 161 F.3d 1347, 1357 (Fed. Cir. 1998). Moreover, no party has contested subject matter jurisdiction. *See* Arista Br. at 5 (contesting infringement, not jurisdiction); *see generally* Joint Outline (jurisdiction is not contested).

B.   Personal Jurisdiction

Arista has responded to the enforcement complaint and notice of institution, and has participated in the investigation. The Commission therefore has personal jurisdiction over the Arista. *See, e.g.*, *Certain Ink Cartridges and Components Thereof*, Inv. No. 337-TA-565, Enf. Initial Determination at 30-31 (April 17, 2009) ("*Ink Cartridges*"), *aff'd*, Notice of a Commission Determination Not to Review an Enforcement Initial Determination Finding a Violation of Cease and Desist Orders and a Consent Order (June 19, 2009). Further, Arista does not contest personal jurisdiction in this proceeding. *See* Arista Br. at 5 (contesting infringement, not jurisdiction); *see generally* Joint Outline (jurisdiction is not contested).

C.   *In Rem* Jurisdiction

The Commission has *in rem* jurisdiction when infringing articles are imported, sold for

importation, or sold within the United States after importation by the owner, importer, or

consignee. 19 U.S.C. § 1337(a)(l)(B). "All that is required for in rem jurisdiction to be.

established is the presence of the imported property in the United States." *Certain Male*

Prophylactic Devices, Inv. No. 337-TA-546, Initial Determination (June 30, 2006) (citing

Certain Steel Rod Treating Apparatus and Components Thereof, Inv. No. 337-TA-97, USITC

Pub. No. 1210 (Jan. 1982), Comm'n Op. at 4, 11 for the proposition that presence of *res*

establishes *in rem* jurisdiction in section 337 actions). As discussed below, there is no dispute

that the accused products are manufactured abroad and imported into the United States. *See*

Arista Br. at 5 (contesting infringement, not jurisdiction); *see generally* Joint Outline

(jurisdiction is not contested). Indeed, the evidence shows that the accused products have been

imported and sold after importation into the United States. *See, e.g.*, CX-5191C (Arista's

Response to Cisco's First Set of Requests for Admission) at 4-5 (Resp. to RFA No. 1); CX-

5774C (Ex. D to Arista's 12/14/16 Second Supplemental Response to Cisco's First Set of

Interrogatories); CX-5774C (Ex. E to Arista's 12/14/16 Second Supplemental Response to

Cisco's First Set of Interrogatories). Accordingly, the administrative law judge has determined

that the Commission has *in rem* jurisdiction over the accused products, which are imported into

the United States.

III.   VIOLATION

A.   Overview of the '537 Patent (JX-0001)

U.S. Patent No. 7,162,537 (the "'537 Patent"), entitled "Method and system for

externally managing router configuration data in conjunction with a centralized database," issued

on January 9, 2007. The application that would issue as the '537 Patent, Application No.

09/479,607, was filed on January 6, 2000. In general, the '537 Patent is directed to a system and

method for managing data in networking devices. Further background for the '537 Patent is

provided in the ID from the underlying investigation. *See generally* ID at 6-11.

B.   Infringement

The Commission has found a party in violation of a cease and desist order when it sold

infringing products after the cease and desist order issued. *See, e.g., Certain Erasable

Programmable Read Only Memories, Components Thereof, Prods. Containing Such Memories,

and Processes for Making Such Memories*, Inv. No. 337-TA-276, Comm'n Op. at 4 (August 1,

1991) ("the Commission determined that Atmel Corporation had violated the Commission's

cease and desist order by selling infringing EPROMs between March 16, 1989, and August 3,

1989."). Accordingly, the administrative law judge has analyzed whether Arista's redesigned

products infringe the asserted claims.[2]

1.   Claim Construction

The claim constructions from the underlying investigation govern in this enforcement

proceeding. *See Certain Personal Data & Mobile Communications Devices & Related Software*,

Inv. No. 337-TA-710, Order No. 128 at 3 (Nov. 1, 2012) ("It is well-established that parties are

bound by the Commission's prior claim constructions; neither Apple nor HTC can seek to

broaden (or narrow) the scope of the asserted claims during this enforcement proceeding.").

Indeed, the Commission ordered the administrative law judge to "rule on the question of whether

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[2] In the enforcement proceeding, Cisco asserts independent claims 1, 10, and 19 and dependent
claims 2, 8, 9, 11, 17, and 18 of the '537 Patent. *See* Cisco Br. at 8; JX-0001 at 15:22-18:39.
The '592 and '145 Patents are not asserted in this enforcement proceeding. *See generally* Enf.
Compl.

the enforcement respondent has violated the June 23, 2016 CDO issued in the above-captioned investigation." Order at 3 (EDIS Doc. ID No. 591516) (September 28, 2016). The CDO, in turn, prohibited Arista from engaging in various commercial activities[3] for covered products that infringe one or more of claims 1, 2, 8-11, and 17-19 of the '537 Patent. *See* CDO at 1-3.

For reference, select, previously construed claim terms from the '537 Patent are reproduced below:

CLAIM TERM & CORRESPONDING CLAIM(S)	ADMINISTRATIVE LAW JUDGE / COMMISSION CONSTRUCTION
"externally managing router data" (1 and 10) "externally manage router data" (19) "external management" (1 and 10) "management of" (19)	No construction necessary
"management registration request" (1 and 10) "management request" (19)	"a request to register to provide external management services"
"router configuration data" (1, 2, 10, 11, and 19)	No construction necessary
"said database" (1 and 10)	Not indefinite / no construction necessary
"reducing computational overhead" (1 and 10) "reducing computational overhead in a centralized database system" (1 and 10)	"reducing the amount of computation in a centralized database system"
"said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" (1, 10, and 19)	Requires the storage of router configuration data in said database

See ID at 55-59; Comm'n Op. at 8-10.

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[3] The CDO prohibits "importing, selling, marketing, advertising, distributing, transferring (except for exportation), soliciting United States agents or distributors, and aiding or abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of certain network devices, related software and components thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537 . . . claims 6, 7, 20, and 21 of U.S. Patent No. 6,741,592 . . . and claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145[.]"

2.   Literal Infringement

Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly. *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995). Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). If an accused device lacks a limitation of an independent claim, the device cannot infringe a dependent claim. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989). The legal standards for the doctrine of equivalents are discussed in Part III(B)(3), *infra*.

Cisco asserts independent claims 1, 10, and 19 and dependent claims 2, 8, 9, 11, 17, and 18 of the '537 Patent. *See* Cisco Br. at 8; JX-0001 at 15:22-18:39. Cisco argues that Arista products running the redesigned EOS infringe the asserted claims literally and under the doctrine of equivalents. *See* Cisco Br. at 22 (Section V). Arista contends that it does not infringe any of the asserted claims. *See* Arista Br. at 11 (Section IV).

As discussed below, the administrative law judge has determined that the accused products, Arista products running the redesigned EOS, do not infringe the asserted claims.

a)   *Claim 19*

Asserted claim 19 is an independent claim, as are asserted claims 1 and 10. Claim 1 is a method claim, claim 10 is directed to machine-executable instructions, and claim 19 is an apparatus claim. Many of the method steps of claim 1 recite limitations similar to those recited in claim 19. The same holds true with the machine-executable instructions recited in claim 10.

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Therefore, this initial determination will analyze claim 19 before analyzing claims 1 and 10 (and their associated dependent claims).

Independent claim 19 follows:

> 19. In a router device having a processor and memory, a router operating system executing within said memory comprising:
>
> (a) a database subsystem;
>
> (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a *managing subsystem to externally manage router data upon issuing a management request* to said database subsystem; and
>
> (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0001 at 18:21-39 (emphasis added on disputed limitations (*see* Staff Br. at 21-22)). The ID subdivided the claim into eight limitations, which are presented and analyzed below.

> (1)   In a router device having a processor and memory, a router operating system executing within said memory comprising:

Cisco argues:

> Arista does not dispute that its redesigned products continue to infringe the preamble of claim 19 of the '537 Patent as previously found. As noted in the ID, the Accused Products are router devices with a processor, memory, and a router operating system. CX-5719C (944 ID) at 65. This was true for the pre-redesign products and continues to be true for the redesign products. CX-5002C (Almeroth WS) at Q200-202; CX-0166 (Arista Data Sheet). Arista devices are router devices because they perform routing tasks and run routing protocols. *See, e.g.,* CX-5002C (Almeroth WS) at

Q200-201; CX-5183C (Duda Dep.) at 279:9-15, 279:24-25, 281:6-9, 282:1-11.

Cisco Br. at 76-77.

Arista and the Staff do not specifically address the preamble. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products are router devices that satisfy the preamble. For example, the data sheet for the 7010T-48 shows the accused products contain a CPU, include system and flash memory, and run Arista's EOS software. *See* CX-0166 (Arista Data Sheet); CX-5002C (Almeroth WS) at Q/A 200. Further, the accused products are router devices because they perform routing tasks and run routing protocols. *See* CX-5002C (Almeroth WS) at Q/A 201. Accordingly, the administrative law judge has determined that the accused products satisfy the preamble.

(2)   (a) a database subsystem;

Cisco argues:

> Arista does not dispute that its redesigned products continue to infringe this element of the '537 Patent as previously found. Arista does not allege to have made any changes to its products that would affect this element of the claim. In the underlying investigation, the ALJ found that the claimed "database subsystem" is the portion of Sysdb that handles mounts. CX-5788C (944 ID) at 65-66. As Dr. Almeroth explains, the same is true with the redesigned system. CX-5002C (Almeroth WS) at Q202. In the redesigned system, there is a part of Sysdb that [
>
>
>] as explained above in §§ VI.A and VI.B. This functionality in Sysdb corresponds to the claimed "database subsystem." CX-5002C (Almeroth WS) at Q202.

Cisco Br. at 77.

Arista and the Staff do not specifically address the database subsystem limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the database subsystem limitation. In particular, the database subsystem is the part of Sysdb that handles the "mounting" functionality.[4] *See* CX-5002C (Almeroth WS) at Q/A 202. Accordingly, the administrative law judge has determined that the accused products satisfy the database subsystem limitation.

> (3)   (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem,

Cisco addresses the three limitations of subpart (b) of claim 19 jointly. *See* Cisco Br. at 77-79 (Section (V)(E)(1)(c)). For the "plurality of client subsystems" limitation, Cisco argues:

> Arista's redesigned products continue to meet claim 19(b) of the '537 Patent. Detailed analysis regarding the issues presented by the element is also provided above, in §§ V.A and V.B.2.c.
>
> As explained above, when Arista redesigned its EOS software, it [
>
>   ] *See, e.g.,* §§ V.A and V.B.2.c. As such, **subsystems in Arista's redesigned EOS include the agent in combination with the functionality of** [   ] As Dr. Almeroth explains, at least one of these managing subsystems, such as the [
>
>   ] is "configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem." CX-5002C (Almeroth WS) at Q203-204. . . .

Cisco Br. at 77-78.

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[4] The '537 Patent teaches that the "database subsystem" is the part of Sysdb that receives the management registration request from an external subsystem and registers the subsystem for external management. JX-0001 ('537 Patent) at 15:37-40, 16:64-67, 18:29. *See* ID at 65.

Arista and the Staff do not specifically address the plurality-of-client-subsystems limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the plurality-of-client-subsystems limitation. In particular, the plurality of client subsystems includes agents in the EOS in combination with the [   ] functionality. *See* CX-5002C (Almeroth WS) at Q/A 60-62, 115-118. Accordingly, the administrative law judge has determined that the accused products satisfy the plurality-of-client-subsystems limitation.

> (4) one of said client subsystems configured as a managing subsystem to externally manage router data

For the "managing subsystem" limitation of subpart (b) of claim 19, Cisco argues:

> . . . As such, subsystems in Arista's redesigned EOS include the agent in combination with the functionality of [   ] As Dr. Almeroth explains, at least one of these managing subsystems, such as [
>   ] is "configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem." CX-5002C (Almeroth WS) at Q203-204. The managing subsystem described above will issue a management request, or "a request to register to provide external management services," to the database subsystem just as the managing subsystem in the prior version of EOS. In the redesigned system, the [
>
>] Specifically, on an [
>   ] function calls
> [   ] which [
>
>] *Id.* at Q116-118; *See,*
> *e.g.,* CX-5208C [   ] CX-5043C;
> CX-5042C; CX-5015C (Duda Dep.) at 130:11-17; CX-5013C
> (Sweeney Dep.) at 133:7-135:12. This message—just as the write-mount request in the prior system—includes [
>
>] *See, e.g.,* CX-
> 5002C (Almeroth WS) at Q116-118; CX-5208C; CX-5043C; CX-

5042C; CX-5013C (Sweeney Dep.) at 154:8-156:20, 160:17-161:23; CX-5015C (Duda Dep.) at 83:9-84:11. This also causes [   ] for the agent at issue. CX-5002C (Almeroth WS) at Q116-118. [

                                                                    ] *See, e.g., id.* at 116-118, 121-123, 131; CX-5208C; CX-5043C; CX-5042C. [
                                                                                                            ]
See, e.g., CX-5002C (Almeroth WS) at Q116-118, 127-131, 168, 203-204; CX-5208C; CX-5043C; CX-5042C; CX-5013C (Sweeney Dep.) at 46:13-49:2, 145:15-148:1. . . .

Cisco Br. at 78-79 (emphasis added).

Arista argues that four "indisputable, and indeed, undisputed" facts compel a finding of

no infringement. The four facts are:

1. It is the [   ] process (using a function called [   ] that sends the [   ] the only thing Cisco contends is a management registration request in the redesign.

2. It is the [   ] process that sends the name of the agent to [   ]

3. Neither [   ] nor [   ] is a managing subsystem, alone or in combination with each other.

4. Agents, which were adjudged to be managing subsystems, are [
                                        ] and so do not and cannot [
                          ]

Arista Br. at 12-13. In arguing that the redesigned products lack a managing subsystem, Arista

argues that [   ] and that

[
                                                    ] *Id.* at 13, 15.

The Staff argues that "Cisco's interpretation of 'managing subsystem' is not supported by the '537 Patent." Staff Br. at 27. The Staff further argues that the redesigned products avoid infringement because the [

] and because the [

] *Id.* at 33 (emphasis added by the Staff).

The evidence shows that the accused products do not include a managing subsystem that satisfies the "managing subsystem" limitation.

In the ID and Commission Opinion, it was determined that agents in Arista's EOS perform external management by [   ] *See* ID at 66; Comm'n Op. at 11-14. In [   ] an agent [   ] *Id.* (citing CX-0007C (Almeroth WS) at Q/A 88). [

] *See* RX-5131C (Sweeny RWS) at Q/A 12-14.

In the redesigned products, Arista has removed [   ] to Sysdb. *See* RX-5131C (Sweeny RWS) at Q/A 64-65. In particular, [

] *Id.* at Q/A 67; *see also id.* at Q/A 55-56.

Mr. Sweeny, a Vice President of Software Engineering at Arista, explained that the redesigned products now include [   ] and that[

                                                                            6   ] *Id.* at Q/A 69-71; *see also* RX-5129C (McKusick RWS) at Q/A 30-35 ("the point of the redesign is

---

[5] [

] RX-5131C (Sweeny RWS) at Q/A 12.

[6] [   ] is a new process for the redesign products. RX-5131C (Sweeny RWS) at Q/A 65.

that an agent [

] *See* RX-5131C

(Sweeny RWS) at Q/A 70; *see also* RX-5129C (McKusick RWS) at Q/A 338 ("The content of

the [   ] on its face merely [

] Sysdb then [7

] *See* RX-5131C (Sweeny RWS) at Q/A 69, 91 (["

]."), 106. [

]. *See* RX-5131C (Sweeny RWS) at Q/A 74; RX-5129C

(McKusick RWS) at 39, 61-62, 174. The agent then calls a [

] *See* RX-5131C

(Sweeny) at Q/A 120-22; RX-5129C (McKusick RWS) at 182, 189.

Accordingly, the administrative law judge finds that the redesigned products lack a

managing subsystem, as [   ] do not

perform external management [   ]

> (5) upon issuing a management request to said database
> subsystem;

The "management request" limitation is equivalent to the "management registration

request" of claims 1 and 10. For the "management request" limitation of subpart (b) of claim 19,

Cisco argues:

> . . . . The managing subsystem described above will issue a
> management request, or "a request to register to provide external
> management services," to the database subsystem just as the
> managing subsystem in the prior version of EOS.   In the

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7 [   ] are new to the redesign products. RX-5131C (Sweeny RWS) at Q/A 90-94.

redesigned system, the same management request functionality has been transferred from the agent to a different set of software files that performs the same functions. Specifically, [

] *Id.* at Q116-118; *See, e.g.*, CX-5208C (Arista [   ] Summary); CX-5043C; CX-5042C; CX-5015C (Duda Dep.) at 130:11-17; CX-5013C (Sweeney Dep.) at 133:7-135:12. This message—just as the [   ] in the prior system—includes all of the information necessary for Sysdb to [

] *See, e.g.*, CX-5002C (Almeroth WS) at Q116-118; CX-5208C; CX-5043C; CX-5042C; CX-5013C (Sweeney Dep.) at 154:8-156:20, 160:17-161:23; CX-5015C (Duda Dep.) at 83:9-84:11. This also causes [

] CX-5002C (Almeroth WS) at Q116-118. [

] *See, e.g., id.* at 116-118, 121-123, 131; CX-5208C; CX-5043C; CX-5042C. [

] *See, e.g.*, CX-5002C (Almeroth WS) at Q116-118, 127-131, 168, 203-204; CX-5208C; CX-5043C; CX-5042C; CX-5013C (Sweeney Dep.) at 46:13-49:2, 145:15-148:1. Thus, the "managing subsystem" in Arista's products—the agent and the corresponding [   ]—*transmits a management request to Sysdb just as in the previous version of the products.* And after the management request is sent to Sysdb, Sysdb will [

] just as in the previous version. CX-5042C at 0331.

This managing subsystem will thus externally manage the router data in the same way that the ID found in the pre-redesign version, as explained above in § V.A.1. 944 Initial Determination at 66 ("When an EOS agent [   ] data in Sysdb, [

] As Dr. Almeroth explains, and as Arista and its expert do not dispute, Arista's redesigned products still perform the external management found to satisfy the claim requirements. *See, e.g.*, CX-5002C (Almeroth WS) at Q110, 206.

Further, even if Arista were correct that managing subsystems in the redesigned products do not literally "issu[e] a management request to said database subsystem," that limitation is met under the doctrine of equivalents. *See* § V.C.

Cisco Br. at 79 (emphasis added).

Arista argues that the [   ] command is not a management registration request, given its content, purpose, and location in the EOS. *See generally* Arista Br. at 24-34.

The Staff argues that the redesigned products do not satisfy the management request limitation because [   ] not a management request (*i.e.*, a request to register to provide external management services). *See generally* Staff Br. at 33-37.

The evidence shows that the accused products do not issue a managing request to the database subsystem.

In the ID, it was determined that agents in EOS [   ] to Sysdb that [   ] *See* ID at 69-70 ("The first step of a [

                                                                    ]

In the redesigned EOS, the components identified as part of the managing subsystem (*e.g.*, *inter alia*, [   ] do not send a management request to the database subsystem because the [   ] command is not a [   ] In particular, the [   ] command includes only [

            ] *See* RX-5129C (McKusick RWS) at Q/A 33, 329, 335-39.

Indeed, the [   ] command does not include [

                                ] *Id.* at Q/A 338. Further, as Arista notes, and as the testimony confirms, the purpose of the [   ] command is to [

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]. *See* RX-5129C (McKusick RWS) at Q/A 38, 344,

346, 412. Additionally, the [   ] command does not originate from the managing

subsystem, as the agent [

] RX-5131C (Sweeny RWS) at Q/A 69-71; *see also* RX-5129C (McKusick RWS)

at Q/A 30-35 ("the point of the redesign is that an agent [

] 355.

Accordingly, for the reasons provided above, the administrative law judge finds that the

redesigned products do not issue a management request.

> (6) and (c) a database operatively coupled to said database
> subsystem, said database configured to store router
> configuration data

Cisco addresses the three limitations of subpart (c) of claim 19 jointly. *See* ID at 70-74

(analyzing subpart (c) in three separate limitations); Cisco Br. at 79-80 (Section (V)(E)(1)(d)).

For subpart (c), Cisco argues:

> The Accused Products continue to meet claim 19(c) of the '537
> Patent as described below. Arista does not allege to have made
> any changes to its products that would affect this element of the
> claim, other than their arguments regarding the "request" element,
> which are the same as discussed in element 1(b) above and in
> §§ VI.A and VI.B.
>
> As the ALJ found in the underlying investigation, Sysdb stores
> router configuration data in a database that is coupled to the
> database subsystem. CX-5788C (944 ID) at 70-74. Sysdb
> contains the complete state of the system. This database is a
> storage (location for the system's data and also acts as an
> intermediary between specialized "agents," which perform the
> management tasks on the data stored in Sysdb. *See, e.g.,* Arista
> White Paper, EOS: The Next Generation Extensible Operating
> System (March 2014) CX-0286 (Arista White Paper - EOS: The
> Next Generation Extensible Operating System) at 0003-04; CX-
> 1098C (EOS Architecture Presentation) at 3-4. [
>   ] *See, e.g.,* CX-5002C (Almeroth WS) at
> Q61; CX-1098C at 15.

> As found in the ID and by the Commission, the router configuration data is "managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database," as Arista does not allege to have changed this functionality in its redesign. CX-5002C (Almeroth WS) at Q207; CX-5719C (944 ID) at 70-74.

Cisco Br. at 79-80.

Arista and the Staff do not specifically address the "database operatively coupled to . . ." limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the "database operatively coupled to . . ." limitation. In particular, Sysdb contains the complete state of the system. CX-5002C (Almeroth WS) at Q/A 205. Accordingly, the administrative law judge has determined that the accused products satisfy the "database operatively coupled to . . ." limitation.

> (7) and delegate management of router configuration data to a management subsystem that requests to manage router configuration data,

Cisco addresses the three limitations of subpart (c) of claim 19 jointly; its argument is copied above. *See* Cisco Br. at 79-80 (Section (V)(E)(1)(d)).

Arista and the Staff do not specifically address the "delegate management of router configuration data . . ." limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the "delegate management of router configuration data . . ." limitation. *See* CX-5002C (Almeroth WS) at Q/A 206 (opining this limitation is met). Accordingly, the administrative law judge has determined that the accused products satisfy the "delegate management of router configuration data . . ." limitation.

    (8)   said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

Cisco addresses the three limitations of subpart (c) of claim 19 jointly; its argument is copied above. *See* Cisco Br. at 79-80 (Section (V)(E)(1)(d)).

Arista and the Staff do not specifically address the "router configuration data managed by . . ." limitation. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy the "router configuration data managed by . . ." limitation. *See* CX-5002C (Almeroth WS) at Q/A 206-07 (opining this limitation is met). Accordingly, the administrative law judge has determined that the accused products satisfy the "router configuration data managed by . . ." limitation.

b) Claim 1

Independent claim 1, a method claim, follows:

> 1. A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is *a first managing subsystem*, comprising:
>
> > a) *transmitting a management registration request by said first managing subsystem* to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to *provide external management services*, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;
> >
> > b) receiving said management registration request by said database subsystem; and

c) registering said first managing subsystem for external management by said database subsystem.

JX-0001 at 15:22-40 (emphasis added on disputed limitations (*see* Staff Br. at 20-21)). While the ID subdivided claim 1 into seven limitations, Cisco's brief subdivides the claim into four limitations. *Compare* ID at 74-77 *with* Cisco Br. at 80-83 (presenting arguments about the preamble and subparts a), b), and c)). Cisco's arguments are analyzed below.

(1) A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:

For the preamble, Cisco argues:

The Accused Products continue to meet the preamble of claim 1 of the '537 Patent as described below. Arista products perform a method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem. Arista does not allege to have made any changes to its products that would affect this element of the claim, other than their arguments regarding the "managing subsystem" element as it relates to the "management registration request" element, which are the same as discussed in element 1(b) below and in §§ VI.A and VI.B. *See also* CX-5719C (944 ID) at 74-75.

As noted above, agents in the redesigned Accused Products [   ] Because the agents [
    ] the processing requirements of Sysdb are reduced, because the application-specific processing is performed by the agents. CX-5002C (Almeroth WS) at Q222-229. The functionality provided by Sysdb, in contrast, primarily consists of a [

        ] *See, e.g.*, CX-0459C ("EOS Architecture") at 2775; CX-0286 (Arista White Paper) at 0004; CX-0412C (AID 1575 What is tacc?) at 3280; CX-0223C (Basic Concepts of Tacc Mount Infrastructure from the EOS agent's perspective) at 3825;

> CX-0035C (AID 42 Hitchhikers Guide to the Arista Galaxy) at 9973; CX-0273 (Arista EOS: An Extensible Operating System) at 0002.
>
> More evidence regarding infringement of this element is found above in §§ V.A and V.B.2.c.

Cisco Br. at 80-83.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address the preamble. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy the preamble because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not include a managing subsystem and do not issue a management request that would satisfy the preamble of claim 1.

* * *

(2)   a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

Cisco argues:

> The Accused Products continue to meet claim 1(a) of the '537 Patent as described below. Detailed analysis regarding the issues presented by the element is also provided above, in §§ V.A and V.B.2.c.
>
> As explained more fully above in the analysis of the redesigned products and in the limitation-by-limitation analysis of claim 19, Arista's redesigned system continues to "transmit[] a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services." Specifically, on an [
>
>] *See, e.g.*, CX-5208C; CX-5043C; CX-5042C; CX-5015C (Duda Dep.) at 130:11-17; CX-5013C (Sweeney Dep.) at 133:7-135:12. This message—just as the [   ] in the prior system—includes all of the [
>
>] *See, e.g.*, CX-5208C; CX-5043C; CX-5042C; CX-5013C (Sweeney Dep.) at 154:8-156:20, 160:17-161:23; CX-5015C (Duda Dep.) at 83:9-84:11. Thus, the "managing subsystem" in Arista's products—the agent and the corresponding [   ]—transmits a management registration request to Sysdb indicating the data for which the agent requests to manage.
>
> Further, even if Arista were correct that its redesigned products do not literally "transmit[] a management registration request by said first managing subsystem to said database subsystem," that limitation is met under the doctrine of equivalents. *See* § V.C.

Cisco Br. at 82.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address subpart a) of claim 1. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy subpart a) because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra.* Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not include a managing subsystem and do not transmit a management request that would satisfy subpart a) of claim 1.

> (3)   b) receiving said management registration request by said database subsystem; and

Cisco argues:

> The Accused Products continue to meet claim 1(b) of the '537 Patent as described above in §§ V.A and V.B.2.c and in the limitation-by-limitation analysis of claim 19. Sysdb receives the [   ] and [
>] *See, e.g.,* CX-5208C; CX-5043C; CX-5042C. Further, even if Arista were correct that its redesigned products do not literally meet this requirement, it is met under the doctrine of equivalents. *See* § VI.D.

Cisco Br. at 83.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address subpart b) of claim 1. *See generally* Arista Br. at 12-34 (Section IV);

Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15

(Sections II and III).

The evidence shows that the accused products do not satisfy subpart b) because the

accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a

managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and

III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge

finds that the redesigned products do not receive a management request that would satisfy

subpart b) of claim 1.

> (4)   c) registering said first managing subsystem for external
> management by said database subsystem.

Cisco argues:

> The Accused Products continue to meet claim 1(c) of the '537
> Patent as described above in §§ V.A and V.B.2.c and in the
> limitation-by-limitation analysis of claim 19. When Sysdb [
>   ] it is "registering said first
> managing subsystem for external management." Further, even if
> Arista were correct that its redesigned products do not literally
> meet this requirement, it is met under the doctrine of equivalents.
> *See* § VI.D.

Cisco Br. at 83.

Apart from the arguments about the managing subsystem and management request

limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff

do not specifically address subpart c) of claim 1. *See generally* Arista Br. at 12-34 (Section IV);

Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15

(Sections II and III).

The evidence shows that the accused products do not satisfy subpart c) because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not register a managing subsystem, for external management, in a manner that would satisfy subpart c) of claim 1.

c)   *Claim 2*

Dependent claim 2 follows:

> 2. The method of claim 1 further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

JX-0001 at 15:41-43.

Cisco argues:

> The Accused Products continue to infringe claim 2 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed in connection with claim 1 above, and the ID's and Commission's findings thus continue to apply. *See, e.g.*, CX-5719C (944 ID) at 77; *see also* CX-5002C (Almeroth WS) at Q241.

Cisco Br. at 83.

Arista and the Staff do not specifically address claim 2. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products satisfy claim 2. In particular, Arista's EOS

[   ] *See* CX-5002C (Almeroth WS) at Q/A 241.

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However, the administrative law judge has determined that claim 2 is not infringed because claim 1 is not infringed. *See Ferring B.V. v. Watson Labs., Inc.-Florida*, 764 F.3d 1401, 1411 (Fed. Cir. 2014) ("Because we hold that the asserted independent claims of Ferring's patents are not infringed, the asserted dependent claims are likewise not infringed.").

d) Claim 8

Dependent claim 8 follows:

> 8. The method of claim 1 further comprising:
>
> (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;
>
> (b) receiving said change request by said database subsystem;
>
> (c) determining whether said router data is externally managed by a second managing subsystem; and
>
> (d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

JX-0001 at 16:27-39.

Cisco argues:

> The Accused Products continue to infringe claim 8 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed above in connection with claim 1, and the ID's and Commission's findings thus continue to apply. *See* CX-5719C (944 ID) at 77-79; *see also* CX-5002C (Almeroth WS) at Q242-249.

Cisco Br. at 83.

Arista and the Staff do not specifically address claim 8. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that the accused products satisfy claim 8.

Cisco cites Dr. Almeroth's testimony, portions of which follow:

Q242. Dr. Almeroth, do you have an opinion as to whether Arista products infringe claim 8?

A242. Yes, I believe they do, both literally and under the doctrine of equivalents.

. . .

Q245. How do Arista's products "receiv[e] said change request by said database subsystem"?

A245. Because, as we've discussed, [   ]

Q246. How do Arista's products "determin[e] whether said router data is externally managed by a second managing subsystem"?

A246. [

]

Q247. How do Arista's products "request[] a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem"?

A247. This occurs when Sysdb [

]

Q248. Do Arista's products infringe claim 8 in any other ways?

A248. Yes. As I've mentioned, Arista's Sysdb [

] When this happens, when one agent

[

]

[

]

Q249. Did you find evidence of this in Arista's code?

A249. Yes, in fact I found several files that confirmed that this occurs in Arista's code, such as

[

]

CX-5002C (Almeroth WS) at Q/A 242-249. This questioning and testimony is essentially copied from the corresponding questioning and testimony in the underlying investigation. *Compare id. with* CX-0007C (Almeroth WS) at Q/A 212-19.

Arista has argued that it has removed [   ] completely and that the redesigned products are now programmed [

] Arista Br. at 5-10. Dr. McKusick has explained that Arista removed [

] and that "an agent does not transmit a [   ] to Sysdb" and that "Sysdb does not [   ] to Sysdb."

RX-5129C (McKusick RWS) at Q/A 147-50, 196-99.

Given the alterations present in the redesigned products, *e.g.*, changes to the [

] the administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that [   ] are applicable (*see* CX-5002C (Almeroth WS) at Q/A 246-48) and can support a finding of infringement.

e)   Claim 9

Dependent claim 9 follows:

> 9. The method of claim 8 further comprising:
>
> a) determining whether said router data is locally cached; and
>
> b) updating the cache value to said router data when said router data is locally cached.

JX-0001 at 16:40-44.

Cisco argues:

> The Accused Products continue to infringe claim 9 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed above in connection with claim 1, and the ID's and Commission's findings thus continue to apply. *See* CX-5719C (944 ID) at 79-80; *see also* CX-5002C (Almeroth WS) at Q250.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 9. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that the accused products satisfy claim 9.

Cisco cites Dr. Almeroth's testimony, which follows:

> **Q250. Dr. Almeroth, do you have an opinion as to whether Arista products infringe claim 9?**
>
> A250. Yes, both literally and under the doctrine of equivalent. As I've discussed previously, Sysdb can [
>   ] which, of course it would know if it had done. And when a [
>   ] as I've previously discussed.

CX-5002C (Almeroth WS) at Q/A 250. This question and testimony is largely the same as the corresponding question and testimony in the underlying investigation. *Compare id. with* CX-0007C Almeroth WS) at Q/A 220.

Arista has argued that it has removed [   ] completely and that the redesigned products are now programmed [

                    ] Arista Br. at 5-10. Dr. McKusick has explained that Arista removed [

                    ] and that "an agent does not transmit a [   ] to Sysdb" and that "Sysdb does not [   ]

RX-5129C at Q/A 147-50, 196-99.

Given the alterations present in the redesigned products, *e.g.*, changes to the [

                    ] the administrative law judge finds that Cisco has not shown, by a preponderance of the evidence, that [   ] are applicable (*see* CX-5002C (Almeroth WS) at Q/A 250) and can support a finding of infringement.

f) Claim 10

Independent claim 10 follows:

> 10. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is *a first managing subsystem*, said method comprising:
>
> > (a) *transmitting a management registration request by said first managing subsystem* to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting *to provide external management* services, said router configuration data

managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

(b) receiving said management registration request by said database subsystem; and

(c) registering said first managing subsystem for external management by said managing subsystem.

JX-0001 at 16:45-67 (emphasis added on disputed limitations (*see* Staff Br. at 21)).

Cisco argues:

> The Accused Products continue to infringe claim 10 of the '537 Patent. Arista does not allege that its redesign affected the elements of this claim beyond what is discussed above in connection with claim 1, and the ID's and Commission's findings thus continue to apply. *See, e.g.*, CX-5719C (944 ID) at 80.

Cisco Br. at 84.

Apart from the arguments about the managing subsystem and management request limitations, which were addressed and analyzed in connection with claim 19, Arista and the Staff do not specifically address claim 10. *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The evidence shows that the accused products do not satisfy claim 10 because the accused products do not include a managing subsystem and do not externally manage data.

The administrative law judge previously found that the accused products do not include a managing subsystem and do not issue a management request. *See* Parts III(B)(2)(a)(4) and III(B)(2)(a)(5), *supra*. Accordingly, for the reasons provided above, the administrative law judge finds that the redesigned products do not include a managing subsystem and do not issue a management request that would satisfy the preamble of claim 1.

g) *Claim 11*

Dependent claim 11 follows:

> 11. The program storage device of claim 10, said method further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

JX-0001 at 17:1-4.

Cisco argues:

> The Accused Products continue to infringe claim 11 of the '537 Patent. The Accused Products infringe claim 10, upon which claim 11 is based. The Accused Products further meet the remainder of claim 11, which is the same as claim 2, for the reasons discussed for claim 2.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 11 (or claim 2). *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge previously found that the accused products satisfy claim 2, but do not infringe claim 2 due to its dependency on claim 1. *See* Part III(B)(2)(c), *supra.* Accordingly, the administrative law judge has determined that claim 11 is not infringed because claims 1 and 2 are not infringed. *See Ferring*, 764 F.3d at 1411.

h) *Claim 17*

Dependent claim 17 follows:

> 17. The program storage device of claim 10, said method further comprising:
>
> > (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;
> >
> > (b) receiving said change request by said database subsystem;

(c) determining whether said router data is externally managed by a second managing subsystem; and

(d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

JX-0001 at 18:1-13.

Cisco argues:

> The Accused Products continue to infringe claim 17 of the '537 Patent. The Accused Products infringe claim 10, upon which claim 17 is based. The Accused Products further meet the limitations in claim 17, which are the same as claim 8.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 17 (or claim 8). *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge previously found that Cisco had not shown, by a preponderance of the evidence, that the accused products satisfy claim 8. *See* Part III(B)(2)(d), *supra*. Accordingly, for the reasons provided above, the administrative law judge has determined that claim 17 is not infringed.

i) *Claim 18*

Dependent claim 18 follows:

> 18. The program storage device of claim 17, said method further comprising:
>
> (a) determining whether said router data is locally cached; and
>
> (b) updating the cache value to said router data when said router data is locally cached.

JX-0001 at 18:14-19.

Cisco argues:

> The Accused Products continue to infringe claim 18 of the '537 Patent. The Accused Products infringe claim 17, upon which claim 18 is based. The Accused Products further meet the limitations in claim 18, which are the same as in claim 9.

Cisco Br. at 84.

Arista and the Staff do not specifically address claim 18 (or claims 8, 9, and 17). *See generally* Arista Br. at 12-34 (Section IV); Arista Reply at 2-25 (Section II); Staff Br. at 18-43 (Section III(D)); Staff Reply at 1-15 (Sections II and III).

The administrative law judge previously found that Cisco had not shown, by a preponderance of the evidence, that the accused products satisfy claims 17 (or claim 8) and 9. *See* Parts III(B)(2)(d), III(B)(2)(e) and III(B)(2)(h), *supra*. Accordingly, for the reasons provided above, the administrative law judge has determined that claim 18 is not infringed.

3. Doctrine of Equivalents

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. "Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21 (1997) (citing *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 609 (1950)). "The determination of equivalence should be applied as an objective inquiry on an element-by-element basis." *Id.* at 40.

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused

device 'performs substantially the same function in substantially the same way to obtain the

same result' as the claim limitation." *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374,

1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software, Inc. v.*

Stealth Signal, Inc., 659 F.3d 1121, 1139-40 (Fed. Cir. 2011).[8]

Cisco argues that the redesigned products also infringe under the doctrine of equivalents.

See Cisco Br. at 60-75 (Section V(C)). Cisco's brief presents a general comparison of overall

attributes of the redesigned products to the claimed router.[9] Cisco focuses its arguments in a

footnote, as follows:

> In an attempt to create artificial gaps between the redesigned
> products and the claims, Arista argues that three separate
> limitations need to be analyzed under the doctrine of equivalents.
> RX-5129C (McKusick RWS) at Q402. But ***there is, in actuality,***
> ***only one claim limitation at issue:*** "transmitting a management
> registration request by said first managing subsystem to said
> database subsystem," and Arista's attempt to argue otherwise is
> legally improper. *See Brilliant Instruments, Inc. v. GuideTech,*
> *LLC*, 707 F.3d 1342, 1347 (Fed. Cir. 2013). Moreover, as
> discussed above, Arista's redesign is equivalent whether the claim
> is treated as having one or three requirements.

Cisco Br. at 62, n.16 (emphasis added).[10] The language for the "only one claim limitation at

issue" appears in claims 1 and 10 only. *See* JX-0001 at 15:22-40; 16:45-67. Cisco's brief

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[8] "The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge." *Warner Jenkinson*, 520 U.S. at 36.

[9] For example, Cisco has argued: "As demonstrated below, Arista's redesigned EOS infringes because it perform the same function, in the same way, to achieve the same result as each of the claim limitations." Cisco Br. at 60-61.

[10] To the extent Cisco is asserting the doctrine of equivalents for other limitations (*see, e.g.*, Cisco Br. at 61, arguing that "[t]he 'result' of the claim limitations in the '537 patent is also identical as between the claimed system and Arista's redesign"), the administrative law judge

contends that the redesigned products are insubstantially different, an argument it presents "by application of the function-way-result test." *Id.* at 61. Cisco's brief also includes disintegrated discussions about [   ] (at 62-63), the [   ] command (at 63-64), Arista's argument about [   ] (at 64), vitiation (at 64-65), Arista's expert's testimony (at 65-66), the [   ] aspects of the redesign (at 66), and Arista documents describing changes between the redesigned EOS and its predecessor (at 66-67).

Arista argues that prosecution history estoppel and vitiation bar Cisco's equivalence argument. Arista Br. at 38-44, 48-49. Arista further argues that the redesigned products are not insubstantially different from the claimed router. *Id.* at 44-48.

The Staff focuses on prosecution history estoppel and concludes that the redesigned products do not infringe under the doctrine of equivalents. Staff Br. at 37-48.

a) *Prosecution History Estoppel*

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex*, 419 F.3d at 1382. In particular, "[t]he doctrine of prosecution history estoppel limits the doctrine of equivalents when an applicant makes a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner." *Id.* (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1344 (Fed. Cir. 2005)).

For amendment-based estoppel, Arista argues:

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finds that those limitations are an improper general comparison between the redesigned EOS and non-specific claim limitations. *See DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1332 (Fed. Cir. 2001) ("in this case, the district court properly avoided such a general comparison and instead compared the limitations of the claims with the specific elements of the accused device. In making this proper comparison, the district court did not accept DeMarini's argument of insubstantial differences.").

First, after the Patent Office rejected its claims in view of the prior art, Cisco amended and narrowed claim 19. Cisco's amendment [submitted on September 6, 2005], with newly added limitations indicated with underscoring in the original (and to which we have added highlighting), is shown below:

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19. (Currently Amended) In a router device having a processor and memory, a router operating system executing within said memory comprising:

    (a) a database subsystem;

    (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and

    (c) a database operatively coupled to said database subsystem, said database ~~structured and~~ configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0007 ('537 Patent file history) at CSI-ANI-00098149.000471; *see also* RX-5129C (McKusick RWS) at Q/A 367-75.

Second, Cisco amended claim 19 for substantial reasons relating to patentability. Amendments "added to overcome a previous rejection" of the claim by the Patent Office are a substantial reason relating to patentability. *EMD Millipore*, 768 F.3d at 1204. Cisco amended claim 19 after the examiner rejected it as obvious in view of a prior art patent issued to an earlier inventor named Ciscon. JX-0007 ('537 Patent file history) at CSI-ANI-00098149.000462. According to the examiner, Ciscon discloses a "subsystem" that sends "registration requests" or "interest objects" that tell the "receiving router" about "objects" that the subsystem is interested in receiving, so that it can receive such objects. *Id.* at CSI-ANI-00098149.000150-158. After Cisco added the "managing subsystem" issuing a "management request" and "managing subsystem that requests to manage" limitations to claim 19, and

argued that similar limitations in claims 1 and 10 distinguish the claimed invention from the Ciscon prior art, the examiner allowed claim 19 without further amendment. *Id.* at CSI-ANI-00098149.000534-35.

Not only did Cisco narrow its claims for reasons directly related to patentability, it did so to distinguish its invention and disclaim the kind of technology that Arista uses in the redesigned EOS. The Ciscon prior art reference, which Cisco amended its claims to avoid, described a subsystem that sends a request and then receives an object. *See, e.g., id.* at CSI-ANI-00098149.000155 ("the managing subsystem receives the 'interest change object'"). And in the redesigned EOS, [

] Cisco's expert Dr. Almeroth agrees that this is how the redesigned EOS works: [

] Hrg. Tr. (Almeroth) at 113:3-6. Having amended its claims to disavow [

] Cisco cannot now exploit the doctrine of equivalents to recapture this surrendered territory. *See Festo II*, 344 F.3d at 1367. . . .

Arista Br. at 39-41 (emphasis added by Arista). Arista then critiques Cisco's arguments. *Id.* at 41-44.

The Staff notes that Examiner allowed claim 19 after the September 6, 2005 amendment. *See id.* at 40 (citing JX-0007 ('537 file history) at CSI-ANI-00098149.000471-72). The Staff then argues that the amendment "was made for a substantial reason relating to patentability" and that Cisco has not rebutted the *Warner-Jenkinson* presumption. *Id.* at 42. The Staff concludes that estoppel bars Cisco's equivalency argument. *See id.* at 43.[11]

For argument-based estoppel, Cisco replies that:

Arista's argument-based estoppel argument also fails, because Cisco never disclaimed the proposed equivalent here in any of its arguments during prosecution. Nor did it need to: in Ciscon, subsystems would register to be informed about certain data,

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[11] *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740 (2002) explained that "[w]hen the patentee is unable to explain the reason for amendment, estoppel not only applies but also 'bar[s] the application of the doctrine of equivalents as to that element.'"

functionality akin to issuing **read-mount requests**. *Id.* This is different than the alleged equivalent in Arista's products, where [   ] are sent to enable agents to [   ] CX-5002C (Almeroth WS) at Q/A 44-45, 218, 261. Faced with these facts, Arista mischaracterizes Dr. Almeroth's testimony to [   ] *See* RPoHB at 40-41. Arista argues that Dr. Almeroth testified that agents in the redesigned EOS [   ] from Sysdb, and contends that Cisco cannot recapture this functionality through equivalents. *Id.* (citing Hr'g Tr. (Almeroth) at 113:3-6). But [   ] from Sysdb is not the functionality accused of infringement, and thus is not something Cisco is trying to "recapture" through equivalents. Agents infringe when they [   ] in Sysdb. Cisco never disclaimed these [   ] and Arista cannot point to evidence demonstrating otherwise. *See* RPoHB at 40-41.

Cisco Reply at 28-29 (emphasis added by Cisco).

The Staff notes that:

> Throughout the underlying investigation and this enforcement, the parties have agreed that the terms "management request" and "management registration request" mean the same thing. . . . Nevertheless, Cisco now argues that "the language in claims 1 and 10 is not identical to the amendment added to claim 19, so there is no risk of interpreting the limitations differently in different claims." Cisco IPHB at 68. . . . Cisco's new argument that interpreting the language of claim 19 differently from claims 1 and 10 would not result in inconsistent interpretation of the claim terms is flatly contradicted by the patent and the positions taken by Cisco up to this point.

Staff Reply at 14.

(1)   Amendment-Based Estoppel

The administrative law judge finds that amendment-based estoppel bars Cisco's doctrine of equivalents arguments.

"A patentee's decision to narrow his claims through amendment may be presumed to be a general disclaimer of the territory between the original claim and the amended claim." *Festo*

Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 740 (2002) ("*Festo*"). A

complainant can rebut the presumption by showing the equivalent would "have been

unforeseeable at the time of the application[,]" "the rationale underlying the amendment [bore]

no more than a tangential relation to the equivalent in question[,]" or that there was "some other

reason" why "the patentee could not reasonably be expected to have described the insubstantial

substitute in question." *See id.* at 740-41. The complainant bears "the burden of showing that

the amendment does not surrender the particular equivalent in question." *Id.* at 740.

The Examiner issued six Office Actions and three Advisory Actions during prosecution.[12]

In general, all of the rejections relied upon Ciscon et al., U.S. Patent No. 5,634,010 ("Ciscon").

In response, the applicant argued against Ciscon and essentially amended the claims once, on

September 6, 2005. Additional details follow:

- In the July 22, 2003 Office Action, the Examiner rejected all of the claims based on Ciscon. *See* JX-0007 at CSI-ANI-00098149.000149. The applicant replied on October 22, 2003. *Id.* at .000201. The reply argued against Ciscon without presenting any meaningful amendments. *Id.* at .000202-18 (generally not amending the claims; the "database subsystem" limitation was introduced); *id.* at .000219-29 (arguing that Ciscon does not teach various limitations of the pending claims).

- In the December 12, 2003 Office Action, the Examiner found that the applicant's arguments were "not persuasive" and again rejected all of the pending claims based on Ciscon. *See* JX-0007 at CSI-ANI-00098149.000233-34. The applicant replied on February 12, 2004. *Id.* at .000244, .000260. The reply submitted "that Ciscon does not teach, suggest, nor otherwise suggest the limitations of claim of the present application for reasons stated previously." *Id.* at .000234. No new claim amendments were presented. *Id.* at .000245-58.

- The Examiner issued an Advisory Action on March 1, 2004 that maintained the rejection. *Id.* at 000262. The applicant filed a request for continued examination

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[12] *See* JX-0007 at CSI-ANI-00098149.000146 (July 22, 2003 Office Action); at .000231 (December 12, 2003 Office Action); at .000261 (March 1, 2004 Advisory Action); at .000307 (May 7, 2004 Office Action); at .00354 (October 21, 2004 Office Action); at .000394 (February 24, 2005 Advisory Action); at .00420 (May 6, 2005 Office Action); at .000458 (August 5, 2005 Advisory Action); at .00478 (November 30, 2005 Office Action).

("RCE"). *See id.* at .000280 (March 17, 2004), .000302 (March 31). The RCEs did not present any new claim amendments. *Id.* at .000266-79 (March 17, 2004), .000287-300 (March 31).

- In the May 7, 2004 Office Action, the Examiner maintained the rejection of all claims as unpatentable over Ciscon. *See* JX-0007 at CSI-ANI-00098149.000311. The applicant filed a reply on August 9, 2004 that argued against Ciscon. *Id.* at .000337, .000339-43 (presenting emphatic argument against Ciscon). The reply did not present any claim amendments. *Id.* at .000320-36.

- In the October 21, 2004 Office Action, the Examiner again maintained the rejection of all claims as unpatentable over Ciscon. *See* JX-0007 at CSI-ANI-00098149.000360. The applicant replied on December 22, 2004, again emphatically arguing against Ciscon. *Id.* at .000372, .000387-90. The reply did not present any claim amendments. *Id.* at .000373-86.

- The Examiner issued an Advisory Action on February 24, 2005 that maintained the rejection. *Id.* at .000394-95. The applicant filed an RCE on March 29, 2005. *Id.* at .000396. The RCE did not amend any claims. *Id.* at .000399-412. The RCE presented additional emphatic argument against Ciscon. *Id.* at .000413-16.

- On May 6, 2005, the Examiner issued an Office Action. *See* JX-0007 at CSI-ANI-00098149.000420. The Examiner again maintained the rejection of all claims as unpatentable over Ciscon. *Id.* at .000424. The applicant replied on July 6, 2005. *Id.* at .000437-56, .000461.

- The Examiner issued an Advisory Action on August 5, 2005. *Id.* at .000458-59. The applicant filed an RCE on September 6, 2005. *Id.* at .000473-74. The RCE amended claims 1, 10, and 19. *Id.* at .000465-72. It also presented argument against Ciscon. *Id.* at .000462-64.

- In the November 30, 2005 Office Action, the Examiner rejected all of the pending claims as unpatentable over Ciscon. *See* JX-0007 at CSI-ANI-00098149.000482. The applicant replied on February 28, 2006. *Id.* at .000505. The applicant presented argument against Ciscon but did not further amend the claims. *Id.* at .00495-504 (presenting original and previously amended claims), .000518-.000525 (same), .000506-08 (arguing against Ciscon), .000515-17 (same).

- The Examiner entered a Notice of Allowance on August 30, 2006. *See* JX-0007 at CSI-ANI-00098149.000537.

As noted above, in response to the May 6, 2005 rejection, Cisco amended the claims on

September 6, 2005. Cisco amended claim 19 as follows:

19.   (Currently Amended) In a router device having a processor and memory, a router operating system executing within said memory comprising:

(a)   a database subsystem;

(b)   a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and

(c)   a database operatively coupled to said database subsystem, said database structured and configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

JX-0007 at CSI-ANI-00098149.000471-72.

The administrative law judge finds that this amendment narrowed the scope of claim 19 because it added several express limitations. Thus, the amendment creates a rebuttable presumption that estoppel applies. *See Warner-Jenkinson*, 520 U.S. at 33-34.

The prosecution history further shows that the reason for the amendment was substantially related to patentability. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1366 (Fed. Cir. 2003) ("the second question is whether the reason for that amendment was a substantial one relating to patentability") ("*Festo II*"). Before the September 6, 2005, amendment, the Examiner had issued five office actions and three advisory actions. *See generally* JX-0007 (bulleted summary above). After the amendment, the Examiner issued another rejection, to which the applicant replied:

45

Independent claims 1, 10, and 19 (all pending independent claims) were previously amended to include the claim limitation of

> transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and **executed by a router configuration subsystem before being stored in said database**

. . .

> Finally, there is no disclosure, teaching, or suggestion in Ciscon that execution of user-supplied configuration commands results in configuration data that is stored in a database. As the present invention performs this claim limitation to manage router configuration data in conjunction with a centralized database, the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands, not properties of data structures, to more effectively configure routers deployed in a network.

JX-0007 at CSI-ANI-00098149.000506-07 (bold emphasis added by applicant). The applicant's

comments that "the present invention performs this claim limitation to manage router

configuration data in conjunction with a centralized database" relates to the amendment, and thus

relates to patentability.[13] Further, the applicant's many unsuccessful attempts to argue over

Ciscon also confirm that the amendment was critical to obtaining allowance. Accordingly, the

administrative law judge finds that the amendment was substantially related to patentability.

The prosecution history shows that the patentee surrendered subject matter pertaining to

management requests and databases that are configured to store router configuration data and

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[13] The Notice of Allowance stated that: "Claims 1-22 are allowed in view of the Applicant's arguments and the cited prior art of record. The independent claims recite registering a managing subsystem with a centralized database to externally manage router configuration data derived from configuration commands supplied by a user which, in addition to the rest of the claim limitations, are distinguished from the prior art." JX-0007 at CSI-ANI-00098149.000535.

"delegate management of router configuration data to *a management subsystem that requests to manage router configuration data* said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database."[14] *See* JX-0007 at CSI-ANI-00098149.000471-72 (emphasis added); *Festo II*, 344 F.3d at 1367 ("the third question in a prosecution history estoppel analysis addresses the scope of the subject matter surrendered by the narrowing amendment"); *Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1141 (Fed. Cir. 2004) (finding an amendment adding a new limitation giving rise to estoppel). In other words, the surrendered scope relates to equivalents of databases that delegate management to a managing subsystem that uses management requests. *See Festo II*, 344 F.3d at 1372 (finding disclaimer of "devices that include other than two sealing rings"). This surrender applies not only to claim 19, but also to claims 1 and 10. *See id.* at 1370 n.4 ("the *Festo* presumption of surrender and its rebuttal apply to all granted patents and to all pending litigation that has not been concluded with a final judgment, including appeals."); *Builders Concrete, Inc. v. Bremerton Concrete Prods.*, 757 F.2d 255, 260 (Fed. Cir. 1985).

<div align="center">(2)   Rebuttal to the Festo Presumption</div>

The Federal Circuit explained that the Supreme Court articulated three ways in which prosecution history estoppel may not apply to a given case:

> As indicated above, the Court identified the three ways in which the patentee may overcome the presumption. Specifically, the patentee must demonstrate that [(1)] the alleged equivalent would have been unforeseeable at the time of the narrowing amendment, that [(2)] the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent in question, or

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[14] To the extent it is later determined that the scope of the estoppel is different, this initial determination has analyzed Cisco's doctrine of equivalents arguments independent of the scope of the estoppel.

that [(3)] there was "some other reason" suggesting that the patentee could not reasonably have been expected to have described the alleged equivalent.

Festo II, 344 F.3d at 1368. Cisco argues that these exceptions "prevent estoppel from applying[.]" Cisco Br. at 72.

> *(a)   The First Festo Criterion*

The Federal Circuit has explained:

> The first criterion requires a patentee to show that an alleged equivalent would have been "unforeseeable at the time of the amendment and thus beyond a fair interpretation of what was surrendered." *Id.* at 738, 122 S.Ct. 1831. This criterion presents an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment. . . . By its very nature, objective unforeseeability depends on underlying factual issues relating to, for example, the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment.   Therefore, in determining whether an alleged equivalent would have been unforeseeable, a district court may hear expert testimony and consider other extrinsic evidence relating to the relevant factual inquiries.

Festo II, 344 F.3d at 1369.

Cisco argues that Arista has conceded the redesign was unforeseeable by arguing that the redesign employs a "'very different [   ] approach to establishing [   ] and never described or claimed it in the '537 Patent.'" Cisco Br. at 73 (quoting Arista Pre-Hr'g Br. at 67). Cisco then adds:

> Arista's superficial change embodied in the redesign was insignificant, *see, e.g.,* CX-5002C (Almeroth WS) at Q215, and a patentee would not have foreseen the particular implementation details Arista now alleges are so significant that the redesign does not infringe literally or under the doctrine of equivalents. This also explains why the third *Festo* exception would apply: a patentee could not have been expected to describe every permutation containing insignificant implementation nuances. *Festo*, 344 F.3d at 1370.

Id. at 73-74. This is the testimony that Cisco relies upon:

> **Q215. Do any Arista documents discuss how different the redesigned system is from the pre-redesign system in terms of [   ]?**
>
> A215. Yes. In internal documents, Arista told its engineers that [   ] ANI-ITC-944E-00000001 at 10 [
>
>
>
>   ] It also explains why Arista's witness Adam Sweeney testified that [
>   ] in the alleged redesign. Sweeney 944E Dep. Tr. at 22:18-25. In fact, of the [   ] people Mr. Sweeney named, [   ] were not even involved in the implementation of the redesign. *Id.* at 18:24-19:4; Duda 944E Dep. Tr. at 12:8-12.

CX-5002C (Almeroth WS) at Q/A 215.

The evidence does not show that the alleged equivalent would have been "unforeseeable at the time of the amendment and thus beyond a fair interpretation of what was surrendered," as *Festo* requires. Rather, the evidence cited pertains to the differences between the redesigned EOS and its predecessor. Further, evidence cited by Arista indicates that the redesigned products were foreseeable. *See* Arista Br. at 42; RX-5129C (McKusick RWS) at Q/A 156, 175, 178, 225, 389. Accordingly, the administrative law judge has determined that Cisco has fallen short of its burden of showing that equivalent was unforeseeable at the time of the amendment.

(b)   The Second Festo Criterion

The Federal Circuit has explained:

> The second criterion requires a patentee to demonstrate that "the rationale underlying the narrowing amendment [bore] no more than a tangential relation to the equivalent in question." [*Festo*], 535 U.S. at 740, 122 S.Ct. 1831. In other words, this criterion asks whether the reason for the narrowing amendment was peripheral, or not directly relevant, to the alleged equivalent. . . . Although we cannot anticipate the instances of mere tangentialness that may

arise, we can say that an amendment made to avoid prior art that contains the equivalent in question is not tangential; it is central to allowance of the claim. . . . whether the patentee has established a merely tangential reason for a narrowing amendment is for the court to determine from the prosecution history record without the introduction of additional evidence, except, when necessary, testimony from those skilled in the art as to the interpretation of that record.

Festo II, 344 F.3d at 1369-70.

Cisco's entire opening argument is:

Starting with the second *Festo* exception, the rationale underlying the amendment adding the "management request" language to claim 19 bore no more than a tangential relation to the equivalent in question. As explained more fully below, the patentee argued for claims 1 and 10, and subsequently claim 19, that the request pointed to by the examiner in the Ciscon reference was a "request to be served," whereas the claims contained a request to serve, *i.e.*, a request to manage. *See, e.g.*, JX-0007 ('537 Patent File History) at 0413; CX-5713 (Ciscon) at 2:53-66. Thus, if anything, the patentee disclaimed requests to "be served" by local router – the opposite of a request to serve or manage. *See, e.g.*, CX-5713 (Ciscon) at Abstract ("Each router process includes a connection table listing its connections with all other router and application processes, as well as an interest table listing the type of objects that each of the other processes are interested in receiving."), 2:53-66 ("Each application process registers its interest in receiving certain types of objects with its local router."), 8:57-59 ("If an application or router process desires to receive data of a particular type, it registers an interest by invoking a routine . . . .") This distinction bears no relationship to the equivalent at hand. The question here is whether it is equivalent to [

                    ] process instead of [   ]
and whether the [   ] at all, due to its contents allegedly not indicating to an outside observer that it is a
[   ] and what [

      ] None of the issues in the equivalents question here have anything to do with what was being distinguished in the prosecution history, which is a "request to be served," as opposed to a request to serve.

Cisco Br. at 72-73 (emphasis omitted).

Arista's entire opening argument is:

Cisco next argues (again with no expert testimony) that its "rationale" for narrowing its claims was not more than tangentially related to the alleged equivalent (the [   ] command). Compl. P.H. Br. at 143. Cisco argues that during prosecution, it "disclaimed requests to 'be served' by local router." *Id.* This only proves Arista's point. Cisco's disclaimer prevents it from asserting that the [   ] command is equivalent to the "management [registration] request." CX-5002C (Almeroth WS) at Q/A 123. The [   ] command [   ] and is thus a [   ] *See supra* at Section IV.B.2. And again, as Dr. Almeroth admits, [

] Hrg. Tr. (Almeroth) at 113:3-6.

Arista Br. at 42-43 (emphasis omitted).

The evidence, along with Cisco's argument, does not show that the rationale underlying the narrowing amendment bore no more than a tangential relation to the equivalent in question. Cisco cites to JX-0007 at CSI-ANI-00098149.000413, which is the "REMARKS" section from the response accompanying the March 24, 2005 RCE.[15] The amendment was submitted on September 6, 2005. *See id.* at .000464, .000473 (showing a Sept. 6, 2005 submission that responds to the August 5, 2005 Advisory Action). Cisco's argument about the March 24, 2005 remarks does not sufficiently explain how the September 6, 2005 amendment bore no more than a tangential relation to the equivalent in question.[16] Accordingly, the administrative law judge has determined that Cisco has fallen short of its burden of showing that the narrowing amendment bore no more than a tangential relation to the equivalent in question.

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[15] The response begins at CSI-ANI-00098149.000398.

[16] The applicant argued that, with regard to the amended claim, "the novelty here is that this claim limitation provides a way to incorporate a database into managing user-supplied configuration commands, not properties of data structures, to more effectively configure routers deployed in a network." JX-0007 at CSI-ANI-00098149.000516; *see also id.* at .000515 (arguing that "Ciscon fails to disclose, teach or otherwise suggest executing configuration commands before storing them in a database.").

(c) *The Third Festo Criterion*

The Federal Circuit has explained:

> The third criterion requires a patentee to establish "some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question." [*Festo*], 535 U.S. at 741, 122 S.Ct. 1831. This category, while vague, must be a narrow one; it is available in order not to totally foreclose a patentee from relying on reasons, other than unforeseeability and tangentialness, to show that it did not surrender the alleged equivalent. Thus, the third criterion may be satisfied when there was some reason, such as the shortcomings of language, why the patentee was prevented from describing the alleged equivalent when it narrowed the claim. When at all possible, determination of the third rebuttal criterion should also be limited to the prosecution history record.

Festo II, 344 F.3d at 1370.

Cisco's argument for the "other reason" criterion is presented along with its unforeseeable-at-the-time-of-the-amendment argument. *See* Cisco Br. at 73-74. Cisco adds a single sentence that is unique to the third criterion, which is "[t]his also explains why the third *Festo* exception would apply: a patentee could not have been expected to describe every permutation containing insignificant implementation nuances." *Id.* The evidence, along with Cisco's argument, does not provide "some other reason" why the applicant could not reasonably be expected to have described the insubstantial substitute in question. Cisco has not shown why the patentee could not have described "every permutation"—indeed, it has not even offered how many permutations (which are presumably akin to different or alternative embodiments) might exist. Further, to the extent Cisco's argument relies on its unforeseeable-at-the-time-of-the-amendment argument, that argument is not an independent "other reason" that would warrant wading into the "narrow" confines of this criterion. *See Festo II*, 344 F.3d at 1370. Finally, Cisco has not directly argued that a shortcoming of language prevented it from describing the

equivalent in question. *Id.* Accordingly, the administrative law judge has determined that Cisco

has fallen short of its burden of showing that some other reason prevents the *Festo* presumption

from extinguishing Cisco's equivalency argument.

(3)　　Argument-Based Estoppel

For argument-based estoppel, Cisco argues:

> Arista's argument-based estoppel argument also fails, because
> Cisco never disclaimed the proposed equivalent here in any of its
> arguments during prosecution. Nor did it need to: in Ciscon,
> subsystems would register to be informed about certain data,
> functionality akin to issuing ***read-mount requests***. *Id.* This is
> different than the alleged equivalent in Arista's products, where
> [   ] are sent to enable agents to [
>   ] CX-5002C (Almeroth WS) at Q/A 44-45, 218, 261.
> Faced with these facts, Arista mischaracterizes Dr. Almeroth's
> testimony to make it appear as though its system operates in a
> similar fashion to Ciscon. See RPoHB at 40-41. Arista argues that
> Dr. Almeroth testified that agents in the redesigned EOS [
>   ] from Sysdb, and contends that Cisco cannot recapture
> this functionality through equivalents. *Id.* (citing Hr'g Tr.
> (Almeroth) at 113:3-6). But [   ] from Sysdb is not
> the functionality accused of infringement, and thus is not
> something Cisco is trying to "recapture" through equivalents.
> Agents infringe when they [
>   ] in Sysdb. Cisco never disclaimed these [
>   ] and Arista cannot point to evidence
> demonstrating otherwise. *See* RPoHB at 40-41.

Cisco Br. at 28-29 (emphasis added by Cisco).

Arista argues:

> Cisco also attempts to avoid the argument-based estoppel that
> arises from Cisco's statements distinguishing the Ciscon prior art
> from the claimed invention. Compl. P.H. Br. at 144-45. Cisco's
> only argument here is that there purportedly is "no relationship"
> between Ciscon's request ***to be served*** and the [   ]
> command in the redesigned EOS. According to Cisco, the
> [   ] command is not a request to get anything or be served
> with anything, but is instead [   ] *Id.* at 145.
> This is baseless. Dr. Almeroth testified in his written witness
> statement that [   ]

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command [   ]
CX-5002C (Almeroth WS) at Q/A 123; *see also* Staff P.H. Br. at
23 (citing RX-5129C (McKusick RWS) at Q/A 31-32; RX-5131C
(Sweeney RWS) at Q/A 70). Cisco is wrong to suggest there is
"no relationship" between the prior art and the [   ]
command, and argument-based estoppel applies.

Id. at 44 (emphasis added by Arista).

Cisco replies:

> Arista's argument-based estoppel argument also fails, because
> Cisco never disclaimed the proposed equivalent here in any of its
> arguments during prosecution. Nor did it need to: in Ciscon,
> subsystems would register to be informed about certain data,
> functionality akin to issuing **read-mount requests**. *Id.* This is
> different than the alleged equivalent in Arista's products, where
> [   ] are sent to enable agents to [
>   ] CX-5002C (Almeroth WS) at Q/A 44-45, 218, 261.
> Faced with these facts, Arista mischaracterizes Dr. Almeroth's
> testimony to make it appear as though its system operates in a
> similar fashion to Ciscon. *See* RPoHB at 40-41. Arista argues that
> Dr. Almeroth testified that agents in the redesigned EOS
> [   ]from Sysdb, and contends that Cisco cannot
> recapture this functionality through equivalents. *Id.* (citing Hr'g
> Tr. (Almeroth) at 113:3-6). But [   ] from Sysdb is
> not the functionality accused of infringement, and thus is not
> something Cisco is trying to "recapture" through equivalents.
> Agents infringe when they [
>   ] in Sysdb. Cisco never disclaimed these [
>   ] and Arista cannot point to evidence
> demonstrating otherwise. *See* RPoHB at 40-41.

Cisco Reply at 28-29 (emphasis added by Cisco).

Arista replies:

> Finally, Cisco argues that it "never disclaimed the proposed
> equivalent" during prosecution, hoping to avoid a finding of
> argument-based estoppel. Compl. Br. at 72-73. Cisco's argument
> is based on the false premise that the [   ] command is
> somehow not a command to get, or receive, or [
>
>] *Id.*; *see also* JX-0007 ('537 Patent file history) at
> CSI-ANI-00098149.000339; RX-5129C (McKusick RWS) at Q/A
> 383-86; Resp. Br. at 44. But Cisco's own expert testified that

"[t]he [

]—*i.e.*, a [
] CX-5002C (Almeroth) at Q/A
123. The attorney arguments Cisco makes in its brief war with its
own expert's testimony and should be disregarded. *See* Resp. Br.
at 44; *see also* Staff Br. at 37-43.

Arista Reply at 22-23 (emphasis added by Arista).

The Federal Circuit has explained that to invoke argument-based estoppel, "'the

prosecution history must evince a clear and unmistakable surrender of subject matter.'" *Conoco,*

Inc. v. Energy & Envtl. Int'l, L.C., 460 F.3d 1349, 1364 (Fed. Cir. 2006) (quoting *Deering*

Precision Instruments, LLC v. Vector Distrib. Sys., Inc., 347 F.3d 1314, 1324 (Fed. Cir. 2003)).

Arista and the Staff have not pointed to any language from the prosecution history that

constitutes a clear and unmistakable surrender of subject matter. *See, e.g., PODS, Inc. v. Porta*

Stor, Inc., 484 F.3d 1359, 1368 (Fed. Cir. 2007) (finding arguments distinguishing the invention

based upon a rectangular-shaped frame "surrendered any claim to a frame that was not

rectangular or four-sided"). Accordingly, the administrative law judge finds that argument-based

estoppel is not applicable.

b) *Vitiation*

For vitiation and the all-elements rule, the Federal Circuit has explained that:

> . . . in certain instances, the "all elements" rule forecloses resort to
> the doctrine of equivalents because, on the facts or theories
> presented in a case, a limitation would be read completely out of
> the claim—*i.e.*, the limitation would be effectively removed or
> "vitiated." . . . We have also concluded that in some cases, the
> patentee's theory of equivalence was legally insufficient because,
> rather than demonstrate an insubstantial difference between a
> limitation and an element in the accused device, the theory
> effectively eliminated a limitation in its entirety. . . . Thus, the "all
> elements" rule generally is not met—and therefore a claim
> limitation can be said to be vitiated—if the theory or evidence of
> equivalence is legally incapable of establishing that the differences
> between the limitation in the claim and the accused device are

insubstantial; *i.e.*, if the theory or evidence is so legally insufficient as to warrant a holding of non-infringement as a matter of law.

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1017 (Fed. Cir. 2006) (citations omitted); *see also Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (Fed. Cir. 2012) ("'Vitiation' is not an exception to the doctrine of equivalents, but instead a legal determination that 'the evidence is such that no reasonable jury could determine two elements to be equivalent.'").

Arista argues:

> . . . In its prehearing brief, Arista explained that Cisco's attempt to equate the redesigned EOS's transmission of a [   ] command by the entity [   ] with the '537 Patent claims' requirement that a "management registration request" be sent by a "managing subsystem" would vitiate—that is, render entirely inconsequential—the claims' requirement that the thing that transmits the request be the external data manager. Resp. P.H. Br. at 108. Similarly, equating [
>
>   ] to the claimed "managing subsystem" would vitiate the requirement of having a managing subsystem that does "managing." *Id.* And equating the [   ] command (which does not [   ] with the claimed "management request" would vitiate the requirement that the request actually be one to manage data and indicate the data to be managed. *Id.*
>
> . . .
>
> Arista's redesigned EOS, in which [   ] have been removed, in which agents cannot [
>   ] and in which [
>   ]—issues a [   ] command, is the very "antithesis" of the claimed invention: a *request*-based approach to external management, in which a "managing subsystem" requests to manage data. In the redesigned EOS, agents, which before were found to be the "managing subsystem" of the claims, no longer [.   ] which were found to be "management registration requests." And the only command that could arguably be accused to be such a request in the redesigned EOS, the [   ] command, does not request registration or emanate from anything resembling a "managing subsystem." *Supra* at Sections IV.A, IV.B; *see also* RX-5131C (Sweeney RWS) at Q/A

83-86; RX-5129C (McKusick RWS) at Q/A 156-57. These are not mere "small variations" as Cisco suggests. Compl. P.H. Br. at 136. These are major changes that turned Arista's legacy EOS from a [   ] system that was found to infringe to a [   ] system that avoids fundamental limitations of the claims. Vitiation does not apply simply because Arista does not literally infringe; it applies because the equivalents Cisco accused of infringing are the opposite of what it claimed to have invented.

Arista Br. at 49 (emphasis added by Arista).

Cisco argues:

> Second, and most tellingly, Arista improperly asserts, without support, that transmitting the management registration request from anything other than the managing subsystem "cannot be equivalent" to transmitting it from the managing subsystem due to the claim vitiation doctrine. *See, e.g.*, RX-5129C (McKusick RWS) at Q362 ("Having something other than the managing subsystem send the accused message is not and cannot be equivalent."). Here, application of the doctrine of equivalents hardly "vitiates" the limitation. There is a [   ] sent on behalf of the agent, by a process that is logically, functionally, architecturally, and in all other meaningful respects, connected to the agent, using functionality already found to meet the claim limitations. *See supra* § V.B.2.c.

Cisco Br. at 64-65 (emphasis omitted). Cisco adds that Arista's application of vitiation would render "the doctrine of equivalents meaningless." *Id.* at 65.

Arista's reply does not address vitiation. *See generally* Arista Reply.

The administrative law judge has addressed Arista's vitiation-related arguments within the context of the function-way-result analysis, which follows. *See* Part III(B)(3)(c), *infra*. As reflected in that analysis, the requirement that a "management registration request" be sent by a "managing subsystem" has not lost significance or been rendered entirely inconsequential. *Id.*

c)   *Function-Way-Result Analysis*

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused

device 'performs substantially the same function in substantially the same way to obtain the same result' as the claim limitation." *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1139-40 (Fed. Cir. 2011). "The determination of equivalence should be applied as an objective inquiry on an element-by-element basis."[17] *Warner-Jenkinson*, 520 U.S. at 40.

(1) The Function

Cisco argues:

> Those insubstantial changes [between the redesigned EOS and its predecessor, which was found to infringe the '537 Patent,] are highlighted by application of the function-way-result test. First, the "function" of the "transmitting a management registration request by said first managing subsystem to said database subsystem" and "issuing a management request to said database subsystem" claim limitations in the '537 Patent *is to register a subsystem for management.* JX-0001 ('537 Patent) at 15:28-29, 18:28-29. This identical function is present in Arista's redesigned products. As explained above, the function of [
>
>] Hr'g Tr. (McKusick) at 261:25-262:4. This is not an ancillary effect but rather the exact role the [   ] command plays in the system Arista redesigned. *Id.* at 261:15-24.

Cisco Br. at 61 (emphasis added). This is the testimony Cisco cites:

> Q Okay. I'm going to show you your deposition, it's on page 119, starting at line 24, to 120, line 5. And it's going to cut over two pages, but I'll show it to you here on the screen. And you were asked -- there's a little bit of preliminary colloquy that we then started over. But starting at line 24, page 119 you were asked, "other than [
>
>] are there any other functions for the [   ] command?

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[17] "Infringement, whether literal or under the doctrine of equivalents, is a question of fact." *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1130 (Fed. Cir. 2011).

"Answer: That's the role of the [   ] in the [   ] command." Was that your testimony?

A   Yes.

Q   Okay. Now, when Sysdb is provided the [   ] that causes Sysdb to [

[   ] correct?

A   That is correct.

McKusick Tr. at 261-62.

Arista's brief analyzes the ". . . Differences Between the Redesigned EOS and the Claims of the '537 Patent[.]" Arista Br. at 44 (this is the heading for Section IV(D)(2)). Arista argues that "[t]he function of 'transmitting a management registration request by said first managing subsystem to said database subsystem' is, as the functional claim language itself makes plain, that the managing subsystem sends a request to the database subsystem." *Id.* at 45 (citing RX-5129C (McKusick RWS) at Q/A 421).

Cisco replies:

> First, the "function" of the limitation is to transmit a registration request to Sysdb to register a subsystem for external management, which is exactly the function [   ] performs when it sends the [   ] command to Sysdb in Arista's redesigned system.   Hr'g Tr. (McKusick) at 261:25-262:4; CX-5002C (Almeroth WS) at Q/A 208-210.   Arista contends that the "function" is not the same because "an entity that is *not* a managing   subsystem   [
>] RPoHB at 45 (emphasis in original).   As noted above, however, this is simply a reapplication of Arista's literal infringement analysis. Moreover, Arista's analysis conflates the *way* in which the claims transmit the request—via the agent or via a process on behalf of the agent—with the *function* of [   ] Even if the "way" the requested is transmitted is considered to be part of the claimed function, however, it is insubstantially different from the claims for the reasons explained below.

Cisco Reply at 23 (emphasis added by Cisco).

Arista replies that Cisco has confused the relevant function with another claim limitation:

> Cisco first claims that the function of "'transmitting a management registration request by said first managing subsystem to said database subsystem' and 'issuing a management request to said database subsystem' claim limitations in the '537 Patent is to register a subsystem for management." Compl. Br. at 60. This confuses the function of one limitation with another separate limitation of the claims: registration. "Registering" a managing subsystem is its own discrete limitation of claims 1 and 10 (step c), and is similarly addressed in the separate limitation of "delegat[ing] management" to a management subsystem in claim 19 (element c). JX-0001 ('537 Patent). The true function of "transmitting a management registration request by said first managing subsystem to said database subsystem" is, as the claim language makes plain, that the managing subsystem sends a request to the database subsystem. *Id.* at cls. 1, 10, 19; RX-5129C (McKusick RWS) at Q/A 421. No such function exists in the redesigned EOS. *Supra* at Section II.A.1; Hrg. Tr. (McKusick) at 313:4-314:6, 315:10-316:24; RX-5129C (McKusick RWS) at Q/A 421; RX-5131C (Sweeney RWS) at Q/A 85-86.

Arista Reply at 23.

The evidence, along with Cisco's argument, does not support a finding that the

[   ] command is equivalent to the "only one claim limitation at issue"—"transmitting a

management registration request by said first managing subsystem to said database subsystem."

See Cisco Br. at 62, n.16.

The function of the "transmitting a management registration request by said first

managing subsystem to said database subsystem" is to transmit a management request from a

managing subsystem to the database subsystem. Cisco's proposed function, which is crafted to

make its equivalency argument palatable, improperly drops the managing subsystem and

managing request aspects of the limitation.[18] Further, Cisco's proposed function imposes on the

"registering" limitations that appear later in claims 1 and 10. Arista's argument that the function

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[18] Cisco argued: "the 'function' of the limitation is to transmit a registration request to Sysdb to register a subsystem for external management[.]" Cisco Reply at 23.

corresponds to the functional claim language itself neither unduly enlarges or narrows the scope of the functional equivalency.

Further, the evidence, along with Cisco's argument, does not support a finding that the [   ] command is equal to transmitting a management request, much less transmitting a management request from a managing subsystem to the database subsystem. Instead, in the redesigned EOS, the [   ] RX-5129C (McKusick RWS) at Q/A 421. Indeed, the redesigned EOS does not use managing agents as disclosed and claimed in the '537 Patent. *See* Part III(B)(2)(a)(4), *supra*. Further, the

[   ] of the redesigned EOS is probative evidence that the redesigned EOS is not equivalent and not insubstantially different from the claimed scheme that uses management registration requests. *See* RX-5131C (Sweeny RWS) at Q/A 58 (testifying that [

] Sweeny Tr. at 249-253; RX-5129C (McKusick RWS) at Q/A 417-19. Accordingly, the administrative law judge finds that the redesigned EOS does not perform the substantially the same function as the relevant limitation and that the difference between the redesigned EOS and the relevant limitation is substantial.

(2)   The Way

Cisco argues:

> Regarding the "way," even if the ALJ or Commission were to find that the management registration request comes from outside of the managing subsystem in Arista's redesign, there are no substantial differences between the "way" requests are issued and the claims. Even if that argument is accepted, [
>   ] by a [
>   ] is an insubstantial change.

61

Cisco Br. at 62.

Arista argues:

> Cisco's arguments about the "way" are largely a repackaging of its arguments for literal infringement, and fail for the same reasons. *See supra* at Sections IV.A, IV.B. Cisco also makes the puzzling argument that the redesigned EOS is equivalent because [
>   ] is substantially the same as [   ] essentially equating the word "after" with the word "before." Compl. P.H. Br. at 131. The law does not permit this. *See Moore USA, Inc. v. Standard Register Co.*, 229 F.3d 1091, 1106 (Fed. Cir. 2000) ("If a minority could be equivalent to a majority, this [majority] limitation would hardly be necessary . . . .").

Arista Br. at 46-47.

Cisco replies:

> Third, the "way" of the claim limitations in the '537 Patent is transmitting the request by the managing subsystem, which is at least insubstantially different from transmission of the [   ] command by [   ] Arista argues that the [   ] command is [   ] RPoHB at 46. But Arista does not—and cannot—explain why this is a substantial difference from the claims. *See id.* Not only are the claims not limited to "agents" as managing subsystems, having an [
>
>   ] is undistinguishable from the claims from a technical perspective. *See* CX-5002C (Almeroth WS) at Q/A 212-213. Arista also points to the fact that the [   ] when the [   ] command is sent as another difference between the claims and the redesign. RPoHB at 47. But there is no material difference between starting the agent [
>   ] because the agent cannot manage data in Sysdb anyway until [   ] *Id.* What is more, the agent is [
>   ], and as part of the same [   ] process, [   ], that transmits the management registration request, meaning the distinction Arista is trying to draw is one of *milliseconds*. *See* Hr'g Tr. (Almeroth) at 181:18-24.

Cisco Reply at 24-25.

The evidence, along with Cisco's argument, does not support a finding that the redesigned EOS operates in substantially the same way as the claim limitation at issue: "transmitting a management registration request by said first managing subsystem to said database subsystem[.]" *See* Cisco Br. at 62, n.16 (emphasis added).

Cisco does not directly state and argue the "way" in which the disputed limitation operates. *See generally* Cisco Br. at 62; Cisco Reply at 24-25.[19] Rather, Cisco argues that the redesigned EOS is insubstantially different from "the claims" and "the claim limitations in the '537 Patent." *See id.*; *see also* CX-5002C (Almeroth WS) at Q/A 208, 219 ("As I've stated here today and in my expert report, I compared the redesigned products to the claims."). This analysis does not address the relevant limitation on an element-by-element basis. *See Warner-Jenkinson*, 520 U.S. at 40 ("equivalence should be applied as an objective inquiry on an element-by-element basis"); *Eastcott v. Hasselblad USA, Inc.*, 564 Fed. App'x 590, 595-96 (Fed. Cir. 2014) ("Equivalence must be established on a limitation-by-limitation basis, not based on an assessment of the accused product as a whole."); *DeMarini Sports*, 239 F.3d at 1332. This is an independent reason for finding that Cisco has fallen short of showing that the redesigned EOS operates in substantially the same "way" as the limitation in dispute.

In addition, Cisco's arguments about the [   ] command and [   ] and the corresponding [   ], *see* Cisco Reply at 24-25, do not support a finding that the redesigned EOS operates in substantially the same way as the claim limitation at issue. The evidence shows that the way in which the function is performed differs from the limitation at issue:

---

[19] Cisco's opening argument was similarly obfuscated with regard to the "way" of the analysis. *See, e.g.*, Pre-Hr'g Tr. at 36 ("So we have got function and result that are the same. And I'll say I'm not sure that I've seen a case that when the function and the result are identical to the claims, that the way has been different enough to take you out of the scope of DOE.").

422. Q: Are the ways in which the functions are performed substantially the same under the function-way-result test?

A: No. The function of the claim limitation is performed by the managing subsystem sending the request to the database subsystem. In contrast, [

]

RX-5129C (McKusick RWS) at Q/A 422. While Cisco's expert, Dr. Almeroth, addressed the "way" aspect of the function-way-result analysis, the analysis presumes the way is substantially the same as long as the result of the message is the same. *See, e.g.,* CX-5002C (Almeroth WS) at Q/A 212 ("The form of the message does not matter in the context of the '537 Patent as long as the message serves its role[.]"). Accordingly, the administrative law judge finds that the redesigned EOS does not perform the substantially the same function as the relevant limitation, in substantially the same way as the relevant limitation. The administrative law judge also finds that the difference between the redesigned EOS and the relevant limitation, with respect to the way in which the redesigned EOS and the relevant limitation operate, is substantial.

(3) The Result

Cisco argues:

> The "result" of the claim limitations in the '537 Patent is also identical as between the claimed system and Arista's redesign. In the claims, the result is that the subsystem is registered for external management. Likewise, in Arista's redesign, the result of the [   ] command is *exactly* the same: [
>] *Id.* at 275:23-276:10

Cisco Br. at 62.

Arista argues:

> Cisco next claims that the "result" of this claim limitation is that "the subsystem is registered for external management." Compl. P.H. Br. at 130. This is precisely the same thing—registration of the managing subsystem—that Cisco argues is the "function" of

the claim limitation, and is wrong for similar reasons. "Registration" is an entirely discrete claim limitation and is not the result of this single limitation. Rather, the "result" of "transmitting a management registration request by said first managing subsystem to said database subsystem" is that the database subsystem receives a request from the managing subsystem, and the claim continues in other limitations to show that the database subsystem then registers the managing subsystem to manage data. RX-5129C (McKusick RWS) at Q/A 423. Such "results" do not exist in the redesigned EOS. In the redesigned EOS, the result of [   ] is that [   ] and [   ] *Id.* When [   ] from a "managing subsystem," as the agent, [

                              ] *See* Hrg. Tr. (Duda) at 359:12-20; RX-5131C (Sweeney RWS) at Q/A 55-57, 72, 75, 85, 104-05; RX-5129C (McKusick RWS) at Q/A 49, 53-67, 148, 151, 158, 224-27; Hrg. Tr. (McKusick) at 299:2-7.

Arista Br. at 45-46.

Cisco replies:

Second, the "result" of the claim limitations in the '537 Patent is registering the subsystem for external management, which is exactly the result of sending the [   ] command to Sysdb for a particular agent. Hr'g Tr. (McKusick) at 275:23-276:10. Although Arista disputes that the "result" is met, the only way it can do so is by defining the "result" as "the database subsystem receives a request from the managing subsystem." RPoHB at 46. Not only is this argument another attempt at limiting the doctrine of equivalents to the literal scope of the claims, it incorporates another claim element—element (b) of claims 1 and 10—and cannot be the "result" of limitation in element (a). *See* JX-0001 ('537 Patent) at 15:37-38 ("b) receiving said management registration request by said database subsystem"). But in any case, there is no question that Sysdb, the database subsystem, receives the [   ] from the [   ] command, and uses that [   ] to put [   ] in place. *See, e.g.,* CX-5015C (Duda) at 150:18-151:1, 195:1-20; CX-5002C (Almeroth WS) at Q/A 116-118, 121.

Cisco Reply at 24.

Cisco does not directly state and argue the "result" of the disputed limitation. *See generally* Cisco Br. at 62; Cisco Reply at 24-25. Rather, Cisco argues that the result "of the claim limitations in the '537 Patent" is identical to the redesigned EOS. *See id.*; *see also* CX-5002C (Almeroth WS) at Q/A 208, 219 ("As I've stated here today and in my expert report, I compared the redesigned products to the claims."). Cisco's arguments about the result do not address the disputed limitation on an element-by-element basis.[20] *See Warner-Jenkinson, Eastcott,* and *DeMarini Sports, supra.* This is an independent reason for finding that Cisco has fallen short of showing that the redesigned EOS achieves substantially the same "result" as the disputed limitation.

Moreover, the result of the "transmitting a management registration request by said first managing subsystem to said database subsystem" is that a management request is sent to a database subsystem. Cisco's proposed result imposes on the "registering" limitations that appear later in claims 1 and 10:

CISCO'S PROPOSED RESULT	CLAIM 1, SUBPART (C)	CLAIM 10, SUBPART (C)
"In the claims, the result is that the subsystem is registered for external management."	c) registering said first managing subsystem for external management by said database subsystem.	(c) registering said first managing subsystem for external management by said managing subsystem.

See Cisco Br. at 62; JX-0001 at 15:39-40; 16:66-67. Arista's argument that the result is that "the database subsystem receives a request from the managing subsystem" corresponds to the functional claim language itself neither unduly enlarges or narrows the scope of the functional equivalency. *See* Arista Br. at 46.

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[20] Cisco's arguments include, for example, Cisco Br. at 62, Cisco Reply at 24, and CX-5002C (Almeroth WS) at Q/A 208, 211.

Further, the evidence shows that the redesigned EOS realizes a different result than the result of the disputed limitation. Dr. McKusick explained the difference between the result of the disputed limitation and the result of the redesigned EOS as follows:

423. Q: Are the results of the functions substantially the same under the function-way-result test?

A: No. The result is the request is received from the managing subsystem by the database subsystem, which registers the subsystem to manage data, whereas in the redesigned EOS, the [   ] command is [

                                                                                                      ]

Another result of the claimed limitation is that the managing subsystem has control over managing data, through request-based registration. This allows new agents to be added without the need to provide the centralized database with information about the agent in advance. This result is not achieved by any aspect of the redesigned EOS. In the redesigned EOS approach, Sysdb rather than the agent [   ] This means that EOS agents may have [

                                                                  ]

RX-5129C (McKusick RWS) at Q/A 423. Dr. Almeroth's testimony, on the other hand,

contends that establishing a [   ] is sufficient for finding equivalency. *See* CX-5002C

(Almeroth WS) at Q/A 211. However, the redesigned EOS has removed [   ] and

[   ] and the [   ] command, amongst others, do not contain equivalent

functionality. *See* RX-5131C (Sweeny RWS) at Q/A 55-56, 64-71; *see also* RX-5129C

(McKusick RWS) at Q/A 30-35 ("the point of the redesign is that an [

                                              ] 423. Accordingly, the administrative law judge finds that the

redesigned EOS does not perform the substantially the same function as the relevant limitation,

in substantially the same way as the relevant limitation, to achieve substantially the same result.

The administrative law judge also finds that the difference between the redesigned EOS and the relevant limitation, with respect to the result of the redesigned EOS and the relevant limitation, is substantial.

d) Insubstantial Differences Analysis

Cisco's brief and reply has relied on the function-way-result test and the insubstantial differences test. For example, Cisco has argued:

- "Arista's Products Are the Same or Insubstantially Different from the Asserted Claims" (Cisco Br. at 61);

- "Those insubstantial changes [between the redesigned EOS and its predecessor] are highlighted by application of the function-way-result test." (Cisco Br. at 61);

- [   ] further demonstrate the insubstantial differences between the redesigned system and the claimed invention, and further support the application of the doctrine of equivalents in the event literal infringement is not found." (Cisco Br. at 67);

- ". . . Arista's redesign is, at best, an insubstantial change that falls within the claims of the '537 Patent." (Cisco Reply at 22);

- "Under the proper analysis, which Arista never conducts, and Staff and CBP never reach, the function, way, and result are identical or insubstantially different." (Cisco Reply at 23); and

- "Even if the 'way' the requested is transmitted is considered to be part of the claimed function, however, it is insubstantially different from the claims for the reasons explained below." (Cisco Reply at 24).

For the avoidance of doubt, the administrative law judge notes that Cisco's function-way-result and insubstantial-differences arguments have been considered above, *see* Part III(B)(3)(c), *supra*, and the redesigned products have been determined to be substantially different from the asserted claims.

4. Indirect Infringement

Cisco argues that Arista is liable for contributory and induced infringement. Cisco Br. at 86-90.

Arista argues that there is no direct infringement upon which to find indirect infringement, but even if there is, "Cisco has failed to present any evidence that Arista had the requisite knowledge of patent infringement with respect to the redesigned EOS to support a finding of either contributory or induced infringement." Arista Br. at 35 (emphasis omitted).

The Staff argues that the redesigned EOS does not directly infringe and that:

> The evidence also shows that Arista lacked the requisite intent to infringe the asserted claims of the '537 Patent. As discussed above, Arista undertook a redesign effort to avoid infringing the patent. This effort included obtaining an opinion of counsel that concluded that the redesigned EOS did not infringe any of the asserted claims of the '537 Patent. See RX-5066C (Opinion Letter). The evidence shows that these efforts mean that Arista had a good faith belief that the redesigned EOS did not infringe and so they did not have the requisite intent to induce infringement or contribute to infringement.

Staff Br. at 45.

As an initial matter, the administrative law judge has determined that the redesigned EOS does not infringe the asserted claims. See Part III(B)(2) and III(B)(3), supra. Thus, there is no direct infringement upon which to find indirect infringement. See Limelight Networks, Inc. v. Akamai Techs., Inc., 134 S.Ct. 2111, 2118 (2014) ("Because liability for inducing infringement requires an underlying act of direct infringement, the evidence consequently does not show that Arista induced infringement.").

The evidence also shows that Arista lacked the requisite intent to infringe the asserted claims indirectly. In particular, Arista undertook an extensive redesign effort and obtained an

opinion of counsel in connection with its efforts to avoid further infringing the '537 Patent.[21]

See RX-5133C (Duda RWS) at Q/A 17 (describing steps taken to ensure non-infringement).

Accordingly, the administrative law judge has determined that Arista lacked the requisite intent

to indirectly infringe the '537 Patent.

C. The Colorable Differences Test

Arista argues that the administrative law judge should use the "colorable differences

standard" in determining whether Arista violated the CDO. *See* Arista Br. at 49-53 (Section

IV(E)). In particular Arista argues:

> As the [non-infringement] discussion above demonstrates, the redesigned EOS does not infringe and thus Cisco cannot prevail. Faithfulness to Federal Circuit authority and Commission precedent, however, requires that the ALJ determine not whether the redesigned EOS infringes but rather whether the redesigned EOS is more than colorably different from the legacy EOS. And the foregoing also establishes that Arista plainly meets that standard; the differences between the legacy EOS that was found to infringe the '537 Patent and the redesigned EOS are numerous, clear, and significant. *Supra* at Sections III, IV.A, IV.B. Cisco tries to escape this conclusion by arguing that the colorable differences standard does not apply. However, its efforts to distinguish the relevant Federal Circuit precedent are unavailing, and it makes no meaningful effort to distinguish the Commission's own interpretations of that precedent.

Id. at 49-50. Arista points to three decisions in support of its argument that the colorable

differences test applies:

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[21] While Arista also sought a ruling from Customs on the issue of whether its products infringe, it began selling the redesigned products before Customs issued its ruling. *See* CX-5238C (November 18, 2016 Steuart to Reiser letter). Further, Custom's initial ruling did not resolve the uncertainty about the redesigned products, as Customs held subsequent proceedings on the issue. *See* CX-5632C (Dec. 14, 2016 Bartkowski to Steuart letter); CX-5092 (Jan. 13, 2017 Steuart to Bartkowski letter); CX-5093 (Jan. 13, 2017 Steuart to Reiser letter). Customs issued a final ruling on April 7, 2017, after the hearing had concluded. *See* RX-5206C (April 7, 2017 Steuart to Reiser letter). Accordingly, the administrative law judge finds that Arista's efforts before customs are entitled to little weight for purposes of analyzing indirect infringement.

- *Yingbin-Nature (Guangdong) Wood Industry Co., Ltd. v. Int'l Trade Comm'n,* 535 F.3d 1322 (Fed. Cir. 2008) ("*Yingbin*");

- *Certain Ground Fault Circuit Interrupters and Products Containing Same,* Inv. No. 337-TA-615, Comm'n Op. at 27 (Mar. 9, 2009) ("*Ground Fault Circuit Interrupters*"); and

- *Certain GPS Devices and Products Containing Same,* Inv. No. 337-TA-602, Advisory Op. at 4 (April 20, 2010) ("*GPS Devices*").

See Arista Br. at 49-51. Arista then critiques Cisco's arguments about the colorable differences test. *Id.* at 51-53.

Cisco argues:

> As noted above in Section IV.B, the colorable difference test is not the appropriate test for determining violations of the CDO and Arista is precluded from raising the test now in any event. Nonetheless, even if the test is applied, the only differences between Arista's redesign products and the products already found to infringe are colorable, as made clear in the above analysis. At best, Arista made minor modifications to its infringing products that moved functionality from one place to another and re-labeled it. *See* § V.C.1. Courts have confirmed that similar attempts at redesigns are not colorably different. *See, e.g., Proveris Scientific Corp. v. Innovasystems, Inc.,* 739 F.3d 1367, 1371 (Fed. Cir. 2014) ("[E]ven if Innova did make some small changes to the product's software, a comparison of the User Manuals demonstrates that the two products are functionally identical. Thus, we agree with the district court that the ADSA product is not more than colorably different from the infringing OSA product."). Arista's redesign here, too, is "functionally identical." *See* § V.C.1
>
> Indeed, as described above, Arista does not dispute that its products [   ] *See* §§ V.A and V.B. And even with respect to the element of the claims that Arista contends its redesign affected—the "management registration request" sent from a "managing subsystem"—Arista's redesign is functionally identical to the pre-redesign system: [
>
>] in the system. *See id.* Moreover, agents only needed minimal changes to operate in Arista's redesigned system. *See* CX-5002C (Almeroth WS) at Q215-216. Because of all these similarities between the redesign and pre-redesign systems, Arista told its engineers that [

] CX-5042C at 10. Similarly, although Arista identifies several source code files as being "relevant" to the redesign, much of the cited code either [

] CX-5002C (Almeroth WS) at Q216.

Cisco Br. at 75-76 (emphasis on "functionally identical" omitted).

The Staff addresses *Yingbin*, *Ground Fault Circuit Interrupters*, *GPS Devices*, and *TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 882 (Fed. Cir. 2011) (*en banc*), and then analyzes Cisco's allegations "under the colorable differences test and under the traditional two-step infringement analysis." Staff Br. at 13. The Staff concludes that the redesigned EOS is "more than colorably different" from its predecessor. *Id.* at 13-18.

Arista's entire reply is:

> The differences between the legacy and redesigned EOS are significant. As the Staff correctly observed, Cisco had to devise an entirely new theory of infringement just for these enforcement proceedings, belying its contention now that the changes are merely "minor" or "cosmetic." Staff Br. at 15-17 (citations omitted).
>
> Cisco's argument that the colorable differences standard should not apply is premised on its erroneous reading of *Yingbin-Nature (Guangdong) Wood Industry Company, Ltd. v. International Trade Commission*, 555 F.3d 1322 (Fed. Cir. 2008). The Commission has made clear that, following *Yingbin*, its orders excluding articles "that infringe" apply to products found to infringe "and articles that are '*essentially the same*,' meaning that the differences between them are *merely 'colorable.'*" *Certain GPS Devices*, Inv. 337-TA-602 Advisory Op. at 4 (Apr. 20, 2010) (citing *Yingbin*, 535 F.3d at 1322-23); *see also Certain Ground Fault Circuit Interrupters*, Inv. No. 337-TA-615, Comm'n Op. at 27 (Mar. 9, 2009); Resp. Br. at 49-53.
>
> Contrary to Cisco's suggestion, Compl. P.H. Br. at 15 n.1, the Commission's decision in *GPS Devices* never mentions collateral estoppel. Rather, the Commission concluded that an existing order did not cover a new product because the new product was not essentially the same as the adjudicated product. *GPS Devices, supra* at 4-5. *Ground Fault Circuit Interrupters* likewise establishes that, if a product is not essentially the same as the

adjudicated product, it is not covered by an existing order **unless and until** it too is found to infringe. Inv. 337-TA-615, Comm'n Op. at 27-28; Resp. Br. at 51-52; *see also* Staff Br. at 12.

Arista Reply at 24-25 (emphasis added by Arista).

Cisco's entire reply is:

> Arista's argument that the Commission's CDO is limited to products not more than colorably different, RPoHB at 49, contradicts the language of the CDO and Commission and Federal Circuit precedent. *See* CPoHB at 13-16. In its brief, although Staff never takes a position as to the proper test that should apply, Staff focuses its discussion on *TiVo Inc. v. EchoStar Corp*, 646 F.3d 869, 882 (Fed. Cir. 2011) (*en banc*). *TiVo* is irrelevant here, however, as it relates to the standard for contempt under a district court injunction. *See, e.g.,* SPoHB at 13 n.5. Unlike injunctions, which are limited to the products accused of infringement, Commission orders typically contain broad language aimed at preventing future violations of Section 337, *i.e.,* by defining the prohibited activities in terms of "articles that infringe" the relevant claims: "The Commission has always issued its orders in terms of 'infringing' products, and has always intended them, as in this case, to prohibit to [*sic*] future importation or sale of products which were not specifically adjudged infringing in the violation proceeding, but do in fact infringe." *Certain Erasable Programmable Read Only Memories, Components Thereof, Prods. Containing Such Memories, & Processes for Making Such Memories*, Inv. No. 337-TA-276 (Enforcement), Comm'n Op. at 10-11 (Aug. 1, 1991). Likewise, the Commission's CDO here applies to products "that infringe" the specified claims of the '537 Patent. CDO § I(G). Thus, no reason exists to depart from the traditional two-step infringement analysis that has always been used to assess violations of Commission orders in the past.

> Even under the colorable difference test, a violation exists. Although Arista argued at length that its redesigned products were more than colorably different from its legacy products in its pre-hearing brief, Arista essentially abandoned the argument after the hearing, providing *no* substantiated explanation for this contention. *See, e.g.,* RPoHB at 52, 86. Nonetheless, Staff does analyze both tests. *See* SPoHB at 13. Staff, however, cites no expert testimony in support of its conclusion. Staff's argument boils down to its statement that "Cisco now points to a different functionality for management registration requests than it did," SPoHB at 17, but that is not the proper analysis. The proper question is whether the

differences are *significant*. *Id.* at 16. As both experts testified, agents in the legacy system used functionality in separate modules—[   ]—to
[

                                      ] CX-5002C (Almeroth WS) at Q/A 68-78; Hr'g Tr. (McKusick) at 290:23-292:1. Likewise, here, functionality in another module outside the agent—the [   ] module in [
                        ] CX-5002C (Almeroth WS) at Q/A 178-179. After that [

                  ] *Id.* The insignificance of this difference is demonstrated by the fact that agents in Arista's system work the same as they did before, *with no loss in functionality*. CX- 5018C (Sadana) at 110:22-119:7,128:6-9, 131:3-6, 139:16-140:10; CX-5013C (Sweeney) at 219:23-228:11, 246:12-251:17. Arista has provided no evidence to the contrary.

Cisco Reply at 29-30 (emphasis added by Cisco; footnote omitted).

1. Whether the Commission Should Utilize the Colorable Differences Test

The Federal Circuit addressed the colorable differences test in *TiVo Inc. v. EchoStar Corp.*, 646 F.3d 869, 881-83 (Fed. Cir. 2011) (*en banc*). As Cisco and the Staff note, *TiVo* arises from contempt proceedings held to determine whether an injunction was violated. *See id.* at 881-82. The Federal Circuit explained:

> We have stated the test for colorable differences as one that requires determining whether "substantial open issues with respect to infringement to be tried" exist. . . . In some cases, that has misled district courts to focus solely on infringement by the newly accused devices in deciding contempt. That is the case here. Today, we reject that infringement-based understanding of the colorably different test. Instead of focusing solely on infringement, the contempt analysis must focus initially on the differences between the features relied upon to establish infringement and the modified features of the newly accused products.

> The primary question on contempt should be whether the newly accused product is so different from the product previously found to infringe that it raises "a fair ground of doubt as to the

wrongfulness of the defendant's conduct." . . . The analysis must focus not on differences between randomly chosen features of the product found to infringe in the earlier infringement trial and the newly accused product . . . but on those aspects of the accused product that were previously alleged to be, and were a basis for, the prior finding of infringement, and the modified features of the newly accused product. Specifically, one should focus on those elements of the adjudged infringing products that the patentee previously contended, and proved, satisfy specific limitations of the asserted claims. Where one or more of those elements previously found to infringe has been modified, or removed, the court must make an inquiry into whether that modification is significant. If those differences between the old and new elements are significant, the newly accused product as a whole shall be deemed more than colorably different from the adjudged infringing one, and the inquiry into whether the newly accused product actually infringes is irrelevant. Contempt is then inappropriate.

Id. at 882 (citations omitted). The Federal Circuit noted that the Supreme Court "has cautioned that contempt 'is a severe remedy, and should not be resorted to where there is a fair ground of doubt as to the wrongfulness of the defendant's conduct.'" *Id.* at 881-82.

In the portion of *Yingbin* that Arista relies upon, the Federal Circuit discussed collateral estoppel, as follows:

> First, we note that proof of infringement by collateral estoppel is only appropriate in limited circumstances, where it is shown that a close identity exists between the relevant features of the accused device and the device previously determined to be infringing. *See Acumed LLC v. Stryker Corp.*, 525 F.3d 1319, 1324 (Fed. Cir. 2008) (noting that ***claim preclusion does not apply*** with respect to infringement ***unless*** the accused device and the device previously held infringing are "essentially the same," meaning that the differences between them are ***merely "colorable"*** or "unrelated to the limitations in the claim of the patent" (citations omitted))[.]

Yingbin, 535 F.3d at 1333 (emphasis added).

In the portion of *Certain Ground Fault Circuit Interrupters* that Arista relies upon, the Commission declined a request to include particular model numbers in an exclusion order:

Certain respondents argue that the exclusion order should specify the particular model numbers of products found to infringe. P&S counters that, if the exclusion order is limited to specific model numbers, merely changing the adjudicated products' model numbers would allow respondents to circumvent the order. In order to prevent such circumvention, we reject Trimone's invitation to deviate from the long-standing Commission practice of declining to limit exclusion orders to specific model numbers. The Commission's practice is consistent with Federal Circuit law, which provides that *the Commission's infringement determinations with respect to the adjudicated products are effective* for the purposes of the exclusion order against different models presented for importation at a future date *if there is a "close identity between the relevant features of an accused device and the device determined to be infringing."*[70] Correspondingly, the exclusion order would not apply to products not adjudicated to be infringing, and not having such a "close identity," thus alleviating respondents' concerns,[71] unless infringement is established by other means. We also note that the exclusion order contains a certification provision that gives U.S. Customs & Border Protection the authority to accept a certification from the parties that goods being imported are not covered by the exclusion order. This certification provision also addresses the respondents' concerns.

Certain Ground Fault Circuit Interrupters and Products Containing Same, Inv. No. 337-TA-615, Comm'n Op. at 27 (Mar. 9, 2009) (emphasis added; the text of footnotes 70 and 71, which are only citations to *Yingbin*, is omitted).

In the *GPS Devices* advisory opinion that Arista relies upon, the Commission decided whether GPS chips made by Atheros, a manufacturer who was not a respondent in the underlying investigation, would violate a limited exclusion order. *See Certain GPS Devices and Products Containing Same*, Inv. No. 337-TA-602, Advisory Op. at 1 (April 20, 2010). The Commission

concluded that the limited exclusion order was not directed toward Atheros. *Id.* at 5.[22] In

reaching this conclusion, the Commission commented that:

> Exclusion orders must be read in the context of the investigation in which they were issued and the Commission's findings in that investigation. The language in Commission limited exclusion orders directed to articles of named respondents "that infringe" or articles "covered by" generally refers to articles found by the Commission to infringe and articles that are "'essentially the same,' meaning that the differences between them are merely 'colorable' or 'unrelated to the limitations in the claim of the patent.'" *See* [*Yingbin*].

Certain GPS Devices and Products Containing Same, Inv. No. 337-TA-602, Advisory Op. at 4

(April 20, 2010).

The Commission's order instituting this enforcement proceeding instructs the

administrative law judge to "rule on the question of whether the enforcement respondent has

violated the June 23, 2016 CDO issued in the above-captioned investigation." Order at 3 (EDIS

Doc. ID No. 591516) (September 28, 2016). The CDO, in turn, prohibited Arista from engaging

in various commercial activities for covered products that infringe one or more of claims 1, 2, 8-

11, and 17-19 of the '537 Patent. *See* CDO at 1-3. The order does not explicitly instruct the

administrative law judge to determine if Arista is in contempt of the CDO. *Id.*

Based on the arguments presented, the administrative law judge is not persuaded that the

colorable differences test is the appropriate test for determining whether Arista's redesigned

products violate the CDO. In particular, the legal authority Arista relies upon does not squarely

invoke the colorable differences test, as explained above. Accordingly, based on the arguments

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[22] The limited exclusion order was "directed only to SiRF's infringing GPS chips and products of respondents MiTAC, Mio, E-TEN, and/or Pharos that incorporate SiRF's infringing chips." Advisory Op. at 5.

presented in the parties' post-hearing briefs and replies, the administrative law judge has decided the Commission should not utilize the colorable differences test.

2.   The Redesigned EOS Is More Than Colorably Different from Its Predecessor

In the event that it is later decided that the Commission should utilize the colorable differences test, the administrative law judge has determined that Arista's redesigned EOS is more than colorably different from its predecessor. The articles found by the Commission to infringe are not essentially the same as the redesigned articles. The differences between the features Cisco relied upon to establish infringement in the underlying investigation—such as EOS agents [   ] in Sysdb—are starkly different in the redesigned EOS, for the reasons described above. *See* Parts III(B)(2) (literal infringement) and III(B)(3) (doctrine of equivalents), *supra*. Further, the differences are so stark that the redesign, as a whole, raises a fair ground of doubt as to whether Arista's conduct, with respect to the redesign, was truly wrongful. *See TiVo*, 646 F.3d at 881-82.

IV.   UNCLEAN HANDS

Arista argues:

> The Commission's enforcement authority "can never be exerted on behalf of one who has acted fraudulently, or who by deceit or any unfair means has gained an advantage." . . . Cisco has done exactly that, and comes to the ITC with unclean hands.

> After missing the important transition to cloud networking, Cisco commenced a "Cisco-wide effort to stop Arista's growth." . . . Cisco's efforts to compete legitimately were not fruitful, as Arista "outperformed Cisco on price, product, roadmap and vision." . . . Lacking a viable competitive strategy, Cisco turned to the courts, deploying a string of lawsuits against Arista in order to recapture its market share.

> This enforcement proceeding is emblematic of Cisco's pervasive pattern of misconduct.   In particular, Cisco's hastily-filed

complaint, exorbitant civil penalty request, and relentless publicity campaign confirm its ulterior motive: to use the Commission's authority to cripple Arista and remove it as a competitor. The unclean hands doctrine bars precisely this misconduct.

Arista Br. at 119-20 (citations omitted).[23]

Arista further argues that "Cisco brought this enforcement action in bad faith and for the improper purpose of leveraging the Commission's authority to regain its dominant market share." *Id.* at 121. Arista contends that Cisco filed its complaint without an adequate pre-suit investigation, that Cisco's "exorbitant" civil penalty demands shows that Cisco wants to punish Arista rather than seek redress for any harm suffered, and that Cisco has used the enforcement proceeding "in an attempt to create fear, uncertainty, and disruption amongst Arista's investors, customers, and partners." *Id.* at 121-22. Arista cites to Cisco blog posts and Cisco's communications with Arista's customers and business partners as evidence of Cisco's acts creating "fear, uncertainty, and disruption." *Id.* at 122-24.

Cisco argues that it performed an adequate pre-suit investigation, that seeking a penalty expressly allowed by the statute does not support an unclean hands defense, and that "disseminating information about a litigation dispute" is not improper. Cisco Br. at 122-23. Cisco further argues that no precedent supports Arista's theory and that "multiple courts have analyzed supposed 'unclean hands' allegations premised on allegations such as those made by

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[23] Arista relies upon *Certain Probe Card Assemblies, Components Thereof and Certain Tested DRAM and NAND Flash Memory Devices and Products Containing Same*, Inv. No. 337-TA-621, Initial Determination at 30 (June 29, 2009) (*'Probe Card Assemblies"*) and *Certain Microprocessors, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-781, Initial Determination, 2012 WL 6883205, at *162 (Dec. 14, 2012) (*"Microprocessors"*) in support of its argument. The page from *Probe Card Assemblies* that Arista cites (ID at 30) is from the general law section. The administrative law judge later found that there was no patent misuse, unclean hands, or abuse of process in light of certain claim construction arguments. *See Probe Card Assemblies*, Initial Determination at 193. In *Microprocessors*, the administrative law judge addressed unclean hands within the context of equitable estoppel and spoliation. *See Microprocessors*, 2012 WL 6883205, at *162.

Arista—*i.e.*, that a competitor's lawsuit was brought in bad faith and made attendant statements about the litigation—and have uniformly rejected the argument that such allegations can constitute a legally viable 'unclean hands' defense." *Id.* at 124.

The Staff argues that the "evidence does not show that the doctrine of unclean hands bars Cisco from pursuing this enforcement proceeding." Staff Br. at 45. The Staff argues that Arista's reliance upon Cisco blog posts are "overly-literal" and that Cisco's statements to Arista's customers and business partners were not shown to be false. *Id.* at 46-47.

Arista addresses Cisco's arguments in its reply. *See* Arista Reply at 34-35. For additional legal authority, Arista cites to a Delaware district court decision, *Honeywell Intern., Inc. v. Universal Avionics Sys. Corp.*, 398 F. Supp. 2d 305, 311 (D. Del. 2005) (declining to find unclean hands in light of defendant's arguments about "market uncertainty" related to a follow-on lawsuit and the adequacy of plaintiff's pre-suit investigation). *Id.* at 35.

Based on the arguments presented, the administrative law judge is not persuaded that unclean hands provides an appropriate basis for resolving this case. In particular, the legal authority Arista relies upon either did not find unclean hands or does not clearly apply the doctrine, as explained above. [24]

Additionally, the administrative law judge finds that Cisco did not engage in unconscionable conduct pertaining to the enforcement proceeding that would warrant precluding Cisco's enforcement complaint. *See Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 240,

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[24] Further, Arista has not explicitly addressed why a complainant's unclean hands should extinguish the Commission's authority in an enforcement proceeding. *See* Commission Rule 210.75(b) (providing that the Commission institutes enforcement proceedings); *cf. Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing Same*, Inv. No. 337-TA-372 (Enforcement), Comm'n Op. at 33, USITC Pub. 3073 (Nov. 1997) ("[T]he Commission generally has an interest in vindicating its authority where one of its orders is violated.").

245 (1933) (unclean hands requires "some unconscionable act of one coming for relief").[25]

Cisco's pre-filing investigation was adequate, as Cisco studied the redesign and prepared a claim chart mapping the elements of the claims to Arista's products. *See* RX-5038C (Lang Dep.) at 39-41, 173-74; Enf. Compl., Ex. 21. Further, Cisco's blog posts and communications to Arista's customers and partners may not be routine, but were not sufficiently shown to be false or misleading or otherwise unconscionable. Lastly, Cisco's request for the statutory maximum penalty is wholly proper, as the statute proscribes that amount. *See* 19 U.S.C. § 1337(f)(2); *see also* 19 C.F.R. § 210.75(b) (allowing a complainant to file an enforcement complaint). Thus, the administrative law judge has determined that the unclean hands doctrine does not bar Cisco's enforcement complaint.

V.   CIVIL PENALTY

"Civil penalties are mandatory for violations of the Commission's cease and desist orders . . . issued under section 337." *Certain Two-way Global Satellite Communication Devices, System and Components Thereof*, Inv. No. 337-TA-854 (Enforcement), Comm'n Op. at 26 (July 1, 2014) ("*Global Satellite Devices*") (EDIS Doc. ID No. 537131). "[F]or each day on which an importation of articles, or their sale, occurs in violation of [a cease and desist] order," the Commission shall impose a civil penalty "of not more than the greater of $100,000 or twice the domestic value of the articles entered or sold on such day in violation of the order." 19 U.S.C. § 1337(f)(2). "The Commission has the discretion to impose a civil penalty that is appropriate to the circumstances." *Global Satellite Devices*, Comm'n Op. at 27 (citing *Certain Erasable*

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[25] Arista also has not met the clear and convincing standard of showing that unclean hands should apply. *See Gilead Scis., Inc. v. Merck & Co, Inc.*, No. 13-CV-04057-BLF, 2016 WL 3143943, at *39 (N.D. Cal. June 6, 2016) ("the Court concludes that Gilead has proven its defense of unclean hands by clear and convincing evidence."); *Probe Card Assemblies*, Initial Determination at 30 (citing *In re Omeprazole Patent Litigation*, 483 F.3d 1364, 1374 (Fed. Cir. 2007) for the clear and convincing standard).

Programmable Read Only Memories, Components Thereof, Products Containing Such Memories, and Processes for Making Such Memories, Inv. No. 337-TA-276 (Enforcement), Comm'n Op. at 29 (July 19, 1991) (hereinafter, "*EPROMs*")).

The administrative law judge previously determined that Arista has not violated the CDO. Thus, no civil penalty is appropriate. *See* 19 U.S.C. § 1337(f)(2). In the event that it is later determined that Arista has violated the CDO, the administrative law judge has determined an appropriate civil penalty, as follows.

A.   Statutory Maximum Penalty

For the statutory maximum penalty ("SMP"), Cisco argues that "[a] straightforward analysis of the sales information Arista produced in this Enforcement Proceeding leads to a calculation of the SMP of [   ] Cisco Br. at 94 (emphasis added by Cisco) (citing CX-5003C (Arnold WS) at Q/A 15, 85; CX-5642C); *see also* CX-5642C (providing the financial calculation, which is keyed to sales of switches, power supplies, and fans).[26] Cisco's expert, Dr. Arnold, presents at least 16 different opinions for the SMP based on various "potential combinations of products and time-periods." CX-5003C (Arnold WS) at Q/A 78; *see also* CX-5641C, CX-5642C (presenting SMP calculations). Regarding the products upon which the SMP is based, Cisco has stated:

> Solely in order to streamline the issues and to ensure that the statutory maximum penalty calculation is as conservative as possible, Cisco does not seek a civil penalty to accrue for Arista's

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[26] This is a significant departure from its pre-hearing brief, which argued: "[a] straightforward analysis of the sales information Arista produced in this Enforcement Proceeding leads to a calculation of the SMP Cisco of [   ] Cisco Pre-Hr'g Br. at 170 (emphasis added by Cisco) (citing CX-5003C (Arnold WS) at Q/A 15, 85). The [   ] figure encompasses sales of all Arista switches, power supplies, cables, optics, and fans sold from August 23, 2016 to December 12, 2016. *See* CX-5003C (Arnold WS) at Q/A 85; *see also* CX-5642C (providing the financial calculation).

sales made during the Presidential Review Period, from June 23, 2016 to August 22, 2016, nor does Cisco seek a civil penalty for cables and optics. *Cisco continues to seek a civil penalty for Arista's sales made after August 22, 2016 of switches, power supplies and fans.* Cisco reserves all rights to present evidence from before expiration of the PRP, and of any sales of cables and optics, for any other issues.

Cisco Br. at 97 n.23 (emphasis added).

Arista argues that "the appropriate civil penalty in this case, if any, is $10,000 per day of violation, but no greater than $100,000 per day of violation." Arista Br. at 118. Arista argues that "at worst" the administrative law judge should recommend "a civil penalty of 10% of the statutory maximum penalty, or [   ] *Id.* at 119 (citing *Certain DC-DC Controllers and Products Containing Same*, Inv. No. 337-TA-698, Enf. ID at 120 (Nov. 30, 2012); *see also* Arista Reply at 32-33. Thus, Arista has tacitly acknowledged that the SMP is [   ] *See id.*

The Staff has proposed a civil penalty of [   ] which is based on Arista's gross revenue from sales of Arista switches, power supplies, and fans, from sales made between August 23, 2016 and December 12, 2016.[27] Staff Br. at 56-57 (citing CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39); *see also* CX-5644C (providing the financial calculation).[28]

The administrative law judge has determined that the SMP is [   ] which is based on Arista's sales of switches, power supplies, and fans. *See* CX-5003C (Arnold WS) at Q/A 78; *see also* CX-5642C (providing the financial calculation); Cisco Br. at 97; Arista Br. at 119. As discussed below, however, the administrative law judge has determined that assessing the SMP would not be appropriate in this proceeding.

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[27] The [   ] proposed in Cisco's pre-hearing brief.

[28] The Staff has not argued what the maximum allowable penalty would be. *See generally id.*; Staff Reply at 15-16.

B.   Amount of Penalty

When calculating an appropriate civil penalty as a result of a cease and desist order

violation, the Commission may consider a number of factors: "(1) the good or bad faith of the

respondent; (2) any injury due to the violation; (3) the respondent's ability to pay the assessed

penalty; (4) the extent to which the respondent benefitted from its violations; (5) the need to

vindicate the authority of the Commission; and (6) the public interest" (hereafter, "the penalty

factors"). *See Ninestar Tech. Co. Ltd. v. Int'l Trade Comm'n*, 667 F.3d 1373, 1379 (Fed. Cir.

2012) (citation omitted); *see also Global Satellite Devices*, Comm'n Op. at 27 (citing *EPROMs*,

Comm'n Op. at 23-24, 26).[29]

This six-factor test takes into account "the three overarching considerations enumerated

by Congress in the legislative history [of section 337(f)(2)], *viz.*, the desire to deter violations,

the intentional or unintentional nature of any violations, and the public interest." *San Huan New*

Material High Tech, Inc. v. Int'l Trade Comm'n, 161 F.3d 1347, 1362 (affirming *Certain*

Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing the Same, Inv. No.

337-TA-372, Comm'n Op. on Violation of Consent Order (May 6, 1997)).

Each of the six penalty factors is discussed below.

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[29] For additional authority, *see Certain DC-DC Controllers and Products Containing the Same* (Enforcement), Inv. No. 337-TA-698, Comm'n Op. at 38 (December 12, 2012) ("DC Controllers"); *Certain Ink Cartridges and Components Thereof* (Enforcement), Inv. No. 337-TA-565, Comm'n Op. at 17-18 (Sept. 24, 2009) ("*Ink Cartridges*"); *Certain Lens-Fitted Film Packages*, Inv. No. 337-TA-406 (Enforcement II), Op. on Enforcement Measures at 12 (April 4, 2005) ("*Cameras II*"); *Certain Lens-Fitted Film Packages*, Inv. No. 337-TA-406 (Consolidated Enforcement and Advisory Opinion Proceedings), Comm'n Op. at 17 (June 23, 2003) ("*Cameras I*"); *Certain Agricultural Tractors Under 50 Power Take-Off Horsepower*, Inv. No. 337-TA-380 (Enforcement), Comm'n Op. at 31, USITC Pub. 3227 (Aug. 1999) ("*Tractors*"); *Certain Neodymium-Iron-Boron Magnets, Magnet Alloys, and Articles Containing Same*, Inv. No. 337-TA-372 (Enforcement), Comm'n Op. at 22-33, USITC Pub. 3073 (Nov. 1997) ("*Magnets*").

1. Arista's Good or Bad Faith

The first penalty factor is an evaluation of the good or bad faith of the respondents. To make that determination, the Commission examines whether the respondent "(1) had a reasonable basis to believe that the violating product was not within the scope of the Commission's order, (2) requested an advisory opinion or clarification from the Commission, (3) provided any opinion of counsel indicating that it obtained legal advice before engaging in the acts underlying the charge of violation, (4) decided which products were subject to the order based on the decisions of management and technical personnel, without legal advice, and (5) satisfied its reporting requirements under the relevant Commission order." *Ink Cartridges*, Comm'n Op. at 14; *see also EPROMs*, Comm'n Op. at 28-29. Respondents have "an affirmative duty to take energetic steps to do everything in their power to assure compliance, and . . . this duty not only means not to cross the line of infringement, but to stay several healthy steps away." *Cameras II*, Comm'n Op. at 16 (internal quotations omitted); *Tractors*, Comm'n Op. at 32; *Magnets*, Comm'n Op. at 24.

a) Basis for Believing That the Redesign Did Not Violate the CDO

Cisco argues:

> But for the alleged redesign, all of Arista's products and components thereof are indisputably "Covered Products." Arista used [   ] prior to the expiration of the Presidential Review Period, to be sold thereafter. And Arista does not dispute that every single product it sold contained at least one imported component, as explained in § III. Thus, absent Arista's redesign, every switch and the components thereof is a Covered Product.

Cisco Br. at 101. Cisco then critiques Arista's reliance on *Global Satellite Devices* and adds:

> the evidence leaves no doubt that Arista played a significant role in the importation of its components by third parties after expiration of the Presidential Review Period, while simultaneously claiming

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it was only sourcing components domestically, as discussed in §§ III, V.G and VI.B. *See also* RX-5130 (Cox RWS) at Q87–88 (not disputing Arista's control over [   ]

Id. at 101-02.

Arista argues:

> Arista invested heavily in the redesign of its accused products directly in response to and out of respect for the Commission's remedial orders. RX-5133C (Duda RWS) at Q/A 16-29; Hrg. Tr. (Duda) at 339:2-340:3; RX-5130C (Cox RWS) at Q/A 57-73; RX-5132C (Sadana RWS) at Q/A 66-109. Because the accused products constitute nearly all of Arista's products, and Arista was well aware that Cisco would be challenging the redesign immediately following the completion of the underlying investigation, Arista had an overwhelming business reason to invest in a redesign to bring its products outside the scope of any of the patents found to be infringed in the underlying investigation. After a significant redesign effort, Arista's senior management, overseeing a team of more than [ ] engineers, confirmed the removal of the functionality identified by the Commission to be infringing Cisco's patents, which marked a fundamental change from the legacy products previously found to infringe. RX-5133C (Duda RWS) at Q/A 16-29; RX-5144C (Arista Redesign Spreadsheet). In further support of its reasonable basis to believe that its redesigned products do not infringe the '537 Patent, Arista also: engaged in an extensive evaluation of redesign alternatives as soon as the initial determination in the underlying investigation was issued; obtained an opinion of counsel; sought and obtained two rulings from CBP that its products were outside the scope of the Commission's orders; and required its customers to [
>
>] RX-5133C (Duda RWS) at Q/A 16, 31-37, 53-55; RX-5132C (Sadana RWS) at Q/A 104-09.
>
> All of these facts, in combination, make plain that Arista had a reasonable basis to believe in the fruits of its extensive redesign efforts.

Arista Br. at 83-84.

The Staff argues that Arista had a reasonable basis to believe that the allegedly violating products, which run the redesigned EOS, were not within the scope of the CDO. Staff Br. at 50-51.

The evidence shows that Arista had a reasonable basis to believe that its redesigned products did not infringe the '537, '145 and '592 Patents or otherwise violate the CDO. Indeed, Arista launched an extensive redesign effort involving many engineers and patent attorneys. Arista further obtained an opinion of counsel and two rulings from U.S. Customs and Border Protection ("CBP") that its products were outside the scope of the CDO. *See* RX-5133C (Duda RWS) at Q/A 16-29. Accordingly, this factor supports a finding that Arista acted in good faith.

b)   *Seeking Clarification from the Commission*

Cisco argues that Arista "bypassed the Commission" because it "did not seek an advisory opinion or modification of the CDO from the Commission. Cisco Br. at 108.

Arista argues that "seeking a ruling from CBP is standard practice and expressly permitted by the Commission and the Code of Federal Regulations." Arista Br. at 89. Arista contends "it would be contrary to Commission policy to determine that Arista's election of seeking a ruling letter from CBP is somehow an indication of bad faith where the Commission expressly permitted such action." *Id.*

The Staff argues that "Arista's decision to go to CBP is not a substitute for seeking an advisory opinion from the Commission." Arista Br. at 51.

Arista did not seek clarification from the Commission of whether the redesigned products would violate the CDO. *See Certain Agricultural Tractors Under 50 Power Take-Off Horsepower*, 337-TA-380 (Enforcement), Comm'n Op. at 10 (Aug. 5, 1999) ("The Gamut respondents' argument fails to recognize the difference between exclusion orders, which are

interpreted and enforced by Customs pursuant to 19 U.S.C. § 1337(d), and cease and desist

orders, which are interpreted and enforced by the Commission pursuant to 19 U.S.C.

§ 1337(f)."). The evidence does not show, however, that Arista believed there was a question as

to the scope of the CDO, or that it did not fully understand the terms of the exclusion order. *See*

Ink Cartridges, Enf. ID, 2009 WL 2122014 at *39-40 (April 17, 2009). Accordingly, this factor

does not support a finding that Arista acted in good or bad faith.

c)   *Opinion of Counsel*

Cisco argues:

> As explained in § VI.D.1.a.ii above, the circumstances surrounding
> the opinion of counsel obtained by Arista do not weigh in favor of
> a finding of good faith. The opinion letter's discussion of Arista's
> redesign is based solely on a [   ] document,
> which Arista's [   ] authored by heavily modifying
> an engineering document describing the redesign, and which
> [   ] relied on. *Cf. Certain Erasable Programmable
> Read Only Memories*, Inv. No. 337-TA-276 (Enforcement),
> Comm'n Op., 1991 WL 11735258, at *5 (July 19, 1991).

Cisco Br. at 108. In § VI.D.1.a.ii, Cisco argues that Arista did not have a sufficiently reasonable

basis to rely on its opinion of counsel. *Id.* at 103. For example, Cisco argues the opinion did not

address certain arguments Cisco about [   ] and [   ] that the opinion was

provided without sufficient technical information, and that the "reasoning on the doctrine of

equivalents also is incorrect." *Id.* at 104-06.

Arista notes the opinion relied upon discussions with Arista's technical and legal staff.

See Arista Br. at 89-90. Arista further notes that it obtained the opinion before releasing its

redesign products. *Id.*

The Staff argues that Arista's decision to obtain an opinion of counsel indicates Arista

acted in good faith. *See* Staff Br. at 52.

The evidence shows that Arista obtained an opinion of counsel and that Arista obtained the opinion before launching its redesigned products. While Cisco has provided a detailed critique of the opinion, that critique does not wholly negate the larger point that Arista affirmatively obtained an opinion of counsel. Accordingly, this factor supports finding that Arista acted in good faith.

d) Determining Which Products Are Covered Without Seeking Legal Advice

Cisco argues that various Arista employees gave Arista's suppliers and customers incorrect legal guidance. Cisco Br. at 108-12.

Arista argues its "engineers worked closely with inside and outside counsel to determine which products were subject to the Commission's remedial orders given the opinion of counsel sought and obtained by Arista and the initial ruling from CBP." Arista Br. at 97.

The evidence shows that Arista's managers and technical employees did not take it upon themselves to decide which products were subject to the CDO without seeking legal advice. *See Ink Cartridges*, Enf. ID, 2009 WL 2122014 at *40 (April 17, 2009) (finding that Ninestar's management decided which products were subject to the cease and desist order without consulting their attorneys). Indeed, the evidence shows that Arista obtained an opinion of counsel that analyzed whether the redesigned products were subject to the CDO. *See* Part (V)(B)(1)(c), *supra*. Accordingly, this factor supports finding that Arista acted in good faith.

e) Reporting Requirement

Cisco argues:

> As explained in § VI.C.4 [("Arista's Unfounded Criticisms of Cisco's SMP Calculations")], Arista has suggested it would be difficult to identify the value of Covered Products sold in order to calculate the SMP using Arista's own sales data. *E.g.*, Arista PrHB at 167-70. But Arista used this same sales data to create its

Compliance Report to the Commission dated January 31, 2017. CX-5131 (2017-01-31 Arista Response to CDO). To the extent Arista challenges Cisco's calculations of the SMP based on the alleged inadequacy of the very same sales data that Arista used to produce its Compliance Report, Arista would not have satisfied its reporting requirements under the CDO. *See* CX-5020 (CDO) §§ V–VI.

Cisco Br. at 112.

Arista argues, in pertinent part:

Arista filed its response to the CDO's reporting requirement on January 31, 2017, further demonstrating its good faith efforts to comply with the Commission's orders. Arista's satisfaction of this factor therefore also weighs in favor of a finding of good faith.

Arista Br. at 97.

The evidence shows that Arista filed a compliance report on January 31, 2017. *See, e.g.*, Report of Respondent Arista Networks, Inc. Pursuant to Section V of the Cease and Desist Order (EDIS Doc. ID No. 602306). Accordingly, this factor supports finding that Arista acted in good faith.

On balance, the above factors support a finding that Arista acted in good faith in attempting to comply with the CDO. While Arista did not obtain clarification from the Commission through an advisory opinion, it undertook a significant redesign effort, obtained an opinion of counsel pertaining to its redesigned products, and complied with the Commission's reporting requirement.

2. Injury Due to Infringement

In general, "[t]he focus of this factor is injury to the domestic industry and protection of intellectual property rights." *Ink Cartridges*, Comm'n Op. at 27. The Commission has explained that "[t]he harm to the domestic industry can be measured in terms of respondents' unlicensed sales." *Magnets*, Comm'n Op. at 25. Moreover, injury to the public need not be precisely

quantified because a patent owner has the right to exclude all infringing products. *See Tractors*, Comm'n Op. at 38 (citing *EPROMs*, Comm'n Op. at 25 ("[A]ny lack of evidence of harm to the domestic industry resulting from the sales in violation of the Commission's order is not controlling on the question of whether the violations were harmful. . . . Atmel's violations harmed Intel by the loss of unlicensed sales to which it was entitled by virtue of its patent rights")).

Cisco argues "Arista injured the public, Cisco, and the domestic industry, through its systematic violation of the CDO." Cisco Br. at 112. Cisco further argues it has lost sales to Arista. *Id.* at 113.

Arista argues that Cisco's claims "are entirely speculative and unsupported by any record evidence." Arista Br. at 98. Arista adds:

- There is only one specific instance in where Cisco might have lost a sale during the relevant time period, and that [
      ] (Arista Br. at 98);

- The existence of overlapping customers "does not indicate that any specific sales by Arista during the relevant period displaced any sales by Cisco" (Arista Br. at 99);

- There are more than 15 other competitors in the network switching market (Arista Br. at 100);

- There is no evidence the alleged harm was due to Arista infringing the '537 Patent and "customers choose Arista's products over Cisco's products for reasons other than the technology claimed in the '537 Patent" (Arista Br. at 100-02).

The Staff argues:

> Cisco also alleges that Arista has caused competitive harm to Cisco. Cisco PrHB at 256. Arista argues that Cisco does not prove that any sales Arista made would have otherwise gone to Cisco. Arista PrHB at 147-48. The Commission does not require absolute proof that Cisco would have made the sales absent Arista's alleged infringement. *Neodymium Magnets*, 337-TA-372, Comm'n Op. at 25. The Commission has found it "reasonable to

assume" a Complainant "would have captured a significant portion" of the sales. *Id.* at 25 n.70. Cisco and Arista sell to overlapping customers. CX-5003 (Arnold DWS) at Q/A 224-25. Although there are other competitors in the market, Commission precedent allows the presumption that Cisco would have made sales but for Arista's sales.

This factor favors imposition of a penalty if the redesigned EOS is found to have violated the CDO.

Staff Br. at 54-55.

The evidence shows that Arista made [   ] sales [   ] between August 23, 2016 and December 12, 2016. *See* CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39; *see also* CX-5644C (providing the financial calculation). Assuming the redesigned products violate the CDO, it is reasonable to presume that Cisco would have captured additional sales and that it was injured due to Arista's infringement. *See Magnets*, Comm'n Op. at 25. Accordingly, this factor weighs in favor of imposing a significant penalty.

3.   Arista's Ability to Pay the Assessed Penalty

The Commission has looked to a party's income and revenue as an appropriate measure of its ability to pay a penalty. *Certain Ink Cartridges and Components Thereof*, Inv. No. 337-TA-565 (Enforcement Proceeding), Comm'n Op. at 30 n.12 (Sept. 25, 2009).

Cisco argues that Arista is able to pay the SMP [   ] Cisco Br. at 114-16. Cisco argues Arista's recent SEC filing shows that Arista holds $567 million in cash and cash equivalents. *Id.* at 115 (citing CX-5818 (2016 Form 10-K) at 67). Cisco further notes Arista has a market capitalization of $8.2 billion. *Id.*

Arista presents argument against earlier penalty figures Cisco sought. *See* Arista Br. at 104 (arguing against "an unprecedented civil penalty in excess of [   ] Arista then argues that market capitalization "bears absolutely no relationship to the funds that Arista has

available on hand to pay a proposed remedy." *Id.* Arista argues annual net income ($121.5 or

$125 million) would be a more reliable metric for determining Arista's ability to pay. *Id.* at 105.

Arista also suggests the Commission should consider how the penalty "would impact Arista's

employees or Arista as an ongoing concern." *Id.*

> The Staff argues:

> > Arista's revenue for fiscal year 2015 was $634.4 million in the
> > United States and $837.6 million worldwide. Arista PrHB at 154;
> > CX-5526 (Arista Networks, Inc., Dec. 31, 2015 Form 10-K).
> > Arista's net income as of December 31, 2015 was $121.5 million
> > and $125 million from January 1, 2016 through September 30,
> > 2016. RX-5130C (Cox RWS) at Q/A 135.

> > The evidence is shows that Arista's income and revenue show that
> > it can pay a substantial penalty if the redesigned EOS is found to
> > have violated the CDO.

Staff Br. at 55.

The evidence shows that Arista is able to pay a large, substantial penalty. *See* CX-5003C

(Arnold DWS) at Q/A 38, 41, 238-39; *see also* CX-5644C (providing financial calculations

showing [   ] in revenue and profits for less than [   ] of

sales; Arista has not provided financial data after December 12, 2016). In particular, the

evidence shows that Arista could pay a penalty at or near the SMP, and it certainly could pay the

penalty Staff recommends, given its recent revenues, profits, and cash on hand. *See id.*; *see also*

CX-5818 (2016 Form 10-K) at 67.

4.   The Extent to Which Arista Benefitted from its Violations

The fourth penalty factor is the extent to which the respondent benefitted from any

violations of the cease and desist orders. The Commission has explained that "the benefit to a

violating party can be measured in a number of ways, including revenues received from

infringing sales, profits from those sales, or even revenues from sales of related products where

those sales would not have occurred but for the sales of the infringing goods." *Tractors*,

Comm'n Op. at 42. The benefits to a respondent may also include intangible benefits, such as

customer retention. *See Ink Cartridges*, Comm'n Op. at 32. Moreover, the Commission has

explained that "[w]e do not believe that this factor requires the Commission to establish with

precision the amount of benefit derived by respondents. Rather, we have considered this factor

with a view to determine the general order of magnitude of the infringing conduct." *Magnets*,

Comm'n Op. at 28.

Cisco argues that Arista captured monetary and intangible benefits from its infringement.

Cisco Br. at 116-18. Cisco points to Arista's [   ] in revenue and [   ] in

gross profit (for sales of switches, power supplies, and fans) over the [   ] timeframe

following the Presidential review period. *Id.* at 117. Cisco contends Arista's expert "admitted"

that Arista benefitted from sales of the redesigned products. *Id.* at 116 (citing RX-5130 (Cox

RWS) at Q/A 136).

Arista argues that Cisco has overstated "the benefit to Arista from the sales of the

redesigned products." Arista Br. at 105. Arista points to its 2016 net income, which was "was

$125 million on the entire company's revenues." *Id.* (RX-5130C (Cox RWS) at Q/A 136-37).

Arista argues that Dr. Arnold did not "deduct the costs of designing around the '537 Patent" and

then also presents a nexus and apportionment arguments. *Id.* at 106-07 ("Cisco made no effort to

evaluate what portion of those benefits was due to Arista's own innovations, and which portion

was due to any alleged use of the '537 Patent.").

The Staff argues:

> The evidence shows that, if Arista violated the CDO, it benefitted
> from sales of the accused products with redesigned EOS. The
> evidence shows that the value of sales made in violation of the
> CDO is an appropriate measure of the benefit derived from a

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violation. *Neodymium Magnets*, Inv. No. 337-TA-372, Comm'n Op. at 28. This revenue from Arista's sales [far exceeds] the alternative maximum penalty of $100,000 per day.

Cisco has presented evidence that, from August 23, 2016 through December 12, 2016, Arista's gross revenue from sales of products with the redesigned EOS was [   ] with a gross profit of [   ] Cisco PrHB at 267; CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39. Arista argues that these figures do not accurately portray Arista's net income. Arista PrHB at 155. But, as discussed above, sales value is an appropriate method of determining the benefit derived from violation.

If Arista is found to have violated the CDO, this factor supports imposition of a civil penalty.

Staff Br. at 55-56 (footnotes omitted).

Assuming a violation is found, the evidence shows that Arista enjoyed a significant benefit from sales of its redesigned products. In particular, the value of sales made in violation of the CDO between August 23, 2016 and December 12, 2016 alone is [   ] *See* CX-5003C (Arnold DWS) at Q/A 38, 41, 238-39); *see also* CX-5644C (providing the financial calculation). Further, Arista's arguments about Cisco "overstating" the value of the '537 Patent are undercut by the "extensive redesign efforts" Cisco undertook following entry of the CDO. Accordingly, this factor weighs in favor of imposing a significant penalty.

5. Vindicating the Commission's Authority

"[T]he Commission generally has an interest in vindicating its authority where one of its orders is violated." *Magnets*, Comm'n Op. at 33. The need to vindicate the Commission's authority is an aggravating factor in cases where a respondent has acted in bad faith or has deliberately evaded the Commission's orders. *See Ink Cartridges*, Comm'n Op. at 35 (bad faith and deliberate evasion of orders); *Cameras II*, Comm'n Op. at 27 (knowingly making infringing sales, or making them with reckless or willful indifference); *Tractors*, Comm'n Op. at 43

(finding a pattern of activity intended to circumvent the orders); *Magnets*, Comm'n Op. at 32-33 (finding bad faith in the fact that the respondents proposed a consent order and then violated it).

Cisco argues that Arista made "an 'all-in' bet to continue selling its products based on its own unilateral determination of non-infringement," that Arista did not inform its agents of the CDO, and that Arista [

] Cisco Br. at 118. Cisco further argues it has induced others, through an unusual financial arrangement, to stockpile products "in clear defiance of the Commission's authority." *Id.* at 119.

Arista argues that, assuming a violation, Arista's violation was not intentional and that it "never acted with malice." Arista Br. at 107. Arista then argues a large civil penalty is not appropriate because "vast majority of civil penalties imposed by the Treasury Department" are far lower than the SMP. *Id.*

The Staff argues that "if a violation is found, the evidence does not show that Arista acted in bad faith or deliberately evaded the Commission's orders." Staff Br. at 56.

The Commission previously found that Arista was willfully blind to Cisco's patents and that "Arista's behavior evinces a corporate culture of copying." Comm'n Op. at 20. Since that finding, Arista began selling redesigned products, seeking only CBP's ruling on whether the redesigned products infringe the '537 Patent. *See, e.g.*, CX-5060C (July 22, 2016 Reiser to Steuart letter). Subsequent interactions with Customs were contested. *See, e.g.*, CX-5632C; CX-5092; CX-5093. Arista did not seek an advisory opinion about its redesigned products. The Commission's prior findings on copying and willful blindness, coupled with Arista's decision to litigate the redesign at Customs, indicate a need to vindicate the Commission's Authority. Accordingly, if a violation is found, this factor weighs in favor of imposing a significant penalty.

6. The Public Interest

In previous proceedings, the Commission analyzed the public interest as follows:

> We adopt the ALJ's analysis of the public interest factor and find that the public interest weighs in favor of substantial penalties. The public interest at issue in this case, as in most section 337 investigations, is the protection of intellectual property rights. The public interest is not served if intellectual property rights are not respected, and the imposition of a penalty that is substantial enough to deter future violations is in the public interest. While the purpose of the penalty is not to destroy the businesses, as the ALJ points out, the Ninestar Respondents should not complain if their business suffers if a severe penalty is imposed in response to their misconduct.

Ink Cartridges, Comm'n Op. at 38; *see also Magnets*, Comm'n Op. at 33 ("the public interest favors the protection of U.S. intellectual property rights and therefore militates in favor of a substantial penalty").

Cisco argues that imposing a civil penalty would protect intellectual property rights and the corresponding "investments in innovation (and associated domestic industries)[.]" Cisco Br. at 120. Cisco adds that "this is not a case where the Covered Products directly affect public health or welfare." *Id.*

Arista argues that imposing the SMP "is not appropriate in this instance." Arista Br. at 108. Arista argues that overprotection of intellectual property rights harms society and that Cisco has not "demonstrate[d] the value of the invention claimed in the '537 Patent." *Id.* at 109, 111. Arista further argues that its redesign efforts avoided "interruption in many key sectors of the U.S. economy." *Id.* at 109.

The Staff argues that if "Arista is found to have taken deliberate steps to violate the CDO, the public interest would not be harmed by imposing a civil penalty." Staff Br. at 57.

Assuming a violation is found, the evidence supports imposing a penalty. In the underlying investigation, the Commission found Arista was willfully blind to Cisco's patents and that "Arista's behavior evinces a corporate culture of copying." Comm'n Op. at 20. The public interest would not be served if Arista, which was previously found to be a copyist, and did not seek an advisory opinion concerning the redesigned products, were afforded leniency for its second violation of U.S. intellectual property rights. Accordingly, if a violation is found, this factor weighs in favor of imposing a significant penalty.

7. Recommended Penalty

If a violation is found, the administrative law judge recommends a civil penalty of

[   ] which is based on Arista's gross revenue from sales of products with or related to the redesigned EOS between August and December 2016. The recommended penalty disgorges benefit that Arista received from its infringement, vindicates the Commission's authority, and upholds the public's interest in protecting intellectual property rights. The penalty is substantial enough to deter future violations of the CDO and the Commission's orders in general. Lastly, the penalty is within the statutory limits imposed by Congress, and well below "twice the domestic value of the articles entered or sold on such day in violation of the order." *See* 19 U.S.C. § 1337(f)(2).

*   *   *

VII. CONCLUSIONS OF FACT AND LAW

1) The Commission has personal jurisdiction in this investigation.

2) The Commission has subject matter jurisdiction in this investigation.

3) The Commission has *in rem* jurisdiction in this investigation.

4) Since at least August 23, 2016 (the day after the Presidential review period ended), Arista has sold the accused products in the United States.

5) The accused products include all of Arista's products that run Arista's redesigned EOS, including at least the 7010, 7020, 7048, 7050, 7050X 7060, 7150, 7160, 7250, 7250X, 7260, 7280, 7280E, 7300, 7300X, 7320, and 7500 series models, related software and the components thereof.

6) The accused products do not literally infringe claims 1, 2, 8-11, or 17-19 of U.S. Patent No. 7,162,537.

7) The accused products do not infringe claims 1, 2, 8-11, or 17-19 of U.S. Patent No. 7,162,537 under the doctrine of equivalents.

8) Amendment-based estoppel applies to Cisco's doctrine of equivalents arguments.

9) Arista does not indirectly infringe the asserted claims because there is no direct infringement upon which to find indirect infringement.

10) Arista lacks the requisite intent to infringe the asserted claims indirectly.

11) Based on the arguments presented, the administrative law judge is not persuaded that the colorable differences test is the appropriate test for determining whether Arista has violated the CDO.

12) In the event that it is later the colorable differences test should be utilized, Arista's redesigned EOS is more than colorably different from its predecessor.

13) Cisco has not engaged in unconscionable conduct pertaining to the enforcement proceeding that would warrant precluding Cisco's enforcement complaint under the unclean hands doctrine.

14) The statutory maximum penalty is [   ]

15) In the event that a violation is found, the recommended civil penalty is
[   ]

VIII. ORDER

On April 11, 2017, Arista filed an unopposed motion seeking to reopen the record for the limited purpose of admitting RX-5206C into evidence. *See* Motion Docket No. 944-083. RX-5206C is a letter ruling from Customs that issued on April 7, 2017, after the hearing concluded. The administrative law judge grants Motion No. 944-083. Any remaining motions not previously ruled upon are denied as moot.

IX. ENFORCEMENT INITIAL DETERMINATION

It is the administrative law judge's ENFORCEMENT INITIAL DETERMINATION (EID) that Arista, the enforcement respondent, has not violated the cease and desist order issued on June 23, 2016.

Further, this EID, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is CERTIFIED to the Commission.
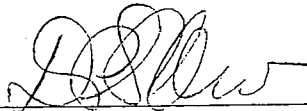
In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.

The Secretary shall serve a public version of this EID upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order, as amended, issued in this investigation.

To expedite service of the public version, no later than June 28, 2017, the parties shall file a joint copy of this enforcement initial determination with the Commission Secretary, with bold, red brackets to show any portion considered by the parties (or their suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the

undersigned, and the brackets shall be provided in bold, red text. If a party (and its suppliers of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.[30]

David P. Shaw
Administrative Law Judge

Issued: June 20, 2017

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[30] Confidential business information ("CBI") is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

CERTAIN NETWORK DEVICES, RELATED SOFTWARD AND COMPONENTS
THEREOF (I):

<div align="right">

INV. NO. 337-TA-944
(Enforcement Proceeding)

</div>

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ENFORCEMENT INITIAL DETERMINATION** has been served by hand upon the Commission Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on _____**JUL 1 7 2017**_____ .

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, DC 20436

FOR COMPLAINANT CISCO SYSTEMS, INC.:	
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of	
CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I)	Investigation No. 337-TA-944 (Declassification)

COMMISSION DECLASSIFICATION OPINION

I.   INTRODUCTION

The Commission instituted this investigation on January 27, 2015, based on a complaint

filed on behalf of Cisco Systems, Inc. ("Cisco" or "Complainant") of San Jose, California. 80

Fed. Reg. 4314-15 (Jan. 27, 2015). The complaint was filed on December 19, 2014, and a

supplement was filed on January 8, 2015. The complaint alleged violations of section 337 of the

Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("section 337") based upon the importation

into the United States, the sale for importation, and the sale within the United States after

importation of certain network devices, related software and components thereof by reason of

infringement of certain claims of U.S. Patent No. 7,162,537 ("the '537 patent"); U.S. Patent No.

8,356,296 ("the '296 patent"); U.S. Patent No. 7,290,164 ("the '164 patent"); U.S. Patent No.

7,340,597 ("the '597 patent"); U.S. Patent No. 6,741,592; and U.S. Patent No. 7,200,145, and

alleged that an industry in the United States exists as required by subsection (a)(2) of section

337. The '296 patent was subsequently terminated from the investigation. The complaint named

Arista Networks, Inc. ("Arista") of Santa Clara, California as the respondent. A Commission

investigative attorney ("IA") participated in the investigation.

The presiding Administrative Law Judge issued an administrative protective order

("APO") at the beginning of the investigation. The APO defines confidential business

information in accordance with Commission Rule 201.6(a)(1), 19 C.F.R. §201.6(a)(1), a rule issued pursuant to statute, section 337(n), 19 U.S.C. §1337(n). In accordance with this APO, the parties designated information to be treated as confidential throughout the investigation.

On June 23, 2016, the Commission issued its confidential opinion, a limited exclusion order, and a cease and desist order. At that time, the Commission's counsel asked the parties to identify information to be redacted from the Commission opinion in order to prepare a public version. In response, Cisco did not designate any information as confidential and Arista provided its proposed redactions. The parties also submitted letters regarding the extent of Arista's redactions. After receiving these letters, the Commission's counsel worked with Arista and expressed her concern about some of Arista's redactions. As a result, Arista withdrew some of its originally proposed redactions. While Commission counsel attempted to foster agreement with Arista on the extent of the redactions at the time of the issuance of the Commission opinion, the Commission itself did not conduct (nor had it been asked to conduct) any formal analysis as to whether each and every redaction in the Commission's opinion meets the definition of confidential business information provided in Commission Rule 201.6(a)(1). The public version of the Commission opinion then issued.

Arista appealed the Commission's finding of violation for the '537 patent to the U.S. Court of Appeals for the Federal Circuit ("Federal Circuit") and Cisco appealed the Commission's finding of no violation for the '597 patent. The two appeals, Appeal Nos. 16-2539 and 16-2563, were consolidated.

On November 2, 2016, Cisco filed a motion with the Federal Circuit to, *inter alia*, (1) declassify certain information marked confidential on pages 14-24 and 45-47 of the Commission opinion and (2) declassify the evidence upon which those redactions were based. The

Commission opposed these parts of Cisco's motion, arguing that the Commission itself should make such declassification decisions in the first instance and noting that Cisco had not applied the Commission's confidentiality definition set out in Commission Rule 201.6. Arista also opposed Cisco's motion.

On December 30, 2016, the Federal Circuit agreed that the Commission should consider the declassification requests in the first instance. The Court granted the Commission leave to consider Cisco's requests for declassification of confidential business information ("CBI") and directed the Commission to act expeditiously.

On January 10, 2017, the Commission issued a Notice instituting a declassification proceeding and issuing an order to Cisco to show cause why the information it sought to be declassified should be declassified pursuant to Commission Rule 201.6, 19 C.F.R. § 201.6. Arista and the IA were given an opportunity to file responses. Cisco filed its response on January 23, 2017.[1] In that response, Cisco withdrew its request for declassification of the underlying evidentiary documents. Arista and the IA filed their respective responses on February 2, 2017.[2] On February 10, 2017, Arista moved to replace Exhibit 2 of its February 2, 2017 submission in order to withdraw additional proposed redactions as to information that will

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[1] Complainant Cisco Systems, Inc.'s Response to the Commission's January 10, 2017 Notice of Declassification Proceedings ("Cisco Br.").

[2] Respondent Arista Networks, Inc.'s Response to Complainant Cisco Systems, Inc.'s Response to the Commission's January 10, 2017 Notice of Declassification Proceedings ("Arista Br."); Office of Unfair Import Investigations' Response to Cisco Systems, Inc.'s Response to the Commission's January 10, 2017 Notice of Declassification Proceeding ("IA Br.").

become public in the near future.[3] On February 16, 2017, Arista submitted a letter and corrected

motion with corrections to replacement Exhibit 2.[4]

II. STANDARD

A. 19 U.S.C § 1337(n)(l) and 19 C.F.R. § 201.6

The Commission's obligation to protect the confidentiality of information submitted to

the Commission is imposed by statute. Section 337(n) provides:

> *Information* submitted to the Commission or exchanged among the parties in
> connection with proceedings under this section *which is properly designated as*
> *confidential pursuant to Commission rules* may not be disclosed (except under a
> protective order issued under regulations of the Commission which authorizes
> limited disclosure of such information) to any person (other than a person
> described in paragraph (2)) [*i.e.,* the Commission, USTR, and Customs employees
> directly involved in carrying out duties related to the investigation and any
> remedial orders] without the consent of the person submitting it.

19 U.S.C § 1337(n)(l) (emphasis supplied). Pursuant to this statutory authority, the Commission

has promulgated rules defining what information constitutes CBI and concerning the submission

and protection of CBI. *See, e.g.,* 19 C.F.R. §§ 201.6, 210.5. The Commission's rules define

"confidential business information" as follows:

> [I]nformation which concerns or relates to the trade secrets, processes, operations,
> style of works, or apparatus, or to the production, sales, shipments, purchases,
> transfers, identification of customers, inventories, or amount or source of any
> income, profits, losses or expenditures of any person, firm, partnership,
> corporation, or other organization, or other information of commercial value, *the*
> *disclosure of which is likely to have the effect of either impairing the*
> *Commission's ability to obtain such information as is necessary to perform its*

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[3] Respondent Arista Networks, Inc.'s Motion to Submit Updated Exhibit Reflecting Proposed
Redactions to Commission Opinion Pursuant to the January 10, 2017 Notice of Declassification
Proceedings.

[4] Respondent Arista Networks, Inc.'s Corrected Motion to Submit Updated Exhibit Reflecting
Proposed Redactions to [Commission] Opinion Pursuant to the January 10, 2017 Notice of
Declassification Proceedings. The Commission has determined to grant Arista's motions to
replace Exhibit 2 of its original filing. The Commission cites to this version of Exhibit 2.

statutory functions, or causing substantial harm to the competitive position of the person, firm, partnership, corporation, or other organization from which the information was obtained, unless the Commission is required by law to disclose such information.

Commission Rule 201.6(a)(1), 19 C.F.R. § 201.6(a)(1) (emphasis supplied).

Of critical importance to this definition is the determination whether disclosure of the involved information "is likely to have the effect of ... impairing the Commission's ability to obtain such information as is necessary to perform its statutory functions. . . ." Underlying the Commission's framework for assuring the protection of confidential information is the important role that such information plays in the Commission's execution of its mandatory investigative duties. Because of the protections that the statute provides and the rules promulgated thereunder, the Commission is able to obtain confidential information essential for its section 337 investigations. The guarantee that properly designated confidential information will remain protected allows the Commission to develop a full administrative record and conduct effective investigations, and has enabled the Commission to fulfill its statutory mission of completing its mandatory investigative duties in section 337 investigations "at the earliest practicable time." 19 U.S.C. § 1337(b)(1).

Without assurance that confidential information will be protected from disclosure by the Commission, in accordance with its rules, throughout Commission investigations and any subsequent appeals, parties and third parties may be reluctant to voluntarily provide confidential information to the Commission. The guarantee that confidential information will remain protected allows the Commission to develop a full administrative record and to conduct effective investigations without parties (or subpoenaed non-parties) frustrating discovery because of concerns over the effectiveness of protective orders. Due to the Commission's strict and consistent stance in safeguarding confidential information, in accordance with its rules, parties

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and non-parties alike cooperate in providing their confidential information to the Commission in its proceedings.

In considering whether the information Cisco seeks to declassify should be declassified, the Commission considers whether the information is properly designated as confidential within the confines of 19 C.F.R. § 201.6. Commission Rule 201.6(a) sets forth a two-part test for determining whether information is CBI. First, the information must be "information which concerns or relates to the trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value." 19 C.F.R. § 201.6(a). Second, the disclosure of such information must be likely to have the effect of either (1) "impairing the Commission's ability to obtain such information as is necessary to perform its statutory functions," or (2) "causing substantial harm to the competitive position of the person, firm, partnership, corporation, or other organization from which the information was obtained," unless the Commission is required by law to disclose such information. *Id.* Legal conclusions that do not include information meeting this definition are not CBI under Rule 201.6. Information that would be embarrassing, but does not meet this definition is not afforded confidential treatment. *See e.g., Certain Semiconductor Memory Devices and Prods. Containing Same*, Inv. No. 337-TA-414, Order No. 12, 2000 WL 49207, *2 (Jan. 14, 2000). Information that is publicly available also does not fall within the definition of CBI. 19 C.F.R. § 201.6(a); *see e.g., Certain Recombinantly Produced Human Growth Hormones* , Inv. No. 337-TA-358, Order No. 153, 1995 WL 945593, *5 (Feb. 2, 1995)..

B.   Arista's Approach

Arista asserts that the Commission should apply a three-part test to determine when to release confidential information. Arista argues that the Commission should consider "(1) the need to reveal the confidential information to the public; (2) the harm of that public disclosure would cause; and (3) the Commission's interest in maintaining the confidentiality of this information." Arista Br. at 10 (citing *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1484 (Fed. Cir. 1986)).

In *Akzo*, the issue related to whether the protective order should be modified to allow in-house counsel to have access to CBI of its competitor. 808 F.2d at 1482-85. There was no question raised as to whether the information at issue was properly designated as confidential under Commission Rule 201.6. Both the ALJ and the Court applied a three-part test to determine whether respondent's in-house counsel, who sought access to complainant's CBI under the protective order, should be granted access to the confidential information.[5] *Id.* In contrast, here, the question is whether the information designated by Arista in the Commission's Opinion is properly designated as CBI pursuant to Commission Rule 201.6.

C.   Cisco's Additional Common-Law Approach

Cisco argues that the common-law right of public access provides an additional reason (beyond Commission Rule 201.6) to make the information on pages of 14-24 and 45-47 public. Cisco Br. at 14-15. Cisco argues that the "public has a fundamental interest in keeping a

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[5] The Court stated "*Rotary Wheel Printers* established, and the ALJ employed, a three-part balancing test to determine whether, to whom, and under what conditions to release confidential information. Factors to be considered include the party's need for the confidential information sought in order to adequately prepare its case, the harm that disclosure would cause the party submitting the information, and the forum's interest in maintaining the confidentiality of the information sought." *Akzo,* 808 F.2d at 1484.

'watchful eye on the workings of public agencies' and the courts." *Id.* at 14. Cisco asserts that this common-law approach applies to agency decisions and creates a "'strong presumption in favor of public access' to the Commission decision itself." *Id.*

Arista counters that Cisco attempts to cast "the statutory protections of 19 C.F.R. § 201.6(a) completely aside by advancing a narrower 'common-law' standard for confidentiality" by relying on law developed in district court proceedings. Arista Br. at 11. Arista notes that, importantly, those proceedings are not governed by section 337(n) and accompanying regulations. *Id.*

While Cisco is correct that the common-law right of access may apply to agencies, none of the cases that Cisco cites apply the common-law to agencies having specific statutory provisions governing confidentiality. Indeed, the parties have not cited any case law where an agency, that has its own statutory directive regarding confidentiality, has applied the common-law standard. Accordingly, the Commission declines to apply the common-law standard and only applies the standard of section 337(n) and Commission Rule 201.6 promulgated thereunder.

III. BURDEN

Cisco and Arista disagree as to which party bears the burden to establish whether the redactions at issue are properly designated as CBI and should remain confidential. Cisco asserts that the burden is on Arista, not Cisco, to demonstrate that each of its redactions meet the standard set forth in 19 C.F.R. § 201.6(a)(1). Cisco Br. at 6. Cisco argues that it is not required to establish that the designated information is not confidential and that the information in a Commission opinion "does not come with a presumption that it will be deemed confidential. Rather the Commission must affirmatively decide" whether information identified by the supplier should be afforded confidential treatment. *Id.* at 7. Cisco asserts that the regulations

governing confidentiality in Commission opinions require the supplier of the confidential

information to provide support for the claim of confidentiality. *Id.* at 7.

Arista contends that Cisco should bear the burden of proof on declassification. Arista Br.

at 8. Arista asserts that the Commission's show cause order to Cisco is practical and efficient

because initiating a declassification proceeding simply by asserting without specificity that a

large swath of an opponent's CBI should be declassified would result in the Commission

receiving a never-ending stream of declassification requests. *Id.*

Pursuant to Commission Rule 210.20, Cisco could have moved to initiate a

declassification proceeding before the Commission at any time during or after the completion of

an investigation. Cisco instead moved the Federal Circuit to declassify portions of the

Commission opinion and the underlying record. Cisco had not filed a motion with the

Commission and its filing with the Federal Circuit did not apply Rule 201.6. Because the

Commission had not received the motion for declassification from Cisco, the show cause order

was issued to Cisco to define the parameters of its request and to apply the appropriate standard.

However, we conclude that it is Arista's burden to establish that the information it seeks to

redact meets the requirements of Rule 201.6(a). Rule 210.5(f) allows the ALJ or the

Commission to require the party submitting redactions to provide support for their claim of

confidentiality—here that submitter is Arista.

IV. THE REDACTIONS AT ISSUE

A. Cisco's Arguments

Cisco asserts that none of the redactions on pages 14-24 and 45-47 protect CBI.[6] Cisco Br. at 1. Cisco explains that the information is not CBI and that Arista has not identified a specific or credible harm that would suffice if the redacted information about its culture of copying, changes to its importation practices, and its deliberate steps to avoid learning that it infringed Cisco's patents, was publicly available. *Id.* Cisco asserts that Arista has withdrawn some of its designations, and that the Commission should remove those redactions from the Commission opinion. *Id.* at 7.

Cisco argues that certain redactions at issue are not the type of information that Arista should be able to hide from public view and that Arista would not suffer substantial harm if that information were disclosed. *Id.* 7-8, 11-12. Cisco further asserts that Arista never identified any substantial harm that it would suffer if the public knew that Arista copied or consulted Cisco features in designing its products. *Id.* at 8, 10. Cisco also argues that other portions of the redacted information is already publicly known. *Id.* at 9-10, 13. Cisco further contends that legal conclusions should not be redacted because legal conclusions are not CBI. *Id.* at 10, 12-14. Finally, Cisco argues that the fact that certain information is private does not establish that the disclosure of such information would cause Arista substantial harm. *Id.* at 10.

B. Arista's Arguments

Arista argues that the redactions it seeks are limited to factual findings supporting unredacted legal conclusions. Arista Br. at 12. Arista asserts that the Commission's legal

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[6] Cisco is no longer seeking to declassify the evidence relied on in the Commission opinion. Cisco Br. at 14 n.4. In addition, Cisco is not seeking to declassify the first two redactions on page 14 of the Commission opinion. *Id.* at 6 n.1.

conclusions concerning infringement, invalidity, enforceability, and remedy are all available to the public. *Id.* Arista argues that the references to the "culture of copying" are not legal conclusions but are at best characterizations of the confidential factual record that underlies the Commission's conclusions. *Id.* Arista argues that Cisco does not identify any legal conclusions that are redacted. *Id.*

Arista's arguments focus on two categories of information: (1) the design and development documents and (2) the importation information. For each of these categories, Arista argues the information is confidential, that Arista will be harmed[7] by the disclosure of such information, and that the Commission has an interest in maintaining the redactions of the contested passages. *Id.* at 13-18.

C. The IA's Arguments

The IA asserts that based on Commission Rule 201.6 and orders interpreting the rule, there appear to be some passages that are properly redacted. IA Br. at 12-13. The IA also argues that there are also a number of redactions that do not fall under the definition of CBI of Rule 201.6. *Id.* at 7-12. The IA helpfully provided tables for the passages that appear to be properly redacted, those withdrawn by Arista, and those passages that he contends should remain confidential. *Id.* at 6-13.

D. Analysis

During briefing, both before the Federal Circuit and the Commission, Arista has withdrawn certain redactions. The passages of the original confidential version that Arista has agreed to de-designate are outlined in the chart below. *See* Arista Br. at Exhibit 2. The

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[7] Arista's harm arguments are based on the harm discussed in the Sweeney declaration, which was attached to its filing.

withdrawal of these redactions impact pages 15-16, 19-24, and 47-49, with no redactions now

remaining on pages 21, 23-24, and 45-49 of the Commission opinion.

Page	Passage
15	change in importation practice
16	with regard to Arista's changed importation practice.
19	command line interfaces
19	We copy Cisco for everything else.
19	the employee's email was limited to command line interfaces ("CLI"), he admitted Arista's CLIs are very much like Cisco's.
19	Arista had a Cisco device and tested it when it wanted to learn how port features work.
19	Cisco's presentation on application programing interfaces, and an Arista employee suggested that they copy it.
19-20	one of her engineers had copied a portion of a Cisco manual concerning the operation of EOS software or installation configuration into an Arista manual.
21	some of the hardware components are imported without EOS
21	the imported hardware
21	it has no uses other than with the EOS software
21	all of the individual components
21	because they are imported only to be incorporated into a finished Arista switch that will ultimately run EOS software which necessarily runs the infringing functionality.
22	without the EOS software installed
22	the Blank Switches
22	Blank Switches, which are made of various components such as a processor, memory, CPU card, chassis, switch card, and fan modules
22 fn 13	The Blank Switches are used only with EOS, which contains the infringing functionality.
22 fn 14	"Blank Switches" include fixed switches and supervisor modules
23	the underlying hardware that executes Sysdb
23	the Blank Switches
23	imported components
23	If Arista attempts to circumvent a Commission remedy by importing only the components of the accused products for reassembly into complete functional switches, it would still be in violation of section 337 because the Commission finds that the Blank Switches and the fully assembled complete switches indirectly infringe and the accused switch components are covered by this finding.
23	Sysdb is necessarily utilized with every instance of EOS use
24	including the Blank Switches
24	The switch hardware is designed to run the EOS software containing Sysdb and is run each time EOS is booted.
24	"I'm not aware of any customers using our switches without using EOS"
24	And Arista switch hardware is used exclusively with EOS.

Page	Passage
45	it is designed for and used exclusively with EOS, which contains the infringing PVLAN functionality.
46	the Blank Switches and components
46	the hardware is designed for EOS, but the PVLAN functionality infringes.
46	the Blank Switches and components are not designed for PVLAN and they are not used exclusively with PVLAN.
46	the EOS software can be used for non-accused functionality and indeed rarely performs Arista's PVLAN feature.
46	*e.g.*, the Blank Switches. It is irrelevant if the switches with EOS installed have non-infringing uses. The Blank Switches are not capable of being used without EOS which includes the infringing functionality.
47	the Blank Switches
47	(with or without EOS installed) or components thereof
47	because the switch hardware is designed to run the EOS software which is run each time EOS is booted.
47	"I'm not aware of any customers using our switches without using EOS"
47	Arista switch hardware is used exclusively with EOS

The Commission has considered the papers filed with the Federal Circuit, as well as the briefing in response to its Notice and Order. Arista maintains redactions on pages 14-20, and 22 of the June 23, 2016 confidential opinion. Arista Br. at Exhibit 2. The Commission addresses each of these redactions below individually.

Arista made arguments regarding the harm that would result from disclosure of the challenged passages in general terms. Many of Arista's arguments are generic and speculative. *See* Arista Br. at Sweeney Dec.

In addition, Arista argues that information in the challenged passages concerning copying is the type of information that the Commission has an interest in maintaining the confidentiality of, even if the excerpted text in the Commission opinion appears to be "insignificant." Arista Br. at 15. However, in many instances, the information before us is not the type that would impair the Commission from obtaining similar information in the future and Arista has not shown that the disclosure of the information in the passages would hamper the Commission's ability to obtain similar information.

Page	Passage	Explanation
14-15	"not predicated by any business reason and Arista's witnesses declined to answer questions about the reason for the change on the basis of privilege."	This passage does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Arista's alleged injury is speculative. Nor would disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
15	[[ ]]	This passage is a characterization of the confidential evidence considered. The disclosure of this statement may reveal information that falls within "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value." The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. However, Rule 201.6(a) provides that "nonnumerical characterizations of numerical confidential business information (e.g., discussion of trends) will be treated as confidential business information only at the request of the submitter for good cause shown." Arista argues that disclosure of this information would harm Arista because [[ ]] Arista Br. at Sweeney Dec., ¶21. The Commission has determined to maintain this redaction since disclosure would likely impair the Commission's ability to gather similar relevant information.

Page	Passage	Explanation
15	the timing of the change, the products impacted, and the lack of business reasons	This passage does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
16	[[ ]]	This passage is related to Arista's importation practices and could be considered Arista's process, style of works, production, or shipment information. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
16	[[ ]]	This passage is related to Arista's importation practices and could be considered Arista's process, style of works, production, or shipment information. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.

Page	Passage	Explanation
16	as to a business reason for making the change and instead declined to answer questions about the reason for the change based on privilege.	This is a legal/factual conclusion and does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
16	[[ ]] and suggests an attempt by Arista to avoid liability for direct infringement under Section 337.	The first portion of the passage goes to the details regarding operation of Arista's product. This information falls within "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value." The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. However, the remaining language is a legal conclusion and does not fall within the definition of Rule 201.6(a). The Commission has determined to maintain the redaction before the "and" and declassify the remainder of the passage.
16	[[ ]]	This passage is a characterization of the confidential evidence considered. The disclosure of this statement may reveal information that is one of "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial

Page	Passage	Explanation
		value." The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. However, Rule 201.6(a) provides that "nonnumerical characterizations of numerical confidential business information (e.g., discussion of trends) will be treated as confidential business information only at the request of the submitter for good cause shown." Arista argues that disclosure of this information would harm Arista because [[ ]] Arista Br. at Sweeney Dec., ¶21. The Commission has determined to maintain this redaction since disclosure would likely impair the Commission's ability to gather similar relevant information.
16	[[ ]]	This information goes to Arista's importation practices and could be considered Arista's process, style of works, production or shipment information. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this redaction.
16-17	[[ ]]	This first portion of this passage is a conclusion based on the confidential evidence considered. The disclosure of this statement may reveal information that is one of "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value." The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. However, Rule

Page	Passage	Explanation
	the timing of the change in importation practice *(i.e.,* after Arista had knowledge of its alleged infringement), and Arista's failure to explain the change *(i.e.,* Arista did not testify as to a business reason for the change) evinces an effort and intent to avoid liability for infringement of the asserted claims.	201.6(a) provides that "nonnumerical characterizations of numerical confidential business information (e.g., discussion of trends) will be treated as confidential business information only at the request of the submitter for good cause shown." Arista argues that disclosure of this information would harm Arista because [[ ]] Arista Br. at Sweeney Dec., ¶21 The Commission has determined to maintain this redaction since the disclosure of this information is likely to have the effect of impairing the Commission's ability to gather relevant information. The second portion of this passage is a legal/factual conclusion and does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.

Page	Passage	Explanation
18	Arista's copying and marketing of features that were based on patented Cisco features.	This is a legal/factual conclusion and does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
18	Arista took deliberate steps to avoid learning of its infringement.	This is a legal/factual conclusion and does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
19	they are not aware of anyone checking whether they were infringing Cisco's patents	At least one witness gave this hearing testimony in open session. Tr. at 787-88. The Commission has determined to de-classify this redaction.

Page	Passage	Explanation
19	a routine of not researching Cisco's patent portfolio, Arista has a practice of copying or consulting Cisco features, technology, and manuals in designing its products	This passage does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The facts upon which this legal conclusion is based are public because of Arista's withdrawal of certain of its own redactions, and testimony given in open court. *See e.g.,* Arista Br. at Exhibit 2 at 19-20; Tr. at 787-88. The Commission has determined to de-classify this redaction.
19	[[ ]]	This information includes the identification of a customer. The underlying document discussed is confidential and the disclosure of this type of information could substantially harm Arista and its customer. In addition, the Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
19	Cisco has products and features that are used across the industry, and therefore, customers ask for features used in Cisco products	This passage does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," and Arista has not demonstrated that the disclosure of this passage would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.

Page	Passage	Explanation
19	just because Arista and Cisco offer the same feature, this does not mean Arista copied it	This testimony is not confidential information under any of the following: "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," and Arista has not demonstrated that the disclosure of this information will cause substantial harm. Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
19	there are times when Arista emulated features that preexisted in Cisco products.	This passage does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). The conclusion that Arista emulated Cisco at times can be gleaned from other redactions that Arista has withdrawn. *See e.g.,* Arista Br. at Exhibit 2 at 19-20. Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
19	[[ ]]	The statement relies, at least in part, on a confidential email chain between [[ ]] The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.

Page	Passage	Explanation
19	[[ ]]	This evidence relates to Arista's operations and apparatus. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
20	consultation and copying of features not at issue in this investigation, Arista's behavior evinces a corporate culture of copying.	Arista has already de-designated certain copying facts. *See e.g.,* Arista Br. at Exhibit 2 at 19-20. Thus, this legal/factual conclusion does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
20	based in part on its culture of copying.	Arista has already de-designated certain copying facts. *See e.g.,* Arista Br. at Exhibit 2 at 19-20. Thus, this legal/factual conclusion does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.

Page	Passage	Explanation
20	[[ ]]	This evidence relates to Arista's operations, style of works, and apparatus. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
20	[[ ]]	This evidence relates to Arista's operations, style of works, and apparatus. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
20	[[ ]]	This evidence relates to Arista's operations, style of works, and apparatus. Disclosure by Cisco about [[ ]] may inadvertently disclose information about [[ ]] if this information became public, causing substantial harm to Arista. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
20	[[ ]]	This evidence relates to Arista's operations and apparatus. Disclosure by Cisco about [[ ]] may inadvertently disclose information about [[ ]] if this information became public, causing substantial harm to Arista. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.

Page	Passage	Explanation
20	[[ ]]	This evidence relates to Arista's operations and apparatus. Disclosure by Cisco about [[ ]] may inadvertently disclose information about [[ ]] if this information became public, causing substantial harm to Arista. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
20	Arista's company policy of consulting Cisco's products while failing to consider whether it may infringe a patent	Arista has already de-designated certain copying facts and at least one witness publicly testified that Arista does not check for patent infringement. *See e.g.,* Arista Br. at Exhibit 2 at 19-20; Tr. at 787-88. Thus, this passage does not concern or relate to "trade secrets, processes, operations, style of works, or apparatus, or to the production, sales, shipments, purchases, transfers, identification of customers, inventories, or amount or source of any income, profits, losses or expenditures of any person, firm, partnership, corporation, or other organization, or other information of commercial value," the disclosure of which would cause substantial harm to Arista's competitive position. 19 C.F.R. § 201.6(a). Nor would its disclosure compromise the Commission's ability to obtain similar information. The Commission has determined to de-classify this redaction.
22 fn 13	[[ ]]	This information goes to Arista's importation practices and could be considered Arista's process, style of works, production or shipment information. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.
22 fn 14	[[ ]]	This information goes to Arista's importation practices and could be considered Arista's process, style of works, production, or shipment information. The Commission's disclosure of this type of information is likely to have the effect of impairing the Commission's ability to obtain

Page	Passage	Explanation
		similar information in the future, which is necessary to carry out its statutory function. The Commission has determined to maintain the confidentiality of this passage.

V. STAY OF THE COMMISSION'S DETERMINATION

The Commission stays the order of declassification for 21 days from the date of its order

to permit Arista to seek judicial relief and to seek a judicial stay. As to those redactions the

Commission has determined not to declassify (identified above), the Commission notes that in its

December 30, 2016, order, the Federal Circuit stated that Cisco may renew its motion for

declassification with the Court.

VI. Conclusion

For the forgoing reasons, the Commission has determined to declassify certain passages

of the Commission opinion while maintaining other redactions as discussed above.

By order of the Commission:

Lisa R. Barton
Secretary to the Commission

Issued: April 19, 2017

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **April 19, 2017**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

Adam R. Alper, Esq.   ☐ Via Hand Delivery
KIRKLAND & ELLIS LLP   ☒ Via Express Delivery
555 California Street   ☐ Via First Class Mail
San Francisco, CA 94104   ☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Bert C. Reiser, Esq.   ☐ Via Hand Delivery
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Suite 1000   ☐ Other:_____
Washington, DC 20004

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

CERTAIN NETWORK DEVICES,
RELATED SOFTWARE AND
COMPONENTS THEREOF (I)

Investigation No. 337-TA-944

NOTICE OF THE COMMISSION'S FINAL DETERMINATION FINDING A VIOLATION; ISSUANCE OF A LIMITED EXCLUSION ORDER AND CEASE AND DESIST ORDER; TERMINATION OF THE INVESTIGATION

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has found a violation of section 337 in this investigation and has (1) issued a limited exclusion order prohibiting importation of certain network devices, related software and components thereof, and (2) issued a cease and desist order. The Commission terminates the investigation.

FOR FURTHER INFORMATION CONTACT: Amanda Pitcher Fisherow, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2737. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at _http://www.usitc.gov_. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at _http://edis.usitc.gov_. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on January 27, 2015, based on a complaint filed on behalf of Cisco Systems, Inc. ("Complainant") of San Jose, California. 80 _Fed. Reg._ 4314-15 (Jan. 27, 2015). The complaint was filed on December 19, 2014 and a supplement was filed on January 8, 2015. The complaint alleges violations of section 337 based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain network devices,

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related software and components thereof by reason of infringement of certain claims of U.S. Patent No. 7,162,537 ("the '537 patent"); U.S. Patent No. 8,356,296 ("the '296 patent"); U.S. Patent No. 7,290,164 ("the '164 patent"); U.S. Patent No. 7,340,597 ("the '597 patent"); U.S. Patent No. 6,741,592 ("the '592 patent"); and U.S. Patent No. 7,200,145 ("the '145 patent"), and alleges that an industry in the United States exists as required by subsection (a)(2) of section 337. The '296 patent was previously terminated from the investigation. The complaint named Arista Networks, Inc. ("Arista") of Santa Clara, California as the respondent. A Commission investigative attorney ("IA") is participating in the investigation.

On February 2, 2016, the ALJ issued his final ID finding a violation of section 337. The ID found a violation with respect to the '537, '592 and '145 patents. The ID found no violation based on the '597 and '164 patents. On February 11, 2016, the ALJ issued his Recommended Determination on Remedy and Bonding.

On February 17, 2016, Cisco and Arista filed petitions for review. On March 3, 2016, the parties, including the IA, filed responses to the respective petitions for review. On April 11, 2016, the Commission determined to review the ID in-part. The Commission determined to review the final ID on the following issues: (1) infringement of the '537, '597, '592 and '145 patents; (2) patentability of the '597, '592, and '145 inventions under 35 U.S.C. §101; (3) the construction of "said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" of claims 1, 10, and 19 of the '537 patent; (4) the construction of "a change to a configuration" / "a change in configuration" of claims 1, 39, and 71 of the '597 patent; (5) equitable estoppel; (6) laches; (7) the technical prong of domestic industry for the '537, '597, '592 and '145 patents; (8) economic prong of domestic industry; and (9) importation. To the extent any findings that the Commission reviewed implicated the ID's findings for the '164 patent (e.g., intent to induce infringement), the Commission also reviewed those findings for the '164 patent. The parties briefed the issues on review, remedy, bonding, and the public interest.

After considering the final ID, written submissions, and the record in this investigation, the Commission has determined to affirm-in-part the final ID and to terminate the investigation with a finding of violation of section 337. Specifically, the Commission finds that a violation of section 337 has occurred for the '537, '592, and '145 patents and no violation has occurred for the '597 and '164 patents. The Commission finds that the asserted claims of the '597 and '164 patents are not directly infringed by the accused products.

Having found a violation of section 337 in this investigation, the Commission has determined that the appropriate form of relief is (1) a limited exclusion order prohibiting the unlicensed entry of certain network devices, related software and components thereof thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of the '537 patent; claims 6, 7, 20, and 21 of the '592 patent; and claims 5, 7, 45, and 46 of the '145 patent; and (2) a cease and desist order prohibiting Arista from importing, selling, marketing, advertising, distributing, transferring (except for exportation), and soliciting United States, agents or distributors for States certain

network devices, related software and components thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of the '537 patent; claims 6, 7, 20, and 21 of the '592 patent; and claims 5, 7, 45, and 46 of the '145 patent.

The Commission has also determined that the public interest factors enumerated in section 337(d) and (f) (19 U.S.C. §§ 1337(d) and (f)) do not preclude issuance of the limited exclusion order or a cease and desist order. Finally, the Commission has determined that a bond during the period of Presidential review (19 U.S.C. § 1337(j)) shall be in the amount of zero percent (0%) of the entered value of the imported articles that are subject to the limited exclusion order or cease and desist order. The Commission's orders and opinion were delivered to the President and to the United States Trade Representative on the day of their issuance.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 C.F.R. Part 210).

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: June 23, 2016

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **June 23, 2016**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

D. Sean Trainor, Esq.	☐ Via Hand Delivery
KIRKLAND & ELLIS LLP	☒ Via Express Delivery
655 15th Street, NW	☐ Via First Class Mail
Washington, DC 20005	☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Lauren A. Degnan, Esq.	☐ Via Hand Delivery
FISH & RICHARDSON P.C.	☒ Via Express Delivery
1425 K Street, NW, 11th Floor	☐ Via First Class Mail
Washington, DC 20005	☐ Other:_____

US INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN NETWORK DEVICES,
RELATED SOFTWARE AND
COMPONENTS THEREOF (I)**

Investigation No. 337-TA-944

LIMITED EXCLUSION ORDER

The United States International Trade Commission ("Commission") has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the unlawful importation, sale for importation, or sale within the United States after importation by Respondents Arista Networks, Inc. ("Arista" or "Respondent") of certain network devices, related software and components thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537 ("the '537 patent"); claims 6, 7, 20, and 21 of U.S. Patent No. 6,741,592 ("the '592 patent"); and claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145 ("the '145 patent").

Having reviewed the record in this investigation, including the written submissions of the parties, the Commission has made its determination on the issues of remedy, public interest, and bonding. The Commission has determined that an appropriate form of relief is a limited exclusion order prohibiting the unlicensed entry of network devices, related software and components thereof manufactured by or on behalf of Respondent or its affiliated companies, parents, subsidiaries, licensees, or other related business entities, or their successors or assigns.

The Commission has also determined that the public interest factors enumerated in 19 U.S.C. § 1337(d) do not preclude the issuance of the limited exclusion order.

During the Presidential review period, the Commission has further determined to set a zero bond for the network devices, related software and components thereof that are manufactured by, for, or on behalf of Arista.
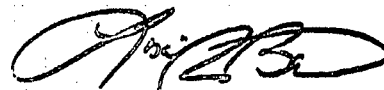
Accordingly, the Commission hereby **ORDERS** that:

1. Network devices, related software and components thereof that infringe one or more of 1, 2, 8-11, and 17-19 of the '537 patent; claims 6, 7, 20, and 21 of the '592 patent; and claims 5, 7, 45, and 46 of the '145 patent that are manufactured abroad by or on behalf of, or imported by or on behalf of, Respondent, or its affiliated companies, parents, subsidiaries, licensees, or other related business entities, or its successors or assigns, are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, for the remaining terms of the patents, except under license of the patent owner or as provided by law, and except for service, repair, or replacement articles imported for use in servicing, repairing, or replacing network devices under warranty or service contracts, for identical articles, that existed as of the date of this Order.

2. Notwithstanding paragraph 1 of this Order, the aforesaid network devices, related software and components thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption under zero bond by, for, on or behalf of Arista pursuant to subsection (j) of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337(j)), and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 *Fed. Reg.* 43251), from the day

after this Order is received by the United States Trade Representative until such time as the United States Trade Representative notifies the Commission that this Order is approved or disapproved but, in any event, not later than sixty (60) days after the date of receipt of this Order.

3. At the discretion of U.S. Customs and Border Protection ("CBP") and pursuant to the procedures it establishes, persons seeking to import network devices, related software and components thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraph 1 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses to substantiate the certification.

5. In accordance with 19 U.S.C. § 1337 (l), the provisions of this Order shall not apply to network devices, related software and components thereof that are imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.

6. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

7. The Secretary shall serve copies of this Order upon each party of record in this investigation.

8. Notice of this Order shall be published in the Federal Register.

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: June 23, 2016

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **June 23, 2016**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

D. Sean Trainor, Esq.	☐ Via Hand Delivery
KIRKLAND & ELLIS LLP	☒ Via Express Delivery
655 15th Street, NW	☐ Via First Class Mail
Washington, DC 20005	☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Lauren A. Degnan, Esq.	☐ Via Hand Delivery
FISH & RICHARDSON P.C.	☒ Via Express Delivery
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Washington, DC 20005	☐ Other:_____

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of **CERTAIN NETWORK DEVICES, RELATED SOFTWARE AND COMPONENTS THEREOF (I)**	**Investigation No. 337-TA-944**

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Arista Networks, Inc. cease and desist from conducting any of the following activities in the United States: importing, selling, marketing, advertising, distributing, transferring (except for exportation), soliciting United States agents or distributors, and aiding or abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of certain network devices, related software and components thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537 ("the '537 patent"); claims 6, 7, 20, and 21 of U.S. Patent No. 6,741,592 ("the '592 patent"); and claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145 ("the '145 patent") in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I.
Definitions

As used in this order:

(A)   "Commission" shall mean the United States International Trade Commission.

(B)   "Complainant" shall mean Cisco Systems, Inc. of San Jose, California ("Cisco").

(C)   "Respondent" shall mean Arista Networks, Inc. of Santa Clara, California ("Arista").

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(D) "Person" shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.

(E) "United States" shall mean the fifty States, the District of Columbia, and Puerto Rico.

(F) The terms "import" and "importation" refer to importation for entry for consumption under the Customs laws of the United States.

(G) The term "covered products" shall mean network devices, related software and components thereof that infringe one or more of claims 1, 2, 8-11, and 17-19 of the '537 patent; claims 6, 7, 20, and 21 of the '592 patent; and claims 5, 7, 45, and 46 of the '145 patent.

II.
Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them, insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III.
Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order. For the remaining term of the relevant '537 patent, '592 patent and '145 patent, Respondent shall not:

(A) import or sell for importation into the United States covered products;

(B)   market, distribute, sell, or otherwise transfer (except for exportation) imported

covered products;

(C)   advertise imported covered products;

(D)   solicit U.S. agents or distributors for imported covered products; or

(E)   aid or abet other entities in the importation, sale for importation, sale after

importation, transfer, or distribution of covered products.

IV.
Conduct Permitted

Notwithstanding any other provision of this Order, specific conduct otherwise prohibited

by the terms of this Order shall be permitted if,

(A) in a written instrument, the owner of the '537 patent, '592 patent and '145 patent

licenses or authorizes such specific conduct, or such specific conduct is related to the

importation or sale of covered products by or for the United States;

(B) the conduct is limited to provision of service, repair, or replacement articles imported

for use in servicing, repairing, or replacing network devices under warranty or service

contracts, for identical articles, that existed prior to the date of this Order.

V.
Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of

each year and shall end on the subsequent December 31. The first report required under this

section shall cover the period from the date of issuance of this order through December 31, 2016.

This reporting requirement shall continue in force until such time as Respondent has truthfully

reported, in two consecutive timely filed reports, that it has no inventory of covered products in

the United States.

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Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-944") in a prominent place on the cover pages and/or the first page. *See* Handbook for Electronic Filing Procedures, http://www.usitc.gov/secretary/fed_reg_notices/rules/handbook_on_electronic_filing.pdf. Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the original with the Office of the Secretary and must serve a copy of the confidential version on Complainant's counsel.[1]

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. § 1001.

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[1] Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

VI.
Record-Keeping and Inspection

(A)   For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.

(B)   For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal offices during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of this Order.

VII.
Service of Cease and Desist Order

Respondent is ordered and directed to:

(A)   Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, or sale of imported covered products in the United States;

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(B)   Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this order, a copy of the Order upon each successor; and

(C)   Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until the expiration dates of the '537 patent, '592 patent and '145 patent.

VIII.
Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section VI of this order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

IX.
Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X.
Modification

The Commission may amend this order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI.
Bonding

The conduct prohibited by section III of this order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)), under a bond of zero percent. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainant's counsel.[2]

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[2] *See* Footnote 1.

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it within the review period), unless (i) the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or (ii) Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

This bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: June 23, 2016

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **June 23, 2016**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

D. Sean Trainor, Esq.
KIRKLAND & ELLIS LLP
655 15th Street, NW
Washington, DC 20005

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Lauren A. Degnan, Esq.
FISH & RICHARDSON P.C.
1425 K Street, NW, 11th Floor
Washington, DC 20005

☐ Via Hand Delivery
☒ Via Express Delivery
☐ Via First Class Mail
☐ Other:_____

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

CERTAIN NETWORK DEVICES,
RELATED SOFTWARE AND
COMPONENTS THEREOF (I)

Investigation No. 337-TA-944

COMMISSION OPINION

Table of Contents

I.   INTRODUCTION

On February 2, 2016, the presiding administrative law judge ("ALJ") issued his final

initial determination ("ID") in this investigation, finding a violation of section 337 of the Tariff

Act of 1930, as amended, 19 U.S.C. § 1337 ("section 337"). Specifically, the ID finds a

violation with respect to U.S. Patent Nos. 7,162,537 ("the '537 patent"), 6,741,592 ("the '592

patent"); and 7,200,145 ("the '145 patent"). The ID finds no violation with respect to U.S.

Patent Nos. 7,290,164 ("the '164 patent"); and 7,340,597 ("the '597 patent"). On April 11, 2016,

the Commission determined to review the ID in-part. Upon review, the Commission finds a

violation of section 337 for the '537, '592, and '145[1] patents and no violation for the '597 and

'164 patents. The Commission adopts the ID's findings that are consistent with this opinion.[2]

II.   PROCEDURAL HISTORY

The Commission instituted this investigation on January 27, 2015, based on a complaint

filed on behalf of Cisco Systems, Inc. ("Cisco") of San Jose, California. 80 *Fed. Reg.* 4314-15

(Jan. 27, 2015). The complaint alleges violations of section 337 based upon the importation into

the United States, the sale for importation, and the sale within the United States after importation

of certain network devices, related software and components thereof by reason of infringement

of certain claims of the '537 patent; the '164 patent; the '597 patent; the '592 patent; the '145

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[1] The Commission refers to the '592 and '145 patents as the "PVLAN patents." A "VLAN" is a virtual Local Area Network and a "PVLAN" is a private VLAN.

[2] The Commission notes that testimonial evidence, upon which the ID relies, accurately reflects the testimony of the expert and fact witnesses at the hearing. However, it appears that the transcript citations used in the ID are not always the same page number in the final transcript appearing on EDIS. Therefore, the Commission cites will include an additional 5 pages before and after each hearing transcript cite in the ID to ensure the testimony relied on by the ID, and to the extent adopted by the Commission is encompassed by the citation.

patent; and U.S. Patent No. 8,356,296 ("the '296 patent"), and alleges that an industry in the

United States exists as required by subsection (a)(2) of section 337. The complaint named Arista

Networks, Inc. ("Arista") of Santa Clara, California as the respondent. A Commission

investigative attorney ("IA") is participating in the investigation.

On August 20, 2015, Cisco filed an unopposed motion to terminate the investigation with

respect to the '296 patent, and various claims of the '597 patent, the '592 patent and the '145

patent. On August 21, 2015, the ALJ granted the motion. The Commission determined not to

review this ID.[3]

On February 2, 2016, the ALJ issued his final ID finding a violation of section 337. The

ID found a violation with respect to the '537, '592 and '145 patents. The ID found no violation

with respect to the '597 and '164 patents. On February 11, 2016, the ALJ issued his

Recommended Determination on Remedy and Bonding ("RD").

On February 17, 2016, Cisco, and Arista filed petitions for review of the ID.[4] Cisco did

not petition for review of the ID's finding of no violation with respect to the '164 patent. On

March 3, 2016, the parties, including the IA, filed responses to the opposing petitions for

review.[5]

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[3] Notice of the Commission's Determination Not to Review an Initial Determination Terminating the Investigation As to Certain Claims. (Sept. 9, 2015).

[4] Complaint Cisco Systems, Inc.'s Petition for Review ("Cisco Pet."); and Respondent Arista Networks, Inc.'s Petition for Review of Initial Determination on Violation of Section 337 ("Arista Pet.").

[5] Complaint Cisco Systems, Inc.'s Response to Respondent Arista Network, Inc.'s Petition for Review ("Cisco Pet. Reply"); Respondent's Response in Opposition to Complainant's Petition for Review-In-Part of the Final Initial Determination ("Arista Pet. Reply"); and Combined

On April 11, 2016, the Commission determined to review the ID in-part. Specifically, the Commission determined to review the following issues: (1) infringement of the '537, '597, '592 and '145 patents; (2) patentability of the claimed subject matter in the '597, '592, and '145 patents under 35 U.S.C. §101; (3) the construction of the limitation "said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" in claims 1, 10, and 19 of the '537 patent; (4) the construction of the limitation "a change to a configuration" / "a change in configuration" in claims 1, 39, and 71 of the '597 patent; (5) equitable estoppel; (6) laches; (7) the technical prong of domestic industry for the '537, '597, '592 and '145 patents; (8) the economic prong of domestic industry; and (9) importation. The Commission also reviewed any findings for the '164 patent affected by the other issues under review. The Commission requested briefing on the issues under review and for briefing on remedy, bonding, and the public interest. 81 *Fed. Reg.* 22312-14 (April 15, 2016). On April 25, 2016,[6] and May 2, 2016,[7] the parties filed briefs in response to the Commission's notice. Cisco

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Response of the Office of Unfair Import Investigations to Complainant Cisco Systems, Inc.'s and Arista Networks, Inc.'s Petitions for Review of Final Initial Determination ("IA Pet. Reply").

[6] Complaint Cisco Systems, Inc.'s Written Submission In Response to the Commission's Determination To Review In-Part A Final Initial Determination of a Violation of Section 337 ("Cisco Br."); Respondent's Arista Networks, Inc.'s Response To Request For Writing Submissions Regarding the Issues Under Review ("Arista Br."); and Office of Unfair Import Investigations' Responses to the Commission's April 11, 2016 Questions ("IA Br.").

[7] Respondent Arista Networks, Inc.'s Response To Request For Writing Submissions Regarding the Issues Under Review ("Arista Reply Br."); and Office of Unfair Import Investigations' Reply to the Responses of the Private Parties to the Commission's April 11, 2016 Questions ("IA Br.").

filed a corrected brief on May 10, 2016.[8] Arista also submitted numerous letters regarding

public interest on behalf of various third parties.

III. JURISDICTION AND IMPORTATION

The ID notes that the Commission has *in rem* jurisdiction over infringing articles

imported, sold for importation, or sold within the United States after importation by the owner,

importer, or consignee. ID at 3-4. The ID asserts that the importation of a single article could

satisfy the importation requirement. *Id.*

Arista argued before the ALJ that a violation cannot be found because of [[

]][9][[

]] *Id.* at 4. The ID,

however, finds that the accused devices were imported into the United States [[

]]. *Id.* Therefore, the ID concluded there

was *in rem* jurisdiction over the accused devices.

The ID further notes that the "Commission has *in rem* jurisdiction over 'articles that . . .

infringe' a United States patent, a set that includes components used in, or are otherwise a part

of, contributory and induced infringement." *Id.* at 4-5 (citing *Suprema, Inc. v. Int'l Trade

Comm'n*, 796 F.3d 1338, 1346 (Fed. Cir. 2015) (*en banc*) ("*Suprema II*") ("'[I]nfringement' is

a term that encompasses both direct and indirect infringement, including infringement by

importation that induces direct infringement of a method claim.). The ID concludes that the

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[8] Complaint Cisco Systems, Inc.'s Corrected Reply Brief In Response to Written Submission By Respondent and Staff on the Issues Under Review ("Cisco Reply Br.").

[9] Extensible Operating System ("EOS").

Commission thereby has jurisdiction over articles that contribute to or induce infringement, even when direct infringement occurs after importation. *Id.* at 5.

The ID considers the evidence and determines that in addition to [[

]]. *Id.* The ID determines that "the Commission has *in rem* jurisdiction over the switch hardware, inasmuch as they constitute 'articles that . . . infringe' pursuant to section 337 and the Federal Circuit's *en banc* decision in *Suprema [II]*." *Id.*

Arista petitioned for review of the ID's finding that [[

]]. *See, e.g.,* Arista Pet. at 29-31. The Commission determined not to review the ID's findings on jurisdiction, but to review the ID's findings on importation. No party challenges the ID's finding that [[

]]. *See* ID at 3-4. The Commission affirms this finding. The Commission also affirms the ID's findings that [[

]]. *Id.* at 5. The Commission does not need to reach [[

]] and therefore, takes no position on this issue. *See, e.g., id.* at 87.

IV. THE '537 PATENT

A. Overview

The '537 patent is entitled "Method and System for Externally Managing Router Configuration Data in Conjunction with a Centralized Database" and issued on January 9, 2007. Cisco asserts independent claims 1, 10, and 19, and dependent claims 2, 8, 9, 11, 17, and 18. *See id.* at 11.

B. Accused Products

The accused '537 products are Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7280E, 7300, 7300X, and 7500E series switches. ID at 14. These switches run Arista's EOS. *Id.* At the center of EOS is "Sysdb"[10] is a centralized database that Cisco argues contains the complete state of the system and interfaces with various subsystems called "agents." *Id.*

C. Construction of the Claim Limitation: "said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" (claims 1, 10, and 19)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	IA's Proposed Construction
The plain language requires that router configuration data be "stored in said database"	The plain language requires that configuration commands be "stored in said database"	None provided

ID at 64.

The ID notes that both Arista and Cisco address this term in their post-hearing briefs, but did not identify it as a term that needs construction. ID at 64. In analyzing whether these limitations are met for each of the asserted independent claims, however, the ID resolves the claim construction dispute. *See, e.g.,* ID at 72-74. The parties dispute centers on what is stored in the database. Arista argues that the user supplied configuration commands are stored while Cisco asserts that the router configuration data are stored. The ID finds that this limitation requires storage of router configuration data, not commands. *Id.* at 74. Arista petitioned for review of the ID's construction of this term. The Commission determined to review this issue.

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[10] The Sysdb is a centralized database for [[   ]]. The parties use differing capitalization for this term, but the various capitalizations all reference the same thing.

The ID does not provide a discussion or analysis for its conclusion and construction and simply states that the intrinsic evidence does not support Arista's construction. *See* ID at 74, 64. The Commission finds, consistent with the ID, that the proper construction of this term requires the storage of router configuration data.

The specification supports this reading of the claim limitation. Specifically, the specification states that the focus of the '537 patent is on the storage of configuration data. JX-0001 ('537 patent) at 3:64–4:5 ("sysDB . . . provides a centralized storage and retrieval facility for router configuration *information*. . . . The configuration *information* stored on the sysDB may include, for example, Internet Protocol (IP) addresses. . . . user and password *data* . . . and other router *data* as known in the art.") (emphasis added); 7:30–32; 7:65–8:3; 8:7–9; 8:50–52. The specification further explains that the commands are executed and it is the router configuration information, which is stored:

> The config subsystem **28** carries out configuration commands for a user of the router, *executing the configuration command* received from the user and providing configuration information to the user of the router upon request from the user, among other things. As described above, this *router configuration information is stored* and managed by the sysDB 26 in the sysDB tree 42.

JX-0001 at 8:46–52. Moreover, the purpose of the invention is to manage router configuration data. JX-0001 at Title, Abstract, 3:13–15, 6:26–28.

Further, the prosecution history, considered as a whole, supports the ID's construction. The portions of the prosecution history relating to the Ciscon reference upon which Arista relies do not constitute clear and unmistakable disclaimer. *See e.g., Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.,* 222 F.3d 951, 956-57 (Fed.Cir.2000). Although the applicant stated "Ciscon fails to disclose . . . executing configuration commands before storing them in a database," it is clear that the applicant was not distinguishing Ciscon on the basis of commands

being stored in the database. JX-0007 at CSI-AN 1-00098149.000506. In the subsequent

paragraphs in the office action response, the applicant elaborated on its argument and confirmed

that (1) there are no commands in Ciscon; and (2) it is the router configuration data, not the

commands, that are stored. *Id.* at CSI-AN 1-00098149.000506-07; *see also* CX-0007C at Q/A

156. The applicant argued in it its response to the Office Action:

> Specifically, Ciscon discloses at column 18, lines 7–11 and 24–27 the description
> of FIG. 9, a flow diagram of the sequence for comparing properties of an object. .
> . . *Applicant submits that structures here are not commands, and can in no way
> be construed to be equivalent to router configuration commands.*

JX-0007 at CSI-AN 1-00098149.000506-07; *see also id.* at CSI-AN 1-00098149.000507 ("[A]ll

that is being performed [in Ciscon] is a comparison of fields with the composite structure, as

specifically described in column 18, lines 21–24. This is not equivalent to executing a command

that configures a router.") The applicant then asserted that Ciscon also fails to disclose the

execution of user-supplied configuration commands resulting in configuration data that is stored

in a database:

> Finally, there is no disclosure, teaching, or suggestion in Ciscon that *execution of
> user-supplied configuration commands results in configuration data that is
> stored in a database.* As the present invention performs this claim limitation to
> manage router configuration data in conjunction with a centralized database, the
> novelty here is that this claim limitation provides a way to incorporate a database
> into managing user-supplied configuration commands, not properties of data
> structures, to more effectively configure routers deployed in a network. Directing
> Examiner's attention to the whole of FIG. 9, *there is no indication that the
> comparison of properties of a data structure results in any configuration data
> with respect to routers,* nor is there any store operation illustrated in Ciscon's
> FIG. 9 or described in its accompanying detailed description in columns 18 and
> 19.

Id. at CSI-AN 1-00098149.000507-08 (emphasis added). Therefore, based on the intrinsic

record, the Commission finds that the claims require storing of router configuration data, not

user-supplied commands. The Commission further finds that Arista did not waive this argument.

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D.   Direct Infringement

The Commission determined to review the ID's findings of infringement. While the ID finds that all of the limitations of the asserted claims are met (ID at 64-82), Arista only challenged the ID's direct infringement findings with respect to a few claim limitations. The Commission affirms the ID's findings for the claim limitations not discussed herein. Arista also challenges whether a violation can be found because [[

]]. Arista Pet. at 29-31. As discussed below, the Commission finds that direct infringement has occurred [[

]] and such infringement supports a finding of indirect infringement by Arista. The basis of the Commission's finding of violation for the '537 patents is indirect infringement based on the direct infringement by Arista's [[   ]] products [[

]]. The Commission does not reach whether Arista is liable for directly infringing the asserted claims.

1.   "externally managing router data" (claims 1 and 10) / "externally manage router data" (claim 19) / "external management" (claims 1 and 10) / "management of" (claim 19) limitations

The ID finds that Arista's products satisfy this claim limitation when the agents in the EOS perform external management by [[   ]].[11] ID at 66 (claim 19). The ID explains that when the EOS agent [[   ]] data in Sysdb, [[   ]]. *Id.* The ID finds that the evidence confirms that the agents in EOS externally manage data. *Id.* at

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[11] Dr. Almeroth testified: [[

]] CX-0007C at Q/A 88.

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67-69. The ID further holds that [[   ]] is "pertinent to management." *Id.* at 70. The

ID referred back to its findings for claim 19 in analyzing independent claims 1 and 10. *See* ID at

75, 76, 77, 90, 95. Arista petitioned for review of these findings.

The Commission finds that the accused products meet this limitation. Cisco alleges that

agents in EOS perform external management by [[   ]] data in Sysdb. When an

agent [[   ]] data in Sysdb, [[

]]. *See, e.g.,* Tr. 999 ("[[

]]."); JX-0026C 192 ("[[

]]."). In addition,

Sysdb cannot [[   ]]. CX-0007C at Q/A 91, 100, 130, 134; Tr. 999; JX-0026C at 194-

195.

The record evidence further confirms Cisco's position that the EOS agents externally

manage data. An Arista internal presentation given by Hugh Holbrook, Arista's VP of software

engineering and [[   ]], states that [[

]]. CX-0459C at ANI-ITC-944 945-1732776; *see also id.* at ANI-

ITC-944 945-1732767. The presentation slides contain examples of [[   ]]

that the agents manage, including [[

]]. *Id.*; Tr. 192–193. Dr. Hollingsworth, Arista's expert, admitted that this

presentation describes an agent in EOS that manages [[   ]].

Tr. 1002-03; JX-0001 at 3:67–4:5.

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Additional documents also evidence that the agents manage various things in EOS. CX-1098C at 2:24-3:16, 32:5-8, 45:1-4. In addition, testimony from Dr. Hollingsworth confirmed that Arista's EOS agents externally manage [[   ]] by [[   ]] and that [[   ]] are router configuration data. Tr. 1003-04.

The fact that an agent will [[   ]] does not negate the evidence cited above proving this limitation is met. Dr. Hollingsworth admitted that the mere fact that [[   ]] says *nothing* about whether there is external management. Tr. at 1014.

Arista argues that because the accused products [[   ]], the products do not infringe. *See* Arista Pet. at 27. However, SysDB 26, described in the '537 patent [[ ]] performs verifications which are unrelated to external management. *See, e.g.*, CX-0007C at Q/A 136; Tr. 198, 201–201; JX-0001 at Fig. 8. For example, in Figure 8 of the patent, the verifications shown are independent from whether or not there is external management. JX-0001, Fig. 8, 14:6-43; CX-0007C at Q/A 136.

Arista is wrong in asserting that the ID does not link the [[
]] with activities that are "external management. The ID states that "[s]pecifically, agents in EOS perform external management [[   ]] and that "[w]hen an EOS agent [[   ]] data in Sysdb, [[
]] and provides supporting evidence. ID at 66. The ID also states that "[a]dditional evidence establishes that [[   ]] is pertinent to management" and cites more evidence. ID at 69 (citing CX-1098C (Transcript of Holbrook [[   ]] Presentation) at 42 ("[[
]]."), 45 ("[[

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]].""); CX-0035C at 7; JX-0034C at 98).

The Commission affirms the ID's finding that this limitation is met and adopts the ID's

findings consistent with this opinion.

    2.   **"said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" (claims 1, 10, and 19) limitations**

The ID finds that the accused products store router configuration data as required by the

claims. ID at 71-74 (claim 19). However, if the claims are construed to require the storage of

user commands, the ID also finds that the accused products store user commands. ID at 74.

Arista petitioned for review of the ID's findings. The Commission determined to review

the ID's claim construction of this term and therefore, also reviewed the ID's findings of

infringement. The ID found that Arista products infringed under Cisco's construction, and in the

alternative, under Arista's own construction. Arista's petition for review was premised on the

Commission adopting its construction of this term. *See, e.g.,* Arista Pet. at 14. Therefore, the

Commission adopts the ID's findings on this limitation. However, the Commission takes no

position on the ID's alternative finding that Arista also infringes when [[   ]]. ID

at 74.

    E.   **Indirect Infringement**

        1.   **Specific Intent and Knowledge**

        (a)   **Importation Practices**

The ID finds that Arista changed its importation practices shortly after Cisco filed the

complaint in this investigation. ID at 83. The ID finds the change was "not predicated by any

business reason and Arista's witnesses declined to answer questions about the reason for the

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change on the basis of privilege." *Id.* The ID explains that [[

]] *Id.* The ID concludes that the timing of the

change, the products impacted, and the lack of business reasons led to the conclusion that Arista

had a specific intent to induce infringement through the importation of the accused products. *Id.*

Arista petitioned for review the ID's findings, and the Commission determined to review them.

On review, the Commission affirms the ID's finding that Arista's change in importation

practice evinces knowledge and an intent to infringe under the relevant standards for

contributory and induced infringement. Arista argues that the Commission should apply the

Federal Rule of Evidence ("FRE") 407.[12] We agree with Arista and the IA that Arista's

arguments for applying FRE 407 is not waived and note that Cisco first identified this issue in its

pre-hearing brief. Thereafter, Arista raised the issue in opposition to a motion in *limine* and

raised the issue in its post-hearing brief. Arista raised this issue at its earliest opportunity in

response to the issue which was raised by Cisco in its pre-hearing submission.

The Commission is not bound to apply the FRE and as such need not apply them here.

Instead, the Commission is bound by the Administrative Procedures Act, 5 U.S.C. § 500-596

("APA"), and can consider all relevant evidence. *See, e.g.,* 5 U.S.C. §556. Moreover, whether

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[12] FRE 407 states:

> When measures are taken that would have made an earlier injury or harm less
> likely to occur, evidence of the subsequent measures is not admissible to prove:
>
> - negligence;
> - culpable conduct;
> - a defect in a product or its design; or
> - a need for a warning or instruction.

But the court may admit this evidence for another purpose, such as impeachment or — if
disputed — proving ownership, control, or the feasibility of precautionary measures.

FRE 407 is applicable to patent cases appears to be an unsettled question. *See, e.g., Kowalski v. Anova Food, LLC*, No. CIV. 11-00795HG-RLP, 2015 WL 1119411, at *3 (D. Haw. Feb. 18, 2015); *Mikkelsen Graphic Eng'g Inc. v. Zund Am., Inc.*, No. 07–C–0391, 2011 WL 1330782, at *11 (E.D. Wis. Apr. 7, 2011), *vacated in part on other grounds*, 541 Fed. Appx. 964 (Fed. Cir. 2013). Accordingly, the Commission declines to apply FRE 407 with regard to Arista's changed importation practice.

At the time of the filing of the complaint in this investigation, Arista imported its switches [[   ]]. Starting in January 2015, Arista changed its importation practice [[

]]. CX-1009C; Tr. at 1156-58. Arista's witnesses did not testify as to a business reason for making the change and instead declined to answer questions about the reason for the change based on privilege. *See e.g.,* Tr. at 1157-58. This change in importation practice did not

[[   ]] and suggests an attempt by Arista to avoid liability for direct infringement under Section 337 and adopts the ID's findings consistent with this opinion.

"The requisite intent to induce infringement may be inferred from all of the circumstances." *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 669 (Fed. Cir. 1988). And "[t]he drawing of inferences, particularly in respect of an intent-implicating question ... is peculiarly within the province of the fact finder that observed the witnesses." *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 700 (Fed. Cir. 2008) (quoting *Rolls-Royce Ltd. v. GTE Valeron Corp.*, 800 F.2d 1101, 1110 (Fed. Cir. 1986)). The ID found that the change in importation practice [[   ]]. ID at 83. The evidence establishes that

[[

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]], as the ID found, [[   ]].

See, e.g., RX-3914C at Q/A 63, 66, 69. The Commission finds that the timing of the change in importation practice (*i.e.,* after Arista had knowledge of its alleged infringement), and Arista's failure to explain the change (*i.e.,* Arista did not testify as to a business reason for the change) evinces an effort and intent to avoid liability for infringement of the asserted claims. Accordingly, the Commission finds that Cisco established Arista's specific intent to infringe.

Arista also argues before the Commission that the evidence does not rise to the level of showing intent because it relied on a good faith basis for non-infringement. The Ground Rules governing this investigation includes Ground Rule 7 addressing the contents of the "Prehearing Brief and Statement." The rule states, in relevant part, that "[a]ny contentions not set forth in detail as required therein shall be deemed abandoned or withdrawn, except for contentions of which a party is not aware and could not be aware in the exercise of reasonable diligence at the time of the prehearing statement." Order No. 2 (Ground Rules) at G.R. 7. In the section of its pre-hearing brief entitled "The Accused Products Do Not Indirectly Infringe the Asserted Claims," Arista did not argue that it had a good-faith basis to believe that it did not infringe the asserted patent; but argued instead that "the evidence is insufficient to show that any of Arista's alleged conduct was done with 'knowledge that the induced acts constitute patent infringement.'" Arista Pre-Hearing Br. at 165-66. Arista also stated that it has "explained that there are numerous reasons it does not infringe the asserted claims." *Id.* at 166. This single sentence does not set forth in detail Arista's claimed contention concerning a good faith belief in non-infringement and the Commission finds that this single sentence is not sufficient to preserve Arista's argument. Therefore, the Commission concludes that Arista's good faith belief argument

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was waived before the ALJ and Arista cannot now rely on a good faith belief to negate the

evidence of an intent and knowledge to induce or contribute to infringement of the '537 patent.

(b) Willful Blindness

The ID finds that Arista intentionally and willfully blinded itself to the knowledge of

Cisco's patents. ID at 83-84. The ID determines that there was evidence of Arista's subjective

belief that it was infringing Cisco's patents, such as Arista's copying and marketing of features

that were based on patented Cisco features. *Id.* The ID further finds that Arista took deliberate

steps to avoid learning of its infringement. *Id.* at 85.

The ID concludes that, based on Arista's knowledge of the patent and its specific intent to

infringe, Arista is liable for induced and contributory infringement if direct infringement is

shown. *Id.* at 85-86.

Arista petitioned for review of the ID's findings, and the Commission determined to

review them. As discussed herein, even if Arista was found not to have a specific intent to

infringe, the Commission finds, at the very least, Arista intentionally and willfully blinded itself

as to Cisco's patents, including the '537 patent and the PVLAN patents, prior to its knowledge of

its alleged infringement.

Willful blindness is sufficient to meet both the knowledge and specific intent

requirements for induced infringement. *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754,

769-771 (2011). A finding of willful blindness requires (1) the subjective belief that there is a

high probability that a fact exists; and (2) the taking of deliberate steps to avoid learning of that

fact. *Id.* at 769-70.

Mr. Duda, Mr. Holbrook, and Dr. Cheriton, Arista co-founders, were Cisco employees

when Sysdb was under development at Cisco. Mr. Holbrook talked with engineers at Cisco

during his employment about Sysdb and he learned about some of the features of Sysdb. JX-0027C at 70-71, 73-74, 96-97. Mr. Cheriton, Ms. Ullal, Arista's CEO, and Mr. Sadana, a senior vice president of customer engineering, all testified that that they knew Cisco had a large patent portfolio and Ms. Ullal, Mr. Sadana, Mr. Duda testified that they are not aware of anyone checking whether they were infringing Cisco's patents. JX-22C at 104-05; JX-0042C at 178-179, 40-41; JX-33C at 221; Tr. at 787-88.

In addition to the knowledge of Sysdb and a routine of not researching Cisco's patent portfolio, Arista has a practice of copying or consulting Cisco features,technology, and manuals in designing its products. For example, in an internal email related to command line interfaces (which are not at issue in this investigation), an Arista employee stated "We copy Cisco for everything else." CX-0198C. Although Mr. Sadana testified that the employee's email was limited to command line interfaces ("CLI"), he admitted Arista's CLIs are very much like Cisco's. JX-0033C at 228. In addition, Arista [[

]]. CX-201C. Mr. Sadana further testified that Cisco has products and features that are used across the industry, and therefore, customers ask for features used in Cisco products. However, he asserted that just because Arista and Cisco offer the same feature, this does not mean Arista copied it. JX-0033C at 217. He admitted that there are times when Arista emulated features that preexisted in Cisco products. *Id.* at 221. Ms. Ullal, Arista's CEO, [[   ]]. CX-206C; JX-0042C at 218-19. Arista had a Cisco device and tested it when it wanted to learn how port features work. CX-210C. Arista consulted Cisco's presentation on application programing interfaces, and an Arista employee suggested that they copy it. CX-205C. In addition, Arista [[

]]. CX-209C. Finally, Ms. Ullal testified that one of her engineers had copied

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a portion of a Cisco manual concerning the operation of EOS software or installation

configuration into an Arista manual. JX-0042C at 58.

While most, if not all, of the evidence relates to the consultation and copying of features

not at issue in this investigation, Arista's behavior evinces a corporate culture of copying. Based

on the totality of the evidence in the record, the Commission finds that the evidence supports the

ID's finding that Arista was willfully blind to the '537 patent, based in part on its culture of

copying.

The Commission also finds that Arista was willfully blind to the PLVAN patents, as

discussed in more detail below. For example, an Arista internal design document, which is [[

]] CX-0034C. Another internal Arista

email communication notes Arista [[   ]]. CX-

0052C. That email admits that Arista's "[[

]]." *Id.* Indeed, Mr. Arneja testified that

[[   ]]. *See, e.g.,* JX-0019C at

46 ([[   ]]). Based on

this evidence and Arista's company policy of consulting Cisco's products while failing to

consider whether it may infringe a Cisco patent, the Commission affirms the ID's finding that

Arista was willfully blind to the PLVAN patents.

(c)   Knowledge of the Patents

The ID found Arista had knowledge of the asserted patents such that the knowledge

requirements for induced and contributory infringement were met. ID at 85-86. No party

challenged the ID's findings on this issue and the Commission affirms these findings.

2.   Contributory and Induced Infringement

Arista petitioned for review of the ID's findings on contributory and induced infringement and the Commission determined to review them.

(a)   Contributory Infringement

(i)   The ID

The ID finds that Arista is liable for contributory infringement and explains that "the components implicated in Arista's contributory infringement of the '537 patent are the Accused Products with EOS, which are a material part of the claimed invention with no substantial non-infringing uses." ID at 88. The ID finds that the fact that some of the hardware components are imported without EOS does not absolve Arista of liability because the hardware components are described in the claims and therefore are material parts of the invention that are necessary to perform the other aspects of the invention. *Id.* at 88-89.

The ID finds the imported hardware has no substantial non-infringing uses because it has no uses other than with the EOS software. *Id.* at 89. The ID finds that all of the individual components contribute to infringement because they are imported only to be incorporated into a finished Arista switch that will ultimately run EOS software which necessarily runs the infringing Sysdb functionality. *Id.*

Arista petitioned for review of the ID's findings. The Commission determined to review this issue.

(ii)   Analysis

Under 35 U.S.C. § 271(c), a party is liable for infringement if he "offers to sell or sells within the United States or imports into the United States ... a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to

be especially made or especially adapted for use in an infringement of such patent, and not a

staple article or commodity of commerce suitable for substantial non-infringing use." In

addition, the complainant must show that the accused infringer knew that the component was

patented and infringing and that the respondent's components have no substantial non-infringing

uses. 35 U.S.C. § 271(c); see §IV.E.1. Arista does not challenge, in its petition for review, the

ID's finding that there are no non-infringing uses of its switches,[13] but only challenges that the

components are material. Arista Pet. at 39-42. Contrary to Arista's petition, there is no

requirement that the component be directed to the "inventive contribution" of the patent in order

to be a material part of the invention under section 271(c). *See Lucent Techs., Inc. v. Gateway,*

Inc., 580 F.3d 1301, 1320 (Fed. Cir. 2009) (finding a component material with no novelty

analysis). As the ID found, the fact that the accused products are imported without the EOS

software installed[14] does not necessarily negate liability. ID at 88. The various components of

the imported accused products are claimed in the asserted apparatus claims, and asserted method

claim 1 could not be carried out without the accused products.

The Commission finds that the Blank Switches are a material part of the invention. The

Blank Switches, which are made of various components such as a processor, memory, CPU card,

chassis, switch card, and fan modules are required for independent claims 10 and 19.

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[13] Accordingly, the Commission finds that this argument was waived. However, for the reasons discussed below in §VI.B.2 for the PVLAN patents, the Commission finds that there are no substantial non-infringing uses [[

]]. The Blank Switches are used only with EOS, which contains the infringing functionality. *See e.g.,* Tr. at 1162; CX-0007C Q/A 252-273. Any hypothetical non-infringing use is insufficient to support of finding of substantial non-infringing uses. *Vita-Mix Corp. v. Basic Holding, Inc.,* 581 F.3d 1317, 1327 (Fed. Cir. 2009).

[14] "Blank Switches" include fixed switches and supervisor modules [[

]]. *See* Arista Br. at 4-5.

Specifically, independent apparatus claims 10 and 19 call for "a plurality of router subsystems" and "a router device having a processor and memory" and could not be infringed without the underlying hardware that executes Sysdb. In addition, the Blank Switches are a material part of asserted independent method claim 1. Claim 1, requires both hardware, including "a plurality of router subsystems" and "a router device having a processor and memory," and software to, *inter alia*, request and access "router data." JX-001 at 15:22-41.

Although Arista argues that each of the imported components must also be material to the invention, the Commission need not reach this issue. If Arista attempts to circumvent a Commission remedy by importing only the components of the accused products for reassembly into complete functional switches, it would still be in violation of section 337 because the Commission finds that the Blank Switches and the fully assembled complete switches indirectly infringe and the accused switch components are covered by this finding. Accordingly, the Commission affirms the ID's finding that Cisco established contributory infringement by Arista.

(b) Induced Infringement

(i) The ID

The ID finds that Arista is liable for actively inducing third parties to infringe the '537 patent. ID at 87. Specifically, the ID finds that Arista knowingly induces infringement by encouraging, instructing, and enabling third parties to use the accused products in a manner that infringes the asserted claims. *Id.* According to the ID, Arista knows and intends that Sysdb is necessarily utilized with every instance of EOS use, and that Arista encourages, aids, facilitates, and otherwise causes others to use EOS. *Id.* at 87-88. The ID finds that the evidence of active inducement includes presentations, documents, and manuals. *Id.* at 88. The ID further finds that

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Arista's sales and promotion of switch hardware also induces infringement of the '537 patent

because the hardware is designed to run the EOS software which contains Sysdb. *Id.*

Arista petitioned for review of these findings and the Commission determined to review

them.

(ii)   Analysis

35 U.S.C. § 271(b) provides: "Whoever actively induces infringement of a patent shall be

liable as an infringer." 35 U.S.C. § 271(b). Induced infringement requires that an infringer, with

knowledge of the patent and infringement, "actively induce[]" another to infringe the patent with

specific intent to encourage infringement. 35 U.S.C. § 271(b); *Commil USA, LLC v. Cisco Sys.,*

Inc., 135 S. Ct. 1920, 1928 (2015).

The Commission finds that Arista's sale and promotion of its accused products, including

the Blank Switches, constitute acts of induced infringement. As discussed above, the

Commission finds that the intent and knowledge requirements are also met. *See* §IV.E.1. The

switch hardware is designed to run the EOS software containing Sysdb and is run each time EOS

is booted. JX-0026C at 204, 205 (*e.g.*, "I'm not aware of any customers using our switches

without using EOS"), 212–213; CX-0175; CX-41C at ANI-ITC-944_945-1619604; CX-335.

And Arista switch hardware is used exclusively with EOS. *E.g.*, Tr. at 1162; CX-0035C; JX-

0026C at 204-07, 273–275; CX-0007C Q/A 252–273. Arista promotes the use of EOS through

presentations, documents, and manuals, for example. *See e.g.*, CX-0273, CX-0256C at ANI-

ITC-944_945-3933367; JX-0026C at 197, 330; CX-0214; CX-0075; CX-0286. Accordingly, the

Commission finds induced infringement by Arista.

F.   Laches

The ID notes that laches has not previously been available as a defense in 337

investigations, ID at 270,[15] but that after the hearing in this investigation the Federal Circuit,

sitting *en banc*, issued its opinion in *SCA Hygiene Products v. First Quality Baby Prod.*, 807

F.3d 1311 (Fed. Cir. 2015) (*en banc*), which held that laches may be considered in injunctive

relief cases. ID at 270-71 n. 45. The ID explains that *SCA Hygiene* limits the district courts'

consideration of laches to bar injunctive relief in patent cases to the confines of *eBay v.

MerchExchange, L.L.C.*, 547 U.S. 388 (2006) and the decision is silent as to whether laches is a

defense in section 337 investigations. *Id.* The ID finds that Arista has not shown that departing

from prior Commission precedent is warranted in this investigation. *Id.* at 270.

Nonetheless, the ID holds that Cisco did not delay in bringing suit for an "unreasonable

and inexcusable" length of time. *Id.* at 271. The ID finds that Cisco did not become aware of

Arista's infringement of Cisco's patents until May 2014 and therefore, the delay until filing on

December 19, 2014 was not unreasonable. *Id.* The ID finds that the evidence relied upon by

Arista fails to show that Cisco should have known of Arista's infringement earlier. *Id.* at 271-72.

The ID further finds that Arista failed to prove that it was prejudiced by any delay. *Id.* at 272.

Arista petitioned for review of the ID's findings and the Commission determined to

review them. Prior to *SCA Hygiene,* the Commission had determined that laches did not apply to

the Commission based on *Aukerman.* Arista argues that the holding in *A.C. Aukerman Co. v.*

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[15] *See, e.g., Certain Sortation Systems, Parts Thereof, and Products Containing Same*, Inv. No.
337-TA-460, Initial Determination, at 266, n.20 (Oct. 22, 2002) (the Commission does not
recognize laches as a defense under section 337) (reviewed on other grounds); *Certain Personal
Watercraft and Components Thereof*, Inv. No. 337-TA-452, Order No. 54 (Sept. 19, 2001)
(precluding the affirmative defense of laches) (unreviewed).

R.L. Chaides Const. Co, 960 F.2d 1020 (Fed. Cir. 1992) (*en banc*) that laches could not bar

prospective relief was rejected by the Court in *SCA Hygiene*. Arista Br. at 66; *see also SCA*

Hygiene, 807 F.3d at 1332. After the Commission asked the parties to brief whether laches is an

available defense at the Commission, the Supreme Court granted *certiorari* to address the

question of whether laches is available as a defense in patent infringement actions. The

Commission declines to reach the legal issue of whether laches is available as a defense at the

Commission given the uncertainty of the law and finds that regardless of whether laches is

available as a defense at the Commission, Arista's evidence does not satisfy its burden to prove

laches for the '537 patent.

In order to find laches, Arista must prove that Cisco delayed in bringing suit for an

unreasonable and inexcusable length of time from when Cisco knew or reasonably should have

known of Arista's infringement and that the delay caused material prejudice to Arista.

Aukerman, 960 F.2d at 1028 (overruled on other grounds). Under *Aukerman*, a delay of six years

causes a presumption of laches to arise. If the presumption applies, the burden shifts to Cisco to

dispute the reasonableness of the delay. *Id.* at 1027.

The issue of whether Arista has proven laches on the merits requires an examination of

the facts and law. Arista argues that Cisco had a duty to investigate whether Arista's products

were infringing. The Federal Circuit has held, in *Wanlass v. General Elec. Co.*, 148 F.3d 1334,

1338 (1998), that:

> Although laches will not bar a patentee whose ignorance is justifiable, ignorance
> will not insulate him from constructive knowledge of infringement in appropriate
> circumstances. *See Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*,
> 988 F.2d 1157, 1162, 26 U.S.P.Q.2d 1038, 1042 (Fed.Cir.1993) ("Absent actual
> knowledge, the facts must support a duty of inquiry."); *see also Wetzel v.*
> *Minnesota Ry. Transfer Co.*, 169 U.S. 237, 241, 18 S.Ct. 307, 42 L.Ed. 730
> (1898) ("The interests of public order and tranquillity demand that parties shall

acquaint themselves with their rights within a reasonable time, and, although this time may be extended by their actual ignorance, or want of means, it is by no means illimitable."); *Potash Co. of Am. v. International Minerals & Chem. Corp.,* 213 F.2d 153, 155, 101 U.S.P.Q. 264, 265 (10th Cir.1954) (In patent cases, like others, "[l]aches will not be imputed to one who has been justifiably ignorant of facts which create his right or cause of action. But ignorance will not of itself excuse delay. The party must be diligent and make such inquiry and investigation as the circumstances reasonably suggest, and the means of knowledge are generally equivalent to actual knowledge.") (citations omitted).

These circumstances include "pervasive, open, and notorious activities" that a reasonable patentee would suspect were infringing. *See Hall v. Aqua Queen Mfg., Inc.,* 93 F.3d 1548, 1553, 39 U.S.P.Q.2d 1925, 1928 (Fed.Cir.1996). For example, sales, marketing, publication, or public use of a product similar to or embodying technology similar to the patented invention, or published descriptions of the defendant's potentially infringing activities, give rise to a duty to investigate whether there is infringement. *See id.* (constructive knowledge where defendant sold and marketed allegedly infringing products through print advertisements and trade shows); *Pearson v. Central Ill. Light Co.,* 210 F.2d 352, 356, 100 U.S.P.Q. 285, 288 (7th Cir.1954) (constructive knowledge where defendant published a product brochure, which it distributed to the trade); *A.R. Mosler & Co. v. Lurie,* 209 F. 364, 371 (2d Cir.1913) (barring infringement suit "[w]here owners have remained ... supine for many years, shutting their eyes to what was going on in the art to which the patent belonged"). *See generally* Jean F. Rydstrom, Annotation, *Laches as defense in patent infringement suit,* 35 A.L.R. Fed. 551, 577–79 (1977) (examining cases in which constructive knowledge was imputed to the patentee).

Various district courts have stated the following standard:

> If a patentee knows of the existence of a product or device that (i) embodies technology similar to that for which he holds a patent and (ii) uses that similar technology to accomplish a similar objective, he has a duty to examine the product or device more closely to ascertain whether it infringes his patent. If he shirks this duty, he does so on peril of triggering the laches period and perhaps ultimately losing his right to recover damages for the infringement.

I/P Engine, 915 F. Supp. 2d 736, 741-42 (E.D. Va. 2012) (quoting *Odetics, Inc. v. Storage Tech. Corp.,* 919 F.Supp. 911, 918 (E.D.Va.1996), *on remand,* 14 F.Supp.2d 800 (E.D.Va.1998), *aff'd in part, rev'd in part,* 185 F.3d 1259 (Fed.Cir.1999); *see also Crown Packaging Tech., Inc. v. Rexam Bev. Can Co.,* 679 F. Supp. 2d 512, 520 n.42 (quoting same); *St. Clair Intellectual*

Property Consultants, Inc. v. Acer, Inc., 2013 WL 3367319, at *3 (D.Del. Jul.2, 2013); *see also Wanlass v. Fedders Corp.,* 145 F.3d 1461, 1466-67 (Fed. Cir. 1998) ("*Fedders*").

Cisco admits that it knew of the 7124 and 7148 switches in the fall of 2008 and that they included Arista's Sysdb. RX-3879C at Q/A 32-33; RX-21C. Around that period, Cisco also performed a competitive analysis of these products. This competitive analysis was for sales purposes and included identifying how to distinguish Arista's products. *See, e.g.,* CX-1221C at Q/A 53-58; JX-0062C at 57, 152-53. This competitive analysis process was captured in various slide presentations. RX-3120C is one such presentation and it includes information regarding EOS software. In particular, this slide presentation describes EOS as having a modular operating system and Linux OS kernel that runs independently from system processes, but it does not mention Sysdb. *See* RX-3120C at CSI-ANI-00056464.000044-45. This presentation does not contain any detailed information on the operation of the software or provide any indication that there is also external management. There is no information in this presentation regarding infringement of Cisco's patents.

Arista also relies on several documents dated in 2009 that contain Arista confidential information to allege that Cisco should have known of Cisco's infringement. *See, e.g.,* RX-2964C and RX-4007C. Arista's position rests on Cisco possessing these documents in 2009. The documents were produced by Cisco in this investigation, but there is no evidence to show when or how Cisco came into possession of these documents. Moreover, these documents are dated fewer than six years before Cisco's filing of the ITC complaint in 2014 such that they do not create a presumption of laches. These documents are similar to RX-3120C in that they do not contain any information to suggest external management. While these documents do include a hub and spoke representation, showing a system managed through Sysdb, these documents do

not provide any indication that there is external management of the agents and do not evince that Cisco knew or should have known of Arista's infringement. Arista has failed to show that Cisco knew of these documents or that these documents demonstrate that Cisco knew of Arista's infringement.

Similarly, the 2009 blog post, CX-0479, also does not demonstrate that Cisco knew or should have known that Arista was infringing the '537 patent. This blog post does not contain any information on Sysdb that would indicate external management and there is no evidence of when Cisco became aware of this document.

Arista argues that Cisco had a duty to investigate whether Arista's products infringed. As discussed above, courts have found that, in some circumstances a patentee has a duty of inquiry. Courts have held that when the "patentee knows of the existence of a product or device that (i) embodies technology similar to that for which he holds a patent and (ii) uses that similar technology to accomplish a similar objective, he has a duty to examine the product or device more closely to ascertain whether it infringes his patent." In *Johnston v. Standard Mining Co.*, 148 U.S. 360, 370 (1893), the Court held that a plaintiff is only chargeable "with such knowledge as he might have obtained upon inquiry, *provided the facts already known by him were such to put upon a man of ordinary intelligence the duty of inquiry.*" The Federal Circuit has been reluctant to impose a duty of inquiry in cases where the infringement is "difficult to discern" or not apparent." *See Fedders*, 145 F.3d at 1467. In *Wanless*, the Federal Circuit imposed a duty to investigate where there was an open and notorious sale of easily testable products; the plaintiff offered a license, and the defendant indicated that it intended to continue using various infringing features. *Wanless*, 148 F.3d at 1139-40. Here, Arista's infringement is not open and notorious because it would take significant investigation to determine whether the

accused products use external management of the '537 patent. *See generally* CX-7C (Almeroth WS) (containing over 200 questions and citing over 75 documents to show infringement.).

In addition, Cisco has an extensive patent portfolio of over 12,000 patents and requiring Cisco to perform infringement analyses for every feature that a sales team is aware of, is unreasonable. *See Fedders,* 145 F.3d at 1465. In addition to all of this evidence, Mr. Lang, Cisco's Vice President, Intellectual Property and Deputy General Counsel, testified that Cisco did not become aware of Arista's infringement of the '537 patent until July 2014 (five months before filing suit). CX-1221 at Q/A 59.

Therefore, for the above reasons, the Commission finds that there was no unreasonable delay in this case. The Commission does not reach the issue of material prejudice. The Commission adopts the ID's findings on this issue that are consistent with this opinion.

G. Technical Prong of the Domestic Industry Requirement

The ID finds that the domestic industry products asserted for the '537 patent, running Cisco's IOS XR operating system, practice 1, 2, 8, 10-11, 17 and 19. ID at 89-100. No party petitioned for review of these findings, but the Commission determined to review these findings because it determined to review a claim construction. On review, the Commission affirms the ID's findings.

V. THE '597 PATENT

A. Overview

The '597 patent is entitled "Method and Apparatus for Securing a Communications Device Using a Logging Module" and issued on March 4, 2008. Cisco asserts independent

claims 1, 39, and 71, and dependent claims 14, 15, 29, 63, 64,[16] 72, and 73 of the '597 patent. ID at 17.

B.   Accused Products

Cisco accuses Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7280E, 7300, 7300X, and 7500E series network switches of infringing the '597 patent. ID at 19. Cisco asserts that these communication devices comprise a subsystem and a logging module named Process Manager ("ProcMgr"). *Id.*

C.   Construction of the Claim Limitation: "a change to a configuration" (claim 1) / "a change in a configuration" (claims 39 and 71)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	The IA's Proposed Construction
No construction necessary. If construction is necessary, "a change to the state of the device"	a change to the settings of the subsystem specified by the user	No construction necessary. The IA's original proposed construction, if construction is necessary, was "a change to the state of the device." The IA's revised construction is "a change to the settings of the subsystem"

The parties dispute the meaning of "a change to a configuration" in the claim phrase of claim 1 "a logging module, coupled to said subsystem, and configured to detect *a change to a configuration* of said subsystem of said communications device." Similarly, the parties also dispute the meaning of "a change in a configuration of a subsystem" as recited in claim 39 and 71. The ID construes the terms "a change to a configuration" and "a change in configuration" in claims 1, 39, and 71 to mean "a change to the state of the device." ID at 112. The ID finds that Cisco's expert Dr. Wicker testified that the patent's detected configuration changes relate to

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[16] Claims 63 and 64 depend from unasserted claim 40, which depends from asserted claim 39.

"'any compromise' of the device." *Id.* The ID explains that the patent describes the logging

module detecting software modification, anomalous conditions, hardware resets, user interaction

through the command line interface, and changes made by the device itself. *Id.* at 112-113. The

ID finds that the specification uses "state" and "configuration" interchangeably such that

"configuration" includes the state of the device. *Id.* at 113.

The ID further finds that the intrinsic record does not support the construction proposed

by Arista. *Id.* Specifically, the ID explains that "settings" is not used in the specification, and

the specification discloses embodiments where configuration changes are made by the network

device, instead of the user. *Id.* at 113-14.

Arista petitioned for review the ID's construction. The Commission reviewed the

construction and on review modifies the ID's construction of this term. The ID's construction,

which adopted Cisco's proposed construction, renders the term "subsystem" ambiguous. Under

the ID's construction, the claim limitation of claim 1 reads: "a logging module, coupled to said

subsystem, and configured to detect **a change to the state of the device** *of said subsystem* of

said communications device." Similarly, under the ID, the claim limitation of claims 39 and 71

read: "[detecting/detect] **a change to the state of the device** *of the subsystem.*" The parties

agree that the changes are made to the subsystem even if "of the device" is included in the

construction. However, this construction on its face is ambiguous and confusing. The

specification and prosecution history support a finding that the change is to the subsystem.

Arista's proposed construction recites "a change to the settings of the subsystem specified

by the user." The term "settings" only appears in the specification for one embodiment. Arista

asserts that the ID's construction is too broad in that it encompasses all types of changes while

"setting" limits the types of actions within the scope of the patent. Arista relies on the file

history to support its argument, but the file history appears instead to distinguish the Brown prior art on the basis that the logging module coupled to a subsystem are both encompassed in the communications device. *See* JX-0010 at CSI-ANI-00097276.000109-111. In its office action response, Cisco repeatedly describes the changes in "status" in Brown, but its focus is on distinguishing Brown based on the arrangement of elements, not whether the changes were to configuration versus a status. *Id.*

In discussing the scope of configuration changes that are encompassed within claims 1, 39, and 71, the ID includes a broad statement that "'configuration' encompasses all types of changes to different aspects of the device" which would extend the claims beyond the specification. ID at 113. However, the specification teaches that configuration changes embrace software modifications, anomalous conditions, hardware resets, user interaction through the command line interface, and changes made by the device itself, such as a device setting its own source IP and MAC address. JX-0004 at 1:30-33, 14:52-54, 4:35-38, 9:18-21, 5:33-36. The Commission therefore finds that the ID's statement is too broad and the changes should be limited to the types of configuration changes described in the '537 patent, not *all* changes to the subsystem as suggested in the ID's statement. Accordingly, consistent with the specification, the Commission construes the terms "a change to a configuration" and "a change in configuration" to mean "a change to the state" (*e.g.*, software modifications, anomalous conditions, hardware resets, user interaction through the command line interface, and changes made by the device itself, such as a device setting its own source IP and MAC address).

D.   Direct Infringement

The ID found that the accused products do not infringe the asserted claims of the '597 patent. The ID analyzed the "a change to a configuration" (claim 1) / "a change in a

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configuration" (claims 39 and 71) / "determine the configuration" (claim 72) claim limitation of

independent claims 1, 39, and 71 and dependent claim 72, found it was not met, and did not

analyze any additional limitations of the claims or rule on indirect infringement. The

Commission determined to review the ID's infringement findings. As discussed below, the

Commission also finds that the asserted independent claims are not infringed based on these

limitations and does not reach the other claim limitations.

1. The ID

(a) Claims 1, 39, and 71: "detect a change to a configuration of said subsystem"/ "detect/[ing] a change in a configuration of a subsystem" limitations

The ID determines that asserted claim 1 requires that the logging module "detect a

change to a configuration of said subsystem" and claims 39 and 71 require "detect/[ing] a change

in a configuration of a subsystem." ID at 118. The ID notes that these terms were construed to

mean "a change to the state of the device." *Id.*

The ID explains that Cisco relies on three mechanisms within Arista's ProcMgr to satisfy

the limitation of detecting a change in configuration including: [[

]]. The ID reproduces an

illustration of these three mechanisms based on Dr. Wicker's testimony:

[[

]]

Id. at 118-119 (reproducing RDX-1001C (adding circled numerals)). The ID finds that none of

these mechanisms detect a change in a configuration. *Id.* at 119. The ID explains that ProcMgr

[[   ]]. *Id.* Specifically, the ID explains [[

]]. *Id.* Indeed, ProcMgr [[   ]]. *Id.* The ID finds that ProcMgr [[

]]. *Id.* [[   ]]. *Id.* In

addition, [[   ]].

Id. The ID also finds that ProcMgr [[

]]. *Id.* at 119-120.

     (i) **[[   ]]**
       Do Not "Detec[t] a Change in a Configuration"

The ID notes that Dr. Wicker testifed that the [[   ]] are

related and together monitor agent failures. *Id.* at 120. The ID finds that each [[

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]]. *Id.* The ID finds that [[

]]. *Id.* [[

]]. *Id.*

The ID concludes that ProcMgr's [[

]] does not constitute detecting whether the [[   ]] configuration

has changed as required by the claims. *Id.* The ID finds instead that ProcMgr [[

]]. *Id.*

**(ii)   [[   ]] Does Not Detect a
Change to a Configuration of a Subsystem**

The ID finds that ProcMgr does not satisfy the "detect a change to a configuration of said

subsystem"/ "detect/[ing] a change in a configuration of a subsystem" limitations when it

determines [[

]]. *Id.* at 120-21. The ID finds that

the [[

]], as confirmed by Cisco's expert, Dr. Wicker. *Id.* at 121.

The ID finds that the evidence shows that the [[

]] and that [[

]]. *Id.* For example, the ID explains that [[

]] and

that this [[

]] *Id.* Therefore, the ID concludes that [[

]]. *Id.*

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(b)   Claim 72

The ID finds that the accused products do not infringe claim 72 because ProcMgr does

not determine the configuration of the identified subsystems (*i.e.*, agents). *Id.* at 121-122. The

ID finds that [[   ]] and [[

                                             ]]. *Id.* at 122. The ID finds that the

[[   ]]. *Id.* Therefore, the ID

concludes that these functionalities do not determine a change in configuration of the agent. *Id.*

2.   Analysis

> **(a)   Claims 1, 39, and 71: "detect a change to a configuration of said subsystem"/ "detect/[ing] a change in a configuration of a subsystem" limitations**
>
> **(i)   [[   ]]**

In the Arista system, ProcMgr [[

]]. [[   ]] has a [[

]]. *See, e.g.,* RX-3912C at Q/A 43. If [[

]]. *See, e.g.,* RX-3912C at Q/A 51. ProcMgr will then [[

]]. However, ProcMgr [[

                                             ]].

See, e.g., RX-3912C at Q/A 43; CX-245C at ANI-ITC-944_945-015219. ProcMgr is [[

]]. *See, e.g.,* RX-3912C at Q/A 49-51; CX-614C at ANI-

ITC-944_945-0152198.

The patent describes the covered changes to a configuration to include software modifications, anomalous conditions, hardware resets, user interaction through the command line interface, and the changes made by the device itself, such as a device setting its own source IP and MAC address. JX-0004 at 1:30-33; 14:52-54; 4:35-38; 9:18-21; 5:33-36. The '597 patent describes an anomalous condition as one where there is a potential compromise of security. *See, e.g.* JX-0004 at 14:52-54, 14:59-63, 15:4-5. We find that ProcMgr's determination that [[

]] does not constitute a change to a configuration of the subsystem as described in the '537 patent. Instead, ProcMgr is [[   ]].
See, e.g., RX-3912C at Q/A 51.

(ii)   [[   ]]

ProcMgr [[   ]]. Indeed, ProcMgr [[

]].

For these reasons, at most ProcMgr, may [[   ]].

ProcMgr also [[

]]. *See, e.g.,* CX-001C at Q/A 125, 143. These files contain information on

[[

]]. RX-3909C at Q/A 245; CX-1C at Q/A 128; *see also* Tr. at 1283-84; RX-3912C at Q/A 43. The files stored [[   ]] as Cisco contends. Cisco Pet. at 19. [[

]]. Tr. at 1283-84.

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The [[   ]]. This file includes

[[   ]]. For example, it includes the [[

                                                                          ]]. *See, e.g.,* CX-245C at

ANI-ITC-944945-0150224.

[[

                                        ]]. *Id.* at ANI-ITC-944945-0150221. The process includes: (1)

determining [[   ]], (2) determining [[

                                        ]], and (3) [[

            ]]. *Id.* at ANI-ITC-944_945-0150222. Cisco asserts process step (2) is the [[

            ]].

Cisco asserts that the ID does not address the second half of its [[   ]]

argument and when the whole process is considered, there must be a finding of infringement.

However, contrary to Cisco's assertion, in order to determine what [[

                                        ]]. *Id.* If the [[

            ]]. *Id.* [[   ]].

Accordingly, the Commission finds that these claim limitations are not met by the accused

products. The Commission adopts the ID's findings consistent with this opinion.

(b)   Claim 72

The ID's findings for claim 72 are closely related to its findings for claims 1, 39, and 71.

For the same reasons discussed above, the Commission finds all of the elements of claim 72 are

not met by the accused products. The Commission affirms ID's finding and adopts the ID's

findings consistent with this opinion.

E. Indirect Infringement

The Commission does not reach any issues related to indirect infringement for the '597

patent. Because the claims are not directly infringed, there can also be no finding of indirect

infringement.

F. Validity: Patentability Under 35 U.S.C. § 101[17]

The Commission determined not to review the ID's findings that assignor estoppel

applies to Arista. 81 *Fed. Reg.* 22312-14 (April 15, 2016). This determination prevents Arista

from making any challenges to the validity of the '597 patent, including § 101 challenges.

Accordingly, the Commission need not reach this issue and takes no position on the ID's

findings for this issue.

G. Technical Prong of Domestic Industry

The ID finds that domestic industry products asserted for the '597 patent practice claims

1, 14-15, 39, and 71-72. ID at 122-131. While the Commission modifies the ID's construction

of "a change to a configuration" (claim 1) / "a change in a configuration" (claims 39 and 71), this

change does not alter the ID's determination on the technical prong of the domestic industry

requirement. The Commission affirms the ID's findings. ID at 122-131.

---

[17] Section 101 limits patent-eligible subject matter to "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. §101. The inquiry involves determining whether the claims "transform [an] abstract idea into a patent-eligible invention", and require an "inventive concept" or "additional features" to ensure the patent does not seek simply to monopolize the abstract idea." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l.*, 134 S. Ct. 2347, 2352-57 (2014).

VI. THE '592 AND '145 PATENTS (PVLAN)

A. Overview

1. The '592 Patent

The '592 patent is entitled "Private VLANs" and issued on May 25, 2004. Cisco asserts

independent claims 6, 20, and 21, as well as dependent claim 7. ID at 23.

2. The '145 Patent

The '145 patent is entitled "Private VLANs" and issued on April 3, 2007. The '145

patent is a continuation of the '592 patent and the two patents share the same specification.

Cisco asserts independent claims 5, 7, 45, and 46.

3. Accused Products

Cisco contends that Arista's 7010, 7050, 7050X, 7150, 7250X, 7300, and 7300X series

network switches that run Arista's EOS software, which in turn supports the PVLAN feature,

infringe the asserted claims of the PVLAN patents (the "Arista VLAN products"). ID at 27.

B. Infringement

1. Direct Infringement

The Commission determined to review the ID's findings of infringement. While the ID

finds that all of the limitations of the asserted claims are met, Arista only challenged the ID's

direct infringement findings based on its argument that the PVLAN patents are conceptual.

Arista Pet. at 61-66. Arista also challenges the ID's findings because [[

]]. *Id.* at 67 n.41. As discussed below, the

Commission finds that direct infringement has occurred by the fully assembled and operational

products as used by Arista's customers and such infringement supports a finding of indirect

infringement by Arista. The basis of the Commission's finding of violation for the PLVAN

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patents is indirect infringement based on the direct infringement [[

]]. The Commission does not reach whether Arista is liable for directly infringing the asserted claims.

(a) The ID

The ID finds that the Arista VLAN products infringe all of the asserted claims of the PVLAN patents. ID at 172. The ID finds that Cisco's expert, Dr. Jeffay, testified that the Arista VLAN products infringe and the testimony of Arista's fact witness Gagan Arneja and expert witness, Mr. Moisand, supports the infringement finding. *Id.* The ID analyzes each of the limitations of the asserted claims and finds that they are met by the Arista VLAN products. *Id.* at 173-95.

The ID notes that Arista's non-infringement position is based on its argument that VLANs abstract and therefore cannot process packets as required by the claims. *Id.* at 196. The ID finds that Arista's arguments that VLANs are an abstract concept are contradicted by Arista's pre-litigation documents and record evidence. *Id.* at 196-98. The ID explains that Arista's EOS User Manual specifically defines VLANs as "layer 2 structures" and refers to Arista's PVLANs as a "network structure." *Id.* (citing CX-0075 at 761, 762). The ID further finds that the "802.1Q-1998 standard itself defines a VLAN as '[a] subset of the active topology of a Bridged Local Area Network' where the 'active topology' is 'the set of communication paths formed by interconnecting the LANs and Bridges by the forwarding Ports.'" *Id.* (citing RX-0186 at 9, 30; CX-1220C at Q/A 19). The ID explains that the VLANs are specific structures enabled through the use of hardware and software. *Id.* at 196-197 (discussing the Arista User Manual and testimony from Mr. Moisand and Mr. Arneja).

The ID also rejects Arista's arguments that its VLANs are not one-way connections (ID at 198-199), its isolated ports do not prevent the exchange of packets (ID at 199), and that Cisco merely relies on a naming convention (ID at 199-200). The Commission determined to review the ID's findings.

(b) Analysis

The Commission finds that VLANs are not conceptual and adopts the ID's findings that are consistent with the discussion herein. The Commission finds that on balance that the evidence supports the ID's infringement determination.

Arista's first argument is that VLANs are a conceptual association that occur through the implementation of IEEE 802.1Q compliant tagging and therefore, do not process packets. Arista asserts that the ID ignored Cisco's expert testimony that shows the Arista VLAN products do not infringe. Arista Pet. at 62. Arista contends that in accepting Dr. Jeffay's assertion that the 802.1Q standard defines the virtual LAN as a subset or part of the LAN, Dr. Jeffay omitted a key portion of the definition. *Id.* Specifically, Arista argues that the standard defines "*an active topology* of a Bridged Local Area Network" and Dr. Jeffay admitted that the active topology does not transfer, receive, or reject packets. *Id.* Dr. Jeffay, Cisco's expert, testified that the definition of VLAN taken from the 802.1Q standard was fine but he also stated that there are "multiple views you can have [for a] LAN." Tr. at 493-495. However, Dr. Jeffay did not limit his definition to the 802.1Q standard or provide a restrictive definition of "active topology." *See, e.g.,* Tr. 493-95, 497; CX-1220 Q/A19-20. Dr. Jeffay testified that a VLAN is a segment of a physical LAN (*i.e.*, a LAN within a LAN). CX-0003C at Q/A 32. Inventor Edsall confirmed this definition. Tr. at 891. Dr. Jeffay also testified that the "active topology" as "acted on by the hardware" makes up the VLAN and is implemented such that it can receive, transfer and reject

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packets. Tr. at 497. Dr. Jeffay explicitly rejected Arista's argument that the VLANs are conceptual and explained that it is the hardware and the software together that makeup a VLAN. CX-1220 at Q/A 19.

Arista further asserts that the ID misinterprets Arista documents and testimony that support finding that [[   ]]. Arista Pet. at 63. However, Arista's witness testified during his deposition [[

]]. JX-0019C at 48; Tr. 1126-1128. It is understandable that documents describing the [[   ]] chip sets do not discuss VLANs because the documents describe only the hardware while VLAN are a combination of software and hardware. Additionally, the statements regarding [[   ]] does not change anything regarding the VLANs. Dr. Jeffay's testimony does not contradict his opinion that a VLAN is a structure that is realized in hardware and software. CX-1220C at Q/A 22–23.

Arista's EOS User Manual specifically defines VLANs as *"layer 2 structures"* and refers to Arista's PVLANs as a *"network structure."* CX-0075 at 761, 762. The manual further describes that "[i]solated VLAN ports *carry unidirectional traffic"* and that "[c]ommunity VLAN ports *carry traffic."* CX-0075 at 763. And Arista's [[

]]. CX-0031C at ANI-ITC-944_945-0772168-70. Arista points out that its witnesses stated that the Arista documents were describing [[   ]].

Last, Arista argues that the Cisco inventor testimony (Mr. Foschiano and Mr. Edsall) defining VLANs supports finding non-infringement. Arista Pet. at 65-66. Arista argues that

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VLANs are conceptual because they are "numbers on a wire." Mr. Foschiano testified that

VLANs are implemented using hardware components but he also explained that the "number on

a wire" refers to a VLAN ID in a packet that identifies a specific structure, namely a VLAN, that

the packet is associated with. JX-0051C 147-48. Inventor Edsall explained that saying a VLAN

"may be carried in the packet" is the way that those skilled in the art refer to the fact that the

VLAN ID is carried in the packet (*i.e.*, the packet has an identifier that associates it with a

VLAN). Tr. 392. In addition, the VLAN patents teach using a VLAN Assignment number. *See,*

e.g., JX-0005 ('592) at 6:8–22. Therefore, the Commission finds that the VLANs are not

abstract concepts, affirming the ID, and finds the asserted claims are directly infringed by the

fully assembled accused products (including an operational version of EOS).

2. Indirect Infringement

The ID further finds that Arista is liable for induced infringement by encouraging,

instructing, sell, promoting, and enabling third parties to use the Arista VLAN products that

infringe the asserted patents. ID at 201. The ID also determines that Arista is liable for

contributory infringement. *Id.* at 202-03. The ID finds that all of the claims require the imported

switch hardware, including all of the components thereof. The ID finds that these were material

components. *Id.* at 202. The ID further determines that the switch hardware has no substantial

non-infringing uses because it is designed for and used exclusively with EOS, which contains the

infringing PVLAN functionality. *Id.* at 202-03.

The Commission determined to review the ID's findings. The Commission finds, as discussed above, that the intent and knowledge requirements for indirect infringement were met for the PVLAN patents. *See* §IV.E.1.

Arista challenges the ID's finding that the Blank Switches and components have no substantial non-infringing uses. Arista Pet. at 67. Arista asserts that the ID's finding is based on the fact that the hardware is designed for EOS, but the PVLAN functionality infringes. *Id.* Arista asserts that the Blank Switches and components are not designed for PVLAN and they are not used exclusively with PVLAN. *Id.* at 67-68. Arista also contends that the EOS software can be used for non-accused functionality and indeed rarely performs Arista's PVLAN feature. *Id.* at 68.

As the Commission discussed in *Certain Television Sets, Television Receivers, Television Tuners, and Components Thereof*, Inv. No. 337-TA-910, Comm'n Op. at 44 (USITC Oct. 30, 2015) ("*Certain Television Sets*"), the proper test for determining whether there are substantial non-infringing uses is set forth in *Ricoh Co. Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325 (Fed. Cir. 2008). In that case, the Federal Circuit held that if a subcomponent (in that case, a microcontroller) contributes to infringement, the fact that the subcomponent is part of a larger component does not negate contributory liability solely on the ground that the larger component is capable of substantial non-infringing uses. *Id.* at 1337-38. Thus, in considering substantial non-infringing uses in this case, we focus on the components accused of contributory infringement, *e.g.*, the Blank Switches. It is irrelevant if the switches with EOS installed have non-infringing uses. The Blank Switches are not capable of being used without EOS, which includes the infringing functionality. *See e.g.*, Tr. at 1162; CX-0075.

The "bundling" of non-infringing components with infringing components does not create substantial non-infringing uses. *See, e.g., Ricoh*, 550 F.3d at 1336–40 (*e.g.*, "While selling a potentially infringing product where each component part thereof has a substantial lawful use may well be 'equivocal' . . . , it is entirely appropriate to presume that one who sells a product containing a component that has no substantial noninfringing use in that product does so with the intent that the component will be used to infringe."). Further, turning off infringing features does not create substantial non-infringing uses. *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1331 (Fed. Cir. 2010) ("Netgear argues that because a user can turn off the infringing features, then there are substantial noninfringing uses . . . . [However,] [w]hether a user activates fragmentation [the infringing feature] is relevant to the extent of direct infringement, but does not establish substantial noninfringing uses."). Therefore, the Commission finds that the Blank Switches have no substantial non-infringing uses and adopts the ID's findings that are consistent with this opinion.

With respect to induced infringement, Arista's sale and promotion of the Arista VLAN products (with or without EOS installed) or components thereof are found to constitute acts of inducement because the switch hardware is designed to run the EOS software which is run each time EOS is booted. JX-0026C at 204, 205 (*e.g.*, "I'm not aware of any customers using our switches without using EOS"), 212–213; CX-0175 at 731; CX-41C at ANI-ITC-944_945-1619604; CX-335. And Arista switch hardware is used exclusively with EOS. *E.g.*, Tr. at 1162; CX-0035C; JX-0026C at 204-07, 273–275; CX-0007C Q/A 252–273. Arista promotes the use of EOS through, for example, documents, manuals, and customer guidance. *See e.g.*, CX-0076, CX-0075 at CSI-ANI-00128383.000760-771, CX-0041C; CX-0043C, CX-0673. As discussed above in §IV.E.1, the knowledge and intent requirements for induced infringement have been

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met. Accordingly, the Commission finds that Arista has induced infringement of the asserted

claims.

C. Validity: Patentability Under 35 U.S.C. § 101[18]

The ID notes Arista's argument that the claims of the PLVAN patents are directed to the

idea of abstract VLANs and in particular the exchange or handling of packets by use of VLANs.

ID at 234. The ID finds that the PVLAN patents are directed to a specific device (*i.e.*, a router or

switch) configured in a specific way to have new types of ports and VLANs to isolate a user's

traffic. *Id.* The ID finds that the physical devices are the opposite of an abstract idea. *Id.* The

ID explains that the patent claims do not claim an algorithm or a computerized approach that was

implemented manually in the prior art. *Id.* at 234-35.

The ID further finds that the patents cover an inventive concept. *Id.* at 235. The ID

explains that the PVLAN patents solved problems in the prior art. *Id.* The ID determines that all

of the asserted claims require special purpose devices, and do not require routine or conventional

structures. *Id.* at 235-36.

Arista petitioned for review of the ID's findings on this issue and the Commission

determined to review. On review, Arista's argument regarding unpatentability hinges on its

position that VLANs are abstract. The Commission finds that VLANs are not abstract.

The Supreme Court laid out a two-part test for determining unpatentable subject matter in

Alice Corp. Pty. Ltd. v. CLS Bank Int'l., 134 S. Ct. 2347 (2014). This test requires a

determination as to (1) whether a patent's claims are directed to a patent-ineligible abstract idea,

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[18] Arista does not make assignor estoppel arguments for the PVLAN patents.

and if so, (2) whether its claims contain an inventive concept ensuring that the patent amounts to significantly more than a patent upon the abstract idea itself. *Alice*, 134 S. Ct. at 2355.

As discussed above in detail with respect to direct infringement, the Commission finds that the claims are not directed to an abstract idea. The claims of the PVLAN patents are directed to a specific device, namely a switch or a router, configured to have new types of ports and new types of VLANs in order to isolate users' traffic. ID at 234; CX-1220C at Q/A 227. The claims all recite a switch or router comprising a VLAN—a definite structure. ID at 234; CX-1220C at Q/A 228. In addition, the claims are not directed to an algorithm, or merely computerize an approach that was implemented manually in the prior art, but to a device that solves a problem that existed in the networking field in the prior art. *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) ("the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.").

Even if the claims are found to be directed to an abstract idea, they contain an inventive concept ensuring that the patent claims amount to significantly more than a patent upon the abstract idea itself. The claims are to a switch or router configured in a particular manner with VLAN type ports to create new types of functionality that did not previously exist. CX-1220C at Q/A 32–37. The PVLAN patents solved the problem in the prior art of separating users' traffic on a LAN by inventing a mechanism for isolating user traffic with specific configurations of new types of VLANs and new types of ports, that can be implemented and stored in assignment tables, memory, switching chips and other hardware or software components. CX-1220C at Q/A233–238. Therefore, the claims require a special purpose device with defined structures that transform the networking device into a special purpose machine. *See id.* at Q/A 238.

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Accordingly, the Commission finds that the asserted claims are not invalid under § 101 and

adopts the ID's findings consistent with this opinion.

D.   Equitable Defenses

1.   Equitable Estoppel

The Commission affirms the ID's determination that Arista did not meet its burden to

establish that (1) Cisco, through misleading conduct, led Arista to reasonably believe that Cisco

did not intend to enforce its patents against Arista; and (2) Arista relied on that conduct. ID at

263-267. The Commission does not reach or adopt the ID's findings on whether Arista was

materially prejudiced.

2.   Laches

The ID provides only a single laches discussion applicable to all of the asserted patents.

We summarized the ID's findings above in discussing Arista's laches defense for the '537

patent. *See infra* § IV.F

The Commission finds that Arista has likewise not established laches for the PVLAN

patents, regardless of whether or not laches is an available defense at the Commission. *See infra*

§ IV.F

Arista raised various issues regarding the PVLAN patents related RFC 5517 that were not

addressed above for the '537 patent. *See* Arista Pet. at 81-83. Arista first offered its PVLAN

functionality in 2012 and asserts that Cisco should have known that Arista infringed from this

time. *Id.* Cisco filed the complaint in this investigation in December 2014. This delay of less

than two years does not result in a presumption of laches. *Aukerman*, 960 F.2d at 1027. Arista

relies on various cases that find laches after only three or four year delays where the parties were

already litigating infringement or the infringement was "open and continuous." Arista Pet. at 81-

82. The facts of these cases are distinguishable because here Arista was not already in litigation with Cisco over these patents and infringement of these patents is not open and notorious. Arista cites no cases where laches was found where the delay was as short as two years. Arista also makes a strained argument with respect to Cisco's submission to the Internet Engineering Task Force ("IETF") of an Inter Partes Review disclosure ("IPR") from the U.S. Patent and Trademark Office, which linked the PVLAN patents to RFC 5517. *Id.* at 82; *see also* RX-3852. However, the IPR submission does not relate to infringement by Arista. In addition, contrary to Arista's assertion, the mere fact that other companies implement VLAN features does not mean that those companies infringe the PVLAN patents (and Arista has offered no proof that they do) or that because other companies implemented PVLAN that Cisco should have known that Arista infringed. Accordingly, the Commission finds that Arista has not met its burden in proving laches for the PVLAN patents.

E. Technical Prong of Domestic Industry

The Commission affirms the ID's findings that the domestic industry products asserted for the '592 and '145 patents practice the asserted domestic industry claims consistent with the constructions herein. *See* ID at 203-224.

VII. THE '164 PATENT

The ID finds that the '164 patent is not infringed and that the technical prong of the domestic industry was not met. ID at 250-255. Cisco did not petition for review of these findings. The Commission affirms these findings and takes no position on other issues related to the '164 patent (*e.g.*, laches).

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VIII. ECONOMIC PRONG OF DOMESTIC INDUSTRY

No party petitioned for review the ID's determination on the economic prong of domestic industry but the Commission determined on its own motion to review the ID's findings on the economic prong of domestic industry. 19 C.F.R. § 210.44.

In order to establish a domestic industry, pursuant to section 337(a)(2) and (3), Cisco must establish "(A) significant investment in plant and equipment; (B) significant employment of labor or capital; or (C) substantial investment in [the patent's] exploitation, including engineering, research and development, or licensing." 19 U.S.C. § 1337(a)(2), (3). The Commission affirms the ID's finding that Cisco has established substantial investment in the exploitation of the patents under section 337(a)(3)(C) and takes no position on the other categories.

IX. REMEDY, BONDING AND PUBLIC INTEREST

Where a violation of section 337 has been found, the Commission must consider the issues of remedy, the public interest, and bonding. Section 337(d)(1) provides that "[i]f the Commission determines, as a result of an investigation under this section, that there is a violation of this section, it shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States ..." 19 U.S.C. § 1337 (d)(1).

A. Limited Exclusion Order ("LEO")

Cisco is seeking a limited exclusion order covering the accused products found in violation of section 337. Cisco Br. at 84-88. More specifically, the RD explains that Cisco seeks an LEO covering:

> Arista's imported network equipment, and also components and software therein, such as switches and their components, operating systems and/or

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other software, and "all products covered by the patent claims as to which a violation has been found," not just specific models accused of infringement.

RD at 3.

The RD recommends that the Commission issue an LEO covering products and components thereof that infringe the asserted claims. *Id.* at 5. The RD further recommends that the LEO include a standard certification provision. *Id.*

The Commission has "broad discretion in selecting the form, scope, and extent of the remedy." *Viscofan, S.A. v. U.S. Int'l Trade Comm'n,* 787 F.2d 544, 548 (Fed. Cir. 1986). The Commission may issue an exclusion order excluding the goods of the person(s) found in violation (a limited exclusion order) or, if certain criteria are met, against all infringing goods regardless of the source (a general exclusion order). As the ALJ recommended, the Commission finds that the appropriate remedy in this investigation is an LEO and a CDO. With respect to the LEO, the Commission includes both the standard[19] certification provision and an exemption for warranty and repair of existing products Arista has already sold to customers for which Arista is obligated to provide warranty, repair services, or software update services. With respect to the warranty/service provision, Cisco contends, if the Commission opts to include such a provision, that it should be limited to six-months from the time the LEO issues arguing that it will cover most of Arista's warranty/service obligations. Warranty and repair exemptions are common in Commission orders but they are usually not time limited. [[

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[19] The standard provision does not allow an importer to simply certify that it is not violating the exclusion order as Arista suggests. CBP only accepts a certification that the goods have been previously determined by CBP or the Commission not to violate the exclusion order.

]]. Therefore, the Commission finds that a time limit is not appropriate.

The Commission declines to adopt Cisco's proposal that the Commission require Arista to seek modification of the Commission's orders or an advisory opinion for any redesign. The Commission has recently included such provisions in investigations, which involved spoliation of evidence. *Certain Opaque Polymers*, Inv. No. 337-TA-883, Comm'n Op. at 23-24 (Apr. 30, 2015); *Certain Stainless Steel Products, Certain Processes for Manufacturing or Relating to Same, and Certain Products Containing Same*, Inv. No. 337-TA-933, Comm'n Op. at 32 (June 9, 2016). No such circumstances exist here. Cisco has not provided sufficient reasons for the Commission to depart from CBP's and the Commission's normal practice.

B. Cease and Desist Order ("CDO")

Cisco seeks a cease and desist order directed against Arista. Cisco Br. at 89. The RD notes that the Commission generally issues a CDO with respect to the imported infringing products, when a respondent maintains a commercially significant inventory of the infringing products within the United States. RD at 5-6. The RD notes that Arista did not specifically address the appropriateness of a CDO in its post-hearing briefing. *Id.* at 7. The RD finds that the evidence demonstrates that Arista maintains a commercially significant inventory of the accused products. *Id.* Cisco presented evidence that Arista has maintained, on average, a total of

[[   ]] units of inventory of its networking products at [[   ]] in [[   ]] between

[[   ]]. *Id.* at 6. Therefore, the RD recommends that the

Commission issue a CDO. *Id.* at 7.

Section 337(f)(1) provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a cease and desist order as a remedy for a violation of section

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337. 19 U.S.C. § 1337(f)(1). Cease and desist orders are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order. *See, e.g., Certain Protective Cases and Components Thereof,* Inv. No. 337-TA-780, USITC Pub. No. 4405 (July 2013), Comm'n Op. at 28 (Nov. 19, 2012) (citing *Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same,* Inv. No. 337-TA-551, Comm'n Op. at 22 (June 14, 2007)); *Certain Agricultural Tractors, Lawn Tractors, Riding Lawnmowers, And Components Thereof* ("Agricultural Tractors"), Inv. No. 337-TA-486, USITC Pub. No. 3625, Comm'n Op. at 17 (August 14, 2003)). A complainant seeking a cease and desist order must demonstrate, based on the record, that this remedy is necessary to address the violation found in the investigation so as to not undercut the relief provided by the exclusion order. *Certain Integrated Repeaters, Switches, Transceivers, and Products Containing Same,* Inv. No. 337-TA-435, USITC Pub. No. 3547 (Oct. 2002), Comm'n Op. at 27 (Aug. 16, 2002) ("[C]omplainants bear the burden of proving that respondent has such an inventory. Because complainants failed to sustain their burden, we have determined not to issue a cease and desist order."); see also H.R. Rep. No. 100-40, at 160 (1987) ("When the Commission determines that both remedies [i.e., an exclusion order and cease and desist order] are necessary, it should be without legal question that the Commission has authority to order such relief.").

Arista does not present any arguments why a CDO should not issue. In this investigation, the record evidence demonstrates that there is a commercially significant U.S. inventory. CX-0010C at Q/A 238–242 (testifying to Arista's amount of inventory and concluding that it is

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commercially significant). Accordingly, the Commission determines that a CDO is

appropriate.[20]

C. Bonding

Cisco is seeking imposition of a 100 percent bond. Cisco Br. at 89-91. The RD rejected

Cisco's proposal for a 100 percent bond rate. RD at 11-12. In particular, the RD finds that

Cisco failed to demonstrate that a price differential was not an appropriate method for calculating

the bond, or that a reasonable royalty rate could not be calculated. *Id.* Therefore, the RD

concludes that no bond should be required during the Presidential review period. *Id.* at 12.

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[20] Commissioner Schmidtlein supports issuance of the cease and desist order in this
investigation. She agrees with the Commission that Arista's domestic inventory provides a basis
for issuing the order. She, however, finds it unnecessary to confirm the existence of a
"commercially significant" inventory because a commercially significant domestic inventory is
not a statutory requirement. *See* 19 U.S.C. § 1337(f)(1). Indeed, the statutory language leaves it
to the discretion of the Commission and does not establish any particular test or standard for
issuing a cease and desist order aside from consideration of the public interest factors. *See*
Gamut Trading Co. v. Int'l Trade Comm'n, 200 F.3d 775, 784 (Fed. Cir. 1999) (explaining that
the Commission has broad discretion in selecting a remedy). From a practical standpoint,
Commissioner Schmidtlein fails to see the value gained by requiring parties and the Commission
to expend time and resources addressing the extent of domestic inventory levels as a predicate to
issuing cease and desist orders. In her view, such a requirement unnecessarily carries risk for the
complainant since even the presence of one infringing product in domestic inventory can
undercut the exclusion order and prevent complete relief to the complainant. Thus,
Commissioner Schmidtlein finds that the presence of some domestic inventory, regardless of the
commercial significance, provides a basis to issue the cease and desist order.

Commissioner Schmidtlein does not join the Commission's statement that a complainant
seeking a cease and desist order must demonstrate that the remedy is "necessary" to address the
violation found in the investigation. It is unclear what the Commission intends to convey by the
statement, but on its face it appears to limit the broad discretion granted to the Commission
under section 337(f)(1). In Commissioner Schmidtlein's view, the House committee report cited
by the Commission as support does not address the standard for determining whether a cease and
desist order should issue. *See* H.R. Rep. No. 100-40, at 160 (1987). Instead, the committee
report simply explains that the amendments to section 337(f)(1) under the Omnibus Trade and
Competitiveness Act of 1988 authorize the Commission to issue both a cease and desist order
and an exclusion order to remedy the same unfair act. *See id.* at 22, 159.

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During the 60-day period of Presidential review, imported articles otherwise subject to remedial orders are entitled to conditional entry under bond. 19 U.S.C. § 1337(j)(3). The amount of the bond is specified by the Commission and must be an amount sufficient to protect the complainant from any injury. *Id;* 19 C.F.R. § 210.50(a)(3). The Commission frequently sets the bond by calculating the difference in sales prices between the patented domestic product and the infringing product or based upon a reasonable royalty. *Certain Microsphere Adhesives, Process For Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes,* Inv. No. 337-TA-366, Comm'n Op. at 24, USITC Pub. No. 2949 (Jan. 1996). In cases where the record does not contain sufficient evidence upon which to base a determination of the appropriate amount of the bond despite a complainant's effort to adduce such evidence, the Commission has set a 100 percent bond. *See Certain Sortation Systems, Parts Thereof, and Products Containing Same,* Inv. No. 337-TA-460, Comm'n Op. at 21 (Mar. 2003). Complainants bear the burden of establishing the need for a bond amount in the first place. *Certain Rubber Antidegradants, Components Thereof, and Prods. Containing Same,* Inv. No. 337-TA-533, Comm'n Op. at 39-40 (July 21, 2006).

The Commissions adopts the ALJ's recommendation and sets the bond at zero percent. The burden in proving that a bond is necessary falls on Cisco. Here, Mr. Leonard, Cisco's expert, offered conclusory testimony to assert that neither a reasonable royalty or price differential could be calculated. CX-0010C at Q/A 247-60. In addition, Cisco argues for the first time in its briefing before the Commission that, in the alternative, a five percent bond should be set. The evidence presented to the Commission on whether a five percent bond is appropriate was not well developed and there was no evidence in the RD to consider due to Cisco's failure to

provide support for its request for a bond before the ALJ. Accordingly, the Commission sets the bond at zero percent.

D. Public Interest

Sections 337(d) and (f) of the Tariff Act of 1930, as amended, direct the Commission to consider certain public interest factors before issuing a remedy. These public interest factors include the effect of any remedial order on "the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers." 19 U.S.C. §§ 1337(d) and (f).

The Commission finds that the public interest does not preclude the issuance of a remedy in this investigation. Cisco asserts that there are no public interest concerns that prevent the issuance of a remedy in this investigation. Cisco Br. at 91-94. We agree with Cisco that (1) there are numerous alternative networking technologies, including those supplied by Cisco and others in the industry, (2) Cisco has the resources and supply chain to scale production to meet any increase in demand, and (3) there would be no harm to competitive conditions if Arista's products were excluded. *Id.*

The only public interest issue Arista raises is its assertion that the PVLAN patents are the subject of a *de facto* standard, thereby precluding issuance of a remedy for those patents. *See* Respondent Arista's Public Interest Submission Under 210.50(a) (March 17, 2016); Arista Br. at 84-108.[21] Arista admits that RFC 5517 is not a *de jure* standard. Arista Br. at 95-96. Instead,

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[21] Arista submitted letters from various third-parties on this issue, including [[

]]. The Commission has considered these submissions.

Arista argues that based on Cisco's actions that RFC 5517 should be found to be a *de facto* standard and that the PVLAN patents are essential.

Arista relies on Mr. HomChaudhuri's Linked-In page to argue that RFC 5517 is a *de facto* standard because it states that he helped develop *de facto* standard RFC 5517. Mr. HomChaudhuri's testified, however, that the statement on his Linked-In page was [[   ]] and explains that the intent of RFC 5517 was not to have others adopt PVLAN, but if they did, that they could see how the technology should behave. RX-53C at 76; *see also* JX-0051C at 248-49; CX-1222C at Q/A 57–61.

Arista also argues that Cisco promoted PVLAN within the industry such that it became a standard. Arista Br. at 86-88. Although other Cisco competitors have PVLAN functionality available, Arista cites no evidence that they adopted or relied on RFC 5517 or the PVLAN patents. Indeed, competitors are not required to practice the PVLAN patents or RFC 5517 because they are not part of a formal standard. Arista admits that [[

                                    ]]. The mere fact that others in the industry offer PVLAN functionality, without more, does not demonstrate that they practice RFC 5517, the PVLAN patents, or that PVLAN is a *de facto* standard.

Arista also asserts that the PVLAN patents are essential based on Cisco's actions, including Cisco's filing of RFC 5517, tying of RFC 5517 to the PVLAN patents, and relying on Arista's implementation of RFC to show infringement. Arista Br. at 89-91. Cisco's submission to IETF, however, states that RFC 5517 is not a standard and *if* IETF adopts RFC 5517 as a standard *and* any claims of Cisco patents are necessary for practicing the standard, Cisco will offer its technology for licensing under FRAND terms. *See* RX-3852. Arista admits that these conditions have not been met. Arista Br. at 95. Without further action by Cisco to encourage

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others to adopt RFC 5517 or evidence that the industry has adopted RFC 5517 as a standard, the Commission finds that RFC 5517 is not a *de facto* standard. Arista also asserts that patent hold-up has occurred. *See, e.g.,* Arista Br. at 91-97. Here, however, there is no record evidence to support a finding that patent hold-up has occurred or is likely to occur. In particular, there is nothing on the record demonstrating the existence of an industry standard or that Cisco had an obligation to offer licenses with respect to the PLVAN patents on a fair, reasonable, and non-discriminatory basis. Consequently, there are no public interest concerns barring the issuance of a remedy in this investigation.

X.   CONCLUSION

For the forgoing reasons, the Commission finds that a violation of section 337 has occurred.

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: April 19, 2017

PUBLIC CERTIFICATE OF SERVICE

       I, Lisa R. Barton, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Andrew Beverina, Esq., and the following parties as indicated, on **April 19, 2017**.

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

Adam R. Alper, Esq.	☐ Via Hand Delivery
KIRKLAND & ELLIS LLP	☒ Via Express Delivery
555 California Street	☐ Via First Class Mail
San Francisco, CA 94104	☐ Other:_____

On Behalf of Respondent Arista Networks, Inc.:

Bert C. Reiser, Esq.	☐ Via Hand Delivery
LATHAM & WATKINS LLP	☒ Via Express Delivery
555 Eleventh Street NW	☐ Via First Class Mail
Suite 1000	☐ Other:_____
Washington, DC 20004	

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

CERTAIN NETWORK DEVICES,
RELATED SOFTWARE AND   Investigation No. 337-TA-945
COMPONENTS THEREOF (II)

NOTICE OF COMMISSION DECISION TO REVIEW IN PART A FINAL INITIAL
DETERMINATION FINDING A VIOLATION OF SECTION 337;
REQUEST FOR WRITTEN SUBMISSIONS

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has
determined to review in part the presiding administrative law judge's ("ALJ") final initial
determination ("Final ID") issued on December 9, 2016, finding a violation of section 337 of the
Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("section 337") in the above-captioned
investigation.

FOR FURTHER INFORMATION CONTACT: Megan M. Valentine, Office of the General
Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436,
telephone (202) 708-2301. Copies of non-confidential documents filed in connection with this
investigation are or will be available for inspection during official business hours (8:45 a.m. to
5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street,
S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the
Commission may also be obtained by accessing its Internet server at _https://www.usitc.gov._ The
public record for this investigation may be viewed on the Commission's electronic docket (EDIS)
at _https://edis.usitc.gov._ Hearing-impaired persons are advised that information on this matter can
be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on
January 27, 2015, based on a Complaint filed by Cisco Systems, Inc. of San Jose, California
("Cisco"). 80 FR 4313-14 (Jan. 27, 2015). The Complaint alleges violations of section 337 of
the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the sale for importation, importation,
and sale within the United States after importation of certain network devices, related software
and components thereof by reason of infringement of certain claims of U.S. Patent Nos.
7,023,853; 6,377,577; 7,460,492; 7,061,875; 7,224,668; and 8,051,211. The Complaint further
alleges the existence of a domestic industry. The Commission's Notice of Investigation named
Arista Networks, Inc. of Santa Clara, California ("Arista") as respondent. The Office of Unfair
Import Investigations ("OUII") was also named as a party to the investigation. The Commission
previously terminated the investigation in part as to certain claims of the asserted patents. Order

No. 38 (Oct. 27, 2015), unreviewed Notice (Nov. 18, 2015); Order No. 47 (Nov. 9, 2015), unreviewed Notice (Dec. 1, 2015).

On December 9, 2016, the ALJ issued her Final ID, finding a violation of section 337 with respect to claims 1, 7, 9, 10, and 15 of the '577 patent; and claims 1, 2, 4, 5, 7, 8, 10, 13, 18, 56, and 64 of the '668 patent. The ALJ found no violation of section 337 with respect to claim 2 of the '577 patent; claims 46 and 63 of the '853 patent; claims 1, 3, and 4 of the '492 patent; claims 1-4, and 10 of the '875 patent; and claims 2, 6, 13, and 17 of the '211 patent.

In particular, the Final ID finds that Cisco has shown by a preponderance of the evidence that the accused products infringe asserted claims 1, 7, 9, 10, and 15 of the '577 patent; and asserted claims 1, 2, 4, 5, 7, 8, 10, 13, 18, 56, and 64 of the '668 patent. The Final ID finds that Cisco has failed to show by a preponderance of the evidence that the accused products infringe asserted claim 2 of the '577 patent; asserted claims 46 and 63 of the '853 patent; asserted claims 1, 3, and 4 of the '492 patent; asserted claims 1-4, and 10 of the '875 patent; and asserted claims 2, 6, 13, and 17 of the '211 patent.

The Final ID also finds that assignor estoppel bars Arista from asserting that the '577 and '853 patents are invalid. The Final ID finds, however, that if assignor estoppel did not apply, Arista has shown by clear and convincing evidence that claims 1, 7, 9, 10, and 15 of the '577 patent and claim 46 of the '853 patent are invalid as anticipated by U.S. Patent No. 5,920,886 ("Feldmeier"). The Final ID further finds that Arista has failed to show by clear and convincing evidence that any of the remaining asserted claims are invalid. The Final ID also finds that Arista has not proven by clear and convincing evidence that Cisco's patent claims are barred by equitable estoppel, waiver, implied license, laches, unclean hands, or patent misuse.

The Final ID finds that Cisco has satisfied the economic prong of the domestic industry requirement for all of the patents-in-suit pursuant to 19 U.S.C. § 337(A), (B), and (C). The Final ID finds, however, that Cisco has failed to satisfy the technical prong of the domestic industry requirement with respect to the '875, '492, and '211 patents. The Final ID finds that Cisco has satisfied the technical prong with respect to the '577, '853, and '668 patents.

The Final ID also contains the ALJ's recommended determination on remedy and bonding. The ALJ recommended that the appropriate remedy is a limited exclusion order with a certification provision and a cease and desist order against Arista. The ALJ recommended the imposition of a bond of 5% during the period of Presidential review.

On December 29, 2016, Cisco, Arista, and OUII each filed petitions for review of various aspects of the Final ID. As described below, some of the issues presented for review were in the form of contingent petitions.

Cisco petitions for review of the Final ID's construction of certain limitations recited in claim 46 of the '853 patent and the resulting finding that Arista's accused products do not infringe that claim. Cisco also petitions for review of the Final ID's findings of non-infringement and non-satisfaction of the technical prong of the domestic industry requirement with respect to the '875, '492, and '211 patents. Cisco requests contingent review of the Final

ID's finding that Arista does not indirectly infringe the asserted claims of the '577 patent should the Commission review the Final ID's finding that Arista's post-importation direct infringement cannot alone support a finding of violation of section 337. Cisco also requests contingent review of the Final ID's finding that Feldmeier anticipates the asserted claims of the '577 patent should the Commission review the Final ID's finding that assignor estoppel applies.

Arista petitions for review of the Final ID's construction of certain limitations recited in the asserted claims of the '577 and '668 patents and the resulting finding that certain of Arista's accused products infringe those claims. Arista also petitions for review of the Final ID's findings of indirect infringement with respect to the '577 and '668 patents. Arista further petitions for review of the Final ID's finding that assignor estoppel precludes Arista from challenging the validity of the '577 and '853 patents. Arista requests contingent review of the Final ID's finding that claim 46 of the '853 patent is invalid as anticipated and indefinite should the Commission review the ALJ's non-infringement findings with respect to that claim. Arista also requests contingent review of the issue of indirect infringement regarding the '853, '211, '875, and '492 patents should the Commission review the Final ID's findings of no direct infringement with respect to those patents.

OUII petitions for review of the Final ID's finding that the "configurable PiP CoPP" implementation in Arista's accused products infringes the asserted claims of the '668 patent. OUII also petitions for review of the Final ID's reliance on the Patent Trial and Appeal Board decision in finding that claims 1 and 12 of the '211 patent are invalid as anticipated. OUII requests contingent review of the Final ID's finding that Feldmeier anticipates the asserted claims of the '577 patent should the Commission review the Final ID's finding that assignor estoppel applies. OUII further requests contingent review of the Final ID's construction of certain means-plus-functions claims recited in claim 46 of the '853 patent should the Commission review the Final ID's finding that the accused products do not infringe that claim.

On January 10, 2017, Cisco, Arista, and OUII filed responses to the various petitions for review.

On January 11, 2017, Cisco and Arista each filed a post-RD statement on the public interest pursuant to Commission Rule 210.50(a)(4). No responses were filed by the public in response to the post-RD Commission Notice issued on December 20, 2016. *See* Notice of Request for Statements on the Public Interest (Dec. 20, 2016); 81 FR 95194-95 (Dec. 27, 2016).

Having examined the record of this investigation, including the Final ID, the petitions for review, and the responses thereto, the Commission has determined to review the Final ID in part.

With respect to the '577 patent, the Commission has determined to review the Final ID's finding that Arista has indirectly infringed the '577 patent by importing Imported Components, as referenced at page 110 in the Final ID. The Commission has also determined to review the Final ID's finding that Arista's post-importation direct infringement cannot alone support a finding of violation of section 337. The Commission has further determined to review the Final ID's finding that Feldmeier anticipates claims 1, 7, 9, 10, and 15 of the '577 patent.

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With respect to the '853 patent, the Commission has determined to review the Final ID's claim construction findings with respect to claim elements (c), (d), and (f) of claim 46. The Commission has also determined to review the Final ID's findings concerning direct and indirect infringement regarding the '853 patent. The Commission has further determined to review the Final ID's finding that assignor estoppel applies to validity challenges based on indefiniteness. The Commission has also determined to review the Final ID's finding that Feldmeier does not anticipate claim 46.

With respect to the '875 and '492 patents, the Commission has determined to review the Final ID's finding of no direct infringement and the related finding of no indirect infringement. The Commission has also determined to review the Final ID's finding that Cisco has failed to satisfy the technical prong of the domestic industry requirement with respect to the '875 and '492 patents.

With respect to the '668 patent, the Commission has determined to review the Final ID's finding of direct infringement and the Final ID's finding of indirect infringement, in particular as concerns Arista's importation of Imported Components.

With respect to the '211 patent, the Commission has determined to review the Final ID's finding that Cisco has failed to satisfy the technical prong with respect to claims 1 and 12 of the '211 patent, including the Final ID's finding that claims 1 and 12 are invalid.

The Commission has determined not to review the remaining issues decided in the Final ID.

The parties are requested to brief their positions on the issues under review with reference to the applicable law and the evidentiary record. In connection with its review, the Commission is particularly interested in responses to the following questions:

1. Discuss the relevant case law regarding the requirement, pursuant to 35 U.S.C. § 271(c), that to be found liable for contributory infringement, the accused infringer must import into the United States or sell within the United State a device that constitutes a "material part of the invention." In addition, please address whether the Imported Components satisfy this requirement with respect to the '577, '853, and '668 patents. Please cite to and discuss any relevant evidence in the record.

2. Please address whether the Accused ACL Products infringe asserted claim 46 of the '853 patent if the 35 U.S.C. § 112, ¶ 6 (means-plus-function) limitation "means for matching matchable information, said matchable information being responsive to said packet label, with said set of access control patterns in parallel" is construed to require as the corresponding structure an access control memory, including one or more content-addressable memory units of the type shown in Figure 2 of the '853 patent.

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3. Please address whether the Accused ACL Products infringe asserted claim 46 of the '853 patent if the 35 U.S.C. § 112, ¶ 6 (means-plus-function) limitation "means for generating a set of matches in response thereto, each said match having priority information associated therewith" is construed to require as the corresponding structure an access control memory, including one or more content-addressable memory units of the type shown in Figure 2 of the '853 patent.

4. Please address whether the Accused ACL Products with the Petra chip infringe asserted claim 46 of the '853 patent, in particular with respect to the 35 U.S.C. § 112, ¶ 6 (means-plus-function) limitation "means for selecting at least one of said matches in response to said priority information, and generating an access result in response to said at least one selected match."

5. Regarding the 35 U.S.C. § 112, ¶ 6 (means-plus-function) limitation "means for making a routing decision in response to said access result" recited in asserted claim 46 of the '853 patent, please address whether any corresponding structure disclosed in the specification of the '853 patent satisfies the claimed function, other than the structure recited in the Final ID's claim construction or the structures previously proposed by the parties.

6. With reference to question five, please address whether the Accused ACL Products infringe claim 46 of the '853 patent under the proper construction of the 35 U.S.C. § 112, ¶ 6 (means-plus-function) limitation "means for making a routing decision in response to said access result."

7. Please address whether the Accused Loop Guard Products and the DI Loop Guard Products practice the limitation "including a discarding state" recited in claims 1 and 10 of the '875 patent and/or the limitation "including a discarding port state" recited in claim 1 of the '492 patent under the ALJ's claim construction of "discarding [port] state," which requires "a port state in a spanning tree protocol or algorithm in which data frames are neither forwarded to nor received from the port." Please cite to and discuss any relevant evidence in the record.

8. Please address whether the Accused Loop Guard Products and the DI Loop Guard Products practice the limitation "including . . . a listening state" recited in claims 1 and 10 of the '875 patent and/or the limitation "including . . . a listening [port] state" recited in claim 1 of the '492 patent. In particular, please discuss the disclosure in exhibit CX-0653 at pages 63, 66, and 67. In addition, please cite to and discuss any other relevant evidence in the record.

9. With respect to the '668 patent, please address whether the Pip CoPP feature in the '668 Accused Products is a physical port service. In particular, please address the significance of the ALJ's finding on page 196 of the Final ID. In addition, please cite to and discuss any relevant evidence in the record.

The parties have been invited to brief only these discrete issues, as enumerated above, with reference to the applicable law and evidentiary record. The parties are not to brief other issues on review, which are adequately presented in the parties' existing filings.

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue one or more cease and desist orders that could result in the respondent(s) being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, see *Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843 (December 1994) (Commission Opinion).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005, 70 FR 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

WRITTEN SUBMISSIONS: The parties to the investigation, including the Office of Unfair Import Investigations, are requested to file written submissions on the issues identified in this notice. Parties to the investigation, including the Office of Unfair Import Investigations, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding. Complainant and the Office of Unfair Import Investigations are also requested to submit proposed remedial orders for the Commission's consideration. Complainant is further requested to state the dates that the patents expire, the HTSUS numbers under which the accused products are imported, and any known importers of the accused products. The written submissions and proposed remedial orders must be filed no later than close of business on **March 15, 2017**. Initial submissions are limited to 50 pages, not including any attachments or exhibits related to discussion of the public interest. Reply submissions must be filed no later than the close of business on **March 24, 2017**. Reply submissions are limited to 25 pages, not including any attachments or exhibits related to

discussion of remedy, the public interest, and bonding. No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above and submit 8 true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-945") in a prominent place on the cover page and/or the first page. (*See* Handbook for Electronic Filing Procedures, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000).

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this Investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel[1], solely for cybersecurity purposes. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 C.F.R. Part 210).

By order of the Commission.

Lisa R. Barton
Secretary to the Commission

Issued: March 1, 2017

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[1] All contract personnel will sign appropriate nondisclosure agreements.

CERTAIN NETWORK DEVICES, RELATED SOFTWARE
AND COMPONENTS THEREOF (II)

Inv. No. 337-TA-945

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Monica Bhattacharyya, Esq., and the following parties as indicated, on **March 1, 2017.**

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainant Cisco Systems, Inc.:

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UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C. 20436

In the Matter of

**CERTAIN NETWOK DEVICES,
RELATED SOFTWARE AND
COMPONENTS THEREOF (I)**

Investigation No. 337-TA-944

INITIAL DETERMINATION
Administrative Law Judge David P. Shaw

Pursuant to the notice of investigation, 80 Fed. Reg. 4314 (January 27, 2015), this is the

initial determination in *Certain Network Devices, Related Software and Components Thereof (I)*,

United States International Trade Commission Investigation No. 337-TA-944.

It is held that a violation of section 337 of the Tariff Act, as amended, has occurred in the

importation into the United States, the sale for importation, or the sale within the United States

after importation, of certain network devices, related software and components thereof with

respect to asserted claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537; asserted claims 6,

7, 20, and 21 of U.S. Patent No. 6,741,592; and asserted claims 5, 7, 45, and 46 of U.S. Patent

No. 7,200,145.

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The following abbreviations may be used in this Initial Determination:

ALJ	Administrative Law Judge
Br.	Post-Hearing Brief
CDX	Complainant's Demonstrative Exhibit
Compl.	Complainant or Complainant's
CPX	Complainant's Physical Exhibit
CX	Complainant's Exhibit
Dep.	Deposition
DHCP	Dynamic Host Configuration Protocol
DWS	Direct Witness Statement
EDIS	Electronic Document Imaging System
JDX	Joint Demonstrative Exhibit
JPX	Joint Physical Exhibit
JX	Joint Exhibit
MPEP	Manual of Patent Examining Procedure
PTO	U.S. Patent and Trademark Office
Q/A	Question and Answer
RDX	Respondent's Demonstrative Exhibit
Resp.	Respondent or Respondent's
RPX	Respondent's Physical Exhibit
RWS	Rebuttal Witness Statement
RX	Respondent's Exhibit

SDX	Staff's Demonstrative Exhibit
SPX	Staff's Physical Exhibit
SRWS	Supplemental Rebuttal Witness Statement
SWS	Supplemental Witness Statement
SX	Staff's Exhibit
Tr.	Transcript
WS	Witness Statement

I. Background

A. Institution of the Investigation

By publication of a notice in the *Federal Register* on January 27, 2015, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted this investigation to determine:

> [W]hether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain network devices, related software and components thereof by reason of infringement of one or more of claims 1, 2, 8-11, and 17-19 of the '537 patent [U.S. Patent No. 7,162,537]; claims 1, 6, and 12 of the '296 patent [U.S. Patent No. 8,356,296]; claims 1, 5, 6, 9, and 18 of the '164 patent [U.S. Patent No. 7,290,164]; claims 1, 14, 15, 29, 39-42, 63, 64, 71-73, and 84-86 of the '597 patent [U.S. Patent No. 7,340,597]; claims 6-10, 17, 18, 20, 21, 23, and 24 of the '592 patent [U.S. Patent No. 6,741,592]; claims 1, 3, 5, 7-11, 13, 15-29, 33-37, and 39-46 of the '145 patent [U.S. Patent No. 7,200,145], and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

80 Fed. Reg. 4134 (Jan. 27, 2015).

The Commission named as complainant Cisco Systems, Inc. of San Jose, California. *Id.*

The Commission named as respondent Arista Networks, Inc. of Santa Clara, California. *Id.*

The Office of Unfair Import Investigations ("Staff" or "OUII") was also named as a party to the investigation. *Id.*

B. Procedural History

The target date for completion of this investigation was set at 16 months, *i.e.*, May 27, 2016. Order No. 3 (Jan. 28, 2015). The deadline for this initial determination was therefore set for January 27, 2016. *Id.*

Cisco moved to terminate the investigation in part as to the following asserted claims:

- U.S. Patent No. 8,356,296: claims 1, 6, and 12 (all asserted claims);

- U.S. Patent No. 7,340,597: claims 40-42 and 84-86;

- U.S. Patent No. 6,741,592: claims 8-10, 17-18, and 23-24; and

- U.S. Patent No. 7,200,145: claims 1, 3, 8-10, 11, 13, 15-29, 33-37, and 39-44.

The administrative law judge granted the motion in an initial determination. Order No. 19 (Aug. 21, 2015), *aff'd*, Notice of the Commission's Determination Not to Review an Initial Determination Terminating the Investigation As to Certain Claims (Sept. 9, 2015).

A prehearing conference was held on September 9, 2015, with the evidentiary hearing in this investigation beginning immediately thereafter. The hearing concluded on September 16, 2015. *See* Order No. 6 (Mar. 9, 2015); Prehearing Tr. 1-24 (Sept. 10, 2015); Hearing Tr. 1-1494. The parties were requested to file post-hearing briefs not to exceed 450 pages, and to file reply briefs not to exceed 150 pages. Prehearing Tr. 10 (Sept. 10, 2015).

Following the submission of post-hearing briefs, Arista submitted a Notice of New Authority (EDIS Doc. No. 570796) (Dec. 15, 2015) addressing the economic prong of the domestic industry requirement. Cisco submitted a response to Arista's Notice (EDIS Doc. No. 572194) (Jan 11, 2016).

On January 27, 2016, the administrative law judge issued Order No. 27, an initial determination extending the target date of this investigation to June 2, 2016. The deadline for this initial determination is therefore February 2, 2016.

C.   The Private Parties

Cisco Systems, Inc. is a corporation organized and existing under the laws of California, having its principal place of business at 170 West Tasman Drive, San Jose, California, 95134. Compl. ¶ 7.

Arista Networks, Inc. is a corporation organized and existing under the laws of Delaware, having its principal place of business at 5453 Great America Parkway, Santa Clara, California, 95134. *See* Compl. ¶ 12; Resp. ¶ 12.

II.   Jurisdiction and Standing

A.   Subject Matter Jurisdiction

No party has contested the Commission's jurisdiction over the subject matter of this investigation. *See, e.g.*, Compl. Br. at 41-42; Resp. Br at 34; Staff Br. at 8. Indeed, as indicated in the Commission's notice of investigation, discussed above, this investigation involves the alleged importation of products that infringe United States patents in a manner that violates section 337 of the Tariff Act, as amended. Accordingly, it is found that the Commission has subject matter jurisdiction over this investigation.

B.   Personal Jurisdiction

No party has contested the Commission's personal jurisdiction over it. *See, e.g.*, Compl. Br. at 42; Resp. Br. at 34; Staff Br. at 8. Indeed, all parties appeared at the evidentiary hearing, and presented evidence. It is found that the Commission has personal jurisdiction over all parties.

C.   *In Rem* Jurisdiction and Importation

1.   Importation of the Accused Products

The Commission has *in rem* jurisdiction when infringing articles are imported, sold for importation, or sold within the United States after importation by the owner, importer, or consignee. 19 U.S.C. § 1337(a)(1)(B); *see also* 80 Fed. Reg. 4134 (Jan. 27, 2015) (Notice of Investigation). It has long been recognized that an importation of even one accused product can satisfy the importation requirement of section 337. *See Certain Trolley Wheel Assemblies*, Inv.

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No. 337-TA-161, Comm'n Op. at 7-8, USITC Pub. No. 1605 (Nov. 1984) (deeming the importation requirement satisfied by the importation of a single product of no commercial value).

Arista has argued that a violation of section 337 cannot be found in this investigation because [

]. *See, e.g.*, CX-1009C (Arista's First Supplemental Response to Interrogatory No. 40); *see also* Metivier Tr. 1161.

The evidence demonstrates, however, that the accused products have been imported into the United States [   ]. *See, e.g.*, CX-0597C; CX-1009C; JX-0029C; CX-1213C; Metivier Tr. 1160-1161, 1165; Duda Tr. 821-822 ("[

].")· For example, Mr. Metivier, Arista's Vice President of Manufacturing and Platform engineering, testified that [

].

Metivier Tr. 1168, 1172. Arista's Chief Technology Officer, Mr. Kenneth Duda, also testified that [

]. Duda Tr. 823.

Therefore, it is determined that the Commission has *in rem* jurisdiction over the accused products pursuant to 19 U.S.C. § 1337(a).

2.   Importation of Hardware Components

The Commission has *in rem* jurisdiction over "articles that . . . infringe" a United States patent, a set that includes components used in, or are otherwise a part of, contributory and

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induced infringement under 35 U.S.C. § 271(b), (c). *Suprema, Inc. v. Int'l Trade Comm'n,* 796

F.3d 1338, 1346 (Fed. Cir. 2015) *(en banc)* ("'[I]nfringement' is a term that encompasses both

direct and indirect infringement, including infringement by importation that induces direct

infringement of a method claim."); *see Certain Digital Media Devices Including Televisions,*

Blu-Ray Disc Players, Home Theater Sys., Tablets & Mobile Phones, Components Thereof &

Associated Software, Inv. No. 337-TA-882, Final Initial Determination (Aug. 7, 2014) (*"Certain*

Digital Media Devices"). The Commission therefore has jurisdiction over articles that contribute

to or induce direct infringement, even if direct infringement occurs after importation into the

United States. *Suprema,* 796 F.3d at 1347, 1348; *Certain Digital Media Devices* at 22-23.

The record evidence establishes that, [

]. *See, e.g.,* CX-1009C;

JX-0029C; CX-0597C. Cisco alleges that this [

]. *See, e.g.,* Compl. Br. at 375-405. It is argued that the

[

]. *See, e.g.,* Compl. Br. at 45 (citing Duda Tr. 861; Metivier Tr. 1167, 1173;

CX-0035C; CX-0038C; CX-0040C; JX-0026C (Duda Dep. Tr.) 204-205, 266, 267-268,

273-275; JX-0031C (Pech Dep. Tr.) 140-141).

Therefore, it is determined that the Commission has *in rem* jurisdiction over the switch

hardware, inasmuch as they constitute "articles that . . . infringe" pursuant to section 337 and the

Federal Circuit's *en banc* decision in *Suprema.*

D.   Ownership of the Asserted Patents

The asserted patents have each been assigned to Cisco, and the assignments have been

recorded with the U.S. Patent and Trademark Office. *See* JX-0013; JX-0015; JX-0016; JX-0017;

JX-0018. It is therefore determined that Cisco has standing to bring this enforcement action

against Arista.

III.   The Asserted Patents

A.   U.S. Patent No. 7,162,537

1.   Overview of the Technology

The '537 patent is generally directed to a system and method for managing data in

networking devices. JX-0001 ('537 patent) at Abstract. In particular, the '537 patent concerns

the use of router subsystems to externally manage router configuration data stored in a

centralized database, referred to as "sysDB." The '537 patent teaches that, although prior art

systems used a centralized database (*i.e.*, sysDB) to store router configuration data, none allowed

the subsystems to manage the data.

As the '537 patent explains, network devices, such as routers and switches, transfer

network messages and packets within a network or between networks. JX-0001 at col. 1, lns.

19-22. These network devices typically use an operating system to control the functionality

needed to operate. *Id.* at col. 1, lns. 14-18. Network devices also can use a number of

specialized subsystems to perform specific functionality. *Id.* at col. 1, lns. 37-38. For example,

the IP subsystem handles IP address information, and the AAA subsystem deals with user

authentication information. *Id.* at col. 4, lns. 9-11. The '537 patent teaches that prior art

operating systems generally used one of two approaches. In the first approach, devices relied on

each subsystem to manage the specific functions for which it was responsible. *Id.* at col. 1, lns.

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37-40. Although this technique allowed each subsystem to focus on a specific process, it suffered from several drawbacks. In particular, each of the subsystems often had "multiple dependencies with other client subsystem[s]." *Id.* at col. 1, lns. 37-47. These multiple dependencies hindered device performance, for example, by making "common transactions cumbersome and unnecessarily complicated." *Id.* at col. 1, lns. 48-67.

In the second approach, a centralized database system was used to manage network device transactions. JX-0001 ('537 patent) at col. 2, lns. 42-49. The inventor of the '537 patent, Mr. Pradeep Kathail, along with others at Cisco, was awarded U.S. 6,704,752 ("Kathail '752") regarding this centralized database approach. CX-0006C (Kathail WS) at Q/A 42-43; CX-1150. Prior art systems implementing this approach helped to reduce or avoid multiple dependencies among client subsystems by using a central point of coordination. JX-0001 ('537 patent) at col. 2, lns. 55-57. In the system of Kathail '752, for example, "[t]he centralized database system manages a storage structure . . . contain[ing] configuration data for the router. The centralized database then carries out the configuration change in the appropriate tuple[1] node using the configuration information provided in the configuration command issued by the user." CX-1150 at Abstract (emphasis added). Mr. Kathail received additional patents—U.S. Patent Nos. 6,952,703 ("Kathail '703") and 6,728,723 ("Kathail '723")—relating to how the centralized database in this approach would verify and notify others of transactions. CX-0006C (Kathail WS) at Q/A 42-43; CX-1150. As the '537 patent explains, this second approach also suffers from drawbacks. *See* CX-0006C (Kathail WS) at Q/A 42-43. For example, a centrally managed

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[1] In this instance, a tuple is a node on a data storage tree structure. *See* CX-0007C (Almeroth WS) at Q/A 373.

system is inefficient because it requires one database to perform the transactions continuously on stored data, taxing the central database:

> However, the centralized database scheme is somewhat inefficient when the information stored in the database contains a large amount of data or is changing very fast. For example, when the data in the database is constantly changing (such as statistic counters), the sysDB may have to continuously perform transaction routines, notification routines, and verification routines.

JX-0001 ('537 patent) at col. 2, ln. 58 – col. 3, ln. 38.

The central database is also needed to coordinate the activities of all of the individual subsystems, which requires burdensome logic and processing. *See* CX-0006C (Kathail WS) at Q/A 42-43, 57; CX-0007C (Almeroth WS) at Q/A 41.

2. Overview of the '537 Patent

Asserted U.S. Patent No. 7,162,537 ("the '537 patent") is titled, "Method and System for Externally Managing Router Configuration Data in Conjunction With a Centralized Database." JX-0001 ('537 patent). The '537 patent issued on January 9, 2007, and the named inventor is Pradeep Kathail. *Id.*

To address the problems present in the prior art, the '537 patent provides "a method and system for externally managing router configuration data in conjunction with a centralized database [that] allows the various subsystems of the IOS to be modular and independent." *See* JX-0001 ('537 patent) at col. 3, lns. 13-16. As such, the system of the '537 patent maintains modularity by using a centralized database while at the same time reducing some of the computational burden of that centralized database by allowing external subsystems to manage data. *Id.* at col. 3, lns. 13-19. In this way, modularity and independence is achieved without the

drawback of multiple dependencies among client subsystems. *See id.*; CX-0007C (Almeroth WS) at Q/A 42.

The operating system contemplated in the '537 patent includes a database subsystem, sysDB, along with several other subsystems coupled to sysDB, such as an IP subsystem, an Ethernet subsystem, a dialer subsystem, an authentication subsystem, and a point-to-point protocol subsystem. JX-0001 ('537 patent) at col. 7, lns 46-55. As the '537 patent explains, subsystems can submit a registration request to sysDB to externally manage certain router configuration data:

> A managing subsystem registers for external data managing services with the sysDB by transmitting a "managing" registration request. The managing subsystem may register to externally manage router configuration data which would otherwise be maintained within the sysDB tree. Accordingly, the managing subsystem may register to externally manage an individual tuple of the sysDB tree or an entire sub-tree (or namespace) of the sysDB tree.

Id. at col. 5, lns. 18-25.

According to the '537 patent, its invention differs from prior art systems in a number of ways. For example, whereas in the prior art systems "the centralized database . . . carries out the configuration change," the system of the '537 patent transfers that role to the external managing subsystem. JX-0001 ('537 patent) at col. 14, ln. 65 – col. 15, ln. 2; *see* CX-1150 at col. 3, lns. 41-44. Compared to the prior art, external management also allows the central database to avoid certain processing required to coordinate modifications to data stored within. *See* CX-0007C (Almeroth WS) at Q/A 42, Q/A 47.

Some benefits of external management are seen by comparing the steps for updating data in the '537 patent using an external manager (Figure 8) with the steps for updating data in the prior art Kathail '752 patent using sysDB without external management (Figure 5). As shown

below in demonstrative CDX-0020C-0000, prior art systems required significant functionality

that was rendered unnecessary with external management. For example, Kathail '752 requires

that several tasks be performed by the centralized database system when a change is requested,

inasmuch as the centralized database system is the manager. These tasks include checking

whether the data is locked in step 200, refusing the change in step 230 if the data were locked,

and then communicating that refusal in step 240:

'752 Patent, Fig. 5 and '537 Patent, Fig. 8

Centralized Management ('752 Patent)   External Management ('537 Patent)

RX-0066, Kathail '752 Patent, Fig. 5   JX-0001, Kathail '537 Patent, Fig. 8
                                                                        CDX-0020C-0000
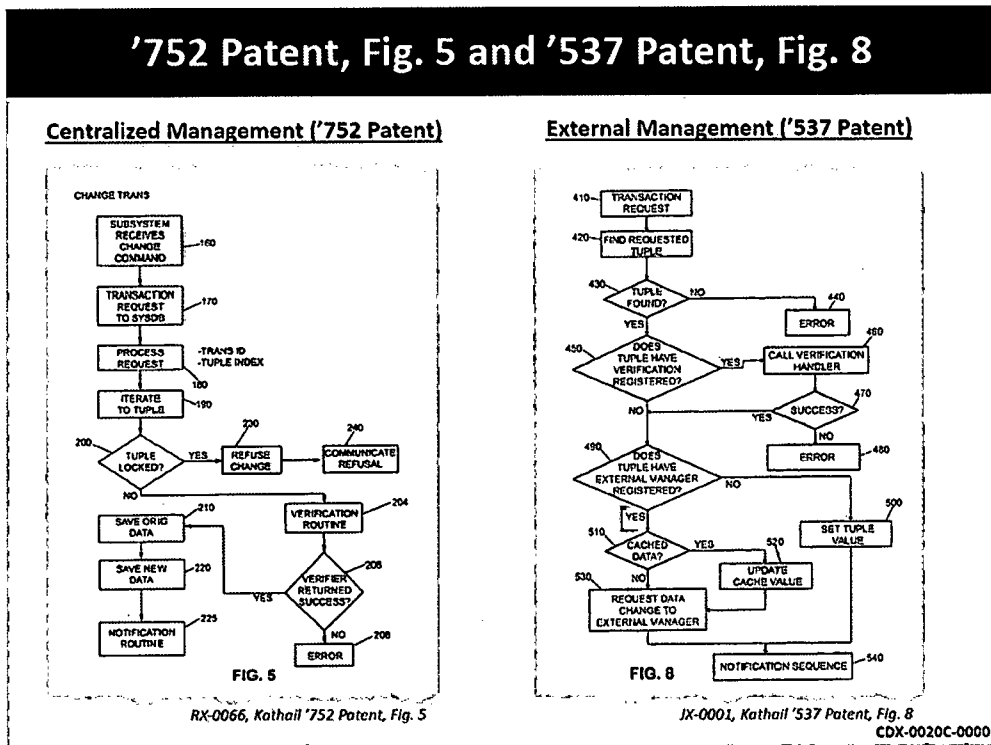
CDX-0020C-0000 (citing CX-1150 (Kathail '752) at Fig. 5; JX-0001 ('537 patent) at Fig. 8).

These steps were all required in the context of the '752 patent because sysDB managed

all the data, and therefore managed access to the data by the subsystems. CX-0007C (Almeroth

WS) at Q/A 169. By contrast, the '537 patent does not require that those tasks be carried out by

the centralized database. Rather, the subsystems responsible for the data manage them directly,

and it is therefore unnecessary for the centralized database to lock and unlock the data or

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otherwise to manage access to the data by the subsystems. *Id.* The computational steps required for centralized management of data that are depicted in Figure 5 the '752 patent are absent when external management is available, as shown in Figure 8 of the '537 patent. CX-0007C (Almeroth WS) at Q/A 169; JX-0001 ('537 patent) at Figs. 5, 8. Moreover, if the data are not externally managed, the '537 patent indicates in box 500 of Figure 8 that data updates are handled according to the method disclosed in Kathail '752. JX-0001 ('537 patent) at Fig. 8; col. 14, lns. 44-54.

Thus, the claimed inventions of the '537 patent provide independence between the various subsystems of the IOS by eliminating dependencies between multiple individual subsystems through the use of a centralized database. JX-0001 ('537 patent) at col. 5, lns. 41-50. The '537 patent also teaches that the claimed inventions avoid and reduce the disadvantages associated with such a database by allowing individual subsystems to manage the data outside of the database. *Id.*

3. The Asserted Claims

Cisco asserts independent claims 1, 10, and 19 from the '537 patent, as well as dependent claims 2, 8, 9, 11, 17, and 18.[2] The relevant claims read as follows:

> 1. A method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:
>
> > a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management

---

[2] Cisco relies on claims 1, 2, 8, 10, 11, 17, and 19 of the '537 patent to argue satisfaction of the technical prong of the domestic industry requirement. *See* Compl. Br. at 27.

services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

b) receiving said management registration request by said database subsystem; and

c) registering said first managing subsystem for external management by said database subsystem.

2. The method of claim 1 further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

8. The method of claim 1 further comprising:

(a) transmitting a change request for router data by a requesting subsystem to said database subsystem;

(b) receiving said change request by said database subsystem;

(c) determining whether said router data is externally managed by a second managing subsystem; and

(d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

9. The method of claim 8 further comprising:

a) determining whether said router data is locally cached; and

b) updating the cache value to said router data when said router data is locally cached.

10. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for reducing computational overhead in a centralized database system by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, said method comprising:

(a) transmitting a management registration request by said first managing subsystem to said database subsystem, said registration

request indicating router configuration data for which said first managing subsystem is requesting to provide external management services, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;

(b) receiving said management registration request by said database subsystem; and

(c) registering said first managing subsystem for external management by said managing subsystem.

11. The program storage device of claim 10, said method further comprising maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

17. The program storage device of claim 10, said method further comprising:

(a) transmitting a change request for router data by a requesting subsystem to said database subsystem;

(b) receiving said change request by said database subsystem;

(c) determining whether said router data is externally managed by a second managing subsystem; and

(d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.

18. The program storage device of claim 17, said method further comprising:

(a) determining whether said router data is locally cached; and

(b) updating the cache value to said router data when said router data is locally cached.

19. In a router device having a processor and memory, a router operating system executing within said memory comprising:

(a) a database subsystem;

(b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem, one of said client subsystems configured as a managing subsystem to externally manage router data upon issuing a management request to said database subsystem; and

(c) a database operatively coupled to said database subsystem, said database configured to store router configuration data and delegate management of router configuration data to a management subsystem that requests to manage router configuration data, said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.

4. The '537 Products at Issue

a. Accused Arista Products

The Accused '537 Products are Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7280E, 7300, 7300X, and 7500E series switches. *See* CX-0007C (Almeroth WS) at Q/A 24. Arista switches, including the switches named above, run Arista's "Extensible Operating System," or "EOS." CX-0007C (Almeroth WS) at Q/A 82; CX-0179. At the center of EOS is "Sysdb," a centralized database that Cisco contends contains the complete state of the system and interfaces with various subsystems called "agents." CX-0286 at 4-5; *see also* CX-0007C (Almeroth WS) at Q/A 85; JX-0026C (Duda Dep. Tr.) at 37-38.

b. Cisco Domestic Industry Products

Cisco's '537 Domestic Industry Products are the CRS-1, XR 12000, and the ASR 9000 platforms, which use Cisco's IOS XR operating system. Mr. Kathail, the named inventor of the '537 patent, worked on IOS XR under its previous name of IOS ENA. CX-0006C (Kathail WS) at Q/A 10, Q/A 17-18, Q/A 99. IOS XR uses a centralized database called SysDB. *Id.* at Q/A 19; CX-0007C (Almeroth WS) at Q/A 284. In IOS XR, a subsystem process may register with

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SysDB to be an "External Data Manager" (or "EDM") for a particular set of data that it identifies in a registration request. CX-0471C; CX-0007C (Almeroth WS) at Q/A 284-294.

B.   U.S. Patent No. 7,340,597

1.   Overview of the Technology

The invention of the '597 patent is a computer networking communications device invented by Arista founder David Cheriton while he working as an engineer at Cisco. The '597 patent relates to communication networks, which allow for access to information and services provided by remote devices. JX-0004 ('597 patent) at col. 1, lns. 12-16. Convenient access to remote information and services makes it easier for an attacker to take over networked communications devices, however, to cripple the network or "to proceed with further compromise of the network's security." *Id.* at col. 1, lns. 35-36.

The '597 patent teaches that prior attempts to implement a secure, robust, and flexible logging and reporting mechanism to monitor system changes on communications devices as they occurred typically relied on network monitors external to the communications devices. JX-0004 at col. 2, lns. 7-20. These implementations suffered from multiple problems unique to monitoring security threats in networked environments. First, attacking a router or other devices between a given communications device and its associated network monitor could disable the monitor's access to data and ability to function properly. *Id.* at col. 1, lns. 30-38; col. 2, lns. 16-20. Second, configuration changes reported by a device to an external monitor may cause a network administrator to disable or isolate the device where the change is severe enough to warrant its quarantine. *Id.* at col. 5, lns. 5-16. Third, an external network monitor itself is a target for attacks. *Id.* at col. 1, lns. 30-38; col. 2, lns. 13-20.

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2. Overview of the '597 Patent

Asserted U.S. Patent No. 7,340,597 ("the '597 patent") is titled, "Method and Apparatus for Securing a Communications Device Using a Logging Module." JX-0004 ('597 patent). The '597 patent issued on March 4, 2008, and the named inventor is David R. Cheriton. *Id.*

To address the problems in the prior art, David Cheriton developed the inventions claimed in the '597 patent while working at Cisco. The device includes a "logging module" coupled to a subsystem in the device and uses the full hardware and software capabilities of the device to securely log and report configuration changes within the device itself, without the need for external systems. JX-0004 at col. 2, lns. 21-30. Cheriton's invention solved the three problems with the prior art discussed above.

The '597 patent describes a communication device that itself contains a logging module that is separate from but coupled to one or more of the operative subsystems of the communication device. The device's logging module "determines a configuration of the subsystem 115, detects a change in the configuration of the subsystem 115, and indicates that the change has occurred." JX-0004 at col. 6, lns. 7-10. Inasmuch as the logging module logs each of these changes to the subsystem, the logging module can provide an indication whenever an attacker attempts to circumvent the security of the subsystem. *Id.* at col. 2, lns. 40-42. Unlike the prior art, the logging module of the '597 patent is contained within the device, coupled to its subsystems; it is not distributed across the device or other devices on the network.

Another aspect of the invention disclosed in the '597 patent secures the device's logging module by "substantially restricting" the ability to configure or disable the logging module remotely. JX-0004 at col. 3, lns. 56-62; col. 13, lns. 14-53; Fig. 8. This can be accomplished by structuring the device so that its logging module is not configurable over the device's network

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interface. The invention of the '597 patent also solves the shortcomings of prior art approaches because the device is able to broadcast configuration changes on the network, rather than being restricted to (for example) sending configuration changes to a single remote device. *Id.* at col. 11, lns. 45-51; col. 13, lns. 47-49; Fig. 8. This aspect of the device allows multiple remote external monitors to subscribe and unsubscribe to reports of the device's configuration changes generated by the device's logging module, without reconfiguring the device. This aspect of the device makes it more difficult for an attacker to mask a compromised device by attacking an external monitor.

3. The Asserted Claims

Cisco asserts independent claims 1, 39, and 71, and dependent claims 14, 15, 29, 63, 64,[3] 72, and 73 of the '597 patent.[4] The relevant claims read as follows:

> 1. An apparatus comprising:
>
> a communications device comprising:
>
> a subsystem; and
>
> a logging module, coupled to said subsystem, and configured to detect a change to a configuration of said subsystem of said communications device, and communicate information regarding said change to said configuration of said subsystem of said communications device.
>
> 14. The communications device of claim 1, wherein
>
> the subsystem is a communications interface.
>
> 15. The communications device of claim 14, wherein

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[3] Claims 63 and 64 depend from unasserted claim 40, which depends from asserted claim 39.

[4] Cisco relies on claims 1, 14, 15, 39, 71, and 72 of the '597 patent to argue satisfaction of the technical prong of the domestic industry requirement. *See* Compl. Br. at 31.

the logging module is further configured to restrict a change to a configuration of the logging module by the communications interface.

29. The communications device of claim 1, wherein

the logging module is configured to communicate the change to the configuration of the subsystem by broadcasting the change to the configuration of the subsystem.

39. A method comprising:

detecting a change in a configuration of a subsystem of a communications device wherein a logging module is coupled to said subsystem and said detecting is performed at the logging module; and

communicating information regarding the change comprises causing said logging module to communicate the change information.

40. The method of claim 39, further comprising:

determining the configuration.

63. The method of claim 40, wherein the communicating comprises:

broadcasting the information.

64. The method of claim 63, wherein the broadcasting is performed using the subsystem.

71. A communications device comprising:

a subsystem;

a processor, coupled to the subsystem;

computer readable medium coupled to the processor;

and computer code, encoded in the computer readable medium, configured to cause the processor to:

detect a change in a configuration of the subsystem; and

communicate information regarding the change.

72. The communications device of claim 71, wherein the computer code is further configured to cause the processor to:

determine the configuration.

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73. The communications device of claim 72, wherein the computer code configured to cause the processor to communicate the information regarding the change is further configured to cause the processor to:

broadcast the information.

4. The '597 Products at Issue

a. Accused Arista Products

Cisco has accused Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7280E, 7300, 7300X, and 7500E series network switches of infringing the '597 patent. CX-0001C (Wicker WS) at Q/A 83-261; *see* Compl. Br. at 31. It is argued that these communication devices comprise a subsystem and a logging module named Process Manager or "ProcMgr." CX-0001C (Wicker WS) at Q/A 83-261; *see* Compl. Br. at 31.

b. Cisco Domestic Industry Products

The Cisco '597 Domestic Industry Products ("the '597 DI Products") are the Catalyst 6500, Catalyst 6800, ASR 901, and Nexus 7000 product lines. CX-0001C (Wicker WS) at Q/A 262-316. It is argued that these devices comprise a subsystem and a logging module named On-Board Failure Logging or "OBFL." *Id.*

C. U.S. Patent Nos. Nos. 6,741,592 and 7,200,145

1. Overview of the Technology

A computer network is a system to enable communication among devices, typically computers that are connected to the network. A network is comprised of the hardware and software that allow devices to communicate with one another. CX-0003C (Jeffay WS) at Q/A 26. A common form of a computer network is a Local Area Network or "LAN." LANs typically span a small geographic area such as an office or a building, and are comprised of the hardware and software required to enable communication between devices attached to the

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network. CX-0003C (Jeffay WS) at Q/A 29. Common interconnection devices used to build LANs are devices such as "switches," "hubs," and "bridges." Devices that connect LANs to one another are called "routers." In addition, many networking devices function as both a switch and a router. CX-0003C (Jeffay WS) at Q/A 30.

The acronym "VLAN" stands for "Virtual Local Area Network" and can be conceptualized as a LAN within a LAN. A VLAN is a segment or a subset of a LAN and, like a LAN, is implemented using hardware and software. Networking devices that are members of the same VLAN can communicate with each other as if they are on the same LAN, but devices that are members of separate VLANs are isolated from each other at layer 2.[5] In general, VLANs are used to partition devices on a LAN into sub-LANs to create smaller, private, or secure networks without having to add more networking devices. CX-0003C (Jeffay WS) at Q/A 32.

2. Overview of the '592 and '145 Patents

The '592 patent is entitled, "Private VLANs," and issued on May 25, 2004. JX-0005 ('592 patent). The named inventors are Thomas J. Edsall, Marco Foschiano, Michael Fine, and Thomas Nosella. *Id.* The '145 patent is a continuation of the '592 patent, and the two patents (the "Private VLAN Patents") share the same specification.[6] *See id.*; JX-0006 ('145 patent). Both the '592 and '145 patents expire on May 22, 2020. JX-0005; JX-0006.

The Private VLAN Patents are directed toward mechanisms for separating users' traffic on a networking device using port and VLAN technologies. CX-0003C (Jeffay WS) at Q/A 34. As taught in the Private VLAN Patents, it was common at the time of the invention to separate

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[5] References to numbered layers are with respect to the seven-layer OSI model of computer networking.

[6] Citations will be made to the specification of the '592 patent during discussions of the disclosures of and inventions claimed in both patents.

different users' packet traffic by assigning each user to a different subnetwork or "subnet" identified by a unique layer 3 address. JX-0005 ('592 patent) at col. 1, lns. 12-18. Several disadvantages of this practice are described in the Private VLAN Patents. For instance, only a limited number of subnets may be addressed by a particular network device, thereby restricting the number of users who can be served while having their traffic maintained separately. JX-0005 ('592 patent) at col. 1, lns. 19-22; col. 1, lns. 56-67; CX-0003C (Jeffay WS) at Q/A 44-45. Additionally, managing a large number of subnets within a networking device is burdensome. JX-0005 ('592 patent) at col. 1, lns. 56-67; CX-0003C (Jeffay WS) at Q/A 45.

The Private VLAN Patents purport to overcome these problems by providing special types of ports and VLANs for separating users' traffic on a single LAN, while allowing for greater scalability than was available using subnets. Specifically, the Private VLAN Patents introduce three new types of VLANs (referred to in some claims as a "primary VLAN," an "isolated VLAN," and a "community VLAN") that interact with three new types of ports (referred to in some claims as "promiscuous ports," "isolated ports," and "community ports"). CX-0003C (Jeffay WS) at Q/A 48. The Private VLAN Patents teach that these new VLANs and the corresponding port types work together to separate user traffic on a LAN, while making it easy to add and manage users new to the network.

In one particular embodiment shown in Figure 1 of the Private VLAN Patents, promiscuous ports receive packets from the Internet, and transmit them to user devices, such as servers, through isolated and community ports. CX-0003C (Jeffay WS) at Q/A 49; JX-0005 ('592 patent) at Fig. 1; col. 2, lns. 12-25; col. 3, ln. 62 – col. 4, ln. 7; col. 4, lns. 46-50. By contrast, isolated and community ports receive packets from the user devices and transmit them out to the Internet through promiscuous ports. CX-0003C (Jeffay WS) at Q/A 49; JX-0005 ('592

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patent) at Fig. 1; col. 2, lns. 12-25; col. 4, lns. 52-64; col. 5, lns. 9-19. An isolated port can transfer packets to a promiscuous port, but cannot transfer packets to another isolated port. JX-0005 ('592 patent) at col. 2, lns. 20-26. Such a port is useful to isolate a single device on the network, such as one of the servers, so that no one else on the network can access that device. CX-0003C (Jeffay WS) at Q/A 49; JX-0005 ('592 patent) at col. 2, lns. 12-19. By contrast, a community port is a port that is part of a "community" of ports and can send packets to any other of the community ports in its community, but cannot directly exchange packets with ports that are not part of the community using layer 2 protocol. CX-0003C (Jeffay WS) at Q/A 49, Q/A 53; JX-0005 ('592 patent) at col. 2, lns. 20-26. This allows some users within a "community" to access devices on the network, while isolating other users. CX-0003C (Jeffay WS) at Q/A 49, Q/A 53.

In embodiments shown in Figures 2 and 3 of the Private VLAN Patents, a primary VLAN connects some or all of the promiscuous ports with some or all of the isolated and community ports. As such, packets received from the Internet at a promiscuous port can be transferred to isolated and community ports via a primary VLAN. To ensure the isolation between ports as described above, a primary VLAN is a one-way connection from a promiscuous port to isolated or community ports. Thus, for example, a packet received from a server at an isolated or promiscuous port cannot be transferred to any other port using a primary VLAN. CX-0003C (Jeffay WS) at Q/A 51; JX-0005 ('592 patent) at col. 2, lns. 27-36.

In contrast to a primary VLAN, an isolated VLAN is a VLAN that connects the isolated ports to some or all of the promiscuous ports. Like a primary VLAN, an isolated VLAN is also a one-way connection, but in this instance is directed from the isolated ports to the promiscuous ports; an isolated VLAN cannot transfer packets to other isolated ports or community ports.

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Accordingly, a packet arriving at an isolated port from a server, for example, could not be

directly transferred to a different server that is connected to another isolated port. This

arrangement ensures isolation between the user traffic received at different isolated ports.

CX-0003C (Jeffay WS) at Q/A 52; JX-0005 ('592 patent) at col. 2, lns. 37-45.

Finally, a community VLAN is used to connect the community ports to each other and to

the promiscuous ports. As such, a community VLAN can receive packets from a community

port and transfer them to other "community" ports as well as the promiscuous port. It cannot,

however, send packets to an isolated port, and it is also a one-way connection to the promiscuous

port. CX-0003C (Jeffay WS) at Q/A 53; JX-0005 ('592 patent) at col. 2, lns. 46-62. Community

VLANs thus help users within a community to access shared devices, while still isolating the

members of that community from other users.

3. The Asserted Claims

a. The '592 Patent

From the '592 patent, Cisco asserts independent claims 6, 20, and 21, as well as

dependent claim 7.[7] The relevant claims read as follows:

> 6. A switch, comprising:
>
> > a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network; and
> >
> > a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network, said selected isolated port exchanging packets with said promiscuous port through a

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[7] Cisco relies on these same claims to prove satisfaction of the technical prong of the domestic industry requirement. *See* Compl. Br. at 266-74.

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path inside said switch, and said isolated port not exchanging packets with another isolated port.

7. The switch of claim 6 further comprising:

a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network, each port of said community of ports exchanging packets through a path internal to said switch with said promiscuous port, and said each port of said community of ports exchanging packets with all ports of said plurality of community ports through a path within said switch, and said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch.

20. A switch implementing virtual local area networks (VLANs) in a computer network, comprising:

a first isolated port assigned to a user to receive said user's packet from an external circuit connected to said first isolated port; and

a selected promiscuous port to receive said packet through an isolated VLAN, said packet to be transferred to an external circuit connected to said promiscuous port, said isolated VLAN configured as a one way connection from all isolated ports to all promiscuous ports and also configured to prevent any other isolated port from receiving said user's packets from said isolated VLAN, said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports.

21. A switch implementing virtual local area networks (VLANs) in a computer network, comprising:

a plurality of community ports, including a first community port assigned to a user to receive said user's packet from an external circuit connected to said first community port; and

a plurality of promiscuous ports connected to external circuits to receive said packet through a community VLAN, all other community ports connected to said community VLAN also receiving said packet, but not any other ports of said switch, said community VLAN configured as a one way connection from all community ports in said community VLAN to all promiscuous ports, said all promiscuous ports also connected via a one way primary VLAN to all community ports.

b. The '145 Patent

From the '145 patent, Cisco asserts independent claims 5, 7, 45, and 46.[8] The relevant claims read as follows:

5. A router, comprising:

a port connected to a shared network;

a plurality of user ports;

a first VLAN from the port connected to the shared network to the plurality of user ports, the first VLAN to receive packets from the shared network and transferring them to a designated user port, the first VLAN to reject packets from the user ports;

a second VLAN from the plurality of user ports, the second VLAN to receive packets from the user ports and transferring them to the port connected to the shared network, the second VLAN to prevent transfer of packets from one of the user ports to other user ports, and the second VLAN also to reject packets from the shared network, in order to separate packet traffic of different users.

7. A router, comprising:

one or more promiscuous ports;

one or more isolated ports;

one or more community ports;

a primary VLAN, the primary VLAN to receive packets from outside of the router through the one or more promiscuous ports and to transfer the packets to a selected one of the one or more isolated ports and to transfer the packets to the one or more community ports, the primary VLAN to reject packets from the one or more isolated ports and to reject packets from the one or more community ports;

an isolated VLAN, the isolated VLAN to receive packets from outside of the router through an isolated port of the one or more isolated ports and to transfer the packets to the one or more promiscuous ports, the isolated VLAN to prevent transfer of the packets from the isolated port

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[8] Cisco relies on these same claims to prove satisfaction of the technical prong of the domestic industry requirement. *See* Compl. Br. at 274-80.

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to another isolated port of the one or more isolated ports, and the isolated VLAN to prevent transfer of the packets from the isolated port to the one or more community ports, and the isolated VLAN to reject packets from the one or more promiscuous ports; and

a community VLAN, the community VLAN to receive packets from outside of the router at a community port of the one or more community ports and to transfer the packets to the one or more promiscuous ports and to transfer the packets to any other community ports, the community VLAN to prevent transfer of packets to the one or more isolated ports, the community VLAN to reject packets from the one or more promiscuous ports.

45. A computer readable medium containing executable program instructions for operating a router, the executable program instructions comprising program instructions configured to:

establish a first VLAN from a port connected to a shared network to a plurality of user ports, the first VLAN to receive packets from the shared network and to transfer them to one or more of the user ports, the first VLAN to reject any packets received from the user ports;

establish a second VLAN from the plurality of user ports, the second VLAN to receive packets from the user ports and to transfer them to the port connected to the shared network, the second VLAN to prevent transfer of packets from one of the user ports to other user ports, and the second VLAN also to reject packets from the shared network, to thereby separate packet traffic of different users.

46. A computer readable medium containing executable program instructions for operating a router, the executable program instructions comprising program instructions configured to:

establish a primary VLAN, the primary VLAN to receive packets from outside of the router through the one or more promiscuous ports and to transfer the packets to one or more community ports, the primary VLAN to reject packets received from the one or more community ports; and

establish a community VLAN, the community VLAN to receive packets from outside the router on a community port of the one or more community ports and to transfer the packets to the one or more promiscuous ports and to transfer the packets to any other community ports of the one or more community ports, the community VLAN rejecting packets received from the one or more promiscuous ports.

4. The Private VLAN Products at Issue

a. Accused Arista Products

Cisco contends that Arista's 7010, 7050, 7050X, 7150, 7250X, 7300, and 7300X series network switches that run Arista's EOS software, which in turn supports the private VLAN feature, infringe the asserted claims of the Private VLAN Patents (the "Accused Private VLAN Products"). CX-0003C (Jeffay WS) at Q/A 132-133.

b. Cisco Domestic Industry Products

To show satisfaction of the technical prong of the domestic industry requirement with respect to the Private VLAN Patents, Cisco relies on Cisco's Catalyst 4500 and Catalyst 6500 series switches, the CBS 3110-40 series switches, the Industrial Ethernet 3000 series switches, the Connected Grid 2520 series switches, and the Nexus 3000, Nexus 5000, Nexus 6000, Nexus 7000, and Nexus 9000 series switches with the private VLAN feature (the "Cisco Private VLAN DI Products"). CX-0003C (Jeffay WS) at Q/A 441-442.

D. U.S. Patent No. 7,290,164

1. Overview of the Technology

The '164 patent relates to the configuration and re-configuration of intermediate network devices, such as routers and switches. A network device, which serves to interconnect end-user devices on a computer network, has one or more network interfaces, which is the hardware onto which links connect. *See, e.g.*, CX-0008C (Bhattacharjee WS) at Q/A 34. Configuring a network device requires providing instructions with operational parameters to each network interface on the device. *See, e.g., id.* at Q/A 36. A device may include configuration files referenced by the operating system. *Id.* Configuring a device would also include modifying

these files. *Id.* Network administrators can implement high-level network policy by specifying such instructions. *Id.*

It is common for network devices to have what is known as a Command Line Interface ("CLI") for receiving configuration instructions. *See, e.g.,* CX-0008C (Bhattacharjee WS) at Q/A 37. The device will accept configuration commands, which are strings of text, through the CLI. *Id.* These CLI commands can be input directly, for example by a network administrator using a terminal, or they may be stored in and executed from a file. *Id.*

For example, configuration commands can be used to configure an interface with a network address, such as an IP address. *See, e.g.,* CX-0008C (Bhattacharjee WS) at Q/A 38. Similarly, the device can be given instructions to select which protocols the device must run on a network. *See, e.g., id.* at Q/A 39. These configurations can enable the exchange of routing or forwarding information to facilitate communication on the network. *Id.*

In the context of the '164 patent, provisioning a network device means providing it with configurations for hardware and software to make the device operational. JX-0003 ('164 patent) at col. 1, lns. 32-45; col. 2, lns. 6-12. Once a device has been deployed and its wired links connected, it must be provided with a configuration for it to be operational. CX-0008C (Bhattacharjee WS) at Q/A 43.

The '164 patent addresses the scenario in which a network device has a configuration, but that configuration is lost or modified in a way that prevents the device and the network management system from communicating. Prior to the patent, there was no way to recover that connectivity in an automatic manner. JX-0003 ('164 patent) at col. 1, lns. 46–54. Typically, a user would have to manually enter configuration commands or a technician would need to travel to the customer's premises to manually reconfigure the device. *Id.*

The '164 patent specification discusses a prior art attempt to solve the problem described above called "rollback." Under the rollback mechanism, the current configuration of the device is periodically saved, and the user can roll back to a previous configuration if needed. JX-0003 ('164 patent) at col. 1, ln. 55 – col. 2, ln. 5. Nevertheless, the configuration of a network device embeds information about security, topology, and policy, all of which can change over time. Therefore, the '164 patent explains that "what worked yesterday may not work tomorrow." *Id.* at col. 1, ln. 58 – col. 2, ln. 5. The '164 patent also teaches that rolling back a network configuration may create security vulnerabilities or violate network privacy policies. Therefore, rollback is extremely dangerous, and automatic rollbacks are not advised. *See* CX-0008C (Bhattacharjee WS) at Q/A 47.

2. Overview of the '164 Patent

Asserted U.S. Patent No. 7,290,164 ("the '164 patent") is titled, "Method of Reverting to a Recovery Configuration in Response to Device Faults." JX-0003 ('164 patent). The '164 patent issued on October 30, 2007, and the named inventors are Andrew G. Harvey, John Ng, and Gilbert R. Woodman, III. *Id.*

The inventors conceived a mechanism for the automatic re-provisioning, or reconfiguration, of a network device that has a lost, misconfigured, or corrupted configuration. *See, e.g.,* JX-0003 ('164 patent) at col. 2, lns. 6-9; col. 3, lns. 59-64. The '164 patent teaches a network device that automatically reverts to a recovery configuration stored on the device upon detecting a loss of connectivity resulting from a configuration change. The recovery configuration enables the device to connect to a configuration manager on the network to download a new configuration. *See, e.g., id.* at col. 3, lns. 46-57. The configuration manager is

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an entity coupled to the network and comprising configuration information which may be exchanged with a network device. *Id.* at col. 5, lns. 25-29; Fig. 1.

The scenario envisioned by exemplary claim 1 is one in which the configuration on the network device is changed based on configuration instructions such that the network device loses connectivity with the network. For example, and with reference to Figure 1 of the '164 patent reproduced below, a network administrator at a computer connected to a network (Network A [item 101]) issues configuration instructions to a network device (CPE A [item 110]) in order to change the device's current configuration (e.g., Running Config [item 110B]) to a new configuration:
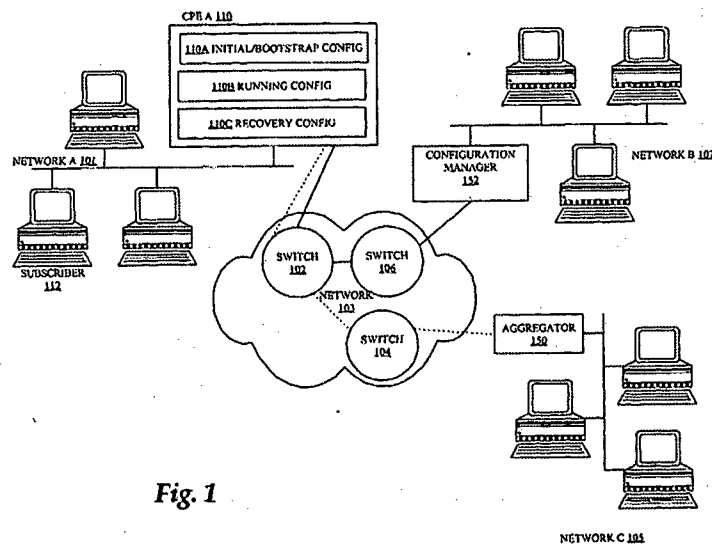
Fig. 1

As recited in claim 1, the network device will detect a loss of connectivity between the device and a network (*e.g.*, Networks A [item 101], B [item 107], or C [item 107]) resulting from the configuration change and revert to a recovery configuration ("Recovery Config" [item 110C]).

The '164 patent requires that the recovery configuration be stored in persistent storage in association with manufacturing the device. JX-0003 ('164 patent) at claims 1, 18. Such storage

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is persistent and can be used beyond just initial provisioning. *Id.* at col 1, lns. 46-54; col. 3, lns. 49-51; col. 7, ln.62 – col. 8, ln. 6; claim 1. Manufacturing the device in this way is one aspect that distinguishes the '164 invention from the rollback prior art, inasmuch as rollback configurations are created post-install. *Id.* at col. 1, ln. 55 – col. 2, ln. 5. Additionally, the '164 patent teaches that the recovery configuration may serve a dual-purpose as a boot configuration loaded during manufacture to enable automatic provisioning of a newly installed device. *Id.* at col. 3, lns. 59-61; col. 1, lns. 32-45.

3. The Asserted Claims

Cisco asserts independent claims 1 and 18, as well as dependent claims 5, 6, and 9 of the '164 patent.[9] The relevant claims read as follows:

> 1. A method of reverting to a recovery configuration in response to faults of a network device, the method comprising the computer-implemented steps of:
>
>> receiving configuration instructions;
>>
>> changing a current configuration to a new configuration based upon the configuration instructions;
>>
>> detecting a loss of connectivity between the device and a network resulting from the configuration change; and
>>
>> recovering from the loss of connectivity by reverting to a recovery configuration, wherein the recovery configuration is stored in a persistent storage of the device in association with manufacturing the device, wherein the recovering step further comprises:
>>
>>> retrieving a recovery configuration;
>>>
>>> making the recovery configuration the current configuration; and
>>>
>>> establishing connectivity to a configuration manager using the recovery configuration.

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[9] Cisco refers to claims 1, 5, 9, and 18 of the '164 patent to argue satisfaction of the technical prong of the domestic industry requirement. *See* Compl. Br. at 41.

5. A method as recited in claim 1, wherein the step of recovering from the loss of connectivity by reverting to a recovery configuration further comprises the steps of:

receiving from the configuration manager a network level configuration; and

replacing the current configuration with the network level configuration.

6. A method as recited in claim 1, wherein the recovery configuration is a boot configuration and wherein establishing connectivity to a configuration manager using the recovery configuration comprises:

establishing connectivity with the configuration manager as a new device.

9. A method as recited in claim 1, wherein retrieving the recovery configuration comprises:

obtaining a configuration for a state enabling the device to establish connectivity to the configuration manager.

18. A computer-readable medium carrying one or more sequences of instructions for reverting to a recovery configuration in response to faults of a network device, which instructions, when executed by one or more processors, cause the one or more processors to carry out the steps of:

receiving configuration instructions;

changing the current configuration to a new configuration based upon the configuration instructions;

detecting a loss of connectivity between the device and a network resulting from the configuration change;

recovering from the loss of connectivity by reverting to a recovery configuration

wherein the recovery configuration is stored in a persistent storage of the device in association with manufacturing the device, wherein the recovering step further comprises:

retrieving the recovery configuration;

making the recovery configuration the current configuration; and

establishing connectivity to a configuration manager using the recovery configuration.

4. The '164 Products at Issue

a. Accused Arista Products

Cisco contends that Arista's 7010, 7048, 7050, 7050X, 7150, 7250X, 7300, 7300X, and 7500E series network switches running Arista's EOS with the Zero Touch Provisioning feature infringe the asserted claims of the '164 patent. CX-0008C (Bhattacharjee WS) at Q/A 87-88.

b. Cisco Domestic Industry Products

Cisco contends that the Nexus 3000, Nexus 5000, Nexus 6000, Nexus 7000 and Nexus 9000 series switches with the Power-on Auto-Provisioning ("PoAP") feature are domestic industry products for the '164 patent. CX-0008C (Bhattacharjee WS) at Q/A 89.

IV. General Principles of Law

A. Claim Construction

Claim construction begins with the plain language of the claim.[10] Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent.[11] *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

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[10] Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

[11] Factors that may be considered when determining the level of ordinary skill in the art include: "(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

In some instances, claim terms do not have particular meaning in a field of art, and claim construction involves little more than the application of the widely accepted meaning of commonly understood words. *Phillips*, 415 F.3d at 1314. "In such circumstances, general purpose dictionaries may be helpful." *Id.*

In many cases, claim terms have a specialized meaning, and it is necessary to determine what a person of skill in the art would have understood the disputed claim language to mean. "Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to 'those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.'" *Id.* (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). The public sources identified in *Phillips* include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.*

In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Id.* at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). The specification is, however, always highly relevant to the claim construction analysis, and is usually dispositive. *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Moreover, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Id.* at 1316.

Claims are not necessarily, and are not usually, limited in scope to the preferred embodiment. *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed. Cir. 2003); *Decisioning.com, Inc. v. Federated Dep't Stores, Inc.*, 527 F.3d 1300, 1314 (Fed. Cir. 2008) ("[The] description of a preferred embodiment, in the absence of a clear intention to limit claim scope, is an insufficient basis on which to narrow the claims."). Nevertheless, claim constructions that exclude the preferred embodiment are "rarely, if ever, correct and require highly persuasive evidentiary support." *Vitronics*, 90 F.3d at 1583. Such a conclusion can be mandated in rare instances by clear intrinsic evidence, such as unambiguous claim language or a clear disclaimer by the patentees during patent prosecution. *Elekta Instrument S.A. v. O.U.R. Sci. Int'l, Inc.*, 214 F.3d 1302, 1308 (Fed. Cir. 2000); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319 (Fed. Cir. 2002).

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, and includes inventor testimony, expert testimony, and learned treatises. *Phillips*, 415 F.3d at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent. *Id.* at 1318. Extrinsic evidence may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

B.   Infringement

1.   Direct Infringement

Under 35 U.S.C. §271(a), direct infringement consists of making, using, offering to sell, or selling a patented invention without consent of the patent owner. The complainant in a section 337 investigation bears the burden of proving infringement of the asserted patent claims by a "preponderance of the evidence." *Certain Flooring Products*, Inv. No. 337-TA-443, Comm'n Notice of Final Determination of No Violation of Section 337, 2002 WL 448690, at *59, (Mar. 22, 2002); *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376 (Fed. Cir. 1998).

Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly.[12] *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. "Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21 (1997) (citing *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605,

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[12] Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). If an accused device lacks a limitation of an independent claim, the device cannot infringe a dependent claim. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

609 (1950)). "The determination of equivalence should be applied as an objective inquiry on an element-by-element basis."[13] *Id.* at 40.

"An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused device 'performs substantially the same function in substantially the same way to obtain the same result' as the claim limitation." *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software*, 659 F.3d at 1139-40.[14]

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the patent, either by amendment or argument. *AquaTex*, 419 F.3d at 1382. In particular, "[t]he doctrine of prosecution history estoppel limits the doctrine of equivalents when an applicant makes a narrowing amendment for purposes of patentability, or clearly and unmistakably surrenders subject matter by arguments made to an examiner." *Id.* (quoting *Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1344 (Fed. Cir. 2005)).

2. Induced Infringement

With respect to induced infringement, section 271(b) of the Patent Act provides: "Whoever actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C.

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[13] "Infringement, whether literal or under the doctrine of equivalents, is a question of fact." *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1130 (Fed. Cir. 2011).

[14] "The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge." *Warner-Jenkinson*, 520 U.S. at 36.

§ 271(b). "To prevail on a claim of induced infringement, in addition to inducement by the defendant, the patentee must also show that the asserted patent was directly infringed." *Epcon Gas Sys. v. Bauer Compressors, Inc.*, 279 F.3d 1022, 1033 (Fed. Cir. 2002). Further, "[s]ection 271(b) covers active inducement of infringement, which typically includes acts that intentionally cause, urge, encourage, or aid another to directly infringe a patent." *Arris Group v. British Telecomms. PLC*, 639 F.3d 1368, 1379 n.13 (Fed. Cir. 2011). The Supreme Court has held that "induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement." *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 131 S. Ct. 2060, 2068 (2011). The Court further held: "[g]iven the long history of willful blindness[ ] and its wide acceptance in the Federal Judiciary, we can see no reason why the doctrine should not apply in civil lawsuits for induced patent infringement under 35 U.S.C. § 271(b)." 131 S. Ct. at 2060 (footnote omitted).

3. Contributory Infringement

As for contributory infringement, section 271(c) of the Patent Act provides: "Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer." 35 U.S.C. § 271(c).

Section 271(c) "covers both contributory infringement of system claims and method claims." *Arris*, 639 F.3d at 1376 (footnotes omitted). To hold a component supplier liable for contributory infringement, a patent holder must show, *inter alia*, that (a) the supplier's product

was used to commit acts of direct infringement; (b) the product's use constituted a material part of the invention; (c) the supplier knew its product was especially made or especially adapted for use in an infringement" of the patent; and (d) the product is not a staple article or commodity of commerce suitable for substantial noninfringing use. *Id.*

C. Validity

1. Anticipation

Anticipation under 35 U.S.C. § 102 is a question of fact. *z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). Section 102 provides that, depending on the circumstances, a claimed invention may be anticipated by variety of prior art, including publications, earlier-sold products, and patents. *See* 35 U.S.C. § 102 (*e.g.*, section 102(b) provides that one is not entitled to a patent if the claimed invention "was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States").

The general law of anticipation may be summarized, as follows:

> A reference is anticipatory under § 102(b) when it satisfies particular requirements. First, the reference must disclose each and every element of the claimed invention, whether it does so explicitly or inherently. *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1375 (Fed.Cir.2006). While those elements must be "arranged or combined in the same way as in the claim," *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed.Cir.2008), the reference need not satisfy an *ipsissimis verbis* test, *In re Bond*, 910 F.2d 831, 832-33 (Fed. Cir. 1990). Second, the reference must "enable one of ordinary skill in the art to make the invention without undue experimentation." *Impax Labs., Inc. v. Aventis Pharms. Inc.*, 545 F.3d 1312, 1314 (Fed.Cir.2008); *see In re LeGrice*, 49 C.C.P.A. 1124, 301 F.2d 929, 940-44 (1962). As long as the reference discloses all of the claim limitations and enables the "subject matter that falls within the scope of the claims at issue," the reference anticipates -- no "actual creation or reduction to practice" is required. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1380-81 (Fed.Cir.2003); *see In re Donohue*, 766 F.2d 531, 533 (Fed. Cir. 1985).

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This is so despite the fact that the description provided in the anticipating reference might not otherwise entitle its author to a patent. *See Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562 (Fed. Cir. 1991) (discussing the "distinction between a written description adequate to support a claim under § 112 and a written description sufficient to anticipate its subject matter under § 102(b)").

In re Gleave, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

2. Obviousness

Under section 103 of the Patent Act, a patent claim is invalid "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."[15] 35 U.S.C. § 103. While the ultimate determination of whether an invention would have been obvious is a legal conclusion, it is based on "underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness." *Eli Lilly and Co. v. Teva Pharmaceuticals USA, Inc.*, 619 F.3d 1329 (Fed. Cir. 2010).

The objective evidence, also known as "secondary considerations," includes commercial success, long felt need, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). "[E]vidence arising out of the so-called 'secondary considerations' must always when present be considered en route to a determination of obviousness." *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Secondary considerations, such as commercial success, will

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[15] The standard for determining whether a patent or publication is prior art under section 103 is the same as under 35 U.S.C. § 102, which is a legal question. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).

not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007) (commercial success did not alter conclusion of obviousness).

"One of the ways in which a patent's subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent's claims." *KSR*, 550 U.S. at 419-20. "[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.*

Specific teachings, suggestions, or motivations to combine prior art may provide helpful insights into the state of the art at the time of the alleged invention. *Id.* at 420. Nevertheless, "an obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way." *Id.* "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* A "person of ordinary skill is also a person of ordinary creativity." *Id.* at 421.

Nevertheless, "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); *see KSR*, 550 U.S. at 416 (a combination of elements must do more

than yield a predictable result; combining elements that work together in an unexpected and

fruitful manner would not have been obvious).[16]

3.   Patentable Subject Matter

A patent may be obtained for "any new and useful process, machine, manufacture, or

composition of matter, or any new and useful improvement thereof." 35 U.S.C. § 101. Section

101 nevertheless "contains an important implicit exception" for abstract ideas, which reflects

"the longstanding rule that '[a]n idea of itself is not patentable.'" *Alice Corp. Pty. Ltd. v. CLS*

Bank Int'l, 134 S. Ct. 2347, 2354 (2014) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)).

Inasmuch as "all inventions" rest upon abstract ideas at some level, tribunals must "tread

carefully in construing this exclusionary principle lest it swallow all of patent law." *Alice*, 134 S.

Ct. at 2354 (quotation marks omitted); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132

S. Ct. 1289, 1293 (2012) (warning "too broad an interpretation of this exclusionary principle

could eviscerate patent law"). It therefore is important to "distinguish between patents that claim

the 'buildin[g] block[s]' of human ingenuity and those that integrate the building blocks into

something more." *Alice*, 134 S. Ct. at 2354 (quoting *Mayo*, 132 S. Ct. at 1303) (modifications in

original).

The Supreme Court has set forth a two-part framework for analyzing Section 101

eligibility. *See Alice*, 134 S. Ct. at 2355. A court first determines whether the asserted claims

involve an underlying abstract idea. *Id.* If so, then it then determines whether the claims

"contain[] an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a

patent-eligible application." *Id.* at 2357 (quoting *Mayo*, 132 S. Ct. at 1294, 1298). This can be

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[16] Further, "when the prior art teaches away from combining certain known elements, discovery
of a successful means of combining them is more likely to be nonobvious." *KSR*, 550 U.S. at
416 (citing *United States v. Adams*, 383 U.S. 39, 52 (1966)).

shown by "solv[ing] a technological problem in 'conventional industry practice,'" "improv[ing] an existing technological process," or "improv[ing] the functioning of the computer itself." *Id.* at 2358-59 (quoting *Diamond v. Diehr*, 450 U.S. 175, 178 (1981)). Inasmuch as a patent is presumed valid, Arista must demonstrate that a patent fails both steps of the *Alice* framework by clear and convincing evidence. *See* 35 U.S.C. § 282; *Microsoft Corp. v. i4i Ltd. P'Ship*, 131 S. Ct. 2238, 2242 (2011); *StoneEagle Servs., Inc. v. Play-Plus Solutions, Inc.*, 2015 WL 4042097, *4 (M.D. Fla. July 1, 2015); *Trading Techs. Int'l, Inc. v. CQG, Inc.*, 2015 WL 774655, *3 (N.D. Ill. Feb. 24, 2015); *see, e.g.*, *Certain Audiovisual Components*, Inv. No. 337-TA-837, 2013 WL 4406820, *45 (July 18, 2013).

4. Written Description

The issue of whether a patent is invalid for failure to meet the written description requirement of 35 U.S.C. § 112, ¶ 1 is a question of fact. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 670 F.3d 1171, 1188 (Fed. Cir. 2012). A patent's written description must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed. The test for sufficiency of a written description is "whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Id.* (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)).

5. Enablement

A patent's specification must "enable a person of ordinary skill in the art to make and use the invention." 35 U.S.C. § 112 ¶ 1 (2006). This requirement is met when, at the time of filing the application, one skilled in the art, having read the specification, could practice the invention without "undue experimentation." *Genentech Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365

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(Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)). Enablement is a

question of law. *Atlas Powder Co. v. E.I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1576 (Fed.

Cir. 1984); *Streck, Inc. v. Research & Diagnostic Sys.*, 665 F.3d 1269, 1288 (Fed. Cir. 2012).

When determining whether or not the amount of experimentation required to make and

use the claimed invention is undue, courts consider the *Wands* factors: the quantity of

experimentation necessary, the amount of direction or guidance presented in the specification,

the presence of working samples, the nature of the invention, the state of the prior art, the relative

skill of those in the art, the predictability or unpredictability of the art, and the breadth of the

claims. *In re Wands*, 858 F.2d 731, 735 (Fed. Cir. 1988).

6.   Indefiniteness

The definiteness requirement of 35 U.S.C. § 112 ensures that the patent claims

particularly point out and distinctly claim the subject matter that the patentee regards to be the

invention. *See* 35 U.S.C. § 112, ¶ 2; *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370

F.3d 1354, 1366 (Fed. Cir. 2004). If a claim's legal scope is not clear enough so that a person of

ordinary skill in the art could determine whether or not a particular product infringes, the claim is

indefinite, and is, therefore, invalid. *Geneva Pharm., Inc. v. GlaxoSmithKline PLC*, 349 F.3d

1373, 1384 (Fed. Cir. 2003).[17]

Thus, it has been found that:

> When a proposed construction requires that an artisan make a separate
> infringement determination for every set of circumstances in which the
> composition may be used, and when such determinations are likely to
> result in differing outcomes (sometimes infringing and sometimes not),
> that construction is likely to be indefinite.

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[17] Indefiniteness is a question of law. *IGT v. Bally Gaming Int'l, Inc.*, 659 F.3d 1109 (Fed. Cir. 2011).

Halliburton Energy Servs. v. M-I LLC, 514 F.3d 1244, 1255 (Fed. Cir. 2008).

The Supreme Court recently addressed the issue of indefiniteness, and stated that a finding of indefiniteness should not be found if the claims, "viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014).

D.   Assignor Estoppel

"Assignor estoppel is an equitable doctrine that prevents one who has assigned the rights to a patent . . . from later contending that what was assigned is a nullity." *Diamond Scientific Co. v. Ambico, Inc.*, 848 F.2d 1220, 1224 (Fed. Cir. 1988). One who assigns patent rights is presumed to have made an "implicit representation" that the rights assigned "are not worthless." *Mentor Graphics Corp. v. Quickturn Design Sys., Inc.*, 150 F.3d 1374, 1377 (Fed. Cir. 1998) (quoting *Diamond*). Thus, an assignor is estopped from raising defenses asserting, in effect, "what [it] has sold as a patent was not a patent." *Diamond*, 848 F.2d at 1224. "The estoppel historically has applied to invalidity challenges based on 'novelty, utility, patentable invention, anticipatory matter, and the state of the art.'" *Id.* (quoting *Babcock v. Clarkson*, 63 F. 607, 609 (1st Cir. 1894)). The bar can also extend to the inequitable conduct equitable defense. *See Shamrock Techs., Inc. v. Med. Sterilization, Inc.*, 903 F.2d 789, 794 (Fed. Cir. 1990).

Assignor estoppel applies to assignors, and to "other parties in privity with the assignor such as a corporation founded by the assignor." *Diamond*, 848 F.2d at 1224. Privity depends on a balancing of equities based on the strength of the relationship between the assignor and the other party. *Shamrock*, 903 F.2d at 793. Privity does not require that the assignor designed or worked on the infringing technology. *Mentor Graphics*, 150 F.3d at 1379 (finding privity between two companies, even though the assignor company did not develop the accused

product). If such facts are present they favor a finding of privity, but they are not required. "What is significant is whether the ultimate infringer availed itself of the inventor's 'knowledge and assistance.'" *Intel Corp. v. U.S. Int'l Trade Comm'n*, 946 F.2d 821, 839 (Fed. Cir. 1991).

E. Equitable Defenses

1. Equitable Estoppel

To establish the affirmative defense of estoppel, an alleged infringer must demonstrate: "(1) misleading conduct, which may include not only statements and action but silence and inaction, leading another to reasonably infer that rights will not be asserted against it; (2) reliance upon this conduct; and (3) due to this reliance, material prejudice if the delayed assertion of such rights is permitted." *Certain Bearings and Packaging Thereof*, Inv. No. 337-TA-487, Initial Determination at 28 (April 10, 2003) (internal citations omitted). Notably, "[r]eliance is not the same as prejudice or harm, although frequently confused . . . [t]o show reliance, the infringer must have had a relationship or communication with the plaintiff which lulls the infringer into a sense of security." *Id.* (quoting *A.C. Aukerman Co. v. R. L. Chaides Constr. Co.*, 960 F.2d 1020, 1033 (Fed. Cir. 1992) (*en banc*)). Material prejudice may be established by a showing of "change of economic position or loss of evidence." *Aukerman*, 960 F.2d at 1033. Additionally, egregious conduct on the part of the alleged infringer must also be considered. *Bearings*, Initial Determination at 28.

It is well-established that all relief, including prospective relief, may be barred by equitable estoppel. *Aukerman*, 960 F.2d at 1041. Nevertheless, application of the doctrine is given to the sound discretion of the trial judge. *Id.* at 1028.

2.   Laches

Section 337(c) provides that "[a]ll legal and equitable defenses may be presented in all cases." 19 U.S.C. § 1337(c). Pursuant to this provision, legal and equitable defenses to infringement cognizable in federal district courts may generally be asserted before the Commission. *See Lannom Mfg. Co. v. U.S. Int'l Trade Comm'n*, 799 F.2d 1572, 1576-79 (Fed. Cir. 1986).

In *Aukerman v. Chaides*, 960 F.2d 1020 (Fed. Cir. 1992) (*en banc*), the Federal Circuit held that the equitable defense of laches applied only to past damages, and could not bar prospective relief. *See Aukerman*, 960 F.2d at 1041 ("[L]aches bars relief on patentee's claim only with respect to damages accrued prior to suit."). Under this authority, the Commission had previously determined that laches is not available as a defense before the Commission. *See Certain Personal Watercraft and Components Thereof*, Inv. No. 337-TA-452, Initial Determination, Order No. 54 at 2 (September 19, 2001) (EDIS Doc. No. 61574) (unreviewed, EDIS Doc. No. 61619); *Certain EPROM, EEPROM, Flash Memory, and Flash Memory Microcontroller Semiconductor Devices*, Inv. 337-TA-395, Supplemental Views of Commission Bragg at n.65, 1998 WL 35428257, at *28 (Oct. 1998) ("The facts of this case suggest an attempt . . . to take what is essentially a laches defense and bootstrap it into prospective relief, which *Aukerman* holds to be impossible.").

The Federal Circuit recently issued an *en banc* decision rejecting *Aukerman*'s "bright line rule" regarding laches and prospective relief. *See SCA Hygiene Products Aktiebolag SCA Personal Care, Inc. v. First Quality Baby Products, LLC*, 807 F.3d 1311 (Fed. Cir. 2015) (*en banc*). The *SCA Hygiene* opinion explained that the court convened *en banc* to resolve whether, "in light of the Supreme Court's recent decision in *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 134

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S. Ct. 1962 (2014), laches remains a defense to legal relief in a patent infringement suit." *Id.* at

1315. Although *Petrella* concerned a copyright infringement cause of action and one of the

issues concerned a delay in the assertion of that cause of action, the *SCA Hygiene* court stated:

"Still, Petrella clearly casts doubt on several aspects of *Aukerman.*" *Id.* at 1321. The *SCA*

Hygiene court held that laches considerations can be applied in assessing prospective relief,

including with respect to injunctions and, in "extraordinary circumstances," to ongoing royalties.

See id. at 1315 ("We emphasize that equitable principles apply whenever an accused infringer

seeks to use laches to bar ongoing relief.").

While it appears to be a matter of first impression, the Federal Circuit's *SCA Hygiene*

decision may provide a basis under some circumstances to assert laches before the

Commission.[18]

In order to prevail in a laches defense in the event that such a defense is appropriate

under the circumstances of this investigation, Arista must prove that (1) Cisco delayed in

bringing an infringement lawsuit for an "unreasonable and inexcusable" length of time from

when it knew or reasonably should have known of its infringement claim against the accused

infringer, and (2) the delay caused "material prejudice" or injury (economic or evidentiary) to the

defendant. *See Aukerman,* 960 F.2d at 1028. A presumption of laches may apply only where the

delay in bringing suit is more than 6 years. *Id.* at 1035. This period begins with a patentee's

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[18] The *SCA Hygiene* court reasoned that although *Aukerman* held that laches could not bar
prospective relief, "[r]eexamination of that rule is necessary in light of *Petrella* and the Supreme
Court's decision in *eBay v. MerchExchange, L.L.C.,* 547 U.S. 388 (2006)." *SCA Hygiene,* 807
F.3d at 1331. However, to the extent the *SCA Hygiene* court's rationale for overruling the
holding in *Aukerman* is based in part on *eBay,* the reasoning based on *eBay* should not apply to
the Commission. *See, e.g., Spansion, Inc. v. Int'l Trade Comm'n,* 629 F.3d 1331, 1359 (Fed. Cir.
2010) ("Given the different statutory underpinnings for relief before the Commission in Section
337 actions and before the district courts in suits for patent infringement, this court holds
that *eBay* does not apply to Commission remedy determinations under Section 337.").

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actual or constructive knowledge of defendant's infringement and counts forward. *Id.* at

1035-36.

3.   Implied License

An implied license may arise "where the circumstances plainly indicate that the grant of a

license should be inferred." *Bandag, Inc. v. Al Bolser's Tire Stores, Inc.*, 750 F.2d 903, 925

(Fed. Cir. 1984) (*citing Hunt v. Armour & Co.*, 185 F.2d 722, 729 (7th Cir. 1950)). An implied

license "signifies a patentee's waiver of the statutory right to exclude others from making, using,

selling, offering to sell, or importing the patented invention," and may be established by:

(1) equitable estoppel, (2) acquiescence, (3) conduct, or (4) legal estoppel. *Wang Lab. v.*

Mitsubishi Elecs. Am., 103 F.3d 1571, 1580-81 (Fed. Cir. 1997).

4.   Patent Misuse

"Patent misuse is an equitable defense to patent infringement." *U.S. Philips Corp. v. Int'l*

Trade Comm'n, 424 F.3d 1179, 1184 (Fed. Cir. 2005). A finding of misuse renders a patent

temporarily unenforceable until the misuse has been purged. *Qualcomm Inc. v. Broadcom Corp.*,

548 F.3d 1004, 1025 (Fed. Cir. 2008) (quoting *B. Braun Medical, Inc. v. Abbott Labs.*, 124 F.3d

1419, 1427 (Fed. Cir. 1997)). "The doctrine of patent misuse is [] grounded in the policy-based

desire to 'prevent a patentee from using the patent to obtain market benefit beyond that which

inheres in the statutory patent right.'" *Princo Corp. v. Int'l Trade Comm'n*, 616 F.3d 1318, 1328

(Fed. Cir. 2010) (*en banc*) (quoting *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 704 (Fed.

Cir. 1992)). Thus, "the key inquiry under the patent misuse doctrine is whether, by imposing the

condition in question, the patentee has impermissibly broadened the physical or temporal scope

of the patent grant and has done so with anticompetitive effects." *Id.* (citing *B. Braun Medical,*

Inc. v. Abbot Labs., 124 F.3d 1419, 1426 (Fed. Cir. 1997)); *see also Monsanto Co. v. McFarling*,

363 F.3d 1336, 1341 (Fed. Cir. 2004) (quoting *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340,

1372 (Fed. Cir. 1998)).

5. Waiver

"[W]aiver is the 'intentional relinquishment or abandonment of a known right.'" *United*

States v. Olano, 507 U.S. 725, 733 (1993) (quoting *Johnson v. Zerbst*, 304 U.S. 458, 464

(1938)). "To support a finding of implied waiver in the standard setting organization context, the

accused must show by clear and convincing evidence that '[the patentee's] conduct was so

inconsistent with an intent to enforce its rights as to induce a reasonable belief that such right has

been relinquished.'" *Hynix Semiconductor Inc. v. Rambus, Inc.*, 645 F.3d 1336, 1348 (Fed. Cir.

2011) (citing *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004, 1020 (Fed. Cir. 2008)).

6. Unclean Hands

A complainant who seeks justice must come into court with clean hands or "the doors of

the court will be shut." *Aptix Corp. v. Quickturn Design Sys., Inc.*, 269 F.3d 1369, 1375 (Fed.

Cir. 2001) (quoting *Keystone Driller Co. v. General Excavator Co.*, 54 S.Ct. 146, 147 (1933)).

To prove unclean hands, Arista must prove that Cisco "conducted [itself] as to shock the moral

sensibilities of the judge." *Gaudiosi v. Mellon*, 269 F.2d 873, 882 (3d Cir. 1959).

F. Domestic Industry

A violation of section 337(a)(1)(B), (C), (D), or (E) can be found "only if an industry in

the United States, with respect to the articles protected by the patent, copyright, trademark, mask

work, or design concerned, exists or is in the process of being established." 19 U.S.C.

§ 1337(a)(2). Section 337(a) further provides:

> (3) For purposes of paragraph (2), an industry in the United States shall be
> considered to exist if there is in the United States, with respect to the
> articles protected by the patent, copyright, trademark, mask work, or
> design concerned—

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

These statutory requirements consist of an economic prong (which requires certain activities)[19] and a technical prong (which requires that these activities relate to the intellectual property being protected). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 13 (May 16, 2008) (*"Stringed Musical Instruments"*). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm'n Op. at 5 (July 22, 2011) (*"Navigation Devices"*).

1.   Technical Prong

"With respect to section 337(a)(3)(A) and (B), the technical prong is the requirement that the investments in plant or equipment and employment in labor or capital are actually related to 'articles protected by' the intellectual property right which forms the basis of the complaint."

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[19] The Commission practice is usually to assess the facts relating to the economic prong at the time that the complaint was filed. *See Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-560, Comm'n Op. at 39 n.17 (Apr. 14, 2010) ("We note that only activities that occurred before the filing of a complaint with the Commission are relevant to whether a domestic industry exists or is in the process of being established under sections 337(a)(2)-(3).") (citing *Bally/Midway Mfg. Co. v. U.S. Int'l Trade Comm'n*, 714 F.2d 1117, 1121 (Fed. Cir. 1983)). In some cases, however, the Commission will consider later developments in the alleged industry, such as "when a significant and unusual development occurred after the complaint has been filed." *See Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, Comm'n Op., at 5-6 (Jan. 20, 2012) ("[I]n appropriate situations based on the specific facts and circumstances of an investigation, the Commission may consider activities and investments beyond the filing of the complaint.").

Stringed Musical Instruments at 13-14. "The test for satisfying the 'technical prong' of the industry requirement is essentially same as that for infringement, i.e., a comparison of domestic products to the asserted claims." *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003). "With respect to section 337(a)(3)(C), the technical prong is the requirement that the activities of engineering, research and development, and licensing are actually related to the asserted intellectual property right." *Stringed Musical Instruments* at 13.

2. Economic Prong

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that "whether a complainant has established that its investment and/or employment activities are significant with respect to the articles protected by the intellectual property right concerned is not evaluated according to any rigid mathematical formula." *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm'n Op. at 27 (Feb. 17, 2011) ("*Printing and Imaging Devices*") (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm'n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines "the facts in each investigation, the article of commerce, and the realities of the marketplace." *Id.* "The determination takes into account the nature of the investment and/or employment activities, 'the industry in question, and the complainant's relative size.'" *Id.* (citing *Stringed Musical Instruments* at 26).

With respect to section 337(a)(3)(C), whether an investment in domestic industry is "substantial" is a fact-dependent inquiry for which the complainant bears the burden of proof. *Stringed Musical Instruments* at 14. There is no minimum monetary expenditure that a complainant must demonstrate to qualify as a domestic industry under the "substantial investment" requirement of this section. *Id.* at 25. There is no need to define or quantify an

industry in absolute mathematical terms. *Id.* at 26. Rather, "the requirement for showing the existence of a domestic industry will depend on the industry in question, and the complainant's relative size." *Id.* at 25-26.

V.   The '537 (SysDB) Patent

A.   Claim Construction

1.   Level of Ordinary Skill

Cisco's expert Dr. Almeroth testified that the level of ordinary skill in the field of art of the '537 patent is a person with a Bachelor of Science degree, or its equivalent, in electrical engineering, computer engineering, computer science, or a related field and either a Master of Science degree, or its equivalent, in one of those fields or approximately two years of related experience in the field of network devices. CX-0007C (Almeroth WS) at Q/A 26.

Arista's expert Mr. Hollingsworth testified that a person of ordinary skill in the art in January 2000, the time the application for the '537 patent was filed, would be a person with an undergraduate degree in computer science, computer engineering, electrical engineering, or a closely related field, along with at least 2-3 years of experience working in the field of computer networks. In Mr. Hollingsworth's opinion, superior education or work experience would compensate for a deficiency in the other. RX-3273C (Hollingsworth WS) at Q/A 37.

Both experts for Cisco and Arista agree that a person of ordinary skill in the art with respect to the '537 patent would have at least a Bachelor of Science degree in computer science, computer engineering, or electrical engineering. Cisco's expert also opines that a person of ordinary skill in the art would have a Master of Science degree, an additional requirement that could be satisfied with two years of experience in a relevant field. This is consistent with the opinion of Arista's expert that a person of ordinary skill in the art would have 2-3 years of

experience in a relevant field. The experts' proposals differ in the particular field in which that experience should be gained. Cisco's expert proposes the field of "network devices," whereas Arista's expert proposes the field of "computer networks."

In view of the expert testimony, it is determined that a person having ordinary skill in the art of the '537 patent is a person with a Bachelor of Science degree in computer science, computer engineering, electrical engineering, or a closely related field, along with at least 2-3 years of experience working in the field of network devices or computer networks.

2. Disputed Claim Terms

a. "externally managing router data" (claims 1 and 10) / "externally manage router data" (claim 19) / "external management" (claims 1 and 10) / "management of" (claim 19)

Below is a chart setting forth the parties' proposed constructions.[20]

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[20] This initial determination addresses only the disputed claim terms identified by the parties as needing construction. *See* Corrected Joint Outline of List of Issues to Be Decided (EDIS Doc. No. 566522) ("Joint Outline of Issues"). The parties identified the claim terms for construction in a joint filing required by Ground Rule 11, which provides: "On the same day the initial posthearing briefs are due, the parties shall file a comprehensive joint outline of the issues to be decided in the final Initial Determination. The outline shall refer to specific sections and pages of the posthearing briefs. Moreover, the claim terms briefed by the parties must be identical. For example, if the construction of the claim term 'wireless device' is disputed, the parties must brief that exact claim term. If a party briefs only a portion of the claim term such as 'wireless' or 'device,' that section of the brief will be stricken." Ground Rule 11 (emphasis original) (attached to Order No. 2 (Issuance of Ground Rules) (Jan. 28, 2015)).

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
The term "externally managing router data" in claims 1 and 10 are part of the preamble, which is not limiting. That term in claim 19 is not part of the preamble but does not need construction. The term "external management" does not require construction. If, however, either the preamble is limiting or a construction is necessary, "maintaining router data outside of the centralized database."	offloading from the centralized database subsystem control and maintenance of the principal non-cached copy of data required to configure a router controlling and maintaining the principal non-cached copy of data required to configure a router outside the centralized database subsystem	The term "externally manage router data" in claims 1 and 10 are part of the preamble, which is not limiting. That term in claim 19 is not part of the preamble but does not need construction. The term "external management" does not require construction.

The phrase "external management" appears in the preambles of claims 1 and 10, and in the body of claim 19. Although the parties disagree on whether the phrase "external management" in the preambles of claims 1 and 10 is a limitation, that dispute is overshadowed by that fact that "external management" is a requirement present in the body of those claims. As proposed by Cisco and the Staff, it is determined that no construction is needed for the claim term "external management." In particular, the construction proposed by Arista introduces terms and concepts that are not supported by the intrinsic evidence.

The claim terms "externally managing router data" and "external management" do not require construction because the meaning of "external management" is plain to a person having ordinary skill. A person having ordinary skill would understand "external management" to mean that the subsystem, which is external to the centralized database system, manages the data. Almeroth Tr. 183-184; CX-0007C (Almeroth WS) at Q/A 62-63. In such circumstances, where

"the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words," further construction is not necessary. *Phillips*, 415 F.3d at 1314; *see also U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (holding that claim construction is not an "exercise in redundancy").

Further construction is unnecessary because the remainder of the claim language itself provides additional information regarding what is required for external management, including precisely what data is managed, where that data is located, and how a subsystem becomes a "managing subsystem." Claim 1, for example, teaches that "external management" involves a "first managing subsystem" that "indicat[es] router configuration data" that it will manage outside the centralized database system by "transmitting a management registration request." *See, e.g.*, JX-0001 ('537 patent) at col. 15, lns. 22-40.

By contrast, Arista's proposed construction is not supported by the intrinsic record. As an initial matter, the terms used by Arista in its construction, *e.g.*, "control" and "principal non-cached copy," are not found in the claims, specification, or prosecution history of the '537 patent. *See, e.g.*, Hollingsworth Tr. 1011; Almeroth Tr. 184. Moreover, inserting "control" in place of "manage" substitutes one word for another without providing a further clarification of meaning. Similarly, inclusion of the term "authoritative" in the proposed construction provides no additional clarity as to the meaning of this phrase.

Accordingly, it is determined that the claim term "external management" and variations thereof do not need construction.

b. "management registration request" (claims 1 and 10) / "management request (claim 19)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
a request to register to provide external management services	request to control and maintain	a request to the sysDB for external management services

The claim terms "management registration request" and "management request" are recited in asserted claims 1, 10, and 19 of the '537 patent. As proposed by Cisco, these terms are construed to mean "a request to register to provide external management services." This construction is consistent with the language of the claims and specification.[21]

According to the claims, the first managing subsystem transmits a "management registration request" "to provide external management services." JX-0001 ('537 patent) at col. 15, lns. 28-32. Consistent with the claims, the specification confirms that a management registration request is a request to register to provide external management services. A "managing subsystem" transmits a "management registration request" to "register to externally manage router configuration data." *Id.* at col. 5 lns. 18-22; *see also id.* at col. 10, lns. 45-47 ("At box 100, a managing subsystem 48 (via local managing unit 52) issues a management registration request to the sysDB 26 for external management services.").

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[21] The construction proposed by the Staff is similar to the adopted construction, but with two differences. First, the Staff proposed that the management registration request be transmitted to "the sysDB," as opposed to the "centralized database system," which is the language used in the claims. Second, the Staff's construction refers to a "request," whereas the adopted construction refers to a "request to register," inasmuch as the claims require that the request be for registration.

c. "router configuration data" (claims 1, 2, 10, 11, and 19)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "data relating to configuration of the router."	data required to configure a router	No construction necessary. If construction is necessary, "data about the configuration of the router."

The claim term "router configuration data" is recited in asserted claims 1, 2, 10, 11, and 19 of the '537 patent. As proposed by Cisco and the Staff, it is determined that no construction is needed for the claim term "router configuration data." In particular, the construction proposed by Arista excludes specific types of data identified in the specification as being "router configuration data."

The record reflects that the term "router configuration data" would be understood by one of ordinary skill in the art in the context of the claims and specification. *See* CX-0007C (Almeroth WS) at Q/A 72-73. Indeed, the claim language itself teaches that "router configuration data" is data "derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." JX-0001 ('537 patent) at col. 18, lns. 35-39. Therefore, reference to the claims themselves would be sufficient for a person having ordinary skill in the art to understand the meaning of the term. Moreover, the '537 patent specification confirms that router configuration data may include any type of "router data" known in the art, listing numerous examples and then expressly stating that router configuration data could include other types of router data as well. *Id.* at col. 3, ln. 64 – col. 4, ln. 11.

By contrast, Arista's proposed construction conflicts with the embodiments of the patent.

As an initial matter, the specification of the '537 patent does not limit "router configuration data" to what is "required" to configure a router. JX-0001 ('537 patent) at col. 4, lns. 20-26. Instead, any type of router configuration data would be consistent with the claim language as long as that data is "derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." JX-0001 ('537 patent) at col. 18, lns. 35-39. Indeed, the specification confirms that a broad variety of data relating to the configuration of a router qualifies as "router configuration data," including any type of "router data" known in the art:

> The configuration information stored on the sysDB may include, for example, Internet protocol (IP) addresses, Ethernet configurations, subnet masks, default routes, protocol configuration, name server information, user and password data, access levels, and other router data as is known in the art.

Id. at col. 3, ln. 67 – col. 4, ln. 5; *see also* col. 6, ln. 66 – col. 7, ln. 3.

This not only includes specific types of data, but broad categories of "router configuration information" such as "fast changing data" or "large amounts of data." *Id.* at col. 4, lns. 20-24.

Accordingly, it is determined that the claim term "router configuration data" does not need construction.

d.   "said database" (claims 1 and 10)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
said database system / the centralized database system	Indefinite	Not indefinite

The term "said database" is recited in asserted claims 1 and 10. Arista argues that the term "said database" is indefinite because it could refer to either the "database system," the "database subsystem," or the "managing subsystem." *See* Resp. Br. at 87-89; RX-3273C (Hollingsworth WS) at Q/A 82. By contrast Cisco and Staff disagree that "said database" is indefinite.[22]

Notwithstanding Arista's argument, the claims and specification are clear that the centralized database subsystem's role is "receiving said management registration request" and "registering said first managing subsystem for external management," whereas the centralized database system's role is, among other things, storing router configuration data. JX-0001 ('537 patent) at col. 15, lns. 37-40; CX-0007C (Almeroth WS) at Q/A 77-81. Moreover, claim 2 clarifies that router configuration data is stored in "said database system," and not said database subsystem. JX-0001 ('537 patent), col. 15, lns. 41-43.

Dr. Almeroth's testimony confirms that a person of ordinary skill in the art would be informed with reasonable certainly that the claim term "said database" recited in claims 1 and 10 refers to the "database system." *See* CX-0007C (Almeroth WS) at Q/A 78, Q/A 81; *see also* Hollingsworth Tr. 1040-1041. Accordingly, it is determined that this claim term is not indefinite.

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[22] Although Cisco proposed a construction for "said database," Cisco also agrees with Staff's proposal that no construction is necessary. *See* Compl. Br. at 66 n.10.

e.   "reducing computational overhead in a centralized database system" (claims 1 and 10)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
Preamble not limiting; if limiting, plain and ordinary meaning which is "reducing the amount of computation in a centralized database system."	reducing transactions, notifications, or verifications processed in a centralized database system	Preamble is limiting. If the preamble is found to be limiting, "reducing multiple dependencies between individual subsystems"

The claim term "reducing computational overhead in a centralized database system" is recited in the preamble of asserted claims 1 and 10. Based on the intrinsic evidence, it is determined that this claim term is limiting.

A preamble limits the scope of a claim if it "recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim. *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (internal citations omitted). "Conversely, a preamble is not limiting 'where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.'" *Id.* (*quoting Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997)). "'[W]hether to treat a preamble as a claim limitation is determined on the facts of each case in light of the claim as a whole and the invention described in the patent.'" *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006) (quoting *Storage Tech. Corp. v. Cisco Sys., Inc.*, 329 F.3d 823, 831 (Fed. Cir. 2003)).

Arista adduced evidence showing that Cisco added this limitation to claims 1 and 10 during prosecution of the '537 patent. Specifically, the file wrapper shows that Cisco added the phrase "for reducing computational overhead" to distinguish the claims from the prior art. The

prosecution history shows that Cisco added the phrase "reducing computational overheard in a centralized database system" to the preamble of claims 1 and 10 to distinguish the claimed invention from the Ciscon reference (RX-3275) and argued that Ciscon "is not an attempt to relieve a database of its computational burden." *See* JX-0007 ('537 Patent Prosecution History) at CSI-ANI-00098149.000342, 389, 456, 465, 468. Cisco argues that the phrase "reducing computational overhead in a centralized database system" should not be read to limit the claims, inasmuch as the Examiner did not accept Cisco's argument that adding this phrase would distinguish the pending claims from the prior art. *See* Compl. Br. at 75-76. Nevertheless, the fact that Cisco amended the pending claims to add this phrase in an attempt to distinguish the prior is enough to render this a limitation of the claims, regardless of whether or not Cisco's arguments with respect to the amendment were ultimately successful.

Inasmuch as Cisco added this phrase during prosecution to distinguish the prior art, it is determined that at least the portions of the preambles of claims 1 and 10 that recite "reducing computational overhead in a centralized database system" are limiting.

Moreover, as proposed by Cisco, the phrase "reducing computational overhead in a centralized database system" is construed to mean "reducing the amount of computation in a centralized database system." This construction reflects the phrase's plain and ordinary meaning to a person of ordinary skill in the art. *See* CX-1217C (Almeroth RWS) at Q/A 42-45.

By contrast, Arista's proposed construction improperly reads in limitations from a description of the prior art. In particular, the '537 patent describes "transaction routines, notification routines, and verification routines" as an "example" of one of the problems with the prior art:

However, the centralized database scheme is somewhat inefficient when the information stored in the database contains a large amount of data or is changing very fast. For example, when the data in the database is constantly changing (such as statistic counters), the sysDB may have to continuously perform transaction routines, notification routines, and verification routines.

JX-0001 ('537 patent) at col. 2, lns. 58-64.

The specification does not, however, limit "reducing computational overhead" to only the reduction of "transaction routines, notification routines, and verification routines." Indeed, when describing the embodiments of the claimed inventions, the specification refers generally to "computational tasks" without limiting them to items listed in Arista's proposed construction:

The CPU 12 carries out the computational tasks associated with executing and running the internetwork operating system (IOS) software of the present invention and comprises circuitry or other hardware as is known in the art.

JX-0001 ('537 patent) at col 6, lns. 52-55.

Moreover, the construction proposed by the Staff also reads in a limitation unnecessarily from the specification. The Staff's proposed construction relies on a particular "objective" of the invention, that of reducing multiple dependencies. *See* JX-0001 ('537 patent) at col. 3, lns. 26-29. Although the claimed inventions of the '537 patent do achieve this goal, limiting the construction of the term "reducing computational overhead in a centralized database system" to only this goal is overly narrow. *See E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003) ("An invention may possess a number of advantages or purposes, and there is no requirement that every claim directed to that invention be limited to encompass all of them.").

Accordingly, it is determined that the claim term "reducing computational overhead in a centralized database system" recited in the preambles of claims 1 and 10 are limiting. It is further determined that the claim term "reducing computational overhead in a centralized

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database system" is construed to mean "reducing the amount of computation in a centralized database system."

> f. "said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database" (claims 1, 10, and 19)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
The plain language requires that router configuration data be "stored in said database"	The plain language requires that configuration commands be "stored in said database"	None provided

The parties did not include proposed constructions of this claim term in the parties' Joint Claim Construction Statement. Nevertheless, both Cisco and Arista addressed this claim term in their post-hearing briefs. *See* Compl. Br. at 67-74; Arista Br. at 65-70. Cisco takes the position that "Arista waived this untimely claim construction argument by failing to include it in the Joint Claim Construction Statement." *See* Compl. Br. at 67. Although the claim term was not identified in the parties' Joint Claim Construction Statement, Arista did disclose its argument regarding this term in response to an interrogatory seeking information regarding Arista's non-infringement positions. *See* CX-1011C (Arista's Ninth Supp. Resp. to Cisco's First, Second, Third and Fourth Set of Rogs) at 35. Arista's arguments will be addressed in the section discussing infringement below.

B.   Literal Infringement Analysis

As discussed below on a claim-by-claim basis, the record evidence establishes that the accused products satisfy all limitations of the asserted '573 patent.

1. Claim 19

Asserted claim 19 is an independent claim, as are asserted claims 1 and 10. Claim 1 is a method claim, claim 10 is directed to machine-executable instructions, and claim 19 is an apparatus claim. Many of the method steps of claim 1 recite limitations similar to those recited in claim 19. The same holds true with the machine-executable instructions recited in claim 10. Therefore, this initial determination will analyze claim 19 before analyzing claims 1 and 10 (and their associated dependent claims).

a. In a router device having a processor and memory, a router operating system executing within said memory comprising:

The record evidence establishes that the Accused '537 Products practice the preamble of claim 19. As Dr. Almeroth testified, the Accused '537 Products are router devices. CX-0007C (Almeroth WS) at Q/A 125-126. The Accused '537 Products have a processor and memory, and they also execute Arista's EOS, a router operating system, within that memory. *Id.* at Q/A 125-126. This is confirmed by the data sheet for Arista's 7010T-48 device, which demonstrates that the devices have a CPU, system, and flash memory. CX-0166. The data sheet further indicates that EOS runs processes in memory and that the processes "exchange state through an in-memory database." *Id.*

b. (a) a database subsystem;

Cisco adduced evidence showing that the Accused '537 Products practice this limitation. The '537 patent teaches that the "database subsystem" is the part of Sysdb that receives the management registration request from an external subsystem and registers the subsystem for external management. JX-0001 ('537 patent) at col. 15, lns 37-40; col. 16, lns. 64-67; col. 18, ln. 29. As described below with respect to the term "externally manage router data," agents in EOS

register for external management by [   ].[23] Thus, as Dr.

Almeroth testified, this limitation is satisfied by the portion of Arista's Sysdb that handles the

"mounting." CX-0007C (Almeroth WS) at Q/A 127.

    c.   **(b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem,**

The evidence establishes that EOS contains numerous "agents," which correspond to the

"plurality of client subsystems" recited in claim 19. CX-0007C (Almeroth WS) at Q/A 128.

Each agent generally handles a particular feature or set of related features. *Id.* at Q/A 86;

CX-0035C at 6. For example, there is an MLAG agent for managing MLAG data, an STP agent

for managing STP, and an LED Driver agent for managing LED data. CX-0007C (Almeroth

WS) at Q/A 86; CX-0286; CX-1098C; CX-0419C at 1, 6; JX-0034C (Sigoure Dep. Tr.) 85-86;

CX-1098C (Transcript of [   ] Presentation) at 3-4. Each of these

agents is coupled to EOS's Sysdb, as discussed above. *See* CX-0286 at Fig. 3.

    d.   **one of said client subsystems configured as a managing subsystem to externally manage router data**

The record evidence shows that Arista's products satisfy this limitation under the claim

constructions adopted above. Specifically, agents in EOS perform external management by

[   ]. CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120, Q/A

130, Q/A 134; JX-0026C (Duda Dep. Tr.) 177-178, 192; Almeroth Tr. 191. When an EOS agent

[   ] data in Sysdb, [

    ]. CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120, Q/A 130, Q/A 134;

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[23] Dr. Almeroth testified: "[

]." CX-0007C (Almeroth WS) at Q/A 88.

see Hollingsworth Tr. 1004; JX-0026C (Duda Dep. Tr.) 192. Moreover, [

                                        ]. CX-0007C (Almeroth WS) at Q/A 91, Q/A 100, Q/A 130,

Q/A 134; Hollingsworth Tr. 1005; JX-0026C (Duda Dep. Tr.) 194-195.

The documentary evidence confirms that EOS's agents externally manage data. For

example, an Arista internal presentation given by [

                                        ], states that [

                    ]. CX-0459C ([   ] Presentation) at

ANI-ITC-944 945-1732776; *see* Duda Tr. 843; Almeroth Tr. 192; JX-0027C ([   ] Dep.

Tr.) 96-97.

A slide from the presentation given by [   ] is reproduced below:

                [

                                                            ]

CX-0459C ([   ] Presentation) at ANI-ITC-944 945-1732776.

Dr. Almeroth testified regarding the slide at the hearing:

Q. What are we seeing here on this slide?

[

]

Almeroth Tr. 192-193.

Dr. Almeroth further testified that the types of data listed in the presentation are explicitly

described by the '537 patent as examples of router configuration data. Almeroth Tr. 193-195.

Arista's expert Dr. Hollingsworth also testified that [

]. For example, he testified that [   ]

presentation shows [   ]:

[

].

Hollingsworth Tr. 1008.

Dr. Hollingsworth also testified that, that in addition to the examples in the presentation

reproduced above, [   ].

Hollingsworth Tr. 1008. Dr. Hollingsworth further testified that [

]. Hollingsworth Tr. 1009. He testified that [

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]:

[

].

Hollingsworth Tr. 1008; *see* CX-1098C (Transcript of [   ]

Presentation) at 2-3 (discussing [   ]);

Almeroth Tr. 192-193.

    Additional evidence establishes that [   ] is pertinent to management. *See*

CX-1098C (Transcript of [   ] Presentation) at 42 ("[

]."");

CX-0035C at 7 ("[

]"); JX-0034C (Sigoure Dep. Tr.) 98 ("[

].").

    e.   **upon issuing a management request to said database subsystem;**

The evidence establishes that the accused products practice this claim limitation because

agents in EOS issue a [   ] request to Sysdb indicating [

]. As discussed above, agents within EOS externally manage data when they

[   ]. CX-0007C (Almeroth WS) at Q/A 90-91,

Q/A 100-120. The first step of a [

]. *See* CX-0223C; CX-0457C at 15-17, 20. This functionality satisfies the

"issuing a management request to said database subsystem" claim limitation under the claim

constructions adopted above. CX-0007C (Almeroth WS) at Q/A 138-142.

> **f.** **and (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data**

Cisco adduced evidence showing that Arista's products have a Sysdb, which stands for

"System Database," including a [   ]." CX-1098C

(Transcript of [   ] Presentation) at 2-3, 7, 15; CX-0007C (Almeroth

WS) at Q/A 206; CX-0459C ([   ] Presentation) at 11. An [   ] is a

software construct for a unit of data. CX-0412C; CX-1098C (Transcript of [

] Presentation) at 15; CX-0035C. The [   ] is a

"database" as described in embodiments of the '537 patent. CX-0007C (Almeroth WS) at Q/A

43; *see* JX-0001 ('537 patent) at col. 4, lns. 30-38. Sysdb is "operatively coupled" to the

database subsystem because [   ]. CX-0007C (Almeroth

WS) at Q/A 143. As explained in more detail below, the "data" stored in Sysdb is "router

configuration data."

> **g.** **and delegate management of router configuration data to a management subsystem that requests to manage router configuration data,**

As demonstrated by the record evidence, when Sysdb processes the write-mount request

described above, Sysdb permits the requesting agent to externally manage the data, and therefore

"delegates management" of that data to that agent as recited in this claim limitation. CX-0007C

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(Almeroth WS) at Q/A 144. As further explained below, the "data" that is externally managed is "router configuration data." Upon receiving a [   ] from an agent, Sysdb will perform the next series of steps [   ]. CX-0223C at 11; CX-0457C at 16, 19-20. [   ]. CX-0223C at 11-14; CX-0457C at 23. Dr. Almeroth testified that this functionality is present in Arista's source code for Sysdb. CX-0007C (Almeroth WS) at Q/A 95, Q/A 99.

> **h.** **said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.**

Cisco has adduced evidence showing that the accused products satisfy this claim limitation under the constructions adopted above. As Dr. Almeroth testified, the claimed router configuration data is "managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120, Q/A 144-162 Q/A 170; *see* CX-0434C; CX-0430C.

The evidence shows that [

                                                    ]. CX-0007C (Almeroth WS) at Q/A 100-120, Q/A 130, Q/A 144-156, Q/A 175; CX-0285 at 460, 964; CX-0500C; CX-0413C. [

                                                    ]. CX-0007C (Almeroth WS) at Q/A 102-106, Q/A 126; CX-0413C at 2, ANI-ITC-944_945-0086713; CX-0417C at 6; CX-1098C (Transcript of [   ] Presentation) at 44. Next, [

]. CX-0007C (Almeroth

WS) at Q/A 146. [

]. CX-0007C (Almeroth WS) at Q/A 146; *see*

Hollingsworth Tr. 1032, 1077-1078. [

]. CX-0007C (Almeroth WS) at Q/A 108-109, Q/A

111, Q/A 115-116, Q/A 130, Q/A 138, Q/A 146, Q/A 155.

The evidence therefore demonstrates that [

], and constitutes the claimed "router configuration data" that is "derived from

configuration commands supplied by a user." Further, the evidence shows that [

] is "derived from" user-supplied configuration commands through a series of steps

"before being stored in said database" where "said database" refers to [   ]. CX-0007C

(Almeroth WS) at Q/A 146.

Arista raises several non-infringement arguments with respect to infringement of this

claim limitation. As discussed below, each of Arista's arguments fails.

Arista argues that "Cisco has failed to identify any 'router configuration data' derived

from commands supplied by a user as being externally managed in Arista switches." *See* Resp.

Br. at 104-06. Arista's argument rests on a criticism of Dr. Almeroth's identification of the

[   ] as producing "router configuration data." *See* Hollingsworth Tr.

1037-1038. Arista argues that the [   ] does not produce "router configuration data," but

is instead concerned with [   ]. *See* Resp. Br. at 105-06. The record evidence, however,

does not support Arista's argument.

Dr. Almeroth testified that, when the configuration commands [

].

CX-0007C (Almeroth WS) at Q/A 112-119. As a result of these commands, [

]. *Id.* This constitutes "router configuration data," inasmuch as the patent states that

"network interface statistic counter information" is a type of such data. JX-0007C (Almeroth

WS) at Q/A 73, Q/A 76; *see* JX-0001 ('537 patent) at col. 4, lns. 20-26. Accordingly, it has been

shown that the [   ], which is reflected by the [   ], is the

claimed "router configuration data."

In addition, the evidence shows that other agents within EOS manage "router

configuration data." Dr. Almeroth testified that other agents, such as [

] all manage router

configuration data. Almeroth Tr. 192-195. Specifically, these agents manage protocol

configuration information, which is identified in the patent specification as a type of router

configuration data. *Id.*; JX-0001 ('537 patent) at col. 3, ln. 67 – col. 4, ln. 5. Dr. Almeroth also

described the overall process for how [

]." CX-0007C (Almeroth WS) at Q/A 144-162.

Arista also argues that the output of the agents in EOS, which Arista refers to as [   ]

data, does not constitute "router configuration data." *See* Resp. Br. at 105; RX-3909C

(Hollingsworth RWS) at Q/A 107. Under the construction of "router configuration data"

adopted above, however, such [   ] is router configuration data. Moreover, Dr. Almeroth

testified that [   ].

CX-0007C (Almeroth WS) at Q/A 153; *see* CX-0419C at 2 ([

]); RX-3912C (Duda RWS) at Q/A 8.

With respect to the claim limitation "storing commands," Arista argues that "storing commands" requires storing the command as entered by the user. *See* Resp. Br. at 92-94. As discussed above in the section addressing claim construction, Arista did not raise this issue in the parties' Joint Claim Construction Statement. Moreover, the intrinsic evidence does not support the limitation of this phrase to storing the actual commands as entered by the user. Nevertheless, the evidence establishes that [

]. *See* CX-0007C (Almeroth WS) at Q/A 155, Q/A 162; Hollingsworth Tr. 1034. Accordingly, Arista's argument must fail.

2.   Claim 1

Independent method claim 1 recites many limitations similar to those recited in independent apparatus claim 19, analyzed above. As with claim 19, the record evidence shows that the accused products satisfy all limitations of claim 1.

a.   A method for reducing computational overhead in a centralized database system

As discussed in the previous section with respect to claim construction, the preamble claim term "reducing computational overhead" was determined to be limiting and was construed to mean "reducing the amount of computation in a centralized database system." The record evidence establishes that the Accused '537 Products meet this limitation under the adopted construction because [

]. In particular, Dr. Almeroth

testified that this architecture reduces computational overhead in the centralized database system

(Sysdb) by reducing the amount of computation in that centralized database system. CX-0007C

(Almeroth WS) at Q/A 163-182; *see also* Hollingsworth Tr. 1036 ("[

]."").

> **b.** **by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:**

Dr. Almeroth testified that the Accused '537 Products meet this element under the

adopted claim constructions for the same reasons as explained above with respect to claim 19. In

particular, the external management is "in conjunction with a centralized database subsystem"

because the centralized database subsystem within Sysdb handles the [

]. CX-0007C (Almeroth WS) at Q/A 127. In addition, as discussed above with respect to

claim 19, the database subsystem is coupled to a plurality of router subsystems, one of which is a

first managing subsystem. CX-0007C (Almeroth WS) at Q/A 86, Q/A 128; CX-1098C

(Transcript of [   ] Presentation) at 3-4.

> **c.** **a) transmitting a management registration request by said first managing subsystem to said database subsystem,**

As Dr. Almeroth testified the Accused '537 Products meet this element under the adopted

claim constructions for the same reasons discussed above with respect to the "management

request" of claim 19. CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120.

d. **said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services,**

The record establishes that the Accused '537 Products meet this element under the adopted claim constructions for the same reasons set forth above with respect to the "management request" limitation of claim 19. In particular, Dr. Almeroth testified that the limitation "indicating router configuration data for which said first managing subsystem is requesting to provide external management services" is met due to the [

]. CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120.

e. **said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;**

Dr. Almeroth testified that the router configuration data present in the accused Arista products satisfies this element for the reasons set forth with respect to claim 19 discussed above. CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120, Q/A 144-162, Q/A 170.

f. **b) receiving said management registration request by said database subsystem;**

The record evidence shows that the Accused '537 Products satisfy this claim limitation. In particular, Dr. Almeroth testified that in Arista's EOS, [

] for at least the reasons discussed with respect to claim 19. CX-0007C (Almeroth WS) at Q/A 90-91, Q/A 100-120. Moreover, the part of Sysdb that receives the mount request in order to perform the mount is the claimed "database subsystem." *See id.*

g.   **and c) registering said first managing subsystem for external management by said database subsystem.**

Dr. Almeroth testified that the Accused '537 Products satisfy this limitation.

Specifically, in Arista's EOS, [   ] for at least the

reasons explained with respect to claim 19. *See* CX-0007C (Almeroth WS) at Q/A 90-91, Q/A

100-120. The part of Sysdb that receives the mount request in order to perform the mount,

thereby registering the agent for external management, is the "database subsystem." *See id.*

3.   Claim 2

a.   The method of claim 1 further comprising

As set forth above, the record evidence shows that the accused products satisfy the

limitations of claim 1.

b.   maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

As Dr. Almeroth testified, EOS maintains router configuration data using [

]. CX-0007C (Almeroth WS) at Q/A 206; CX-0459C at 11;

CX-0412C; CX-0035C at 18-19.

It is therefore determined that the accused products satisfy the limitations of claim 2.

4.   Claim 8

a.   The method of claim 1 further comprising:

As set forth above, the record evidence shows that the accused products satisfy the

limitations of claim 1.

b. **(a) transmitting a change request for router data by a requesting subsystem to said database subsystem;**

The evidence shows that the accused products satisfy this limitation. As Dr. Almeroth testified, the '537 Accused Products transmit a change request for router data by a requesting subsystem to said database subsystem. CX-0007C (Almeroth WS) at Q/A 212-219.

In Arista's EOS, [

]. CX-0007C

(Almeroth WS) at Q/A 213-214; CX-0035C at 18. For example, [

]. CX-0417C; CX-0035C at

14-15. [   ], and

therefore satisfies the "requesting subsystem" limitation of claim 8.

c. **(b) receiving said change request by said database subsystem;**

Dr. Almeroth testified that Sysdb receives the change request by the database subsystem discussed above. CX-0007C (Almeroth WS) at Q/A 215. This limitation is therefore satisfied by the accused products.

d. **(c) determining whether said router data is externally managed by a second managing subsystem; and**

The evidence establishes that the accused products satisfy this claim limitation. Dr. Almeroth testified that the Arista products determine whether the router data is externally managed by a second managing subsystem when [

]. CX-0007C (Almeroth WS) at Q/A 216. Sysdb knows which agents have [   ], and which agents have [   ]. CX-0007C (Almeroth WS) at Q/A 100-120, Q/A 216; *see* JX-0026C (Duda Dep. Tr.) 199-200. Therefore, Sysdb would learn [

]. CX-0007C (Almeroth WS) at Q/A 100-120, Q/A 216. Accordingly, when

[   ]

and is therefore a "second managing subsystem." *Id.*

     e.   **(d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.**

Dr. Almeroth testified that the claim limitation is satisfied when Sysdb propagates the change update to the second managing subsystem so that it will change its own data. CX-0007C (Almeroth WS) at Q/A 216.

     5.   **Claim 9**

     a.   **The method of claim 8 further comprising:**

As set forth above, the record evidence shows that the accused products satisfy the limitations of claim 8.

     b.   **a) determining whether said router data is locally cached; and b) updating the cache value to said router data when said router data is locally cached.**

Evidence adduced at the hearing establishes that the Accused '537 Products satisfy these additional limitations of claim 9. As Dr. Almeroth testified, Arista's products determine whether the router data is locally cached because [

]. CX-0286; CX-1098C; CX-0414C; CX-0434C; CX-0286; CX-0223C; CX-0035C; CX-0007C (Almeroth WS) at Q/A 220. Arista

products update the cache value to said router data when said router data is locally cached

because [

]. CX-0007C (Almeroth WS) at Q/A 220.

6. Claim 10

Asserted claim 10 of the '537 patent is nearly identical to asserted independent method

claim 1, with the exception of the claim terms "program storage device readable by a machine,

tangibly embodying a program of instructions executable by the machine" and "registering said

first managing subsystem for external management by said managing subsystem." The evidence

shows that Arista's Accused '537 Products contain a "program storage device readable by a

machine, tangibly embodying a program of instructions executable by the machine" because they

run EOS, [   ]. CX-0166. Moreover, agents within EOS register for

external management by [   ] and additionally by [

]. CX-0007C (Almeroth WS) at Q/A 98.

Therefore, for these reasons and the reasons discussed above with respect to claim 1, it is

determined that the accused Arista products satisfy all limitations of claim 10.

7. Claim 11

a. The program storage device of claim 10, said method further comprising

As set forth above, the record evidence shows that the accused products satisfy the

limitations of claim 10.

> **b.** **maintaining router configuration data using a tree structure having a plurality of tuples by said database system.**

This additional limitation is identical to the limitation recited in claim 2. For the reasons discussed above with respect to asserted claim 2, it is determined that the Accused '537 Products infringe claim 11.

> **8.** **Claim 17**

>> **a.** **The program storage device of claim 10, said method further comprising:**

As set forth above, the record evidence shows that the accused products satisfy the limitations of claim 10.

>> **b.** **(a) transmitting a change request for router data by a requesting subsystem to said database subsystem; (b) receiving said change request by said database subsystem; (c) determining whether said router data is externally managed by a second managing subsystem; and (d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.**

These additional limitations are identical to limitations recited in claim 8. For the reasons discussed above with respect to asserted claim 8, it is determined that the Accused '537 Products infringe claim 17.

> **9.** **Claim 18**

>> **a.** **The program storage device of claim 17, said method further comprising:**

As set forth above, the record evidence shows that the accused products satisfy the limitations of claim 17.

b.   **(a) determining whether said router data is locally cached; and (b) updating the cache value to said router data when said router data is locally cached.**

These additional limitations are identical to limitations recited in claim 9. For the reasons discussed above with respect to asserted claim 9, it is determined that the Accused '537 Products infringe claim 18.

C.   Indirect Infringement

1.   Specific Intent and Knowledge of the Asserted Patents

Indirect infringement requires that the infringer have specific intent to encourage infringement. *Commil USA, LLC v. Cisco Sys., Inc.,* 135 S. Ct. 1920, 1928 (2015) ("Section 271(b) requires that the defendant 'actively induce[d] infringement.' That language requires intent to 'bring about the desired result,' which is infringement."); *see also Global-Tech Appliances, Inc., v. SEB S.A.,* 131 S. Ct. 2060 (2011). Such specific intent can be shown by, for example, (1) changes in importation practices effectuated to shift infringement liability, (2) the infringer's copying of patented technology, and (3) the infringer's willful blindness of the underlying direct infringement. *See, e.g., SynQor, Inc. v. Artesyn Techs., Inc.,* 709 F.3d 1365, 1384–85 (Fed. Cir. 2013); *Commil USA, LLC,* 135 S. Ct. at 1924-25; *Global-Tech,* 131 S. Ct. at 2071-72.

"Willful blindness" is sufficient to meet the knowledge and specific intent requirement of induced infringement. *Global-Tech,* 131 S. Ct. at 2071-72. A finding of willful blindness requires (1) the subjective belief in the high probability that a fact exists, and (2) the taking of deliberate steps to avoid learning of that fact. *Id.* at 2070. The first prong may be found upon a showing that the party "was successful in its attempts to develop various functions covered by the [asserted] patent into its products." *See, e.g., Suprema,* 796 F.3d. at 1343. The failure to

obtain opinion of counsel through which infringing conduct and/or the asserted patent(s) can be discovered can also support a finding of deliberate avoidance. *Suprema, Inc. v. Int'l Trade Comm'n*, 2015 WL 5315371, *7 (Fed. Cir. Sept. 14, 2015) (panel remand).

As discussed below, Arista's actions indicate that it had specific intent to encourage infringement.[24]

The record evidence shows that Arista changed its importation practices soon after Cisco filed the complaint in this investigation. [

]. *See* CX-1009C (Arista's First Supplemental Response to Interrogatory No. 40); Metivier Tr. 1161. The evidence shows that [

]. Metivier Tr. 1162-1163, 1167, 1174-1175; JX-0029C (Metivier Dep. Tr.) 96. [

]. RX-3914C (Metivier WS) at Q/A 63, Q/A 66, Q/A 69; Metivier Tr. 1162, 1163; CX-1213C; CX-1009C (Arista's Third Supplemental Response to Interrogatory No. 40). [

] therefore lead to the conclusion that Arista had a specific intent to induce infringement through the importation of the accused products.

In addition, the evidence shows that Arista [   ] Cisco products in developing Arista's products. *See, e.g.*, CX-0206C; JX-0026C; JX-0033C; CX-0201C;

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[24] The discussion of Arista's specific intent to encourage infringement also applies to the analysis of the other patents asserted in this investigation.

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CX-0198C; CX-0210C; CX-0200C; CX-0205C; CX-0209C; JX-0022C (Cheriton Dep. Tr.) 104,

105; JX-0042C (Ullal Dep. Tr.) 178-179; JX-0033C (Sadana Dep. Tr.) 27; CX-0001C (Wicker

WS) Q/A 220-225; CX-0003C (Jeffay WS) Q/A 372-376; CX-0007C (Almeroth WS) Q/A

238-242; CX-0008C (Bhattacharjee WS) Q/A 362-366. Cisco has presented [

]. *See, e.g.*, CX-0206C, CX-0201C, CX-0198C, CX-0210C,

CX-0200C; CX-0205C; CX-0209C; Sadana Tr. 1299-1300. For example, [

]" CX-0205C; CX-0198C; Sadana Tr. 1299-1300. Arista's Chief Technology Officer,

Kenneth Duda, testified [

]. JX-0026C (Duda Dep. Tr.) 217-219, 482-483. Mr.

Duda also testified that [

]. CX-0206C; Duda Tr. 837, 838. Similarly, in several instances

Anshul Sadana, Arista's Senior Vice President of Customer Engineering, testified that [

]. JX-0033C (Sadana Dep. Tr.) 211-212, 217, 221, 228, 231. Moreover, Arista's

CEO also testified that [

]. JX-0042C (Ullal Dep. Tr.) 58, 61.

The record evidence also supports a finding that Arista at least intentionally and willfully

blinded itself to knowledge of Cisco's patented technology and Arista's infringing conduct. That

there was a high probability of Arista's subjective belief that it was infringing Cisco's patents is

shown by [   ].

See, e.g., JX-0026C (Duda Dep. Tr.) 217-219, 481, 482-483; JX 0033C (Sadana Dep. Tr.)

211-212, 217, 221, 228, 231; CX-0206C; CX-0201C; CX-0198C; CX-0210C; CX-0200C;

CX-0205C; CX-0209C; Sadana Tr. 1299; Arneja Tr. 1120-1121; CX 0001C (Wicker WS) Q/A

226-228; CX-0003C (Jeffay WS) Q/A 377-380; CX-0007C (Almeroth WS) Q/A 243-246;

CX-0008C (Bhattacharjee WS) Q/A 367-370. Additionally, the record evidence shows that

[

]. For example, Mr. Sadana testified that, at

Arista, [

].

JX-0033C (Sadana Dep. Tr.) 221. As another example, Mr. Bechtolsheim, Arista's co-founder,

testified that [   ]. JX-0020C (Bechtolsheim

Dep. Tr.) 247. Similarly, Mr. Duda testified that [

]." Duda Tr. 789. According to Mr. Duda, [

]. JX-0026C (Duda Dep. Tr.) 159-160, 166.

Therefore, the evidence establishes that Arista was willfully blind to Cisco's patented

technology, thereby showing knowledge and specific intent to cause infringement of the asserted

patents.

Additionally, indirect infringement, both contributory infringement and induced

infringement, requires that the infringer act with knowledge of the patent(s)-at-issue and

infringement thereof. *See, e.g., Aro Mfg. Co. v. Convertible Top Replacement Co., Inc.*, 377 U.S.

476 (1964); *Global-Tech*, 131 S. Ct. at 2060. As a preliminary matter, Arista had knowledge of

the patents asserted in this investigation at least as early as December 4, 2014, by virtue of

Cisco's filing of a complaint against Arista in the Northern District of California, and asserting

the same patents asserted in this investigation. *See e.g.*, CX 1003C; CX-0001C (Wicker WS)

Q/A 217-219; CX-0003C (Jeffay WS) Q/A 371; CX 0007C (Almeroth WS) Q/A 236-237;

CX-0008C (Bhattacharjee WS) Q/A 360-361. Therefore, it is determined that Arista had

specific knowledge of the patents in suit such that it could be liable for inducing infringement

and contributory infringement.[25]

2.   Direct Infringement of the '537 Patent in the United States

Evidence shows that Arista's customers use the Accused '537 Products, including using

Sysdb, in the United States. Arista's witnesses have testified that its customers use Sysdb each

and every time they operate the Accused '537 Products, and that Arista intends for customers to

use the Arista devices this way. JX-003C (Sadana Dep. Tr.) 55-57, 75, 77-78; JX-0026C (Duda

Dep. Tr.) 201-13, 330; JX-0031C (Pech Dep. Tr.) 17-18; JX-0034C (Sigoure Dep. Tr.) 18-20,

27-28, 59, 66, 84-85; CX-0479; CX-0007C (Almeroth WS) at Q/A 231-235. These customers

include, for example, [

       ]. CX-0007C (Almeroth WS) at Q/A 233-235; CX-0347C ([   ]); CX-0236C

([   ]); CX-0237C ([

    ]); CX-0270C ([   ]); CX-0260C ([   ]); CX-0482C

([   ]); CX-0261C ([   ]); CX-0262C ([   ]);

CX-0269C ([   ]); CX-0266C ([   ]); CX-0267C

([   ]); CX-0268C ([   ]); CX-0264C ([   ]);

CX-0265C ([   ]); CX-0331C (ANI-ITC-944_945-1602302); CX-0329C (ANI-ITC-

944_945-1614091); CX-0330C (ANI-ITC-944_945-1624373); RX-3879C (Duda WS) at Q/A 6.

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[25] The discussion of Arista's knowledge of the infringing acts also applies to the analysis of the
other patents asserted in this investigation.

The evidence cited above shows that the Accused '537 Products are used by Arista's customers to meet each limitation of each of the asserted claims in the United States and, moreover, that Arista is aware of its customers' use of Sysdb.

Arista argues that there cannot be direct infringement of the '537 patent at the time of importation because [   ]. *See, e.g.*, RX-3909C (Hollingsworth WS) at Q/A 132-145. Nevertheless, as discussed above in the section addressing importation issues, the record evidence shows that the accused devices

[

]. This alone is sufficient to establish direct infringement at the time of importation. *See, e.g., Certain Absorbent Garments*, Inv. No. 337-TA-508, Order No. 16, 2004 WL 2251882, at *2 (Aug. 20, 2004). In addition, [

]. *See, e.g.*, CX-1349C (Benson WS) at Q/A 15, Q/A 21-27; Benson Tr. 1438-1439, 1454, 1456, 1460-1461. It was established that [

]. *See* Benson Tr. 1448.

3.   Induced Infringement of the '537 Patent

Arista is liable for actively inducing third parties to infringe the '537 patent. Arista knowingly induces infringement by encouraging, instructing, and enabling third parties to use the Accused Products in a manner that infringes the asserted claims of the '537 patent. *See, e.g.*, CX-0007C (Almeroth WS) Q/A 275-279. The record establishes that Arista knows and intends that [   ], and that Arista encourages, aids, facilitates, and otherwise causes use of EOS. *See* JX-0026C (Duda Dep. Tr.) 212-213;

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CX-0273 (Arista document promoting EOS, stating that Sysdb is the "key to EOS benefits");

CX-0256C at ANI-ITC-944_945-3933367 (Sysdb provides [

]). Inasmuch as the Sysdb functionality is [

], Arista promotes and instructs the use of Sysdb [

]. JX-0026C (Duda Dep. Tr.) 212-213 ("[

]."); JX-0033C (Sadana Dep. Tr.) 75. Evidence of Arista's active inducement includes

numerous Arista customer presentations, documents, and manuals. *See, e.g.*, CX-0214;

CX-0075; CX-0273; CX-0286; CX-0673; CX-0335; CX-0328C; CX-0283C; CX-0279C;

CX-0257C; CX-0256C; CX-0274C; CX-0324C; CX-0282C; CX-0281C; CX-0280C;

CX-1031C.

Arista's sales and promotion of switch hardware also induces infringement of the '537

patent because the hardware is designed to run the EOS software, which contains Sysdb. *See*

e.g., CX-0175; JX-0026C (Duda Dep. Tr.) 204-207; 212-213; 273-275; 861; JX-0033C (Sadana

Dep. Tr.) 75; Metivier Tr. 1167, 1173; CX-0035C.

4. Contributory Infringement of the '537 Patent

Arista is also liable for contributory infringement of the '537 patent. The components

implicated in Arista's contributory infringement of the '537 are the Accused Products with EOS,

which are a material part of the claimed invention with no substantial noninfringing uses.

Arista's contention that [   ] does not

absolve Arista of its liability for contributory infringement. *See, e.g.*, CX-0007C (Almeroth WS)

Q/A 249-251. Focusing just on the switch hardware as the component, the switch hardware is

described in the claim limitations of the asserted claims of the '537 patent, and is therefore

material to the invention. *See* JX-0001 ('537 patent). Switch hardware, [

], is particularly necessary for independent apparatus claims 10 and 19, and is material

with respect to performing each of the steps of the limitations in independent method claim 1.

The switch hardware has no substantial non-infringing uses because it is designed for and

used exclusively with EOS, which contains the infringing Sysdb functionality. *See e.g.*,

CX-0007C (Almeroth WS) Q/A 252-273. [

], also contribute to infringement

because [

], and lack

any actual substantial noninfringing use. *See* CX-0007C (Almeroth WS) Q/A 252-273.

D.   Technical Prong of the Domestic Industry Requirement

The record evidence demonstrates that the '537 patent domestic industry products ("'537

DI Products") running Cisco's IOS XR operating system practice the asserted claims of the '537

patent. CX-0007C (Almeroth WS) at Q/A 283-293.

1.   Claim 19

a.   In a router device having a processor and memory, a router operating system executing within said memory comprising:

The record evidence establishes that the '537 DI Products practice the preamble of claim

19. Dr. Almeroth testified that the '537 DI Products are router devices because they perform

routing tasks. CX-0007C (Almeroth WS) at Q/A 310-311; CX-0465 (CRS Data Sheet) at 5. For

example, the term "CRS" in the product name CRS-1 stands for "Carrier Routing System."

CX-0007C (Almeroth WS) at Q/A 311; CX-0465. The evidence further shows that the '537 DI

Products have a processor and memory, and also run a router operating system, IOS XR,

executing within that memory. CX-0007C (Almeroth WS) at Q/A 310-311; CX-0464 (IOS XR Fundamentals); CX-0465 at 5.

b.   (a) a database subsystem;

The '537 patent teaches that the "centralized database system," or "database subsystem," is the part of sysDB that receives the management registration request from a subsystem and registers the subsystem for external management. JX-0001 ('537 patent) at claims 1, 10, 19. Accordingly, Dr. Almeroth testified that the database subsystem limitation of claim 19 is satisfied by the part of Cisco's SysDB that handles registering EDMs. CX-0007C (Almeroth WS) at Q/A 312; CX-0471C (IOS ENA Guide) at 15-5, 15-9, 15-11–15-12, 15-47.

c.   (b) a plurality of client subsystems, each operatively coupled for communication to said database subsystem,

The evidence shows that IOS XR includes a number of processes, each generally focused on particular activities, *e.g.*, activities related to carrying out a particular routing protocol. CX-0007C (Almeroth WS) at Q/A 284, Q/A 313. These processes are "operatively coupled" to the subsystem in SysDB that handles EDM registration requests at least because they transmit the EDM registration requests to SysDB. *Id.* at Q/A 313. Accordingly, the '537 DI Products satisfy this claim limitation.

d.   one of said client subsystems configured as a managing subsystem to externally manage router data

The record evidence establishes that the '537 DI Products satisfy this claim limitation under the claim constructions adopted above. In particular, it has been shown that a process in IOS XR can register as an "EDM." After registration, the EDM is in charge of, among other things, making changes to and responding to query requests for the data that it manages. CX-0007C (Almeroth WS) at Q/A 282-285, Q/A 295-307, Q/A 315; CX-0464 (IOS XR

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Fundamentals); CX-0471C (IOS ENA Guide). Cisco documents state that "the EDM is responsible for processing all operations relating to items in the area of the namespace that it manages." CX-0471C at 15-5. Thus, any "create, delete, set and/or get" requests regarding that data, called "access request[s]," that are sent by the various processes to SysDB, get "redirected by SysDB to the EDM application" for processing by the EDM. CX-0464 at 47; CX-0471C at 15-47-15-48. As a result, other processes that want to obtain copies of or change data for which there is a registered EDM work through SysDB to send either query requests or change requests to the EDM, and the EDM either returns the value, or changes the value and returns it, depending on the request. CX-0007C (Almeroth WS) at Q/A 285, Q/A 295-319; CX-0471C at 15-5, 15-9, 15-47, 15-48; CX-0464 at 47. Even though the data is externally managed, "[t]he client accessing the items does not need to know that they are stored outside SysDB, as it uses the same SysDB API calls to do so." CX-0471C at 15-5. "Client programs communicate with an instance of the SysDB client library via the SysDB API." *Id.*; CX-0007C (Almeroth WS) at Q/A 285, Q/A 295-319, Q/A 299.

Accordingly, the '537 DI Products satisfy this claim limitation because data is stored in the EDM and managed or maintained by it there, and also because the EDM has the most up-to-date data inasmuch as it changes its copy of the data first. CX-0007C (Almeroth WS) at Q/A 285, Q/A 295-319.

> e.   **upon issuing a management request to said database subsystem;**

Cisco adduced evidence showing that a process can register with SysDB to be an EDM for a set of data it identifies in a registration request. CX-0007C (Almeroth WS) at Q/A 285-286; CX-0471C at 15-5; CX-0464 (IOS XR Fundamentals) at 47. The Cisco documentation

explains how a process registers as an EDM, an operation that is shown in the Cisco source code. CX-0007C (Almeroth WS) at Q/A 286-291, Q/A 294; CX-0471C (IOS ENA Guide) at 15-47; CX-0464. Accordingly, it has been shown that the '537 DI Products satisfy this claim limitation under the claim constructions adopted above.

> **f.   and (c) a database operatively coupled to said database subsystem, said database configured to store router configuration data**

As demonstrated by the record evidence, IOS XR's SysDB stores "config" and "oper" data, and therefore is the claimed database configured to store router configuration data. CX-0007C (Almeroth WS) at Q/A 306, Q/A 309, Q/A 320, Q/A 325-327; CX-0471C (IOS ENA Guide) at 15-2; CX-0464 (IOS XR Fundamentals) at 46. SysDB is "operatively coupled" to the database subsystem because the database subsystem is a part of SysDB. CX-0007C (Almeroth WS) at Q/A 306, Q/A 309, Q/A 320, Q/A 325-327. As explained further below, the data stored in SysDB is router configuration data. Accordingly, the '537 DI Products satisfy this claim limitation.

> **g.   and delegate management of router configuration data to a management subsystem that requests to manage router configuration data,**

The evidence shows that the '537 DI Products satisfy this claim limitation because they delegate management to a management subsystem. In particular, a process requests to serve as an external data manager by transmitting a registration request to SysDB. CX-0007C (Almeroth WS) at Q/A 285-286; CX-0464 (IOS XR Fundamentals) at 47; CX-0471C (IOS ENA Guide) at 15-5, 15-9, 15-11–15-12, 15-47. When SysDB processes that request and registers the process as an EDM, SysDB has delegated management to the EDM. CX-0007C (Almeroth WS) at Q/A 282-285, Q/A 295-307, Q/A 315; CX-0464; CX-0471C.

h.　　**said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database.**

Cisco has adduced evidence showing that the EDMs in Cisco's IOS XR externally

manage "router configuration data." Specifically, Cisco's domestic industry products externally

manage all statistical information and real-time counters for ports, which the '537 patent

identifies as types of router configuration data. *See* CX-0007C (Almeroth WS) at Q/A 326-333;

JX-0001 ('537 patent) at col. 4, lns. 20-26 ("certain router configuration information . . . [f]or

example, network interface statistic counter information"); CX-0464 (IOS XR Fundamentals) at

46-48; CX-0471C (IOS ENA Guide) at 15-8; *see also* Hollingsworth Tr. 1044-1045 ("[I]f you're

managing all the fast-changing or large amounts of data, you're going to be also managing router

configuration data.").

The evidence also establishes that the router configuration data in the '537 DI Products is

derived from user-supplied commands. The user of a Cisco switch inputs commands into the

command-line interface. These commands configure the device in various ways, *e.g.*, by starting

or stopping processes or agents, changing parameters of operation of protocols or processes the

device is running such as changing the protocol up or down status of a port, and are therefore the

claimed "configuration commands supplied by a user." CX-0007C (Almeroth WS) at Q/A

326-329, Q/A 333; CX-0464 (IOS XR Fundamentals) at 46-47; CX-0471C (IOS ENA Guide) at

15-8. Next, these configuration commands are executed by the CLI process, which is the

claimed "router configuration subsystem." CX-0007C (Almeroth WS) at Q/A 326-329, Q/A

333. The output of the CLI process's execution of the configuration commands is named "cfg"

and stored in Sysdb. *Id.* at Q/A 326-329, Q/A 333; CX-0464 at 46-48, 107-108. Sysdb then

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requests that the managing process apply the "cfg." CX-0007C (Almeroth WS) at Q/A 326-329, Q/A 333; CX-0464 at 47-4. This application of configuration changes based on the user-issued command results in changes to the "oper" data and other fast-changing or complex data, such as route tables, statistics, and counters, which are among the types of router configuration data stored in Sysdb and managed by EDMs. CX-0007C (Almeroth WS) at Q/A 326-329, Q/A 333; CX-0464 at 46-48; CX-0471C at 15-8. Thus, the "oper" data is derived from configuration commands supplied by a user and satisfies the "router configuration data" claim limitation. CX-0007C (Almeroth WS) at Q/A 326-329, Q/A 333; CX-0464 at 46-48; CX-0471C at 15-8; *see also* CX-0007C (Almeroth WS) at Q/A 300-307 (providing a particularized example of how this process flow is implemented in IOS XR).

Accordingly, it is determined that the '537 DI Products satisfy this claim limitation.

2. Claim 1

Independent method claim 1 recites many limitations similar to those recited in independent apparatus claim 19, analyzed above. As with claim 19, the record evidence shows that the '537 DI Products practice all limitations of claim 1.

a. A method for reducing computational overhead in a centralized database system

As discussed in a previous section with respect to claim construction, the preamble claim term "reducing computational overhead" was determined to be limiting and was construed to mean "reducing the amount of computation in a centralized database system." The record evidence establishes that the '537 DI Products practice this limitation under the adopted construction because the EDM externally manages the data, thereby reducing the work to be done by SysDB. In particular, the evidence states that "the EDM is responsible for processing all

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operations relating to items in the area of the namespace that it manages," and that "by moving

the configuration-derived data into the external data managers, you add less workload into

SysDB." CX-0471C (IOS ENA Guide) at 15-5, 15-9, 15-47, 15-48; JX-0054C (Kathail Dep.

Tr.) 136. Accordingly, any "create, delete, set and/or get" requests regarding that data, called

"access request[s]," that are sent by the various processes to SysDB, get "redirected by SysDB to

the EDM application" for processing by the EDM. CX-0464 (IOS XR Fundamentals) at 47.

> **b.** **by externally managing router data in conjunction with a centralized database subsystem, said database subsystem operatively coupled for communication with a plurality of router subsystems one of which is a first managing subsystem, comprising:**

Dr. Almeroth testified that the '537 DI Products practice this claim limitation under the

adopted claim constructions for the same reasons set forth above with respect to claim 19. In

particular, the external management is "in conjunction with a centralized database subsystem"

because the centralized database subsystem within SysDB handles the write-mount requests in

SysDB. CX-0007C (Almeroth WS) at Q/A 282-285, Q/A 295-307, Q/A 315; CX-0464;

CX-0471C.

> **c.** **a) transmitting a management registration request by said first managing subsystem to said database subsystem,**

Dr. Almeroth testified that the '537 DI Products satisfy this element for the same reasons

set forth above with respect to the "management request" limitation of claim 19. CX-0007C

(Almeroth WS) at Q/A 282-285, Q/A 295-307, Q/A 315; CX-0464; CX-0471C. Specifically, the

claim limitation "indicating router configuration data for which said first managing subsystem is

requesting to provide external management services" is satisfied because a process registers as a

SysDB EDM by "identif[ying] an item or subtree of the SysDB namespace for which it will act

as the EDM." CX-0007C (Almeroth WS) at Q/A 286; CX-0471C at 15-47.

> **d.** **said registration request indicating router configuration data for which said first managing subsystem is requesting to provide external management services,**

Cisco adduced evidence establishing that the '537 DI Products practice this limitation for

the same reasons set forth above with respect to the "management request" limitation of claim

19. CX-0007C (Almeroth WS) at Q/A 286; CX-0471C at 15-47. The limitation "indicating

router configuration data for which said first managing subsystem is requesting to provide

external management services" is satisfied because a process registers as a SysDB EDM by

"identif[ying] an item or subtree of the SysDB namespace for which it will act as the EDM."

CX-0007C (Almeroth WS) at Q/A 286; CX-0471C at 15-47. Further, the requirement that the

registration request indicate "router configuration data" is met under the adopted claim

constructions for the same reasons set forth above with respect to claim 19. CX-0007C

(Almeroth WS) at Q/A 286.

> **e.** **said router configuration data managed by said database system and derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database;**

The record evidence demonstrates that the '537 DI products practice this limitation under

the adopted claim constructions. In particular, Dr. Almeroth testified that the claimed router

configuration data is "managed by said database system and derived from configuration

commands supplied by a user and executed by a router configuration subsystem before being

stored in said database" for the reasons set forth with respect to claim 19 above. CX-007C

(Almeroth WS) at Q/A 326-333; CX-0464; CX-0471C.

f.   b) receiving said management registration request by said database subsystem;

Dr. Almeroth testified that, in Cisco's IOS XR, the agents send the request to serve as an EDM to SysDB. CX-0007C (Almeroth WS) at Q/A 285-286, Q/A 320-324; CX-0471C at 15-5; CX-0464. The part of SysDB that receives the mount request in order to perform the mount is the "database subsystem." *See* CX-0007C (Almeroth WS) at Q/A 285-286, Q/A 290-292, Q/A 320-324. Accordingly, it is determined that the '537 DI Products practice this limitation.

g.   and c) registering said first managing subsystem for external management by said database subsystem.

Dr. Almeroth testified that the '537 DI Products practice this limitation. Specifically, he testified that, in Cisco's IOS XR, the agents send the request to serve as an EDM to SysDB. CX-0007C (Almeroth WS) at Q/A 285-286, Q/A 320-324; CX-0471C at 15-5; CX-0464. The part of SysDB that receives the mount request in order to perform the mount is the "database subsystem." *See* CX-0007C (Almeroth WS) at Q/A 285-286, Q/A 320-324.

3.   Claim 2

a.   The method of claim 1 further comprising

As set forth above, the record evidence shows that the '537 DI Products satisfy the limitations of claim 1.

b.   maintaining router configuration data using a tree structure having a plurality of tuples by said database system.

As Dr. Almeroth testified, SysDB stores information in a tree format, one of the described embodiments for the database. CX-0007C (Almeroth WS) at Q/A 373; CX-0471C at 15-2; CX-0464 at 46.

It is therefore determined that the '537 DI products satisfy the limitations of claim 2.

4. Claim 8

a. The method of claim 1 further comprising:

As set forth above, the record evidence shows that the '537 DI Products satisfy the limitations of claim 1.

b. (a) transmitting a change request for router data by a requesting subsystem to said database subsystem;

The evidence shows that the accused products satisfy this limitation. As Dr. Almeroth testified, the '537 DI Products transmit a change request for router data by a requesting subsystem to said database subsystem. CX-0007C (Almeroth WS) at Q/A 378-383. As explained above, when a process wants to make a change to data, it sends that change request to SysDB. *See id.*

c. (b) receiving said change request by said database subsystem;

Dr. Almeroth testified that Sysdb receives the change request identified above. CX-0007C (Almeroth WS) at Q/A 378-383. This limitation is therefore satisfied by the '537 DI Products.

d. (c) determining whether said router data is externally managed by a second managing subsystem; and

The evidence establishes that the '537 DI Products satisfy this claim limitation. Dr. Almeroth testified that Sysdb determines whether the router data to be changed is externally managed by a second managing subsystem. CX-0007C (Almeroth WS) at Q/A 378-383. Inasmuch as there is no requirement that the "second managing subsystem" manage the same data as the "first managing subsystem," the first managing subsystem (*e.g.*, the STP process) serves as EDM for STP data, and a second managing subsystem (*e.g.*, the OSPF process) serves as EDM for OSPF data. CX-0007C (Almeroth WS) at Q/A 378-383. When a change is

requested for that OSPF data by the claimed "requesting subsystem," Sysdb checks whether that

data is externally managed and learns that it is externally managed by the OSPF process, *i.e.*, the

"second managing subsystem." *See* CX-0464; CX-0471C.

> e. **(d) requesting a data change for said router data to said second managing subsystem by said database subsystem when said database subsystem determines said router data is externally managed by a second managing subsystem.**

Dr. Almeroth testified that the claim limitation is satisfied because, when an EDM

manages data, SysDB "redirects" the change request to the EDM so that the EDM carries out the

change request as described above. CX-0007C (Almeroth WS) at Q/A 378-383.

5. Claim 10

Asserted claim 10 of the '537 patent is nearly identical to asserted claim 1, with the

exception of the claim terms "program storage device readable by a machine, tangibly

embodying a program of instructions executable by the machine" and "registering said first

managing subsystem for external management by said managing subsystem." The evidence

shows that the '537 DI Products contain the claimed "program storage device readable by a

machine, tangibly embodying a program of instructions executable by the machine." *See*

CX-0465 at 5; CX-0464. Further, processes within IOS XR register for external management by

sending a registration request to SysDB and additionally by performing some related tasks after

SysDB receives the registration request. CX-0007C (Almeroth WS) at Q/A 294, Q/A 299.

Therefore, for these reasons and the reasons discussed above with respect to claim 1, it is

determined that the '537 DI Products satisfy all limitations of claim 10.

6. Claim 11

Claim 11 depends from claim 10, and recites an additional limitation that is identical to a limitation recited in claim 2. Inasmuch as the '537 DI Products practice the limitations of claims 10 and 2, they also practice the limitations of claim 11.

7. Claim 17

Claim 17 depends from claim 10, and recites additional limitations that are identical to limitations recited in claim 8. Inasmuch as the '537 DI Products practice the limitations of claims 10 and 8, they also practice the limitations of claim 17.

E. Validity

Arista relies on certain prior art references to argue that the asserted claims of the '537 patent are invalid. While there are several differences between the references and combinations, none of the cited prior art shows external management, a requirement of all the claims of the '537 patent. Instead, as discussed further below, each reference relies on some sort of centralized management.

For example, the concept of external management does not appear anywhere in Kathail '752 or Kathail '723. Prager '918 similarly discloses a system where a centralized manager machine manages the data and provides updates to remote subscribers. Hendrickson '646 discloses a centralized configuration database that provides updates to a set of software components. Moreover, Traversat '715 discloses a centralized management server that provides data to client devices.

1. Anticipation

a. U.S. Patent No. 5,838,918 ("Prager '918")

Prager '918 involves a manager machine with a central configuration database that communicates with remote subscriber machines. As an initial matter, Arista's expert does not address the requirement in all asserted claims that the router configuration data be "derived from configuration commands supplied by a user and executed by a router configuration subsystem before being stored in said database." *See* RX-3273 (Hollingsworth WS) at Q/A 113-119. This omission is fatal to Arista's allegation of anticipation. Further, as Dr. Almeroth testified, Prager '918 discloses a fundamentally different system from the '537 patent. CX-1217C (Almeroth WS) at Q/A 102-103. In particular, Prager '918 does not disclose externally managing data by a subsystem. Rather, the "management" described in Prager '918 is carried out by the "manager machine." RX-3278 (Prager '918) at Fig. 4. Subscribers do not manage the data, but instead store data and receive updates from the central database, similar to the prior art centralized-management systems distinguished by the '537 patent. *Id.* at col. 6, lns. 30-39; CX-1217C (Almeroth RWS) at Q/A 105. Prager '918 similarly fails to disclose a "management registration request," inasmuch as devices only send subscription requests to receive data, not manage it. Prager '918 also does not teach or render obvious "router configuration data" under any party's construction. Prager '918 describes a distributed computer system, not routers, switches, bridges, or other networking equipment. CX-1217C (Almeroth RWS) at Q/A 111; RX-3278 at Figs. 1-4. As Dr. Almeroth testified, switches, bridges, routers, and other networking devices are very different from the types of devices shown in Prager '918. CX-1217C (Almeroth RWS) at Q/A 111. Moreover, storing data at subscriber machines as

taught by Prager '918 does not relieve any of the computational burden of the centralized database. CX-1217C (Almeroth RWS) at Q/A 107.

b. U.S. Patent No. 6,704,752 ("Kathail '752")

Kathail '752 is one of named inventor Mr. Kathail's prior art patents regarding the use of a centralized database to manage data. The abstract of Kathail '752 confirms that it relates to management by a centralized database: "The centralized database system manages a storage structure (database tree) having a plurality of tuple nodes, where each tuple node contains configuration data for the router." RX-3282 (Kathail '752) at Abstract. The concept of external management, a key concept on the '537 patent, does not appear in Kathail '752. Indeed, the '537 patent distinguishes the '752 patent in the background of the invention section. JX-0001 ('537 patent) at col. 2, lns. 42-60. The '537 patent explains that its invention is designed to overcome drawbacks associated with the centralized management provided with prior systems such as Kathail '752. *Id.*

Nevertheless, Arista takes the position that Mr. Kathail's prior patents disclose external management. First, Arista argues that Kathail '752 "teaches the use of external data stores, which are used to maintain data outside of the centralized database," and that "[a] tuple in the centralized database sysDB may include a pointer that points to an external data store which contains the value for the tuple." *See* RX-3273C (Hollingsworth WS) at Q/A 201. As Dr. Almeroth testified, this excerpt does not teach external management, but rather describes an extension to SysDB such as additional memory space that operates as if it were part of SysDB. CX-1217C (Almeroth RWS) at Q/A 142-145. In particular, auxiliary storage space that is used by SysDB is not enough to show external management by a managing subsystem because external management in the '537 patent involves more than storing data. *Id.*

Arista also argues that "a subsystem may store a local copy of the configuration data locally within the subsystem and periodically check the sysDB 26 for current information." *See* RX-3273C (Hollingsworth WS) at Q/A 201. This argument fails for the reason discussed above, that external storage is not external management. In Kathail '752, the centralized database manages the data and transactions on the data, not on an external subsystem. CX-1217C (Almeroth RWS) at Q/A 142-145.

Arista's expert Dr. Hollingsworth also cites the portion of Kathail '752 discussing the use of a verification handler to support Arista's anticipation argument. *See* RX-3273C (Hollingsworth WS) at Q/A 201 (citing CX-1150 at col. 13, lns. 25-40). The '537 patent, however, explicitly discusses verification handling in the background, thereby distinguishing it from external management. JX-0001 ('537 patent) at col. 2, ln. 58 – col. 3, ln. 2. Other portions of the '537 patent also distinguish verification from external management. *See, e.g., id.* at Fig. 8 (calling a verification handler in box 460 regardless of whether the data is externally managed); CX-1217C (Almeroth RWS) at Q/A 142–145.

c.   U.S. Patent No. 6,728,723 ("Kathail '723")

Kathail '723 is also a prior art patent of named inventor of Mr. Kathail. It concerns a centralized database that manages data. Arista's anticipation arguments for Kathail '723 are similar to its anticipation arguments for Kathail '752, and must fail for the same reasons discussed above. CX-1217C (Almeroth RWS) at Q/A 158-177. In particular, the '537 patent discusses the external verifications of Kathail '723 in the background, and distinguishes those external verifications from external management. JX-0001 ('537 patent) at col. 2, ln. 58 – col. 3, ln. 2; col. 3, lns. 13-19.

d. U.S. Patent No. 5,933,646 ("Hendrickson '646")

Hendrickson '646 discloses a central "software manager" that uses a central configuration database to manage various software components on a system. RX-3276 (Hendrickson '646) at Abstract. The software components communicate with the software manager server using plug-in modules. *Id.* at col. 6, lns. 8-12. No management is done by the external software components or plug-ins. CX-1217C (Almeroth RWS) at Q/A 179-183. Instead, the central software manager is responsible for maintaining the central configuration database, and the software components receive information and updates through plug-ins. *Id.* For example, the software manager server carries out the functions to change the data, as was done in the prior art discussed in the background of the '537 patent. RX-3276 at col. 6, lns. 15-18; col. 8, lns. 29-30. Hendrickson '646 also does not teach or render obvious "router configuration data" under any party's construction. The system described in Hendrickson '646 is directed at a software manager, and not routers, switches, bridges, or other networking equipment. CX-1217C (Almeroth RWS) at Q/A 190.

Arista also uses Hendrickson '646 in combination with other references to argue that the asserted '537 claims are rendered obvious. As with Prager '918, however, the words "router," "switch," "bridge," and "networking" are not found in Hendrickson '646. As such, the discussion of computer systems in Hendrickson '646, without any specific discussion of networking devices, would not teach or render obvious to one of ordinary skill in the art that the system of Hendrickson '646 could be applied to routers. *Id.* Further, as with Prager '918, Arista fails to explain how Hendrickson '646 discloses router configuration data "derived from configuration commands supplied by a user and executed by a router configuration subsystem

before being stored in said database." *See* RX-3273 (Hollingsworth WS) at Q/A 323-329.

Without such analysis, Arista cannot meet its burden to show invalidity.

2.   Obviousness

a.   NSFNET in Combination with Prager '918, Hendrickson '646, or Traversat '715

Arista argues that the combination of NSFNET with Prager, Hendrickson, or Traversat

satisfies the router configuration data element. NSFNET is a report regarding the NSFNET

network research project that designed and studied a backbone network infrastructure linking

NSF-sponsored supercomputing centers. RX-3284. As Dr. Almeroth testified, a person of

ordinary skill would not have been motivated to combine NSFNET with the references listed

above solely because NSFNET discusses routers. CX-1217C (Almeroth RWS) at Q/A 114-117,

Q/A 208-210, Q/A 252-254. Moreover, as discussed above with respect to Arista's anticipation

arguments, the combinations each lack external management, router configuration data derived

from commands, a management registration request, and reducing computational overhead.

b.   Ciscon '010 in Combination with Prager '918, Hendrickson '646, or Traversat '715

Arista argues that the combination of Ciscon '010 with Prager, Hendrickson, or Traversat

satisfies the router configuration data element. Ciscon '010 is a patent relating to techniques for

handling data in a distributed computer network, where a router process runs on each computer

in the network. RX-3275. Ciscon '010 was considered by the examiner during prosecution of

the '537 patent. JX-0007. As Dr. Almeroth testified, a person of ordinary skill in the art would

not have been motivated to combine Ciscon with the references listed above solely because

Ciscon discusses routers. CX-1217C (Almeroth RWS) at Q/A 118-121, Q/A 211-213, Q/A

255-257. Moreover, as discussed above with respect to Arista's anticipation arguments, the

combinations each still lack external management, configuration data derived from commands, and reducing computational overhead, and a management registration request.

c. Brodersen '752 in Combination with Hendrickson '646 or Traversat '715

Arista argues that the combination of Brodersen '752 with Hendrickson or Traversat satisfies the external management element, and in combination with Traversat satisfies the alleged reducing computational overhead requirement. Brodersen '752 describes a system for collecting, storing and retrieving data that uses a centralized database management scheme. RX-3286. It discusses a "master database server" or "central database" in conjunction with several "computer systems." *Id.* at Abstract; Figs. 9, 4-9. Brodersen does not describe operation of subsystems within a single router operating system running on a single device. RX-3286 at Abstract; Figs. 1-10, 1-31. It is also therefore incompatible with Hendrickson '646, which concerns an operating system. In any event, Arista does not identify why one of ordinary skill would have combined these references, when there are numerous ways to handle router configuration data, both with and without a centralized database. *See* CX-1217C (Almeroth RWS) at Q/A 193-199, Q/A 239-244. Moreover, as discussed above with respect to Arista's anticipation arguments, the combinations each still lack router configuration data, configuration commands, a management registration request, reducing computational overhead (in the Hendrickson combination), and a plurality of subsystems (in the Traversat combination).

d. James '977 in Combination with Hendrickson '646 or Traversat '715

Arista argues that the combination of James '977 with Hendrickson or Traversat satisfies the external management element, and in combination with Traversat satisfies the alleged reducing computational overhead requirement. James '977 describes a "master database"

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managed by a central server, and caching data stored there in various separate client devices involving the use of time stamps. RX-3285. James does not describe operation of subsystems within a single router operating system running on a single device. *Id.* It is also therefore incompatible with Hendrickson '646, which concerns an operating system on a computer. In any event, Arista does not identify why one of ordinary skill would have combined these references, when there are numerous ways to handle router configuration data, both with and without a centralized configuration database. *See* CX-1217C (Almeroth RWS) at Q/A 200-207, Q/A 245-250. Moreover, as discussed above with respect to Arista's anticipation arguments, the combinations each still lack router configuration data, configuration commands, a management registration request, reducing computational overhead (in the Hendrickson combination), and a plurality of subsystems (in the Traversat combination).

e.   **Prager '918 in Combination with Traversat '715 – Claims 2 and 11**

Arista further argues that Prager '918 can be combined with Traversat '715 for the limitation in claims 2 and 11 regarding the use of a tree structure. As Dr. Almeroth testified, there are numerous different types of data structures that can be used (*e.g.*, trees, tables, pointers, lists, records, queues, etc.), and Arista's expert Dr. Hollingsworth has not provided any reason to explain why one of ordinary skill would have combined Prager '918 with Traversat '715. CX-1217C (Almeroth RWS) at Q/A 126-129. In any event, even if these references were combined, they still do not address the numerous deficiencies with Prager '918 identified above.[26]

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[26] The Joint Outline of Issues specifies that one of the issues to be decided in this initial determination is "[w]hether Complainant has met its burden to demonstrate any secondary considerations of nonobviousness for any asserted claim of the '537 patent," and identifies pages

3. Arguments Relating to 35 U.S.C. § 112

a. Indefiniteness – Claims 1 and 10

For the reasons stated in the claim construction section above, the term "said database" in claims 1 and 10 is not indefinite.[27] In particular, Dr. Almeroth's testimony confirms that a person of ordinary skill in the art would be informed with reasonable certainly that the claim term "said database" recited in claims 1 and 10 refers to the "database system." *See* CX-0007C (Almeroth WS) at Q/A 78, Q/A 81; *see also* Hollingsworth Tr. 1040-1041.

b. Written Description and Enablement – Claims 8, 9, 17, and 18

Arista's expert Dr. Hollingsworth has taken the position that claims 8, 9, 17, and 18 are invalid for failure to satisfy the written description and enablement requirements because the '537 patent "never discloses how two 'managing subsystems'—namely the first management subsystem and the second managing subsystem—can concurrently externally manage the same data." *See* RX-3273C (Hollingsworth WS) at Q/A 355. This argument is incorrect for several reasons.

First, this invalidity argument relies on the assumption that two managing subsystems externally manage the same data. This assumption is incorrect because it is inconsistent with the claims and specification of the '537 patent, as well as the understanding of one of ordinary skill in the art. In particular, nothing in the claim language refers to two managing subsystems externally managing the same data. CX-1217C (Almeroth RWS) at Q/A 279-282. Instead,

---

135-45 of complainant's post-hearing brief as addressing this issue. Joint Outline of Issues at 5. Yet, complainant's brief does not contain arguments regarding secondary considerations of nonobviousness with respect to the '537 patent, and they will not be addressed in this initial determination.

[27] Asserted claims 2, 8, 9, 11, 17, and 18 depend from claims 1 and 10, and are not indefinite for the reasons set forth with respect to claims 1 and 10.

claims 8 and 17 describe how a requesting subsystem transmits a change request to the database

subsystem. The database subsystem will then determine whether the requesting subsystem is

requesting data externally managed by another subsystem. JX-0001 ('537 patent) at claim 8.

This process is illustrated in detail in Figure 8 of the '537 patent, and is described in the

associated section of the specification. *Id.* at Fig. 8; col. 13, ln. 48 – col. 15, ln. 11. As such, it is

determined that claims, 8, 9, 17, and 18 are both supported by the written description and

enabled. *See* CX-1217C (Almeroth RWS) at Q/A 279-282.

Second, the claims are enabled and described by the specification at column 13, line 48

through column 15, line 11. The claims are also illustrated in Figure 8. As Dr. Almeroth

testified, a person of skill in the art would be able to use the teaching of the '537 patent and

enable external monitoring of the same attribute in selected situations without undue

experimentation. CX-1217C (Almeroth RWS) Q/A 279-282. For example, Arista's own

documentation demonstrates techniques by which this can be accomplished. CX-0435C.

Therefore, it is determined that claims 8, 9, and 17 are not invalid for failure to satisfy the

written description and enablement requirements of 35 U.S.C. § 112.

4. Inventorship

Arista argues that the asserted claims of the '537 patent are invalid for failing to list Mr.

Andrew Valencia as an inventor. The record evidence establishes, however, that Mr. Kathail is

the sole inventor of the '537 patent.

In support of its inventorship position, Arista identifies Mr. Valencia's involvement in

creating the centralized database in the prior art Cisco patents. Nevertheless, Arista has not

adduced evidence to establish that Mr. Valencia ever conceived of external management of

router configuration data, which is the claimed invention of the '537 patent. Indeed, Mr.

Valencia testified that he had never heard of the concept of external data management:

> Q. Have you ever heard of the concept of a term called "EDMs" or "external data managers" when used with respect to SysDB?
>
> A. That sounds completely unfamiliar in the context of SysDB.

JX-0038C (Valencia Dep. Tr.) 41.

Mr. Valencia's involvement in the development of the centralized database does not

warrant the conclusion that he should be named as an inventor on the '537 patent, inasmuch as

the evidence does not show that he made a significant contribution to the conception of one or

more of the claims of the patent. *See Eli Lilly and Co. v. Aradigm Corp.*, 376 F.3d 1352,

1358-59 (Fed. Cir. 2004). Instead, the evidence adduced by Arista shows that Mr. Valencia and

Mr. Kathail worked together on the concept of a centralized database to manage data in an

operating system of a network device, a concept that is claimed in U.S. Patent Nos. 6,704,752,

6,952,703, and 6,728,723. *See* JX-0038C (Valencia Dep. Tr.) at 41. Accordingly, Mr. Valencia

was properly named as a co-inventor on these patents, which are prior art to the '537 patent. By

contrast, the invention claimed in the '537 is external management of the centralized database, to

which Mr. Valencia did not contribute significantly. Thus, it is determined that the '537 patent is

not invalid for failure to name the correct inventors.

VI. The '597 (ProcMgr) Patent

A. Claim Construction

1. Level of Ordinary Skill

Cisco's expert testified that a person of ordinary skill in the art at the time of invention of

the '597 patent would have at least a Bachelor of Science degree, or its equivalent, in electrical

engineering, computer engineering, computer science, or a related field and either a Master of

Science degree, or its equivalent, in one of those fields or approximately two years of related experience in the field of network devices. *See* CX-0001C (Wicker WS) at Q/A 29.

Arista's expert testified that a person of ordinary skill in the art would have an undergraduate degree in computer science, computer engineering, electrical engineering, or a closely related field, along with at least 2-3 years of experience working in the field of computer networks and systems. In addition, superior education or work experience could compensate for a deficiency in the other. *See* RX-3273C (Hollingsworth WS) at Q/A 361-363.

Both experts for Cisco and Arista agree that a person of ordinary skill in the art would have at least an undergraduate degree in computer science, computer engineering, electrical engineering, or a related field.

Cisco's expert also opines that a person of ordinary skill in the art would have a Master of Science degree, an additional requirement that could be satisfied with two years of experience in a relevant field. This is consistent with the opinion of Arista's expert that a person of ordinary skill in the art would have 2-3 years of experience in a relevant field. The experts' proposals differ in the particular field in which that experience should be gained. Cisco's expert proposes the field of "network devices," whereas Arista's expert proposes the field of "computer networks and systems."

In view of the expert testimony, it is determined that a person having ordinary skill in the art of the '597 patent is a person with a Bachelor of Science degree in computer science, computer engineering, electrical engineering, or a closely related field, along with at least 2-3 years of experience working in the field of network devices or computer networks and systems.

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2. Disputed Claim Terms

a. "a change to a configuration" (claim 1) / "a change in configuration" (claims 39 and 71)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "a change to the state of the device"	a change to the settings of the subsystem specified by the user	No construction necessary. The Staff's original proposed construction, if construction is necessary, was "a change to the state of the device." The Staff's revised construction is "a change to the settings of the subsystem"

The claim term "a change to a configuration" is recited in asserted claim 1 of the '597 patent, and the claim term "a change in configuration" is recited in asserted claims 39 and 71. As proposed by the Cisco, the terms "a change to a configuration" and "a change in configuration" are construed to mean "a change to the state of the device," a construction that reflects the ordinary meaning of the term as understood by a person having ordinary skill in the art.

Cisco's expert Dr. Wicker testified that the phrases "a change to a configuration" and "a change in a configuration" are plain terms that are easily understood by one of ordinary skill in the art in light of the claims and specification. CX-0001C (Wicker WS) at Q/A 67. In particular, including because the '597 patent is generally directed at an invention for increasing the security of a device, a person of ordinary skill in the art would understand the patent's detected configuration changes to encompass changes related to "any compromise" of a device. CX-0001C (Wicker WS) at Q/A 67-70; JX-0004 ('597 patent) at col. 3, lns. 63-66. For example, the patent describes the logging module detecting software modifications, anomalous conditions,

hardware resets, user interaction through the command line interface, and the changes made by the device itself, such as a device setting its own source IP and MAC address. JX-0004 ('597 patent) at col. 1, lns. 30-33; col. 14, lns. 52-54; col. 4, lns. 35-38; col. 9, lns. 18-21; col. 5, lns. 33-36. Indeed, the '597 patent uses the term "state" and "configuration" interchangeably, indicating that the term "configuration" is used broadly to encompass the state of the device. CX-0001C (Wicker WS) at Q/A 68; JX-0004 ('597 patent) at col. 13, ln. 50 – col. 14, ln. 10; col. 11, ln. 60 – col. 12, ln. 6. For example, the patent explains that reset of a network device is a reset to a predetermined known "state" or "configuration":

> At step 525, the network device is reset to a predetermined, "known" state. . . . At step 535, the security monitors receive the broadcast and determine that there has been a change in the network device's configuration and that the network device has been reset to a predetermined, known configuration.

JX-0004 ('597 patent) at col. 11, ln. 60 – col. 12, ln. 4.

Moreover, the patent explains that the reset of a device, *i.e.*, a reset to a "predetermined, known state," "should be logged as a configuration change." JX-0004 ('597 patent) at col. 4, lns. 35-38; col. 11, ln. 60 – col. 12, ln. 4. Thus, as Dr. Wicker explained, a person of ordinary skill in the art would understand the '597 patent's use of the term "configuration" to broadly encompass the state of the claimed communication device. *See* CX-0001C (Wicker WS) at Q/A 67; Wicker Tr. 322-326. Therefore, the patent's use of "configuration" broadly encompasses all types of changes to a variety of different aspects of the device.

In contrast, Arista's proposed construction narrows the term "configuration" to "settings . . . specified by [a] user," a modification that is not supported by the intrinsic evidence. In particular, the term "settings" does not appear in the '597 patent or file history. Further, as Dr. Wicker testified, a person of ordinary skill in the art would not restrict "configuration" to

"settings" in the context of the '597 patent because nothing in the intrinsic record supports limiting the claim scope in such a way. CX-0001C (Wicker WS) at Q/A 73.

The second part of Arista's proposed construction, which limits the changes that can be detected to those specified by a "user," also does not comport with the intrinsic evidence. *See* CX-0001C (Wicker WS) at Q/A 73-75. In particular, the '597 patent specification discloses embodiments where configuration changes are made by the network device itself, rather than by a user. For example, the specification describes situations in which the device itself changes its own IP and MAC address, thereby triggering a log entry and a potential security event. JX-0004 ('597 patent) at col. 5, lns. 33-36; CX-0001C (Wicker WS) at Q/A 73-75. Other configuration changes, such as hardware resets, are also accomplished without being specified by a user. JX-0004 ('597 patent) at col. 4, lns. 35-38; CX-0001C (Wicker WS) at Q/A 73. Moreover, inasmuch as a stated goal of the '597 patent is to alert an administrator when a communications device is compromised by an attacker, the detected "configuration" changes naturally should include any type of attack, not merely changes to a device's "settings" specified by a user. CX-0001C (Wicker WS) at Q/A 73; *see* JX-0004 ('597 patent) at col. 3 lns. 63-66.

b.   **"a logging module" (claims 1 and 39)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "a module configured to detect changes"	A module to generate a log record	"a module configured to detect changes"

The claim term "a logging module" is recited in asserted claims 1 and 39 of the '597 patent. Cisco originally proposed a construction of "a module configured to detect changes," a

construction also proposed by the Staff. *See* Staff Br. at 51-52. Subsequently, Cisco stated in its

post-hearing brief:

> Although the parties initially disputed this construction, it is no longer
> relevant to any claim or defense. Thus, while Cisco agrees that Staff's
> construction appropriately captures that the "logging module" be
> "configured to detect changes," Cisco will adopt Arista's construction of
> "a module to generate a log record" to streamline the investigation.

Compl. Br. at 153.

The claim term "a logging module" is therefore construed to mean "a module to generate

a log record," a construction that is supported by the patent specification. For example, in

describing Figure 1, the specification states: "Logging module 120 determines a configuration of

the subsystem 115, detects a change in the configuration of the subsystem 114 and indicates that

the change has occurred." JX-0004 ('597 patent) at col. 6, lns. 7-10.

c.   **"a logging module, coupled to said subsystem" (claim 1) / "a
logging module is coupled to said subsystem" (claim 39)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "a logging module operably connected to said subsystem" / "a logging module is operably connected to said subsystem"	a logging module connected to the subsystem without using a central storage location	No construction necessary. If construction is necessary, "a logging module connected to said subsystem" / "a logging module is connected to said subsystem"

The claim term "a logging module, coupled to a said subsystem" is recited in asserted

claim 1 of the '597 patent, and the related term "a logging module is coupled to said subsystem"

is recited in asserted claim 39. The evidence demonstrates that the meaning of these terms is

clear to a person having ordinary skill in the art, and that they do not need further construction.

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To the extent construction of these related terms is necessary, intrinsic evidence supports a construction of "a logging module connected to said subsystem" / "a logging module is connected to said subsystem." For example, Figure 1 of the '597 patent shows a logging module connected to a subsystem and the patent shows no evidence of redefining the words. JX-004 ('597 patent) at Fig. 1.

As Dr. Wicker testified, the phrase "coupled to said subsystem" is easily understood by a person of skill in the art of the '597 patent in light of the claims and specification. CX-1216C (Wicker RWS) at Q/A 51; Wicker Tr. 371-372. In particular, a person having ordinary skill would understand from reading the specification that two components can be "coupled" to each other despite the presence of "intermediate components":

> The foregoing described embodiment wherein the different components are contained within different other components (e.g., the various elements shown as components of communications device 100). It is to be understood that such depicted architectures are merely examples, and that in fact many other architectures can be implemented which achieve the same functionality. In an abstract, but still definite sense, any arrangement of components to achieve the same functionality is effectively "associated" such that the desired functionality is achieved. Hence, any two components herein combined to achieve a particular functionality can be seen as "associated with" each other such that the desired functionality is achieved, irrespective of architectures or intermediate components. Likewise, any two components so associated can also be viewed as being "operably connected," or "operably coupled," to each other to achieve the desired functionality.

JX-0004 ('597 patent) at col. 6, lns. 35-51; *see* Hollingsworth Tr. 1278; CX-1216C (Wicker RWS) at Q/A 51.

d. "broadcasting" (claims 29, 63, and 64) / "broadcast" (claim 73)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
"transmitting data to one or more devices without specifying what device(s) will ultimately receive the data"	"transmitting/transmission to one or more receivers"	No construction necessary. If construction is necessary, "transmitting/transmission to one or more receivers"

The claim term "broadcasting" is recited in asserted claims 29, 63, and 64 of the '597 patent, and the related claim term "broadcast" is recited in asserted claim 73. As proposed by Arista, the terms "broadcasting" and "broadcast" are construed to mean "transmitting to one or more receivers" and "transmission to one or more receivers," respectively. This construction is consistent with the intrinsic evidence, and is also supported by the Staff. *See* Staff Br. at 53-54.

Specifically, according to the patent specification, a broadcast occurs when information is sent to one or more devices. JX-0004 ('597 patent) at col. 7, lns. 38-42; col. 11, lns. 46-51; col. 11, lns. 64-67.

B. Literal Infringement Analysis

As discussed in further detail below, the evidence adduced at the hearing fails to show that the Accused '597 Products infringe the asserted claims of the '597 patent.

Specifically none of the Accused '597 Products infringe asserted independent claims 1, 39, and 71 because they do not satisfy the "detect a change to a configuration of said subsystem claim limitation." Inasmuch as the asserted dependent claims all depend from claims 1, 39, 71, none of Accused '597 Products infringe the dependent claims for the same reason.

In addition, none of the Accused '597 Products infringe dependent claim 72 because they do not satisfy the "determine the configuration" claim limitation.[28]

1. The Accused Products Do Not Detect a Change to a Configuration of a Subsystem

Asserted claim 1 requires that the logging module "detect a change to a configuration of said subsystem." JX-0004 ('597 patent) at col. 16, lns. 49-50. Similarly, asserted claims 39 and 71, the other two independent claims at issue, recite "detect/[ing] a change in a configuration of a subsystem." As discussed above, these claim terms are construed to mean "a change to the state of the device." The evidence shows that the accused Arista products do not detect a change in configuration under the adopted construction of that term.

At the hearing, Cisco's expert Dr. Wicker testified that he identifies three mechanisms within ProcMgr as satisfying the limitation of detecting a change in configuration. Wicker Tr. at 257-258. Specifically, these mechanisms are: [

]. CX-0001C (Wicker WS) at Q/A 113. The three mechanisms were illustrated during Dr. Wicker's testimony, and this illustration is reproduced below:

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[28] Inasmuch as the accused products do not literally infringe the '597 patent, there can be no finding that Arista is liable for indirect infringement of the '597 patent.

[

                                                                              ]

RDX-1001C (red numerals added).

    None of these three mechanisms satisfies the limitation of detecting a change in

configuration. The evidence shows that, regardless of the mechanism, ProcMgr [

                                                    ]. RX-3912C (Duda RWS) at

Q/A 49-50. [

                                            ]. *Id.* Moreover, ProcMgr, by design,

[   ]. *Id.* Indeed, the evidence demonstrates that ProcMgr [

        ]. *Id.* at Q/A 51. In addition, [

        ]. *Id.* [

]. *Id.* Further, [

]. *Id.* at Q52-53. [

]. *Id.* at Q54. Instead, [

]. *Id.*

a.   [   ] Do Not
"Detec[t] a Change in Configuration"

[   ] are related and work together to monitor for

agent failures. Wicker Tr. 265. As Dr. Wicker testified, [

]. Wicker Tr. 258-259, 261, 279. [

]. Wicker

Tr. 259, 280; RX-3912C (Duda RWS) at Q/A 43. [

]. RX-3912C (Duda RWS) at Q/A 43. [

]. *Id.* at Q/A 43, Q/A 46-47; Wicker

Tr. 262-265.

ProcMgr's [

] does not constitute detecting whether the agent's configuration has changed as

claimed in the '597 patent. RX-3912C (Duda RWS) at Q/A 8, Q/A 46-47, Q/A 50-53;

Hollingsworth Tr. 1285-1286. Instead, it constitutes ProcMgr [

]. RX-3912C (Duda RWS) at Q/A 8, Q/A 46-47, Q/A 50-53; *see*

Hollingsworth Tr. 1285-1286.

b.   [   ] Does Not Detect a Change to
a Subsystem

Contrary to Cisco's infringement arguments, the evidence shows that ProcMgr does not

satisfy the "detect a change to a configuration of said subsystem" claim limitation when it

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determines [

].	*See* RX-3912C (Duda RWS) at

Q/A 43, Q/A 50; RX-3909C (Hollingsworth RWS) at Q/A 245; Wicker Tr. 293-294. Indeed, the

evidence demonstrates that the [

]. RX-3912C (Duda RWS) at Q/A 43, Q/A 50; Hollingsworth Tr. 1272.

Moreover, Cisco's' expert Dr. Wicker testified that the files in the [

]. *See* CX-0001C (Wicker WS) at Q/A 125, Q/A 143-44.

Evidence adduced at the hearing establishes that the [

]. RX-3912C (Duda RWS) at Q/A 43, 50; RX-3909C

(Hollingsworth RWS) at Q/A 245; Wicker Tr. 293-294. [

]. RX-3909C (Hollingsworth RWS) at Q/A 245; RDX-1123; CX-0001C (Wicker WS)

at Q/A 128. For example, [

]. Hollingsworth Tr. 1288-1289. That attribute, found in

the [

]. Hollingsworth Tr. 1283-1284. Rather, [

]. *Id.* Therefore, to the extent ProcMgr [

].

**2.	The Accused Arista Products Do Not Determine a Configuration (Claim 72)**

Contrary to Cisco's arguments, the Accused '597 Products do not infringe claim 72

because they do not satisfy the claim limitation "determine the configuration." In particular,

Cisco's expert Dr. Wicker testified that this limitation is satisfied because "[

].” *See* Compl. Br. at 181-82;

CX-0001C (Wicker WS) at Q/A 180.

The evidence shows, however, that ProcMgr does not determine the configuration of the

identified subsystems, *i.e.*, agents. RX-3909C (Hollingsworth RWS) at Q/A 273; RX-3912C

(Duda RWS) at Q/A 49-50. As above, [

]. RX-3912C (Duda RWS) at Q/A 43, 5 Q/A 0; RX-3909C (Hollingsworth

RWS) at Q/A 245, Q/A 273. [

]. RX-3912C (Duda RWS)

at Q/A 43; RX-3909C (Hollingsworth RWS) at Q/A 246, Q/A 273. Moreover, [

]. RX-3909C (Hollingsworth RWS) at

Q/A 255-261, Q/A 273. None of these functionalities is determining a change in configuration

of an agent. *See* RX-3909C (Hollingsworth RWS) at Q273. Accordingly, the Accused '597

Products do not determine a configuration as required by claim 72.

C.   Technical Prong of the Domestic Industry Requirement

At the hearing, Cisco offered evidence establishing that the technical prong of the

domestic industry requirement is satisfied because the Catalyst 6500, Catalyst 6800, ASR 901,

and Nexus 7000 Cisco products satisfy at least claims 1, 14-15, 39, and 71-72 of the '597 patent.

1.   Claim 1

a.   An apparatus comprising:

The record evidence demonstrates that each of the '597 DI Products is an apparatus.

CX-0001C (Wicker WS) at Q/A 263-280, Q/A 282; CX-0309 ("Catalyst 6500 Data Sheet");

CX-0312 ("Catalyst 6800 Data Sheet"); CX-0306 ("ASR 901 Data Sheet"); CX-0321 ("Nexus

7000 Data Sheet"); CX-0311 ("Catalyst 6800 Data Sheet"); CX-0310 ("Catalyst 6500 Data Sheet"); CX-0067 ("Nexus 7000 Data Sheet").

b. a communications device comprising:

The '597 DI Products satisfy this limitation because each is a communications device. Specifically, the '597 DI Products are routers and switches that are used in communications data networks. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 283; CX-0309 ("Catalyst 6500 Data Sheet"); CX-0312 ("Catalyst 6800 Data Sheet"); CX-0306 ("ASR 901 Data Sheet"); CX-0321 ("Nexus 7000 Data Sheet"); CX-0311 ("Catalyst 6800 Data Sheet"); CX-0310 ("Catalyst 6500 Data Sheet"); CX-0067 ("Nexus 7000 Data Sheet").

c. a subsystem;

The evidence shows that the '597 DI Products are made up of numerous subsystems. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 284. As the '597 patent explains, the communications interface itself is a subsystem. JX-0004 ('597 patent) at Figs. 1, 2. Each of the '597 DI Products is a router or switch and thus, like the '597 patent, has a communications interface subsystem through which packets are sent, processed, and received. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 284. Further, OBFL detects and logs configuration changes for individual field replaceable units, or "FRUs." Thus, another subsystem is the set of components monitored on the particular FRU monitored by OBFL. CX-0001C (Wicker WS) at Q/A 284; CX-0355C (OBFL Architecture Document) at 005-8.

d. and a logging module, coupled to said subsystem, and configured to detect a change to a configuration of said subsystem of said communications device,

As discussed in further detail below, the evidence establishes that the '597 DI Products meet this element under all parties' constructions.

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i.   a logging module

Cisco has adduced evidence showing that the Cisco '597 DI Products meet this element under any party's construction. A generic diagram describing the OBFL architecture for IOS-based '597 DI Products (*i.e.*, Catalyst 6500, Catalyst 6800, ASR 901) is reproduced below:
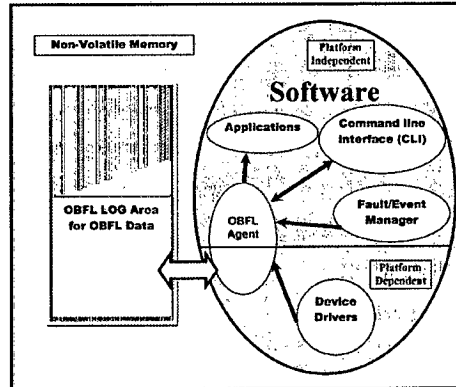
CX-0337C (OBFL Product Requirements Document, "PRD") at 805; *see also* CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; CX-0298C ("Cat6k OBFL Design Specification").

The OBFL Agent or instance is responsible for all interactions with the non-volatile memory. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293. The OBFL Agent interacts with other software applications, such as the CLI, that require access to read or write from the non-volatile memory. *Id.* The OBFL Agent also interacts with platform dependent device drivers that provide platform-specific information, such as ASIC versions. *Id.* OBFL works similarly in NX-OS-based '597 DI Products (*i.e.*, Nexus 7000 series). CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; CX-0357C (OBFL Specification) at 763.

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OBFL is "configured to detect changes," as required by the Staff's (and Cisco's initial) construction for "logging module."[29] CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-95. Various types of critical information can be tracked by OBFL related to the device's subsystems, and if that information changes, such changes will be captured and logged. *Id.*; *see, e.g.*, CX-0337C (OBFL PRD) at 806-21. OBFL thus also "generates a log record" as required by Arista's (and Cisco's current) construction of "logging module." Types of information that may be detected and logged are summarized in the table in CX-0337C (OBFL PRD) at 806, and include OS Version, BIOS/Firmware Version, FPGA Version/Device ID, ASIC Version, Slot Number and Chassis Type, ASIC register dumps, Number of Resets and Uptime, and various other system messages. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293. In addition, certain platforms, such as the ASR 901, also log certain CLI configuration commands. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; *see, e.g.*, CX-0305 (ASR 901 IOS Config Guide) at 598.

Information is logged on a field replaceable unit ("FRU") basis. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; *see, e.g.*, CX-0337C (OBFL PRD). This means, depending on the platform-type, that OBFL instances may exist for an entire platform, on line cards, or on route processors and supervisors. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; *see, e.g.*, CX-0337C (OBFL PRD) at 802; CX-0355C (OBFL Architecture Document) at 005-8. User control of the platform is typically through the main platform processor over the CLI. The user may interact with the various OBFL instances through the CLI to provide logged OBFL information to the user console. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; *see,*

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[29] Cisco agreed to Arista's construction of "logging module" to streamline the issues in this investigation. *See* Compl. Br. at 153.

e.g., CX-0355C (OBFL Architecture Document) at 005-8; CX-0337C (OBFL PRD) at 805, CX-0382 (IOS Configuration Guide); CX-0315 (IOS Configuration Guide); CX-0305 ("ASR 901 IOS Configuration Guide); CX-0320 (NX-OS Configuration Guide).

The generated log records are stored in physical non-volatile memory and persist through module resets, reloads, power cycles, and upgrades. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-95; *see also* CX-0337C (OBFL PRD) at 802; CPX-0002C (Cisco Source Code) at IOS \sys\obfl\ and NX-OS at \storage\common\uspace\obfl\, \storage\common\uspace\plog\, and \storage\common\diag2\. [

]. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; *see, e.g.*, CX-0337C (OBFL PRD) at 804, 807. [

]. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-293; *see also* CX-0337C (OBFL PRD) at 823.

ii. a logging module, coupled to said subsystem

The evidenced adduced at the hearing shows that the Cisco '597 DI Products meet this element under all parties' constructions. As an initial matter, OBFL is connected or operably connected to the subsystem, satisfying Cisco's and the Staff's constructions. As described above, the OBFL software runs on the FRU it is monitoring and is therefore connected to the various subsystems, such as for example the ASIC drivers and device drivers. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-95; *see e.g.*, CX-0337C (OBFL PRD) at 802; CX-0355C (OBFL Architecture Document) at 5-8. Moreover, for the reasons discussed above with respect to Cisco and the Staff's constructions, the '597 DI Products also meet this limitation under Arista's construction because the OBFL software runs on the FRU it is monitoring and logs its

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data to local non-volatile storage rather than a central storage location. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-95; *see e.g.*, CX-0337C (OBFL PRD) at 802; CX-0355C (OBFL Architecture Document) at 5-8.

> iii.   **a logging module . . . configured to detect a change to a configuration of said subsystem of said communications device**

It has been established that the Cisco '597 DI Products meet this element under all parties' constructions. Cisco's expert Dr. Wicker testified that at least the following items detected and logged by OBFL constitute "configuration" of a subsystem under all parties' constructions: OS Version, BIOS/Firmware Version, FPGA Version/Device ID, ASIC Version, Slot Number and Chassis Type, ASIC register dumps, Number of Resets and Uptime, and various other system messages. The '597 DI Products log various combinations of these types of information from the subsystems, and a change to these items in the system will be detected and logged by OBFL, as Dr. Wicker testified. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-95; *see, e.g.*, CX-0382 at 920-22, 924, 926-28; CX-0315 at 288-90, 292, 294-96; CX-0320 at 285, 288; CX-0357C at 765-70, 790-91.

Further, these categories of information logged by OBFL constitute "a change to the settings of the subsystem specified by a user" or "a change to the settings of the subsystem" as required by Arista's construction and the Staff's new construction. For example, a user can choose to upgrade or configure a system to change at least the OS Version, BIOS/Firmware Version, FPGA Version, or the content of ASIC register dumps. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 285-95. A user can also change or select which slot number a line card is plugged into in a chassis. *Id.* A user can also cause a reset of the system. *Id.* Thus, the '597 DI Products satisfy this limitation under all parties' constructions.

<blockquote>
e.   and communicate information regarding said change to said
        configuration of said subsystem of said communications device.
</blockquote>

The evidence shows that the '597 DI Products satisfy this limitation by sending the

logged information to the non-volatile memory as described above, and also by providing such

information to the user through, for example, CLI commands. Various combinations of "show

logging onboard" CLI commands will produce OBFL records to the user console. CX-0001C

(Wicker WS) at Q/A 263-280, Q/A 294-95; CX-0382 (IOS Configuration Guide); CX-0315 (IOS

Configuration Guide); CX-0305 (ASR 901 IOS Configuration Guide); CX-0320 (NX-OS

Configuration Guide).

2.   Claim 14

a.   The communications device of claim 1,

As discussed above, the '597 DI Products practice claim 1 of the '597 patent.

b.   wherein the subsystem is a communications interface.

The evidence further shows that the '597 DI Products practice the claim element "the

subsystem is a communications interface." As described above, the '597 DI Products are

coupled and detect changes to the communications interface on Cisco's products. CX-0001C

(Wicker WS) at Q/A 263-280, Q/A 297-299. Thus, the '597 DI Products satisfy this limitation.

3.   Claim 15

a.   The communications device of claim 14,

As discussed above, the '597 DI Products practice claim 14 of the '597 patent.

b.   wherein the logging module is further configured to restrict a change to a configuration of the logging module by the communications interface.

The evidence shows that the '597 DI Products practice the claim element "the logging

module is further configured to restrict a change to a configuration of the logging module by the

communications interface." Certain aspects of OBFL's configuration cannot be changed by the communications interface, and therefore the '597 DI Products satisfy this limitation. For example, [

]. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 294-95; CX-0337C (OBFL PRD) at 804, 807. [

]. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 294-95; CX-0337C (OBFL PRD) at 823; (CX-0357C (OBFL Specification) at 769-70. The user cannot stop this from happening through the communications interface. Thus, the '597 DI Products satisfy this limitation.

4. Claim 39

Independent claim 39 is a method claim with limitations that parallel those recited in independent apparatus claim 1. In particular, claim 39 reads as follows:

> 39. A method comprising: detecting a change in a configuration of a subsystem of a communications device wherein a logging module is coupled to said subsystem and said detecting is performed at the logging module; and communicating information regarding the change comprises causing said logging module to communicate the change information.

Cisco adduced evidence demonstrating that the '597 DI Products practice method claim 39. In particular, Dr. Wicker testified that the '597 DI Products are communications devices that perform a method. Moreover, the '597 DI Products practice the other limitations of this claim for the reasons discussed above with respect to claim 1. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 302-303.

5. Claim 71

a. A communications device comprising:

The evidence shows that the '597 DI Products satisfy this limitation because each is a communications device. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 310-311.

b. a subsystem;

The '597 DI Products satisfy this limitation for the reasons set forth above with respect to the parallel limitation of claim 1.

c. a processor, coupled to the subsystem;

Dr. Wicker testified that the '597 DI Products include the claimed processor for at least the reasons explained above with respect to the parallel limitation recited in claim 1. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 310-311.

d. computer readable medium coupled to the processor;

Dr. Wicker testified that the domestic industry products include "computer readable medium coupled to the processor" because, as described earlier, the operating system software including the OBFL feature will run in some runtime memory that is coupled to the processor. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 310-311; CX-0356C (OBFL Generic Software Functional Specification, "FS"); CX-0326 (Catalyst 6500 Comparison); CX-0383C (Cat 6800 FS); CX-0291C (ASR-901 HW Design Specification); CX-0353C (Nexus 7000 HW FS); CX-0295C (Nexus 7700 FS); CX-0359C (Cat6500 Card FS).

e. and computer code, encoded in the computer readable medium, configured to cause the processor to:

The record evidence shows that the '597 DI Products satisfy this limitation because the operating system software that includes OBFL will run in some runtime memory that is coupled to the processor described above. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 310-311;

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CX-0356C (OBFL Generic Software FS); CX-0326 (Catalyst 6500 Comparison); CX-0383C (Cat 6800 FS); CX-0291C (ASR-901 HW Design Specification); CX-0353C (Nexus 7000 HW FS); CX-0295C (Nexus 7700 FS); CX-0359C (Cat6500 Card FS).

> **f.**   **detect a change in a configuration of the subsystem;**

The '597 DI Products practice this limitation for the reasons discussed above with respect to the parallel limitation recited in claim 1. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 302-303.

> **g.**   **and communicate information regarding the change.**

As Dr. Wicker testified, the '597 DI Products include OBFL, which is configured to cause the processor communicate information regarding the change for at least the reasons explained above with respect to the parallel limitation recited in claim 1. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 302-303.

> **6.**   **Claim 72**

> **a.**   **The communications device of claim 71,**

As discussed above, the '597 DI Products practice claim 71 of the '597 patent.

> **b.**   **wherein the computer code is further configured to cause the processor to: determine the configuration.**

The evidence shows that the '597 DI Products practice the additional claim 72 limitation "the computer code is further configured to cause the processor to: determine the configuration." As Dr. Wicker testified, the '597 DI Products satisfy this limitation because they determine what the changed configuration is. CX-0001C (Wicker WS) at Q/A 263-280, Q/A 312-313. For example, if a line card is put into a different chassis slot, OBFL will log which slot the line card is in. *See* CX-0337C at 812–13; CX-0382 at 926; CX-0315 at 294; CX-0357C at 766; CX-0320 at 289.

D.   Validity

Cisco argues that the doctrine of assignor estoppel bars Arista from challenging the validity of the '597 patent in this investigation, an argument with which the Staff agrees. *See* Cisco Br. at 191-200; Staff Br. at 59-66. As set forth below, it is determined that assignor estoppel does serve as a bar to Arista's arguments that the asserted claims of the '597 patent are invalid over the prior art, or are directed to unpatentable subject matter. Nevertheless, Arista's invalidity arguments with respect to Sections 101, 102, and 103 of the Patent Act are also discussed below for the sake of completeness.

1.   Assignor Estoppel

The assignor estoppel doctrine precludes the assignor of a patent (and those in privity with the assignor) from asserting at a later time that a patent previously assigned for consideration is invalid. The evidence adduced in this investigation demonstrates that assignor estoppel applies with respect to the '597 patent. Not only did named inventor Dr. Cheriton make a valid assignment of the '597 patent to Cisco, but Dr. Cheriton is in privity with Arista, thereby applying assignor estoppel to Arista. Moreover, the arguments raised by Arista against the application of assignor estoppel in this investigation are addressed below and are shown to fail.

a.   Dr. Cheriton's Assignment of the '597 Patent to Cisco

The evidence establishes that David Cheriton joined Cisco in [   ], when Cisco acquired his startup company (Granite Systems, Inc.) for approximately $220 million, and Dr. Cheriton remained at Cisco until [   ]. JX-0022C (Cheriton Dep. Tr.) at 21; CX-0798 at 062-64; CX-0529C ([   ]) at 056-61; CX-0012C (Lang WS) at Q/A 26-38, Q/A 102-106; CX-0530C ([   ]) at 047.

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During his [   ], Dr. Cheriton served as [

]. CX-0797C at 506; JX-0022C (Cheriton Dep.

Tr.) at 34-35; CX-0012C (Lang WS) at Q/A 39-40. Cisco [

] in connection with patents he

invented and assigned to Cisco. JX-0022C (Cheriton Dep. Tr.) at 21, 23, 28-31; CX-0529C at

056; CX-0531C ([   ]) at 555-63; CX-0012C (Lang WS) at Q/A 63-101, Q/A 100-101;

CX-0809 (copy of *In re Marriage of Cheriton*, 92 Cal. App. 4th 269, 280 (6 Dist. Ca. Sep. 14,

2001)); CX-0532C ([   ]) at 798-801. One such patent was U.S. Patent No.

7,340,597. JX-0004 (U.S. Patent No. 7,340,597) at 001; Duda Tr. 795-796.

The evidence establishes that Dr. Cheriton validly assigned the '597 patent to Cisco for

consideration while he was employed there. CX-0012C (Lang WS) at Q/A 41, Q/A 50-57, Q/A

62-63. The assignment expressly states that Dr. Cheriton assigned "the entire right, title and

interest" in his invention "and all patent applications and patent . . . for said invention" to Cisco,

in exchange for "good and valuable consideration, receipt of which is hereby acknowledged."

JX-0016 ('597 Assignment Reel) at 002; CX-0012C (Lang WS) at Q/A 55-57. The assignment

bears Dr. Cheriton's signature, is notarized, and was recorded in the PTO four days after it was

signed. JX-0016 ('597 Assignment Reel) at 002; CX-0012C (Lang WS) at Q/A 52, Q/A 57, Q/A

59; JX-0022C (Cheriton Dep. Tr.) at 51, 52. Dr. Cheriton also submitted an inventor's

declaration as part of the '597 application. JX-0010 ('597 Certified File History) at 057-8;

CX-0012C (Lang WS) at Q/A 42-49.

The '597 patent issued on March 4, 2008. JX-0004 ('597 patent). In 2014, Cisco

Technology, Inc. transferred the '597 patent to Cisco Systems, Inc., the complainant in this

investigation. JX-0016 ('597 Assignment Reel) at 004-10; CX-0012C (Lang WS) at Q/A 58,

Q/A 60-61. Dr. Cheriton left Cisco on [   ]. CX-0530C ([   ]) at

047; CX-0012C (Lang WS) at Q/A 26, Q/A 102-106. [   ], he founded Arista with

Andreas Bechtolsheim. Duda Tr. 796; JX-0022C (Cheriton Dep. Tr.) at 37, 38-39, 39-40;

JX-0026C ([   ] Dep. Tr.) at 33; JX-0020C (Bechtolsheim Dep. Tr.) at 60; CX-0799 (Arista's

Cross Complaint against OptumSoft) at 732.

b.   Privity Between Dr. Cheriton and Arista

Evidence adduced at the hearing establishes that Arista is in privity with Dr. Cheriton for

purposes of assignor estoppel. As an initial matter, Dr. Cheriton founded Arista. When defining

a privy relationship, the Federal Circuit has identified a company "founded by the assignor" as

an example of a company that is in privity with that assignor. *Diamond Scientific Co. v. Amico,*

Inc., 848 F.2d 1220, 1224 (Fed. Cir. 1988) ("The estoppel also operates to bar other parties in

privity with the assignor, such as a corporation founded by the assignor."); *see also Juniper*

Networks, Inc. v. Palo Alto Networks, Inc., 15 F. Supp. 3d 499, 508 (D. Del. 2014) (founder

status alone "dispositive of the issue of privity."); *Shamrock Tech. Inc. v. Medical Sterilization,*

Inc., 903 F.2d 789, 794 (Fed. Cir. 1990) (finding estoppel where the assignor was "far more than

a mere employee"); *Mentor Graphics Corp. v. Quickturn Design Sys.*, 150 F.3d 1374, 1379 (Fed.

Cir. 1998) (same, quoting *Shamrock*).

Second, after founding Arista, Dr. Cheriton remained a high-level employee with

substantial power to influence Arista's operations. Specifically, Dr. Cheriton was a director on

Arista's board and "Chief Scientist." JX-0022C (Cheriton Dep. Tr.) at 37, 46, 75; Duda Tr. 796;

CX-0797C ([   ]) at 506; CX-0803 (Arista Update by Jayshree Ullal) at 480.

Third, Dr. Cheriton was positioned to profit, and did personally profit, from Arista's

activities. Dr. Cheriton provided [   ] to found Arista and fund

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development of its products. JX-0022C (Cheriton Dep. Tr.) at 41-42, 46-47. Dr. Cheriton took a [   ] ownership stake at the outset, [

           ]. Over the years, the value of Dr. Cheriton's shares in Arista has increased

[   ]. JX-0022C (Cheriton Dep. Tr.) at 42; Duda Tr. 798; CX-0499

(Arista's Form S-1/A) at 224456-57; JX-0020C (Bechtolsheim Dep. Tr.) at 82.

   Fourth, Dr. Cheriton oversaw and was involved with the development of the accused

Arista products. [

                              ]. JX-0022C (Cheriton Dep.

Tr.) at 157-158; JX-0020C (Bechtolsheim Dep. Tr.) at 60, 61. As Arista stated in a public court

filing, "Cheriton was deeply involved in knowing and setting the direction of Arista's software

development and had intimate knowledge of its software efforts over the years." CX-0799

(Arista's Cross Complaint against OptumSoft) at 732; Duda Tr. 797-798. Dr. Cheriton's

activities included involvement in [   ].

JX-0022C (Cheriton Dep. Tr.) at 76-77, 79-82, 94-95; JX-0020C (Bechtolsheim Dep. Tr.) at 60.

Indeed, for years after Arista was founded, [

                              ]. Duda Tr. 798-800, 805-807; JX-0022C (Cheriton Dep.

Tr.) at 76-77, 79-80; JX-0026C (Duda Dep. Tr.) at 44, 48-50, 56.

   Dr. Cheriton's influence on the accused products was substantial. He [

                              ]. JX-0022C (Cheriton Dep.

Tr.) at 76-77, 79-82, 158; Duda Tr. 867, 799; JX-0020C (Bechtolsheim Dep. Tr.) at 60. Dr.

Cheriton also invented a programming environment and runtime called [   ], which is used in

both the development of Arista's software and on the switches themselves when Arista's

software is running, and which Arista asserts is "[   ]." CX-0035C ([

                                    ]) at ANI-ITC-944_945-0779973–74; Duda Tr. 798-800.

Fifth, Dr. Cheriton was [   ] in the design of the Arista

feature that is covered by his patent. Duda Tr. 808-811, 876; JX-0022C (Cheriton Dep. Tr.) at

83-86, 88-93. Specifically, Dr. Cheriton [

                                    ]. CX-0245C (AID 61) at ANI-ITC-944_945-

0150232; Duda Tr. 812-816; JX-0022C (Cheriton Dep. Tr.) at 83-86; JX-0026C (Duda Dep. Tr.)

at 97-99. Dr. Cheriton [   ]. *Id.*; *see*

also Duda Tr. 809-811, 876. Other documents, such as internal e-mails to and from Dr.

Cheriton, also show that [

                                    ]. *Id.*; *see also* CX-0804C (Email from D. Cheriton) at 800-17;

CX-0535C (Email from K. Duda) at 256-57; CX-0932C (Email from D. Cheriton) at 188;

JX-0022C (Cheriton Dep. Tr.) at 88-89. In addition, Dr. Cheriton testified at his deposition that

[   ], and that [

                                    ]. JX-0022C (Cheriton Dep. Tr.) at 85-86, 89-93; Duda Tr.

816-817; CX-0804C (Email from D. Cheriton) at 800-17.

Accordingly, it is determined that Dr. Cheriton is "far more than a mere employee" or

"mere shareholder" of Arista, and that Arista is in privity with Dr. Cheriton for purposes of the

assignor estoppel analysis. *See Shamrock*, 903 F.2d at 794.

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c. Assignor Estoppel Applies to Arista's Defenses Based on 35 U.S.C. § 101

Arista argues that Section 101-based defenses are exempt from the application of

assignor estoppel, yet does not cite legal authority to support its position. *See* Resp. Br. at

223-24. Indeed, Arista states in its post-hearing brief: "Arista is aware of no court ever applying

the doctrine of assignor estoppel to block a § 101 challenge, particularly not in this modern era of

revitalized jurisprudence concerning non-patentable subject matter." *Id.* at 224.

The governing law states that the doctrine of assignor estoppel defeats "invalidity

challenges based on . . . utility [and] patentable invention." *Diamond*, 848 F.2d at 1224;

Westinghouse Elec. & Mfg. Co. v. Formica Insulation Co., 266 U.S. 342, 349 (1924) ("[A]n

assignor . . . is estopped to attack the utility . . . of a patented invention which he has assigned.");

see 35 U.S.C. § 101 ("Inventions Patentable"); *Brenner v. Manson*, 383 U.S. 519, 528-29 (1966)

("utility" is a requirement of § 101). Moreover, the Federal Circuit rejected the idea that

assignor estoppel is limited to defenses arising under a particular subchapter of Title 35.

Shamrock, 903 F.2d at 794 ("We reject the contention that mere classification of a defense as

equitable bars consideration of assignor estoppel.").

Accordingly, the application of assignor estoppel in this investigation is applicable to

Arista's defense under § 101.

d. Arista May Not Argue That the Accused Feature Is Within the Prior Art and Thus Cannot Infringe

Arista also argues that, inasmuch as it alleges ProcMgr is within the prior art, Arista's

products cannot infringe. *See* Resp. Br. at 224-25. In actuality, Arista has not established that

ProcMgr is within the prior art. In any event, "there is no 'practicing the prior art' defense to

literal infringement." *See Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d

1357, 1365 (Fed. Cir. 2002) (citing *Baxter Healthcare Corp. v. Spectramed, Inc.*, 49 F.3d 1575, 1583 (Fed. Cir. 1995)). Furthermore, Arista's reliance on *Mentor Graphics* (which cites to *Scott Paper Co. v. Marcalus Mfg. Co.*, 326 U.S. 249, (1945)) as justification that this argument is permissible under the assignor estoppel doctrine is misplaced. *See* Resp. Br. at 224-25. In particular, *Tate* distinguishes the situation in *Scott Paper*, explaining that there the assignor was allowed to "measure the extent of anticipation for the purpose of limiting the claims of the assigned patents, and thus avoid infringement." *Tate*, 279 F.3d at 1369 (citing *Scott Paper*, 326 U.S. at 250). In the circumstances of this investigation, Arista presents its invalidity argument as a non-infringement theory, a practice that the Federal Circuit has held to be ineffectual. *See Tate* 279 F.3d at 1365.

e. The Doctrine of Assignor Estoppel Applies to This Investigation

Inasmuch as "[t]he principle of fair dealing . . . whereby the assignor will not be allowed to say that what he has sold as a patent was not a patent has been part of the fabric of our law throughout the life of this nation," it is determined that assignor estoppel acts as a bar to Arista's invalidity defenses with respect to the '597 patent in this investigation. *See Diamond*, 848 F.2d at 1224. Moreover, the Federal Circuit has held that "both statutory and case law required that assignor estoppel be considered and applied in section 337 cases," and instructed that "the Commission's public interest responsibilities do not give it an independent duty to determine the validity of a patent where no party made such a challenge." *Intel*, 946 F.2d at 837 (citing *Lannom Mfg. Co. v. Int'l Trade Comm'n*, 799 F.2d 1572, 1579 (Fed. Cir. 1986)).

Although it has been determined that assignor estoppel bars Arista's invalidity arguments with respect to the '597 patent, those arguments are addressed in the sections below for completeness.

2.   Patent Eligibility Under 35 U.S.C. § 101

Arista argues that that the asserted claims of the '597 patent are invalid for claiming patent-ineligible subject matter. *See* Resp. Br. at 182-90. Arista's arguments fail, however, inasmuch as the '597 patent is directed to a specific thing, *i.e.*, a communications device with a specific arrangement of components within the device, including a logging module and a device subsystem that the logging module is coupled to and monitors, and not an abstract idea. The first sentence of the patent abstract recites "[a] logging module is disclosed," and goes on to teach that a hardware device can "be made secure through the use of[] the logging module." JX-0004 ('597 patent) at Abstract. This on-device logging module, as the specification makes clear, secures that device by "detect[ing] a change in the configuration of [a] subsystem" and communicating "that the change has occurred." *Id.* at col. 6, lns. 7-10; *see id.* at Abstract; col. 4, lns. 16-19; col. 7, lns. 20-30; col. 8, lns. 50-52. Indeed, the logging module as described in the specification is described in concrete terms as a well-defined part of the device that performs a specific role within the device's architecture and is distinct from, but coupled to, the subsystem it monitors. *Id.* at col. 6, lns. 5-7; col. 7, lns. 16-20; Figs. 1, 2.

Similarly, claim 39 recites "a logging module" that "is coupled to" a "subsystem of a communications device" to detect and communicate "a change in a configuration" of the subsystem. JX-0004 ('597 patent) at col. 19, lns. 21-28; *see id.* at col. 16, lns. 44-52 (claim 1); col. 21, lns. 23-30 (claim 71). Such a recitation is the opposite of "an idea, having no particular concrete or tangible form" that would be deemed unpatentable subject matter under Section 101.

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See Ultramercial, Inc. v. Hulu, LLC, 772 F.3d 709, 715 (Fed. Cir. 2014). The patent claims

describe not only the desired functionality, but also a specific and non-generic arrangement of

components within a particular type of device to carry out that functionality within the device,

thereby improving the device. Such a specific, concrete improvement to "the functioning of" a

network device does not "disproportionately t[ie] up the use of" the "'building block[s]' of

human ingenuity." *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l.*, 134 S. Ct. 2347, 2354-55, 2359

(2014) (quoting *Mayo*, 132 S. Ct. at 1294, 1303).

3. Invalidity Over the Prior Art

a. Anticipation – U.S. Patent Pub. 2002/0078382 to Sheikh

The record evidence shows that Sheikh does not anticipate any of the independent claims,

and therefore does not anticipate any of the associated dependent claims, of the '597 patent,

under any party's constructions. CX-1216C (Wicker RWS) at Q/A 80-87; Q/A 136-146, Q/A

151, Q/A 154. The system described Sheikh is distributed over multiple devices connected over

a network, *i.e.*, a central server and one or more remote servers. *Id.*; *see* RX-3293 (Sheikh) at

Abstract, 0032. As an initial matter, a server is not a communications device, and Sheikh only

discloses remotely monitoring communications devices such as routers. CX-1216C (Wicker

RWS) at Q/A 141-44; RX-3293 (Sheikh) at 0033-34. Second, the central server contains a

"master transport" 110a that "provides for the polling of one or more agent transports, which are

located throughout network 100a on the agent transport's associated host servers." CX-1216C

(Wicker RWS) at Q/A 138-39; *see* RX-3293 (Sheikh) at 0032. In Sheikh, the master transport

controls each remote agent by "pushing," or "sending," a software package to the agent that

contains the necessary monitoring sensors. CX-1216C (Wicker RWS) at Q/A 138-39; RX-3293

(Sheikh) at 0044. Without a software package containing the necessary sensor configuration, the

agent is unable to perform any detecting. CX-1216C (Wicker RWS) at Q/A 138-39; RX-3293 (Sheikh) at 0043. This does not disclose the claimed architecture of the '597 patent, *i.e.*, a communications device comprising a logging module and a subsystem. CX-1216C (Wicker RWS) at Q/A 136-44. Instead, Sheikh discloses the same network-focused security vulnerability the invention of the '597 patent addressed. RX-3293 (Sheikh) at 0010.

Sheikh also does not anticipate claim 14 because it does not satisfy the limitation requiring "the subsystem is a communications interface"—the network between the server and the router, and the disclosed monitoring is interrogation of the device as a whole. CX-1216C (Wicker RWS) at Q/A 147.

Sheikh also does not anticipate claim 15 because it does not disclose the restricted access limitation. CX-1216C (Wicker RWS) at Q/A 148-149. First, Sheikh does not disclose the logging module containing restricted access. *Id.* Second, Sheikh describes at 0044 a system that provides sensor configuration information over the network. *See* RX-3293 (Sheikh) at 0044. Regardless of whether communications are encrypted or not, network-based security solutions allowed attackers to undermine the effectiveness of the solutions, and are examples of the problems with the prior art that the '597 patent sought to solve. CX-1216C (Wicker RWS) at Q/A 148-149.

Finally, Sheikh does not anticipate dependent claims 29, 63, 64, or 73 because it does not disclose the limitation of "broadcasting." CX-1216C (Wicker RWS) at Q/A 150. First, "communicating configuration changes to one or more master transports" is not broadcasting the change by a logging module. *Id.* As the specification teaches, "[t]he task of the master transport is to poll each agent transport in turn, receive the results, decrypt that information, evaluate it, store it on its central server and report the information upon request by a user." *Id.*; RX-3293

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(Sheikh) at 0040. In this situation, the agent transport is directly sending data to the master transport in response to the poll. Second, "transmitting the changes as alerts through a variety of systems" does not disclose broadcasting the change by a logging module. CX-1216C (Wicker RWS) at Q/A 150. The "alerts" in Sheikh are not broadcast; they are sent directly to and received by the device specified by the administrator. *Id.*; RX-3293 (Sheikh) at 0093. Further, Sheikh explains that the "alerts" on which Arista relies for its argument are sent by the master transport. CX-1216C (Wicker RWS) at Q/A 150.

b. Anticipation and Obviousness – U.S. Patent No. 7,316,016 to DiFalco

Arista has not shown that DiFalco anticipates or renders obvious any of the independent claims, and therefore any of the associated dependent claims, of the '597 patent under any party's constructions. CX-1216C (Wicker RWS) at Q/A 88, Q/A 160-66, Q/A 170, Q/A 173. DiFalco is a "distributed" and "scalable architecture" that can be managed from a console to periodically detect state changes of heterogeneous nodes across a network. *Id.*; RX-3292 (DiFalco) at col. 1, lns. 7-16. The distributed system of DiFalco includes clients (102), which represent devices that can include a "station service" (103) where "Rules" are processed and contain the criteria for monitoring state-changes and can "be applied to multiple locations or notes on a network." *Id.* If a client contains a station service, it is an active node and the rules can be processed locally. If the client does not contain a station service, it is then considered a passive node. *Id.*; RX-3292 (DiFalco) at col. 2, lns. 45-67; col. 3, lns. 1-20. Communications devices are limited to being passive nodes, *i.e.*, nodes acted on remotely. *Id.* This is not the claimed architecture of the '597 patent, *i.e.*, a communications device comprising a logging module and a subsystem. *Id.*

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DiFalco also not anticipate claim 14 because it does not satisfy the limitation requiring "the subsystem is a communications interface." In particular, the station service monitoring would need to take place remotely, but DiFalco does not disclose or enable the ability to do this. CX-1216C (Wicker RWS) at Q/A 167.

Moreover, DiFalco also does not anticipate claim 15 because it does not disclose the restricted access limitation. CX-1216C (Wicker RWS) at Q/A 168. Arista's expert Dr. Hollingsworth has testified that the "security service" or "remedying response" taught in DiFalco provides this functionality, but the evidence shows otherwise. *See id.* With respect to the remedying response feature, DiFalco explains that a remedying response "may update the baseline that is used to detect state-changes or a [sic] restore an object to its baseline state," and restoring after a change is not restricting as required by the claim language. *See id.*; RX-3292 (DiFalco) at col. 6, lns. 45-47. Indeed, DiFalco teaches that "a remedying response may update the baseline that is used to detect state-changes or restore an object to its baseline state." *See id.*; RX-3292 (DiFalco) at col. 3, lns. 31-41.

DiFalco also does not anticipate claims 29, 63, 64, or 73 because it does not teach the limitation requiring "broadcast[ing]." CX-1216C (Wicker RWS) at Q/A 169. Specifically, nothing in DiFalco discloses configuring an SNMP trap to broadcast data. *Id.*

With respect to Arista's obviousness arguments, the evidence fails to establish that a person of ordinary skill in the art would know to configure an SNMP trap in the system of DiFalco to be sent to a broadcast address. CX-1216C (Wicker RWS) at Q/A 169. Moreover, the evidence also fails to establish that a person of ordinary skill in the art would be motivated to combine DiFalco with Sheikh to arrive at the inventions claimed in the '597 patent. *Id.* at Q/A 121-125. As Dr. Wicker testified, "DiFalco and Sheikh address different problems and the

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disclosures in each are incompatible with one another." *Id.* at Q/A 123. In particular, Dr. Wicker testified:

> DiFalco explicitly excludes communication devices from the category of "active nodes" that detect state changes at 3:14-19. Thus, even if Sheikh disclosed monitoring a mail subsystem and using that mail subsystem to broadcast change information, the system of Sheikh would not work in DiFalco. . . . DiFalco never suggests modifying its system by using a monitored mail subsystem to broadcast state changes or otherwise. In fact, DiFalco explicitly discourages such modifications. Thus, the combination proposed by Dr. Hollingsworth is impermissible hindsight.

Id. Q/A 124-125.

Therefore, it is determined that the DiFalco reference does not anticipate or render obvious the asserted claims of the '597 patent.

c. Anticipation – WebLogic Guide

The evidence adduced at the hearing demonstrates that the WebLogic Guide does not anticipate any of the asserted '597 patent claims under all claim constructions proposed by the parties. CX-1216C (Wicker RWS) at Q/A 106-109, Q/A 230-233, Q/A 237, Q/A 240. The WebLogic Guide describes application servers known as WebLogic servers used for developing and deploying distributed enterprise applications. *Id.* As the WebLogic Guide explains at pages 1-2, the "basic administrative unit for WebLogic Servers is called a domain." *Id.* "A domain is a logically related group of WebLogic Server resources that are managed as a unit by a WebLogic Server instance configured as the Administration Server." The WebLogic Guide provides an example domain configuration in Figure 1-1. *Id.* As illustrated at 1-4, the domain consists of Machine A, an "Administration Server" that hosts one instance of WebLogic Server, and Machines B and C, "Managed Servers" that each host two instances of WebLogic Server. *Id.* This is not the claimed architecture of the '597 patent (a communications device comprising

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a logging module and a subsystem). *See id.* Further, relying on individual subsystems to monitor their own health status do not disclose the claimed "subsystem; and a logging module, coupled to said subsystem, and configured to detect a change to a configuration of said subsystem of said communications device." *See id.* Unlike the invention of the '597 patent, an attacker can comprise the subsystem of a server instance in the WebLogic Guide and use it to modify the self-health mechanism. *See id.*

In addition, WebLogic does not anticipate claim 14 because it does not satisfy the limitation of "the subsystem is a communications interface," inasmuch as a software messaging service is not the same as a communication interface of a communications device. CX-1216C (Wicker RWS) at Q/A 234.

WebLogic also does not anticipate claim 15 because it does not disclose the recited restricted access limitation. CX-1216C (Wicker RWS) at Q/A 235. Instead, WebLogic describes a security scheme that allows for configuration of groups, roles, policies, and permissions. *Id.*; RX-3296 (WebLogic Guide) at 8-8.

Moreover, WebLogic does not anticipate claims 29, 63, 64, or 73 because it does not satisfy the limitation that requires "broadcast[ing]." *See* CX-1216C (Wicker RWS) at Q/A 236.

d. Anticipation and Obviousness – IOS 11.2.1

The record evidence shows that IOS 11.2.1 does not anticipate or render obvious any of asserted claims of the '597 patent under all claim constructions proposed by the parties.[30] *See* CX-1279C (Wicker SRWS).

Arista identifies three functionalities in IOS 11.2.1, *i.e.*, the watchdog mechanism, the chassis daemon, and Syslog, as satisfying the logging module claim limitation, but the evidence

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[30] Arista does not allege claims 15 or 64 are anticipated or rendered obvious by IOS 11.2.1.

shows otherwise. *See* CX-1279C (Wicker SRWS) at Q/A 19-32. Specifically, Syslog does not

generate log messages or detect changes to any subsystem. CX-1279C (Wicker SRWS) at Q/A

26, Q/A 31; JX-0050C (Edsall Dep. Tr.) at 155, 156, 180. The "watchdog mechanism" also does

not satisfy a logging module limitation, inasmuch as the "watchdog mechanism" operates as part

of the process itself to determine whether a process has been executing too long, *i.e.*, the

subsystem is required to perform its own detecting and logging. CX-1279C (Wicker SRWS) at

Q/A 21. The "chassis daemon" mechanism also does not satisfy the a logging module limitation

because it is the support code for the chassis interface that itself polls statistics related to the

chassis interface. CX-1279C (Wicker SRWS) at Q/A 28-30. As with the "watchdog"

mechanism, this is code for the chassis interface and does not constitute a logging module

coupled to a subsystem. *Id.*

The record also fails to show that the IOS 11.2.1 satisfies the "broadcasting" claim

limitation "broadcasting" recited in claims 29, 63, 64, or 73. CX-1279C (Wicker SWS) at Q/A

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With respect to Arista's obviousness arguments, the evidence fails to establish that a

person of ordinary skill in the art would know to configure an SNMP trap to be sent to a

broadcast address. *See* CX-1216C (Wicker RWS) at Q/A 34.

Therefore, it is determined that the IOS 11.2.1 does not anticipate or render obvious the

asserted claims of the '597 patent.

e.   Secondary Considerations of Nonobviousness

The nonobviousness of the '597 patent is also demonstrated by evidence suggesting that

[   ]. *See* CX-1216C (Wicker RWS) at Q/A 246-251. The evidence

shows that Arista was aware of the invention of the '597 patent in particular because the named

inventor, David Cheriton, co-founded Arista. Arista has also praised the invention of the '597 patent and its unexpected results. CX-0335 ("Arista White Paper - EOS" 2015 version); CX-0273; CX-0268 ("Arista Whitepaper - EOS"); CX-0259 ("Arista Cloud Networking Portfolio").

VII. The '592 and '145 (Private VLAN) Patents

A. Claim Construction

1. Level of Ordinary Skill

Although the private parties and the Staff each proposed a different definition of a person having ordinary skill in the art with respect to the Private VLAN Patents, all agree that the differences between the competing proposals do not affect the analysis in this investigation. *See* Compl. Br. at 214; Resp. Br. at 300-01; Staff Br. at 83.

For example, Arista proposes that a person of ordinary skill in the field of art of the '592 and '145 patents would be a person with a Bachelor of Science or Bachelor of Art degree in computer science, computer engineering, electrical engineering, or a closely related field, along with 2-4 years of industry experience in computer networks and systems. RX-3136C (Moisand WS) at Q/A 18-21. Additional education in a relevant field, such as computer science, computer engineering, or electrical engineering, or industry experience may compensate for a deficit in one of the other aspects of the above. *Id.*

The Staff proposes that a person of ordinary skill in the art would be a person with a Bachelor of Science degree in computer science, computer engineering, electrical engineering, or a closely related field, along with 2 years of experience in the field of computer networks, systems, and network devices. Staff Br. at 83. Cisco "is willing to accept Staff's proposed definition for the Private VLAN patents." Compl. Br. at 214.

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Inasmuch as the parties are in substantial agreement regarding the level of ordinary skill, it is determined that a person of ordinary skill in the art with respect to the '592 and '145 patents would be a person with a Bachelor of Science degree in computer science, computer engineering, electrical engineering, or a closely related field, along with two years of experience in the field of computer networks, systems, or network devices.

2. Disputed Claim Terms

a. "promiscuous port" ('592 patent claims 6, 7, 20, and 21; '145 patent claims 7 and 46)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
port for exchanging packets with one or more isolated ports and community ports by use of VLANs	a physical port on a layer 2 switch or bridge that is connected to a layer 3 or layer 4 device of the OSI reference model external to the switch and that is connected to VLANs internal to the switch, including a primary VLAN and isolated VLAN and/or community VLAN. A promiscuous port transmits packets onto a primary VLAN and receives packets from an isolated VLAN and/or community VLAN.	a port that is connected to layer 3 or 4 devices and that exchanges packets with isolated ports and community ports by use of VLANs internal to the switch

The claim term "promiscuous port" appears in claims 6, 7, 20, and 21 of the '592 patent, as well as in claims 7 and 46 of the '145 patent. As proposed by Cisco, the term is construed to mean "port for exchanging packets with one or more isolated ports and community ports by use of VLANs." This construction is consistent with the claim language and is supported by the specification.

In particular, the express language of the claims require that the promiscuous ports exchange packets with isolated or community ports using VLANs. Thus, for example, asserted

claim 6 of the '592 patent requires an "isolated port exchanging packets with said promiscuous port," while asserted claim 7 requires a "community of ports exchanging packets . . . with said promiscuous ports." JX-0005 ('592 patent). The specification also supports the adopted claim construction, disclosing that "[i]solated ports and community ports exchange packets with the promiscuous ports by use of the VLANs internal to the switch." JX-0005 ('592 patent) at col. 2, lns. 20-26; CX-0003C (Jeffay WS) at Q/A 62. This description is repeated several times throughout the specification. See, e.g., JX-0005 ('592 patent) at col. 4, lns. 46-49 ("[A]ny packet received by a promiscuous port . . . may be received by any isolated port or community port."); col. 4, lns. 53-55 ("Isolated VLAN 240 carries packet traffic from isolated ports to the promiscuous ports."); col. 5., lns. 25-30 (packets are "transferred by community VLAN #2 350 . . . to all of the promiscuous ports"); Fig. 2; Fig. 3.

The claim construction proposed by Arista, however, adds limitations that conflict with the claim language and intrinsic evidence. For instance, Arista's construction requires that each "promiscuous port" be "connected to VLANs . . . including a primary VLAN and isolated VLAN and/or community VLAN." See RX-3136C (Moisand WS) at Q/A 103. The addition of this limitation conflicts with the express claim language. According to the claims, a promiscuous port need not be connected to all three types of VLANs: some claims specify that promiscuous ports receive packets over isolated VLANs only (e.g., '592 patent claims 8, 12, 17, 20, and 23; '145 patent claims 11, 22, 33, 39, 40, and 41), other claims specify that promiscuous ports receive packets over require community VLANs only (e.g., '592 patent, claims 18, 21, and 24; '145 patent claims 12, 23, 34, 42, 43, 44, and 46), and still other claims do not require isolated or community VLANs at all (e.g., '145 patent claims 1, 3, 5, 13, 15, 24, 26, 35, and 45).

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Arista proposes a further requirement that the VLANs used by the promiscuous port be "internal to the switch."[31] This additional limitation conflicts with the claim language. For example, asserted claims 6 and 7 of the '592 patent require "exchanging packets . . . through a path inside said switch," while asserted claims 20 and 21 do not have this requirement. Adding a requirement that a VLAN must be "internal to the switch" to the construction of "promiscuous port" would make the express language in claims 6 and 7 redundant while at the same time adding unclaimed limitations to claims 20 and 21. Adding an "internal to the switch" limitation would also exclude the "trunk port" embodiments used to extend the private VLANs from within an individual switch to cross over between two switches. CX-0003C (Jeffay WS) at Q/A 65; JX-0005 ('592 patent) at col. 3, lns. 4-6; Fig. 8.

Arista's proposed construction also defines "promiscuous port" as a port on a layer 2 switch, but this limitation conflicts with the claim language and is inconsistent with the specification. As an initial matter, some claims of the '592 patent are directed to a "switch," whereas some claims of the '145 patent are directed to a "router." Moreover, according to the specification, the claimed invention can be implemented on a router: "As an example, primary VLANs and secondary VLANs (that is Isolated or Community VLANS) are programmed in the router using Color Blocking Logic (CBL)." JX-0005 ('592 patent) at col. 7, lns. 25-27; *see id.* at col. 6, lns. 53-57; col. 7, lns. 13-16; CX-1220C (Jeffay RWS) at Q/A 40. Arista's proposed construction also renders redundant certain dependent claims, such as claim 10 of the '592 patent, that are specifically directed to "layer 2 switches."

Arista proposes a construction requiring that a promiscuous port be a "physical port," arguing that the patent "illustrates the ports as the connections on the switch itself." *See*

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[31] This requirement is also proposed by the Staff in its construction.

RX-3136C (Moisand WS) at Q/A 103. Arista relies on the deposition testimony of named

inventor Thomas Edsall to support this facet of its proposed construction, but Mr. Edsall's

testimony describes one way in which a port could be isolated, and not the meaning of the term

"port" in the context of the claim language. *See* RX-3136C (Moisand WS) at Q/A 103;

CX-1220C (Jeffay RWS) at Q/A 42.

Arista's proposed construction also requires that a "promiscuous port" be connected to

layer 3 or layer 4 devices.[32] *See* RX-3136C (Moisand WS) at Q/A 103. Nevertheless, no such

requirement exists in the claims which are directed to a single device such as a "switch" ('592

patent) or a "router" ('145 patent), instead of to additional devices connected to the switch or

router. CX-1220C (Jeffay RWS) at Q/A 41. Requiring that a promiscuous port include a

connection to a separate device when the claim itself is directed to a single, standalone device is

illogical. *See id.*

Therefore, the term "promiscuous port" is construed to mean "port for exchanging

packets with one or more isolated ports and community ports by use of VLANs."

b. "isolated port" ('592 patent claims 6 and 20; '145 patent claim 7)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
port for exchanging packets with one or more promiscuous ports by use of VLANs but that cannot transfer packets to another isolated port	a physical port on a layer 2 switch or bridge that is connected to user devices and is configured to exchange packets with the promiscuous ports by use of the VLANs internal to the switch, including a primary VLAN and isolated VLAN, where an isolated port cannot transfer packets to another isolated port	port that exchanges packets with the promiscuous ports by use of the VLANs internal to the switch but that cannot transfer packets to another isolated port

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[32] This requirement is also proposed by the Staff in its construction.

The claim term "isolated port" appears in asserted claims 6 and 20 of the '592 patent, as well as asserted claim 7 of the '145 patent. As proposed by Cisco, this term is construed to mean "port for exchanging packets with one or more promiscuous ports by use of VLANs but that cannot transfer packets to another isolated port," a construction that is consistent with the claim language and the specification.[33]

The language of the claims expressly requires that isolated ports exchange packets with promiscuous ports, but not other isolated ports. *See, e.g.,* JX-0005 ('592 patent) at claim 6 (requiring "said selected isolated port exchanging packets with said promiscuous port" and "not exchanging packets with another isolated port"). The specification also supports the adopted construction, stating that "[i]solated ports . . . exchange packets with the promiscuous ports by use of the VLANs internal to the switch . . . [but] an isolated port cannot transfer packets to another isolated port." JX-005 ('592 patent) at col. 2, lns. 20-22; *see* CX-0003C (Jeffay WS) at Q/A 62, Q/A 67; JX-0005 at col. 2, lns. 38-41 (an isolated VLAN "transfers the packets [from isolated ports] to the promiscuous ports . . . [but] does not deliver any packets to another isolated port"); col. 4, lns. 53-55 ("Isolated VLAN 240 carries packet traffic from isolated ports to the promiscuous ports . . . [and] is configured so that it cannot deliver any packets to an isolated port."); Fig. 2.

Arista's proposed construction add limitations to the functionality taught by the specification, requiring that the isolated port communicate with the primary and isolated VLANs

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[33] The construction proposed by the Staff is similar to the adopted construction, although the Staff's construction adds the phrase "internal to the switch." As discussed above with respect to the claim term "promiscuous port," adoption of this additional phrase is not warranted by the intrinsic evidence.

referenced in the specification, the VLANs be "internal to the switch," the isolated port reside on a "layer 2" switch, the isolated port be a "physical" port, and the isolated port be connected to user devices. RX-3136C (Moisand WS) at Q/A 109-110. The additional limitations are not supported by the intrinsic evidence and are not adopted for reasons similar to those set forth in the discussion with respect to the clam term "promiscuous port." *See* CX-1220C (Jeffay RWS) at Q/A 39-43.

Therefore, the term "isolated port" is construed to mean "port for exchanging packets with one or more promiscuous ports by use of VLANs but that cannot transfer packets to another isolated port."

      c.   **"community port" ('592 patent claims 7 and 21; '145 patent claims 7 and 46)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
"port for exchanging packets with one or more promiscuous ports by use of VLANs and that can transfer packets to a designated number of other community ports	a physical port on a layer 2 switch or bridge that is connected to user devices and is configured to exchange packets with the promiscuous ports by use of the VLANs internal to the switch, including a primary VLAN and community VLAN, where a community port has a designated number of community ports to which it can transfer packets	a port that exchanges packets with the promiscuous ports by use of the VLANs internal to the switch and that can transfer packets to a designated number of other community ports

The claim term "community port" appears in asserted claims 7 and 21 of the '592 patent, as well as in asserted claims 7 and 46 of the '145 patent. As proposed by Cisco, this claim term is construed to mean "port for exchanging packets with one or more promiscuous ports by use of

VLANs and that can transfer packets to a designated number of other community ports," a construction that is supported by the claim language and the specification.[34]

The language of the claims requires that community ports exchange packets with promiscuous ports and other designated community ports. *See, e.g.,* JX-0005 ('592 patent) at claim 7 (reciting "each of said community ports . . . exchanging packets through a path internal to said switch with said promiscuous port . . . [and] with all ports of said plurality of community ports"). The specification also supports the adopted construction, stating that "community ports exchange packets with the promiscuous ports by use of the VLANs internal to the switch . . . [and a community port] has a designated number of community ports to which it can transfer packets." JX-0005 ('592) at col. 2, lns. 20-26; *see* CX-0003C (Jeffay WS) at Q/A 72; JX-0005 at col. 2, lns. 49-52 ("The community VLAN transfers a packet . . . [from] a community port to all of the promiscuous ports, and . . . to the other community ports attached to that community VLAN."); col. 5, lns. 12-18 ("A packet transferred to the community VLAN from a community port is received by all of the community ports connected to the community VLAN, and also all of the promiscuous ports."); Fig. 3.

Arista's proposed construction add limitations to the functionality taught by the specification, requiring that the community port communicate with the primary and community VLANs referenced in the specification, the VLANs be "internal to the switch," the community port reside on a "layer 2" switch, the community port be a "physical" port, and the community port be connected to user devices. *See* RX-3136C (Moisand WS) at Q/A 115-116. The

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[34] The construction proposed by the Staff is similar to the adopted construction, although the Staff's construction adds the phrase "internal to the switch." As discussed above with respect to the claim term "promiscuous port," adoption of this additional phrase is not warranted by the intrinsic evidence.

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additional limitations are not supported by the intrinsic evidence and are not adopted for reasons

similar to those set forth in the discussion with respect to the clam term "promiscuous port." *See*

CX-1220C (Jeffay RWS) at Q/A 39-42, Q/A 44.

Therefore, the term "community port" is construed to mean "port for exchanging packets

with one or more promiscuous ports by use of VLANs and that can transfer packets to a

designated number of other community ports."

d. "primary VLAN" ('592 patent claims 20 and 21; '145 patent claims 7 and 46)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
a VLAN that connects to all or a subset of promiscuous ports, to all or a subset of isolated ports, and to all or a subset of community ports. The primary VLAN receives packets from outside of the switch arriving at any of the promiscuous ports, and transfers the packets to the isolated or community ports. However, an isolated or community port cannot receive traffic from the external LAN connected to it, and transfer the packets to the primary VLAN. The primary VLAN is a one way connection from promiscuous ports to isolated or community ports.	a VLAN connecting to all promiscuous ports, to all isolated ports, and to all community ports. The primary VLAN receives packets from outside of the switch arriving at any of the promiscuous ports, and transfers the packets to the isolated or community ports. However, an isolated or community port cannot receive traffic from the external LAN connected to it, and transfer the packets to the primary VLAN. The primary VLAN is a one way connection from promiscuous ports to isolated or community ports.	a VLAN that connects to all promiscuous ports, to all isolated ports, and to all community ports. The primary VLAN receives packets from outside of the switch arriving at any of the promiscuous ports, and transfers the packets to the isolated or community ports. However, an isolated or community port cannot receive traffic from the external LAN connected to it, and transfer the packets to the primary VLAN. The primary VLAN is a one way connection from promiscuous ports to isolated or community ports.

The claim term "primary VLAN" is recited in asserted claims 20 and 21 of the '592

patent, as well as in asserted claims 7 and 46 of the '145 patent. As proposed by Cisco, this

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claim term is construed to mean "a VLAN that connects to all or a subset of promiscuous ports, to all or a subset of isolated ports, and to all or a subset of community ports." Moreover, "[t]he primary VLAN receives packets from outside of the switch arriving at any of the promiscuous ports, and transfers the packets to the isolated or community ports. However, an isolated or community port cannot receive traffic from the external LAN connected to it, and transfer the packets to the primary VLAN. The primary VLAN is a one way connection from promiscuous ports to isolated or community ports." This construction is supported by the claim language and the specification.

Specifically, the claims themselves specify that a primary VLAN is not required to connect to all promiscuous, isolated, and community ports. Independent claim 20 of the '592 patent recites a switch in which "*all* promiscuous ports [are] also connected via a one way primary VLAN to said *all* isolated ports." JX-0005 ('592 patent) at claim 20 (emphasis added). By contrast, independent claim 7 of the '145 patent requires only that the primary VLAN connect to "one or more promiscuous ports." JX-0006 ('145 patent) at claim 7. Inasmuch as the claim term "primary VLAN" is construed the same for both patents, this demonstrates that a VLAN is required to connect to at least a subset of ports, and not necessarily all ports.

The specification also confirms that a primary VLAN may connect to all or only a subset of the ports:

> [I]n an alternative exemplary embodiments of the invention, a single primary VLAN may connect to only a subset of promiscuous ports. In such an alternative embodiment, there may be a plurality of primary VLANs, each with its associated promiscuous ports and associated isolated or community ports.

JX-0005 ('592) at col. 9, lns. 61-66.

The specification also provides:

Alternatively, a single L2 switch, or a network or trunked L2 switches, may have its promiscuous ports divided into subsets. Each subset of the promiscuous ports is then associated with its subset of isolated ports and community ports, along with the necessary VLAN.

JX-0005 ('592) at col. 3, lns. 7-11.

The specification teaches that such an exemplary embodiment may be desirable because it "gives a system designer flexibility in arranging connections to L3/L4 devices through promiscuous ports, and to user equipment connected at isolated ports or community ports." JX-0005 ('592 patent) at col. 9, ln. 65 – col. 10, ln. 3. Thus, as Cisco's expert Dr. Jeffay explained, a person skilled in the art would understand that the claimed VLANs need not connect to all ports. CX-0003C (Jeffay WS) at Q/A 79; CX-1220C (Jeffay RWS) at Q/A 46.

By contrast, the construction proposed by the Arista and the Staff requires that the primary VLAN connect to "all promiscuous ports, to all isolated ports, and to all community ports." This construction is in conflict with the language of the claims. For example, claim 6 of the '592 patent requires only that the switch have promiscuous and isolated ports, and does not require that the switch have community ports. JX-0005 ('592 patent) at claim 6; *see* CX-1220C (Jeffay RWS) at Q/A 46. In addition, as discussed above, defining a primary VLAN as being connected to "all" ports would render redundant those claims which expressly recite that as a limitation. *See, e.g.*, JX-0005 ('592 patent) at claim 20.

Moreover, even though the summary of invention section of the patent states that "[t]he primary VLAN connects to all promiscuous ports, to all isolated ports and to all community ports," this statement, when read in context with the rest of the specification and the claims, does not mean that a primary VLAN must connect to all ports on a switch. *See* JX-0005 ('592 patent) at col. 2, lns. 27-36; CX-0003C (Jeffay WS) at Q/A 79. Rather, a person having ordinary skill in

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the art would understand that statement to mean that the primary VLAN need only connect to all the ports in that primary VLAN. Any other interpretation would be inconsistent with the embodiments that explicitly allow a primary VLAN to connect to only a subset of promiscuous ports. CX-0003C (Jeffay WS) at Q/A 79; *see* JX-0005 ('592 patent) at col. 9, lns. 61-66.

Accordingly, the claim term "primary VLAN" is construed to mean "a VLAN that connects to all or a subset of promiscuous ports, to all or a subset of isolated ports, and to all or a subset of community ports," with the additional requirement that "[t]he primary VLAN receives packets from outside of the switch arriving at any of the promiscuous ports, and transfers the packets to the isolated or community ports. However, an isolated or community port cannot receive traffic from the external LAN connected to it, and transfer the packets to the primary VLAN. The primary VLAN is a one way connection from promiscuous ports to isolated or community ports."

e. "isolated VLAN" ('592 patent claim 20; '145 patent claim 7)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
a VLAN connecting to all or a subset of promiscuous ports and connecting to all or a subset of isolated ports.	a VLAN connecting to all promiscuous ports and connecting to all isolated ports.	a VLAN connecting to all promiscuous ports and connecting to all isolated ports.
An isolated VLAN receives packets arriving from outside of the switch at an isolated port, and transfers the packets to the promiscuous ports. An isolated VLAN does not carry packets received by a promiscuous port from outside of the switch. Also, an isolated VLAN does not deliver any packets to another isolated port. The isolated VLAN is a one way connection from an isolated port to the promiscuous ports.	An isolated VLAN receives packets arriving from outside of the switch at an isolated port, and transfers the packets to the promiscuous ports. An isolated VLAN does not carry packets received by a promiscuous port from outside of the switch. Also, an isolated VLAN does not deliver any packets to another isolated port. The isolated VLAN is a one way connection from an isolated port to the promiscuous ports.	An isolated VLAN receives packets arriving from outside of the switch at an isolated port, and transfers the packets to the promiscuous ports. An isolated VLAN does not carry packets received by a promiscuous port from outside of the switch. Also, an isolated VLAN does not deliver any packets to another isolated port. The isolated VLAN is a one way connection from an isolated port to the promiscuous ports.

The claim term "isolated VLAN" appears in asserted claim 20 of the '592 patent, as well as asserted claim 7 of the '145 patent. As proposed by Cisco, this term is construed to mean "a VLAN connecting to all or a subset of promiscuous ports and connecting to all or a subset of isolated ports." Moreover, "[a]n isolated VLAN receives packets arriving from outside of the switch at an isolated port, and transfers the packets to the promiscuous ports. An isolated VLAN does not carry packets received by a promiscuous port from outside of the switch. Also, an isolated VLAN does not deliver any packets to another isolated port. The isolated VLAN is a one way connection from an isolated port to the promiscuous ports." This construction is supported by the claim language and the specification.

As with the claim term "primary VLAN" discussed above, the dispute among the parties with respect to the claim term "isolated VLAN" is whether the isolated VLAN connects to "all or a subset" of promiscuous and isolated ports, or to "all" promiscuous and isolated ports. For the reasons set forth above with respect to "primary VLAN," the construction adopted for "isolated VLAN" is correct and reflects the various embodiments described in the specification.

f. "community VLAN" ('592 patent claim 21; '145 patent claims 7 and 46)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
VLAN connecting to a group of community ports, and also connecting to all or a subset of the promiscuous ports.	VLAN connecting to a group of community ports, and also connecting to all of the promiscuous ports.	VLAN connecting to a group of community ports, and also connecting to all of the promiscuous ports.
The group of community ports is referred to as a 'community' of community ports.	The community VLAN transfers a packet received from outside the switch at a community port to all of the promiscuous ports, and also transfers the packet to the other community ports attached to that community VLAN. A community VLAN cannot transfer packets received from outside of the switch at a promiscuous port. A community VLAN is a one way connection from a community of ports to the promiscuous ports, but allows a packet received by one community port to be transmitted out of the switch, through the other community ports connected to that community VLAN.	The group of community ports is referred to as a 'community' of community ports.
The community VLAN transfers a packet received from outside the switch at a community port to all of the promiscuous ports, and also transfers the packet to the other community ports attached to that community VLAN. A community VLAN cannot transfer packets received from outside of the switch at a promiscuous port. A community VLAN is a one way connection from a community of ports to the promiscuous ports, but allows a packet received by one community port to be transmitted out of the switch, through the other community ports connected to that community VLAN.		The community VLAN transfers a packet received from outside the switch at a community port to all of the promiscuous ports, and also transfers the packet to the other community ports attached to that community VLAN. A community VLAN cannot transfer packets received from outside of the switch at a promiscuous port. A community VLAN is a one way connection from a community of ports to the promiscuous ports, but allows a packet received by one community port to be transmitted out of the switch, through the other community ports connected to that community VLAN

The claim term "community VLAN" appears in asserted claim 21 of the '592 patent, as well as asserted claims 7 and 46 of the '145 patent. As proposed by Cisco, this term is construed to mean "VLAN connecting to a group of community ports, and also connecting to all or a subset of the promiscuous ports." Moreover, "[t]he group of community ports is referred to as a

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'community' of community ports. The community VLAN transfers a packet received from outside the switch at a community port to all of the promiscuous ports, and also transfers the packet to the other community ports attached to that community VLAN. A community VLAN cannot transfer packets received from outside of the switch at a promiscuous port. A community VLAN is a one way connection from a community of ports to the promiscuous ports, but allows a packet received by one community port to be transmitted out of the switch, through the other community ports connected to that community VLAN." This construction is supported by the claim language and the specification.

As with the claim terms "primary VLAN" and "isolated VLAN" discussed above, the dispute among the parties with respect to the claim term "community VLAN" is whether the community VLAN connects to "all or a subset" of promiscuous ports, or to "all" promiscuous ports. For the reasons set forth above with respect to "primary VLAN," the construction adopted for "community VLAN" is correct and reflects the various embodiments described in the specification.

g. **"switch" ('592 patent claims 6, 7, 20, and 21)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
Plain and ordinary meaning	a layer 2 (data link layer) device of the OSI reference model	No construction necessary. If construction is necessary, "a layer 2 (L2) switch"

The claim term "switch" appears in asserted claims 6, 7, 20, and 21 of the '592 patent. Based on the record evidence, it is determined that this claim language is unambiguous to a person having ordinary skill in the art, and that construction is therefore unnecessary. *See, e.g.,*

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Summit 6, LLC v. Samsung Electronics Co., Ltd., 802 F.3d 1283, 1291 (Fed. Cir. 2015)

("Because the plain and ordinary meaning of the disputed claim language is clear, the district

court did not err by declining to construe the claim term."). This position is supported by both

Cisco and the Staff. In particular, Cisco's expert Dr. Jeffay testified that the term "switch" is

self-explanatory and has a plain and ordinary meaning in the field of computer networks.

CX-0003C (Jeffay WS) at Q/A 88.

By contrast, the construction proposed by Arista is inconsistent with the patent

specification, which discloses that the claimed invention can be implemented on both routers and

switches. JX-0005 ('592 patent) at col. 6, lns. 8-14; col. 6, lns. 53-57; col. 7, lns. 13-16; col. 7,

lns. 25-27; CX-1220C (Jeffay RWS) at Q/A 49; Jeffay Tr. 451-452. Dr. Jeffay testified that a

person having ordinary skill in the art would understand the specification's references to a

"switch" to mean that the device could have layer 3/4 capabilities and would not be limited

solely to layer 2 capabilities. CX-1220C (Jeffay RWS) at Q/A 49, Q/A 242; *see* Duda Tr. 776-

777.

h.   "VLAN" ('592 patent claims 20 and 21; '145 patent claims 5, 7, 45, and 46)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
virtual local area network	a virtual local area network at layer two of the OSI reference model whereby packets exchanged between members of a given VLAN are transferred at the data link layer (layer two) of the OSI reference model and packets exchanged between VLANs are routed at the network layer (layer three) of the OSI reference model	virtual local area network defined within the switch

The claim term "VLAN" appears in asserted claims 20 and 21 of the '592 patent, as well as in asserted claims 5, 7, 45, and 46 of the '145 patent. As proposed by Cisco, this claim term is construed to mean "virtual local area network." This construction reflects the plain and ordinary mean of the term as understood by a person having ordinary skill in the art.[35]

As Cisco's expert Dr. Jeffay testified, the term "VLAN" should be construed to take its plain and ordinary meaning in the field of computer networks, which is "virtual local area network." CX-0003C (Jeffay WS) at Q/A 92; Jeffay Tr. 451, 516. This is supported by the specification where it states that a VLAN is a virtual local area network. JX-0005 ('592 patent) at col. 1, lns. 7-10 ("The invention relates to Virtual Local Area Networks (VLANs)."); CX-0003C (Jeffay WS) at Q/A 93.

Arista's proposed construction for the term "VLAN" adds additional limitations with respect to the operation of the VLAN that are not supported by the claim language or the specification. *See* CX-0003C (Jeffay WS) at Q/A 95.

Accordingly, the claim term "VLAN" is construed to mean "virtual local area network."

i. **"VLAN configured as a one way connection" ('592 patent claims 20 and 21)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "a VLAN configured as a one-way path"	a VLAN configured as a one way path inside the switch	No construction necessary. If construction is necessary, "a VLAN configured as a one-way path"

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[35] The construction proposed by the Staff is similar to the adopted construction, although the Staff's construction adds the phrase "within the switch." As discussed above with respect to the claim term "promiscuous port," adoption of this additional phrase is not warranted by the intrinsic evidence.

The claim term "VLAN configured as a one way connection" appears in asserted claims 20 and 21 of the '592 patent. Both Cisco and the Staff argue that no construction is needed for the claim term. If, however, it is determined that construction is necessary, Cisco and the Staff both propose that the term be construed to mean "a VLAN configured as a one-way path." *See* CX-0003C (Jeffay WS) at Q/A 96-97; Staff Br. at 92. Arista's proposed construction for this claim term adds a limitation that the "path" be "inside the switch," which is incorrect for the reasons discussed above in connection with the claim term "promiscuous port."

It is determined that the meaning of the claim term "VLAN configured as a one way connection" is unambiguous and does not require construction.

j.   **"said selected isolated port exchanging packets with said promiscuous port through a path inside said switch" ('592 patent claim 6)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. See construction of "isolated port" and "promiscuous port."	Indefinite	No construction necessary. If construction necessary "the isolated port exchanges packets with the promiscuous port through a path inside the switch"

The claim term "said selected isolated port exchanging packets with said promiscuous port through a path inside said switch" appears in asserted claim 6 of the '592 patent. Both Cisco and Staff agree that no construction of this term is required, and that it should have its plain and ordinary meaning. *See* CX-0003C (Jeffay WS) at Q/A 100; Staff Br. at 92. Arista argues that the term is indefinite. *See* RX-3136C (Moisand WS) at Q/A 407. Arista's invalidity

argument is rejected, and is discussed in further detail below in the validity section addressing

Arista's argument that certain claim elements are indefinite because they are "circular."

It is therefore determined that the claim term "said selected isolated port exchanging

packets with said promiscuous port through a path inside said switch" is unambiguous and does

not require construction.

k. "said isolated port not exchanging packets with another isolated port" ('592 patent claim 6)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. See construction of "isolated port."	Indefinite	No construction necessary. See construction of "isolated port."

The claim term "said isolated port not exchanging packets with another isolated port"

appears in asserted claim 6 of the '592 patent.

Both Cisco and Staff agree that no construction of this term is required, and that it should

have its plain and ordinary meaning. *See* CX-0003C (Jeffay WS) at Q/A 103; Staff Br. at 93.

Arista argues that the term is indefinite. *See* RX-3136C (Moisand WS) at Q/A 409. Arista's

invalidity argument is rejected, and is discussed in further detail below in the validity section

addressing Arista's argument that certain claim elements are indefinite because they are

"circular."

It is therefore determined that the claim term "said isolated port not exchanging packets

with another isolated port" is unambiguous and does not require construction.

l.   "each of said community ports of said plurality of community
        ports receiving packets from a selected external network and
        transmitting packets onto said selected external network, each
        port of said community of ports exchanging packets through a
        path internal to said switch with said promiscuous port, and
        said each port of said community of ports exchanging packets
        with all ports of said plurality of community ports through a
        path within said switch, and said each port of said community
        of ports not exchanging packets with any other port of said
        switch through a path within said switch" ('592 patent claim 7)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. See construction of "community port" and "promiscuous port"	Indefinite	No construction necessary. See construction of "community port" and "promiscuous port"

The claim term "each of said community ports of said plurality of community ports

receiving packets from a selected external network and transmitting packets onto said selected

external network, each port of said community of ports exchanging packets through a path

internal to said switch with said promiscuous port, and said each port of said community of ports

exchanging packets with all ports of said plurality of community ports through a path within said

switch, and said each port of said community of ports not exchanging packets with any other port

of said switch through a path within said switch" appears in asserted claim 7 of the '592 patent.

Both Cisco and Staff agree that no construction of this term is required, and that it should

have its plain and ordinary meaning. See CX-0003C (Jeffay WS) at Q/A 106; Staff Br. at 93.

Arista argues that the term is indefinite. See RX-3136C (Moisand WS) at Q/A 407. Arista's

invalidity argument is rejected, and is discussed in further detail below in the validity section

addressing Arista's argument that certain claim elements are indefinite because they are "circular."

It is therefore determined that the claim term "each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network, each port of said community of ports exchanging packets through a path internal to said switch with said promiscuous port, and said each port of said community of ports exchanging packets with all ports of said plurality of community ports through a path within said switch, and said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch" is unambiguous and does not require construction.

m.   "said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch" ('592 patent claim 7)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. See construction of "community port."	Indefinite	No construction necessary. If construction is necessary, "none of the community ports exchanges packets with any other port." See, also, construction of "community port."

The claim term "said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch" appears in asserted claim 7 of the '592 patent.

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Both Cisco and Staff agree that no construction of this term is required, and that it should have its plain and ordinary meaning. *See* CX-0003C (Jeffay WS) at Q/A 109; Staff Br. at 94. Arista argues that the term is indefinite. *See* RX-3136C (Moisand WS) at Q/A 409. Arista's invalidity argument is rejected, and is discussed in further detail below in the validity section addressing Arista's argument that certain claim elements are indefinite because they are "circular."

It is therefore determined that the claim term "said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch" is unambiguous and does not require construction.

n. **"router" ('145 patent claims 5, 7, 45, and 46)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
Plain and ordinary meaning	a layer 3 (network layer) device of the OSI reference model	a layer 3 (network layer) device of the OSI reference model to which promiscuous ports are connected

The claim term "router" appears in asserted claims 5, 7, 45, and 46 of the '145 patent. Based on the record evidence, it is determined that this claim language is unambiguous to a person having ordinary skill in the art, and that construction is therefore unnecessary. *See, e.g., Summit 6*, 802 F.3d at 1291. In particular, Cisco's expert Dr. Jeffay testified that the term "router" is self-explanatory and has a plain and ordinary meaning in the field of computer networks. CX-0003C (Jeffay WS) at Q/A 117.

The construction proposed by Arista is inconsistent with the patent specification, which discloses that the claimed invention can be implemented on both routers and switches. JX-0005

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('592 patent) at col. 6, lns. 8-14; col. 6, lns. 53-57; col. 7, lns. 13-16; col. 7, lns. 25-27; CX-1220C (Jeffay RWS) at Q/A 49; Jeffay Tr. 451-452. Accordingly, Dr. Jeffay testified that a person having ordinary skill in the art would understand the specification's references to a "switch" to mean that the device could have layer 3/4 capabilities and would not be limited solely to layer 2 capabilities. CX-1220C (Jeffay RWS) at Q/A 49, Q/A 242; *see* Duda Tr. 776-777.

Moreover, the construction proposed by Arista and the Staff limits the invention to a "layer 3 (network layer) device of the OSI reference model." Such a limitation belies the fact that a person of ordinary skill in the art would understand the term "router" to mean any device with routing capabilities, and not only a layer 3 device. *See* CX-0003C (Jeffay WS) at Q/A 119. Moreover, not every layer 3 device is a router, and Arista's proposed construction would capture devices which are not routers. *See id.*

o. **"first VLAN" ('145 patent claims 5 and 45)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "a VLAN"	a primary VLAN	No construction necessary. If construction is necessary, "a VLAN"

The claim term "first VLAN" appears in asserted claims 5 and 45 of the '145 patent. Both Cisco and the Staff agree that this term does not require construction and should take its plain and ordinary meaning. *See* Compl. Br. at 236-37; Staff Br. at 95. In particular, it is argued that nothing in the claims or the specification of the '145 patent suggests that use of the word "first" has any special meaning. *See* Compl. Br. at 236. Indeed, Cisco's expert Dr. Jeffay

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testified that the term is self-explanatory and is fully defined in the remainder of the relevant claim as a VLAN for "receiving packets from the shared network and transferring them to a designated user port, the first VLAN rejecting packets from the user ports." CX-0003C (Jeffay WS) at Q/A 122. Although the "first VLAN" may be a primary VLAN, nothing in the claims or the specification limits it to only a primary VLAN. *Id.*

It is therefore determined that the claim term "first VLAN" is unambiguous, does not require construction, and is not limited to only "a primary VLAN."

p.   **"second VLAN" ('145 patent claims 5 and 45)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "a VLAN other than the first VLAN"	a VLAN including either an isolated VLAN or community VLAN	No construction necessary. If construction is necessary, "a VLAN other than the first VLAN"

The claim term "second VLAN" appears in asserted claims 5 and 45 of the '145 patent. Both Cisco and the Staff agree that this term does not require construction and should take its plain and ordinary meaning. *See* Compl. Br. at 237-38; Staff Br. at 95. In particular, it is argued that nothing in the claims or the specification of the '145 patent suggests that use of the word "second" has any special meaning. *See* Compl. Br. at 237. Indeed, Cisco's expert Dr. Jeffay testified that the term is self-explanatory and is fully defined in the remainder of the relevant claim as a VLAN for ""receiving packets from the user ports and transferring them to the port connected to the shared network, the second VLAN preventing transfer of packets from one of the user ports to other user ports, and the second VLAN also rejecting packets from the shared network, in order to separate packet traffic of different users." CX-0003C (Jeffay WS) at Q/A

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125. Although the "second VLAN" may be an isolated or a community VLAN, nothing in the claims or the specification limits it to such. *Id.*

It is therefore determined that the claim term "second VLAN" is unambiguous, does not require construction, and is not limited to only an isolated VLAN or a community VLAN.

B.   Literal Infringement Analysis

As discussed in further detail on a claim-by-claim basis below, the record evidence establishes that Arista's products infringe all asserted claims of the Private VLAN Patents under the adopted claim constructions. In particular each Accused Private VLAN Product contains the elements of the claim inventions, including promiscuous ports and associated primary VLANs, isolated ports and associated isolated VLANs, and community ports and associated community VLANs. Cisco's expert Dr. Jeffay, who analyzed Arista's technical documents, source code, and witness testimony, and who performed his own independent testing, testified that the Accused Private VLAN Products infringe the asserted claims of the Private VLAN Patents. Testimony given by Arista's fact witness Gagan Arneja and Arista's expert witness Mr. Moisand also supports a finding of infringement.

Arista's noninfringement position centers on the argument that VLAN's are "virtual" and therefore cannot process packets as required by the asserted claims. *See* Resp. Br. at 314-28. Nevertheless, the record evidence demonstrates that the VLAN's in the Accused Private VLAN Products are more than a virtual construct and implement the claimed inventions. In particular, the evidence shows that Arista's products contain physical structures and software elements that satisfy the elements of the asserted claims.

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1.   '592 Patent – Claim 6

a.   A switch, comprising:

The record evidence shows that the Accused Private VLAN Products satisfy this claim

limitation under the construction adopted above. Specifically, the accused products are devices

with switching capabilities. They also satisfy this claim limitation under the other constructions

proposed by the parties because they are layer 2 (data link layer) devices and layer 2 (L2)

switches. *See* CX-0003C (Jeffay WS) at Q/A 146; CX-0075 at 46; CX-0076 at 1.

b.   a promiscuous port for receiving incoming packets from an
      external network, and for transmitting outgoing packets to
      said external network;

The Accused Private VLAN Products have a "[   ]" feature that satisfies this

claim limitation under the claim constructions adopted above.[36] In particular, the [   ]

in the Arista products exchange packets with isolated and community ports by use of VLANs.

Moreover, the [   ] feature also satisfy this claim limitation under the claim

constructions proposed by the other parties, inasmuch as Arista's [

                                                                    ],

including primary, isolated, and community VLANS, for transmission and receipt of packets.

See CX-0003C (Jeffay WS) at Q/A 190-201, Q/A 175-184, Q/A 276; CX-0031C at 3; CX-0034C

at 1; CX-0036C at 179; CX-0044C at 1; CX-0045C at 50; CX-0048C at 94; CX-0047C at 81;

CX-0948C at 7; CX-0026C at 137-39. In addition, Arista's [   ] receive incoming

packets from an external network, and transmit outgoing packets to said external network, as

shown, for example, by Dr. Jeffay's test results. *See, e.g.,* CX-0003C (Jeffay WS) at Q/A

175-184, Q/A 276.

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[36] The [   ]." *See, e.g.,* CX-0075 at 763.

In particular, Dr. Jeffay testified:

> The tests that I performed on Arista's 7150S-52-CL switch confirmed that
> Arista's private VLAN feature behaves as described by the '592 and '145
> patents and as claimed by the asserted claims. Specifically, in Arista's
> private VLAN implementation, a [   ], which is the claimed
> promiscuous port, can communicate with isolated ports and community
> ports. Isolated ports cannot communicate with each other but can
> communicate with the promiscuous port, and community ports can
> communicate with each other and the promiscuous port but not with the
> isolated ports. The tests also show that the primary, isolated, and
> community VLANs all allow only one-way connections between
> promiscuous ports and isolated and community ports.

CX-0003C (Jeffay WS) at Q/A 178.

Dr. Jeffay further testified:

> The tests that I described show that an isolated port can send packets to
> promiscuous ports but not to community ports. It also shows that isolated
> VLAN is a one way connection from isolated ports to promiscuous ports,
> because when I used a VLAN tag that did not match the isolated VLAN
> tag the packets were rejected. . . . I tested all types of ports and all types of
> VLANs on the Arista switch and the tests shows that all VLANs are
> one-way connections and behave as described by the asserted claims of
> the '592 and '145 patents.

CX-0003C (Jeffay WS) at Q/A 180-181.

The testimony of Arista's witness Mr. Arneja confirms that this claim element is satisfied

by Arista's [   ]:

[

].

JX-0019C (Arneja Dep. Tr.) 46; *see* Arneja Tr. 1123-1124.

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c.   **and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network,**

The Accused Private VLAN Products have an "isolated ports" feature that satisfies this claim limitation under the claim constructions adopted above.[37] The isolated ports in the accused products exchange packets with promiscuous ports by use of VLANS, but cannot transfer packets to other isolated ports. In addition, the accused products satisfy this claim limitation even under the claim constructions proposed by the other parties because the isolated ports are physical ports that can be connected to user devices and exchange packets with promiscuous ports using VLANs internal to the switch, including primary and isolated VLANs. *See* Arneja Tr. 1124-1125; Moisand Tr. 1187; CX-0003C (Jeffay WS) at Q/A 175-184; Q/A 202-206, Q/A 277; CX-0031C at 3; CX-0032C at 54; CX-0033C at 2-3; CX-0034C at 1; CX-0036C at 179; CX-0044C at 1; CX-0045C at 50; CX-0047C at 81; CX-0048C at 94; CX-0075 at 763; CX-0948C at 7; CX-0026C at 137-39; JX-0036C (Sweeney Dep. Tr.) 131; 133; JX-0028C (Kaza Dep. Tr.) 54; JX-0019C (Arneja Dep. Tr.) 58; JX-0033C (Sadana Dep. Tr.) 99-100, 100-101, 101, 105-106. Moreover, Arista's isolated ports can connect to a private network and receive and transfer packets to that private network as shown, for example, by Dr. Jeffay's test results. *See, e.g.,* CX-0003C (Jeffay WS) at Q/A 277.

The testimony of Arista's witness Mr. Arneja confirms that this claim element is satisfied by Arista's isolated ports. For example, Mr. Arneja testified that [

                                                        ]:

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[37] The ports are sometimes referred to as "isolated VLAN ports." *See, e.g.,* CX-0075 at 763.

[

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JX-0019C (Arneja Dep. Tr.) 58; *see* Arneja Tr. 1124-1125.

> **d.** **said selected isolated port exchanging packets with said promiscuous port through a path inside said switch, and said isolated port not exchanging packets with another isolated port.**

The Accused Private VLAN Products have "isolated ports" and "isolated VLANs" that

satisfy this claim limitation under the claim constructions adopted above. As described above

with respect to the "and a plurality of isolated ports, a selected isolated port of said plurality of

isolated ports connected to a selected private network, said selected isolated port receiving

packets from said selected private network and transmitting packets onto said selected private

network" claim limitation, Arista's isolated ports also satisfy this claim limitation under the

constructions proposed by the other parties. Further, Arista's isolated ports exchange packets

with promiscuous ports via an isolated VLAN, which is a path inside the switch, and cannot

exchange packets with other isolated ports. *See* Arneja Tr. 1136; Moisand Tr. 1187-1188;

CX-0003C (Jeffay WS) at Q/A 170, Q/A 175-184, Q/A 231-236, Q/A 277; CX-0031C at 3, 5;

CX-0032C at 55; CX-0033C at 2-3; CX-0034C at 2; CX-0036C at 179; CX-0044C at 1;

CX-0045C at 50; CX-0047C at 81; CX-0048C at 91; CX-0075 at 763; CX-0948C at 7;

CX-0026C at 137-9; JX-0028C (Kaza Dep. Tr.) 50; JX-0036C (Sweeney Dep. Tr.) 131, 133,

377-378, 386-387; JX-0019C (Arneja Dep. Tr.) 53, 58, 83-84; CX-1200C at 48, 50, 52, 54; and

JX-0033C (Sadana Dep. Tr.) 97, 98.

Testimony adduced at the hearing demonstrates that the claim limitation is satisfied by

the accused products. Specifically, Arista's expert Mr. Moisand testified that, [

]." Moisand Tr. 1182, 1187-1188. Arista's fact witness also testified that [

]:

[\

].

JX-0019C (Arneja Dep. Tr.) 53; *see also* Arneja Tr. 1136-1138 ([

]).

This testimony is supported by documentary evidence in the form of Arista's EOS User

Manual, which states that "[i]solated VLAN ports carry unidirectional traffic from host ports to

primary VLAN ports," and that "[i]solated VLAN ports filter broadcast and multicast traffic

(Layer 2) from all other ports in the same isolated VLAN." CX-0075 at 763.

2.   '592 Patent – Claim 7

a.   The switch of claim 6 further comprising:

As discussed above, the Accused Private VLAN Products meet all the limitations of

claim 6 of the '592 patent.

b. a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network,

The evidence adduced at the hearing shows that the Accused Private VLAN Products have "community ports" that meet this claim element under the claim constructions adopted above.[38] Specifically, Arista's community ports exchange packets with promiscuous ports by using VLANs and transfer packets to a designated number of other community ports. The accused products also satisfy this claim limitation under the claim construction proposed by the other parties because Arista's community ports are physical ports that can be connected to user devices and exchange packets with promiscuous ports using VLANs internal to the switch, including primary and community VLANs. *See* Arneja Tr. 1125-1126; Moisand Tr. 1189-1190, 1190; CX-0003C (Jeffay WS) at Q/A 212-216, Q/A 175-184; CX-0031C at 3, 5; CX-0032C at 55; CX-0033C at 2-3; CX-0034C at 2; CX-0036C at 179; CX-0044C at 1; CX-0045C at 50; CX-0047C at 81; CX-0048C at 94; CX-0075 at 763; CX-0948C at 7; CX-0026C at 137-9; JX-0036C (Sweeney Dep. Tr.) 52; CX-1208C at 376-377, 385-386; JX-0019C (Arneja Dep. Tr.) 54, 58. Moreover, Arista's community ports receive and transmit packets onto an external network as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184, Q/A 279.

Testimony adduced at the hearing demonstrates that Arista's community ports satisfy this claim limitation. For example, Mr. Moisand testified with respect to Arista's community VLAN functionality: "[

---

[38] The ports are sometimes referred to as "community VLAN ports." *See, e.g.*, CX-0075 at 763.

]." Moisand Tr. 1189, 1190. In addition, Mr.

Arneja testified that [   ]:

[

].

JX-0019C (Arneja Dep. Tr.) 58; *see* Arneja Tr. 1125-1126.

> c. **each port of said community of ports exchanging packets through a path internal to said switch with said promiscuous port, and said each port of said community of ports exchanging packets with all ports of said plurality of community ports through a path within said switch, and said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch.**

The record evidence shows that the Accused Private VLAN Products have "community ports" and "community VLANs" that satisfy this claim limitation under the claim constructions adopted above. As described with respect to claim limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network" above, Arista's community ports satisfy the claimed "community ports" limitation. In addition, Arista's community ports satisfy this claim limitation under the constructions proposed by the other parties because they exchange packets with promiscuous ports and other designated community ports via a community VLAN, which is a path inside the switch, and do not exchange packets with any other ports (*e.g.*, an isolated port). *See* Arneja Tr. 1138-1139; Moisand Tr. 1189-1190, 1183-1184; CX-0003C (Jeffay WS) at Q/A 169, Q/A 175-184, Q/A 240-245, Q/A 280; CX-0031C at 3, 5; CX-0032C at 55; CX-0033C at 2-3; CX-0034C at 2; CX-0036C at 179; CX-0044C at 1; CX-0045C at 50; CX-0048C at 94; CX-0047C at 81; CX-0048C at 7; CX-0075

at 763; CX-0948C at 7; CX-0026C at 137-39; JX-0036C (Sweeney Dep. Tr.) 52; CX-1208C at

376-377, 385-386; JX-0019C (Arneja Dep. Tr.) 54, 58; JX-0033C (Sadana Dep. Tr.) 97, 98.

Testimony adduced at the hearing demonstrates that the community ports and community

VLANs of the accused products satisfy this claim limitation. For example, Mr. Moisand testified

regarding Arista's community VLAN functionality: "[

]."

Moisand Tr. 1183-1184, 1190. Mr. Arneja also testified that [

]:

[

].

JX-0019C (Arneja Dep. Tr.) 54; *see* Arneja Tr. 1138-1139.

This testimony is supported by documentary evidence in the form of Arista's EOS User

Manual, which states that "[c]ommunity VLAN ports carry traffic from host ports to the primary

VLAN ports and to other host ports in the same community VLAN." CX-0075 at 763.

3. '592 Patent – Claim 20

a. A switch implementing virtual local area networks (VLANs) in a computer network, comprising:

For the reasons set forth above with respect to the limitation "A switch, comprising" from

claim 6, the record evidence shows that the Accused Private VLAN Products satisfy this claim

limitation under the adopted claim constructions, as well as the constructions proposed by the

other parties.

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b. **a first isolated port assigned to a user to receive said user's packet from an external circuit connected to said first isolated port;**

For the reasons set forth above with respect to the limitation "and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network" from claim 6, the Accused Private VLAN Products satisfy this claim limitation under the adopted claim constructions, as well as the constructions proposed by the other parties. In addition, Arista's isolated ports receive packets from an external circuit in a computer connected to the isolated port as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

c. **and a selected promiscuous port to receive said packet through an isolated VLAN, said packet to be transferred to an external circuit connected to said promiscuous port,**

The record evidence demonstrates that the Accused Private VLAN Products have "[   ]" and "isolated VLANs" that satisfy this claim limitation under the claim constructions adopted above, as well as under the constructions proposed by the other parties. In particular, Arista's [   ] satisfy the limitations of the claimed "promiscuous port" element. Arista's isolated VLANs also meet the claimed "isolated VLAN" element because they are a VLAN that is a one-way connection from isolated ports to promiscuous ports that receives packets from isolated ports and transfers them to promiscuous ports, but that cannot carry packets received by a promiscuous port and cannot delivery packets to another isolated port. *See* Arneja Tr. 1136-1138; Moisand Tr. 1187-1188; CX-0003C (Jeffay WS) at Q/A 170, Q/A 175-184, Q/A 232-236; CX-0031C at 3, 5; CX-0032C at 55; CX-0033C at 2, 3; CX-0034C at 2; CX-0036C at 179; CX-0045C at 50; CX-0047C at 81; CX-0048C at 94; CX-0044C at 1;

CX-0075 at 763; CX-0948C at 7; CX-0026C at 137-39; JX-0036C (Sweeney Dep. Tr.) 131, 133, 377-378, 386-387; JX-0019C (Arneja Dep. Tr.) 53, 83-84, 58; CX-1200C at 48, 50, 52, 54; JX-0028C (Kaza Dep. Tr.) 50; JX-0033C (Sadana Dep. Tr.) 99-100, 100-101, 101, 105-106. In addition, Arista's [   ] receive packets through an isolated VLAN and transfer them to an external circuit as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-183.

Testimony adduced at the hearing demonstrates that this claim element is met by Arista's [   ] and isolated VLANs. For example, Mr. Arneja testified that [

]:

[

].

JX-0019C (Arneja Dep. Tr.) 53; *see also* Arneja Tr. 1136-1137 ([

]).

This testimony is supported by documentary evidence in the form of Arista's EOS User Manual, which states that "[i]solated VLAN ports carry unidirectional traffic from host ports to primary VLAN ports," and that "[i]solated VLAN ports filter broadcast and multicast traffic (Layer 2) from all other ports in the same isolated VLAN." CX-0075 at 763.

> d.   **said isolated VLAN configured as a one way connection from all isolated ports to all promiscuous ports and also configured to prevent any other isolated port from receiving said user's packets from said isolated VLAN,**

For the reasons set forth above with respect to the limitation "and a selected promiscuous port to receive said packet through an isolated VLAN, said packet to be transferred to an external

circuit connected to said promiscuous port," the record evidence shows that the Accused Private

VLAN Products satisfy this claim limitation under the adopted claim constructions, as well as

the other constructions proposed by the parties. In addition, Arista's isolated VLANs are

configured as a one way connection from isolated ports to promiscuous ports and prevent other

isolated ports from receiving packets from the isolated VLAN as described above with respect to

the claim 6 element "said selected isolated port exchanging packets with said promiscuous port

through a path inside said switch, and said isolated port not exchanging packets with another

isolated port." This is further demonstrated, for example, by Dr. Jeffay's test results. CX-0003C

(Jeffay WS) at Q/A 175-184.

e. said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports.

The record evidence shows that the Accused Private VLAN Products have "[

]" and primary "VLANs" satisfy this claim limitation under the adopted constructions, as

well as the constructions proposed by the other parties. As discussed with respect to the claim 6

limitation "a promiscuous port for receiving incoming packets from an external network, and for

transmitting outgoing packets to said external network," Arista's [   ] meet the

limitations of all constructions of the claimed "promiscuous ports" element. Arista's primary

VLANs also meet the claimed "primary VLAN" element under all constructions because they

are a VLAN that is a one way connection from promiscuous ports to isolated and community

ports which receive packets from promiscuous ports and transfer them to isolated and

community ports, but which cannot receive and transfer packets from isolated or community

ports. *See* CX-0003C (Jeffay WS) at Q/A 168, Q/A 175-184, Q/A 223-227, Q/A 283; Arneja Tr.

1132-1135; Moisand Tr. 1182-1183, 1185-1186; CX-0031C at 3, 5; CX-0032C at 55; CX-0033C

at 2, 3; CX-0034C at 2; CX-0036C at 179; CX-0045C at 50; CX-0047C at 81; CX-0048C at 94;

CX-0044C at 1; CX-0075 at 763; CX-0948C at 7; CX-0026C at 137-39.

Testimony adduced at the hearing shows that this claim limitation is satisfied by Arista's

[   ] and primary VLAN. For example, Arista's technical expert Mr. Moisand testified

that, [

]:

[

].

Moisand Tr. 1186.

Mr. Arneja also testified that [

]:

[

].

JX-0019C (Arneja Dep. Tr.) 48; *see also* Arneja Tr. 1132-1135 ([

]).

This testimony is supported by documentary evidence in the form Arista's EOS User

Manual, which states that "[a] primary VLAN defines the entire broadcast domain," and that

"[p]rimary VLAN ports community with secondary VLAN ports and ports external to the private

VLAN." CX-0075 at 763.

4. '592 Patent – Claim 21

a. **A switch implementing virtual local area networks (VLANs) in a computer network, comprising:**

For the reasons set forth above with respect to the limitation "A switch, comprising" from claim 6, the record evidence shows that the Accused Private VLAN Products satisfy this claim limitation under the adopted claim constructions, as well as the constructions proposed by the other parties.

b. **a plurality of community ports, including a first community port assigned to a user to receive said user's packet from an external circuit connected to said first community port;**

The Accused Private VLAN Products have "community ports" that satisfy this claim limitation under all claim for the reasons discussed above with respect to the claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network." In addition, Arista's community ports receive packets from an external circuit connected to the community port as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

c. **and a plurality of promiscuous ports connected to external circuits**

For the reasons discussed above with respect to the claim 6 element "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network," the record evidence shows that the Accused Private VLAN Products satisfy this claim limitation under all claim constructions.

> d. to receive said packet through a community VLAN, all other community ports connected to said community VLAN also receiving said packet, but not any other ports of said switch, said community VLAN configured as a one way connection from all community ports in said community VLAN to all promiscuous ports,

The adduced evidence shows that the Accused Private VLAN Products have "community ports" and "community VLANs" that satisfy this claim limitation under all constructions. As discussed with respect to the claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network," Arista's community ports satisfy the limitations of all constructions of the claimed "community ports" element. Arista's community VLANs also satisfy the claimed "community VLAN" limitation under all constructions because they are a VLANs that are one way connections from a community of ports to promiscuous ports that transfer packets from a community of ports to promiscuous ports and also to other community ports attached to the community VLAN, but that cannot transfer packets received by a promiscuous port. Arneja Tr. 1138-1139, 1139; Moisand Tr. 1189-1190; 1190, 1183-1184; CX-0003C (Jeffay WS) at Q/A 169, Q/A 175-184, Q/A 241-245; CX-0031C at 3, 5; CX-0032C at 55; CX-0033C at 2-3; CX-0034C at 2; CX-0036C at 179; CX-0044C at 1; CX-0045C at 50; CX-0048C at 94; CX-0047C at 81; CX-0048C at 7; CX-0075 at 763; CX-0948C at 7; CX-0026C at 137-39; JX-0019C (Arneja Dep. Tr.) 54, 58; JX-0028C (Kaza Dep. Tr.) 52; JX-0036C (Sweeney Dep. Tr.) 376-377, 385-386; JX-0033C (Sadana Dep. Tr.) 97, 98.

Testimony adduced at the hearing demonstrates that this claim limitation is satisfied by Arista's [   ] and primary VLAN. For example, Mr. Moisand testified that, [

]:

[

].

Moisand Tr. 1190.

Mr. Arneja also testified that [

]:

[

].

JX-0019C (Arneja Dep. Tr.) at 54; *see also* Arneja Tr. 1132-1134 (same), 1139 ([

]).

This testimony is supported by documentary evidence in the form of Arista's EOS User Manual, which states that "[c]ommunity VLAN ports carry traffic from host ports to the primary VLAN ports and to other host ports in the same community VLAN." CX-0075 at 763.

e. said all promiscuous ports also connected via a one way primary VLAN to all community ports

As discussed above with respect to the claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports," the evidence shows that the Accused Private VLAN Products satisfy this limitation under all claim constructions.

5. '145 Patent – Claim 5

a. A router, comprising:

The record evidence demonstrates that the Accused Private VLAN Products meet the plain and ordinary meaning of "router" as adopted above because all of Arista's products are devices with routing capabilities. The accused products also satisfy this limitation under the constructions proposed by Arista and the Staff because they are layer 3 (network layer) devices of the OSI reference model. CX-0003C (Jeffay WS) at Q/A 146; CX-1220C (Jeffay RWS) at Q/A 17; CX-0076 at 1; CX-0075 at 45; *see* Duda Tr. 776.

b. a port connected to a shared network;

The evidence shows that the "[   ]" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network."

c. a plurality of user ports;

The evidence shows that the "isolated ports" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network."

> **d.**   **a first VLAN from the port connected to the shared network to the plurality of user ports, the first VLAN to receive packets from the shared network and transferring them to a designated user port, the first VLAN to reject packets from the user ports;**

The evidence shows that the "primary VLAN" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports."

> **e.**   **a second VLAN from the plurality of user ports, the second VLAN to receive packets from the user ports and transferring them to the port connected to the shared network, the second VLAN to prevent transfer of packets from one of the user ports to other user ports, and the second VLAN also to reject packets from the shared network, in order to separate packet traffic of different users.**

The evidence shows that the "isolated VLAN" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "said selected isolated port exchanging packets with said promiscuous port through a path inside said switch, and said isolated port not exchanging packets with another isolated port."

6.   '145 Patent – Claim 7

a.   A router, comprising:

The record evidence demonstrates that the Accused Private VLAN Products meet the plain and ordinary meaning of "router" as adopted above because all of Arista's products are devices with routing capabilities. The accused products also satisfy this limitation under the constructions proposed by Arista and the Staff because they are layer 3 (network layer) devices

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of the OSI reference model. CX-0003C (Jeffay WS) at Q/A 146; CX-1220C (Jeffay RWS) at Q/A 17; CX-0076 at 1; CX-0075 at 45; *see* Duda Tr. 776.

b.   one or more promiscuous ports;

The evidence shows that the "[   ]" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network."

c.   one or more isolated ports;

The evidence shows that the "isolated ports" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network."

d.   one or more community ports;

The evidence shows that the "community ports" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network."

e. **a primary VLAN, the primary VLAN to receive packets from outside of the router through the one or more promiscuous ports and to transfer the packets to a selected one of the one or more isolated ports and to transfer the packets to the one or more community ports, the primary VLAN to reject packets from the one or more isolated ports and to reject packets from the one or more community ports;**

The evidence shows that the "primary VLAN" of the Accused Private VLAN Products

satisfy this claim limitation under all claim constructions for the reasons discussed above with

respect to the '592 patent claim 20 limitation "said all promiscuous ports also connected via a

one way primary VLAN to said all isolated ports." In addition, Arista's primary VLANs are

configured to reject packets from the one or more isolated ports and community ports, as shown,

for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

f. **an isolated VLAN, the isolated VLAN to receive packets from outside of the router through an isolated port of the one or more isolated ports and to transfer the packets to the one or more promiscuous ports, the isolated VLAN to prevent transfer of the packets from the isolated port to another isolated port of the one or more isolated ports, and the isolated VLAN to prevent transfer of the packets from the isolated port to the one or more community ports, and the isolated VLAN to reject packets from the one or more promiscuous ports;**

The evidence shows that the "isolated VLAN" of the Accused Private VLAN Products

satisfy this claim limitation under all claim constructions for the reasons discussed above with

respect to the '592 patent claim 6 limitation "said selected isolated port exchanging packets with

said promiscuous port through a path inside said switch, and said isolated port not exchanging

packets with another isolated port." In addition, Arista's isolated VLANs are configured to

reject packets from the one or more promiscuous ports, as shown, for example, by Dr. Jeffay's

test results. CX-0003C (Jeffay WS) at Q/A 175-184.

> g.   **and a community VLAN, the community VLAN to receive packets from outside of the router at a community port of the one or more community ports and to transfer the packets to the one or more promiscuous ports and to transfer the packets to any other community ports, the community VLAN to prevent transfer of packets to the one or more isolated ports, the community VLAN to reject packets from the one or more promiscuous ports.**

The evidence shows that the "community VLAN" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 21 limitation "to receive said packet through a community VLAN, all other community ports connected to said community VLAN also receiving said packet, but not any other ports of said switch, said community VLAN configured as a one way connection from all community ports in said community VLAN to all promiscuous ports." In addition, Arista's community VLANs are configured to reject packets from the one or more promiscuous ports, as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

7.   '145 Patent – Claim 45

> a.   **A computer readable medium containing executable program instructions for operating a router, the executable program instructions comprising program instructions configured to:**

The record evidence shows that the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '145 patent claim 5 limitation "A router, comprising." In addition, EOS is the operating system software on Arista's devices that controls the devices and provides an interface for configuration. CX-0003C (Jeffay WS) at Q/A 132-134; CX-0075 at 45.

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b. **establish a first VLAN from a port connected to a shared network to a plurality of user ports, the first VLAN to receive packets from the shared network and to transfer them to one or more of the user ports, the first VLAN to reject any packets received from the user ports;**

The evidence shows that the "primary VLAN" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports." In addition, Arista's primary VLANs are configured to reject packets from the one or more isolated ports and community ports, as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

c. **establish a second VLAN from the plurality of user ports, the second VLAN to receive packets from the user ports and to transfer them to the port connected to the shared network, the second VLAN to prevent transfer of packets from one of the user ports to other user ports, and the second VLAN also to reject packets from the shared network, to thereby separate packet traffic of different users.**

The evidence shows that the "isolated VLAN" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 6 limitation "said selected isolated port exchanging packets with said promiscuous port through a path inside said switch, and said isolated port not exchanging packets with another isolated port." In addition, Arista's isolated VLANs are configured to reject packets from the shared network, as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

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8.   '145 Patent – Claim 46

      a.   **A computer readable medium containing executable program instructions for operating a router, the executable program instructions comprising program instructions configured to:**

The record evidence shows that the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '145 patent claim 5 limitation "A router, comprising." In addition, EOS is the operating system software on Arista's devices that controls the devices and provides an interface for configuration. CX-0003C (Jeffay WS) at Q/A 132-134; CX-0075 at 45.

      b.   **establish a primary VLAN, the primary VLAN to receive packets from outside of the router through the one or more promiscuous ports and to transfer the packets to one or more community ports, the primary VLAN to reject packets received from the one or more community ports;**

The evidence shows that the "primary VLAN" and "community ports" of the Accused Private VLAN Products satisfy this claim limitation under all claim constructions for the reasons discussed above with respect to the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports" and the '592 patent claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network," respectively. In addition, Arista's primary VLANs are configured to reject packets from the one or more isolated ports and community ports, as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 175-184.

c.   **and establish a community VLAN, the community VLAN to receive packets from outside the router on a community port of the one or more community ports and to transfer the packets to the one or more promiscuous ports and to transfer the packets to any other community ports of the one or more community ports, the community VLAN rejecting packets received from the one or more promiscuous ports.**

The evidence shows that the "community ports," "community VLANs," and "[

]" of the Accused Private VLAN Products satisfy this claim limitation under all claim

constructions for the reasons discussed above with respect to the '592 patent claim 7 limitation

"a plurality of community ports, each of said community ports of said plurality of community

ports receiving packets from a selected external network and transmitting packets onto said

selected external network," the '592 patent claim 7 limitation "each port of said community of

ports exchanging packets through a path internal to said switch with said promiscuous port, and

said each port of said community of ports exchanging packets with all ports of said plurality of

community ports through a path within said switch, and said each port of said community of

ports not exchanging packets with any other port of said switch through a path within said

switch," and the '592 patent claim 6 limitation "a promiscuous port for receiving incoming

packets from an external network, and for transmitting outgoing packets to said external

network," respectively.

In addition, Arista's community VLANs are configured to reject packets received from

the one or more promiscuous ports, as shown, for example, by Dr. Jeffay's test results. CX-

0003C (Jeffay WS) at Q/A 175-184.

9.   Arista's Non-Infringement Arguments

Arista raises several arguments in support of its position that the accused products do not

infringe the asserted claims of the '592 and '145 patents. These arguments are addressed below.

a. Arista's Argument That Virtual LANs Do Not Process Packets

Arista introduces this non-infringement argument by first establishing that all asserted claims of the Private VLAN Patents require VLANs to process, receive, transmit, transfer, and reject packets. RX-3910C (Moisand RWS) at Q/A 34, Q/A 36, Q/A 90, Q/A 96; *see* Resp. Br. at 314. Arista then argues that, inasmuch as VLANs are abstract concepts that do not actually exist, and therefore cannot perform the claimed functions, there can be no infringement because Cisco has failed to identify the components that perform these functions. RX-3910C (Moisand RWS) at Q/A 10, Q/A 22; *see* Resp. Br. at 315-16. Arista's argument fails for the reasons set forth below.

As an initial matter, Arista's argument that VLANs are an "abstract concept" is directly contradicted by Arista's pre-litigation documents. In particular, Arista EOS User Manual specifically defines VLANs as "layer 2 structures" and refers to Arista's private VLANs as a "network structure." CX-0075 at 761, 762. This definition of VLANs as real, and not an abstract concept, is confirmed by the understanding of those skilled in the art. In particular, the 802.1Q-1998 standard itself defines a VLAN as "[a] subset of the active topology of a Bridged Local Area Network" where the "active topology" is "the set of communication paths formed by interconnecting the LANs and Bridges by the forwarding Ports." RX-0186 at 9, 30; CX-1220C (Jeffay RWS) at Q/A 19. Thus, as Dr. Jeffay testified, [

]." Jeffay Tr. 517; *see* CX-0031C at 5; JX-0019C (Arneja Dep. Tr.) 56, 77, 79; JX-0036C (Sweeney Dep. Tr.) 382-383.

Arista's argument that VLANs cannot process, receive, transmit, transfer, or reject packets is also contradicted by Arista's own documents and fact witness testimony. For example, Mr. Arneja testified that [   ]. JX-0019C

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(Arneja Dep. Tr.) 48; Arneja Tr. 1130-1132. Moreover, an Arista User Manual states that

"[

].": CX-0075 at 763. In addition, Arista's Private VLAN testing documents state that

[

]. CX-0031C at 4. Arista's technical

documents and witness testimony are consistent with how those skilled in the art understand

VLANs. CX-1220C (Jeffay RWS) at Q/A 228-234.

Testimony from Arista's witnesses also confirms that there are hardware and software

structures in the Accused Private VLAN Products that implement the claimed functionality. In

particular, Mr. Moisand testified several times that [

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Moisand Tr. 1192-1193. Mr. Arneja also testified [

]:

[

].

Arneja Tr. 1153.

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As Dr. Jeffay testified, the hardware and software structures identified by Mr. Moisand and Mr. Arneja implement the claimed VLANs. CX-0003C (Jeffay WS) at Q/A 228-234, Q/A 365. Indeed, the patents themselves identify ASIC switching chips, and software data structures such as Color Blocking Logic and assignment tables, as the means by which the claimed VLANs are created. JX-0005 ('592 patent) at col. 2, lns. 63-67; col. 6, lns. 3-17. Thus, Arista explicitly admits that it uses the hardware and software structures disclosed in the Private VLAN Patents to implement the accused private VLAN functionality on its products. Jeffay Tr. 517.

b. Arista's Argument That Its VLANs Are Not One-Way Connections

Arista also argues that there is no one-way connection between ports as required by the asserted claims because the path within its networking chips are the same regardless of the direction the packets are sent. RX-3910C (Moisand RWS) at Q/A 98-100; *see* Resp. Br. at 315-28. This argument discounts the evidence showing how traffic is handled when Private VLANs are configured, resulting in a one way connection between one type of port to another port using a specific VLAN. Thus, for example, [

]. CX-0003C (Jeffay WS) at Q/A 366, Q/A 176-184; CX-0075 at 763; JX-0019C (Arneja Dep. Tr.) 75, 81, 54; Arneja Tr. 1134-1135, 1135, 1136-1137, 1137-1138. [

]. JX-0019C (Arneja Dep. Tr.) 75, 81, 54; Arneja Tr. 1134-1135, 1135, 1136-1137, 1137-1138. These are thus one way connections, a fact reflected in an Arista User

Manual that states, "[i]solated VLAN ports carry unidirectional traffic from host ports to primary VLAN ports." CX-0075 at 763.

c. Arista's Argument That Its Isolated Ports Do Not Prevent the Exchange of Packets

With respect to claim 6 of the '592 patent, Arista argues that there is no infringement because its isolated ports can exchange packets through layer 3 forwarding. RX-3910C (Moisand RWS) at Q/A 112; *see* Resp. Br. at 328-30. Under Arista's theory there is no infringement because a packet can be exchanged from an isolated port to a promiscuous port, and then exit the device entirely using layer 3 forwarding to a different external device, where it would then be routed back to the original device and exchanged from the promiscuous port to another isolated port. Testimony adduced at the hearing, however, demonstrates that the forwarding behavior of such a hypothetical external device has nothing to do with the invention of the Private VLAN patents. Edsall Tr. 403-404. Moreover, even in the hypothetical situation proposed by Arista, the isolated ports still do not exchange with packets each other. Instead, the packets are exchanged to and from the promiscuous port using isolated and primary VLANs, respectively. CX-0003C (Jeffay WS) at Q/A 367; JX-0019C (Arneja Dep. Tr.) 56, 54.

d. Arista's Argument That Cisco Merely Relies on a Naming Convention

Arista also argues that Cisco relies mainly on Arista's use of terms such as "promiscuous," "isolated," and "community" to prove infringement. RX-3910C (Moisand RWS) at Q/A 11-13; *see* Resp. Br. at 330-31. Nevertheless, as discussed above, Cisco's proof of infringement is based on analysis of Arista's technical documents, source code, and witness testimony, as well as tests performed by Dr. Jeffay confirming the presence of the accused

functionality in the accused products. Jeffay Tr. 505-506; CX-0003C (Jeffay WS) at Q/A 368. This defense, therefore, cannot succeed.

C. Indirect Infringement

1. Direct Infringement of the Private VLAN Patents in the United States

The record evidence shows that Arista's customers use private VLAN on the Accused Private VLAN Products in the United States, thereby infringing the private VLAN patents. CX-0003C (Jeffay WS) at Q/A 403; CX-0599. These customers include, for example, [

]. CX-0003C (Jeffay WS) at Q/A 404-407; CPX-0241C; CX-0051C; CPX-0239C; CPX-0235C. The evidence shows that the accused Private VLAN functionality is configured and used by Arista's customers to meet each limitation of each of the asserted claims in the United States and, moreover, that [

] Arista is aware of its customers' use of Private VLAN. *See, e.g.*, CX-0003C (Jeffay WS) at Q/A 408-414; CX-0962C; CPX-200C; CPX-0201C; CPX-0202C; CPX-0203C; CPX-0204C; CPX-0205C; CPX-0206C; CPX-0207C; CPX-0208C; CPX-0209C; CPX-0233C; CPX-0234C; CPX-0236C, CPX-0237C, CPX-0238C, CPX-0242C; CPX-0240C; JX-0033C (Sadana Dep. Tr.) 55-57, 77-78, 99-106, 110-111.

Arista argues that there cannot be direct infringement of the '537 patent at the time of importation because [   ]. *See, e.g.*, RX-3909C (Hollingsworth WS) at Q/A 132-145. Nevertheless, as discussed above in the section addressing importation issues, the record evidence shows that [

]. This alone is sufficient to establish direct infringement at the time of

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importation. *See, e.g., Certain Absorbent Garments*, Inv. No. 337-TA-508, Order No. 16, 2004 WL 2251882, at *2 (Aug. 20, 2004). In addition, [

]. *See, e.g.*, CX-1349C (Benson WS) at Q/A 15, Q/A 21-27; Benson Tr. 1438-1439, 1454, 1456, 1460-1461. It was established that [

]. *See* Benson Tr. 1448.

2. Induced Infringement of the Private VLAN Patents

Arista is liable for inducing third parties to infringe the '592 and '145 patents. Arista knowingly induces infringement by encouraging, instructing, and enabling third parties to use the Accused Products in a manner that infringes the asserted claims of the '592 and '145 patents. *See, e.g.*, CX-0003C (Jeffay WS) Q/A 416-425. For example, Arista advertises private VLAN as a supported feature on the Accused Private VLAN Products, and Arista's User Manual describes in detail the private VLAN (private-vlan) commands, provides the command syntax and parameters, and includes an example of how to use the commands to configure private VLAN. CX-0075 (Arista User Manual EOS v. 4.14.3F at 768–69); CX-0076. Arista's witnesses testified that its users can configure these private VLAN functionalities using the commands provided by Arista. Moisand Tr. 1181-1184; *see* Jeffay Tr. 522.

Arista's sales and promotion of the switch hardware also induces infringement of the '592 and '145 patents because the hardware is designed to run the EOS software, which contains the infringing functionality. *See, e.g.*, Arneja Tr. 1153-1154; Duda Tr. 861; Metivier Tr. 1167, 1173; CX-0035C; JX-0026C (Duda Dep. Tr.) 204-207, 273-275; JX-0033C (Sadana Dep. Tr.) 110-111; CX-0003C (Jeffay WS) Q/A 388-402.

3. Contributory Infringement of the Private VLAN Patents

Arista is also liable for contributory infringement of the '592 and '145 patents. The components implicated in contributory infringement of the '592 and '145 patents are the Accused Products with EOS, which is a material part of the invention with no substantial noninfringing use. Arista's contention that [

] does not absolve Arista of its contributory infringement liability. *See, e.g.,* CX-0003C (Jeffay WS) Q/A 384-387. Focusing on just the switch hardware as the infringing component, all asserted claims of the private VLAN patents refer to and require switch hardware, and thus switch hardware, [

], is a material part of the invention described in the private VLAN patents. Arista's technical expert, Mr. Moisand, testified that all asserted claims of the '145 patent refer to "a router," and that all asserted claims of the '592 patent refer to "a switch." Moisand Tr. 1195.

The switch hardware has no substantial non-infringing uses because [

]. *See, e.g.,* Arneja Tr. 1153-1154; CX-0003C (Jeffay WS) Q/A 388-402. In addition to Arista's User Manuals (*e.g.,* CX-0075), which discuss private VLAN in EOS, testimony from Arista executive Mr. Sadana confirmed that [

]. JX-0033C (Sadana Dep. Tr.) 110-111. Moreover, Cisco has adduced [   ]. *See, e.g.,* Duda Tr. 861; Metivier Tr. 1167, 1173; CX-0035C; JX-0026C (Duda Dep. Tr.) 204-207, 273-275. [

], also contribute to infringement because [

], and lack any actual substantial noninfringing use

identified by Arista. *See, e.g.*, JX-0026C (Duda Dep. Tr.) 204-205; CX-0003C (Jeffay WS)

Q/A 388-402.

D. Technical Prong of the Domestic Industry Requirement

As detailed below, the record evidence demonstrates that Cisco's Private VLAN DI

Products practice the asserted claims of the '592 and '145 patents. Cisco's expert Dr. Jeffay

testified that the technical prong of the domestic industry requirement has been satisfied based on

analysis of Cisco's technical documentation and source code, as well as his own independent

testing that verified the presence of the claimed functionality. CX-0003C (Jeffay WS) at Q/A

442-449, Q/A 498-499, Q/A 503-504, Q/A 513-516. Additionally, named inventor Mr. Edsall

also testified as to the functionality of Cisco's Private VLAN DI Products. CX-0004C (Edsall

WS) at Q/A 165-217.

1. '592 Patent – Claim 6

a. A switch, comprising:

The record evidence shows that the Cisco Private VLAN DI Products practice this claim

limitation under all claim constructions. The Cisco products meet the plain and ordinary

meaning of "switch" as adopted above because they are devices with switching capabilities.

They also practice this limitation under the construction proposed by Arista and the Staff because

they are layer 2 (data link layer) devices and layer 2 (L2) switches. CX-0003C (Jeffay WS) at

Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062 at 1; CX-0067 at 1; CX-0068

at xlv; CX-0069 at 3; CX-0070; CX-0071 at 5; CX-0072 at 17-1; CX-0073 at 1-1; CX-0078 at 1;

CX-0079 at 3; CX-0080 at 3; CX-0081 at 18-1; CX-0082 at 1-2.

> **b.** **a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network;**

The evidence demonstrates that Cisco's Private VLAN DI Products have "promiscuous

ports" that practice this claim limitation under all constructions. Applying the construction

adopted above, this limitation is satisfied because Cisco's promiscuous ports exchange packets

with isolated and community ports by use of VLANs. The limitation is also satisfied under the

construction proposed by Arista and the Staff because Cisco's promiscuous ports are physical

ports that can be connected to layer 3 or 4 devices and connect to VLANs internal to the switch,

including primary, isolated, and community VLANs, for transmission and receipt of packets.

See CX-0003C (Jeffay WS) at Q/A 447, Q/A 454-493, Q/A 498-499, Q/A 503-504, Q/A

513-516; CX-0062; CX-0067; CX-0068 at 15-2; CX-0069 at 21; CX-0070; CX-0071 at 59;

CX-0072 at 24-3; CX-0073 at 20-2; CX-0078 at 25; CX-0079 at 27; CX-0080 at 43; CX-0081 at

44-4; CX-0082 at 16-2. In addition, Cisco's promiscuous ports are designed for receiving

incoming packets from an external network, and for transmitting outgoing packets to said

external network as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at

Q/A 483-489.

> **c.** **and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network,**

Cisco adduced evidence to show that the "isolated ports" of Cisco's Private VLAN DI

Products practice this claim limitation under all proposed constructions. This limitation is

satisfied under the claim constructions adopted above because Cisco's "isolated ports" exchange packets with promiscuous ports by use of VLANs, but cannot transfer packets to other isolated ports. This limitation is also satisfied under the claim constructions proposed by Arista and the Staff because the isolated ports are physical ports that can be connected to user devices and exchange packets with promiscuous ports using VLANs internal to the switch, including primary and isolated VLANs. *See* CX-0003C (Jeffay WS) at Q/A 448, Q/A 454-493, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062; CX-0067; CX-0068 at 15-2; CX-0069 at 21; CX-0070; CX-0071 at 59; CX-0072 at 24-3; CX-0073 at 20-2; CX-0078 at 25; CX-0079 at 27; CX-0080 at 43; CX-0081 at 44-4; CX-0082 at 16-2. In addition, Cisco's "isolated ports" can connect to a private network and receive and transfer packets to that private network as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

> d. **said selected isolated port exchanging packets with said promiscuous port through a path inside said switch, and said isolated port not exchanging packets with another isolated port.**

The evidence shows that the "isolated ports" and "isolated VLANs" of Cisco's Private VLAN DI Products practice this claim limitation under all proposed constructions. As described above with respect to the limitation "and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network," Cisco's isolated ports meet this limitation. In addition, Cisco's isolated ports exchange packets with promiscuous ports via an isolated VLAN, which is a path inside the switch, and cannot exchange packets with other isolated ports. *See* CX-0003C (Jeffay WS) at Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062; CX-0067; CX-0068 at 15-3;

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CX-0069 at 21; CX-0070; CX-0071 at 60; CX-0072 at 24-3; CX-0073 at 20-3; CX-0078 at 25;

CX-0079 at 27; CX-0080 at 44; CX-0081 at 44-4; CX-0082 at 16-3. For example, Cisco's Layer

2 Switching Configuration Guide for Cisco Nexus 3000 Switch Series states that "[a]n isolated

port is a host port that belongs to an isolated secondary VLAN. This port has complete isolation

from other ports within the same PVLAN domain, except that it can communicate with

associated promiscuous ports." CX-0069 at 21; *see* CX-0003C (Jeffay WS) at Q/A 483-489.

2.   '592 Patent – Claim 7

a.   The switch of claim 6 further comprising:

As discussed above, the Cisco Private VLAN DI Products practice all limitations of claim

6 of the '592 patent.

b.   a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network,

The record evidence shows that the "community ports" of Cisco's Private VLAN DI

Products practice this claim limitation under all proposed constructions. This limitation is

satisfied under the adopted claim construction because Cisco's community ports exchange

packets with promiscuous ports by use of VLANs and transfer packets to a designated number of

other community ports. It is likewise satisfied under the construction proposed by Arista and the

Staff because Cisco's community ports are physical ports that can be connected to user devices

and exchange packets with promiscuous ports using VLANs internal to the switch, including

primary and community VLANs. *See* CX-0003C (Jeffay WS) at Q/A 449, Q/A 454-493, Q/A

498-499, Q/A 503-504, Q/A 513-516; CX-0062; CX-0067; CX-0068 at 15-2; CX-0069 at 21;

CX-0070; CX-0071 at 59; CX-0072 at 24-3; CX-0073 at 20-2; CX-0078 at 25; CX-0079 at 27;

CX-0080 at 43; CX-0081 at 44-4; CX-0082 at 16-2. In addition, Cisco's community ports

receive and transmit packets onto an external network as shown, for example, by Dr. Jeffay's test

results. CX-0003C (Jeffay WS) at Q/A 483-489.

> c. **each port of said community of ports exchanging packets through a path internal to said switch with said promiscuous port, and said each port of said community of ports exchanging packets with all ports of said plurality of community ports through a path within said switch, and said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch.**

Evidence adduced at the hearing demonstrates that the "community ports" and

"community VLANs" of Cisco's Private VLAN DI Products practice this claim limitation under

all constructions. As described above with respect to the "a plurality of community ports, each

of said community ports of said plurality of community ports receiving packets from a selected

external network and transmitting packets onto said selected external network" limitation,

Cisco's "community ports" meet the limitations of all constructions of the claimed "community

ports" element. In addition, Arista's community ports exchange packets with promiscuous ports

and other designated community ports via a community VLAN, which is a path inside the

switch, and do not exchange packets with any other ports (*e.g.*, an isolated port). CX-0003C

(Jeffay WS) at Q/A 453, Q/A 454-493, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062;

CX-0067; CX-0068 at 15-3; CX-0069 at 21; CX-0070; CX-0071 at 60; CX-0072 at 24-3;

CX-0073 at 20-3; CX-0078 at 25; CX-0079 at 27; CX-0080 at 44; CX-0081 at 44-4; CX-0082 at

16-3. For example, Cisco's Layer 2 Switching Configuration Guide for Cisco Nexus 3000

Switch Series states:

> A community VLAN is a secondary VLAN that carries upstream traffic from the community ports to the promiscuous port and to other host ports in the same community . . . . The ports within one community can communicate, but these ports cannot communicate with ports in any other community or isolated VLAN in the private VLAN.

CX-0069 at 21.

This was also confirmed by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

3. '592 Patent – Claim 20

a. A switch implementing virtual local area networks (VLANs) in a computer network, comprising:

For the reasons discussed above with respect to the "A switch, comprising" limitation of claim 6, the Cisco Private VLAN DI Products practice this claim limitations under all constructions.

b. a first isolated port assigned to a user to receive said user's packet from an external circuit connected to said first isolated port;

As discussed in connection with the "and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network" limitation of claim 6, the evidence shows that the "isolated ports" of Cisco's Private VLAN DI Products meet this claim element under all proposed constructions. In addition, Cisco's isolated ports receive packets from an external circuit in a computer connected to the isolated port as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

c. and a selected promiscuous port to receive said packet through an isolated VLAN, said packet to be transferred to an external circuit connected to said promiscuous port,

The evidence of record establishes that Cisco's Private VLAN DI Products have "promiscuous ports" and "isolated VLANs" that practice this claim limitation under all constructions. As described above with respect to the claim 6 limitation "a promiscuous port for

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receiving incoming packets from an external network, and for transmitting outgoing packets to said external network," Cisco's promiscuous ports meet the limitations of all proposed constructions of the claimed "promiscuous port" element. Cisco's isolated VLAN also meets the claimed "isolated VLAN" element under all proposed constructions because it is a VLANs that is a one-way connection from isolated ports to promiscuous ports that receives packets from isolated ports and transfers them to promiscuous ports, but that cannot carry packets received by a promiscuous port and cannot delivery packets to another isolated port. *See* CX-0003C (Jeffay WS) at Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062; CX-0067; CX-0068 at 15-3; CX-0069 at 21; CX-0070; CX-0071 at 60; CX-0072 at 24-3; CX-0073 at 20-3; CX-0078 at 25; CX-0079 at 27; CX-0080 at 44; CX-0081 at 44-4; CX-0082 at 16-3. For example, Cisco's Layer 2 Switching Configuration Guide for Cisco Nexus 3000 Switch Series states:

> An isolated VLAN is a secondary VLAN that carries unidirectional traffic upstream from the hosts toward the promiscuous ports. You can configure only one isolated VLAN in a PVLAN domain. An isolated VLAN can have several isolated ports. The traffic from each isolated port also remains completely separate.

CX-0069 at 21.

In addition, Cisco's promiscuous ports receive packets through an isolated VLAN and transfer them to an external circuit as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

> **d.   said isolated VLAN configured as a one way connection from all isolated ports to all promiscuous ports and also configured to prevent any other isolated port from receiving said user's packets from said isolated VLAN,**

As discussed above with respect to the "and a selected promiscuous port to receive said packet through an isolated VLAN, said packet to be transferred to an external circuit connected

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to said promiscuous port" limitation, Cisco's Private VLAN DI Products practice this claim limitation under all proposed constructions. In addition, Cisco's isolated VLANs are configured as a one way connection from isolated ports to promiscuous ports and prevent other isolated ports from receiving packets from the isolated VLAN as described above with respect to the claim 6 limitation "said selected isolated port exchanging packets with said promiscuous port through a path inside said switch, and said isolated port not exchanging packets with another isolated port." This is further demonstrated, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

> e. **said all promiscuous ports also connected via a one way**
>   **primary VLAN to said all isolated ports.**

Cisco adduced evidence showing that Cisco's Private VLAN DI Products have "promiscuous ports" and "primary VLANs" that practice this claim limitation under all proposed constructions. As described with respect to the claim 6 limitation "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network" above, Cisco's promiscuous ports meet the limitations of all proposed constructions of the claimed "promiscuous ports" element. Cisco's primary VLANs also meet the claimed "primary VLAN" element under all proposed constructions because they are a VLAN that is a one way connection from promiscuous ports to isolated and community ports which receive packets from promiscuous ports and transfer them to isolated and community ports, but which cannot receive and transfer packets from isolated or community ports. *See* CX-0003C (Jeffay WS) at Q/A 450-451, Q/A 454-493, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062; CX-0067; CX-0068 at 15-3; CX-0069 at 21; CX-0070; CX-0071 at 60; CX-0072 at 24-3; CX-0073 at 20-3; CX-0078 at 25; CX-0079 at 27; CX-0080 at 44; CX-0081 at

44-4; CX-0082 at 16-3. For example, Cisco's Layer 2 Switching Configuration Guide for Cisco Nexus 3000 Switch Series states that "[t]he primary VLAN carries traffic from the promiscuous ports to the host ports, both isolated and community, and to other promiscuous ports." CX-0069 at 21. The functionality of Cisco's primary VLANs is also confirmed by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

4. '592 Patent – Claim 21

a. A switch implementing virtual local area networks (VLANs) in a computer network, comprising:

For the reasons discussed above with respect to the "A switch, comprising" limitation of claim 6, the Cisco Private VLAN DI Products practice this claim limitations under all constructions.

b. a plurality of community ports, including a first community port assigned to a user to receive said user's packet from an external circuit connected to said first community port;

The evidence shows that the "community ports" of Cisco's Private VLAN DI Products practice this claim limitation under all proposed constructions for the reasons set forth above with respect to the claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network." In addition, Cisco's community ports receive packets from an external circuit connected to the community port as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

c. and a plurality of promiscuous ports connected to external circuits

It has been shown that Cisco's Private VLAN DI Products meet this claim element under all proposed constructions for the same reasons given above for the claim 6 limitation "a

promiscuous port for receiving incoming packets from an external network, and for transmitting

outgoing packets to said external network."

> d. to receive said packet through a community VLAN, all other community ports connected to said community VLAN also receiving said packet, but not any other ports of said switch, said community VLAN configured as a one way connection from all community ports in said community VLAN to all promiscuous ports,

The record evidence establishes that Cisco's Private VLAN DI Products have

"community ports" and "community VLANs" that practice this claim limitation under all

constructions. As described with respect to the claim 7 limitation "a plurality of community

ports, each of said community ports of said plurality of community ports receiving packets from

a selected external network and transmitting packets onto said selected external network" above,

Cisco's community ports practice the "community ports" limitation under all constructions.

Cisco's community VLANs further meet the claimed "community VLAN" limitation in this

claim element under all constructions because they are a VLAN that is a one way connection

from a community of ports to promiscuous ports which transfers packets from a community of

ports to promiscuous ports and also to other community ports attached to the community VLAN,

but which cannot transfer packets received by a promiscuous port. CX-0003C (Jeffay WS) at

Q/A 453, Q/A 454-493, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0062; CX-0067;

CX-0068 at 15-3; CX-0069 at 21; CX-0070; CX-0071 at 60; CX-0072 at 24-3; CX-0073 at 20-3;

CX-0078 at 25; CX-0079 at 27; CX-0080 at 44; CX-0081 at 44-4; CX-0082 at 16-3. For

example, Cisco's Layer 2 Switching Configuration Guide for Cisco Nexus 3000 Switch Series

states:

> A community VLAN is a secondary VLAN that carries upstream traffic
> from the community ports to the promiscuous port and to other host ports

in the same community . . . . The ports within one community can communicate, but these ports cannot communicate with ports in any other community or isolated VLAN in the private VLAN.

CX-0069 at 21.

The functionality of Cisco's community VLANs was also confirmed by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

> e.   **said all promiscuous ports also connected via a one way primary VLAN to all community ports.**

For the reasons discussed above with respect to the "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports" limitation of claim 20, the Cisco Private VLAN DI Products practice this claim limitations under all constructions.

5.   '145 Patent – Claim 5

a.   A router, comprising:

The record evidence shows that the Cisco Private VLAN DI Products practice this claim limitation under all claim constructions. Cisco's Private VLAN DI Products meet the plain and ordinary meaning of "router" adopted above because all of Cisco's products are devices with routing capabilities. They also satisfy this limitation under the constructions proposed by Arista and the Staff because they are layer 3 (network layer) devices of the OSI reference model. CX-0003C (Jeffay WS) at Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-1220C (Jeffay RWS) at Q/A 17; CX-0062 at 1; CX-0078 at 50; CX-0079 at 52; CX-0071 at 17; CX-0080 at 23; CX-0068 at xlv; CX-0073 at 1-1; CX-0082 at 1-14; CX-0081 at 1-13; CX-0072 at 30-2, 30-4; *see* Duda Tr. 776.

b.   a port connected to a shared network;

Cisco's Private VLAN DI Products have "promiscuous ports" that practice this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 6

limitation "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network" discussed above.

c. a plurality of user ports;

Cisco's Private VLAN DI Products have "isolated ports" that practice this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 6 limitation "and a plurality of isolated ports, a selected isolated port of said plurality of isolated ports connected to a selected private network, said selected isolated port receiving packets from said selected private network and transmitting packets onto said selected private network" discussed above.

d. a first VLAN from the port connected to the shared network to the plurality of user ports, the first VLAN to receive packets from the shared network and transferring them to a designated user port, the first VLAN to reject packets from the user ports;

Cisco's Private VLAN DI Products have a "primary VLAN" that practices this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports" discussed above.

e. a second VLAN from the plurality of user ports, the second VLAN to receive packets from the user ports and transferring them to the port connected to the shared network, the second VLAN to prevent transfer of packets from one of the user ports to other user ports, and the second VLAN also to reject packets from the shared network, in order to separate packet traffic of different users.

Cisco's Private VLAN DI Products have an "isolated VLAN" that practices this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 6 limitation "said selected isolated port exchanging packets with said promiscuous port through a

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path inside said switch, and said isolated port not exchanging packets with another isolated port" discussed above.

6. '145 Patent – Claim 7

a. A router, comprising:

The record evidence shows that the Cisco Private VLAN DI Products practice this claim limitation under all claim constructions. Cisco's Private VLAN DI Products meet the plain and ordinary meaning of "router" adopted above because all of Cisco's products are devices with routing capabilities. They also satisfy this limitation under the constructions proposed by Arista and the Staff because they are layer 3 (network layer) devices of the OSI reference model. CX-0003C (Jeffay WS) at Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-1220C (Jeffay RWS) at Q/A 17; CX-0062 at 1; CX-0078 at 50; CX-0079 at 52; CX-0071 at 17; CX-0080 at 23; CX-0068 at xlv; CX-0073 at 1-1; CX-0082 at 1-14; CX-0081 at 1-13; CX-0072 at 30-2, 30-4; *see* Duda Tr. 776.

b. one or more promiscuous ports;

Cisco's Private VLAN DI Products have "promiscuous ports" that practice this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 6 limitation "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network" discussed above.

c. one or more isolated ports;

Cisco's Private VLAN DI Products have "isolated ports" that practice this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 6 limitation "said selected isolated port exchanging packets with said promiscuous port through a

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path inside said switch, and said isolated port not exchanging packets with another isolated port" discussed above.

d.   one or more community ports;

Cisco's Private VLAN DI Products have "community ports" that practice this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network" discussed above.

> **e.   a primary VLAN, the primary VLAN to receive packets from outside of the router through the one or more promiscuous ports and to transfer the packets to a selected one of the one or more isolated ports and to transfer the packets to the one or more community ports, the primary VLAN to reject packets from the one or more isolated ports and to reject packets from the one or more community ports;**

Cisco's Private VLAN DI Products have a "primary VLAN" that practices this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports" discussed above. In addition, Cisco's primary VLAN rejects packets from the one or more isolated ports and community ports as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

> f. an isolated VLAN, the isolated VLAN to receive packets from outside of the router through an isolated port of the one or more isolated ports and to transfer the packets to the one or more promiscuous ports, the isolated VLAN to prevent transfer of the packets from the isolated port to another isolated port of the one or more isolated ports, and the isolated VLAN to prevent transfer of the packets from the isolated port to the one or more community ports, and the isolated VLAN to reject packets from the one or more promiscuous ports;

Cisco's Private VLAN DI Products have an "isolated VLAN" that practices this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 20 limitation "said isolated VLAN configured as a one way connection from all isolated ports to all promiscuous ports and also configured to prevent any other isolated port from receiving said user's packets from said isolated VLAN" discussed above. In addition, Cisco's isolated VLAN rejects packets from the one or more promiscuous ports as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

> g. and a community VLAN, the community VLAN to receive packets from outside of the router at a community port of the one or more community ports and to transfer the packets to the one or more promiscuous ports and to transfer the packets to any other community ports, the community VLAN to prevent transfer of packets to the one or more isolated ports, the community VLAN to reject packets from the one or more promiscuous ports.

Cisco's Private VLAN DI Products have a "community VLAN" that practices this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 21 limitation "to receive said packet through a community VLAN, all other community ports connected to said community VLAN also receiving said packet, but not any other ports of said switch, said community VLAN configured as a one way connection from all community ports in said community VLAN to all promiscuous ports" discussed above. In addition, Cisco's

community VLAN rejects packets from the one or more promiscuous ports as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

7. '145 Patent – Claim 45

    a.   **A computer readable medium containing executable program instructions for operating a router, the executable program instructions comprising program instructions configured to:**

The record evidence shows that the Cisco Private VLAN DI Products practice this claim limitation under all claim constructions. Cisco's Private VLAN DI Products meet the plain and ordinary meaning of "router" adopted above because all of Cisco's products are devices with routing capabilities. They also satisfy this limitation under the constructions proposed by Arista and the Staff because they are layer 3 (network layer) devices of the OSI reference model. CX-0003C (Jeffay WS) at Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-1220C (Jeffay RWS) at Q/A 17; CX-0062 at 1; CX-0078 at 50; CX-0079 at 52; CX-0071 at 17; CX-0080 at 23; CX-0068 at xlv; CX-0073 at 1-1; CX-0082 at 1-14; CX-0081 at 1-13; CX-0072 at 30-2, 30-4; *see* Duda Tr. 776.

In addition, IOS and NX-OS comprise the operating system software on Cisco's devices that control the devices and provide an interface for configuration. CX-0003C (Jeffay WS) at Q/A 442.

    b.   **establish a first VLAN from a port connected to a shared network to a plurality of user ports, the first VLAN to receive packets from the shared network and to transfer them to one or more of the user ports, the first VLAN to reject any packets received from the user ports;**

Cisco's Private VLAN DI Products have a "primary VLAN" that practices this claim limitation under all proposed constructions for the same reasons given for the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all

isolated ports" discussed above. In addition, Cisco's primary VLAN rejects any packets

received from the user ports as shown, for example, by Dr. Jeffay's test results. CX-0003C

(Jeffay WS) at Q/A 483-489.

> c. **establish a second VLAN from the plurality of user ports, the second VLAN to receive packets from the user ports and to transfer them to the port connected to the shared network, the second VLAN to prevent transfer of packets from one of the user ports to other user ports, and the second VLAN also to reject packets from the shared network, to thereby separate packet traffic of different users.**

Cisco's Private VLAN DI Products have an "isolated VLAN" that practices this claim

limitation under all proposed constructions for the same reasons given for the '592 patent claim 6

limitation "said selected isolated port exchanging packets with said promiscuous port through a

path inside said switch, and said isolated port not exchanging packets with another isolated port"

discussed above. In addition, Cisco's isolated VLAN rejects packets from the shared network as

shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

8.   **'145 Patent – Claim 46**

> a. **A computer readable medium containing executable program instructions for operating a router, the executable program instructions comprising program instructions configured to:**

The record evidence shows that the Cisco Private VLAN DI Products practice this claim

limitation under all claim constructions. Cisco's Private VLAN DI Products meet the plain and

ordinary meaning of "router" adopted above because all of Cisco's products are devices with

routing capabilities. They also satisfy this limitation under the constructions proposed by Arista

and the Staff because they are layer 3 (network layer) devices of the OSI reference model.

CX-0003C (Jeffay WS) at Q/A 441-449, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-1220C

(Jeffay RWS) at Q/A 17; CX-0062 at 1; CX-0078 at 50; CX-0079 at 52; CX-0071 at 17;

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CX-0080 at 23; CX-0068 at xlv; CX-0073 at 1-1; CX-0082 at 1-14; CX-0081 at 1-13; CX-0072 at 30-2, 30-4; *see* Duda Tr. 776.

In addition, IOS and NX-OS comprise the operating system software on Cisco's devices that control the devices and provide an interface for configuration. CX-0003C (Jeffay WS) at Q/A 442.

    b.   **establish a primary VLAN, the primary VLAN to receive packets from outside of the router through the one or more promiscuous ports and to transfer the packets to one or more community ports, the primary VLAN to reject packets received from the one or more community ports;**

The evidence demonstrates that the "community ports" and "primary VLAN" of Cisco's Private VLAN DI Products practice this claim limitation under all claim constructions for the reasons set forth above with respect to the '592 patent claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network" and the '592 patent claim 20 limitation "said all promiscuous ports also connected via a one way primary VLAN to said all isolated ports," respectively. In addition, Cisco's primary VLAN rejects packets received from the one or more community ports as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

    c.   **and establish a community VLAN, the community VLAN to receive packets from outside the router on a community port of the one or more community ports and to transfer the packets to the one or more promiscuous ports and to transfer the packets to any other community ports of the one or more community ports, the community VLAN rejecting packets received from the one or more promiscuous ports.**

The evidence demonstrates that the "community ports" and "community VLAN" of Cisco's Private VLAN DI Products practice this claim limitation under all claim constructions

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for the reasons set forth above with respect to the '592 patent claim 6 limitation "a promiscuous port for receiving incoming packets from an external network, and for transmitting outgoing packets to said external network," the '592 patent claim 7 limitation "a plurality of community ports, each of said community ports of said plurality of community ports receiving packets from a selected external network and transmitting packets onto said selected external network," and the '592 patent claim 7 limitation "each port of said community of ports exchanging packets through a path internal to said switch with said promiscuous port, and said each port of said community of ports exchanging packets with all ports of said plurality of community ports through a path within said switch, and said each port of said community of ports not exchanging packets with any other port of said switch through a path within said switch."

In addition, Cisco's community VLAN rejects packets received from the one or more promiscuous ports as shown, for example, by Dr. Jeffay's test results. CX-0003C (Jeffay WS) at Q/A 483-489.

9. Arista's Domestic Industry Arguments

Arista raises several arguments in support of its position that the Cisco products do not practice the claims of the '592 and '145 patents. These arguments are addressed below.

a. Arista's Argument That Virtual LANs Do Not Process Packets

Similar to its argument with respect to non-infringement, Arista argues that VLANs cannot process, receive, transmit, transfer and reject packets, as required by the claims. RX-3910C (Moisand RWS) at Q/A 151, Q/A 155, Q/A 160, Q/A 193 and Q/A 198; *see* Resp. Br. at 335-37. Arista's argument is rejected for the reasons discussed above with respect to Arista's non-infringement defenses. *See* CX-0003C (Jeffay WS) at Q/A 365.

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The record evidence adduced at the hearing belies Arista's assertions. Specifically, the Catalyst 3750 Configuration Guide in which Arista relied on to implement Private VLANs describes the primary, isolated, and community VLANs as "carrying" traffic. CX-0497 at 16-3; *see* CX-0068 at 15-3; Arneja Tr. 1112-1113. Arista's expert also testified that Cisco's products implement the claimed private VLAN functionality in hardware and software. RX-3901C (Moisand RWS) Q/A 176, Q/A 179, Q/A 182, Q/A 185. Therefore, Arista's argument must fail.

b. Arista's Argument That Cisco's VLANs Are Not One-Way Connections

Arista also argues that Cisco's Private VLAN DI Products do not practice the asserted claims because there is no one-way connection between ports, inasmuch as the path within the networking chips is the same regardless of the direction the packets are sent. RX-3910C (Moisand RWS) at Q/A 200-215. This argument fails for the reasons discussed above with respect to Arista's non-infringement defenses. *See* CX-0003C (Jeffay WS) at Q/A 176-184, Q/A 366, Q/A 454-493, Q/A 498-499, Q/A 503-504, Q/A 513-516. Indeed, the adduced evidence shows that Cisco's Private VLANs are understood to be one-way connections. *See, e.g.,* CX-0071 at 60 (describing an "isolated VLAN [as] a secondary VLAN that carries unidirectional traffic"); *see* CX-0068 at 15-3; CX-0069 at 21; CX-0072 at 24-3; CX-0073 at 20-3; CX-0078 at 25; CX-0079 at 27; CX-0080 at 44; CX-0081 at 44-4; CX-0082 at 16-3.

c. Arista's Argument That Cisco's Isolated Ports Do Not Prevent the Exchange of Packets

Arista argues that Cisco's Private VLAN DI Products do not practice the claimed invention because its isolated ports can exchange packets through layer 3 forwarding. RX-3910C (Moisand RWS) at Q/A217-220; *see* Resp. Br. at 377-78. For the same reasons

discussed above with respect to Arista's non-infringement arguments, Arista's argument fails in the context of the technical prong analysis. *See* CX-0003C (Jeffay WS) at Q/A 367.

d. Arista's Argument That Cisco Merely Relies on a Naming Convention

Arista argues that Cisco relies on a naming convention, using terms such as "promiscuous," "isolated," and "community" in order to establish the technical prong of the domestic industry requirement. RX-3910C (Moisand RWS) at Q/A 152-154; *see* Resp. Br. at 338. This argument fails because Cisco has adduced evidence show that its products do, in fact, practice the claims of the '592 and '145 patents. *See* CX-0003C (Jeffay WS) at Q/A 443-449, Q/A 498-499, Q/A 503-504, Q/A 513-516.

e. Arista's Argument That Cisco Has Not Analyzed Customer Implementation of Private VLANs

Arista also argues that Cisco has failed to show that its Private VLAN DI Products have been used by Cisco's customers to implement private VLANs. *See* Resp. Br. at 334-35. This argument misstates the requirements for proving satisfaction of the technical prong of the domestic industry requirement. In particular, establishing the technical prong does not require a showing of actual customer use. Instead, the standard is "articles protected by the patent," which can be shown through pre-sale activities such as investments in R&D and manufacturing equipment. 19 U.S.C § 1337(a)(2). Thus, all that is necessary is that "the patent claims cover the articles of manufacture that establish the domestic industry." *Crocs, Inc. v. Int'l Trade Comm'n*, 598 F.3d 1294, 1307 (Fed. Cir. 2010); *see also Certain Wireless Communication Devices, Portable Music, and Data Processing Devices, Computers and Components Thereof*, Inv. No. 337-TA-745, Initial Determination at 67-68, 72-74 (Apr. 24, 2012) (rejecting respondent's argument that evidence of actual use of DI product was required).

In any event, the record evidence does establish that customers implement Private

VLANs on Cisco products. *See* Jeffay Tr. 501. For instance, [

]. CX-0034C at Background; CX-0490 ([

]); CX-0595 ([

]). Arista's internal

document ([   ]) also shows [

]. CPX-0206C at 1.

Additional documents demonstrate that [

]. CX-0959C at 3; CX-0962C at 6.

E.   Validity

1.   Anticipation – The 802.1Q Standard

Arista contends that the IEEE 802.1Q-1998 standard anticipates all asserted claims of the

Private VLAN Patents. RX-3136C (Moisand WS) at Q/A 192, Q/A 263; *see* Resp. Br. at

339-50. In particular, Arista's technical expert Mr. Moisand opines that Figures B-1, B-2, and

B-4, that appear in Annex B of the 802.1Q standard, in combination with the general VLAN

functionality provided by the 802.1Q standard, disclose the claimed ports and VLANs. *Id.* at

Q/A 120-320. This combination, however, does not anticipate the asserted claims of the Private

VLAN Patents.

The record evidence shows that the 802.1Q standard does not disclose Private VLAN

functionality. Specifically, the evidence shows that the 802.1Q standard describes conventional

VLANs and does not address the specific problems solved by the Private VLAN Patents, *i.e.*,

isolation of users on the same LAN. The 802.1Q standard also does not describe a mechanism that can be used to implement the functionality claimed in the '592 and '145 patents. *See* CX-1220C (Jeffay RWS) at Q/A 57. None of the figures, diagrams, or other disclosures in the 802.1Q standard teaches the claim limitations of the Private VLAN Patents. As discussed in more detail below, the 802.1Q standard does not disclose a "promiscuous port," "isolated port," "community port," "primary VLAN," "isolated VLAN" or "community VLAN." CX-1220C (Jeffay RWS) Q/A 57.

a.   The IEEE 802.1Q-1998 Standard Does Not Disclose "Isolated Ports" and "Isolated VLANs"

Arista contends that ports 1 and 2 in Figure B-4 are examples of the claimed "isolated ports," with the "Red" VLAN created between ports 1 and 3, and the "Blue" VLAN created between ports 2 and 3. *See* Moisand Tr. 1206; RX-3136C (Moisand WS) at Q/A 223, Q/A 225. Figure B-4 does not disclose "isolated ports," however, because products that comply with the 802.1Q standard, such as the "Bridge" in Figure B-4,[39] must allow direct communication at layer 2 between ports within the same VLAN. In particular, because both ports 1 and 2 are listed under the "Member Set" associated with the "Purple" VLAN in Figure B-4, a packet tagged with the "Purple" VLAN that enters the bridge at port 1 is able to reach all ports that are members of the "Purple" VLAN, which includes port 2. This is illustrated below, and Dr. Jeffay testified at the hearing:

> Q   Now we've had some testimony today from yourself and Mr. Moisand yesterday about tagged and untagged packets. Can you explain

---

[39] As experts for both Cisco and Arista testified, the "Bridge" in Figure B-4 is an 802.1Q-compliant bridge. Moisand Tr. 1213; Jeffay Tr. 1375. As such, that the ports on such a bridge must have particular functionalities specified by the 802.1Q standard. CX-1220C (Jeffay RWS) at Q/A 91-92.

to the Court what would happen if a purple tagged packet came into port 1 on figure B-4 that was addressed to port 2?

A   Sure. So remember, the VLANs here are colored. So the purple VLAN has as its member sets the ports that packets can be delivered to as being port 1 and port 2. So if a packet comes in on port 1 with carrying a VLAN tag of purple addressed to a device that's connected to port 2, that packet will be delivered from port 1 to port 2.
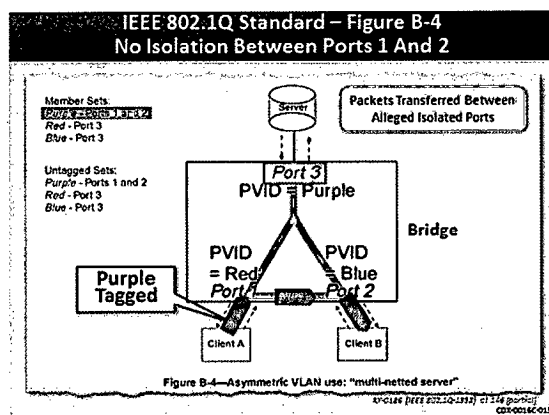
Jeffay Tr. 1373-1374; CDX-0016C-015; *see* CX-1220C (Jeffay RWS) at Q/A 90.

The lack of isolation between ports 1 and 2 stems from the "Acceptable Frame Types" parameter of the 802.1Q standard. In particular, Section 8.4.3 of the 802.1Q standard sets forth two parameters defining how all 802.1Q-compliant devices must handle packets entering at a port, which are (a) Admit Only VLAN-tagged frames or (b) Admit All Frames. RX-0186 at 31; Jeffay Tr. 1374-1375. As such, under either parameter, 802.1Q-compliant devices must be configured to accept tagged packets and cannot be configured to block tagged packets.[40] Jeffay Tr. 1375; CX-1220C (Jeffay RWS) at Q/A 92-93. Therefore, a "purple"-tagged packet must be

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[40] As Dr. Jeffay testified, blocking tagged packets on an 802.1Q-compliant bridge was introduced only in the 2005 version of the IEEE 802.1Q standard, which is not prior art to the Private VLAN patents. CX-1220C (Jeffay RWS) at Q/A 93.

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accepted between ports 1 and 2 in Figure B-4, which means there is no isolation between these

ports and thus no scenario in the 802.1Q standard in which the claimed "isolated ports" can be

configured:

> Q   Is there any way to configure the bridge in figure B-4 of the
> 802.1Q standard to be compliant with the standard and yet not accept
> tagged packets?
>
> A   No, it's not possible.
>
> Q   So in view of that, in your opinion, is there any way to configure
> the bridge of figure B-4 to have isolated ports?
>
> A   No, there's no way.

Jeffay Tr. 1375.

Mr. Moisand also testified regarding an additional, hypothetical third client port, port 4,

having the same "VID association and member set . . . used for port 1," that he suggested shows

isolation between ports 1 and 4. RX-3136C (Moisand WS) at Q/A 212, Q/A 223. Inasmuch as

Mr. Moisand relies on a modification to Figure B-4, Arista's anticipation argument is defeated.

Moreover, even the addition of a hypothetical port 4 to Figure B-4 would not result in isolated

ports for the reasons discussed above. CX-1220C (Jeffay RWS) at Q/A 96. Specifically,

inasmuch as ports 1 and 4 will be part of the same "Member Set" and part of the Purple VLAN,

they can exchange packets directly with each other, *i.e.*, there is no port isolation. *Id.*

Arista further contends that Figures B-1 and B-2 of the 802.1Q standard show examples

in which "direct traffic between ports 1 and 2 is not possible at Layer 2." RX-3136C (Moisand

WS) at Q/A 207, Q/A 208. Although this argument does not expressly state that either Figure

B-1 or B-2 discloses any of the claimed elements of the Private VLAN Patents, it is implied that,

inasmuch as ports 1 and 2 cannot communicate with each other at layer 2, they are examples of

"isolated ports" with the corresponding VLANs being examples of "isolated VLANs." *Id.*

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Yet, neither Figure B-1 nor B-2 discloses "isolated ports" because, in both diagrams, ports 1 and 2 are ports in conventional VLANs which, as discussed above, must be capable of accepting packets that can be transmitted to all ports in their respective VLAN. RX-0186 at 31; Jeffay Tr. 1374-1375; CX-1220C (Jeffay RWS) at Q/A 75, Q/A 80, Q/A 92-93. Moreover, under all parties' constructions, an "isolated VLAN" has to be a one way connection from isolated ports to the promiscuous port or ports. Each VLAN in Figure B-1 and B-2, however, is a conventional VLAN that must be capable of transmitting packets to all ports in the VLAN, in all directions. CX-1220C (Jeffay RWS) at Q/A 75, Q/A 82. Thus, the VLANs shown in Figures B-1 and B-2 are bi-directional and not a "one way" connection as required by the claims. *Id.*; *see* CDX-0016C-012.

b.   The IEEE 802.1Q-1998 Standard Does Not Disclose "Community Ports" and "Community VLANs"

Arista argues that the 802.1Q standard discloses community ports and community VLANs. *See* RX-3136C (Moisand WS) at Q/A 229-235. However, this argument is not supported by specific disclosures within the 802.1Q standard, but instead relies on configurations that are "built into the standard." *See* RX-3136C (Moisand WS) at Q/A 230. More specifically, in order to demonstrate community ports and community VLANs, Arista's expert Mr. Moisand modified Figure B-4 by adding two new ports, ports 5 and 6, which, along with port 3, would establish a new VLAN that includes all ports associated with it (*i.e.*, ports 3, 5 and 6) as the Member Set. RX-3136C (Moisand WS) at Q/A 212, Q/A 223, Q/A 231. According to Mr. Moisand, when Figure B-4 is modified in this manner, ports 3, 5, and 6 would be considered "community ports" and the VLAN connecting them a "community VLAN." *Id.* at Q/A 229-235.

This reliance on hypothetical modifications of Figure B-4 to disclose community ports and VLANs punctures Arista's anticipation argument. Moreover, the proposed modification of Figure B-4 does not disclose a "community VLAN," inasmuch as the new hypothetical VLAN is not a "one way" connection required by all proposed constructions, but a bi-directional VLAN as illustrated below:
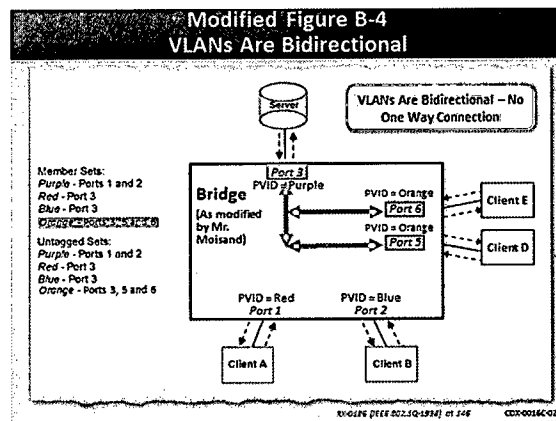
CDX-0016C-022; CX-1220C (Jeffay RWS) at Q/A103.

In addition, the hypothetical modifications to Figure B-4 proposed by Mr. Moisand do not disclose "community ports" because Figure B-4 does not disclose isolated or promiscuous ports, and thus necessarily does not disclose community ports under any construction of the term.[41] CX-1220C (Jeffay RWS) at Q/A 101.

Arista also argues that Figure B-1 "expressly disclose[s]" the member set including all ports associated with the VLAN, thereby "resulting in community ports." *See* RX-3136C (Moisand WS) at Q/A 230, Q/A 207. The evidence shows, however, that no such disclosure exists in Figure B-1 or any other part of the 802.1Q standard. CX-1220C (Jeffay RWS) at Q/A

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[41] Mr. Moisand's implicit suggestion of modifying Figure B-4 so that Ports 1, 2, and 3 are all part of the same member set fails for the same reasons as adding ports 5 and 6. *See* CX-3136C (Moisand WS) at Q/A 230.

57, Q/A 67, Q/A 72. Instead, Figure B-1 shows conventional VLANs without any isolation between ports within a VLAN. CX-1220C (Jeffay RWS) at Q/A 72. Moreover, Figure B-1 does not disclose a "community VLAN" because under all parties' constructions, the VLANs disclosed are bi-directional, and not "one way" connection as required. CX-1220C (Jeffay RWS) at Q/A 74.

c. The IEEE 802.1Q-1998 Standard Does Not Disclose "Promiscuous Ports" and "Primary VLANs"

Arista further argues that port 3 in Figure B-4 of the 802.1Q standard is an example of the claimed "promiscuous port," and that the corresponding "Purple" VLAN created between ports 1, 2, and 3 is an example of the claimed "primary VLAN." *See* RX-3136C (Moisand WS) at Q/A 216, Q/A 218. No other promiscuous ports or primary VLANs are identified by Arista. This analysis is faulty because Arista fails to identify any isolated or community ports that the promiscuous port is connected to, as is required by all constructions. CX-1220C (Jeffay RWS) at Q/A 86. In addition, Figure B-4 does not disclose a "primary VLAN" because, under all parties' constructions, a "primary VLAN" is a VLAN that connects to promiscuous, isolated, and community ports, and does not permit packets to be transferred to it from an isolated or community port. As discussed above, however, the 802.1Q-compliant bridge in Figure B-4 must permit ports 1 and 2 in Figure B-4 to exchange packets directly with each other using the "Purple" VLAN, which precludes that VLAN from being a primary VLAN. Jeffay Tr. 1373-1376; CX-1220C (Jeffay RWS) at Q/A 88.

2. Obviousness

Arista proposes three combinations of alleged prior art references that it contends render obvious the asserted claims of the Private VLAN patents. *See* RX-3136C (Moisand WS) at Q/A

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338-346. Arista, however, fails to provide any explanation of how the references would be combined together or why a person of ordinary skill in the art would be so motivated. Moreover, as Dr. Jeffay testified, the references are either from non-analogous fields or are not directed to the problem of achieving isolation between users within a VLAN. Further, the combination of these references together does not render obvious the inventions of the Private VLAN patents, because they do not disclose the claimed elements. *See* CX-1220C (Jeffay RWS) at Q/A 60, Q/A 220-225.

a. The 802.1Q Standard in Combination With U.S. Patent No. 5,752,003

Arista argues that "[a] combination of the isolated ports within a VLAN disclosed in the '003 patent and the asymmetric VLAN configuration disclosed in 802.1Q, renders obvious" the asserted claims. *See* RX-3136C (Moisand WS) at Q/A 340. As Dr. Jeffay testified, however, the '003 patent does not disclose isolated ports and isolated VLANs but, to the contrary, explicitly describes that all ports in the same VNET are in the same broadcast domain and are able to communicate with each other without any isolation. CX-1220C (Jeffay RWS) at Q/A 222; RX-3158 ('003 patent) at col. 6, lns. 46-51. Likewise, the '003 patent fails to disclose any of the other claimed ports or VLANs. CX-1220C (Jeffay RWS) at Q/A 58, Q/A 60, Q/A 149, Q/A 150-181. Therefore, the combination of 802.1Q standard and the '003 patent would not render obvious the asserted claims. *Id.* at Q/A 222.

In addition, a person skilled in the art would not be motivated to combine these references together, inasmuch as the '003 patent is directed to ATM technology. This technology was not considered a viable solution for LAN and VLAN applications in the 2000 time-period due to its high costs, complexity, and fundamental differences from the

packet-switching technology described in the Private VLAN Patents. CX-1220C (Jeffay RWS) at Q/A 221.

b. The 802.1Q Standard in Combination with the Haviland Publication

Arista argues that asserted claims are obvious over 802.1Q in view of the White Paper titled "Designing High-Performance Campus Intranets with Multilayer Switching" by Cisco's Geoff Haviland in 1998 ("Haviland"). *See* RX-3136C (Moisand WS) at Q/A 331-38, Q/A 341-43. Haviland is directed to the design of campus intranets using multilayer switching. *See* RX-3136C (Moisand WS) at Q333-335; RX-3156 (Haviland) at 4-6, Figs. 2-3. Haviland teaches that Ethernet-attached hosts and servers associated with one VLAN can communicate with hosts and servers associated with that VLAN, but cannot directly communicate with hosts and servers associated with a different VLAN. *See* RX-3136C (Moisand WS) at Q/A 336-337. It is argued that "a combination of Haviland's port communities associated with a VLAN and the asymmetric VLAN configuration disclosed in 802.1Q, renders obvious" the asserted claims. *See id.* at Q/A 343.

As Dr. Jeffay testified, however, the Haviland publication describes the use of conventional VLANs and does not disclose isolation between ports within a LAN. CX-1220C (Jeffay RWS) at Q/A 224. In addition, the Haviland publication does not disclose any other claimed ports or VLANs. CX-1220C (Jeffay RWS) at Q/A 59, Q/A 60, Q/A 187-219. Therefore, the combination of 802.1Q standard and the Haviland Publication would not render obvious the asserted claims of the '592 patent. CX-1220C (Jeffay RWS) at Q/A 224.

In addition, a person skilled in the art would not be motivated to combine these references together, inasmuch as the Haviland Publication deals with ATM technology which, as

discussed above, was not considered a successful solution as LAN technology. CX-1220C

(Jeffay RWS) at Q/A 223. Moreover, the Haviland publication discloses conventional

networking technology using conventional VLANs, and therefore there would be no reason for a

person skilled in the art to consult the Haviland publication in addition to the 802.1Q standard

itself. *Id.*

   c. **The 802.1Q Standard in Combination With U.S. Patent No.**
       5,752,003 and the Haviland Publication

Arista contends that the combination of 802.1Q standard with the '003 patent and the

Haviland Publication renders obvious the asserted claims. For the reasons discussed above with

respect to the first two combinations, the record evidence establishes that the combination of all

three references together would not render the asserted claims obvious, and a person skilled in

the art would not be motivated to combine these references together. *See* CX-1220C (Jeffay

RWS) at Q/A 225. In particular, the combination of all three references would not teach isolated

ports, isolated VLANs, or isolation between ports that are within the same VLAN, as required by

the '592 and '145 patents. *See id.* at Q/A 221-224.

   d. **Secondary Considerations of Non-Obviousness**

Even if the combinations identified by Arista did disclose each and every element of the

claimed inventions of the Private VLAN Patents, secondary considerations of non-obviousness

support the finding that the claimed inventions would not have been obvious to a person of

ordinary skill in the art. Specifically, Cisco adduced evidence showing that the inventions set

forth in the Private VLAN Patents have proven commercially successful, addressed long felt but

unresolved needs, succeeded where others have failed, and have been praised by others.

CX-0003C (Jeffay WS) at Q/A 519-522; CX-0027 at 12; CX-0028 at 1; CX-0095C at 31-3. In

addition, the record evidence shows that [

], thereby showing a long-felt need for the Private VLAN technology and the failure of

Arista to satisfy this demand without the patented Private VLAN technology. CX-0003C (Jeffay

WS) at Q/A 523-525, Q/A 410-412; CX-0959C at 3; CX-0056C at 1; *see* CPX-0201C at 1;

CPX-0202C at 1; CPX-0200C at 1; CPX-0203C at 1; CPX-0204C at 1; CPX-0205C at 1;

CPX-0206C at 1; CPX-0207C at 1; CPX-0208C at 1; CPX-0209C at 1.

3. Patentable Subject Matter

Arista argues that the asserted claims of the '592 and '145 patents are invalid as drawn to

unpatentable subject matter. Specifically, it is argued that the claims are "directed to the abstract

idea of VLANs, particularly exchanging or handling packets by use of VLANs." *See* RX-3136C

(Moisand WS) at Q/A 350, Q/A 361. As with Arista's related arguments with respect to

non-infringement and technical prong discussed above, the arguments here are equally flawed.

The Private VLAN Patents are not directed to an abstract idea, but rather to a specific

device, namely a switch or a router, configured in a specific way to have new types of ports and

new types of VLANs in order to isolate users' traffic. CX-1220C (Jeffay RWS) at Q/A 227.

The claims all recite a switch or router comprising a VLAN, which is a definite structure.

CX-1220C (Jeffay RWS) at Q/A 228. Indeed, even Arista's expert Mr. Moisand testified that

the asserted claims of the Private VLAN Patents refer to physical devices such as a switch or

router having ports. Moisand Tr. 1200-1201. These physical devices and structures are the

opposite of "an idea, having no particular concrete or tangible form." *Ultramercial, Inc. v. Hulu,

LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014).

Far from being the types of claims that present issues under Section 101, the Private

VLAN Patents do not claim an algorithm or computerize an approach that was implemented

manually in the prior art, but rather claim a new, specific and useful device to solve a problem that existed in the networking field in the prior art. *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) ("The claims stand apart because they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks."). Indeed, when determining whether a claim is directed to an abstract idea or a patent-eligible invention, the analysis is based on the claims "as a whole," rather than "dissect[ing] the claims" and ignoring those limitations that make the claims concrete. *Diamond v. Diehr*, 450 U.S. 175, 188 (1981); *see also Digitech Image Techs., LLC v. Elecs for Imaging Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (holding that "determining whether a claim recites an abstract idea" requires "examin[ing] the claims as a whole").

Further, in addition to claiming definite structures rather than an abstract concept, the Private VLAN Patents also cover an inventive concept. As the Supreme Court reaffirmed in *Alice*, "solv[ing] a technological problem in 'conventional industry practice,'" "improv[ing] an existing technological process," "improv[ing] the functioning of the computer itself," or "effect[ing] an improvement in any other technology or technical field" is sufficient to 'transform' a claimed abstract idea into a patent-eligible invention. *Alice*, 134 S. Ct. at 2358-59 (quoting *Diamond v. Diehr*, 450 U.S. 175, 178 (1981)). Here, the Private VLAN Patents solved the problem in the prior art of separating users' traffic on a LAN. The patents claim a mechanism for isolating user traffic on a computer network that is implemented by networking devices with specific configurations of new types of VLANs and new types of ports, one that can be implemented and stored in assignment tables, memory, switching chips, and other hardware

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of software components. CX-1220C (Jeffay RWS) at Q/A 233-238. All the asserted claims, therefore, require special purpose devices, and not routine or conventional structures, such as switches and routers with specific defined structures that implement the new types of ports and new types of VLANs, and which transform the networking device into a special purpose machine that can enforce the private VLAN mechanism. CX-1220C (Jeffay RWS) at Q/A 238.

4. Arguments Relating to 35 U.S.C. § 112

Arista raises several arguments that the asserted claims of the '592 and '145 patents are invalid for failure to comport with the requirements of 35 U.S.C. § 112. As discussed below, Arista has failed to show that the asserted claims are invalid.

a. Indefiniteness – Circularity

Arista argues that all asserted claims of the Private VLAN Patents are "circular and indefinite." Specifically, it is argued that inasmuch as certain claim elements (such as the "primary," "isolated," and "community" VLANs) are defined by their relationship to other claim elements, they are "circular" and thus indefinite. *See* RX-3136C (Moisand WS) at Q/A 402-405. However, the fact that one claim element is defined in terms of its relationship to other claim elements does not make the claims circular, and it does not render them indefinite. A person skilled in the art would understand the meaning of the claim elements at issue, as well the claim elements' relationship with other elements. CX-1220C (Jeffay RWS) at Q/A 250-251. Accordingly, because "a person of ordinary skill in the art, with the aid of the specification, would understand what is claimed, the claim is not indefinite." *Biosig Instruments*, 783 F.3d 1374 at 1381.

It is further argued that the claims at issue are indefinite because "Cisco does not distinguish [] by which VLANs the ports connect to" and, using Figure 3 as an example, because

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"it is arbitrary which port can be labeled the community port and which port can be labeled the promiscuous port." *See* RX-3136C (Moisand WS) at Q/A 405. This argument does not succeed. Although each of the ports in Figure 3 can be configured to be either a promiscuous or community port, a person having ordinary skill in the art would not mistaking the functionality of the ports, which can be ascertained by looking at their configuration. *See* CX-1220C (Jeffay RWS) at Q/A 252. Therefore, looking at Figure 3, a person having ordinary skill in the art would understand that only ports 320-324 could be promiscuous ports, inasmuch as these are the only ports configured for exchanging packets with isolated and community ports by use of VLANS. *Id.*

b.   Mixed Apparatus and Method Steps

Arista argues that claims 6 and 7 of the '592 patent and claims 5 and 46 of the '145 patent are indefinite for reciting both an apparatus and a method of using that apparatus. *See* RX-3910C (Moisand WS) at Q/A407. Arista's argument is rejected for two reasons. First, Arista's position does not comport with case law in this area, and second, because it is permitted for patent claims to describe apparatus or system claims by their functions or capabilities.

Arista's reliance on *IPXL Holdings L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005) and its progeny to support its argument is inapposite because the facts in this investigation are distinguishable from the facts in those cases. In particular, those cases based their decisions on claim elements explicitly calling for user action, a factual scenario not present here. For example, in *IPXL*, the challenged claim read:

> The system of claim 2 [including an input means] wherein the predicted transaction information comprises both a transaction type and transaction parameters associated with that transaction type, and the user uses the input means to either change the predicted transaction information or accept the displayed transaction type and transaction parameters.

IPXL, 430 F.3d at 1383-84 (quoting U.S. Patent No. 6,149,055) (alteration in original).

None of the Private VLAN claims that Arista challenges include reliance on user action.

Rembrandt Data Techs., LP v. AOL, LLC, 641 F.3d 1331, 1339-40 (Fed. Cir. 2011) is also cited in support of Arista's invalidity argument. Nevertheless, the claim element at issue in *Rembrandt* is different from the claim elements at issue here. In *Rembrandt*, the element at issue was a pure method step, disconnected from any structure at all, and unlike the claim elements here that specifically claim structures (*i.e.*, an isolated port) with particular capabilities. *Id.* at 1339. In contrast, the other elements of the claim at issue in *Rembrandt*, which were found by the Federal Circuit to properly recite apparatus elements, use active language to describe the capabilities of the claimed structures, a usage present in the claims at issue here. *Id.*

Moreover, it is settled law that apparatus or system claims may properly claim recited components by describing their function or capabilities, and that the use of such functional language does not render them indefinite. *See Halliburton Energy Servs. v. M–I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008); *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1375 (Fed. Cir. 2008); *K–2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1363 (Fed. Cir. 1999). Each of the disputed claim terms at issue here recites an apparatus with particular capabilities which, in part, distinguish the claimed ports and VLANs from other types of ports and VLANs. For example, claims 6 and 7 each specifically claim a device, *i.e.*, a "switch," including various structures, such as ports, which have particular capabilities as set forth in the claims, and which do not require that a user actually perform any method step. CX-1220C (Jeffay RWS) at Q/A 254-256. As Dr. Jeffay testified regarding claim 7 of the '145 patent:

> Q   What does it mean to you to have a VLAN in a router?

A   It means the router has been programmed to create that VLAN, to forward -- it's been programmed so that it will forward packets according to the rules that are configured for that VLAN. It contains the VLAN, if you will.

Jeffay Tr. 522.

The same analysis applies to claims 5 and 46 of the '145 patent. CX-1220C (Jeffay RWS) at Q257. Thus, a person of ordinary skill in the art would understand that these claims do not require that the device or a user actually perform any method steps. CX-1220C (Jeffay RWS) at Q/A 253-257. The challenged claims are therefore not invalid for claiming mixed method and apparatus claims.

c.   Indefiniteness – Failure to Specify a Time Period

Arista argues that claims 6 and 7 of the '592 patent are invalid as indefinite for failing to inform with reasonable certainty whether the claims cover "not exchanging packets" at all points in time, or only at limited point in time. *See* RX-3910C (Moisand WS) at Q/A409. This argument is without merit, because, as Dr. Jeffay testified, a person skilled in the art would understand that the "not exchanging" requirements of claims 6 and 7 of the '592 patent refer to the capability of isolated and community ports. A time period does not need to be specified in the claim language because that capability is a requirement for a port to be an isolated or community port. CX-1220C (Jeffay RWS) at Q/A 258. Accordingly, a person skilled in the art would understand the scope of the claimed invention with respect to that aspect of those ports with reasonable certainty. *Biosig*, 783 F.3d at 1381.

d.   Written Description – "Router"

Arista argues that the claims of the '145 patent lack sufficient written description because the specification fails to describe implementation of the invention on a router. *See* RX-3136C (Moisand WS) at Q/A 378-391. This argument cannot succeed, inasmuch as the specification of

the Private VLAN Patents contains various disclosures of practicing the claimed invention in routers. For example, the specification of the '145 patent describes that the claimed VLANs can be programmed in a router: "[P]rimary VLANs and secondary VLANs (that is Isolated or Community VLANs) are programmed in the router using Color Blocking Logic (CBL)." JX-0006 ('145 patent) at col. 7, lns. 25-27. The specification also describes that the data associated with private VLAN configuration can be stored in a router:

> Data shown in table 500 may be held, in a particular implementation, in a variety of places. For example some data is in the header of a received packet, some data may be held in hardware such as memory in an ASIC chip in the interface, or further, some of the data may be held in a software lookup table in the memory for a processor of the router. As a further example, an implementation may use a table such as Table 500 in main memory for a processor of the router.

JX-0006 ('145 patent) at col. 6, lns. 6-14; *see* JX-0006 ('145 patent) at col. 2, lns. 7-13; col. 7, lns. 25-27; col. 6, lns. 8-14; col. 6, lns. 53-57.

e.   Written Description – "First VLAN"

Arista argues that the term "first VLAN" appearing in asserted claims 5 and 45 of the '145 patent is indefinite for failure to satisfy the written description requirement. *See* RX-3136C (Moisand WS) at Q/A 392-396. Arista's expert Mr. Moisand, however, testified that a person skilled in the art would have known that a "first VLAN" can mean, in at least one embodiment, a primary VLAN, as indicated by Arista's proposed construction for the term, and a primary VLAN is described in detail in the specification. RX-3136C (Moisand WS) at Q/A 393, Q/A 395; *see* CX-1220C (Jeffay RWS) at Q/A 244. Mr. Moisand testimony shows that Arista's written description argument cannot succeed, as there can be no written description problem with

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respect to the term "first VLAN" where it is shown that the claimed "first VLAN" is embodied by the primary VLAN in the specification.[42]

Moreover, as Dr. Jeffay testified, the claims that recite a "first VLAN" expressly describe the characteristics and functionality of the "first VLAN" in a way that would allow a person skilled in the art to understand the scope of the claimed invention. CX-1220C (Jeffay RWS) at Q/A 244. For example, claim 5 of the '145 patent states that the first VLAN is "from the port connected to the shared network to the plurality of user ports," with the first VLAN being configured "to receive packets from the shared network and transferring them to a designated user port," and also that the first VLAN is configured "to reject packets from the user ports." JX-0006 ('145 patent) at col. 10, ln. 62 – col. 11, ln. 10. This description of the first VLAN is sufficient to inform a person skilled in the art about the characteristics of the first VLAN and the scope of the claimed invention. CX-1220C (Jeffay RWS) at Q/A 244-245 (discussing source code and testing); JX-0006 ('145 patent) at col. 10, ln. 62 – col. 11, ln. 10.

f. Written Description – "Second VLAN"

Arista argues that the term "second VLAN" appearing in asserted claims 5 and 45 of the '145 patent is indefinite for failure to satisfy the written description requirement. *See* RX-3136C (Moisand WS) at Q/A 397-401. For example, Arista's expert Mr. Moisand testified:

> Under Cisco and the Staff's construction, the Second VLAN need not be the isolated or community VLAN, which I find no support for in the specification. Therefore, if Cisco and the Staff's construction is adopted, claims reciting a "Second VLAN" are invalid. . . . As with "First VLAN," the term "Second VLAN" does not appear in the specification. The specification instead describes the purported invention in relation to three

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[42] Although the "first VLAN" is not limited to that embodiment for purposes of claim construction, it is sufficiently described by that embodiment. *See* CX-1220C (Jeffay RWS) at Q/A 244.

purportedly new types of VLANs, a primary VLAN, an isolated VLAN, and/or a community VLAN.

RX-3136C (Moisand WS) at Q/A 398, Q/A 401.

Mr. Moisand further testified:

> As I discussed in reference to claim construction, however, read in light of the specification the term "Second VLAN" requires either the "Isolated" or "Community" VLAN, one of the three recited VLAN types disclosed in the specification. To the extent that Second VLAN does not require an "Isolated" or "Community" VLAN, the specification does not show that the inventors were in possession of such a claim and in fact Inventor Foschiano directly testified that he was not in possession of such a claim.

RX-3136C (Moisand WS) at Q/A 401.

Yet, Mr. Moisand also testified that a person skilled in the art would have known that a "second VLAN" can mean, in at least some embodiments, an isolated VLAN or a community VLAN, as indicated by Arista's proposed construction for the term, and isolated and community VLANs are described in detail in the specification. RX-3136C (Moisand WS) at Q/A 398, 400; *see* CX-1220C (Jeffay RWS) at Q/A 247. Mr. Moisand testimony shows that Arista's written description argument cannot succeed, as there can be no written description problem respect to the term "second VLAN" where it has been shown that the claimed "second VLAN" is practiced by at least two different embodiments in the specification. JX-0006 ('145 patent) at col. 4, lns. 51-64; col. 5, lns. 9-19; col. 5, lns. 52-57.[43]

Moreover, as Dr. Jeffay testified, the claims that recite a "second VLAN" expressly describe the characteristics and functionality of the "second VLAN" in a way that would allow a person skilled in the art to understand the scope of the claimed invention. CX-1220C (Jeffay

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[43] Although the "second VLAN" is not limited to these embodiments for purposes of claim construction, it is sufficiently described by these embodiments. CX-1220C (Jeffay RWS) at Q/A 247.

RWS) at Q/A 247. Claim 5 of the '145 patent, for example, explicitly states that the second

VLAN is "from the plurality of user ports," that the second VLAN is configured "to receive

packets from the user ports and transferring them to the port connected to the shared network,"

and also that the second VLAN is configured "to prevent transfer of packets from one of the user

ports to other user ports, and . . . to reject packets from the shared network, in order to separate

packet traffic of different users." JX-0006 ('145 patent) at col. 10, ln. 62 – col. 11, ln. 10. This

description of the second VLAN is sufficient to inform a person skilled in the art about the

characteristics of the second VLAN and the scope of the claimed invention, and nothing in the

description of the VLAN limits the implementation of "second VLAN" to only isolated or

community VLANs. CX-1220C (Jeffay RWS) at Q/A 247-248; JX-0006 ('145 patent) at col.

10, ln. 62 – col. 11, ln. 10.

VIII.   The '164 (Zero Touch Provisioning) Patent

A.   Claim Construction

1.   Level of Ordinary Skill

Arista argues that a person of ordinary skill in the field of art of the '164 patent would be

a person with a Bachelor's Degree in Computer Science, Computer Engineering, Electrical

Engineering, or a closely related field, along with 2-3 years of industry experience in computer

networks and systems. Additional education in a relevant field, such as Computer Science,

Computer Engineering, Electrical Engineering, or industry experience may compensate for a

deficit in one of the other aspects of the requirements. *See* RX-2836C (Nettles WS) at Q/A 107-

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The Staff takes the position that a person of ordinary skill would be a person with a

bachelor's degree in computer science, computer engineering, electrical engineering, or a closely

related field, along with at least 2-3 years of experience working in the field of network devices or computer networks. *See* Staff Br. at 67-68. Cisco is willing to accept the Staff's proposal as a compromise position between those proposed by Cisco and Arista. *See* Cisco Br. at 307; *see also* CX-1218C (Bhattacharjee RWS) at Q/A 30 (opining on the qualifications of a person having ordinary skill in the art).

Based on the testimony provided by experts for Cisco and Arista, it is determined that a person having ordinary skill in the art with respect to the '164 patent would be a person with a bachelor's degree in computer science, computer engineering, electrical engineering, or a closely related field, along with at least 2-3 years of experience working in the field of network devices or computer networks.

2. Disputed Claim Terms

a. "in response to faults of a network device" / "faults of a network device" (claims 1 and 18)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
Preamble is not limiting; if it is found to be limiting, no construction necessary.	"in response to an abnormal condition of the network device"	Preamble is limiting, however, no construction is necessary. The Staff had originally taken the position that the preamble is not limiting. If the preamble is limiting, no construction necessary.

The claim terms "in response to faults of a network device" and "faults of a network devices" are recited in the preambles of asserted claims 1 and 18. It is determined that these terms in the preamble are limiting, inasmuch as the recited "network device" in the preamble provides the antecedent basis for the term "device" in the body of the claims. It is further

determined that no construction is necessary for these claim terms because the plain meaning of

the terms is evident from reading the intrinsic evidence. *See* CX-0008C (Bhattacharjee WS) at

Q/A 115-120. In particular, the patent specification describes faults and the recovery from faults

in the context of a loss of connectivity. *Id.*; JX-0003 ('164 patent) at col. 6, lns. 19-25.

b. "configuration" (claims 1, 5, 6, 9, and 18)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "state of the various services, functions, parameters and interface devices with which the device may be equipped"	"a text format file containing configuration states"	No construction necessary. If construction is necessary, "the various services, functions, parameters and interface devices with which the device may be equipped"

The claim term "configuration" is recited in every asserted claim of the '164 patent. As

proposed by Cisco, the term is construed to mean "state of the various services, functions,

parameters and interface devices with which the device may be equipped." This construction

comports with the understanding of a person having ordinary skill in the art and is consistent

with the teachings of the patent specification. Moreover, the adopted construction is

substantially similar to that proposed by the Staff. *See* Staff Br. at 69.

The record evidence establishes that "configuration" is a commonly used term in the art,

and that one of ordinary skill in the art would understand that configuring a device parameter

constitutes putting a device in one of multiple possible states that the parameter can assume. *See*

CX-0008C (Bhattacharjee WS) at Q/A 123. This understanding of the term "configuration" is

supported by the teachings of the patent specification:

> Network devices such as routers and switches and the like maintain a
> configuration state using a text format file also known as a "configuration
> file," or just "configuration" as used herein. The configuration reflects the
> various services, functions, parameters and interface devices with which
> the device may be equipped.

JX-0003 at col. 3, lns. 6-12; CX-0008C (Bhattacharjee WS) at Q/A130.

By contrast, Arista's proposed construction limits a "configuration" to "a text format file

containing configuration states," a limitation excludes embodiments disclosed in the patent

specification. Indeed, the specification teaches that a text format file is only one of multiple

disclosed embodiments, which also include non-text files such as "machine-only readable" files:

> In various embodiments, the recovery configuration may be an XML
> formatted file, or a file formatted in either a human or a machine-only
> readable format, or may be encrypted using an encryption technique or the
> like. In one embodiment, however, the recovery configuration is a text
> file.

JX-0003 ('164 patent) at col. 8, lns. 1-6; *see* CX-0008C (Bhattacharjee WS) at Q/A 128-129.

Arista does not explain why its construction improperly excludes disclosed embodiments or how

it adds clarity to the claim language where it attempts to construe the term "configuration" using

that same term in the definition.

Accordingly, the claim term "configuration" is construed to mean "state of the various

services, functions, parameters and interface devices with which the device may be equipped."

c. "configuration instructions" (claims 1 and 18)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "requests to make a change or modification to the current configuration"	"requests to make a change or modification to the current configuration"	No construction necessary. If construction is necessary, "requests to make a change or modification to the current configuration"

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The claim term "configuration instructions" is recited in asserted claims 1 and 18. As proposed by all parties, this term is construed to mean "requests to make a change or modification to the current configuration." *See* Compl. Br. at 313-14; Resp. Br. at 238-39; Staff Br. at 68-69. This construction reflects the plain meaning of the term and is supported by the specification. *See* RX-2836C (Nettles WS) at Q/A 86; JX-0003 ('164 Patent) at col. 6, lns. 32-37 ("Configuration instructions may include directions to change the current configuration of the device.").

> **d.** **"detecting a loss of connectivity between the device and a network resulting from the configuration change" (claims 1 and 18)**

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction necessary, "identifying that the configuration change resulted in a loss of connectivity between the device and a network"	"identifying that the configuration change caused connectivity between the device and a network to be lost"	No construction necessary. If construction is necessary, "identifying that the configuration change resulted in connectivity between the device and a network to be lost"

The claim term "detecting a loss of connectivity between the device and a network resulting from the configuration change" is recited in asserted claims 1 and 18. As proposed by Cisco, this term is construed to mean "identifying that the configuration change resulted in a loss of connectivity between the device and a network," a construction that reflects the plain meaning of the words. The adopted construction also reflects the claim language, which requires that "a loss of connectivity" "result[s] from the configuration change."

By contrast, Arista's proposed construction is inconsistent with the intrinsic evidence. In particular, the claim language provides that a loss of connectivity "result[s]" from the

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configuration change. The specification also uses the word "result," and not "caused," in relation to the loss of connectivity and configuration change. *See, e.g.*, JX-0003 ('164 patent) at col. 3, lns. 19-24; col. 5, lns. 53-65. The specification does, however, use the word "cause" in other unrelated contexts. *See, e.g.*, JX-0003 ('164 patent) at col. 10, lns. 47-50 ("Execution of the sequences of instructions contained in main memory 406 causes processor 404 to perform the process steps described herein.").

Accordingly, the claim term "detecting a loss of connectivity between the device and a network resulting from the configuration change" is defined to mean "identifying that the configuration change resulted in a loss of connectivity between the device and a network."

e. "in association with manufacturing the device" (claims 1 and 18)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
No construction necessary. If construction is necessary, "in connection with the manufacture of the device"	"at the time of manufacture of the device"	"at the time of manufacture of the device"

The claim term "in associate with manufacturing the device" is recited in asserted claims 1 and 18. As proposed by Cisco, the term is construed to mean "in connection with the manufacture of the device," a construction that is consistent with the patent specification. The specification teaches: The disputed phrase appears in claims 1 and 18. As the specification explains, "[t]he CPEs are shipped with a generic bootstrap or minimal configuration that is copied from or generated at the vendor based on a standard template or format specified by the service provider." JX-0003 ('164 patent) at col. 1, lns. 32-38. The patent later refers to the same bootstrap configuration, which is used as a recovery configuration, as being loaded during

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manufacture. JX-0003 ('164 patent) at col. 5, lns. 48-53 ("According to one embodiment, a generic or 'boot' configuration is 110A loaded as the current configuration of CPE A 110 during manufacture."); see id. at col. 3, lns. 59-60. The intrinsic evidence, therefore, describes the recovery configuration as being shipped with the device.

f. "network level configuration" (claim 5)

Complainant Cisco's Proposed Construction	Respondent Arista's Proposed Construction	Staff's Proposed Construction
"a complete and current configuration information"	"configuration enabling the device to connect to other devices in the network"	"complete and current configuration information"

The claim term "network level configuration" is recited in asserted claim 5. As proposed by Cisco and the Staff, the term is construed to mean "a complete and current configuration," a meaning that comports with the teachings of the patent itself. Specifically, the specification teaches:

> Accordingly, a recovery configuration for CPE A 110 need only provide sufficient information for the CPE A 110 to establish the connection with the configuration manager 152 in order to obtain complete and current configuration information (herein referred to as a network level configuration) in order to then connect with other devices, such as aggregator 150, for example using the network 103.

JX-0003 ('164 patent) at col. 5, lns. 37-43.

B. Literal Infringement Analysis

For the reasons set forth below, the accused Arista devices do not infringe the asserted '164 claims because they fail to satisfy one or more of the limitations of the asserted claims.[44]

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[44] Inasmuch as the accused products do not literally infringe the '164 patent, there can be no finding that Arista is liable for indirect infringement of the '164 patent.

1. The Accused Products Are Not Fault Recovery Processes – All Asserted Claims

The evidence establishes that the accused ZTP functionality is an initial provisioning process, and not a fault recovery mechanism as claimed in the '164 patent. *See, e.g.*, RX-2896C (Arista, Quick Start Guide, Data Center Switches Models) at ANI-ITC-944_945-0850985; RX-3912C (Duda RWS) at Q/A 104, Q/A 106; RX-3915C (Sadana RWS) at Q/A 37. The '164 patent is directed to recovering from a fault, *i.e.*, a loss of connectivity, resulting from a configuration change. Bhattacharjee Tr. 530-531. If someone changes the configuration and interrupts connectivity, the claimed invention will restore connectivity by reverting to a factory-installed recovery configuration. *See* JX-0003 ('164 patent) at claim 1.

Evidence adduced at the hearing shows that ZTP and its role differ from the fault recovery scenario described in the '164 patent. Cisco's infringement argument rests upon a manufactured situation in which the startup-config file is removed from a working, connected device and that device is then power cycled. *See, e.g.*, Compl. Br. at 317-22. It is alleged that restarting a device with its startup-config removed is a catastrophic fault as described in the '164 patent. Bhattacharjee Tr. 552.

Yet, Arista's CTO and corporate designee on ZTP functionality, Dr. Duda, testified that the lack of a startup-config file is not a fault:

> Q Before this case, have you ever heard anybody talking about deleting a startup-config file, placing the switch in a fault condition?
>
> A No. In fact, we instruct our customers to delete the startup-config file and reboot the switch in order to re-enter ZTP mode. Why would we tell our users to create catastrophic faults. There's nothing faulty about deleting your startup-config. It's just a crazy notion.

Duda Tr. 874-875.

The lack of a startup-config filed does not qualify as fault under any of the party's proposed constructions. The evidence shows that a device understands whether an event or state is unexpected or abnormal only to the extent that it is designed to identify those differences. RX-3911C (Nettles RWS) at Q/A 63-64.

Arista's products are designed to presuppose the lack of a configuration on initial boot up to allow for client-specific provisioning. *See, e.g.*, RX-3912C (Duda RWS) at Q/A 110; RX-2896C ([   ]) at ANI-ITC-944_945-0850972. [

                                          ]. *See, e.g.*, RX-3912C (Duda RWS) at Q/A 110, Q/A 107; RX-2896C ([

          ]) at ANI-ITC-944_945-0850985 ("[

                    ]."). The devices can operate "[   ]" even if the startup-config file is deleted or even if the device never received a startup-config in the first place. RX-3912C (Duda RWS) at Q/A 117, Q/A 124; JX-0031 (Pech Dep. Tr.) at 37. Further, a user can cancel the ZTP process and boot the switch without using a startup-config file. RX-3911C (Nettles RWS) at Q/A 51; RX-2894C ([   ]) at CSI-ANI-00128400.00335.

Cisco's expert Dr. Bhattacharjee has testified that an Arista device without a startup-config is abnormal. CX-0008C (Bhattacharjee WS) at Q/A 154-155, Q/A 158, Q/A 161-162. This analysis selectively quotes several documents based on the assumption that any alternative to "normal" operations constitutes abnormal behavior and is therefore a fault. *See id.* at Q/A 159-60. For example, Dr. Bhattacharjee relies on a flow chart created at least eight months before the first public release of ZTP to argue that booting an Arista device without a startup-config is a fault. CX-0008C (Bhattacharjee WS) at Q/A 159-60; CX-0177C (Arista

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Software Status, 2010-09-14) at 1, 14. Yet, the chart differentiates the soon-to-be introduced

process from all the processes that existed before it, and does not show that operating an Arista

device without a startup-config is a fault. RX-3911C (Nettles WS) at Q/A 61; *see id.* at Q/A 64.

Accordingly, it is determined that the accused products are not fault recovery processes

as required by all asserted claims of the '164 patent.

2. The Accused Products Do Not Detect a Loss of Connectivity – All Claims

The record evidence shows that the accused Arista switches do not infringe any of the

asserted claims of the '164 patent under any party's proposed claim construction because [

]. RX-3911C (Nettles RWS) at Q/A 89.

Cisco's infringement allegations with respect to this claim limitation depend on the proposition

that a person of ordinary skill would consider checking for the presence of a locally-stored

startup-config file during switch boot-up to be "detecting the loss of connectivity between the

device and a network." *See id.* at Q/A 90; Compl. Br. at 326-31. The evidence adduced at the

hearing, however, contradicts Cisco's argument.

For example, Cisco's expert Dr. Bhattacharjee testified that removing an existing

startup-config file does not by itself cause a loss of connectivity. *See* Bhattacharjee Tr. 551. In

addition, the evidence shows that [

]. RX-3911C (Nettles RWS) at Q/A 91;

RX-3912C (Duda RWS) at Q/A 119, Q/A 123.

[

]. *See, e.g.,*

RX-3912C (Duda RWS) at Q/A 116; RX-3911C (Nettles RWS) at Q/A 92-93; RX-2894C

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([   ]) at CSI-ANI-00128400.0000052. Indeed, a the presence of

a startup-config file filled with nonsensical or otherwise invalid text will not trigger ZTP. *See*

RX-3912C (Duda RWS) at Q/A 112. Moreover, [

                                                    ] because it verifies only the file's existence and not its

contents. RX-3911C (Nettles RWS) at Q/A 94; RX-3912C (Duda RWS) at Q/A 112. At no

point in this situation does the system determine connectivity or its ability to communicate with

other devices on the network. RX-3911C (Nettles RWS) at Q/A 93.

Accordingly, it is determined that the accused products do not satisfy the "detecting a

loss of connectivity resulting from the configuration change" limitation of all asserted '164

claims.

3.   The Accused Products Performing Initial Provisioning Do Not Infringe – All Asserted Claims

The evidence shows that initial provisioning of a switch from the factory without a

startup-config loaded does not practice the asserted claims. When adding the device to the

network for the first time, the ZTP process will trigger without ever receiving configuration

instructions or changing the current configuration to a new configuration based on the

non-existent configuration instructions. *See* RX-3911C (Nettles RWS) at Q/A 54-55; RX-2896C

([   ]) at ANI-ITC-944_945-0850985;

RX-3912C (Duda RWS) at Q/A 107.

Indeed, Cisco has stated that it does not accuse the initial provision functionality of the

Arista switches of infringing the '164 patent. *See, e.g.,* Compl. Br. at 329 ("[T]he Accused

Products do detect a loss of connectivity during initial provisioning—just not one resulting from a configuration change, as required by the claims.").

C. Technical Prong of the Domestic Industry Requirement

For the reasons set forth below, the '164 DI Products do not practice the asserted '164 claims because they fail to satisfy one or more of the limitations of the claims.

Evidence adduced at the hearing establishes that Cisco's PoAP is a provisioning feature designed to provide a minimal startup configuration when a Cisco switch, especially a brand-new switch, is booted without a startup configuration file. RX-3911C (Nettles RWS) at Q/A 167. This minimal startup configuration enables the switch to contact a DHCP server, through which the switch can locate a source for a software image and a startup-config file. *Id.*

Once triggered, the PoAP software dynamically writes instructions to a temporary startup configuration file. RX-3911C (Nettles RWS) at Q/A 168. PoAP then begins DHCP discovery. *Id.* The DHCP response instructs the device to where it may obtain the rest of its configuration. *Id.* The device then downloads the configuration and/or software image from the network server. *Id.* Afterwards, the device reboots with the new configuration. *Id.*

1. The Domestic Industry Products Do Not Detect a Loss of Connectivity – All Claims

The record evidence shows that the '164 DI Products do not practice any asserted claim of the '164 patent under any party's proposed claim construction because PoAP detects the lack of a file, and not the claimed loss of connectivity between the device and the network. *See* RX-3911C (Nettles RWS) at Q/A 192. Cisco's technical prong argument with respect to this claim limitation is similar to its infringement argument inasmuch as it argues that checking for the presence of a startup-config file stored locally on the device practices the limitation of

"detecting the loss of connectivity between the device and the network." *See id.* at Q/A 193;

Compl. Br. at 343-45.

Evidence adduced that the hearing establishes, however, that deleting the startup-config file does not cause a loss of connectivity, and that the system does not attempt to detect a loss of connectivity when the startup-config is deleted. RX-3911C (Nettles RWS) at Q/A 194. Additionally, when booting up, the domestic industry products detect only whether the startup-config exists. *Id.* At no point does the system make a determination regarding connectivity or its ability to communicate with other devices on the network. *Id.* In addition, Cisco's expert Dr. Bhattacharjee provided testimony stating that the system is capable of sending and receiving packets during the boot process when a startup-config file is not present, thereby establishing that the device does not lack connectivity. CX-0008C (Bhattacharjee WS) at Q/A 435; *see id.* at Q/A 197.

Accordingly, it is determined that the '164 DI Products do not practice the "detecting a loss of connectivity resulting from the configuration change" limitation of the asserted '164 claims.

2. The Domestic Industry Products Are Not Fault Recovery Processes – All Claims

The record evidence establishes that PoAP does not revert to a recovery configuration in response to the faults of a network device under the claim constructions proposed by any party. *See* RX-3911C (Nettles RWS) at Q/A 172. Specifically, it has been shown that the lack of a startup-config file within the PoAP process is not a fault as required by the asserted claims. *See id.*

Evidence adduced at the hearing demonstrates that PoAP is a provisioning process designed for new devices, direct from the manufacturer, that do not have a startup-configuration file and that must be provisioned and configured for installation in a new network. RX-3911C (Nettles RWS) at Q/A 173; *see, e.g.,* RX-2904C (Cisco Nexus 5000 Series NX-OS Configuration Guide) at CSI-ANI-00124733.000046; RX-2906C (Power On Auto Provisioning slideshow) at CSI-ANI-00188500. The lack of a startup-configuration is an expected step in the PoAP process and does not constitute an abnormal condition or a fault as claimed in the '164 patent. *See* RX-3911C (Nettles RWS) at Q/A 173-175.

D.   Validity

Arista has not met its burden to show by clear and convincing evidence that any of the asserted claims of the '164 patent is invalid. In support of its invalidity arguments, Arista relies primarily on four references: U.S. Patent No. 7,069,334 to Wysoczynski (RX-2840), Cisco's AutoInstall product, and Cisco's AutoConfig product. None of these references teaches the invention of the '164 patent or otherwise renders the claims of that patent invalid.

1.   Anticipation – U.S. Patent No. 7,069,334 to Wysoczynski

Wysoczynski relates generally to modifying the known concept of a "debug" mode, which "gives the user the opportunity to check the configuration state or memory/register contents to find out what caused the problem." RX-2840 (Wysoczynski) at col. 1, lns. 36-39; *see* CX-1218C (Bhattacharjee RWS) at Q/A 68-70. It discloses a new user command for use on a network device in debug mode, which is used for rolling back a network device to a last known configuration. *See* RX-2840 (Wysoczynski) at col. 4, lns. 45-51. Wysoczynski teaches that a debug mode is distinct from reverting a device to a factory default. In particular, Wysoczynski characterizes the process of factory reset as "needless and undesirable." RX-2840

(Wysoczynski) at col. 1, lns. 49-52. Wysoczynski's debug mode comprises a command prompt that asks the user to either enter in the location of the image and configuration it wishes to download, or else to accept downloading the prior image and configuration based on the location of the last known good image. RX-2840 (Wysoczynski) at col. 4, lns. 42-51; col. 5, lns. 13-15.

a.   Claim 1

The evidence shows that Wysoczynski does not disclose several elements of claim 1 of the '164 patent under all of the parties' proposed constructions.

In particular, Wysoczynski fails to disclose the limitation of "recovering from a loss of connectivity by reverting to a recovery configuration." CX-1218C (Bhattacharjee RWS) at Q/A 72. As discussed above, Wysoczynski discloses a debug mode. RX-2840 (Wysoczynski) at col. 1, lns. 36-39. Applying the claim constructions adopted above, this debug mode is not a "configuration" that provides the state of the various services, functions, parameters and interface devices with which the device may be equipped. Applying Arista's proposed construction, the debug mode is not a text file containing configuration states. Therefore, Wysoczynski does not satisfy the claim limitations requiring that the device "revert to a recovery configuration" by "retrieving a recovery configuration" and "making it the current configuration." *See* CX-1218C (Bhattacharjee RWS) at Q/A 72.

Wysoczynski also does not disclose the claimed "recovery configuration" that "is stored in a persistent storage of the device in association with manufacturing the device." CX-1218C (Bhattacharjee RWS) at Q/A 74. Rather, Wysoczynski teaches that the "devices 210 and 230 also have information stored on them about the last known good image and configuration values that were approved by the administrator or user." RX-2840 (Wysoczynski) at col. 5, lns. 13-16. These parameters are the "names of the last known good image and configuration file," which

are only known after manufacture once the device has been installed with a first set of known good image and configuration files. *See* RX-2840 (Wysoczynski) at col. 4, lns. 45–51. Accordingly, there can be no disclosure of "retrieving" factory default parameters from persistent memory and establishing connectivity to a configuration manager using those retrieved parameters.

Wysoczynski also fails to meet the limitation of "recovering from the loss of connectivity by reverting to a recovery configuration" because it requires user intervention in order to initiate a rollback file transfer with a remote file server. CX-1218C (Bhattacharjee RWS) at Q/A 75; RX-2840 (Wysoczynski) at col. 4, lns. 56-68. Specifically, Wysoczynski requires there to be a user entering a command at the console. *See* RX-2840 (Wysoczynski) at col. 4, lns. 56-68. By contrast, the '164 patent makes clear that the claimed "recovering from the loss of connectivity by reverting to a recovery configuration," *i.e.*, establishing connectivity to a configuration manager using the recovery configuration, is done without user intervention. JX-0003 ('164 patent) at col. 6, lns. 48-50 (describing "an automated recovery process"); col. 5, lns. 29-33; col. 6, lns. 24-28 (teaching recovery "substantially independent of human intervention"); col. 8, lns. 63-67; col. 8, lns. 48-51. Indeed, the stated purpose of the claimed invention is to avoid the need for user intervention in recovering a device. JX-0003 ('164 patent) at col. 1, lns. 27-31; col. 1, lns. 48-54. One of ordinary skill, reading the claims in light of the specification, would understand that "establishing connectivity to a configuration manager using the recovery configuration" is without user intervention. *See* CX-1218C (Bhattacharjee RWS) at Q/A 77. Accordingly Wysoczynski does not practice this limitation.

Accordingly, it is determined that Wysoczynski does not anticipate claim 1 of the '164 patent.

b. Claim 5

The evidence adduced at the hearing shows that Wysoczynski fails to disclose several elements of claim 5 of the '164 patent under all of the parties' proposed claim constructions. CX-1218C (Bhattacharjee RWS) at Q/A 83-88. As an initial matter, inasmuch as claim 5 depends from claim 1, claim 5 is not invalidated by Wysoczynski for the same reasons that it does not invalidate claim 1. *See* CX-1218C (Bhattacharjee RWS) at Q/A 84.

In addition, Wysoczynski does not disclose the "network level configuration" limitation recited in claim 5. CX-1218C (Bhattacharjee RWS) at Q/A 84. Wysoczynski discloses receiving a "last known good image and configuration file from a TFTP server." RX-2840 (Wysoczynski) at col. 4, lns. 46-55. The '164 patent distinguishes the claimed invention from rolling back to a previous configuration, and indicates that doing the latter is undesirable because it may lead to unreliable network connectivity. JX-0003 ('164 patent) at col. 1, ln. 55 – col. 2, ln. 5. Therefore, under claim constructions adopted above, the last known good image and configuration file is not the claimed "complete and current configuration information," and it is not a configuration enabling the device to connect to other devices in the network as required by Arista's proposed claim constructions.

c. Claim 9

The record evidence shows that Wysoczynski fails to disclose several elements of claim 9 of the '164 patent under all of the parties' proposed constructions. *See* CX-1218C (Bhattacharjee RWS) at Q/A 93-94. As an initial matter, inasmuch as claim 9 depends on claim 1, Wysoczynski does not anticipate claim 9 for the same reasons it does not anticipate claim 1. Moreover, Wysoczynski does not disclose a "configuration" under any of the proposed constructions, as previously discussed with respect to claim 5.

d.   Claim 18

The steps recited in the body of claim 18, which is directed to a "computer-readable medium," are substantially similar to those recited in claim 1. JX-0003 ('164 patent) at col. 14, lns 3-23. Thus the record evidence shows that Wysoczynski does not anticipate claim 18 for the same reasons it does not anticipate claim 1. *See* CX-1218C (Bhattacharjee RWS) at Q/A 95-96.

2.   Anticipation – AutoInstall

AutoInstall is a software feature intended to simplify the installation process when a new Cisco router running the IOS operating system is brought into a network. *See* RX-2891C (CSI-ANI-00217643) at CSI-ANI-00217644.

Arista has not established that AutoInstall invalidates the asserted '164 claims, not least because Arista has failed to show that AutoInstall discloses the '164 claim limitation "retrieving a recovery configuration." *See* CX-1218C (Bhattacharjee RWS) at Q/A 99, Q/A 103-108. Specifically, the AutoInstall code that Arista identifies as containing a recovery configuration is not retrieved from persistent storage in the order required by the claims. Additionally, AutoInstall does not disclose retrieving and executing CLI commands or text files that configure the device. *See id.*

3.   Anticipation – AutoConfig

AutoConfig is a software feature intended to simplify the installation process when a new Cisco Catalyst 2950 switch is brought into a network. *See* RX-2854 (Catalyst 2950 Desktop Switch Software Configuration Guide – Cisco IOS Release 12.1(9)EA1); RX-2855 (Catalyst 2950 Desktop Switch Software Configuration Guide – Cisco IOS Release 12.0(5)WC(1)).

Arista has not established that AutoConfig invalidates the asserted '164 claims, not least because Arista has failed to show that AutoConfig discloses the '164 claim limitation "retrieving

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a recovery configuration" as part of "recovering from the loss of connectivity by reverting to a

recovery configuration, wherein the recovery configuration is stored in a persistent storage of the

device in association with manufacturing the device." CX-1218C (Bhattacharjee RWS) at Q/A

129. It is undisputed that AutoConfig is describing a feature of Cisco's IOS operating system.

Similar to devices running AutoInstall, devices running IOS load the entire software image into

memory at boot, before detecting the lack of a startup-config and in contrast with the

requirements of the claim language. The record evidence fails to establish that the AutoConfig

feature deviates from this practice by retrieving a recovery configuration after detecting a loss of

connectivity, as required by the claim language. *See* CX-1218C (Bhattacharjee RWS) at Q/A

130; JX-0003 ('164 patent) at Fig. 2A.

4. Obviousness – Wysoczynski in Combination with Johnson

Arista argues that Wysoczynski in combination with U.S. Patent No. 7,475,389 to

Johnson ("Johnson") renders obvious asserted claim 6 of the '164 patent. *See* Resp. Br. at

288-89. Yet, the record evidence fails to establish that a person of ordinary skill in the art would

be motivated to combine these two references to arrive at the invention of claim 6.

Evidence adduced at the hearing demonstrates that a person of ordinary skill would not

be motivated to combine Wysoczynski with Johnson because Johnson teaches resetting a device

to factory default, whereas Wysoczynski teaches away from resetting a device to factory

default. *See* CX-1218C (Bhattacharjee RWS) at Q/A 91; RX-2840 (Wysoczynski) at col. 1, lns.

49-57; RX-2841 (Johnson) at col. 3, lns. 55-59; col. 3, lns. 7-11; col. 5, lns. 2-48.

Moreover, Johnson fails to teach either a "recovery configuration" that is a "boot

configuration," or a situation "wherein establishing connectivity to a configuration manager

using the recovery configuration" comprises "establishing connectivity with the configuration

manager as a new device." CX-1218C (Bhattacharjee RWS) at Q/A 91. Instead, Johnson discloses a gaming console that registers with a recovery unit when it is initially installed so that the recovery unit can keep track of what software is later installed on that gaming console. RX-2841 (Johnson) at col. 3, lns. 50-59. Registering with a remote server when the gaming console still has connectivity is not using a "recovery configuration" that is a "boot configuration" to establish "connectivity with the configuration manager as a new device" as required by claim 6. *See* CX-1218C (Bhattacharjee RWS) at Q/A 6162; JX-0003 ('164 patent) at col. 3, lns. 54-55. Thus, even if Wysoczynski were combined with Johnson, the combination would not satisfy the limitations of claim 6. CX-1218C (Bhattacharjee RWS) at Q/A 91.

Accordingly, Arista has not shown by clear and convincing evidence that Wysoczynski in combination with Johnson renders obvious claim 6 of the '164 patent.

5. Secondary Considerations of Non-Obviousness

The nonobviousness of the '164 patent is also demonstrated by evidence suggesting that claimed invention fulfilled a long-unresolved need in the industry to solve the problem of remotely reconfiguring a device that has lost connectivity resulting from a change in configuration. *See* CX-1218C (Bhattacharjee RWS) at Q/A142-144; JX-0047C (Woodman Dep. Tr.) at 49-51. Others had failed to address the problem through mechanisms such as a rollback that creates security vulnerabilities and provides no certainty of re-establishing connectivity. *See* CX-1218C (Bhattacharjee RWS) at Q/A 22; JX-0003 ('164 patent) at col. 1, ln. 55 – col. 2, ln. 5. The '164 patent teaches a recovery configuration stored in persistent storage that could be used to establish connectivity to a configuration manager without manual intervention. JX-0003 ('164 patent) at col. 2, lns. 6-9.

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IX. Equitable Defenses

A. Equitable Estoppel

To establish that Cisco is equitably estopped, Arista must prove by a preponderance of the evidence that (1) Cisco, through misleading conduct, led Arista to reasonably believe that Cisco did not intend to enforce its patents against Arista; (2) Arista relied on that conduct; and (3) due to its reliance, Arista would be materially prejudiced if Cisco were permitted to proceed with its charge of infringement. *See A.C. Aukerman Co. v. R.L. Chaides Const. Co*, 960 F.2d 1020, 1028, 1042 (Fed. Cir. 1992) (*en banc*); *Multimedia Patent Trust* 2012 WL 6863471, No. 10–CV–2618–H (KSC) at *20. As discussed below, Arista has failed to meet this burden.

1. There Was No Misleading Conduct by Cisco

The evidence shows that Cisco was not aware of Arista's infringement of the patents in suit until May 21, 2014, approximately seven months before it sued Arista. *See* CX-1221C (Lang RWS) at Q/A 59; RX-0007C (Cisco's Response to Interrogatory No. 8) at 3. The fact that Cisco had not addressed Arista's infringement before that time does not constitute "intentionally misleading silence" that can give rise to a finding that equitable estoppel applies. *See Stryker Corp. v. Zimmer, Inc.*, 741 F. Supp. 509, 512-13 (D.N.J. 1990) ("While silence alone is not sufficient to give rise to estoppel, intentionally misleading silence where 'some evidence' exists to show that the silence was misleading enough to induce the alleged infringer to reasonably infer that the patentee has abandoned his patent claims will be sufficient."). Moreover, the record evidence shows that Cisco has not been "silent" as to suspected patent infringement by Arista or others. In the past, Cisco has taken affirmative steps to protect its intellectual property rights by asserting patents shortly after learning of infringing activities. *See* CX-1329 (Huawei Complaint) at CSI-ANI-00675877.

In addition, the evidence fails to establish that Cisco's public statements regarding enforcement of its intellectual property rights could lead Arista to reasonably believe that Cisco would not enforce its patents against Arista. *See, e.g.,* RX-3840 (Forbes article concerning "patent trolls" by Cisco's General Counsel, Mark Chandler); RX-3118 (Cisco White Paper regarding network standards); RX-2943 (Press Release: Google and Cisco Cross License); CX-0937 (Cisco Annual Report); RX-3078 (Cisco Annual Report). None of the public statements made by Cisco in these publications creates a reasonable inference that Cisco would not assert its patents against infringers. *See* CX-1222C (Djavaherian RWS) at Q/A 85-88. Rather, they demonstrate that Cisco would expect that those desiring to use Cisco technology would seek a patent license.

Moreover, Cisco's licensing and litigation activities with third respect to third parties do not "give rise to the necessary inference that the claim against the defendant is abandoned." *See Aukerman*, 960 F.2d at 1042. In particular, the existence of Cisco licenses establishes that Cisco does not permit other entities to use its intellectual property without a license, and it is highly unreasonable for Arista to believe that it could use Cisco's intellectual property without a license. Further, the fact that Cisco sued only Arista before the Commission without joining other respondents is not bad faith or misleading conduct. There is no evidence that other industry participants are infringing the patents. The fact that that industry participants sell products with similarly named features does not necessarily mean they infringe Cisco's patents. Awareness of product feature names does not constitute knowledge of infringement such that a patent enforcement suit would be a reasonable next step. *See* CX-1222C; RX-3136C (Moisand WS) at Q/A 75 (features that purport to be "private VLAN" do not necessarily infringe); CX-1222C (Djavaherian RWS) at Q/A 79-83, Q/A 91 Q/A 95-96; Djavaherian Tr. 1406.

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Arista also argues that Cisco's promotion of RFC 5517 as an "informal standard" for private VLANs led Arista to believe that it would not be enforcing the Private VLAN patents against industry participants that implemented private VLAN technology in their products. *See, e.g.*, Resp. Br. at 7-8. Yet, the evidence fails to establish that encouraging adoption of a product in the industry creates any licensing obligation for patents related to that product. *See* CX-1222C (Djavaherian RWS) at Q/A 57-61, Q/A 73-75, Q/A 84, Q/A 89-91, Q/A 95-96. Evidence adduced at the hearing shows that RFC 5517 is not a standard and was never submitted to any standard setting organization for adoption. Specifically, each published version of RFC 5517 states that it is an informational submission and not standards-track. CX-1254–1264 (RFC 5517 Drafts); CX-0952 (RFC 5517) at CSI-ANI-00379874; CX-1251 (RFC 5517 approval announcement) at CSI-ANI-00666246; CX-1222C (Djavaherian RWS) at Q/A 53. Moreover, Cisco's intellectual property rights disclosure related to RFC 5517 states that a license would be required to practice any related patents unless (1) the technology were adopted as an IETF standard, and (2) the patents were necessary to the adoption of that standard. *See* CX-0492 (Cisco's IPR Disclosure) at CIS-ANI-00652998; CX-1222C (Djavaherian RWS) at Q/A 22, Q/A 24, Q/A 26, Q/A 62-72; CX-1221C (Lang RWS) at Q/A 21, Q/A 32-39, Q/A 43-47. Inasmuch as neither of these conditions were satisfied, Arista could not reasonably believe based on RFC 5517 that Cisco intended to refrain from enforcing its intellectual property rights.

2. There Was No Reasonable Reliance by Arista

To establish reliance, Arista must show that "the infringer . . . had a relationship or communication with the plaintiff which lulls the infringer into a sense of security" in connection with the infringer "taking some action." *Aukerman*, 960 F.2d at 1042-43. *Aukerman* also makes clear "that for equitable estoppel the alleged infringer cannot be unaware—as is possible under

laches—of the patentee and/or its patent." *Id.*; *see also Winbond Electronics Corp. v. Int'l Trade Comm'n*, 262 F.3d 1363, 1374 (Fed. Cir. 2001) ("Thus, for this form of estoppel, the alleged infringer must have knowledge of the patentee and its patent and must reasonably infer that the patentee acquiesced to the allegedly infringing activity for some time."). Evidence adduced at the hearing demonstrates that Arista cannot prove reasonable reliance under the circumstances, and therefore cannot succeed in its argument that equitable estoppel should bar relief in this investigation.

As an initial matter, Arista maintains that [

]. *See* RX-3879C (Duda WS) at Q/A 60; Duda Tr. 782-783, 870-871; Sweeney Tr. 1091. Accordingly, Arista could not have reasonably relied on any action by Cisco to support a belief that Cisco would not enforce the patents in suit.

Moreover, the record evidence establishes the following:

- [   ].
  JX-0042C (Ullal Dep. Tr.) 160-161; Duda Tr. 763-765, 767-768.

- [
                                      ]. Duda Tr. 787-788.

- [   ]. Duda Tr. 793-795;
  Sweeney Tr. 1089, 1091.

- [   ]. Duda
  Tr. 770-773, 777-7781; JX-0020C (Bechtolsheim Dep. Tr.) 326;
  JX-0022C (Cheriton Dep. Tr.) 115-116; JX-0042C (Ullal Dep. Tr.)
  161.

- [
                                      ]. JX-0042C (Ullal Dep. Tr.) 158-159.

- [
     ]. JX-0042C (Ullal Dep. Tr.) 153, 162; Duda Tr. 789-790;
  Sweeney Tr. 1091; Arneja Tr. 1145-1146; JX-0020C
  (Bechtolsheim Dep. Tr.) 246-247, 269-270.

There was no express or implied communication or relationship between Cisco and

Arista that could have led Arista into a false sense of security, and any reliance under the

circumstances would be unreasonable. *See* CX-1222C (Djavaherian RWS) at Q/A 14, Q/A 25,

Q/A 75-76, Q/A 78, Q/A 81-82, Q/A 88, Q/A 95.

3.   There Was No Prejudice

Arista cannot show a "change of economic position" or that its expenditure of resources

with respect to the accused products was causally related to actions taken by Cisco. *See*

Aukerman, 960 F.2d at 1043. The prejudice claimed by Arista here is that "Arista invested

significant resources to develop the accused products," and that "during this time, Arista's sales

steadily increased as it gained a greater foothold into the market, which has resulted in a

substantial product base deployed by network users throughout the country." *See* Resp. Br. at

405-06.

Inasmuch as the record evidence does not show that Arista would have taken different

actions had it known about Cisco's patents, such as decreasing its expenditures with respect to

developing the accused products, Arista has failed to show prejudice such that equitable estoppel

could bar relief in this investigation. *Cf. ABB Robotics, Inc. v. GMFanuc Robotics Corp.*, 52

F.3d 1062, 1065 (Fed. Cir. 1995) (citing *Aukerman*, 960 F.2d at 1033) (finding prejudice because

the patentee's delay and silence resulted in a change to the defendant's economic position).

B.   Implied License, Waiver, and Patent Misuse

Arista argues that "Cisco's standard setting activities are another, independent reason to

bar Cisco from enforcing the '145 and '59[2] patents in this investigation" because they

allegedly constitute implied license, waiver, and patent misuse. *See* Resp. Br. at 406-07. Yet,

the evidence adduced in this investigation fails to show that the equitable theories of implied

license, waiver, or patent misuse should bar relief in this investigation.

1. Implied License

"The primary difference between the estoppel analysis in implied license cases and the

analysis in equitable estoppel cases is that implied license looks for an affirmative grant of

consent or permission to make, use, or sell: i.e., a license." *Wang Laboratories, Inc. v.*

Mitsubishi Electronics America, Inc., 103 F.3d at 1571, 1581 (Fed. Cir. 1997). In order for

Arista to succeed in its implied license defense, Arista must demonstrate that Cisco engaged in

language or conduct allowing Arista to properly infer that Cisco consented to the use of Cisco's

patents, and that Arista acted upon that consent. *Id.* As discussed above, Arista has set forth no

evidence of conduct by Cisco that could be interpreted as "an affirmative grant of consent or

permission" for Arista to practice its Private VLAN patents.

2. Waiver

Arista's waiver theory is based on identical facts as its implied license theory, and it

suffers from the same legal deficiencies. "[W]aiver is the "intentional relinquishment or

abandonment of a known right." *United States v. Olano,* 507 U.S. 725, 733 (1993) (quoting

Johnson v. Zerbst, 304 U.S. 458, 464 (1938)). "To support a finding of implied waiver in the

standard setting organization context, the accused must show by clear and convincing evidence

that '[the patentee's] conduct was so inconsistent with an intent to enforce its rights as to induce

a reasonable belief that such right has been relinquished.'" *Hynix Semiconductor Inc. v. Rambus*

Inc., 645 F.3d 1336, 1348 (Fed. Cir. 2011). This can be shown by proving that the patentee

breached a duty of disclosure to the standard setting organization, *Id.*

As discussed above, Cisco's conduct related to RFC 5517 was appropriate under the circumstances, and could not effect a waiver. Cisco's IPR disclosure explicitly states that a licensing obligation arose only if the technology were adopted as a standard, which never occurred. *See* CX-0952 (RFC 5517); CX-0492 (Cisco's IPR Disclosure). Arista has not adduced clear and convincing evidence showing that Cisco's conduct was "so inconsistent with an intent to enforce its rights as to induce a reasonable belief that such right has been relinquished." *See Hynix*, 645 F.3d at 1348. Any reliance Arista placed on the assumption that PVLAN technology was an industry standard subject to SSO obligations was not reasonable. *See* CX-1222C (Djavaherian RWS) at Q/A 25, Q/A 40-41, Q/A 45-47, Q/A 57, Q/A 66-69, Q/A 75-76, Q/A 81, Q/A 86, Q/A 91; CX-1221C (Lang RWS) at Q/A 43-47.

3. Patent Misuse

Arista has not established that Cisco committed patent misuse, which requires that the patentee "impermissibly broade[n] the physical or temporal scope of the patent grant and has done so in a manner that has anticompetitive effects." *See Princo Corp.*, 616 F.3d 1318, 1328 (Fed. Cir. 2010); *see also id.* at 1329 ("[T]he doctrine of patent misuse 'has largely been confined to a handful of specific practices by which the patentee seemed to be trying to 'extend' his patent grant beyond its statutory limits.'"). Arista argues that Cisco violated its obligation to offer a license to its Private VLAN Patents on fair, reasonable, and non-discriminatory terms ("FRAND") by asserting its patents against Arista without offering such a license. Resp. Br. at 409-10. The record evidence shows, however, that Cisco has no obligation to license its patent on FRAND terms, because it made no such contractual undertaking. *See* CX-1222C (Djavaherian RWS) at Q/A 14, Q/A 25, Q/A 40-41, Q/A 45-47, Q/A 57, Q/A 66-69, Q/A 73-76, Q/A 81, Q/A 86-88, Q/A 91; CX-1221C (Lang RWS) at Q/A 43-47.

C. Laches

To establish laches, Arista must prove that (1) Cisco delayed in bringing an infringement lawsuit for an "unreasonable and inexcusable" length of time from when it knew or reasonably should have known of its infringement claim against the accused infringer; and (2) the delay caused "material prejudice" to the defendant. *See Aukerman*, 960 F.2d at 1028. A delay in bringing suit for more than six years creates a presumption of laches. *Id.* at 1035-36. This presumption can be eliminated if the patentee shows that the delay was reasonable or that the defendant was not prejudiced. *Id.* at 1038. The laches clock begins running with a patentee's actual or constructive knowledge of defendant's infringement. *Id.* at 1035-36.

1. Laches As a Defense in Section 337 Investigations

Until now, laches has not been available as a defense in section 337 investigations before the Commission. *See, e.g.*, *Certain Sortation Systems, Parts Thereof, and Products Containing Same*, Inv. No. 337-TA-460, Initial Determination, at 142, n.20 (Oct. 22, 2002) (the Commission does not recognize laches as a defense under section 337); *Certain Personal Watercraft and Components Thereof*, Inv. No. 337-TA-452, Order No. 54 (Sept. 19, 2001) (precluding the affirmative defense of laches); *Certain EPROM, EEPROM, Flash Memory and Flash Microcontroller Semiconductor Devices*, Inv. No. 337-TA-395, Supplemental Views of Chairman Bragg, at 11 n.65 (July 9, 1998). Arista has not shown that disturbing that precedent is warranted under the circumstances of this investigation.[45] Nevertheless, as discussed below,

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[45] Following the evidentiary hearing in this investigation, the Federal Circuit sitting *en banc* issued its opinion in *SCA Hygiene Prods. v. First Quality Baby Prods.*, No. 2013-1564, 2015 WL 5474261 (Fed. Cir. Sept. 18, 2015). The Federal Circuit held that laches may be considered in cases seeking injunctive relief, but this does not automatically transform laches into an available defense to bar any remedy that would otherwise be issued for violations of section 337. *See id.* at *16. *SCA Hygiene* limits the district courts' consideration of laches to bar injunctive relief in

Arista would not prevail in a laches defense here even if it were available as a defense in section 337 investigations.

2. Arista's Laches Defense

The record evidence establishes that Cisco did not delay in bringing suit for an "unreasonable and inexcusable" length of time. A successful laches defense would require that Cisco knew or reasonably should have known of Arista's infringement, and not only the existence of Arista's products or features. *See, e.g., Aukerman,* 960 F.2d at 1034 ("The six years for laches begins with a patentee's knowledge of infringement."); *Intirtool, Ltd. v. Texar Corp.,* 369 F.3d 1289, 1297-98 (Fed. Cir. 2004) ("[T]he patentee must have actual or constructive knowledge of an act of infringement that gives rise to a legal claim before that clock begins to run . . . .").

Evidence adduced at the hearing demonstrates that Cisco did not become aware of Arista's infringement of Cisco's patents until May 21, 2014, seven months before filing suit. CX-1221C (Lang RWS) at Q/A 59; RX-0007C (Cisco's Responses to Interrogatory No. 8). This is not an unreasonable or inexcusable delay, and Arista provides no authority suggesting otherwise. Instead, Arista argues: "Beyond mere awareness of the products, Cisco knew of their technical features and their allegedly infringing nature." Resp. Br. at 392. It is argued that Cisco's knowledge of Arista product features having names similar to Cisco's patented product features constitutes constructive knowledge of infringement. *See, e.g., id.* at 392-93, 414-18. The cited evidence, however, fails to show that laches should bar relief in this investigation.

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patent cases to the confines of the *eBay* analysis, and that determination is silent as to whether or not laches is an available defense in section 337 investigations.

The documents cited by Arista show that Cisco had a general market-related awareness that Arista sold devices with sysDB and an ability to detect faults. Yet, these are broad in nature, and Arista has not shown why Cisco should have known that Arista's devices with general functionality infringed Cisco's patents. General knowledge of a product does not mean that a party has a duty to investigate the functionality of the device. *See Wanlass v. Fedders*, 145 F.3d 1461, 1464-65 (Fed. Cir. 1998).

Furthermore, the requirement to prove material prejudice before a defense of laches can bar recovery is the same as that required for equitable estoppel. As discussed above, Arista has failed to establish that it was materially prejudiced by Cisco's alleged delay in asserting the patents in suit.

D.   Unclean Hands

A complainant who seeks justice must come into court with clean hands or "the doors of the court will be shut." *Aptix Corp. v. Quickturn Design Sys., Inc.*, 269 F.3d 1369, 1375 (Fed. Cir. 2001) (quoting *Keystone Driller Co. v. General Excavator Co.*, 54 S.Ct. 146, 147 (1933)). To prove unclean hands, Arista must prove that Cisco "conducted [itself] as to shock the moral sensibilities of the judge." *Gaudiosi v. Mellon*, 269 F.2d 873, 882 (3d Cir.1959). As discussed above, Cisco has not committed misleading conduct, fraud, or deceit, in litigation, before the PTO, or elsewhere.

Nevertheless, Arista also argues that "Cisco has long been in possession of Arista's highly confidential documents, but has not come forward with any explanation about how it received those documents even though it admits that it should not have Arista confidential documents." *See* Resp. Br. at 419. In particular, it is argued:

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[

].

Resp. Br. at 394 (footnote omitted).

Yet, the fact that Cisco was in possession of documents marked Arista Confidential does

not establish that Cisco came before the Commission with unclean hands. In particular, Arista

has not adduced evidence establishing that these documents were in fact confidential, or that they

were obtained by Cisco in an improper manner. Indeed, Adam Sweeny, Arista's VP of Software

Engineering, testified during the hearing that [

]. Sweeny Tr. 1096; *see also*

Sweeny Tr. 1093-1096 (discussing markings on document). Mr. Sweeny also testified that [

]. *See* Sweeny Tr. at 1099-1100.[46]

Accordingly, it is determined that the equitable doctrine of unclean hands should not bar

relief in this investigation.

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[46] Cisco also performed a demonstration at the hearing suggesting that [
]. *See* Sweeny Tr.
1101-1104.

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X. Domestic Industry – Economic Prong

For purposes of the economic prong analysis, and regardless of whether or not they are

determined to have satisfied the technical prong for their respective asserted patents, the

following products will be considered articles protected by the asserted patents:[47]

Asserted U.S. Patent No.	Cisco Domestic Industry Products
7,162,537	Cisco Carrier Routing System (CRS) Cisco Aggregation Services Routers (ASR): 9000 Series Cisco Routers: XR 12000 Series
7,290,164	Nexus Switches: 3000, 5000, 6000, 7000, 9000 Series
7,340,597	Catalyst Switches: 6500, 6800 Series Cisco Aggregation Services Routers (ASR): 901 Nexus Switches: 7000 Series
6,741,592	Catalyst Switches: 4500, 6500, CBS 3110-40 Series Industrial Ethernet Switches: 3000 Series Connected Grid Switches (CGS): 2520 Nexus Switches: 3000, 5000, 6000, 7000, 9000 Series

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[47] On August 21, 2015, the administrative law judge granted Cisco's Unopposed Motion to
Partially Terminate the Investigation As to Certain Asserted Claims, including all asserted claims
of U.S. Patent No. 8,356,296 ("'296 patent"). Order No. 19: Initial Determination Terminating
the Investigation As to Certain Claims (EDIS Doc. No. 563724). Cisco's expert, Dr. Stephen
Wicker, analyzed the '296 patent and concluded that three Cisco products practice this patent:
the Cisco Aggregation Services Routers (ASR) 1000 and 9000, and the Nexus 7000 series
switch. *See* Compl. Pre-Hearing Br. at 758-771. Although Cisco does not rely on the ASR 1000
product with respect to any patent currently asserted in the investigation, the analysis of Cisco's
domestic industry investments conducted by Dr. Leonard included Cisco's U.S. investments in
this product. Cisco is not relying on its investments in this product to demonstrate the existence
of a domestic industry. *See* Compl. Br. at 430 n.54.

Asserted U.S. Patent No.	Cisco Domestic Industry Products
7,200,145	Catalyst Switches: 4500, 6500, CBS 3110-40 Series Industrial Ethernet Switches: 3000 Series Connected Grid Switches (CGS): 2520 Nexus Switches: 3000, 5000, 6000, 7000, 9000 Series

The record evidence shows that Cisco maintains in the ordinary course of business a database called Teradata that tracks worldwide operating expenses. Sacks Tr. 645; CX-0011C (Sacks WS) at Q/A 53-55. Mr. Collin Sacks, a Cisco Operations Manager, queried this database to generate an operating expense ("OPEX") report for R&D and engineering expenses for the business units ("BUs") responsible for the DI Products from fiscal years 2012 to 2015. Sacks Tr. 645; CX-0011C (Sacks WS) at Q/A 53-55; CPX-0020C.

The data in the Teradata database demonstrates that Cisco has a domestic industry in the DI Products. Cisco's economic expert, Dr. Gregory Leonard, analyzed this data and concluded that Cisco's total worldwide engineering and R&D investments for all of the Cisco business units that are responsible for the DI Products were approximately $1.3 billion in each of fiscal years 2012, 2013, and 2014, and $1.1 billion in fiscal year 2015 through May 22, 2015. CX-0010C (Leonard WS) at Q/A 102-108; CPX-0020C.

A. Cisco's Engineering and R&D Activities

Cisco has presented evidence showing that engineering and R&D of Cisco products takes place in the United States, including for the DI Products. Edsall Tr. 431, 435, 435-436, 437, 438-439; Kathail Tr. 247-248; CX-0011C (Sacks WS) at Q/A 43-49. In particular, Cisco's engineers based in San Jose, California, have contributed significantly to the engineering and R&D of the DI Products. Edsall Tr. 436; CX-0011C (Sacks WS) at Q/A 26-29. Cisco witnesses

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testified that the DI Products have been and continue to be designed and developed in the United States, including such ongoing activities as product refinement, development of additional features, platform-specific and platform-independent software releases, hardware releases, and multiple forms of testing. CX-0011C (Sacks WS) at Q/A 47; CX-0004C (Edsall WS) at Q/A 37, Q/A 48-54, Q/A 86-89. Dr. Leonard also testified that Cisco's R&D activities include "refreshing" the DI Products to provide improved versions. Leonard Tr. 690.

B. Dr. Leonard's Analysis of Cisco's Domestic Industry

As set forth in more detail in the sections below, Dr. Leonard's analysis demonstrates that Cisco has made significant and substantial investments in the United States with respect to the DI Products. The OPEX data was apportioned by Dr. Leonard using established economic principles to reflect conservatively only Cisco's U.S. expenditures associated with the DI Products. Leonard Tr. 689-693; CX-0010C (Leonard WS) at Q/A 109-126. Dr. Leonard apportioned Cisco's worldwide BU investments to the DI Products using allocations based on the ratio of a BU's revenues corresponding to DI Products to the BU's total revenues for all products. Leonard Tr. 689-691; CX-0010C (Leonard WS) at Q/A 109-117. Dr. Leonard then apportioned these investments to exclude investments outside the United States using the percentage of engineers in each BU located in the United States. Leonard Tr. 692-693; CX-0010C (Leonard WS) at Q/A 118-126. Dr. Leonard's analyses show that Cisco has invested billions of dollars in connection with the DI Products in the United States.

1. Cisco's Investments in Plant and Equipment

Under section 337(a)(3)(A), a complainant may demonstrate a domestic industry by showing a significant investment in plant and equipment with respect to articles protected by the patent. A showing of significant investment in plant and equipment is itself sufficient to meet

the economic domestic industry requirement. Here, Cisco has provided evidence of its significant investments in plant and equipment for the DI Products. Cisco employees who engage in engineering and R&D related to the DI Products work at facilities throughout the United States in which Cisco makes significant investments. CX-0010C (Leonard WS) at Q/A 91; CX-0105C (Cisco's Investments in Plant and Equipment). Cisco's San Jose headquarters provides space for thousands of engineering and R&D personnel working on the DI Products. CX-0010C (Leonard WS) at Q/A 61, Q/A 92. Cisco's other U.S. campuses also provide space for Cisco's engineering and R&D personnel working on the DI Products. *Id.* at Q/A 62, Q/A 91-92; CX-0004 (Edsall WS) at Q/A 90; CX-0678 (Cisco's 2014 Annual Report) at 31.

Dr. Leonard testified that the relevant Account Rollup items that capture Cisco's investments in plant and equipment for engineering and R&D activities are the following:

> Building Rent – Expenses related to the rent for buildings.
>
> Equipment Expense – Expenses related to low value equipment such as computers and software, networking equipment, and testing equipment.
>
> Other Facilities – General building expenses that are not recorded under Building Rent (or other related line items) such as general maintenance and repair, test lab upgrades and repair, security upgrades for facilities, and general building maintenance.
>
> Prototype – Expenses related to purchasing equipment and materials for prototyping.

CX-0010C (Leonard WS) at Q/A 128-133.

The relevant P/L Level 4 categories associated with these Account Rollup items include Engineering, General & Administrative ("G&A"), Marketing, and Sales, which cover activities that support engineering and R&D activities. CX-0010C (Leonard WS) at Q/A 134-136. For fiscal years 2012 through 2015, Cisco invested approximately $151.8 million in the '592 patent,

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$72.6 in the '537 patent, $151.8 million in the '145 patent, $116.2 million in the '164 patent, and

$88.4 million in the '597 patent. *Id.* at Q/A 147. This is broken down as follows:

Cisco's U.S. Engineering and R&D Investments in Plant and Equipment for the Cisco Domestic Industry Products by Asserted Patent

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
6,741,592	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	36,479,809	34,388,002	44,891,352	36,119,060
7,162,537	Cisco ASR 9000 Router Cisco CRS Cisco XR 12000 Router	22,187,907	18,738,698	17,051,241	14,688,504

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
7,200,145	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	36,479,809	34,388,002	44,891,352	36,119,060
7,290,164	Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	22,341,209	26,188,715	37,892,246	29,847,569
7,340,597	Catalyst 6500 Switch Catalyst 6800 Switch Cisco ASR 901 Router Nexus 7000 Switch	24,650,513	27,012,347	21,588,587	15,178,971

Id. at Q/A 142-151; CX-0105C (Cisco's Investments in Plant and Equipment).

Dr. Leonard also testified that Cisco's investments in plant and equipment for the DI

Products are significant because they are critical to its ability to competitively sell these

products, and to the availability of quality products in the communications equipment industry.

CX-0010C (Leonard WS) at Q/A 150-51. Dr. Leonard also compared Cisco's investments in

plant and equipment for the DI Products inside the United States to those outside the United States. CX-0010C (Leonard WS) at Q/A 152-157. Total U.S. investments in plant and equipment across all of the DI Products were a greater percentage of worldwide investments than non-U.S. investments in every fiscal year under consideration, which were fiscal years 2012 through 2015. *Id.* Furthermore, total U.S. investments in plant and equipment for each of the DI Products, individually, were greater than the corresponding total non-U.S. investments in every fiscal year under consideration with just a few exceptions. *Id.*; CX-0105C (Cisco's Investments in Plant and Equipment). The high relative value of Cisco's U.S. investments to foreign investments demonstrates that Cisco's investments in the DI Products are significant. *See Certain Male Prophylactics*, Inv. No. 337-TA-546, Comm'n Op. at 26 (June 21, 2007); *see also Lelo v. Int'l Trade Comm'n*, 786 F.3d 879, 884 (Fed. Cir. 2015). Thus, Dr. Leonard has demonstrated that Cisco's investments in plant and equipment for the DI Products are economically significant, including at the time the complaint was filed. CX-0010C (Leonard WS) at Q/A 152-157.

2. Cisco's Investments in the Employment of Labor or Capital

Under section 337(a)(3)(B), a complainant may demonstrate a domestic industry by showing a significant investment in labor or capital with respect to articles protected by the patent. A showing of significant investment in labor or capital is itself sufficient to meet the economic domestic industry requirement. Here, Cisco has provided evidence showing significant investments in labor or capital in connection with the DI Products. Dr. Leonard testified that the relevant Account Rollup items that capture Cisco's investments in the employment of labor for engineering and R&D activities are the following:

Salary – Expenses related to salaries paid to engineers.

Overtime – Expenses related to overtime paid to engineers.
CX-0010C (Leonard WS) at Q/A 159-160.

The only relevant P/L Level 4 category associated with these Account Rollup items is

Engineering. CX-0010C (Leonard WS) at Q/A 161. For fiscal years 2012 through 2015, Cisco

invested approximately $349.3 million in the '592 patent, $117.4 in the '537 patent, $349.3

million in the '145 patent, $256.2 million in the '164 patent, and $158.1 million in the '597

patent. *Id.* at Q/A 169-170; CX-0107C (Cisco's Investments in the Employment of Labor). This

is broken down as follows:

Cisco's U.S. Engineering and R&D Investments in the Employment of Labor for the Cisco Domestic Industry Products by Asserted Patent

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
6,741,592	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	78,485,851	75,053,326	98,408,255	97,385,194
7,162,537	Cisco ASR 9000 Router Cisco CRS Cisco XR 12000 Router	31,432,564	32,622,049	31,137,259	22,231,893

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
7,200,145	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	78,485,851	75,053,326	98,408,255	97,385,194
7,290,164	Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	46,844,173	51,325,146	76,394,216	81,689,064
7,340,597	Catalyst 6500 Switch Catalyst 6800 Switch Cisco ASR 901 Router Nexus 7000 Switch	46,372,150	42,155,603	42,388,163	27,266,744

CX-0010C (Leonard WS) at Q/A 158–170; CX-0107C (Cisco's Investments in the Employment of Labor).

Dr. Leonard testified that the relevant Account Rollup items that capture Cisco's investments in the employment of capital for engineering and R&D activities are the following:

Building Rent – Expenses related to the rent for buildings.

Equipment Expense – Expenses related to low value equipment such as computers and software, networking equipment, and testing equipment.

Other Facilities – General building expenses that are not recorded under Building Rent (or other related line items) such as general maintenance and repair, test lab upgrades and repair, security upgrades for facilities, and general building maintenance.

Prototype – Expenses related to equipment and materials for prototyping.

Software – Expenses related to software for engineering development, such as Cadence, Synopsis, Net Front, Wind River, and IBM, and software for standard company operations, such as Windows, Visio, and Apple software.

Project Based Services – Expenses related to outsourced projects such as source code development.

Outsourced Services – Expenses similar to Project Based Services, but additional outsourced work.

Advisory Services – Expenses related to expert consulting or advice on technology.

CX-0010C (Leonard WS) Q/A 180-186.

The relevant P/L Level 4 categories associated with these Account Rollup items include Engineering, G&A, Marketing, and Sales, which cover activities that support engineering and R&D activities. CX-0010C (Leonard WS) at Q/A 187-189. For fiscal years 2012 through 2015, Cisco invested approximately $254.1 million in the '592 patent, $113.5 in the '537 patent, $254.1 million in the '145 patent, $184.2 million in the '164 patent, and $122.1 million in the '597 patent. *Id.* at Q/A 197-198; CX-0108C (Cisco's Investments in the Employment of Capital). This is broken down as follows:

Cisco's U.S. Engineering and R&D Investments in the Employment of Capital for the Domestic Industry Products

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
6,741,592	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	57,219,966	53,927,241	75,974,108	67,052,609
7,162,537	Cisco ASR 9000 Router Cisco CRS Cisco XR 12000 Router	35,329,458	30,479,557	27,165,278	20,533,570
7,200,145	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	57,219,966	53,927,241	75,974,108	67,052,609

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
7,290,164	Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	32,483,511	36,639,468	60,434,099	54,712,868
7,340,597	Catalyst 6500 Switch Catalyst 6800 Switch Cisco ASR 901 Router Nexus 7000 Switch	35,383,474	34,671,892	29,933,642	22,135,722

CX-0010C (Leonard WS) at Q/A 180-198; CX-0108C (Cisco's Investments in the Employment of Capital).

Dr. Leonard also testified that Cisco's U.S. investments in labor and capital for the DI Products are significant because they are critical to its ability to competitively sell these products, and to the availability of quality products in the communications equipment industry. CX-0010C (Leonard WS) at Q/A 172-173, Q/A 200-201. Dr. Leonard compared Cisco's investments in labor and capital for the DI Products inside the United States to those outside the United States. CX-0010C (Leonard WS) at Q/A 171-179, Q/A 199-207. Total U.S. investments in labor and capital across all DI Products were a greater percentage of worldwide investments than non-U.S. investments in every fiscal year under consideration, which were fiscal years 2012 through 2015. *Id.* Furthermore, total U.S. investments in labor and capital for each of the Cisco DI Products, individually, were greater than the corresponding total non-U.S. investments in every fiscal year under consideration with just a few exceptions. *Id.*; CX-0106C (Cisco's

Investments in Labor or Capital). As discussed previously, the high relative value of U.S. investments to foreign investments demonstrates that Cisco's investments in the Cisco DI Products are significant. Thus, Dr. Leonard has demonstrated that Cisco's U.S. investments in labor and capital are economically significant, including at the time the complaint was filed. CX-0010C (Leonard WS) at Q/A 171-79, Q/A 199-207.

3. Cisco's Investments in Engineering and R&D

Under section 337(a)(3)(C), a complainant may demonstrate a domestic industry by showing a substantial investment in the exploitation of the patent, including engineering, research and development, or licensing. Here, Cisco has provided evidence of its substantial investments in the exploitation of the patents through engineering and R&D. Cisco's U.S. investments in engineering and R&D include, for example, the following investments made in connection with the DI Products: equipment and designs for engineering and R&D activities; training of engineering personnel, including by attending trade shows, recruiting and relocation of engineers; compensation, including salaries and overtime pay; and operating expenses for engineering facilities, such as rent and maintenance and equipment costs. CX-0010C (Leonard WS) at Q/A 209-210. Dr. Leonard testified that all Account Rollup items capture Cisco's investments in engineering and R&D. *Id.*; CPX-0020C (Cisco's OPEX Data). The only relevant P/L Level 4 category associated with these Account Rollup items is Engineering. Leonard Tr. 674; CX-0010C (Leonard WS) at Q/A 211. For fiscal years 2012 through 2015, Cisco invested approximately $1 billion in the '592 patent, $410 million in the '537 patent, $1 billion in the '145 patent, $748.5 million in the '164 patent, and $469.6 million in the '597 patent. CX-0010C (Leonard WS) at Q/A 221; CX-0109C (Cisco's Investments in Engineering and R&D). This is broken down as follows:

Cisco's U.S. Engineering and R&D Investments for the Cisco Domestic Industry Products by Asserted Patent

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
6,741,592	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	239,636,233	219,342,804	283,075,272	287,576,096
7,162,537	Cisco ASR 9000 Router Cisco CRS Cisco XR 12000 Router	113,088,534	110,978,470	106,456,862	79,531,272

Asserted U.S. Patent No.	Cisco Domestic Industry Products	FY 2012 ($)	FY 2013 ($)	FY 2014 ($)	FY 2015 ($)
7,200,145	Catalyst 4500 Switch Catalyst 6500 Switch Catalyst CBS 3110-40 Switch CGS 2520 Switch IE 3000 Switch Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	239,636,233	219,342,804	283,075,272	287,576,096
7,290,164	Nexus 3000 Switch Nexus 5000 Switch Nexus 6000 Switch Nexus 7000 Switch Nexus 9000 Switch	141,358,175	150,144,274	218,344,673	238,729,209
7,340,597	Catalyst 6500 Switch Catalyst 6800 Switch Cisco ASR 901 Router Nexus 7000 Switch	139,570,571	126,107,740	120,801,494	83,129,419

CX-0010C (Leonard WS) at Q/A 209-219; CX-0109C (Cisco's Investments in Engineering and

R&D).

Cisco adduced evidence in support of its argument that it exploits the asserted patents

through the ongoing engineering and R&D of the DI Products. Cisco's technical experts, Drs.

Almeroth, Wicker, Jeffay, and Bhattacharjee, testified that the DI Products each practice at least

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one claim of the asserted patents.[48] CX-0001C (Wicker WS) at Q/A 262-305, Q/A 310-313;

CX-0003C (Jeffay WS) at Q/A 441-493, Q/A 498-499, Q/A 503-504, Q/A 513-516; CX-0007C

(Almeroth WS) at Q/A 283-393; CX-0008C (Bhattacharjee WS) at Q/A 407-472. Dr. Leonard

also testified that the required nexus exists between the asserted patents and the DI Products

because the patents are embodied in the DI Products, and because Cisco's engineering and R&D

investments are directed in part to improving the patented features within the DI Products.

Leonard Tr. 694; CX-0010C (Leonard WS) at Q/A 231-232.

Moreover, a nexus to the asserted patents can be seen in the documentary evidence of

Cisco's ongoing engineering and R&D activities relating to the protected articles that practice

the patented features.

For example, with respect to the '145 and '592 (Private VLAN) patents, Mr. Edsall

testified about his own role in the implementation of the patented PVLAN technology in Cisco

products. Edsall Tr. 435 (testifying that he managed a team of Cisco engineers that incorporated

PVLAN into Cisco products). In addition, Cisco's public and internal technical documentation

describe Cisco's implementation of PVLAN in the DI Products. *See, e.g.*, CX-0062 (Cisco

Nexus 3048 Switch Data Sheet, 2014); CX-0068 (Cisco CGS 2520 Software Configuration

Guide, April 2010); CX-0069 (Cisco Nexus 3000 Series NX-OS Layer 2 Switching

Configuration Guide, last modified Sept. 2014). In particular, these documents support the

inference that engineers performed work during the DI investment period on the patented feature

within the DI products. For example, CX-0062, dated 2014, illustrates in detail that the PVLAN

feature is a part of the Nexus 3048 DI Product.

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[48] As mentioned above, Cisco's domestic investments in the DI Products will be analyzed for purposes of the economic prong regardless of whether or not the DI Products are determined to have satisfied the technical prong for their respective asserted patents.

With respect to the '537 (SysDB) patent, Cisco inventor and engineer Mr. Pradeep Kathail testified regarding his own role in the implementation of the patented SysDB technology in Cisco products. Kathail Tr. 246-247 (testifying that he worked on the implementation of IOS XR, which includes the technology covered by the '537 patent in Cisco products). He further testified that he currently supervises engineers who work on designing how Cisco's products use IOS-XR. Kathail Tr. 247. Cisco's public and internal technical documentation describes SysDB and the IOS-XR software in the DI Products. *See, e.g.*, CX-0464 (Cisco IOS XR Fundamentals, June 2009); CX-0465 (Cisco CRS 4-, 8- and 16-Slot Line Card Chassis Performance Route Processors Data Sheet, 2014). In particular, these documents show that engineers in the United States worked on products that practice the patented SysDB feature. *See* CX-0464 at iv-v (describing the authors' involvement in the development of Cisco IOS-XR); *id.* at 46-50 (describing the implementation of SysDB in IOS-XR); CX-0465 at 1-2 (describing the implementation of IOS-XR on Cisco Carrier Routing System (CRS) products).

With respect to the '597 (ProcMgr) patent, Cisco's public and internal technical documentation describes OBFL, Cisco's implementation of the patented technology, in the DI Products. In particular, these documents show that engineers in the United States worked on the patented OBFL feature. *See, e.g.*, CX-0337C (Generic On-Board Failure Logging Product Requirements Document, Jan. 2013) at 2 (listing Cisco who were involved in development of the OBFL technology in the 2012-2013 time frame as shown in this Products Requirements Document, which is a technical document generated by Cisco and devoted to documenting the development of OBFL). OBFL is also discussed in Cisco configuration guides, manuals, and datasheets for Cisco's DI products. *See, e.g.*, CX-0382 (Supervisor Engine 2T Software

Configuration Guide, Release 15.2SY, Dec. 2014) at 17-1 through 17-12 (describing the implementation of OBFL in Cisco IOS Release 15.2SY).

With respect to the '164 (Zero Touch Provisioning) patent, Cisco's public and internal technical documentation describe ZTP, which Cisco refers to as "Power On Auto-Provisioning" or "POAP," in connection with the DI Products. *See, e.g.,* CX-0187 (Cisco Nexus 3000 Series NX-OS Fundamentals Configuration Guide, Release 6.x, last modified Sept. 2014); CX-0188 (Cisco Nexus 5000 Series NX-OS Fundamentals Configuration Guide, Release 5.1(3)N2(1), March 2012); CX-0220C (N7K Series PowerOn Auto-Provisioning (POAP) Software Functional/Design Specification, last modified May 2013). In particular, these documents support the inference that Cisco's engineers performed engineering and research and development work on the patented POAP feature in the DI Products. For example, CX-0220C was last modified in May 2013, and illustrates in detail that the POAP feature is a part of the Nexus 7000 products.

As such, Cisco has demonstrated that its investments in the DI Products have a direct nexus to the asserted patents.

Dr. Leonard also testified that Cisco's investments in engineering and R&D for the DI Products in the United States are substantial because they are critical to Cisco's ability to competitively sell the DI Products, and to the availability of quality products in the communications equipment industry. CX-0010C (Leonard WS) at Q/A 223-24. Dr. Leonard compared Cisco's investments in engineering and R&D for the DI Products inside the United States to those outside the United States. Total U.S. investments in engineering and R&D across all of the DI Products were a greater percentage of worldwide investments than non-U.S. investments in every fiscal year under consideration, which were fiscal years 2012 through 2015.

CX-0010C (Leonard WS) at Q/A 229. Furthermore, total U.S. investments in engineering and R&D for each of the DI Products was greater than the corresponding total non-U.S. investments in every fiscal year under consideration with just a few exceptions. *Id.*; CX-0109C (Cisco's Investments in Engineering and R&D). As discussed previously, the high relative value of U.S. investments to foreign investments demonstrates that Cisco's investments in the DI Products are substantial. Thus, Cisco's U.S. investments in engineering and R&D are substantial, including at the time the complaint was filed. CX-0010C (Leonard WS) at Q/A 222-30.

XI. Conclusions of Law

1. The Commission has subject matter, personal, and *in rem* jurisdiction in this investigation.

2. The accused Arista products have been imported into the United States.

3. Arista's accused products infringe asserted claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537; asserted claims 6, 7, 20, and 21 of U.S. Patent No. 6,741,592; and asserted claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145.

4. Arista's accused products do not infringe asserted claims 1, 14-15, 29, 39, 63-64, or 71-73 of U.S. Patent No. 7,340,597; or asserted claims 1, 5, 6, 9, or 18 of U.S. Patent No. 7,290,164.

5. The domestic industry requirement has been satisfied with respect to the infringed '537, '592, and '145 patents.

6. It has not been shown by clear and convincing evidence that the asserted claims of the patents in suit are invalid.

XII. Initial Determination on Violation

Accordingly, it is the initial determination of the undersigned that a violation of section 337 (19 U.S.C. § 1337) has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain network devices, related software and components thereof with respect to asserted claims 1, 2, 8-11, and 17-19 of U.S. Patent No. 7,162,537; asserted claims 6, 7, 20, and 21 of U.S. Patent No. 6,741,592; and asserted claims 5, 7, 45, and 46 of U.S. Patent No. 7,200,145

Further, this initial determination, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is hereby certified to the Commission.

In accordance with 19 C.F.R. § 210.93(c), all material found to be confidential by the undersigned under 19 C.F.R. § 210.5 is to be given *in camera* treatment.
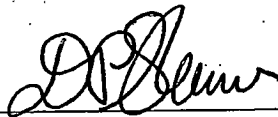
The Secretary shall serve a public version of this initial determination upon all parties of record and the confidential version upon counsel who are signatories to the Protective Order, as amended, issued in this investigation.

Pursuant to 19 C.F.R. § 210.42(h), this initial determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the initial determination or certain issues herein.

XIII. Order

To expedite service of the public version, each party is hereby ordered to file with the Commission Secretary no later than February 9, 2016, a copy of this initial determination with

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brackets to show any portion considered by the party (or its suppliers of information) to be confidential,[49] accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the undersigned, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.

David P. Shaw
Administrative Law Judge

Issued: February 2, 2016

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[49] Confidential business information ("CBI") is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

CERTAIN NETWORK DEVICES, RELATED SOFTWARD AND COMPONENTS THEREOF (I):

INV. NO. 337-TA-944

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **INITIAL DETERMINATION** has been served by hand upon the Commission Investigative Attorney, **Andrew Beverina, Esq.**, and the following parties as indicated, on **MAR 0 2 2016**

_____

Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street SW, Room 112A
Washington, DC 20436

FOR COMPLAINANT CISCO SYSTEMS, INC.:	
D. Sean Trainor, Esq. **KIRKLAND & ELLIS LLP** 655 15th Street, NW Washington, DC 20005	( ) Via Hand Delivery (X) Express Delivery ( ) Via First Class Mail ( ) Other: _____
FOR RESPONDENT ARISTA NETWORKS, INC.:	
Lauren A. Degnan, Esq. **FISH & RICHARDSON P.C.** 1425 K Street, NW 11th Floor Washington, DC 20005	( ) Via Hand Delivery (X) Express Delivery ( ) Via First Class Mail ( ) Other: _____