

In the Matter of

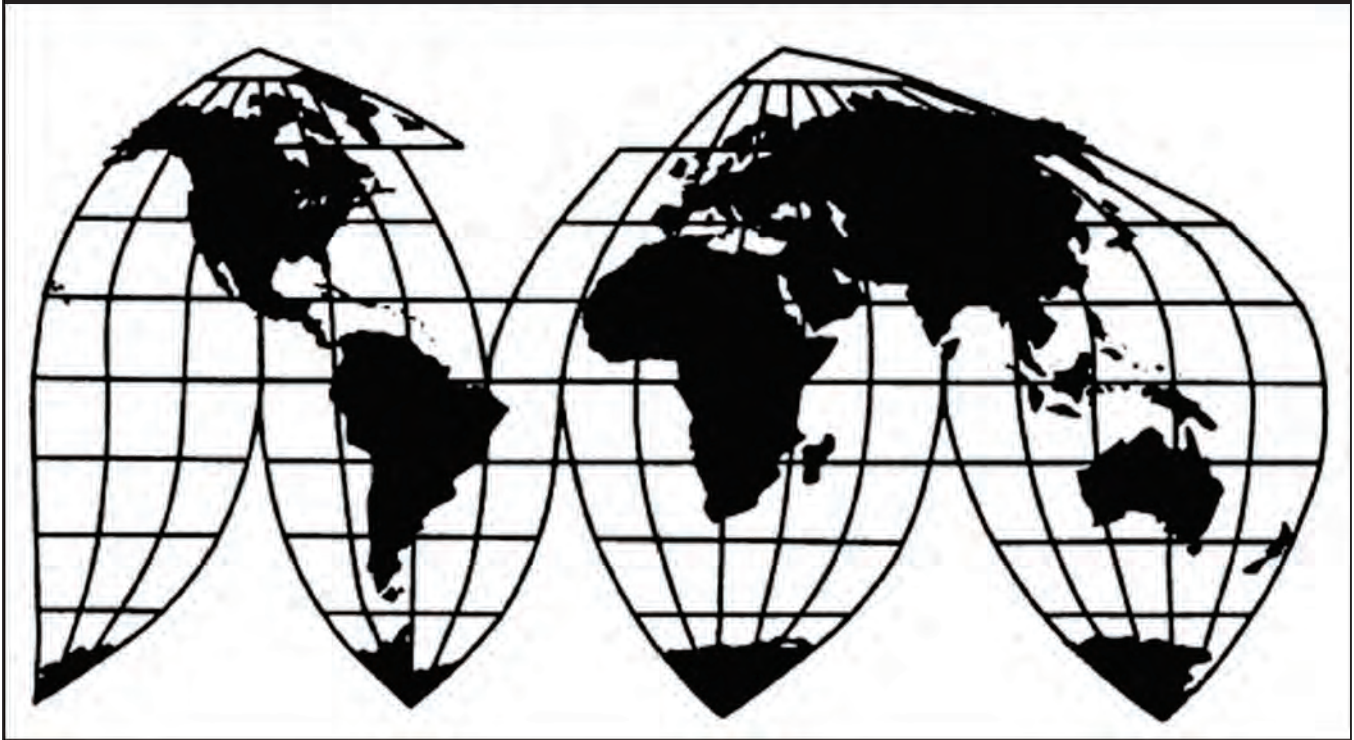
**CERTAIN VISION-BASED DRIVER
ASSISTANCE SYSTEM CAMERAS,
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING THE SAME**

337-TA-907

Publication 4866

February 2019

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C. 20436

In the Matter of

Investigation No. 337-TA-907

**CERTAIN VISION-BASED DRIVER
ASSISTANCE SYSTEM CAMERAS,
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING THE SAME**

**NOTICE OF THE COMMISSION'S DETERMINATION FINDING NO
VIOLATION OF SECTION 337; 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 no violation of section 337 of the Tariff Act of 1930, 19 U.S.C. § 1337, in the above-captioned investigation, and has terminated the investigation.

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. The public version of the complaint can be accessed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>, and 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 (<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 28, 2014, based on a complaint filed by Magna Electronics Inc. of Auburn Hills, Michigan. *See 79 Fed. Reg.* 4490-91 (Jan. 28, 2014). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("section 337"), in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain vision-based driver assistance system cameras and components thereof by reason of infringement of certain claims of U.S. Patent Nos. 8,116,929 ("the '929 patent") and 8,593,521 ("the '521 patent"). The complaint further alleges the existence of a domestic industry. Subsequently, the

complaint and notice of investigation were amended by adding U.S. Patent Nos. 8,686,840 (“the ’840 patent”) and 8,692,659 (“the ’659 patent”), and by terminating the investigation in-part as to all claims of the ’521 patent. The ’929 patent was later terminated from the investigation. The respondent named in the Commission’s notice of investigation is TRW Automotive U.S., LLC of Livonia, Michigan (“TRW”). The Office of Unfair Import Investigations (“OUII”) was also named a party in the investigation.

On April 27, 2015, the ALJ issued his final ID. The ID found that no violation of section 337 has occurred. Specifically, the ID found that the ’659 and ’840 patents were not indirectly infringed, that the ’840 patent is invalid, and that the domestic industry requirement for the ’840 patent has not been met. The ALJ also issued his recommendation on remedy and bonding.

On May 11, 2015, Magna and TRW each filed petitions for review. On May 19, 2015, the parties, including OUII, filed responses to the respective petitions for review. On May 28, 2015, Magna filed a corrected response. The Commission determined to review the ID’s findings with respect to: (1) importation; (2) whether the asserted claims of the ’659 patent require a camera; (3) direct infringement of the ’659 patent; (4) induced infringement of the ’659 and ’840 patents; (5) contributory infringement of the ’659 and ’840 patents; (6) whether the ’659 patent satisfies the requirements of 35 U.S.C. §112; (7) anticipation of the ’659 patent claims based on Rayner; (8) anticipation of the ’659 patent claims based on Batavia; (9) anticipation of the ’659 patent claims based on the SafeTrac Prototype; (10) obviousness of the ’659 patent based on Rayner in combination with Blank; (11) obviousness of the ’659 patent based on Batavia, the SafeTrac Prototype, and the Navlab 1997 Demo; (12) whether the claims are invalid under the America Invents Act §33(a); and (13) the technical prong of domestic industry for the ’659 and ’840 patents.

On August 17, 2015, the parties briefed the issues on review, remedy, bonding, and the public interest. On August 27, 2015, the parties filed their reply submissions. After the conclusion of this briefing, TRW filed “Respondent’s Short Submission Out Of Time Regarding Complainant Admission on Commission Topic 2” and Magna filed a response thereto.

After considering the final ID, written submissions, and the record in this investigation, the Commission has determined to affirm-in-part and reverse-in-part the final ID and to terminate the investigation with a finding of no violation of section 337. Specifically, the Commission finds that (1) the importation requirement has not been satisfied for the ’659 patent; (2) the asserted claims of the ’659 patent do not require a camera; (3) certain automobiles equipped with a mounting system configured to receive certain accused products directly infringe the ’659 patent; (4) the accused products do not contributorily infringe the ’659 patent; (5) the accused products do not induce infringement of the ’659 patent; (6) claims 1 and 3 of the ’659 patent are invalid under 35 U.S.C. § 103 based on Rayner in view of Blank; (7) claims 1 and 3 of the ’659 patent are not anticipated by Rayner; (8) the asserted claims are not invalid under the America Invents Act §33(a); (9) the technical prong of the domestic industry requirement for

the '840 patent has not been met; and (10) the technical prong of the domestic industry requirement for the '659 patent has not been met. The Commission also (11) takes no position on indirect infringement of the '840 patent; (12) takes no position on importation with respect to the '840 patent; (13) takes no position on whether claim 1 of the '659 patent is invalid based on Batavia, the SafeTrac Prototype, and the Navlab 1997 Demo, either alone or in combination; (14) takes no position on whether the asserted claims of the '659 patent satisfy the requirements of 35 U.S.C. §112; and (15) rejects TRW's filing titled "Respondent's Short Submission Out Of Time Regarding Complainant Admission on Commission Topic 2."

A Commission Opinion will issue shortly.

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.

A handwritten signature in black ink, appearing to read "Lisa R. Barton".

Lisa R. Barton
Secretary to the Commission

Issued: October 27, 2015

**CERTAIN VISION-BASED DRIVER ASSISTANCE
SYSTEM CAMERAS AND COMPONENTS THEREOF**

Inv. No. 337-TA-907

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Lisa A. Murray, Esq., and the following parties as indicated, on **October 28, 2015**.



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U.S. International Trade Commission
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

In the Matter of

Investigation No. 337-TA-907

**CERTAIN VISION-BASED DRIVER
ASSISTANCE SYSTEM CAMERAS;
COMPONENTS THEREOF, AND
PRODUCTS CONTAINING THE SAME**

COMMISSION OPINION

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I. INTRODUCTION

On April 27, 2015, the presiding administrative law judge (“ALJ”) issued his final initial determination (“ID”) in this investigation, finding no violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“section 337”). Specifically, the ID’s findings include: (1) Respondent did not indirectly infringe U.S. Patent Nos. 8,686,840 (“the ’840 patent”) or 8,692,659 (“the ’659 patent”),¹ (2) the ’840 patent is invalid, and (3) the domestic industry requirement has been met for the ’659 patent but it has not been met for the ’840 patent. ID at 172. The Commission determined to review the ID on July 31, 2015. On review, the Commission finds no violation of section 337 has occurred.

II. BACKGROUND

A. Procedural History

The Commission instituted this investigation on January 28, 2014, based on a complaint filed by Magna Electronics Inc. (“Magna”) of Auburn Hills, Michigan. 79 *Fed. Reg.* 4490-91 (Jan. 28, 2014). The complaint alleged violations of section 337 by reason of infringement of certain claims of U.S. Patent Nos. 8,116,929 (“the ’929 patent”) and 8,593,521 (“the ’521 patent”) and that an industry in the United States exists or is in the process of being established as required by subsection (a)(2) of section 337. The complaint names TRW Automotive U.S., LLC of Livonia, Michigan as the respondent. The Office of Unfair Import Investigations (“OUII”) was named as a party to the investigation.

On April 10, 2014, Magna filed a motion to amend the complaint and notice of investigation to add the ’840 patent and the ’659 patent. Magna’s motion also included a conditional element whereby if the motion to amend was granted, then Magna would terminate

¹ The Commission collectively refers to the ’659 and ’840 patents as the “asserted patents.”

the investigation in part as to all claims of the '521 patent. On April 21, 2014, TRW filed a response opposing the motion and OUII filed a response stating that it did not oppose the motion. On May 27, 2014, the ALJ issued an ID (Order No. 6) finding that good cause existed to grant Magna's motion to amend the complaint and notice of investigation to add the '840 patent and the '659 patent to the investigation and to terminate the investigation as to the '521 patent. Order No. 6, at 7. On June 4, 2014, TRW filed a timely petition for review of Order No. 6.

The Commission determined to review the ID (Order No. 6) in part. On review, the Commission modified this ID by clarifying that the notice of investigation would be modified to add claims 30 and 36 of the '840 patent and claims 3, 37, 80, and 92 of the '659 patent, as well as terminate the investigation as to all claims of the '521 patent. The Commission determined not to review the remainder of the ID.²

On October 13, 2014, Magna filed an unopposed motion to terminate the investigation with respect to the '929 patent, which was granted on October 14, 2014. Order No. 12. On October 31, 2014, the Commission determined not to review this ID.³

² 79 *Fed. Reg.* 37351-52 (July 1, 2014).

³ Notice of Commission Determination Not to Review an Initial Determination Granting an Unopposed Motion to Terminate the Investigation with Respect to All Asserted Claims of U.S. Patent No. 8,116,929 (Oct. 31, 2014).

On November 7, 2014, Magna filed an unopposed motion to terminate the investigation with respect to claims 37 and 80 of the '659 patent. The motion was granted on November 12, 2014. Order No. 14. On December 8, 2014, the Commission determined not to review this ID.⁴

The evidentiary hearing in this investigation was held on January 12-16, 2015. On April 27, 2015, the ALJ issued his final ID finding no violation of section 337 because he found that TRW did not indirectly infringe the '840 and '659 patents and that the '840 patent was invalid.

On May 11, 2015, Magna and TRW each filed petitions for review.⁵ Magna did not petition for review of the ID's adverse findings for the '840 patent. TRW's petition was a contingent petition, which addressed both the '840 and '659 patents. On May 19, 2015, the parties, including OUII, filed responses to the respective petitions for review.⁶ On May 28, 2015, Magna filed a corrected response that removed one sentence citing to evidence that was not admitted into the record.⁷

On July 31, 2015, the Commission determined to review the ID in-part. The Commission determined to review (1) importation; (2) whether the asserted claims of the '659 patent require a

⁴ Notice of Commission Determination Not to Review an Initial Determination Granting an Unopposed Motion to Terminate the Investigation with Respect to Claims 37 and 80 of U.S. Patent No. 8,692,659 (Dec. 8, 2014).

⁵ Petition of Magna Electronics Inc. For Review-In-Part Of The Final Initial Determination ("Magna Pet."); Respondent TRW Automotive U.S. LLC's Contingent Petition for Review ("TRW Pet.").

⁶ Magna Electronics Inc.'s Response to TRW Automotive U.S. LLC's Contingent Petition for Review; Respondent's Response in Opposition to Complainant's Petition for Review-In-Part of the Final Initial Determination ("TRW Pet. Reply"); Combined Response of the Office of Unfair Import Investigations to Complainant Magna Electronics, Inc. and Respondent TRW Automotive U.S. LLC's Petitions for Review of Final Initial Determination ("OUII Pet. Reply").

⁷ Magna Electronics Inc.'s Response to TRW Automotive U.S. LLC's Contingent Petition for Review ("Magna Pet. Reply").

camera; (3) direct infringement of the '659 patent; (4) induced infringement of the '659 and '840 patents; (5) contributory infringement of the '659 and '840 patents; (6) whether the '659 patent satisfies the requirements of 35 U.S.C. §112; (7) anticipation of the '659 patent claims based on Rayner; (8) anticipation of the '659 patent claims based on Batavia; (9) anticipation of the '659 patent claims based on the SafeTrac Prototype; (10) obviousness of the '659 patent based on Rayner in combination with Blank; (11) obviousness of the '659 patent based on Batavia, the SafeTrac Prototype, and the Navlab 1997 Demo; (12) whether the claims are invalid under the America Invents Act § 33 (a); and (13) the technical prong of domestic industry for the '659 and '840 patents. 80 *Fed. Reg.* 46998-47000 (Aug. 6, 2015). The Commission sought briefing on ten questions concerning the issues under review, and on remedy, bonding, and the public interest. *Id.*

On August 17, 2015, the parties filed their responses to the Commission's notice of review.⁸ On August 27, 2015, the parties filed their reply submissions.⁹

⁸ Complainant Magna Electronics Inc.'s Response to the Commission's Request for Written Submissions on the Issues Under Review and on Remedy, the Public Interest, and Bonding ("Magna Br."); Respondent's Brief On Review ("TRW Br."); Office of Unfair Import Investigations' Response to the Notice of the Commission's Determination to Review In-Part a Final Initial Determination Finding No Violation of Section 337; Request for Written Submissions: Extension of the Target Date ("OUII Br.").

⁹ Complainant Magna Electronics Inc.'s Reply to OUII's and Respondent TRW Automotive U.S. LLC's Responses to the Commission's Request for Written Submissions ("Magna Reply Br."); Respondent's Response Brief On Review ("TRW Reply Br."); Office of Unfair Import Investigations' Reply To Complainant's and Respondent's Responses to the Commission's Determination to Review In-Part a Final Initial Determination Finding No Violation of Section 337; Request for Written Submissions: Extension of the Target Date ("OUII Reply Br.").

On September 4, 2015, TRW filed a document titled "Respondent's Short Submission Out of Time Regarding Complainant Admission on Commission Topic 2." On September 8, 2015, Magna filed "Complainant Magna Electronics Inc.'s Opposition to TRW Automotive U.S. LLC's Short Submission Out of Time Regarding Complainant Admissions on Commission

B. Overview Of The Patents At Issue

1. Overview of the '659 Patent

The '659 patent is entitled "Accessory Mounting System for Vehicle" and issued on April 8, 2014. JX-003. It relates to an accessory mounting system for a vehicle including an attachment element attached at an in-cabin surface of a vehicle windshield. JX-003 at abstract. Magna asserted claims 3 and 92. Claim 3 depends on claim 1 while claim 92 depends on claim 91, which depends on claim 90. These claims are reproduced below, with the terms related to the forward facing camera in bold:

1. An accessory mounting system for a vehicle, said accessory mounting system comprising:

an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system;

said attachment element comprising a mirror mounting button;

a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element;

an interior rearview mirror assembly comprising a mirror head and a mirror support;

wherein said mirror head comprises a mirror reflective element and a mirror casing;

wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element;

a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield;

Topic 2." The Commission does not accept these late filings, and as such they are not part of the administrative record of this investigation. 19 C.F.R. § 210.38(a).

said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield;

wherein said **structure is configured to accommodate a forward facing camera**; and

wherein, with said structure received by and supported by said attachment members and **when said structure is accommodating said forward facing camera**, said **forward facing camera** has a field of view through the vehicle windshield.

3. The accessory mounting system of claim 1, wherein said **forward facing camera** comprises a CMOS imaging device.

90. An accessory mounting system for a vehicle, said accessory mounting system comprising:

an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system;

said attachment element comprising a mirror mounting button;

a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element;

an interior rearview mirror assembly comprising a mirror head and a mirror support;

wherein said mirror head comprises a mirror reflective element and a mirror casing;

wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element;

a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield;

said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield;

wherein said **structure is configured to accommodate a forward facing camera**;

wherein, with said structure received by and supported by said attachment members and **when said structure is accommodating said forward facing camera**, said **forward facing camera** has a field of view through the vehicle windshield;

wherein said **forward facing camera** comprises a CMOS imaging device;

wherein said interior rearview mirror assembly comprise a double-ball interior rearview mirror assembly; and

wherein, with said structure received by and supported by said attachment members, said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said attachment members.

91. The accessory mounting system of claim 90, wherein a light absorbing layer disposed at the vehicle windshield at least partially masks the presence of said attachment element from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.

92. The accessory mounting system of claim 91, wherein said light absorbing layer disposed at the vehicle windshield further at least partially masks the presence of said structure from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.

'659 patent at 44:31-62, 45:6-7, 54:61-56:8.

2. Overview of the '840 Patent

The '840 patent is entitled "Accessory System for a Vehicle" and issued on April 1, 2014. JX-001. The '840 patent relates to an accessory system for a vehicle including an accessory disposed at and behind a windshield of the vehicle and a control having digital circuitry and a microcontroller. *Id.* at abstract. Magna asserted claims 30 and 36. The Commission determined not to review the ALJ's invalidity findings and therefore, found that no violation of section 337 has occurred. 80 *Fed. Reg.* 46998-47000 (Aug. 6, 2015); *see* ID at 137-151.

C. Products At Issue

While TRW manufactures mounting systems and cameras (*i.e.*, the S-Cam), Magna only accuses TRW's S-Cam products of indirectly infringing the asserted patents and admits that the TRW mounting systems are non-infringing. ID at 13; Tr. 79:13-17; 49:16-50:13. The accused TRW S-Cam¹⁰ imaging systems include the S-Cam 2 and the S-Cam 3 and S-Cam 3.5 products.¹¹ *Id.* at 13. The ID noted that the S-Cam 2 is manufactured in Illinois, using imported Mobileye EyeQ2 image processor components. *Id.*

Magna manufactures forward facing camera modules ("FCM") and it relies on its FCM to satisfy the domestic industry requirement.

III. NOTICE OF INVESTIGATION

The final ID includes an amendment to the Notice of Investigation, which the Commission determined not to review. 80 *Fed. Reg.* 46998-47000 (Aug. 6, 2015). The ID found that "the scope of the investigation should be amended to include these larger systems that incorporate the cameras, *i.e.*, '**Products Containing the Same.**'" *Id.* at 8 (emphasis original). The Commission interpreted the ID's statements as merely modifying the scope of the investigation to be commensurate with the scope of the pleadings and not as adding additional products to the scope of the investigation.

¹⁰ The ID stated "the parties treat the S-Cam and S-Cam 2 as functional equivalents, the ALJ does as well in his technical analysis through this Initial Determination." *Id.* at 13 n.3. The Commission also adopts this convention.

¹¹ The Commission collectively refers to the S-Cam 3 and S-Cam 3.5 as "S-Cam 3/3.5."

IV. IMPORTATION

A. The ID

The ID found that the section 337 importation requirement was satisfied. ID at 14. The ID determined that TRW imports components (Mobileye EyeQ2 image processors) of the accused vision-based driver assistance system cameras into the United States for use in its S-Cam 2 vision-based driver assistance system cameras. *Id.* at 14-15. The ID further found that “TRW sells its S-Cam 2 with the EyeQ2 image processor to GM [(“General Motors”)] for importation into the U.S. as GM, with guidance and assistance from TRW, installs the S-Cam 2 into its vehicles in Mexico, which are then imported into the United States.” *Id.* at 15. TRW petitioned for review of the issue of importation. The Commission determined to review the ID’s findings on importation.

B. Analysis

The Commission takes no position on whether the importation requirement is met for the ’840 patent because the ’840 patent is invalid. With respect to the ’659 patent, the Commission finds that the importation requirement is not met. Magna argues that there are several relevant importations which include (1) sale to GM of the S-Cam 2; (2) importation of the Mobileye Q2 chips for use in the S-Cam 2; and (3) the importation of the vehicle having the S-Cam 2 installed. Magna Br. at 8-9. Section 337(a)(1)(B)(i) requires “the importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that – (i) infringe a valid and enforceable United States patent....” 19 U.S.C. § 1337(a)(1)(B)(i).

Magna has not shown that TRW, which is the only named respondent in this investigation, is involved in the importation of the GM vehicles as the owner, importer, or

consignee. Magna Post-Hearing Br. at 7-8; Magna Br. at 8-9. Nor has Magna established that the importation of the vehicle by GM meets the statutory importation requirement. *Id.*

Magna has not established that TRW's sale of the S-Cam 2 to GM is a sale for importation of an article that infringes a valid and enforceable United States patent. As discussed below in more detail, TRW's S-Cam 2 does not infringe the '659 patent either directly or indirectly. Similarly, Magna has not shown that TRW's importation of a non-infringing component of the S-Cam 2, namely the Mobileye chip, satisfies the statutory requirements of section 337(a)(1)(B)(i).

**V. CONSTRUCTION OF THE ASSERTED CLAIMS OF THE '659 PATENT:
WHETHER THE CLAIMS REQUIRE A CAMERA**

The only claim construction dispute centers on whether the asserted claims of the '659 patent require a camera. Although the ID did not make an explicit finding that a camera is a limitation of the claims of the '659 patent, the ID's infringement analysis reflects the implicit finding that a camera is required by the asserted claims. *See, e.g.,* ID at 63-82. The Commission, having considered the parties' arguments, intrinsic evidence, and other evidence in the administrative record, finds that the asserted claims do not require a camera.

The claims at issue here are generally related to an "accessory mounting system." JX-003 at abstract. This preamble language provides guidance that the focus of the claims is not on the camera but on an accessory mounting system. Claims 1 and 90 do not explicitly recite a camera as a component of the invention but rather claim a structure that is "configured to accommodate a forward facing camera." JX-003 at 44:56-57, 55:19-20. The focus of the '659 patent specification is similarly on an "accessory mounting system" and does not describe a camera as part of the invention. *See* JX-003 at 3:30-4:26. To a skilled artisan reading the claims in light of the specification, these claims are understood to be directed to a structure mounted

upon a vehicle windshield that is capable of accommodating certain accessories. RX-208 at QQ. 69-71. The embodiments described in the specification focus primarily on a tire gauge accessory, not a camera. *See e.g.*, JX-003 at 2:37-44. The Federal Circuit, the Commission, and district court precedents support finding that the claim language “configured to” and “wherein...when” appearing in conjunction with the term camera in the asserted claims limit these claim limitations to the primary recited mounting structure and do not extend to the secondary structure for which the recited feature is configured.

Federal Circuit precedent is clear that when a first structure is “capable of” or “configured to” interact with a second component, the claim may be infringed *even in the absence* of the second component. In *Revolution Eyewear*, the claim term at issue was “said first magnetic members capable of engaging second magnetic members of an auxiliary spectacle frame so that lenses of an auxiliary spectacle frame are located in front of said primary lenses.” *Revolution Eyewear, Inc. v. Aspex Eyewear, Inc.*, 563 F.3d 1358, 1363 (Fed. Cir. 2009) (emphasis added). The Court determined that the primary lens satisfied the claim element and the auxiliary frames were not an infringing element. *Id.* at 70. In addition, the Court has found that the phrase “when” does not render the latter elements infringing components of the phrase and should be treated as “capable of.” *Intel Corp. v. U.S. Int’l Trade Comm’n*, 946 F.2d 821, 832 (Fed. Cir. 1991) (The Court found that “[b]ecause the language of claim 1 refers to ‘programmable selection means’ and states ‘whereby *when* said alternate addressing mode is selected’ [], the accused device, to be infringing, need only be capable of operating in the page mode.”) (emphasis original).

District court decisions also support this position. In *Flexhead Indus., Inc. v. Easyflex, Inc.*, the court construed “configured to receive the fire protection sprinkler head” such that

“[t]he invention must be set up in a particular manner to receive sprinkler heads, but this does not mean that it must actually receive the sprinkler head.” No. CIV. 06-11897-DPW and 06-11898-DPW, 2008 WL 4813797, at *7 (D. Mass. Nov. 3, 2008) (emphasis added). In *Hypertherm, Inc. v. Am. Torch Tip Co.*, the district court found that the “wherein” clause did not turn a claim for an electrode into a combination claim for an electrode and coolant tube. No. CIV. 05-CV-373-JD, 2008 WL 268589, *4 (D.N.H. Jan. 29, 2008) (The language at issue was “adapted to mate” which is similar to “configured to accommodate.”). The claim in *Hypertherm* required a Part A adapted to mate with Part B and the court determined that the claim was directed to Part A alone and not the combination. *Id.*

The Commission’s determination in *Certain Recordable Compact Discs and Rewritable Compact Discs*, found that “configured to” language limits the claim to the primary recited feature and does not include the secondary feature. Inv. No. 337-TA-474, USITC Pub. No. 3686, Initial Determination at 12-13, 19, 44-46, 48, *rev’d on other grounds*, 616 F.3d 1318 (Aug. 30, 2010) (“*Compact Discs*”). In *Compact Discs*, the article at issue was a physical CD where the claims described the CD as having a “follow-on track” with “said follow-on track being configured to diffract radiation incident thereon when scanned with a spot of radiation” The ID found that a track is covered by the claims without the track actually diffracting a beam of radiation. *Id.*

Magna and OUII argue that the dependent claims support finding that the camera is a limitation. *See e.g.*, Magna Br. at 11-18; OUII Br. at 7-8, 10-11. Asserted dependent claim 3 requires a CMOS imager.¹² Considering claim 3 in conjunction with claim 1, in the context of the invention described in the specification, the issue is whether a person of ordinary skill in the

¹² Independent claim 90 also requires a CMOS imager.

art would understand the claimed mounting structure to require a camera. There is expert testimony from both sides regarding whether claim 3 leads to the conclusion that a camera is or is not a limitation of claim 1. Dr. Kazerooni, TRW's expert, testified "claim 3 which Magna points to merely describes that the camera for which the mounting system is configured to accommodate." RX-370C at Q. 99. Dr. Kazerooni further testified that, contrary to Magna's assertion, claim 3 is not rendered superfluous by construing the claim to exclude a camera. Specifically, Dr. Kazerooni testified that claim 3 should be interpreted to mean "the mounting system would have the limitation that it has some attribute which renders it specially configured to accommodate a CMOS device." *Id.* at Q. 100; *see also* Tr. 577:11-16. Dr. Lynam, a Magna engineer and inventor of the '659 patent, testified that Magna used CMOS cameras because they were smaller than the other available options. CX-001C at Q. 108 ("To fit into a mirror, a video camera would need to be *tiny*" and how his co-inventor, Mr. Schofield, found "*a CMOS camera chip no bigger than one's little fingernail*"), Q. 234 (how in the mid '90s he worked on mounting such "*tiny* CMOS cameras" into systems) (emphasis added). This testimony shows that the difference in size of a CMOS imager and other imagers may impact the structure of the camera, which in turn would place additional restrictions on the structure configured to accommodate the camera.

Similarly, other dependent claims define the structure of the housing that accommodates the camera. For example, claim 17 defines the housing when it claims "a housing that at least substantially hides the presence of said forward facing camera from view by a person viewing from inside the vehicle cabin." JX-003 at 46:20-23. This claim characterizes the housing as it relates to the camera it is configured to accommodate. Tr. at 575:8-576:7.

Claim 25 recites “wherein said forward facing camera comprises a CMOS imaging device and wherein said forward facing camera comprises a component of at least one of” four different vehicle systems. JX-003 at 46:49-56. This language identifies four possible systems in which a camera may be included but does not add the camera as a limitation to independent claim 1 and instead further limits the structure of claim 1.

In contrast to the language of the asserted claims of the ’659 patent, other related patents explicitly recite a camera as a claim limitation. The ’840 patent and U.S Patent No. 7,460,007, which are related to the ’659 patent, each claim an accessory system. The claims from each of these patents, however, explicitly require a camera. RX-100; JX-001. Thus, the inventors knew how to claim a camera and expressly did so in other related applications, but did not use such language in the asserted claims of the ’659 patent. Moreover, were the Commission to adopt Magna’s and OUII’s contention that the claims require a camera, the inclusion of that limitation would substantially read out the “configured to” and “when” limitations. Therefore, the Commission finds that a camera is not a limitation of the asserted claims of the ’659 patent.

VI. INFRINGEMENT

A. ’659 Patent

1. Direct Infringement

Magna accused TRW’s S-Cam 2, S-Cam 3 and S-Cam 3.5 of indirect infringement of dependent claims 3 and 92 of the ’659 patent. ID at 63. Specifically, Magna alleges that imported vehicles equipped with the S-Cam 2 (*e.g.*, the Chevrolet Silverado and GMC Sierra pickup trucks) directly infringe claims 3 and 92 of the ’659 patent. *Id.* Magna asserts that TRW contributes to GM’s alleged direct infringement by providing the S-Cam 2 to GM and that TRW induces GM’s infringement by continuing to assist GM in the design, development, and

installation of the S-Cam 2 in GM's vehicles, which TRW allegedly knows directly infringes the asserted claims. *Id.*

(a) The ID

The ID analyzed each of the limitations of the asserted claims, and the claims they depend from, and found that the mounting structure containing the S-Cam 2 mounted on the vehicle windshield of certain GM vehicles, such as a Silverado, infringes the asserted claims. *See id.* at 63-82. The Commission determined to review the ID's findings.

(b) Analysis

TRW argues that the ALJ erred in finding that the attachment members and the attachment elements used in the Chevrolet Silverado are adhesively attached. TRW argues that the ID improperly based its findings on "adhesively attached" on demonstrative exhibits and testimony relating to those exhibits, and also improperly relied on physical exhibits. In arguing that the ID improperly relied on demonstratives to support its infringement findings, TRW cites to no finding in the ID or any case law holding that an ID cannot rely on testimony describing demonstrative exhibits. The Commission finds that the ID's findings were supported by witness testimony and did not improperly rely on demonstrative exhibits.

We first correct citations to certain party exhibits cited in the ID. The parties agree that physical exhibits CPX-0032 and CPX-0045 were not admitted into evidence and were instead converted into demonstrative exhibits. *See e.g.*, Magna Br. at 50; TRW Br. at 17. CPX-0032 was converted to CDX-0077 and CPX-0045 was converted to CDX-0088. *Id.* As these citations appear to be inadvertent errors in the ID, the Commission modifies the ID's citations to replace CPX-0032 with CDX-0077 on pages 48, 79, 80 and 82 of the ID. The Commission removes the citations to CPX-0032 on page 68. The ID's citation to CX-003C (Min witness stmt.) QQ. 286-

87 referencing CPX-0032 is modified to remove the reference to CPX-0032 and instead include a reference to CDX-0012.24-25C. The Commission also modifies the citations on pages 48, 74, and 80 that refer to non-admitted exhibit CPX-0045 to instead include CDX-0088.

Dr. Min testified that the attachment members are glued on the windshield in the Silverado. CX-003C at QQ. 286-87; ID at 68. Dr. Lynam also testified that the attachment members are glued on the Silverado. CX-001C at Q. 125, 155-56. The Commission finds that this testimony is substantial evidence that the attachment members are adhesively attached.

We observe that the ID also relied in part on testimony regarding a non-infringing, non-accused product to find that the attachment elements of the accused products are adhesively attached. In particular, the ID found “that the record shows [that] the windshield supplier attaches the bracket to the windshield using an adhesive.” ID at 65 (citing CX-0162C (Whydell dep. tr.) at 116:21-117:1), *see also* ID at 66. The Commission does not rely on Dr. Whydell’s testimony, CX-0162C (Whydell dep. tr.), cited on pages 65-66 of the ID. The Commission instead finds substantial evidence that the attachment element is adhesively attached based on the testimony of Dr. Min and Dr. Lynam.

The Commission finds, as discussed above, that a camera is not a limitation of the claims. The ID’s analysis in finding direct infringement repeatedly states that various claim limitations were met based on the S-Cam 2 or the “Chevrolet Silverado equipped with the S-cam.” *See e.g.*, ID at 65. Because the Commission finds that the camera is not a limitation, the Commission finds that the Silverado equipped with an accessory mounting system that is configured to hold the S-Cam 2 meets the limitations of the asserted claims without requiring the actual installation of the S-Cam 2. For example, the “wherein said forward facing camera comprises a CMOS imaging device” limitation of claims 3 and 90 is met by the bracket installed in the Chevrolet

Silverado. The installed bracket has a structure that is configured to receive the S-Cam 2 CMOS camera. *See e.g.*, ID at 75. The Commission adopts the ID's findings that are consistent with this finding and the other findings in this opinion.

Last, the Commission finds that Magna has not met its burden to prove direct infringement by the GM mounting system configured to receive the S-Cam 3/3.5 products. Although Magna asserts that TRW's S-Cam 3 and S-Cam 3.5 camera and mounting system infringe the asserted claims, the parties acknowledge that the S-Cam 3/3.5 camera and mounting system were in development at the time of hearing. Magna Post-Hearing Br. at 6; TRW Pet. Reply at 22; TRW Post-Hearing Br. at 13. Furthermore, Magna only cursorily attempted to prove direct infringement and never asserted, before the ALJ, that the S-Cam 2 camera and bracket was representative of the S-Cam 3 and 3.5 camera and brackets. Magna Post-Hearing Br. at 6, 54-65. In addition, hearing testimony establishes that there are differences between the S-Cam 2 and the S-Cam 3/3.5 mounting bracket. Tr. 339:6-13, 341:7-11.

Magna did not provide an element-by-element analysis of direct infringement based on a mounting structure configured to accommodate the S-Cam 3 or 3.5. Magna Post-Hearing Br. at 54-65. Magna did not introduce the GM bracket for the S-Cam 3/3.5 or any materials describing their structure into evidence other than stating that the differences relate to size of the S-Cam 3/3.5 the bracket is configured to accommodate and the mounting system for the S-Cam 2 and S-Cam 3.5 would be similar. Magna Post-Hearing Br. at 6-7, 54-65. Magna argues that in light of the Federal Circuit's recent decision in *Suprema, Inc. v. Int'l Trade Comm.*, 796 F.3d 1338 (Fed. Cir. 2015) (*en banc*), direct infringement need not have occurred. However, *Suprema* does not excuse Magna from proving direct infringement but instead allows the act of direct infringement to occur after importation. *See Suprema*, 796 F.3d at 1348. While Magna asserts that TRW had

offered the S-Cam 3 for sale and that it would be going into GM vehicles, Magna is not excused from meeting its burden to prove all the limitations of the asserted claims are met with respect to each accused article. Magna admits that there is no evidence of an installation of the S-Cam 3/3.5 in an infringing mounting structure. Magna Br. at 48. Therefore, the Commission finds that Magna has not met its burden to prove direct infringement for a mounting structure configured to accommodate the S-Cam 3/3.5 products.¹³

2. Contributory Infringement

(a) The ID

The ID found that Magna did not prove by a preponderance of the evidence that TRW is liable for contributory infringement of the asserted claims of the '659 patent. ID at 87. The ID found that although TRW had notice of the '659 patent in April 2014 when Magna provided TRW with notice and a copy of the issued '659 patent, TRW did not immediately have knowledge of infringement because TRW had a good faith belief of invalidity based on an opinion of counsel. *Id.* at 87-88. The ID further found that “[a]lthough the record shows that the S-Cam supplied by TRW to GM for use in the Chevrolet Silverado is not a staple article or commodity of commerce suitable for substantial non-infringing use and the S-Cam itself and its

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]] these facts do not prove that TRW had the requisite knowledge of infringement.” *Id.* at 88. Therefore, the ID found that TRW is not liable for contributory infringement. *Id.*

¹³ The Commission does not address indirect infringement with respect to the S-Cam 3/3.5 because it finds there is no direct infringement.

The ALJ did not directly address whether or not the camera is a material part of the invention in his analysis of contributory infringement, but the camera was discussed in his analysis of the limitation that includes the “forward facing camera.” *See id.* at 72-75. Magna and TRW both challenge certain of the ID’s findings. The Commission determined to review the ID’s finding.

(b) Analysis

In order to find that TRW contributorily infringes asserted claims 3 and 92, Magna must prove that (1) there is an act of direct infringement; (2) the component is a material part of the invention; (3) the accused contributory infringer knows its component is made or especially adapted for use in infringement of a patent; and (4) there are no substantial non-infringing uses for the accused component, *i.e.*, the component is not a staple article of commerce. 35 U.S.C. § 271(c). As we discussed above in §VI.A.1, the Commission finds that there is an act of direct infringement by the mounting systems in the GM vehicle configured to receive the S-Cam 2.

We have considered the parties’ submissions and the evidence and find that TRW does not contributorily infringe the ’659 patent. The Commission does not adopt the ALJ’s findings that TRW did not contributory infringe the asserted claims based on a good faith belief of invalidity. *See Commil USA, LLC v. Cisco Sys., Inc.*, 135 S.Ct. 1920, 1927-1930 (2015). Our finding of no contributory infringement is instead based on our finding that the camera is not a limitation of the asserted claims. *See infra* §V. Because a camera is not an element of the asserted claims, the S-Cam 2 cannot be a material component of the claimed invention as required by 35 U.S.C. § 271(c). Accordingly, the Commission finds that TRW does not contributorily infringe the asserted claims.

3. Induced Infringement

(a) The ID

The ID found that Magna failed to prove by a preponderance of the evidence that TRW is liable for induced infringement of the asserted claims of the '659 patent. ID at 96. Specifically, the ID found that any collaboration between TRW and GM with respect to the S-Cam 2 used in the subject GM vehicles occurred before the issuance of the '659 patent. *Id.* In addition, the ID found that the collaboration [[

]]. *Id.*

The ID also found for the same reasons set forth above with respect to contributory infringement, that TRW did not have the requisite knowledge to prove induced infringement of the asserted claims of the '659 patent. *Id.* at 97. Accordingly, the ID found that TRW is not liable for induced infringement of the asserted claims of the '659 patent. *Id.* The Commission determined to review this finding.

(b) Analysis

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). Liability for inducing infringement attaches only if the defendant knew of the patent and that "the induced acts constitute patent infringement." *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011). In *DSU Medical Corp. v. JMS Co., Ltd.*, the Federal Circuit held that "inducement requires evidence of culpable conduct, directed to encouraging another's infringement, not merely that the inducer had knowledge of the direct infringer's activities." 471 F.3d 1293, 1306 (Fed. Cir. 2006) (en banc) (citing *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 125 S.Ct. 2764, 2780, (2005); *Manville Sales Corp. v. Paramount Systems, Inc.*, 917 F.2d 544, 553 (Fed. Cir. 1990).

Thus, as a prerequisite to establishing infringement under § 271(b), complainant must show an affirmative act that encourages another's direct infringement. *See DSU Med. Corp.*, 471 F.3d at 1305 ("The mere knowledge of possible infringement by others does not amount to inducement; specific intent and *action to induce* infringement must be proven.") (quoting *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1364 (Fed.Cir.2003)) (emphasis added). In this investigation, the alleged inducing acts asserted by Magna are (1) TRW's collaboration with GM involving the S-Cam 2; (2) TRW's collaboration with GM involving the S-Cam 3/3.5.; and (3) TRW's sales of its S-Cam 2 after the '659 patent issued. *See e.g.*, Magna Post-Hearing Br. at 65-66, 69-72; Magna Br. at 36-40. As explained below, the Commission finds that these asserted acts do not constitute acts of inducement forming a predicate to liability under § 271(b). Therefore, the Commission finds that Magna has failed to establish that TRW is liable for induced patent infringement of the asserted claims of the '659 patent.

First, the Commission finds that TRW's collaboration with GM involving the S-Cam 2 does not constitute an inducing act. The ALJ found that any collaboration between TRW and GM with respect to the S-Cam 2 and [[.]] occurred before April 8, 2014, the issuance date of the '659 patent. ID at 96; *see also* Tr. 404-406. The exclusionary rights provided by a patent do not take effect until the patent issues. Consequently, conduct by an accused infringer before the date of issuance, including conduct alleged to later induce infringement, cannot, as a matter of law, constitute a culpable act of inducement. *See Nat'l Presto Indus., Inc. v. West Bend Co.*, 76 F.3d 1185, 1196 (Fed.Cir.1996) ("[W]e hold that the general rule is that inducement of infringement under § 271(b) does not lie when the acts of inducement occurred before there existed a patent to be infringed."). Accordingly, TRW's work

with GM related to the S-Cam 2, which concluded prior to the issuance of the '659 patent, does not constitute an act of inducement.

Second, the Commission finds that TRW's collaboration with GM occurring after the '659 patent issued does not constitute an inducing act. The only post-issuance inducing activities that Magna points to relate to [[

]] for which Magna has not proven direct infringement. *See e.g.*, Magna Post-Hearing Br. at 65-66, 69-72. Without establishing direct infringement based on a mounting system that uses brackets configured to accommodate the S-Cam 3/3.5, the Commission finds that there can be no inducement liability based on post-patent activities related to the S-Cam 3/3.5.

Third, TRW's sales of the S-Cam 2 after the '659 patent issued is the remaining conduct asserted by Magna to induce infringement. Magna fails to present evidence that such sales of the S-cam 2 constituted inducing acts. For example, the limited knowledge that TRW gained about GM's mounting system by working with GM before the '659 patent issued does not, combined with TRW's sales, constitute active inducement. The record shows TRW [[

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See e.g., CX-0351C; CX-0350C; CX-0349C; Tr. 255:22-256:7; 450:17-21; 454:9-455:15; TRW Pet. Reply at 31. Before the ALJ, Magna did not assert that TRW had knowledge of GM's overall design of its mounting system at any time, much less after issuance of the '659 patent. Indeed, it was GM that directed and controlled the design of its mounting system, including the bracket, that GM chose to use with the S-Cam- 2. *See e.g.*, RX-0369C at QQ. 24-27, 50-61; RX-0339C; RX-0368C at 16-17, 40-41; Tr. 450:17-21, 453:15-455:15; CX-174C at 34:6-11. In fact,

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]] RX-0368C at Q18; RX-0369C at QQ. 37, 42. Magna presented no evidence that TRW's sales to GM required GM to use GM's own bracket in its infringing mounting system—a system that GM could modify at any time for any reason without consultation or notice to TRW. *See generally DSU Med. Corp.*, 471 F.3d at 1305 (“The mere knowledge of possible infringement by others does not amount to inducement; specific intent and *action to induce* infringement must be proven.”). TRW's involvement [[

]] ceased before the patent issued. Tr. at 404-406.

Moreover, with regard to the knowledge requirements for inducement, Magna's post-hearing brief arguments are conclusory and lack citation to any facts that would support the contention that TRW had the requisite knowledge and intent to induce GM to infringe the '659 patent. *See* Magna Post-Hearing Br. at 65, 67. Magna did not rely on its amended complaint and accompanying claim chart in its post-hearing brief but instead, only cited to evidence that TRW was given notice of the patent and Magna's intention to seek to amend the complaint. The Commission finds that notice of the patent is insufficient to prove that TRW had knowledge of infringement. *Commil*, 135 S.Ct. at 1927-1930. The Commission also finds that Magna's arguments before the ALJ regarding TRW's knowledge of infringement are insufficient to meet its burden.¹⁴

¹⁴ Commissioner Schmidtlein does not join this paragraph because she takes no position on whether the Commission should reject consideration of Magna's argument regarding its amended complaint and accompanying claim chart on the basis that such argument was not raised before the ALJ.

Finally, the Commission does not adopt the ALJ's findings that TRW did not induce infringement of the asserted claims based on a good faith belief of invalidity. *Commil*, 135 S.Ct. at 1927-1930.

For these reasons, the Commission finds that TRW did not induce infringement of the asserted claims of the '659 patent.

B. '840 Patent

The Commission determined to review the ID's findings on induced and contributory infringement. On review, the Commission takes no position on indirect infringement of the '840 patent. 80 *Fed. Reg.* 46998-47000 (Aug. 6, 2015).

VII. VALIDITY

A. Invalidity Under 35 U.S.C. § 112

The Commission takes no position on invalidity under 35 U.S.C. § 112.

B. Anticipation

1. Rayner

The ID found that U.S. Patent No. 6,389,340 ("Rayner") does not anticipate the '659 patent. The ID held that Rayner is prior art to the '659 patent, but found that Rayner does not disclose "a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle local to said attachment element" of claim 1 because the attachment members disclosed in Rayner are suction cups and thereby not adhesively attached. ID at 126-29. The ID found that the alternative way to mount the device of Rayner, such as "by means of a suitable adhesive" noted in the specification, would eliminate the plurality of attachment members disclosed in another embodiment of Rayner.

The ID also found that Rayner does not disclose the "wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to

said mirror mounting button of said attachment element” limitation of claim 1. *Id.* at 129.

Specifically, the ID found that the mounting bracket in Rayner is part of the interior mirror assembly and not a separate component. *Id.*

The ID also found that the following limitations are not met by Rayner: “a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield; said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield.” *Id.* at 130. The ID determined that “Rayner discloses suction cups **88** and **90** attached to device **84**, but Rayner does not disclose a structure configured to receive and be supported by said plurality of attachment members that are adhesively attached.” *Id.* Therefore, the ID found that Rayner does not disclose all of the limitations of claim 1 of the ’659 patent. *Id.*

The ID similarly found that dependent claim 3 is not anticipated by Rayner because not all of the limitations of claim 1 are met. *Id.* at 130-31.

The Commission affirms the ALJ’s finding that Rayner does not disclose a “mirror support” that comprises “a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element.” The Commission does not adopt the other findings of the ALJ on anticipation by Rayner as discussed below in the section on obviousness.

2. Batavia¹⁵ and SafeTrac Prototype¹⁶

The Commission takes no position on the ID's findings regarding anticipation by Batavia and anticipation by the SafeTrace Prototype.

C. Obviousness

1. Rayner in view of Blank¹⁷

(a) The ID

The ID found that TRW provided only cursory obviousness arguments that were interspersed within its Rayner anticipation argument. ID at 151. The ID found that these arguments were insufficient to meet its burden to prove obviousness. *Id.* As discussed above, the ID found that Rayner does not disclose “a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle local to said attachment element;” “wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element;” and “a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield; said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield.” *Id.* at 127-30.

The ID further found that, “as shown in Fig. 3B in Blank, the interior rearview mirror assembly **40** is mounted together with an informational display **26** by a shared structure, coupler

¹⁵ The Batavia paper is titled “Driver-Adaptive Lane Departure Warning Systems” by the Parag Batavia and is dated September 20, 1999. RX-0011 (“Batavia”).

¹⁶ RX-0012.

¹⁷ U.S. Patent No. 5,576,687 (“Blank”). RX-0007.

body 80, mounted to a mirror mounting button 70.” *Id.* at 151 (citing RX-0007 (Blank) at 6:36-38, Figs. 3B, 5; *see* CX-0437 (Min reb. witness stmt.) at Q. 73). Therefore, the ID found that Blank does not supply the crucial element missing from Rayner: a plurality of attachment members adhesively attached to the windshield and separate from the attachment element (the mirror mounting button) used to mount the rearview mirror assembly. *Id.*

(b) Analysis

The Commission finds that Rayner in combination with Blank render claims 1 and 3 obvious but that TRW did not meet its burden to prove claim 90 obvious based on the combination of Rayner and Blank.

Rayner was filed on September 24, 1999 and the priority date of the ’659 patent that Magna is asserting is November 10, 2000. *See* RX-0014; Tr. at 42:7-10. Accordingly, the Commission finds that Rayner is 102(e) prior art to the ’659 patent. Blank is admitted prior art to the ’659 patent as it is incorporated by reference in the ’659 patent specification. JX-003 at 30:53-56; 31:23-27.

(i) Claim 1: An accessory mounting system for a vehicle, said accessory mounting system comprising:

The Commission finds that Rayner meets this limitation. Rayner relates to “a self-contained vehicle-mounted trigger device for capturing video imagery in response to a triggering event.” RX-0014 at 2:13-15. It discloses that the “device is mounted in the vehicle cabin [in] a manner that provides a clear field-of-view for the image sensor.” *Id.* at 2:41-42. The camera of Rayner can be mounted to the windshield using a mounting system. *See id.* at Fig. 2

(ii) Claim 1: an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system; said attachment element comprising a mirror mounting button;

The Commission finds that this limitation is met by the state of the art at the priority date as shown in Blank and corroborated by Dr. Kazerooni. RX-0208 at Q.130; RX-007 at Figs. 4A, 5, 6:10-35. While Magna argues that there is no motivation to combine Blank with Rayner because it is an interior rearview mirror assembly which is mounted with an information display by a shared structure, the Commission finds otherwise. *See e.g.*, Magna Post-Hearing Br. at 82. The Commission finds that there is motivation to combine the teaching of Blank with Rayner because Rayner repeatedly mentions a conventional mirror and Blank discloses a conventional mirror. Dr. Kazerooni explained that Blank discloses the “conventional rearview mirror” disclosed in Rayner. RX-208 at Q.132; *see also id.* at 135-137. In addition, Blank discloses the same type of mirror as other mirrors disclosed in the ’659 patent. *See, e.g.*, Tr. at 678:1-25 (Dr. Min stating that Figure 24 of the ’659 structure is the same type of mirror as Blank with one attachment element and comprising a display).

Further, having a display mounted with the mirror does not make Blank incompatible with the ’659 invention. Almost every embodiment disclosed in the ’659 patent includes a mirror assembly mounted *together with* a display. In fact, the only embodiment that discloses the use with a forward facing camera contains a mirror assembly and display mounted together on a single button. *See* JX-003 at Fig. 24A, 36:54-55 (the one and only mention of the accessory system including a forward facing camera is as part of the accessory module of Figure 24A). Dr. Min confirmed this. *See* Tr. at 678:1-25. In addition, the ’659 patent discloses the use of an

after-market conventional mirror so it was known in the art and easy to interchange various mirrors. JX-003 at 23:63-66.

The Commission finds that the conventional mirror of Rayner can be exchanged with a mirror as described in Blank. Blank teaches that button **70** is adhered to the windshield by a suitable adhesive. RX-0208 at Q. 130; RX-007 at Figs. 4A & 5, 6:10-35. Accordingly, the Commission finds that this limitation is met by the conventional mirror of Blank and the accessory mounting system of Rayner.

(iii) Claim 1: a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle local to said attachment element;

Rayner discloses a plurality of attachment members attached at the in-cabin surface of the vehicle windshield local to said attachment element as illustrated in Figure 2. RX-0014 at Fig. 2, 7:1-13. Rayner also discloses mounting device **84** mounted to the windshield by suction cups **88** and **90**. *Id.* at 7:6-8. Immediately following this disclosure, Rayner states, “in still other embodiments, it can be mounted to windshield **14** by means of a suitable adhesive, double sided adhesive tape, or Velcro type hook and pile fasteners.” *Id.* at 7:8-11. Dr. Kazerooni, one of ordinary skill in the art, testified that in order to mount the device **84** by a suitable adhesive or double sided tape, the only place to put such “suitable adhesive” or “double sided tape” would be on the attachment members **88** and **90** or on the mounts sticking out from them. RX-208 at Q.115. Based on Figure 2, it would not be possible to attach the adhesive directly to the housing and the windshield because the camera lens sticks out. *Id.* In addition, Dr. Min testified that in 2000, prior to the invention of the '659 patent, the only way he would think of to mount “attachment members” was by glue. Tr. at 730:8-14.

The Commission finds that mounting a camera “local to” the mirror was “well known” prior to the invention of the ’659 patent. Tr. at 46:3-9; *see also* Tr. at 688:18-689:9.

Accordingly, the Commission finds that this limitation is met by Rayner and the knowledge of one skilled in the art.

(iv) Claim 1: an interior rearview mirror assembly comprising a mirror head and a mirror support; wherein said mirror head comprises a mirror reflective element and a mirror casing;

The Commission finds that the mirror head and mirror support are admitted prior art within the ’659 patent and specifically shown in Blank. RX-208 at Q.127-128; RX-0007 at Fig. 3B, 6:6-41. Additionally, Blank discloses a mirror reflective element and mirror casing. RX-007 at 5:54-55 (“glass element **43** is coated with a reflective layer **57**”); 6:10-11 (Blank describes element **50** as “case or frame”). Figure 3B of Blank shows the (1) mirror support that includes support arm **42**, along with various other parts show in purple in CDX-001-003 at 18, (2) mirror head **40**, (3) mirror casing **50**, and (4) glass element **43** which is covered in a reflective coating. RX-007 at Fig. 3B, 5:54-55, 6:6-41. Accordingly, the Commission finds that Blank discloses this limitation.

(v) Claim 1: wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element;

The Commission finds that Blank discloses said mirror support that comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element. RX-208 at Q. 129; RX-007 at Figs. 4A, 5. Specifically, Figures 4A and 5 of Blank show these features.

- (vi) **Claim 1: a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield; said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield;**

The Commission finds that Rayner discloses a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield. RX-0208 at Q. 120; RX-0014 at Fig. 2, 7:1-12. Similarly, Rayner discloses that the structure is configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield. RX-0208 at Q. 120; RX-0014 at Fig. 2, 7:1-12.

Specifically, device **84** is configured to receive and be supported by the members as shown in Figure 2. The device is configured to receive the members **88** and **90** by receiving them at the point that they attach. Rayner discloses attaching the members to the windshield **14**. RX-0014 at 7:1-12; Figs. 1, 2.

- (vii) **Claim 1: wherein said structure is configured to accommodate a forward facing camera; and wherein, with said structure received by and supported by said attachment members and when said structure is accommodating said forward facing camera, said forward facing camera has a field of view through the vehicle windshield**

The Commission finds that Rayner discloses a structure that is configured for accommodating a forward facing camera. RX-0014 at Fig. 2, 7:1-12; RX-0208 at QQ. 121 -122. Specifically, device **84** includes camera **22** that is mounted within the structure of **84**. RX-0014 at Fig. 2. In Figure 2, the lens of the forward facing camera extends out from the device structure. *Id.*

In addition to Figure 2, the specification describes the structure configured to accommodate the camera. For example, the specification states: “the device includes a housing in which the electronics and related elements of the invention are contained.” RX-0014 at 2:15-17. Additionally, Rayner states that “camera 22 is mounted in housing 18.” *Id.* at 3:44-45. The specification also discloses that the device 84 “has an enclosure 86 that contains all of the electronics and associated elements” described in Figure 3. *Id.* at 7:1-4. Figure 2 illustrates the forward facing camera 22 having a field of view through the windshield. *Id.* at Fig. 2, 7:1-13.

(viii) Claim 3: The accessory system of claim 1, wherein said forward facing camera comprises a CMOS imaging device.

The Commission finds that Rayner discloses that the forward facing camera can be a CMOS imaging device. RX-0014 at 3:39-42; RX-0208 at Q. 123. Specifically, Rayner states the forward facing camera 22 is “preferably” a “charge coupled device (CCD) or CMOS silicon sensor array.” RX-0014 at 3:39-42. Accordingly, the Commission finds that the accessory system of claim 1 is configured to receive a CMOS forward facing camera.

Magna did not assert any secondary considerations supporting a finding of non-obviousness. *See* Magna Post-Hearing Br. at 77-90; Magna Post-Hearing Reply Br. at 39-41. Accordingly, the Commission finds claims 1 and 3 are rendered obvious by Rayner in view of Blank.

The Commission finds that TRW did not meet its burden to prove that claim 90 of the '659 patent is obvious. TRW only cursorily alleged in a single sentence that the two additional limitations of claim 90 are met. TRW Post-Hearing Br. at 46. The single conclusory sentence

presented by TRW does not meet the standard of clear and convincing evidence. Accordingly, the Commission finds that Rayner and Blank do not render 90 obvious.

2. Batavia, SafeTrac, and Navlab 1997 Demo

The Commission takes no position on obviousness based on the combination that includes any of Batavia, SafeTrac, and the Navlab 1997 Demo.

D. America Invents Act

TRW argues that the claims require the presence of a person and therefore, are directed to patent ineligible subject matter. TRW Pet. at 66. Specifically, TRW contends that claims 91 and 92 of the '659 patent claim "a viewer" and Magna's expert, Dr. Min, testified the claimed viewer is a person; therefore, under the America Invents Act ("AIA") § 33(a), claims 91 and 92 are invalid.¹⁸ *Id.* at 66-67 (quoting Tr. at 201:24-202:13). This issue was not addressed in the ID.

The Commission finds that a person is not a limitation of the claims, and therefore the claims are not invalid on this basis. The specification discloses "a substantially opaque black-out frit to mask the presence of such members *when* viewed from outside the vehicle through the front windshield." JX-003 at 38:58-60 (emphasis added)). The use of the word "when" illustrates that the patent does not require a person to actually be looking through the windshield from outside the automobile. Despite TRW's assertion that Dr. Min's testified that a person is required, Dr. Min's testimony does not change the language of the specification and claims which use the word "when." Accordingly, the Commission finds that claim 91 and 92 do not require a person, and are not directed to ineligible subject matter.

¹⁸ Section 33(a) of the AIA states "Notwithstanding any other provision of law, no patent may issue on a claim directed to or encompassing a human organism."

VIII. DOMESTIC INDUSTRY: TECHNICAL PRONG

A. '840 Patent

1. The ID

The ID found that Magna did not satisfy the technical prong for the '840 patent because claim 30 is invalid. ID at 164. The ID found that if claim 30 is valid, Magna would satisfy the technical prong because Magna directly contributes to the practice by its customers, specifically GM, of claim 30 by creating products covered by this claim. *Id.* at 166-68. Specifically, the ID found that Magna's products are forward-facing camera modules (*i.e.*, "FCM") [[

]] to provide safety features such as forward collision and lane departure warnings. *Id.* The ID held that the evidence shows that when installed in a Chevrolet Equinox, a Magna FCM device meets all of the limitations of claim 30. *Id.* at 164-68.

2. Analysis

The Commission granted review of this issue solely to clarify any inconsistency in our precedent. The Commission affirms the ID's findings that there is no domestic industry because the claim asserted to show domestic industry (claim 30) is invalid. Section 337 requires that each complainant prove a domestic industry exists for "articles protected by the patent." In this case, Magna has proven, and the ID found, that Magna practices each limitation of the domestic industry claim. However, the ID also found claim 30 to be invalid and that finding was adopted by the Commission. Section 337 requires that the domestic industry is related to an "article protected by the patent," and an invalid patent cannot protect any articles. Therefore, the ID's conclusion and findings are correct. The Commission notes that its regulations require the ID to analyze, as the ALJ did here, whether the limitations of the domestic industry claim are practiced by the domestic industry products even if the asserted domestic industry claim is found to be

invalid so that the Commission has a complete set of findings on the issue. *See* 19 C.F.R. § 210.42(d).

B. '659 Patent

The Commission finds that the domestic industry requirement is not met for the '659 patent. As discussed above, the Commission finds that claim 1, the only asserted domestic industry claim, is invalid.

IX. CONCLUSION

For the forgoing reasons, the Commission finds no violation of section 337 has occurred.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton'.

Lisa R. Barton
Secretary to the Commission

Issued: December 1, 2015

**CERTAIN VISION-BASED DRIVER ASSISTANCE
SYSTEM CAMERAS AND COMPONENTS THEREOF**

Inv. No. 337-TA-907

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, Lisa A. Murray, Esq., and the following parties as indicated, on **December 1, 2015**.



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

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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN VISION-BASED DRIVER
ASSISTANCE SYSTEM CAMERAS AND
COMPONENTS THEREOF**

Investigation No. 337-TA-907

**NOTICE OF A COMMISSION DETERMINATION TO REVIEW IN PART AN INITIAL
DETERMINATION GRANTING COMPLAINANT'S MOTION TO AMEND
COMPLAINT AND NOTICE OF INVESTIGATION AND PARTIALLY TERMINATE
THE INVESTIGATION, AND ON REVIEW TO MODIFY THE INITIAL
DETERMINATION**

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 an initial determination ("ID") (Order No. 6) issued by the presiding administrative law judge ("ALJ") granting complainant's motion to amend complaint and notice of investigation and to partially terminate the investigation. On review, the Commission has modified the ID to specify the claims of the patents that have been added to the investigation.

FOR FURTHER INFORMATION CONTACT: Michael Liberman, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-3115. 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 under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, on January 28, 2014, based on a complaint filed by Magna Electronics Inc. of Auburn Hills, Michigan ("Magna," or Complainant). *See 79 Fed. Reg.* 4490-91 (Jan. 28, 2014). The complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, in the importation into the United States, the sale for importation, and the sale within the United States after importation of

certain vision-based driver assistance system cameras and components thereof by reason of infringement of certain claims of U.S. Patent Nos. 8,116,929 and 8,593,521 ("the '521 patent"). The complaint further alleges the existence of a domestic industry. The respondent named in the Commission's notice of investigation is TRW Automotive U.S., LLC of Livonia, Michigan ("TRW," or Respondent). A Commission investigative attorney ("the IA") is participating in the investigation.

On April 10, 2014, Complainant Magna filed a motion to amend the complaint and notice of investigation to add U.S. Patent Nos. 8,686,840 ("the '840 patent") and 8,692,659 ("the '659 patent"). Magna's motion also included a conditional element whereby if the motion to amend is granted, then Magna moves to terminate the investigation in part as to all claims of the '521 patent. On April 21, 2014, Respondent filed a response opposing the motion. On the same day, the IA filed a response to Magna's motion stating that she does not oppose the motion.

On May 27, 2014, the ALJ issued the subject ID finding that good cause exists to grant Complainant's motion to amend the complaint and notice of investigation to add the '840 and '659 patents to this investigation and to terminate the investigation as to the '521 patent. On June 4, 2014, Respondent filed a timely petition for review of ALJ Order No. 6. On June 11, 2014, Complainant and the IA timely filed their respective responses opposing the petition.

Having examined the record in this investigation, including the subject ID, the petition for review, and the responses thereto, the Commission has determined to review the ID in part. Specifically, the Commission determined to review the first paragraph on page 7 of the subject ID and, on review, to modify it by clarifying that the notice of investigation is modified by adding claims 30 and 36 of the '840 patent and claims 3, 37, 80, and 92 of the '659 patent, as well as by terminating the investigation as to all claims of the '521 patent. The Commission has determined not to review the remainder of the ID.

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 26, 2014

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Lisa A. Murray, Esq., and the following parties as indicated, on **June 26, 2014**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
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On Behalf of Complainant Magna Electronics Inc.:

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() Other: _____

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN VISION-BASED DRIVER
ASSISTANCE SYSTEM CAMERAS AND
COMPONENTS THEREOF**

Inv. No. 337-TA-907

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge Theodore R. Essex

(April 27, 2015)

Appearances:

For the Complainants Magna Electronics Inc.:

Steven E. Adkins, Esq., Matthew Bathon, Esq., Charles F. Schill, Esq., Paul Gennary, Esq., Stephanie Roberts, Esq., Scott Richey, Esq., and Stanley Kue, Esq. of Steptoe & Johnson LLP of Washington, D.C.

Terence J. Linn, Esq., and Karl T. Ondersma, Esq. of Gardner Linn Burkhardt & Flory LLP, Grand Rapids, Michigan.

For Respondents TRW Automotive U.S. LLC:

Allan J. Sternstein, Esq., Timothy K. Sendek, Esq., Michael S. Golenson, Esq., and Sara M. Skulman, Esq. of Lathrop & Gage LLP of Chicago, Illinois.

Lyle B. Vander Schaaf, Esq., Jay H. Reiziss, Esq., and Carl C. Charneski, Esq. of Brinks Gilson & Lione of Washington, D.C.

For the Commission Investigative Staff:

Margaret D. Macdonald, Esq., Director; Jeffrey T. Hsu, Esq., Supervisory Attorney; Andrew Beverina¹, Esq., Investigative Attorney of the Office of Unfair Import Investigations ("OUII"), U.S. International Trade Commission, of Washington, D.C.

¹ On December 22, 2014, Andrew Beverina, Esq. was designated as OUII's lead attorney in place of Lisa Murray, Esq.

PUBLIC VERSION

Pursuant to the Notice of Investigation, 79 Fed. Reg. 4490 (January 28, 2014), this is the Initial Determination in the matter of *Certain Vision-Based Driver Assistance System Cameras and Components Thereof*, United States International Trade Commission Investigation No. 337-TA-907. See 19 C.F.R. § 210.42(a).

It is held that no violation of section 337 of the Tariff Act of 1930, as amended, 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 vision-based driver assistance system cameras and components thereof by reason of infringement of certain claims of U.S. Patent Nos. 8,686,840 and 8,692,659.

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PUBLIC VERSION

The following abbreviations may be used in this Initial Determination:

CDX	Complainant's demonstrative exhibit
CIB	Complainant's initial post-hearing brief
CPB	Complainant's pre-hearing brief
CPX	Complainant's physical exhibit
CRB	Complainant's reply post-hearing brief
CX	Complainant's exhibit
Dep.	Deposition
JX	Joint Exhibit
RDX	Respondent's demonstrative exhibit
RIB	Respondent's initial post-hearing brief
RPX	Respondent's physical exhibit
RPB	Respondent's Pre-hearing brief
RRB	Respondent's reply post-hearing brief
RRX	Respondent's rebuttal exhibit
RX	Respondent's exhibit
SIB	Staff's initial post-hearing brief
SRB	Staff's reply post-hearing brief
Tr.	Transcript

I. BACKGROUND

A. Institution and Procedural History of This Investigation

By publication of a notice in the *Federal Register* on January 28, 2014, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted Investigation No. 337-TA-907 with respect to U.S. Patents Nos. 8,116,929 (“the ’929 patent”) and 8,593,521 (“the ’521 patent”) 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 vision-based driver assistance system cameras and components thereof by reason of infringement of one or more of claims 1, 2, 4, and 5 of the ’929 patent and claims 1, 29, 35, and 39 of the ’521 patent, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

79 Fed. Reg. 4490 (January 28, 2014).

The complainant is Magna Electronics Inc. (“Magna” or “Complainant”) of Auburn Hills, Michigan. (79 Fed. Reg. 4490 (January 28, 2014).) The Notice of Investigation named the respondent as TRW Automotive U.S., LLC (“TRW” or “Respondent”) of Livonia, Michigan. (*Id.*) The Commission Investigative Staff (“Staff”) of the Office of Unfair Import Investigations is a party in this investigation. (*Id.*)

The investigation was assigned to Administrative Law Judge (“ALJ”) Theodore R. Essex. (Notice to the Parties) (January 23, 2014).

On April 10, 2014, Complainant Magna filed a motion to amend the complaint and notice of investigation to add U.S. Patent Nos. 8,686,840 (“the ’840 patent”) and 8,692,659 (“the ’659 patent”). (Order No. 6 at 1.) Magna’s motion also included a conditional element whereby if the motion to amend was granted, then Magna moved to terminate the investigation in part as to all claims of the ’521 patent. (*Id.*) On April 21, 2014, Respondent filed a response opposing the

PUBLIC VERSION

motion. (*Id.*) On the same day, Staff filed a response to Magna's motion stating that it did not oppose the motion. (*Id.*) On May 27, 2014, the ALJ issued an initial determination ("ID") finding that good cause existed to grant the Complainant's motion to amend the Complaint and Notice of Investigation to add U.S. Patent No. 8,686,840 and U.S. Patent No. 8,692,659 to this investigation and terminate this investigation as to U.S. Patent No. 8,593,521. (Order No. 6 at 7.) On June 4, 2014, Respondent filed a timely petition for review of the ALJ Order No. 6. On June 11, 2014, Complainant and the Staff timely filed their respective responses opposing the petition.

The Commission examined the record in this investigation, including the subject ID (Order No. 6), the petition for review, and the responses thereto, and the Commission reviewed the ID in part. Specifically, the Commission reviewed the first paragraph on page 7 of the subject ID and, on review, decided to modify the subject ID by clarifying that the notice of investigation would be modified by adding claims 30 and 36 of the '840 patent and claims 3, 37, 80, and 92 of the '659 patent, as well as by terminating the investigation as to all claims of the '521 patent. The Commission determined not to review the remainder of the ID. (79 Fed. Reg. 37352 (July 1, 2014).)

On July 1, 2014, the ALJ granted Complainant's unopposed motion to extend the target date to August 28, 2015. (Order No. 9.) On July 28, 2014, the Commission determined not to review Order No. 9. (Notice of Commission Decision Not to Review an Initial Determination Extending the Target Date.)

On October 13, 2014, Magna filed an unopposed motion to terminate the investigation with respect to the '929 patent, which was granted on October 14, 2014. (Order No. 12.) On October 31, 2014, the Commission determined not to review the initial determination terminating the investigation with respect to the '929 patent. (Notice of Commission Determination Not to

Review an Initial Determination Granting an Unopposed Motion to Terminate the Investigation with Respect to All Asserted Claims of U.S. Patent No. 8,116,929.)

On November 7, 2014, Magna filed an unopposed motion to terminate the investigation with respect to claims 37 and 80 of the '659 patent. The motion was granted on November 12, 2014. (Order No. 14.) On December 8, 2014, the Commission determined not to review the initial determination terminating the investigation with respect to Claims 37 and 80 of the '659 patent. (Notice of Commission Determination Not to Review an Initial Determination Granting an Unopposed Motion to Terminate the Investigation with Respect to Claims 37 and 80 of U.S. Patent No. 8,692,659.)

The evidentiary hearing in this investigation was held on January 12-16, 2015.

On January 30, 2015, each party filed its initial post-hearing brief.

On February 10, 2015, each party filed its post-hearing reply brief.

B. Amendment to the Notice of Investigation

As set forth *supra*, the Notice of Investigation was amended on July 1, 2014 to add the '840 patent and the '659 patent and to terminate the '521 patent. The '659 patent is directed at an "Accessory Mounting Systems for a Vehicle." (*See infra* Section I.D.; JX-0001 and JX-0003.) The patent covers an accessory mounting system that includes a vision-based driver assistance camera. In other words, the '659 patent covers a system that contains the disputed vision-based driver assistance cameras and not the vision-based driver assistance camera itself. Therefore, the ALJ finds that the scope of the investigation should be amended to include these larger systems that incorporate the cameras, *i.e.*, "***Products Containing the Same.***"

In amending the scope of the investigation, the ALJ finds that this does not affect the evidence and arguments presented by Magna, TRW or the Staff at the evidentiary hearing. As will be set forth below in detail, the parties have spent the entirety of the hearing and their post-

hearing briefs on addressing these systems and products that contain the vision-based driver assistance cameras, which are already mounted inside certain downstream, third party vehicles. As such, the substance of their arguments and evidence remain unaffected by the ALJ's amendment. *See* §210.14(c).² The ALJ further notes that the public was also notified of the additional patents in the Commission's July 1, 2014 notice that was published in the Federal Register. (79 Fed. Reg. 37352 (July 1, 2014).)

Therefore, pursuant to §210.14(c), the ALJ hereby amends the Notice of the Investigation to include "products containing the same."

C. The Parties

1. Complainant

Complainant Magna Electronics Inc. ("Magna") is a Delaware corporation with a registered office at 601 Abbott Road, East Lansing, Michigan 48823 and a place of business at 2050 Auburn Road, Auburn Hills, Michigan 48326.

2. Respondent

Respondent TRW Automotive U.S., LLC ("TRW") is a Delaware corporation with its corporate office at 12001 Tech Center Drive, Livonia, Michigan 48150.

D. The Patents at Issue and Overview of the Technology

1. The '840 Patent

U.S. Patent No. 8,686,840 ("the '840 patent"), entitled "Accessory System for a Vehicle," was filed on January 25, 2013, and issued on April 1, 2014. (*See* JX-0001). John P. Drummond

² (c) Post institution amendments to conform to evidence. When issues not raised by the pleadings or notice of investigation, but reasonably within the scope of the pleadings and notice, are considered during the taking of evidence by express or implied consent of the parties, they shall be treated in all respects as if they had been raised in the pleadings and notice. Such amendments of the pleadings and notice as may be necessary to make them conform to the evidence and to raise such issues shall be allowed at any time, and shall be effective with respect to all parties who have expressly or impliedly consented.

of Glenageary (IE) and Niall R. Lynam of Holland, Michigan are the named inventors of the '840 patent. (*Id.*) The '840 patent generally discloses an accessory system for a vehicle including an accessory disposed at and behind a windshield of the vehicle and a control having digital circuitry and a microcontroller. (*Id.*)

The asserted claims of the '840 patent are claims 30 and 36. The asserted claims read as follows:

30. An accessory system for a vehicle, said accessory system comprising:
- an accessory disposed at and behind a windshield of a vehicle equipped with said accessory system;
 - wherein said accessory comprises a forward facing camera, said forward facing camera viewing through the windshield of the equipped vehicle;
 - a control;
 - wherein said control comprises digital circuitry and a microprocessor;
 - wherein said control controls at least said forward facing camera;
 - wherein said control at least one of sends data to at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle and receives data from at least one other accessory or system of the equipped vehicle via said vehicle network of the equipped vehicle;
 - wherein said vehicle network comprises a protocol selected from the group consisting of a LIN, a CAN and a LAN; and
 - wherein communication of data via said vehicle network comprises communication by at least one of a wire, a cable and a fiber-optic connection.
36. The accessory system of claim 30, wherein said accessory comprises said control.

2. The '659 Patent

U.S. Patent No. 8,692,659 ("the '659 patent"), entitled "Accessory Mounting System for Vehicle," was filed on November 30, 2012, and issued on April 8, 2014. (*See* JX-0003).

Kenneth Schofield and Niall R. Lynam, both of Holland, Michigan, are the named inventors of

the '659 patent. (*Id.*) The '659 patent generally discloses an accessory mounting system for a vehicle including an attachment element attached at an in-cabin surface of a vehicle windshield of a vehicle. (*Id.*)

The asserted claims of the '659 patent are claims 3 and 92. Claim 3 depends on claim 1 while Claim 92 depends on Claim 91 which depends on Claim 90. These claims read as follows:

1. An accessory mounting system for a vehicle, said accessory mounting system comprising:

an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system;

said attachment element comprising a mirror mounting button;

a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element;

an interior rearview mirror assembly comprising a mirror head and a mirror support;

wherein said mirror head comprises a mirror reflective element and a mirror casing;

wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element;

a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield;

said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield;

wherein said structure is configured to accommodate a forward facing camera; and

wherein, with said structure received by and supported by said attachment members and when said structure is accommodating said forward facing camera, said forward facing camera has a field of view through the vehicle windshield.

3. The accessory mounting system of claim 1, wherein said forward facing camera comprises a CMOS imaging device.

90. An accessory mounting system for a vehicle, said accessory mounting system comprising:

an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system;

said attachment element comprising a mirror mounting button;

a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element;

an interior rearview mirror assembly comprising a mirror head and a mirror support;

wherein said mirror head comprises a mirror reflective element and a mirror casing;

wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element;

a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield;

said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield;

wherein said structure is configured to accommodate a forward facing camera;

wherein, with said structure received by and supported by said attachment members and when said structure is accommodating said forward facing camera, said forward facing camera has a field of view through the vehicle windshield;

wherein said forward facing camera comprises a CMOS imaging device;

wherein said interior rearview mirror assembly comprise a double-ball interior rearview mirror assembly; and

wherein, with said structure received by and supported by said attachment members, said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said attachment members.

91. The accessory mounting system of claim 90, wherein a light absorbing layer disposed at the vehicle windshield at least partially masks the presence of said attachment element from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.

92. The accessory mounting system of claim 91, wherein said light absorbing layer disposed at the vehicle windshield further at least partially masks the presence of said structure from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.

E. The Products At Issue

1. TRW Accused Products

Magna accuses TRW's S-cam³ products of infringing the asserted patents. (CIB at 6-7.) Specifically, the accused products are TRW's S-cam imaging systems, specifically the S-cam 2 currently in production and the S-cam 3 and S-cam 3.5 products currently in development. (CPB at 10-11; *see also* RIB at 1 [REDACTED] is still in the design phase, [REDACTED]
[REDACTED] The S-cam 2 is manufactured in Illinois, using imported Mobileye EyeQ2 image processor components. (RIB at 2.)

II. IMPORTATION OR SALE

Section 337 of the Tariff Act prohibits the importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignees of articles that infringe a valid and enforceable United States patent. *See* 19 U.S.C. § 1337(a)(1)(B). A complainant "need only prove importation of a single accused product to satisfy the importation element." *Certain Purple Protective Gloves*, 337-TA-500, Order No. 17 (September 23, 2004).

³ Given that the parties treat the S-cam and S-cam 2 as functionally equivalent, the ALJ does as well in his technical analysis throughout this Initial Determination. (*See e.g.* CX-0003C (Min Witness Stmt.) at Q.278.)

PUBLIC VERSION

Magna contends that TRW imports components of the accused vision-based driver assistance system cameras into the United States. (CIB at 8.) Specifically, Magna points out that “TRW admits that it imports Mobileye EyeQ2 image processors for use in its S-cam 2 vision-based driver assistance system cameras.” (*Id.*) Thus, Magna submits that “[b]ecause the products accused in this investigation include both vision-based driver assistance system cameras and components thereof, Magna has established importation for purposes of Section 337.” (*Id.*) Furthermore, Magna points out that TRW sells its S-cam 2 using the EyeQ2 image processor to General Motors (“GM”) and thereafter GM installs the S-cam 2 into its vehicles in Mexico and those vehicles are then imported into the United States. (*Id.*)

The Staff points out that “TRW does not import accused vision-based driver assistance system cameras into the United States, nor does it sell such products for importation or sell such products after importation into the United States.” (SIB at 6.) Instead, the Staff submits that “TRW manufactures all S-cam 2 products for its North American customers at its facilities in Marshall, Illinois.” (SIB at 6.) However, the Staff contends that TRW does import components of the accused vision-based driver assistance system cameras into the United States by admitting that it imports Mobileye EyeQ2 image processors for use in its S-cam 2 vision-based driver assistance system cameras. (*Id.*) The Staff then argues that there is sufficient evidence to establish importation for the purposes of Section 337 since the accused products include both vision-based driver assistance system cameras and components thereof. (*Id.*)

The ALJ finds that the importation requirement for purposes of Section 337 has been satisfied. The evidence shows that TRW imports components of the accused vision-based driver assistance system cameras into the United States, specifically its importation of Mobileye EyeQ2 image processors for use in its S-cam 2 vision-based driver assistance system cameras. (Autzen

Tr. at 321:25-325:3; CX-0266C at 8-11 (Interrog. No. 77); CX-0246C (Interrog. No. 6); TRW Answer ¶ 18.) Furthermore, the ALJ finds that TRW sells its S-cam 2 with the EyeQ2 image processor to GM for importation into the U.S. as GM, with guidance and assistance from TRW, installs the S-cam 2 into its vehicles in Mexico, which are then imported into the United States. (CX-94C at No. 4; Tr. at 321:8 –323:25, 324:15-22.) Accordingly, the ALJ finds that the importation requirement has been satisfied.

III. JURISDICTION

In order to have the power to decide a case, a court or agency must have both subject matter jurisdiction and jurisdiction over either the parties or the property involved. (*See Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, Commission Memorandum Opinion, 215 U.S.P.Q. 229, 231 (1981).) For the reasons discussed below, the ALJ finds the Commission has jurisdiction over this investigation.

Section 337 declares unlawful the importation, the sale for importation, or the sale after importation into the United States of articles that infringe a valid and enforceable United States patent by the owner, importer, or consignee of the articles, if an industry relating to the articles protected by the patent exists or is in the process of being established in the United States. (*See* 19 U.S.C. §§ 1337(a)(1)(B)(i) and (a)(2).) Pursuant to Section 337, the Commission shall investigate alleged violations of the Section and hear and decide actions involving those alleged violations.

Magna points out that TRW has submitted to the jurisdiction of the Commission as TRW has participated in this investigation, by responding to the Amended Complaint and participating in discovery and at the hearing. (CIB at 9.) Magna also states that TRW admits that it imports the EyeQ2 and EyeQ3 chip from Mobileye to be used in its accused S-cam 2 products. (*Id.*)

Additionally, “TRW does not contest that the Commission has subject matter jurisdiction to investigate whether there has been a violation of section 337.” (RIB at 3.)

The Staff points out that “Magna’s Complaint properly states a cause of action under Section 337 of the Tariff Act of 1930, and thus the Commission has jurisdiction over the subject matter of this investigation.” (SIB at 7.) Additionally, the Staff submits that “Respondent TRW has participated in this investigation, thereby submitting to the personal jurisdiction of the Commission.” (*Id.*) Furthermore, the Staff contends that the Commission has *in rem* jurisdiction over the products at issue by virtue of the fact that accused components have been imported into the United States. (*Id.*)

As set forth *supra* in Section II, the importation requirement has been satisfied. Furthermore, TRW has appeared and participated fully in this investigation and does not dispute the Commission’s jurisdiction. Accordingly, the ALJ finds that TRW has submitted to the jurisdiction of the Commission. (*See Certain Miniature Hacksaws*, Inv. No. 337-TA-237, Pub. No. 1948, Initial Determination at 4, 1986 WL 379287 (U.S.I.T.C., October 15, 1986) (unreviewed by Commission in relevant part).) Thus, the ALJ finds that the Commission has jurisdiction under Section 337 to hear this investigation and has *in personam* jurisdiction over TRW.

The ALJ also finds that the Commission has *in rem* jurisdiction over the products at issue by virtue of the fact that accused components have been imported into the United States. (*See Enercon*, 151 F.3d at 1380; *Sealed Air Corp. v. International Trade Comm’n*, 645 F.2d 976, 985 (C.C.P.A. 1981) (An exclusion order operates against goods, not parties, and therefore is not contingent upon a determination of personal jurisdiction over a foreign manufacturer.).)

IV. CLAIM CONSTRUCTION

A. Legal Standard

Pursuant to the Commission's Notice of Investigation, this investigation is a patent-based investigation. (*See* 79 Fed. Reg. 4490 (January 28, 2014).) Accordingly, all of the unfair acts alleged by Magna to have occurred are instances of alleged infringement of the '840 patent and the '659 patent. Claim interpretation is a question of law. (*Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455 (Fed. Cir. 1998).) Second, a factual determination must be made as to whether the properly construed claims read on the accused devices. (*Markman*, 52 F.3d at 976.)

"The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history." (*Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365–67 (Fed. Cir. 2012) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)).) In construing claims, the ALJ should first look to intrinsic evidence, which consists of the language of the claims, the patent's specification, and the prosecution history, as such evidence "is the most significant source of the legally operative meaning of disputed claim language." (*Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *see also Bell Atl. Network Servs., Inc. v. Covad Comm'n. Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001).) The words of the claims "define the scope of the patented invention." (*Id.*) And, the claims themselves "provide substantial guidance as to the meaning of particular claim terms." (*Phillips*, 415 F.3d at 1314.) It is essential to consider a claim as a whole when construing each term, because the context in which a term is used in a claim "can be highly instructive." (*Id.*) Claim terms are presumed to be used consistently throughout the patent, such that the usage of the term

in one claim can often illuminate the meaning of the same term in other claims. (*Research Plastics, Inc. v. Federal Pkg. Corp.*, 421 F.3d 1290, 1295 (Fed. Cir. 2005).) In addition:

. . . in clarifying the meaning of claim terms, courts are free to use words that do not appear in the claim so long as the resulting claim interpretation . . . accord[s] with the words chosen by the patentee to stake out the boundary of the claimed property.

(*Pause Tech., Inc. v. TIVO, Inc.*, 419 F.3d 1326, 1333 (Fed. Cir. 2005).)

Idiosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification. (*Phillips*, 415 F.3d at 1315–16.) While the ALJ construes the claims in light of the specification, limitations discussed in the specification may not be read into the claims. (See *Intervet Inc. v. Merial Ltd.*, 617 F.3d 1282, 1287 (Fed. Cir. 2010); *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009).) Some claim terms do not have particular meaning in a field of art, in which case claim construction involves little more than applying the widely accepted meaning of commonly understood words. (*Phillips*, 415 F.3d at 1314.) Under such circumstances, a general purpose dictionary may be of use.⁴ (See *Advanced Fiber Tech. (AFT) Trust v. J & L Fiber Servs., Inc.*, 674 F.3d 1365, 1374–75 (Fed. Cir. 2012).)

Claim terms should generally be given their ordinary and customary meaning except “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” (*Thorner*, 669 F.3d at 1365.) “To act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term’” (*Id.*; quoting *CCS Fitness, Inc. v. Brunswick Corp.*,

⁴ Use of a dictionary, however, may extend patent protection beyond that to which a patent should properly be afforded. There is also no guarantee that a term is used the same way in a treatise as it would be by a patentee. *Phillips*, 415 F.3d at 1322.

288 F.3d 1359, 1366 (Fed. Cir. 2002)).) And “[w]here the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside . . . the patent,” even if the terms might otherwise be broad enough to cover that feature. (*Id.* at 1366 (internal citation omitted).) Thus, if a claim term is defined contrary to the meaning given to it by those of ordinary skill in the art, the specification must communicate a deliberate and clear preference for the alternate definition. (*Kumar v. Ovonic Battery Co.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003).) In other words, the intrinsic evidence must “clearly set forth” or “clearly redefine” a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term. (*Bell Atl.*, 262 F.3d at 1268.) For example, disclaiming the ordinary meaning of a claim term—and thus, in effect, redefining it—can be affected through “repeated and definitive remarks in the written description.” (*Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374 (Fed. Cir. 2008) (citing *Watts v. XL Sys.*, 232 F.3d 877, 882 (Fed. Cir. 2000)); see *SafeTCare Mfg., Inc. v. Tele-Made, Inc.*, 497 F.3d 1262, 1270 (Fed. Cir. 2007) (finding disclaimer of “pulling force” where “the written description repeatedly emphasized that the motor of the patented invention applied a pushing force”).)

When the meaning of a claim term is uncertain, the specification is usually the first and best place to look, aside from the claim itself, in order to find that meaning. (*Phillips*, 415 F.3d at 1315.) The specification of a patent “acts as a dictionary” both “when it expressly defines terms used in the claims” and “when it defines terms by implication.” (*Vitronics*, 90 F.3d at 1582.) For example, the specification “may define claim terms by implication such that the meaning may be found in or ascertained by a reading of the patent documents.” (*Phillips*, 415 F.3d at 1323.) “The 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.) However, as a general rule, particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. (*Markman*, 52 F.3d at 979.)

The prosecution history “provides evidence of how the inventor and the PTO understood the patent.” (*Phillips*, 415 F.3d at 1317; *see also Pass & Seymour, Inc. v. Int’l Trade Comm’n*, 617 F.3d 1319, 1327 (Fed. Cir. 2010) (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478 (Fed. Cir. 1998)).) The ALJ may not rely on the prosecution history to construe the meaning of the claim to be narrower than it would otherwise be unless a patentee limited or surrendered claim scope through a clear and unmistakable disavowal. (*Trading Tech. Int’l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 1352 (Fed. Cir. 2010) (internal citations omitted); *Vitronics*, 90 F.3d at 1582–83.) For example, the prosecution history may inform the meaning of the claim language by demonstrating how an inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it otherwise would be. (*Vitronics*, 90 F.3d at 1582–83; *see also Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (stating, “The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution.”); *Microsoft Corp. v. Multi-tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (stating, “We have held that a statement made by the patentee during prosecution history of a patent in the same family as the patent-in-suit can operate as a disclaimer.”).) The prosecution history includes the prior art cited, *Phillips*, 415 F.3d at 1317, as well as any reexamination of the patent. (*Intermatic Inc. v. Lamson & Sessions Co.*, 273 F.3d 1355, 1367 (Fed. Cir. 2001).)

Differences between claims may be helpful in understanding the meaning of claim terms. (*Phillips*, 415 F.3d at 1314.) A claim construction that gives meaning to all the terms of a claim is preferred over one that does not do so. (*Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d

1364, 1372 (Fed. Cir.), *cert. denied*, 546 U.S. 972 (2005); *Alza Corp. v. Mylan Labs. Inc.*, 391 F.3d 1365, 1370 (Fed. Cir. 2004).) In addition, the presence of a specific limitation in a dependent claim raises a presumption that the limitation is not present in the independent claim. *Phillips*, 415 F.3d at 1315. This presumption of claim differentiation is especially strong when the only difference between the independent and dependent claim is the limitation in dispute. (*SunRace Roots Enter. Co., v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).) “[C]laim differentiation takes on relevance in the context of a claim construction that would render additional, or different, language in another independent claim superfluous.” (*AllVoice Computing PLC v. Nuance Commc’ns, Inc.*, 504 F.3d 1236, 1247 (Fed. Cir. 2007).)

Finally, when the intrinsic evidence does not establish the meaning of a claim, the ALJ may consider extrinsic evidence, *i.e.*, all evidence external to the patent and the prosecution history, including inventor testimony, expert testimony and learned treatises. (*Phillips*, 415 F.3d at 1317.) Extrinsic evidence may be helpful in explaining scientific principles, the meaning of technical terms, and terms of art. (*Vitronics*, 90 F.3d at 1583; *Markman*, 52 F.3d at 980.) However, the Federal Circuit has generally viewed extrinsic evidence as less reliable than the patent itself and its prosecution history in determining how to define claim terms. (*Phillips*, 415 F.3d at 1318.) With respect to expert witnesses, any testimony that is clearly at odds with the claim construction mandated by the claims themselves, the patent specification, and the prosecution history should be discounted. (*Id.* at 1318.)

If the meaning of a claim term remains ambiguous after a review of the intrinsic and extrinsic evidence, then the patent claims should be construed so as to maintain their validity. (*Id.* at 1327.) However, if the only reasonable interpretation renders a claim invalid, then the claim should be found invalid. (See *Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999).)

B. The '840 Patent

Magna asserts claims 30 and 36 of the '840 patent. Claim 30 is an independent claim and claim 36 is a dependent claim.

1. Level of Skill in the Art

Magna proposes that a person of ordinary skill in the art ("POSITA") is one having a bachelor's degree in electrical, electronic or mechanical engineering, or the equivalent thereof, and at least two years of experience in the integration of electronics into consumer products. (CIB at 10.) Furthermore, Magna contends that "TRW's expert substantially agrees, opining that 'a person of ordinary skill in the art would have had at least the qualifications of or equivalent to either an undergraduate degree in electrical engineering or mechanical engineering with course work or research in automobile accessory systems and with at least two years of work making automobile accessory systems.'" (*Id.*) Magna argues that "TRW's limitation of the relevant art to 'automobile accessory systems' is overly restrictive, as the Asserted Patents are part of the broader field of consumer electronics, and particularly systems incorporating cameras." (*Id.*)

TRW contends that "[a] person of ordinary skill in the art 'would have had at least the qualifications of or equivalent to either an undergraduate degree in electrical engineering or mechanical engineering with course work or research in automobile accessory systems with at least two years of work making automobile accessory systems.'" (RIB at 5.) Additionally, TRW argues that the relevant art is "automobile accessory systems" as supported by Dr. Kazerooni's witness statement. (*Id.*) TRW then points out that "Magna defines a POSITA as having '... experience in the integration of electronics into consumer products.'" (RIB at 6.) TRW argues that "Magna's expert echoes this statement, but also seems to support a second, much narrower definition of skill: stating the 'pertinent art' in which such a person would be skilled is not all consumer products but a very specific subset of 'windshield electronic modules

for vision-based driver assistance systems.” (*Id.*) However, TRW then submits that “[t]here is no clear connection between accessory mounting systems of the asserted claims and ‘windshield electronics modules . . .’” (*Id.*) TRW contends that its definition of a POSITA is more consistent with the focus of the specification: displays and tire inflation systems while Magna’s definition does not even require automotive experience. (*Id.*)

The Staff contends that the relevant field of art for the ’840 patent is electronic automobile accessory systems. (SIB at 8.) Then, the Staff points out that the ’840 patent, entitled “Accessory System for a Vehicle,” “relates generally to vehicle rearview mirror systems and, more particularly, to digital electrochromic rear-view mirror systems.” (*Id.*) Additionally, the Staff notes that the ’840 patent references “a new and unique combination of a digital electrochromic mirror system, a vehicle accessory and a vehicle network[.]” (*Id.*) Thus, the Staff argues that “a person of ordinary skill in the art would be one possessing the qualifications described by both Magna and TRW – an undergraduate degree in electrical or mechanical engineering plus two years of work experience – in the field of electronic automobile accessory systems.” (*Id.*)

The ALJ finds that the parties are not far apart in their respective skill levels and further that the differences have no significant impact on claim construction. Therefore, the ALJ finds that a person of ordinary skill in the art would have at least an undergraduate degree in electrical or mechanical engineering plus two years of work experience in the field of electronic automobile accessory systems. (CX-0003C at Q. 126; RX-0208 Q. 25; JX-0001 (’840 patent) at 1:27-29.)

2. Claim Construction

The parties have agreed to the following proposed interpretations of claim terms as shown in Table 1 Agreed-Upon Claim Terms for ’840 Patent. (CIB at 11; RIB at 66.)

PUBLIC VERSION

'840 Claim Term	Joint Proposed Construction
an accessory (claim 30)	a component, package, or module
a vehicle equipped with said accessory system (claim 30)	motor vehicle installed with the said accessory system
a vehicle network (claim 30)	an internal communication network that interconnects components and systems of the vehicle
a protocol (claim 30)	a system of rules for the exchange of data
a LIN (claim 30)	a local interconnect/internet network
a CAN (claim 30)	a car or controlled/controller area network
a LAN (claim 30)	a local area network
comprises communication by at least one of a wire, a cable and a fiber-optic connection (claim 30)	communication transmitted by at least one of a wire connection (<i>i.e.</i> , a thread of metal used to carry electricity or electrical signals), a cable connection (<i>i.e.</i> , group of wires, glass fibers, etc. used to carry electricity or electrical signals or data) and a fiber-optic connection (<i>i.e.</i> , a thin transparent fiber or group of fibers of glass or plastic that transmits light throughout its length by internal reflections)
a wire (claim 30)	a thread of metal used to carry electricity or electrical signals

Table 1 Agreed-Upon Claim Terms for '840 Patent

Four claim terms are in dispute in this investigation with respect to the '840 patent, namely (1) "at and behind a windshield" from claim 30; (2) "control" from claim 30; (3) "controls" from claim 30; and (4) "said accessory" from claim 36. (*See* CIB at 11-14; RIB at 64-65; SIB at 8-13.)

Table 2 lists the parties' proposed claim construction for each disputed term. (*See* CIB at 11-14; RIB at 64-65; SIB at 8-13.)

'840 Claim Term	Magna	TRW	Staff
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PUBLIC VERSION

'840 Claim Term	Magna	TRW	Staff
at and behind a windshield (claim 30)	plain and ordinary meaning (<i>i.e.</i> , on the inside of the windshield)	located in a particular place or position, namely behind a windshield	plain and ordinary meaning (<i>i.e.</i> , on the inside of the windshield)
a control (claim 30)	plain and ordinary meaning (<i>i.e.</i> , a device that performs operations)	indefinite; alternatively, a means or device to direct and regulate a process or sequence of events	a device that performs operations
controls (claim 30)	plain and ordinary meaning (<i>i.e.</i> , directs the action or function of something)	indefinite; alternatively, implements an algorithm which communicates with and determines the behavior of a system of equipped vehicle via a vehicle network	plain and ordinary meaning (<i>i.e.</i> , directs the operation of something)
said accessory (claim 36)	plain and ordinary meaning (<i>i.e.</i> , the accessory defined in claim 30: a package or module containing a forward facing camera that views through the windshield of the equipped vehicle)	indefinite	plain and ordinary meaning (<i>i.e.</i> , the accessory described in claim 30 as being disposed at and behind a windshield of a vehicle)

Table 2 Parties' Proposed '840 Claim Construction

3. "at and behind a windshield"

Magna	TRW	Staff
plain and ordinary meaning (<i>i.e.</i> , on the inside of the windshield)	located in a particular place or position, namely behind a windshield	plain and ordinary meaning (<i>i.e.</i> , on the inside of the windshield)

Magna contends that the plain and ordinary meaning of the phrase "at and behind a windshield" is clear, and nothing in the specification evidences any intent to use it other than in

its ordinary sense. (CIB at 11.) In opposition to TRW's proposed construction for this phrase, Magna argues that "TRW's proposed construction adds words without providing more clarity." (*Id.* at 11-12.) Furthermore, Magna submits that TRW ignores the word "at," removing the limitation that the specified location is in proximity to the windshield surface but Magna points out that all terms in a claim, however, are presumed to have meaning. (*Id.* at 12.)

In TRW's initial post hearing brief, TRW does not provide specific support for its proposed construction of the phrase "at and behind a windshield." (*See* RIB at 64.) However, TRW does state that "Magna does not contest that any of the pertinent prior art references asserted against the '840 patent are 'at and behind the windshield' under either party's interpretation." (*Id.*) Additionally, TRW contends that the resolution of the claim phrase does not impact the infringement, domestic industry, or §112 validity analyses. (*Id.*)

The Staff agrees with Magna that the claim term "at and behind a windshield" is not a term of art and should be understood according to its plain and ordinary meaning of "on the inside of the windshield." (SIB at 9.) On the other hand, the Staff points out that TRW would not limit the term to locations on the windshield but TRW contends that the term may refer to any "particular place" that is "behind a windshield," meaning anywhere inside a vehicle. (*Id.*) "In the Staff's view, TRW's proposed construction does not account for the fact that the claim term refers to a location that is both "at" *and* "behind" a windshield." (*Id.*) Furthermore, the Staff submits that TRW's expert witness Dr. Kazerooni does not even share TRW's overly-restrictive definition as shown by Dr. Kazerooni acknowledgement that the terms "at" and "behind" define different concepts. (*Id.*) Specifically, the Staff points out that Dr. Kazerooni's testimony illustrated that "behind" means in the passenger cabin and "at" refers to being on or in close proximity – 2 mm – to the windshield. (*Id.*) Thus, the Staff contends that "[t]he evidence,

including Dr. Kazerooni's testimony, shows that the construction proposed by Magna and the Staff is correct." (*Id.*)

The ALJ finds that the claim term "at and behind a windshield" should be understood by its plain and ordinary meaning of "on the inside of the windshield." Clearly, in the context of the claim and this particular phrase, "behind" the windshield means in the passenger cabin while "at" the windshield means on or in close proximity of the windshield. (JX-0001 ('840 patent) at 8:20-21.) The record further shows that a POSITA understands "behind" to mean in the passenger cabin and "at" refers to being on or in close proximity – 2 mm – to the windshield. (Kazerooni Tr. 621:13 – 622:11.) Accordingly, the ALJ finds the term "at and behind a windshield" means "on the inside of the windshield."

4. "a control"

Magna	TRW	Staff
plain and ordinary meaning (<i>i.e.</i> , a device that performs operations)	indefinite; alternatively, a means or device to direct and regulate a process or sequence of events	a device that performs operations

Magna contends that "[t]he plain and ordinary meaning of 'control' is 'a device that performs operations.'" (CIB at 12.) Magna points out that claim 30 states that "the control (1) 'comprises digital circuitry and a microprocessor,' (2) 'controls at least said forward facing camera,' and (3) 'at least one of sends data to at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle and receives data from at least one other accessory or system of the equipped vehicle via said vehicle network of the equipped vehicle.'" (*Id.*) Then, Magna specifically submits that "[a]ttribute (1) confirms that the control is a device, comprising certain elements, and attributes (2) and (3) show that the control performs

operations with respect to a forward facing camera and sending and/or receiving data.” (*Id.*) Magna contends that “TRW’s proposed construction of “a control” as “a means or device to direct and regulate a process or sequence of events” is excessively restrictive; it includes the words “process or sequence” when the intrinsic evidence shows that the claimed control is not so limited.” (*Id.*) Magna then argues that the ’840 patent does not require that the control send or receive data more than one time or through a “process or sequence.” (*Id.*) Accordingly, Magna contends that “the plain and ordinary meaning of ‘a control’ as ‘a device that performs operations’ should be adopted.” (*Id.* at 13.)

Although TRW contends that the term “a control” is indefinite, TRW provides the following construction in case the term is not found indefinite: “a means or device to direct and regulate a process or sequence of events.” (RIB at 64.) According to TRW, “[t]he claimed ‘control’: (1) directs or determines the behavior of a forward facing camera, and (2) either sends or receives data related to an accessory or system via a vehicle network.” (*Id.*) Furthermore, TRW argues that a POSITA would understand “a control” to mean a means or device to direct and regulate a process or sequence of events. (*Id.*) Additionally, TRW contends that “[t]he control is exclusively described in functional terms, and no specific algorithm or structure is described in any detail for performing the claimed functions.” (*Id.*) Therefore, TRW avers that “Magna’s definition is unreasonably broad.” (*Id.*) TRW argues that “[i]f, however, Magna’s definition of “a device that performs operations” is accepted, then the express limitation in that definition that the control must be a device should be applied.” (*Id.* (emphasis in original).) Furthermore, TRW contends that “Magna’s definition not only would cover the entire printed circuit board 61, but also other single elements and random combinations of elements within Fig. 3.” (*Id.* at 65.) Thus, according to TRW, “the specification—including the original abstract and

the only disclosed embodiment of the control as a microcontroller—supports TRW’s position that the control is a means or device to direct and regulate a process or sequence of events.” (*Id.*)

The Staff proposed construction for the term “a control” is “a device that performs operations.” (SIB at 9.) First, the Staff points out that “TRW contends that the term is indefinite under 35 U.S.C. § 112 para. 2, even though [TRW] alternatively proposes a construction.” (*Id.*) The Staff contends that claim 30 of the ’840 patent, in which the term “control” appears, is not invalid for indefiniteness. (*Id.* at 10.) The Staff states that a POSITA would have understood with reasonable certainty the scope of the invention claimed, and particularly the scope of the claimed “control.” (*Id.*) The Staff points out that “[c]laim 30 describes the control as comprising ‘digital circuitry and a microprocessor’ and explains that it ‘controls at least said forward facing camera’ and sends data to and/or receives data from ‘at least one other accessory or system of the equipped vehicle[.]’” (*Id.*) The Staff notes that [a]t the hearing, TRW’s witness Dr. Kazerooni was able to easily identify the microprocessor and digital circuitry of claim 30.” (*Id.*) Thus, according to the Staff, “[t]he claimed control, therefore, is a device containing digital circuitry and a microprocessor that performs operations including at least controlling a forward facing camera and sending and/or receiving data.” (*Id.*) The Staff additionally points out that “Dr. Kazerooni agrees that a microcontroller controls a device and could include a microprocessor.” (*Id.*) In addressing TRW’s alternative construction of “a means or device to direct and regulate a process or sequence of events,” the Staff contends that TRW’s alternative construction is too narrow. (*Id.*) The Staff points out that “[b]ecause the claimed control may also *receive* data, it is not limited, as TRW’s alternative construction suggests, to sending out instructions, *i.e.*, directing and regulating a process or sequence of events.” (*Id.* (emphasis in original).)

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The ALJ finds that the claim term “a control” should be construed as “a device that performs operations.” Claim 30 specifically provides the correct meaning for the term “a control” by describing the control as comprising “digital circuitry and a microprocessor” and explains that it “controls at least said forward facing camera” and “sends data to at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle and receives data from at least one other accessory or system of the equipped vehicle via said vehicle network of the equipped vehicle[.]” (JX-0001 (’840 patent) at 8:26-35.)

The ALJ finds that TRW’s proposed construction of “a means or device to direct and regulate a process or sequence of events” is incorrect because it is too limiting and too narrow. Specifically, claim 30 states that the control may also *receive* data (e.g., “wherein said control ... receives data from at least one other accessory or system ...” (JX-0001 (’840 patent) at 8:30-34.) TRW’s alternative construction improperly limits the control to sending out instructions, *i.e.*, directing and regulating a process or sequence of events. (CX-0003C (Min witness Statement.) Q. 153.)

5. “controls”

Magna	TRW	Staff
plain and ordinary meaning (<i>i.e.</i> , directs the action or function of something)	indefinite; alternatively, implements an algorithm which communicates with and determines the behavior of a system of equipped vehicle via a vehicle network	plain and ordinary meaning (<i>i.e.</i> , directs the operation of something)

Magna contends that “[t]he claim term ‘controls’ is used in claim 30 to describe the actions performed by the control: ‘controls at least said forward facing camera.’” (CIB at 13.)

Additionally, Magna points out that “[t]he claim language uses ‘controls’ consistent with the plain and ordinary meaning of the term: ‘direct[s] the action or function of (something).’” (*Id.*) In contrast, Magna submits that TRW’s proposed construction improperly limits the scope of the claim term and should be rejected because TRW limits the term to a particular way in which control may be exercised as “implements an algorithm which communicates with and determines the behavior of a system of equipped vehicle via a vehicle network.” (*Id.* at 13-14.) Furthermore, Magna avers that “nothing in the patent requires that the control ‘determines the behavior of the other accessory or system.’” (*Id.*)

Although TRW contends that the term “controls” is indefinite, TRW provides the following construction in case the term is not found indefinite: “implements an algorithm which communicates with and determines the behavior of a system of the equipped vehicle via a vehicle network.” (RIB at 65.) TRW contends that “Magna’s definition provides no reasonable certainty as to what is being claimed and thus highlights the indefiniteness of this term.” (*Id.*) TRW then points out that “controls” as a verb appears only in the claims and therefore the only “controlling” of a camera, if any, must be implementing an algorithm which communicates with and determines the behavior of such a camera. (*Id.*)

The Staff proposed the construction of the verb “controls” as its plain and ordinary meaning, “directs the operation of something.” (SIB at 11.) The Staff points out that “Magna also would construe the term according to its plain and ordinary meaning, which it characterizes as ‘directs the action or function of something.’” (*Id.*) The Staff submits that its proposed construction and Magna’s proposed construction are interchangeable. (*Id.*) The Staff proffers that TRW’s proposed construction would restrict the definition of “controls” in a manner that is not supported by either the specification or the claim language as an “algorithm

is not mentioned anywhere in the '840 patent. (*Id.*) The Staff points out that “[w]hile it is certainly possible to implement the ‘accessory system for a vehicle’ of claim 30 by means of an algorithm, there are other means by which the forward facing camera could be controlled, for example, by circuitry or a control table.” (*Id.*) As such, the Staff argues that “[t]he plain meaning of the claim language ‘said control controls at least said forward facing camera’ is that the ‘control’ directs the operation (or action) of the claimed camera.” (*Id.* at 12.) Thus, the Staff contends that its proposed construction, interchangeable with Magna’s, is consistent with the plain meaning of the term, and therefore should be adopted. (*Id.*)

The ALJ finds that the proposed construction of the term “controls” is its plain and ordinary meaning as proposed by Magna and the Staff. As such, the ALJ construes the term “controls” to have its plain and ordinary meaning as “directs the operation of something.” Clearly, claim 30 captures the meaning of the term “controls” by using the term as follows: “controls at least said forward facing camera,” indicating that the control directs the operation or action of the camera. (JX-0001 at 8:27-28.) The ALJ finds that a POSITA would also define the verb “controls” within the '840 patent by its plain and ordinary meaning which is “directs the operation of something.” (JX-0001 ('840 patent) at 4:60-61 (“microcontroller 20 may control a forward-facing camera system”); CX-0003C (Min witness stmt.) at QQ. 161-163.)

The ALJ rejects TRW proposed construction because this construction would incorrectly limit “controls” as an algorithm, which is not supported by either the specification or the claim language. The specification discusses “controls” in terms of “a microcontroller which defines, at least in part, the digital drive circuit and the logic circuit” without any disclosure of an algorithm. (JX-0001 ('840 patent) at 2:23-24.) Specifically, a POSITA would

understand that a digital drive circuit and the logic circuit do not require an algorithm to control the forward-facing camera. (CX-0003C (Min witness stmt.) at QQ. 165-167.)

6. “said accessory”

Magna	TRW	Staff
plain and ordinary meaning (<i>i.e.</i> , the accessory defined in claim 30: a package or module containing a forward facing camera that views through the windshield of the equipped vehicle)	indefinite ⁵	plain and ordinary meaning (<i>i.e.</i> , the accessory described in claim 30 as being disposed at and behind a windshield of a vehicle)

Magna points out that “TRW contends that the term “said accessory,” as used in claim 36, is indefinite and proposes no construction for the term as an alternative to Magna and Staff’s plain and ordinary meaning of the term.” (CIB at 14.) Moreover, Magna contends that “[t]he parties agree on the construction of the term ‘an accessory’ in claim 30, and the term ‘said’ is of common usage and understood meaning—‘aforementioned.’” (*Id.*) Magna states that claim 30 recites “an accessory disposed at and behind a windshield” (*Id.*) Additionally, Magna states that claim 30 further recites “wherein said accessory comprises a forward facing camera.” (*Id.*) Therefore, Magna argues that “said accessory” referred to in claim 36, is the same “accessory” as “said accessory” referred to in claim 30. (*Id.*) Specifically, Magna submits that “[i]n claim 30, ‘said accessory’ comprises a forward facing camera and in claim 36 the ‘said accessory’ further comprises the control of claim 30.” (*Id.*) According to Magna, the plain meaning of “said accessory” applies in claim 36. (*Id.*)

The Staff contends that the limitation “said accessory” in claim 36 of the ’840 patent should be construed according to its plain and ordinary meaning as “the accessory described in

⁵ TRW’s initial post hearing brief does not include a proposed construction for the term “said accessory” within Subsection A (Claim Construction Regarding the ’840 Patent) in Section III (U.S. Patent 8,686,840).

claim 30 as being disposed at and behind a windshield of a vehicle.” (SIB at 12.) Then, the Staff points out that “Magna’s proposed construction is similar: ‘a package or module containing a forward facing camera that views through the windshield of an equipped vehicle.’” (*Id.*) On the other hand, the Staff states that TRW argues that the term is indefinite because claim 30 mentions two accessories, “said accessory” and “at least one other accessory” and it is unclear which of the two accessories claim 36 is intended to reference. (*Id.*) The Staff contends that a POSITA would not have considered claim 36 to be truly ambiguous, as contended by TRW, but a POSITA would have known with reasonable certainty that the “said accessory” of claim 36 refers to the “said accessory” of claim 30. (*Id.* at 12-13.) Specifically, the Staff submits that “[c]laim 30 first discloses ‘an accessory disposed at and behind a windshield of a vehicle equipped with said accessory system[.]’ and then discloses that ‘*said accessory* comprises a forward facing camera[.]’” (*Id.* at 13; (emphasis added).) Last, the Staff points out that “TRW’s expert identified the forward-facing camera as the accessory.” (*Id.*)

The ALJ finds that the term “said accessory” in claim 36 of the ’840 patent should be given its plain and ordinary meaning. Additionally, the ALJ finds the proposed construction proffered by the Staff is on point with the plain and ordinary meaning in line with the claim language. Specifically, claim 30 clearly describes “an accessory disposed at and behind a windshield” whereby “said accessory comprises a forward facing camera.” (JX-0001 (’840 patent) at 8:20-23.) As such, the ALJ construes the term “said accessory” to be “the accessory described in claim 30 as being disposed at and behind a windshield of a vehicle.” The ALJ determines that a POSITA reading the patent as a whole would understand that “said accessory” referred to in claim 36, is the same “accessory” as “said accessory” referred to in claim 30. (JX-0001 (’840 patent) at 8:20-23; 66-67; Tr. (Kazerooni) at 539:21-24.)

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The ALJ finds that TRW's contention that the term is indefinite is unpersuasive and not in line with the patent as a whole. Indeed, given that claim 36 is dependent on claim 30 and specifically references the "accessory system of claim 30, the ALJ finds a POSITA would have known with reasonable certainty that the "said accessory" of claim 36 refers to the "said accessory" of claim 30.

C. The '659 Patent

Magna asserts dependent claims 3 and 92 of the '659 patent. (CIB at 1.) Claim 3 is dependent on independent Claim 1. (See JX-0003.) Claim 92 is dependent on dependent Claim 91 and Claim 91 is dependent on independent Claim 90. (See JX-0003.)

1. Level of Skill in the Art

With respect to the '659 patent, Magna proposes the same level of skill in the art as discussed above in Section IV.B.1 with respect to the '840 patent with a relevant date of November 10, 2000. (CIB at 4.) TRW also proposes the same level of skill in the art as discussed above in Section IV.B.1. (RIB at 5-6.) And, the Staff does not dispute the assertion that both Magna and TRW contend that the definition of a POSITA should be the same for both the '840 and '659 patents. (SIB at 45.)

The ALJ finds a POSITA for the '659 patent is the same as the POSITA for the '840 patent. Accordingly, as explained in Section IV.B.1 above, a POSITA for the '659 patent would have at least an undergraduate degree in electrical or mechanical engineering plus two years of work experience in the field of electronic automobile accessory systems

2. Claim Construction

The parties have agreed to the following proposed interpretations of claim terms as shown in Table 3 Agreed-Upon Claim Terms for '659 Patent. (CIB at 48; RIB at 5.)

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'659 Claim Term	Joint Proposed Construction
attachment element (claims 1, 90)	a component configured for the mounting of one thing to another
a vehicle equipped with said accessory mounting system (claims 1, 90)	a motor vehicle installed with the said accessory mounting system
a structure configured for mounting to said plurality of attachment members (claims 1, 90)	a manufactured part that is designed to be used for attaching to all of the said plurality of attachment members
a mirror mounting button (claims 1, 90)	plain and ordinary meaning (<i>i.e.</i> , a button-shaped mounting element for a mirror)

Table 3 Agreed-Upon Claim Terms for '659 Patent

While eight claim terms are allegedly in dispute in this investigation with respect to the '659 patent, TRW only proposed a construction for the term “adhesively attached.” Therefore, the ALJ hereby adopts the plain and ordinary meaning of the other 7 claim terms as proposed by Magna and the Staff as shown in Table 4 below. To be clear, the ALJ adopts the Staff’s claim construction for these 7 terms as the ALJ finds the wording put forth by the Staff to be more precise. (CIB at 48-54; SIB at 45-52.) The term “adhesively attached” is discussed in the next section.

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'659 Claim Term	Magna	Staff
local to (claims 1, 90)	plain and ordinary meaning (<i>i.e.</i> , nearby)	plain and ordinary meaning (<i>i.e.</i> , nearby)
mirror head (claims 1, 90)	plain and ordinary meaning (<i>i.e.</i> , a mirror casing that houses a reflective element of the interior rearview mirror assembly of the equipped vehicle)	plain and ordinary meaning (<i>i.e.</i> , a structure comprising a mirror reflective element and a mirror casing)
configured to receive and be supported by (claims 1, 90)	plain and ordinary meaning (<i>i.e.</i> , for claims 1 and 90: designed to accept the said plurality of attachment members and, as accepted, to be borne by the said plurality of attachment members)	plain and ordinary meaning (<i>i.e.</i> , designed to accept and to be held in place by [a plurality of/at least one] attachment member[s])
configured to accommodate a forward facing camera (claims 1, 90)	plain and ordinary meaning (<i>i.e.</i> , designed to hold a forward facing camera)	plain and ordinary meaning (<i>i.e.</i> , designed to hold a forward facing camera)
said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said [at least one] attachment member[s] (claim 90)	plain and ordinary meaning (<i>i.e.</i> , the interior rearview mirror assembly can be attached to and removed from a mirror mounting button without removing the said structure that has received and is being supported by the said attachment member(s))	plain and ordinary meaning (<i>i.e.</i> , the mirror mount can be mounted to and unmounted from the mirror mounting button without removing said structure from the attachment member[s])

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'659 Claim Term	Magna	Staff
a light absorbing layer disposed at the vehicle windshield at least partially masks the presence of said attachment element from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield (claim 91)	plain and ordinary meaning (<i>i.e.</i> , due to a windshield dark coating/film, a person looking through the vehicle windshield from outside the equipped vehicle does not fully see the said attachment element)	plain and ordinary meaning (<i>i.e.</i> , a light-absorbing coating on the vehicle windshield at least partially obscures said attachment element from view by a person looking through the windshield from the outside)
said light absorbing layer disposed at the vehicle windshield further at least partially masks the presence of said structure from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield (claim 92)	plain and ordinary meaning (<i>i.e.</i> , due to a windshield dark coating/film, a person looking through the vehicle windshield from outside the equipped vehicle does not fully see the said structure)	plain and ordinary meaning (<i>i.e.</i> , a light-absorbing coating on the vehicle windshield at least partially obscures said structure element from view by a person looking through the windshield from the outside)

Table 4 Parties Proposed '659 Claim Construction

3. “ adhesively attached”

Staff and Magna	TRW
plain and ordinary meaning (<i>i.e.</i> , glued)	secured using conventional means, such as fasteners, an adhesive, or the like

Magna contends that the term “adhesively attached” as used in the '659 patent should be construed in accordance with its plain and ordinary meaning. (CIB at 48.) Magna argues that TRW’s proposed construction is too broad without support. (*Id.*) Magna points out that “[a]s Dr. Min explained, a [POSITA] would have understood the adverb ‘adhesively’ to suggest that the

attachment is by means of an adhesive.” (*Id.*) By way of example, Magna submits that the specification distinguishes between adhesives and other means of securing pieces together, such as fasteners. (*Id.*) Further, the specification provides a number of examples of adhesives, all of which are glue-like substances. (*Id.*) Magna contends that “[e]ven TRW’s expert suggests that ‘a POSITA would understand the phrase ‘adhesively attached’ to mean conventionally secured through the use of an adhesive force.’” (*Id.* at 49.) Thus, Magna argues that “[a]dhesively attached’ means attached by means of a glue-like adhesive; the plain meaning of the term should be adopted.” (*Id.*)

“TRW’s proposed construction is ‘secured using conventional means such as fasteners, an adhesive, or the like.’” (RIB at 6.) TRW points out that “Dr. Kazerooni testified that adhesively attached means conventionally secured through the use of an adhesive force.” (*Id.*) Furthermore, TRW contends that a POSITA would understand the phrase “adhesively attached” to mean conventionally secured through the use of an adhesive force: attraction between dissimilar surfaces (as opposed to cohesive forces which describe an attraction between like surfaces) including commercial tapes and gels identified in the specification as well as other known implementations such as suction forces. (*Id.*) Therefore, TRW argues that Magna’s proposed construction would exclude the aforementioned examples and therefore be too narrow. (*Id.*)

The Staff agrees with Magna that the claim term “adhesively attached” is not a term of art and should be understood according to its plain and ordinary meaning, *i.e.*, “glued.” (SIB at 45.) The Staff, in disputing TRW broader construction, points out that the ’659 specification “plainly distinguishes between ‘an adhesive’ and a ‘releasable[e]’ mechanical attachment such as

‘attachment members, including rails, channels, or the like.’” (*Id.*) Then, the Staff quotes from the ’659 specification in describing the preferred adhesives as follows:

a structural adhesive such as a modified epoxy structural bonding tape available from 3M of Minneapolis-St. Paul, Minn. under the trade names SBT9214, SBT9263 and SBT9270. Alternately, a silicone adhesive, such the silicone adhesive available from Dow Corning of Midland Mich. under the trade name SOTEFA can be used or a polyvinyl butyral adhesive such as available from Solutia is can be used. For heavier video mirror systems/accessory module assemblies, such as those weighing in excess of 500 g and particularly in excess of 750 g, use of a structural bonding tape such as described above to bond the attachment member (such as the windshield mirror button) to the inner surface of the windshield is preferred.

(*Id.* at 45-46.) Therefore, the Staff proffers that the specification clearly distinguishes between adhesives and releasable mechanical fasteners making it improper to read the term “adhesively attached” as encompassing both fastening methods. (*Id.* at 46.)

The ALJ finds that the proposed construction of the term “adhesively attached” is its plain and ordinary meaning (*i.e.*, glued). First, in context of the ’659 patent, clearly a POSITA would understand the adverb ‘adhesively’ to indicate that the attachment is by means of an adhesive. (JX-3 at 39:22-27 (“A preferred adhesive to attach windshield mirror mounting buttons ... is a structural adhesive such as a modified epoxy structural bonding tape ...”); (CX-0003C (Min witness stmt.) at QQ. 179-185.) The ALJ finds TRW’s proposed construction to be without support within the meaning of the claim term or the specification. The specification specifically describes mounting by an adhesive **or** mounting by releasable and mechanical attachment members such as rails, channels, or the like. (JX-3 at 26:26-30.) Given that the specification clearly makes a distinction between the two different ways of mounting, TRW’s proposed construction cannot be correct.

V. INFRINGEMENT DETERMINATION

A. Applicable Law

In a Section 337 investigation, the complainant 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, Commission Notice of Final Determination of No Violation of Section 337, 2002 WL 448690 at 59, (March 22, 2002); *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376 (Fed. Cir. 1998).

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). 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).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements identical or equivalent to each claimed element of the patented invention. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997).

Under the doctrine of equivalents, infringement may be found if the accused product or process performs substantially the same function in substantially the same way to obtain substantially the same result. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1043 (Fed. Cir. 1993). The doctrine of equivalents does not allow claim limitations to be ignored. Evidence must be presented on a limitation-by-limitation basis, and not for the invention as a whole.

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Warner-Jenkinson, 520 U.S. at 29; *Hughes Aircraft Co. v. U.S.*, 86 F.3d 1566 (Fed. Cir. 1996). Thus, if an element is missing or not satisfied, infringement cannot be found under the doctrine of equivalents as a matter of law. See, e.g., *Wright Medical*, 122 F.3d 1440, 1444 (Fed. Cir. 1997); *Dolly, Inc. v. Spalding & Evenflo Cos., Inc.*, 16 F.3d 394, 398 (Fed. Cir. 1994); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538-39 (Fed. Cir. 1991); *Becton Dickinson and Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 798 (Fed. Cir. 1990).

The concept of equivalency cannot embrace a structure that is specifically excluded from the scope of the claims. *Athletic Alternatives v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996). In applying the doctrine of equivalents, the Commission must be informed by the fundamental principle that a patent's claims define the limits of its protection. See *Charles Greiner & Co. v. Mari-Med. Mfg., Inc.*, 92 F.2d 1031, 1036 (Fed. Cir. 1992). As the Supreme Court has affirmed:

Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.

Warner-Jenkinson, 520 U.S. at 29.

To prove direct infringement, Magna must prove by a preponderance of the evidence that each of the accused products either literally infringe or infringe under the doctrine of equivalents the asserted claims of the asserted patents. *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1336 (Fed. Cir. 2001).

A party can also indirectly infringe a patent. To prevail on a claim for indirect infringement, a patentee must first demonstrate direct infringement, and then establish that the “defendant possessed the requisite knowledge or intent to be held vicariously liable.” *Dynacore*

Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263, 1272–73 (Fed. Cir. 2004). The knowledge requirement must be met by a showing of either actual knowledge or willful blindness. *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011).

Under 35 U.S.C. § 271(b), “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” “To prove induced infringement, the patentee must show direct infringement, and that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement.” *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1363 (Fed. Cir. 2012) (internal quotations omitted).

The Supreme Court has held that “induced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement.” *Global-Tech*, 131 S. Ct. at 2070. In so holding, the Supreme Court rejected the Federal Circuit's “deliberate indifference” to a “known risk” test. *Id.* at 2071. It explained that the “knowledge” required under § 271(b) could be satisfied by a showing of actual knowledge or “willful blindness.” *Id.* at 2068–71. The Supreme Court explained that a defendant acts with willful blindness if she “subjectively believe[s] that there is a high probability that a fact exists” and “take[s] deliberate actions to avoid learning of the fact.” *Id.* at 2070, 2070 n.9. In contrast, a defendant who “merely knows of a substantial and unjustified risk of [] wrongdoing” acts recklessly, and a defendant who “should have known of a similar risk, but in fact, did not” acts negligently. *Id.* at 2071. “Inducement requires evidence of culpable conduct, directed to encouraging another's infringement, not merely that the inducer had knowledge of the direct infringer's activities.” *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1306 (Fed. Cir. 2006) (*en banc*).

Under 35 U.S.C. § 271(c), “[w]hoever 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 specifically made to or specially adapted for use in the infringement of the patent, and not a staple article or commodity suitable for substantial non-infringing use, shall be liable as a contributory infringer.” “Contributory infringement imposes liability on one who embodies in a non-staple device the heart of a patented process and supplies the device to others to complete the process and appropriate the benefit of the patented invention.” *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1327 (Fed. Cir. 2009). To state a claim for contributory infringement, an infringer must sell, offer to sell or import into the United States a component of an infringing product “knowing [the component] 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.” 35 U.S.C. § 271(c); see *Lucent Techs. v. Gateway, Inc.*, 580 F.3d 1301, 1320 (Fed. Cir. 2009). As with induced infringement, a claim for contributory infringement must also contain allegations of the requisite knowledge of the patent-in-suit at the time of infringement. *Global-Tech*, 131 S. Ct. at 2068. In addition, the patentee bears the burden of proving that the accused products have no substantial non-infringing uses. See *Golden Blount, Inc. v. Robert H. Peterson Co.*, 438 F.3d 1354, 1363 (Fed. Cir. 2006).

A seller of a component of an infringing product can also be held liable for contributory infringement if: (1) there is an act of direct infringement by another person; (2) the accused contributory infringer knows its component is included in a combination that is both patented and infringing; and (3) there are no substantial non-infringing uses for the accused component, *i.e.*, the component is not a staple article of commerce. *Carborundum Co. v. Molten Equip. Innovations, Inc.*, 72 F.3d 872, 876 (Fed. Cir. 1995).

B. The '840 Patent

Magna accuses TRW's S-cam 2, S-cam 3 and S-cam 3.5 of indirect infringement of independent claim 30 and dependent claim 36 of the '840 Patent. (CIB at 15; SIB at 13.) Magna alleges that imported vehicles that are equipped with the S-cam, for example, Chevrolet Silverado and GMC Sierra pickup trucks, directly infringe claims 30 and 36 of the '840 patent. (CIB at 13.) As such, Magna alleges that TRW contributes to GM's alleged direct infringement by providing the S-cam to GM. (*Id.*) Additionally, Magna argues that "TRW induces GM's infringement by continuing to assist GM in the design, development, and installation of the S-cam in GM's vehicles, which TRW knows directly infringes the asserted claims." (*Id.*)

For the reasons set forth below, the ALJ finds that Magna has failed to prove by a preponderance of the evidence that TRW infringes, either directly or indirectly, the asserted claims of the '840 patent by supplying the accused devices to third party customers such as GM. Section 337 incorporates the indirect forms of infringement provided for in the patent statute. (*See, e.g., Certain Hardware Logic Emulation Systems and Components Thereof*, Inv. No. 337-TA-383, Comm'n Op. at 18-19, USITC Pub. No. 3089 (Mar. 1998).)

1. Direct Infringement by Third Parties

Magna contends that the evidence shows imported vehicles that are equipped with the S-cam, for example, Chevrolet Silverado and GMC Sierra pickup trucks, directly infringe claims 30 and 36 of the '840 patent. (CIB at 15.) TRW contends that Magna cannot prove direct infringement because the accused products (*i.e.*, S-cam 2) are vision-based drivers assistance cameras and components, not vehicles and claims 30 and 36 cannot be infringed without, *e.g.*, a "windshield, a vehicle equipped, one other accessory, a vehicle network, et cetera." (RIB at 66.) TRW submits that it does not provide any of these components, is not alleged to, nor are these

components the products over which the investigation was instituted. (*Id.*) TRW does not address the issue of direct infringement by third parties such as GM.

The Staff contends that TRW supplies S-cam 2 devices to General Motors as shown by the evidence. (SIB at 14.) Furthermore, the Staff points out that at least some Chevrolet Silverado trucks containing TRW S-cams are assembled in Mexico and then imported into the United States. (*Id.*) The Staff contends that “[t]he evidence therefore shows that these Silverado trucks equipped with S-cam devices directly infringe claims 30 and 36 of the ’840 patent.” (*Id.* at 15.)

a) Claim 30: “An accessory system for a vehicle, said accessory system comprising ...”

Magna contends that the parties agree that no construction of the preamble to claim 30 is necessary and its plain and ordinary meaning should be applied as understood by a POSITA. (CIB at 15.) Specifically, Magna states that the preamble of claim 30 is “[a]ccessory system for a vehicle, said accessory system comprising....” (*Id.*) Magna contends that the S-cam is an accessory system for a vehicle since TRW describes the S-cam as “a scalable family of driver assist camera modules that uses common mechanical designs and vehicle interfaces to simplify the task of vehicle integration across multiple platforms and offers a wide range of safety functions.” (*Id.*) Neither TRW nor the Staff directly address the preamble of claim 30 of the ’840 patent with respect to Magna’s allegation of direct infringement by GM.

The ALJ finds the S-cam 2 is an accessory system for a vehicle because the S-cam is a scalable family of driver assist camera modules that uses common mechanical designs and vehicle interfaces to simplify the task of vehicle integration across multiple platforms and offers a wide range of safety functions. (JX-0001 at 8:18-19 (“[a]ccessory system for a vehicle”); CX-0003C at QQ. 245-46; CX-28.)

b) Claim 30: “... an accessory disposed at and behind a windshield of a vehicle equipped with said accessory system; wherein said accessory comprises a forward facing camera, said forward facing camera viewing through the windshield of the equipped vehicle ...”

Magna contends that “[c]laim 30 requires an accessory ‘disposed at and behind a windshield,’ wherein said accessory ‘comprises a forward facing camera, said forward facing camera viewing through the windshield of the equipped vehicle.’” (CIB at 15.) Magna points out the parties’ agreement that the term “an accessory” means “a component, package, or module.” (*Id.* at 15-16.) Magna also submits that the S-cam is an “accessory” and the S-cam’s image printed circuit board (“PCB”) is an “accessory.” (*Id.* at 16.) Magna then contends that the S-cam integrated into a rearview mirror assembly and located behind the windshield on the inside of a vehicle meets this portion of the claim limitation. (*Id.*) Magna points out this claim limitation also requires a forward facing camera, said forward facing camera viewing through the windshield of an equipped vehicle and according to Magna, there is no dispute that the S-cam comprises a forward facing camera. (*Id.*) Additionally, Magna submits that Dr. Min testified that when the S-cam is installed in a vehicle, such as the Chevrolet Silverado, there is an opening on the front windshield that allows the TRW S-cam to capture images, further establishing that this claim limitation is met. (*Id.*) Thus, Magna argues that the S-cam, used in an equipped vehicle, satisfies this limitation of claim 30 under all parties’ proposed claim constructions. (*Id.* at 17.)

As previously stated, TRW does not address the issue of direct infringement by third parties such as GM. TRW does, however, state that “claims 30 and 36 cannot be infringed without, e.g., a “windshield, a vehicle equipped, one other accessory, a vehicle network, etc.” (RIB at 66.) Additionally, TRW states that it does not provide any of these components, and is

not alleged to and these components are not the products over which the investigation was instituted. (*Id.*)

The Staff submits that a TRW S-cam is “an accessory disposed at and behind a windshield of a vehicle equipped with said accessory system” when the S-cam is installed in a Chevrolet Silverado truck. (SIB at 15.) The Staff further points out that the S-cam is disposed on the interior of the front windshield of the Silverado. (*Id.*) Additionally, the Staff contends that the S-cam “comprises a forward facing camera, said forward facing camera viewing through the windshield of the equipped vehicle[.]” (*Id.*) Next, the Staff points out that the S-cam includes a camera. (*Id.*) Last, the Staff states that “[w]hen the S-cam is installed in the Silverado, the camera faces forward through the windshield of the equipped vehicle.” (*Id.*) Accordingly, the Staff contends that the Chevrolet Silverado with a TRW S-cam installed satisfies the first limitation of asserted claim 30. (*Id.*)

The ALJ finds that Magna has proven by a preponderance of the evidence that the Chevrolet Silverado with an installed TRW S-cam 2 meets this limitation. First, the evidence shows the TRW S-cam 2 is an accessory as shown by the agreement between the parties that the term “an accessory” means “a component, package, or module.” (*See* JX-0005.) Second, the S-cam 2 is installed at and behind a windshield of a vehicle (*i.e.*, a Chevrolet Silverado) under the adopted claim construction for “at and behind a windshield” as “on the inside of the windshield” as shown below in Figure 1 Chevrolet Silverado Opening for TRW S-cam. (*See* CX-0022.0016 (TRW654-002289.); CX-22 at 14-17; CX-0003C at Q. 249; CPX-0032; CPX-0045.)

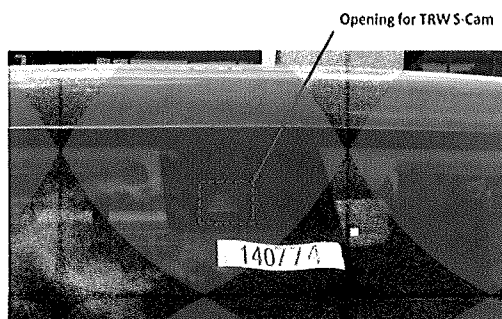


Figure 1 Chevrolet Silverado Opening for TRW S-cam

Third, the record clearly shows that the S-cam “comprises a forward facing camera, said forward facing camera viewing through the windshield of the equipped vehicle” as it faces forward. (Min Tr. at 265:15-266:3; JX-0001 at 8:22-24.) Fourth, the S-cam includes a camera. (*See* CX-0003C Q. 249; CX-0022 (2012, *TRW Advances*, Issue 35) at TRW654-002288.) Accordingly, the ALJ finds that the Chevrolet Silverado with a TRW S-cam installed therein satisfies the limitation at hand of asserted claim 30.

c) Claim 30: “... a control; wherein said control comprises digital circuitry and a microprocessor; wherein said control controls at least said forward facing camera ...”

Magna contends that “[c]laim 30 further requires a control, wherein said control ‘comprises digital circuitry and a microprocessor’ and wherein said control ‘controls at least said forward facing camera.’” (CIB at 17.) Magna argues that under its construction of the term “control” as “a device that performs operations,” TRW’s system meets the “control” limitation because the S-cam contains “a device that performs operations.” (*Id.*) Specifically, Magna contends that TRW’s S-cam has an image PCB and a main PCB and the components of the main PCB perform operations. (*Id.*) Magna also points out that the limitation at hand requires that the control comprises “digital circuitry and a microprocessor” and “[t]here can be no dispute that the main PCB of the S-cam comprises digital circuitry and microprocessor.” (*Id.*)

TRW argues that “Magna has not shown that the accused S-cam 2 modules as installed in GM vehicles include a claimed ‘control.’” (RIB at 66-67.) According to TRW, [REDACTED] is not a “control” or a “device,” [REDACTED] (*Id.* at 67.) Then TRW submits that Magna’s designation of the Main PCB as the “control” is an exercise in arbitrary box-drawing to get to infringement. (*Id.*) TRW contends that [REDACTED] cannot meet the ‘control’ requirement, [REDACTED] (*Id.*) Last, TRW argues that [REDACTED] communication protocol [REDACTED] [REDACTED] communication between [REDACTED] [REDACTED] (*Id.*)

The Staff contends that the accused devices contain such a control in the form of a main printed circuit board or “Main PCB” as discussed in Staff’s explanation in Section IV.B.4 above. (SIB at 15-16.) Thus, the Staff proffers that “[t]he evidence therefore shows that these limitations are also satisfied by the Chevrolet Silverado with a TRW S-cam installed.” (*Id.* at 16.)

As set forth *supra* in Section IV.B.4, the ALJ construed “control” to mean “a device that performs operations.” Consequently, the ALJ finds the limitation at hand is met by GM’s Silverado installed with TRW’s S-cam 2 because the S-cam contains “a device that performs operations” as the [REDACTED] *i.e.*, controls, the forward-facing camera. (CX-0003C (Min witness stmt.) at QQ. 251-252; CX-22.16; CX-162C at 18:2-9, 19:10-11; CX-22. 14; CX-426C at 24:2 – 25:1, 119:24 – 120:9; CX-2C at QQ. 94-96; Min Tr. at 207:5-209:6.) Clearly, the TRW S-cam 2 is a device that performs operations, specifically [REDACTED] [REDACTED] (CX-22.16; CX-22.15; CX-162C at 13:24 – 14:5,

47:12-13, 62:3-10, 64:3-15, 100:5-9; CX-426C at 24:2 – 25:1, 119:24 – 120:9; Tr. at 396:5-21 (Mr. Newton confirming [REDACTED]; CX-0003C (Min witness stmt.) at Q. 105.)

The ALJ finds TRW's arguments fail under the ALJ's claim construction as the "control" requirement is not required to only communicate over the vehicle network nor does the claim construction mandate the use of a specific protocol.

d) Claim 30: "... wherein said control at least one of sends data to at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle and receives data from at least one other accessory or system of the equipped vehicle via said vehicle network of the equipped vehicle ..."

Magna contends that "[c]laim 30 further requires that the control send data to and/or receive data from at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle." (CIB at 18-19.) Magna points out that the S-cam's [REDACTED] [REDACTED] send and receive data [REDACTED] (*Id.* at 19.) Magna specifically submits that [REDACTED] sends and receives data via the [REDACTED]
[REDACTED]

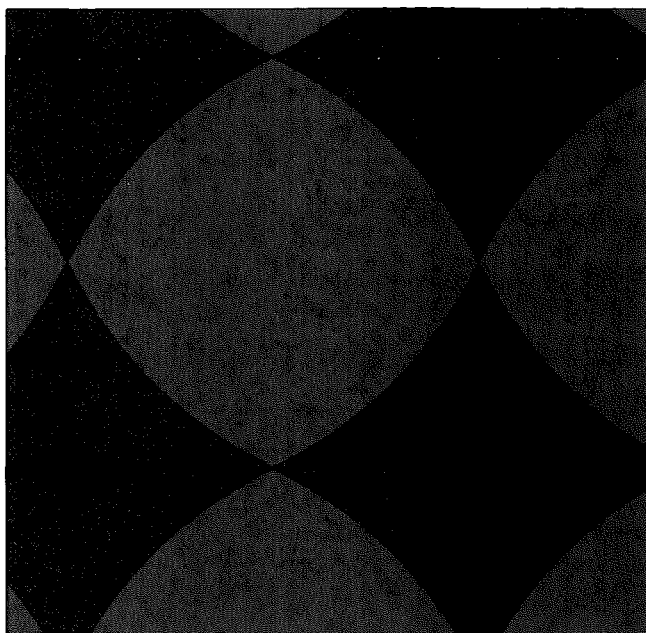


Figure 2 S-cam System Architecture

Thus, Magna submits that the S-cam, as used in an equipped vehicle, meets this claim limitation as the S-cam sends data to and receives data from another accessory or system in the same vehicle. (*Id.*)

TRW contends that “Magna offers no proof whatsoever that any component, either the Main PCB or the EyeQ chip, performs the claimed ‘sends data to at least one other accessory’ of both claims 30 and 36.” (RIB at 67.) Additionally, TRW contends that “[t]here is no mention by Dr. Min of where to find the said control at least one of sends data to at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle and receives data from at least one other accessory or system of the equipped vehicle via said vehicle network.” (*Id.*) According to TRW, “Dr. Min and Magna simply ignored this point despite it having been identified in discovery as a deficiency in Magna’s proofs.” (*Id.*)

The Staff contends that “[t]he evidence shows that the S-cam devices are capable of connecting to a vehicle’s ‘Controlled Area Network,’ or ‘CAN.’” (SIB at 16.) Additionally, the Staff points to an explanation in TRW’s documentation:

[REDACTED] in the camera. The first is typically connected to the [REDACTED]
[REDACTED]
communicating with the [REDACTED]
The optional second [REDACTED]
[REDACTED]

(*Id.*) The Staff therefore submits that the S-cam devices receive data from other accessories or systems of the equipped vehicle, such as the vehicle's indicators, brakes, wipers, headlights, and the like, when connected to a CAN network. (*Id.*) And, the Staff points out that the subject Chevrolet Silverados equipped with TRW S-cams include such a CAN network. (*Id.*)

As set forth *supra* in Section IV.B.5, the ALJ construed "controls" to mean "directs the operation of something." Consequently, the ALJ finds that Magna has proven by a preponderance of the evidence that the Chevrolet Silverado with an installed TRW S-cam 2 meets this limitation. The record shows the TRW S-cam 2 contains CAN interfaces. (CX-0003C (Min witness stmt.) at Q. 254.) The evidence further shows that the S-cam 2, when installed in a Silverado, sends and receives data via the Silverado's CAN as shown above in Figure 2 S-cam System Architecture and also as shown by the witness statements of Dr. Min and the deposition testimony of Dr. Kazerooni as well as TRW's own documentation. (*See* CX-0003C (Min witness stmt.) Q. 117; CX-0386C (Kazerooni dep. tr.) at 114:11-17; CX-0022 (2012, *TRW Advances*, Issue 35) at TRW654-002288 to TRW654-002289.) Therefore, the ALJ finds the Chevrolet Silverado with an installed TRW S-cam 2 meets this limitation.

e) Claim 30: "... wherein said vehicle network comprises a protocol selected from the group consisting of a LIN, a CAN and a LAN; and wherein communication of data via said vehicle network comprises communication by at least one of a wire, a cable and a fiber-optic connection."

Magna points out that "[c]laim 30 further requires that the vehicle network comprises 'a protocol selected from the group consisting of a LIN, a CAN and a LAN.'" (CIB at 19-20.)

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Magna contends that the S-cam's main PCB has CAN interfaces and the subject vehicles in which the S-cams are installed contain a CAN, therefore, the first part of the limitation is met ("wherein said vehicle network comprises a protocol selected from the group consisting of a ... CAN ..."). (*Id.* at 20.) Next, Magna contends the S-cam, when installed in a Silverado, communicates data over the vehicle's CAN network using a wire or cable as required by the last part of the subject limitation. (*Id.*) Thus, when the S-cam accessory system is used in a vehicle, Magna submits that the TRW satisfies this limitation of claim 30. (*Id.*)

The Staff contends that "TRW's S-cam devices are designed to be part of a CAN network." (SIB at 17.) Accordingly, the Staff points out that the S-cam installed in the Silverado connects to the CAN by means of a wire. (*Id.*) Thus, the Staff argues that "a Chevrolet Silverado equipped with a TRW S-cam system meets all of the limitations of claim 30 and therefore directly infringes the asserted claim." (*Id.*)

The ALJ finds that Magna has proven by a preponderance of the evidence that the Chevrolet Silverado with an installed TRW S-cam 2 meets this limitation. The evidence shows that the S-cam's main PCB clearly has CAN interfaces and when the S-cam is installed in a Silverado, it communicates data over the vehicle's CAN network using a wire or cable as required by this last claim limitation. [REDACTED] above and CX-0003C at QQ. 256-57; CX-426C at 53:10-21; CX-95C at No. 140; CX-413.0010; CX-22.0016; CX-0003C (Min witness stmt.) Q. 117; CX-0386C (Kazerooni dep. tr.) at 114:11-17; CX-0022 (2012, *TRW Advances*, Issue 35) at TRW654-002288 to TRW654-002289.) As additional evidence, the TRW S-cam architecture depicted in [REDACTED] below clearly shows the CAN interface. (*See* CX-0108C.0070.)

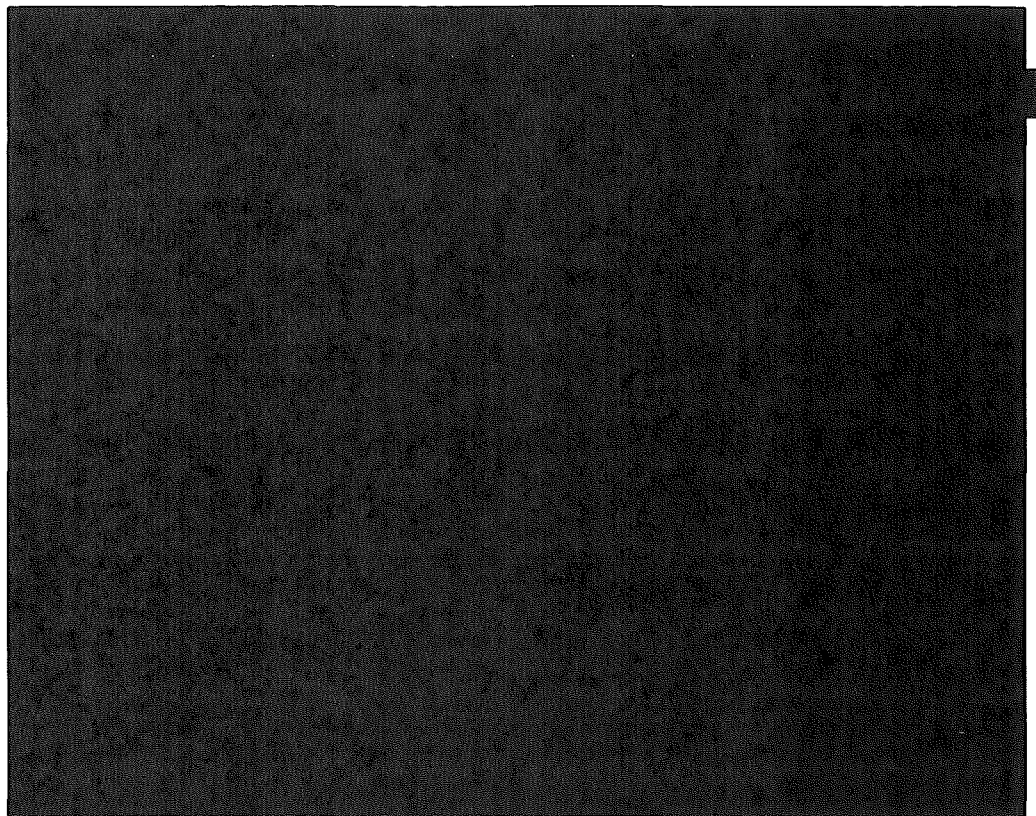


Figure 3 TRW S-cam Architecture

Therefore, the ALJ finds that a Chevrolet Silverado equipped with a TRW S-cam meets all of the limitations of claim 30 and therefore directly infringes the asserted claim.

f) Claim 36: “An accessory system for a vehicle, said accessory system wherein said accessory comprises said control.”

The ALJ finds the S-cam 2 is an accessory system for a vehicle because the S-cam is a scalable family of driver assist camera modules that uses common mechanical designs and vehicle interfaces to simplify the task of vehicle integration across multiple platforms and offers a wide range of safety functions. (JX-0001 at 8:18-19 (“[a]ccessory system for a vehicle”); CX-0003C at QQ. 245-46; CX-28.)

As set forth *supra* in Section IV.B.6, the ALJ construed “said accessory” to mean “the accessory described in claim 30 as being disposed at and behind a windshield of a vehicle.” Also,

as set forth *supra* in Section IV.B.4, the ALJ construed “controls” to mean “a device that performs operations.” The ALJ finds that GM’s Silverado installed with TRW’s S-cam 2 contains “a device that performs operations” because the “Main PCB,” via its [REDACTED], directs the action of, *i.e.*, controls, the forward-facing camera. (CX-0003C (Min witness stmt.) at QQ. 251-252; CX-22.16; CX-162C at 18:2-9, 19:10-11; CX-22. 14; CX-426C at 24:2 – 25:1, 119:24 – 120:9; CX-2C at QQ. 94-96; Min Tr. at 207:5-209:6.) Clearly, the TRW S-cam 2 is a device that performs operations, specifically [REDACTED]. (CX-22.16; CX-22.15; CX-162C at 13:24 – 14:5, 47:12-13, 62:3-10, 64:3-15, 100:5-9; CX-426C at 24:2 – 25:1, 119:24 – 120:9; Tr. at 396:5-21 (Mr. Newton confirming that [REDACTED] CX-0003C at Q. 105.) Accordingly, the ALJ finds the limitation of claim 36 is met and therefore a Chevrolet Silverado equipped with a TRW S-cam directly infringes the asserted claim.

2. Contributory Infringement

Magna submits that “TRW’s activities with respect to the S-cam 2s constitute contributory infringement of claims 30 and 36.” (CIB at 21.) Specifically, Magna contends that TRW sells S-cams to GM with the knowledge that GM will install the S-cam 2s into its vehicles. (*Id.*) Moreover, Magna argues that “TRW’s S-cam constitutes a material part of the accessory system set forth in claims 30 and 36, and the S-cam has no substantial, non-infringing uses.” (*Id.*) Magna also contends that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Thus, according to Magna, “the evidence shows that there are no substantial non-infringing uses for the S-cams sold to GM.” (*Id.*)

TRW provides a detailed argument of why it does not contributorily infringe the ’659 patent (*see* II.B.3 in RIB at 15-20) and then references II.B.3⁶ in arguing that TRW did not possess the requisite knowledge for a finding of indirect infringement of the ’840 patent. (RIB at 68.) Specifically, TRW contends that “[it] does not have knowledge of the infringement at least so far as TRW had a good faith belief of invalidity.” (*Id.*)

The Staff contends that “TRW’s accused products contributorily infringe the ’840 patent because, as the evidence shows, TRW knew that the vision-based driver assistance system in Chevrolet Silverados, for which its S-cam 2’s were especially made, was both patented and infringing at the time that it sold the S-cam 2 components to General Motors.” (SIB at 17.) Moreover, the Staff points out that TRW continued to sell the S-cam 2 after issuance of the ’840 patent. (*Id.*)

First, the Staff submits that “[t]he evidence shows that the S-cam 2 component supplied to General Motors by TRW for use in the Chevrolet Silverado is not a staple article or commodity of commerce suitable for substantial non-infringing use.” (SIB at 17-18.) Specifically, the [REDACTED]

[REDACTED]

[REDACTED] Additionally, the Staff proffers that

⁶ TRW’s initial post-hearing brief mistakenly references sec. III.B.3 on page 69 of its brief when clearly the reference should have been to sec. II.B.3.

the S-cam 2 includes [REDACTED]

[REDACTED] (*Id.*) And, the Staff submits that [REDACTED]

[REDACTED] (*Id.*)

The Staff also points out that “Dr. Kazerooni confirmed that it would require days of re-engineering to convert an S-cam intended for use in one vehicle into a version that would operate in a vehicle from another manufacturer, and that a TRW customer would not be able to do it.” (*Id.*)

Second, the Staff contends that “[t]he evidence also shows that TRW sold its accused devices ‘knowing the same to be especially made or especially adapted for use in an infringement of such patent[.]’” (SIB at 18.) The Staff then points out that “[o]n March 28, 2014 – before Magna filed its amended complaint in this investigation – Magna gave notice that the asserted patents were about to issue [REDACTED]

[REDACTED] (*Id.* at 18-19.) The Staff also points out that “[o]n

April 1, 2014, Magna provided TRW [REDACTED]

[REDACTED] (*Id.* at 19.) The Staff then submits that TRW continued to sell S-cams to GM after it knew about the ’840 patent. (*Id.*) Furthermore, the Staff notes that TRW knew that S-cams it sold to GM would be used as components of vehicles with vision-based driver assistance accessory systems because the cameras are specially adapted to GM vehicles. (*Id.*)

Last, the Staff points out that “[t]o be liable for contributory infringement, TRW also must have known that the combinations for which its S-cams are sold are infringing.” (SIB at 19.) The Staff contends that “TRW had no reasonable basis for concluding that third-party vehicles containing its S-cam devices do not infringe the asserted claims of the ’840 patent.” (*Id.*) Additionally, the Staff proffers that “[w]hile TRW sought an opinion of counsel regarding the ’840 patent’s validity, it did not obtain that opinion until August 21, 2014, five months after receiving notice of the patent.” (*Id.*) The Staff therefore submits that “TRW was not relying on that legal opinion when selling S-cam devices between April and August 2014.” (*Id.*) “In the Staff’s view, on balance, the circumstances suggest that TRW knew that the vehicles for which its S-cam 2 devices are especially made were ‘both patented and infringing,’ and that TRW therefore is liable for contributory infringement of those claims.” (*Id.* at 19-20.)

For the reasons set forth below, the ALJ finds that Magna has not proven by a preponderance of the evidence that TRW is liable for contributory infringement of claims 30 and 36 of the ’840 patent because TRW did not have the requisite knowledge of infringement. Although TRW had notice of the ’840 patent on April 1, 2014 when Magna provided TRW with notice and a copy of the issued ’840 patent, TRW did not immediately have knowledge of infringement as shown by TRW’s good faith belief of invalidity. (RX-0370C at Q. 231-24; see citing *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2067 (2011) (“a violator of § 271(c) must know ‘that the combination for which his component was especially designed was both patented and infringing.’”) (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 337 U.S. 476, 488 (1964) (*Aro II*) (emphasis added).) TRW’s good faith belief is shown by the opinion it received from the law firm of Knechtel, Demeur & Samlan that the ’840 patent is invalid. (*Id.* at Q. 233; see RX-0078 (’840 Invalidity Opinion dated August 21, 2014.))

Furthermore, the ALJ finds that TRW's good faith belief of patent invalidity as obtained from the aforementioned invalidity opinion from Knechtel, Demeur & Samlan is also shown by TRW's action to obtain the opinion within a reasonable time (*i.e.*, approximately 4 months from the date of issuance of the '840 patent). (RX-0078 ('840 Invalidity Opinion dated August 21, 2014.) Although the record shows that the S-cam 2 supplied by TRW to GM for use in the Chevrolet Silverado is not a staple article or commodity of commerce suitable for substantial non-infringing use and the [REDACTED] [REDACTED]

[REDACTED] [REDACTED] these facts do not prove that TRW had the requisite knowledge of infringement. (*See* Min Tr. at 289:6-21, 304:17-305:6; CX-0003C (Min witness stmt.) Q. 266.) Accordingly, the ALJ finds that TRW is not liable for contributory infringement of the asserted claims of the '840 patent.

3. Induced Infringement

Magna argues that "TRW's activities with respect to the S-cam induce infringement of claims 30 and 36." (CIB at 22.) Magna alleges that TRW instructs OEMs such as GM on how to install the S-cam in a vehicle to include assistance with bracket design to hold the S-cam as well as the location selection for the S-cam to ensure that the forward facing camera is properly viewing through the windshield of the equipped vehicle. (*Id.*) Last, Magna points out that "TRW also works with Mobileye to ensure that the digital circuitry and microprocessor are operable in the system." (*Id.*)

TRW contends that "Magna fails to show any intent by TRW to induce infringement of the '840 patent." (RIB at 68.) TRW submits that Dr. Min admitted that most of the specific intent to induce infringement evidence actually existed prior to issuance of the patents. (*Id.* at 68-69.) TRW contends that "Dr. Min also admitted that the exemplary accused product was in

production in December 2013, and the design would have been finalized months before that.”

(*Id.* at 69.) Additionally, TRW contends that Dr. Min admitted he could not identify a single change made since that date in 2013 and also that [REDACTED]

[REDACTED] (*Id.*) Moreover, TRW points out that Magna’s witness admitted that the S-cam being at and behind a windshield is something preordained by GM. (*Id.*) Therefore, TRW argues that it cannot possibly “induce” what has already been decided. (*Id.*) Additionally, TRW points to “[u]nrebutted testimony by Mr. Newton established that [REDACTED]

[REDACTED] (*Id.*) Then, TRW contends that pre-issuance conduct cannot give rise to an inducement claim. (*Id.*) Therefore, TRW argues that “[m]erely continuing sales of an already determined product cannot constitute inducement either.” (*Id.*) Finally, TRW argues that since the design of the accused vehicles [was] long finalized prior to issuance of the ’840, there could have been no knowledge of infringement at the time of any inducing acts and also since the designs have not since been changed, there can be no inducement generally. (*Id.* at 70.)

First, the Staff points out that “[l]ike contributory infringement, liability for inducement requires an underlying act of direct infringement, as well as proof that the party had knowledge that the induced acts constitute patent infringement. (SIB at 20.) However, the Staff notes that inducement only applies to acts that occur after the issuance of the patent. (*Id.*) Then, the Staff submits that Mr. Newton testified at the hearing that the [REDACTED]

[REDACTED] bracket design for the S-cam 2 [REDACTED]

[REDACTED] (*Id.*) Additionally, the Staff points out that Mr. Newton further testified that [REDACTED]

[REDACTED]

[REDACTED] (*Id.*) Thus, the Staff contends that although the evidence shows

[REDACTED] (*Id.* at 20-21.) According to the Staff, “the evidence is insufficient to show that TRW induced the infringement of the asserted claims of the ’840 patent, particularly in light of

[REDACTED] (*Id.* at 21.)

For the reasons set forth below, the ALJ finds that Magna has failed to prove by a preponderance of the evidence that TRW is liable for induced infringement of claims 30 and 36 of the ’840 patent. The ALJ finds that any collaboration between [REDACTED]

[REDACTED] occurred before the issuance of the ’840 patent, which issued on April 1, 2014. (See JX-0001.0002.) The bracket design for the S-cam 2 [REDACTED]

[REDACTED] (Newton Tr. at 404:23-406:17.) Thus, the collaboration between [REDACTED] before the issuance of the ’840 patent.

Additionally, the ALJ finds that any collaboration between [REDACTED]

[REDACTED] relates to a product that [REDACTED] as shown by the testimony of Mr. Newton. (Newton Tr. at 407:19-408:8.) Accordingly, the ALJ finds that TRW is not liable for induced infringement of the asserted claims of the ’840 patent because the evidence clearly shows that TRW and GM only collaborated about the use of the S-cam 2 prior to the issuance of the ’840 patent and inducement only applies to acts that occur after the issuance of the patent. (See *National Presto Industries, Inc. v. West Bend Co.*, 76 F.3d 1185, 1196 (Fed. Cir. 1996) (“... inducement of infringement under § 271(b) does not lie when the acts of inducement occurred before there existed a patent to be infringed.”) Additionally, as set forth *supra* in Section V.B.2, the ALJ finds that TRW did not have the requisite knowledge of

infringement to prove induced infringement of claims 30 and 36 of the '840 patent. Accordingly, the ALJ finds that TRW is not liable for induced infringement of the asserted claims of the '840 patent.

C. The '659 Patent

Magna accuses TRW's S-cam 2, S-cam 3 and S-cam 3.5 of indirect infringement of dependent claims 3 and 92 of the '659 Patent. (CIB at 54-55.) Magna alleges that imported vehicles that are equipped with the S-cam, for example, Chevrolet Silverado and GMC Sierra pickup trucks, directly infringe claims 3 and 92 of the '659 patent. (CIB at 54.) As such, Magna alleges that TRW contributes to GM's alleged direct infringement by providing the S-cam to GM. (*Id.* at 55.) Additionally, Magna argues that "TRW induces GM's infringement by continuing to assist GM in the design, development, and installation of the S-cam in GM's vehicles, which TRW knows directly infringes the asserted claims." (*Id.*)

1. Direct Infringement by Third Parties

a) Claim 1: "An accessory mounting system for a vehicle, said accessory mounting system comprising"

First, Magna points out that asserted claim 3 of the '659 patent depends from independent claim 1. (CIB at 55.) Magna contends that the S-cam accessory mounting system used by GM is an accessory mounting system within the meaning of claim 1 as Dr. Min testified, the S-cam is mounted on the vehicle windshield. (*Id.*)

The ALJ finds the S-cam 2 is an accessory mounting system for a vehicle because the S-cam is mounted on the vehicle windshield of a GM vehicle such as a Silverado. (Tr. at 544:16-19; CX-0003C at QQ. 277-79; CDX-12.5C; CDX-12.20C; *see also* CX-94C at Nos. 21, 22; CX-162C at 21:3-7, 22:4-7; CDX-16.)

b) Claim 1: “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system”

Magna argues that “Claim 1 requires an attachment element adhesively attached at the windshield of an equipped vehicle. (CIB at 55.) Magna contends that under its construction of the term “adhesively attached,” the S-cam accessory mounting system used by GM meets the limitation. Magna specifically points out that an attachment element in the mounting system is glued to the dark shaded area on the windshield and thus is secured using conventional means, such as fasteners, and adhesive, or the like. (*Id.* at 56.) Thus, according to Magna, the S-cam accessory mounting system used by GM satisfies this limitation under its construction as well as TRW’s construction of the term “adhesively attached.” (*Id.*)

TRW submits that “Dr. Min represented that the accused attachment element and plurality of attachment members in the GM mounting system are glued to the windshield.” (RIB at 11.) However, TRW argues that Dr. Min’s conclusion is not supported by any evidence and Dr. Min actually relies on deposition testimony from Mr. Whydell, one of TRW’s witnesses, to support his conclusion regarding the attachment of the attachment element. (*Id.* at 11-12.) TRW then points out that Mr. Whydell’s testimony was discussing TRW’s own mounting bracket for the S-cam 2, which is a completely different component from the accused attachment element (which comprises a mirror mounting button and is used for mounting the mirror) as well as discussing TRW’s own mounting bracket sold to Chrysler, which is not used by GM or accused of infringement (*Id.* at 12.) Additionally, TRW argues that “Dr. Min has not cited to any evidence describing specifically how GM actually attaches the accused attachment element and attachment members to its windshields, nor has Magna sought any such evidence from GM in this investigation.” (*Id.* at 13.) TRW argues that “Dr. Min’s conjecture, coupled with his reliance on wholly-irrelevant deposition testimony, is insufficient to establish that the accused

attachment element and attachment members are adhesively attached to the windshield in GM vehicles and thus Magna has failed to prove that the accused GM mounting system directly infringes the asserted claims of the '659 patent.” (*Id.*)

The Staff contends that Chevrolet Silverado trucks with vision-based driver assistance systems have a bracket attached to the interior surface of the vehicle windshield using an adhesive applied by the windshield supplier. (SIB at 52-53.) Additionally, the Staff points out that the bracket is “a component configured for the mounting of one thing to another.” (*Id.* at 53.)

The ALJ finds that Magna has proven by a preponderance of the evidence that the Chevrolet Silverado equipped with the S-cam meets this limitation. As set forth *supra* in Section IV.C.3, the ALJ construed “adhesively attached” to be its plain and ordinary meaning (*i.e.*, glued). The evidence shows that the Silverados have a bracket attached to the interior surface of the vehicle windshield using an adhesive applied by the windshield supplier. (CX-0003C at Q. 281 (discussing *inter alia*, CDX-12.21C, CDX-12.22C); CX-1C at QQ. 125, 156, 176.) The ALJ finds that the record shows the windshield supplier attaches the bracket to the windshield using an adhesive. (CX-0162C (Whydell dep. tr.) at 116:21-117:1 (“The brackets are [REDACTED]

[REDACTED] the bracket [REDACTED]

[REDACTED] Thus, the ALJ finds that the record shows

Chevrolet Silverado equipped with the S-cam has “an attachment element adhesively attached at an in-cabin surface of a vehicle windshield of a vehicle equipped with said accessory mounting system.” (CX-0003C (Min witness stmt.) QQ. 280-81; CX-0162C (Whydell dep. tr.) at 116:21-117:1.)

TRW's argument that Mr. Whydell was speaking about TRW's and not GM's brackets fails because Mr. Whydell's testimony supports Dr. Min's statements by showing adhesively attaching brackets. (CX-0162C (Whydell dep. tr.) at 116:21-117:6.) Furthermore, besides Mr. Whydell's testimony concerning adhesively attaching the brackets, TRW never put forth a viable alternative theory to attach the brackets. (Kazerooni Tr. at 553:1-9.)

c) Claim 1: "said attachment element comprising a mirror mounting button"

Magna points out that "Claim 1 further requires that the attachment element comprise a mirror mounting button." (CIB at 56.) Magna also submits that the parties agree that "mirror mounting button" should be given its plain and ordinary meaning, namely "a button-shaped mounting element for a mirror." (*Id.*) And, Magna contends that Dr. Min testified that the attachment element in the accused mounting system has a button-shaped mounting element for a mirror to which the interior rearview mirror is mounted. (*Id.*) Magna therefore argues that the S-cam accessory mounting system used by GM satisfies this limitation. (*Id.* at 57.)

The Staff contends that the attachment element in the Chevrolet Silverado contains a button-shaped mounting element for a mirror. (SIB at 53.) Additionally, the Staff points out that "[t]he mirror mounting button in the Silverado has tapered edges around the perimeters that engage button supports." (*Id.*)

TRW does not dispute that this claim limitation is met.

The ALJ finds the attachment element in the Chevrolet Silverado equipped with the S-cam contains a button-shaped mounting element for a mirror because Dr. Min's testimony showed the attachment element in the accused mounting system has a button-shaped mounting element for a mirror to which the interior rearview mirror is mounted. (*Citing* CX-0003C at QQ. 283-85.) The ALJ specifically finds that windshield illustration (CDX-12.23C and CDX-77 –

see Figure 4 Windshield with Mirror Mounting Button below) cited in Dr. Min's witness statement (CX-0003C at Q284) clearly shows that this limitation is met.

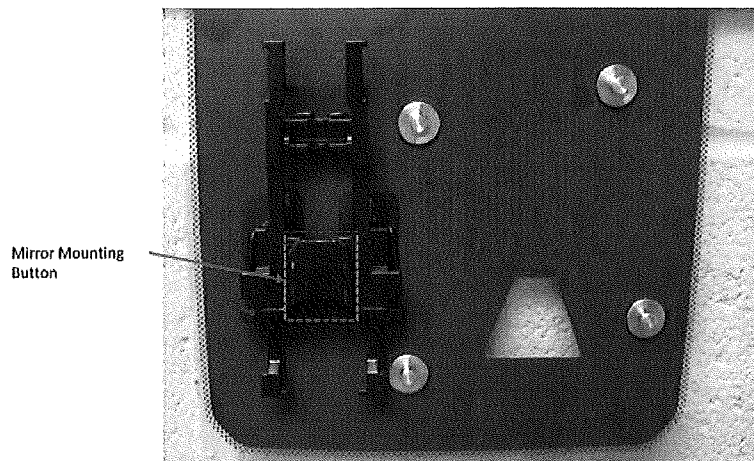


Figure 4 Windshield with Mirror Mounting Button

Therefore, the ALJ finds that the accused attachment element in the Chevrolet Silverado meets the limitation at hand.

d) Claim 1: “a plurality of attachment members adhesively attached at the in-cabin surface of the vehicle windshield local to said attachment element:

Magna contends that “Claim 1 further requires a plurality of attachment members adhesively attached at the windshield local to the attachment element.” (CIB at 57.) Magna argues that more than one attachment member is glued on the windshield of a vehicle, such as a Chevrolet Silverado, in the S-cam accessory mounting system used by GM nearby the attachment element. (*Id.*) Magna contends that Dr. Min therefore testified that a POSITA would not have considered attaching the claimed attachment element and attachment members using anything other than glue. (*Id.*) Magna thus contends the S-cam accessory mounting system used by GM satisfies this limitation. (*Id.* at 58.)

The Staff contends that there are four attachment members, or “bonding buttons,” glued to the windshield of a Chevrolet Silverado containing a vision-based driver assistance system. (SIB at 53.) Additionally, the Staff points out that “[t]he four bonding buttons are located within centimeters of the attachment element containing the mirror mounting button, located on the interior of the front windshield.” (Id.) Accordingly, the Staff submits that the attachment members in the Chevrolet Silverado are “local to” the attachment element.

TRW does not dispute that this claim limitation is met.

The ALJ finds that four attachment members or bonding buttons are glued to the windshield of a Chevrolet Silverado equipped with a S-cam. (CX-0003C (Min witness stmt.) QQ. 286-87 referencing CPX-0032; CDX-0077 (Figure 5 Picture of Shaded Area of Silverado Windshield).)

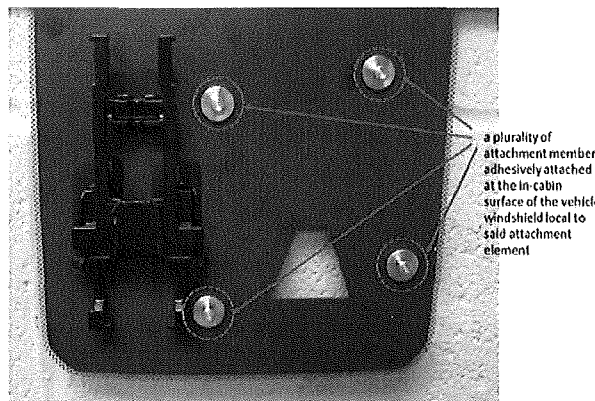


Figure 5 Picture of Shaded Area of Silverado Windshield

Dr. Lynam, Magna’s expert witness, testified that “you can also see the four bonding buttons that are glued to the windshield.” (See CX-0001C (Lynam witness stmt.) QQ. 155-156; CPX-0032; CDX-0077 (Silverado windshield).) Also, the ALJ finds the attachment members for the Chevrolet Silverado are “local to” the attachment element because the attachment members and the attachment element are located nearby each other as shown above in Figure 5 Picture of

Shaded Area of Silverado Windshield. Therefore, the ALJ finds the S-cam accessory mounting system used by GM in the Silverado satisfies the limitation at hand.

e) Claim 1: “an interior rearview mirror assembly comprising a mirror head and a mirror support; wherein said mirror head comprises a mirror reflective element and a mirror casing”

Magna contends that the S-cam accessory mounting system used by GM includes an interior rearview mirror assembly. (CIB at 58.) Magna specifically points out that the interior rearview mirror assembly has a mirror head, which the parties construe as “a mirror casing that houses a reflective element of the interior rearview mirror assembly of the equipped vehicle” (Magna) and “a structure comprising a mirror reflective element and a mirror casing” (Staff). (*Id.*) Additionally, Magna submits that the interior rearview mirror assembly also has a mirror support. (*Id.*) And, Magna contends that the mirror head in the S-cam accessory mounting system used by GM includes a mirror reflective element and a mirror casing, and thus this limitation is satisfied. (*Id.*)

The Staff contends that “the Chevrolet Silverado contains such a mirror assembly.” (SIB at 54.) Specifically, the Staff submits that the interior rearview mirror of the Silverado contains a mirror casing that encloses a reflective element, as well as a mirror support on the underside of the mirror assembly.” (*Id.*)

TRW does not dispute that this claim limitation is met.

The ALJ finds this limitation is met by the Silverado equipped with the S-cam 2. The evidence shows that the interior rearview mirror assembly in the Silverado has a mirror head. (CX-0003C (Min witness stmt.) QQ. 288-92.) Additionally, the evidence shows that the mirror assembly has a mirror support. (*Id.*) The evidence also shows that the mirror head has a

reflective element of the interior rearview mirror assembly of the equipped vehicle and a mirror casing. (*Id.*)

f) Claim 1: “wherein said mirror support comprises a mirror mount that is configured to mount said interior rearview mirror assembly to said mirror mounting button of said attachment element”

Magna contends that the S-cam accessory mounting system used by GM includes a mirror support comprising a mirror mount that is configured to mount the assembly to the mirror mounting button. (CIB at 59.) Magna therefore submits that the S-cam accessory mounting system used by GM satisfies this limitation.

The Staff notes that the mirror support portion of the rearview mirror assembly comprises a mirror mount that is configured to mount the assembly to the mirror mounting button. (SIB at 54.) Therefore, the Staff contends that the mirror mount is shaped to connect with the tapered edges of the mirror mounting button. (*Id.*)

TRW does not dispute that this claim limitation is met.

The ALJ finds this limitation is met by the Silverado equipped with the S-cam 2. The evidence shows that the mirror support portion of the rearview mirror assembly in the Silverado has a mirror mount that is configured to mount the assembly to the mirror mounting button. (CX-0003C (Min witness stmt.) at QQ. 293-95.) Additionally the record shows, as pointed out in Dr. Min’s witness statement, that the mirror support portion of the rearview mirror assembly has a mirror mount that is configured to mount the assembly to the mirror mounting button and the mirror mount is shaped to connect with the tapered edges of the mirror mounting button. (CX-0003C (Min witness stmt.) at QQ. 293-95.) Therefore, the ALJ finds the S-cam accessory mounting system used by GM in the Silverado satisfies the limitation at hand.

g) Claim 1: “a structure configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield; said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield”

Magna contends that “the TRW/GM sensor farm bracket is designed to be attached to the “plurality of attachment members,” which are themselves adhesively attached at the in-cabin surface of the vehicle windshield.” (CIB at 59.) Then, Magna points out that under its construction of “configured to receive and be supported by” as “designed to accept the said plurality of attachment members and, as accepted, to be borne by the said plurality of attachment members,” the S-cam accessory mounting system used by GM satisfies this claim limitation. (*Id.* at 60.) Magna specifically points out that multiple attachment members are glued to the windshield. (*Id.*) Additionally, Magna submits that “[t]he TRW/GM sensor farm bracket structure is designed to accept the attachment members and, as accepted, to be borne by and held in place by the attachment members.” (*Id.*) Magna therefore argues that the S-cam accessory mounting system used by GM satisfies this limitation. (*Id.*)

The Staff contends that the four bonding buttons in the Chevrolet Silverado are used to mount a structure that receives and is supported by the bonding buttons to the windshield. (SIB at 54.) The Staff also points out that the aforementioned structure is a roughly rectangular bracket with four openings corresponding to the locations of the four bonding buttons. (*Id.*) Then, the Staff submits that “[b]y aligning the four openings with the four attachment members, it is possible to mount the bracket to the attachment members such that they support the bracket on the windshield.” (*Id.* at 55.)

TRW does not dispute that this claim limitation is met.

The ALJ finds this limitation is met by the Silverado equipped with the S-cam. The evidence shows that four bonding buttons are used to mount a structure that receives and is

supported by the bonding buttons to the windshield. (CX-0003C (Min witness stmt.) at QQ. 296-300.) Additionally, the evidence shows the structure is a rectangular-like shaped bracket with four openings corresponding to the locations of the four bonding buttons and the bracket can be mounted to the attachment members by aligning the four openings with the four attachment members. (*Id.*) Therefore, the ALJ finds the S-cam accessory mounting system used by GM in the Silverado satisfies this limitation.

h) Claim 1: “wherein said structure is configured to accommodate a forward facing camera; and wherein, with said structure received by and supported by said attachment members and when said structure is accommodating said forward facing camera, said forward facing camera has a field of view through the vehicle windshield.”

Magna submits that under its construction of the term “configured to accommodate” to be “designed to hold a forward facing camera,” the S-cam accessory mounting system used by GM satisfies this limitation because the TRW/GM sensor farm bracket structure is specifically designed to hold a forward facing camera. (CIB at 60.) Furthermore, Magna points out that the TRW/GM sensor farm bracket structure is received by and supported by the attachment members in the S-cam accessory mounting system used by GM. (*Id.* at 61.) Magna also points out that the TRW/GM sensor farm bracket accommodates a forward facing camera, specifically the S-cam. (*Id.*) Thus, Magna contends that “[w]hen the S-cam is properly in its bracket, the S-cam’s forward facing camera has a field of view through the vehicle windshield.” (*Id.*) Therefore, Magna argues that the S-cam accessory mounting system used by GM satisfies this limitation. (*Id.*) Accordingly, Magna contends that it has proven by a preponderance of the evidence that the S-cam accessory mounting system used by GM satisfies every limitation of claim 1 of the ’659 patent. (*Id.*)

While TRW points out that the accused “camera” or S-cam is not an element of the

claims as the mounting system need not actually include the accessory to be infringing claims 1, 3 or 92 of the '659 patent, TRW does not specifically dispute this claim limitation. (RIB at 7-9.)

The Staff points out that claim 1 requires that the structure accommodate a forward-facing camera such that when installed in the vehicle, the camera has a field of view through the vehicle windshield. (SIB at 55.) The Staff submits that the bracket is configured to accept a TRW S-cam. (*Id.*) Furthermore, the Staff notes the S-cam device contains a forward-facing camera. (*Id.*) Moreover, the Staff points out that the forward-facing camera has a field of view through the vehicle windshield when installed in a Silverado truck. (*Id.*) Therefore, the Staff contends that a Chevrolet Silverado with a TRW S-cam device installed satisfies this claim limitation and in turn satisfies each of the limitations of claim 1 of the '659 patent. (*Id.*)

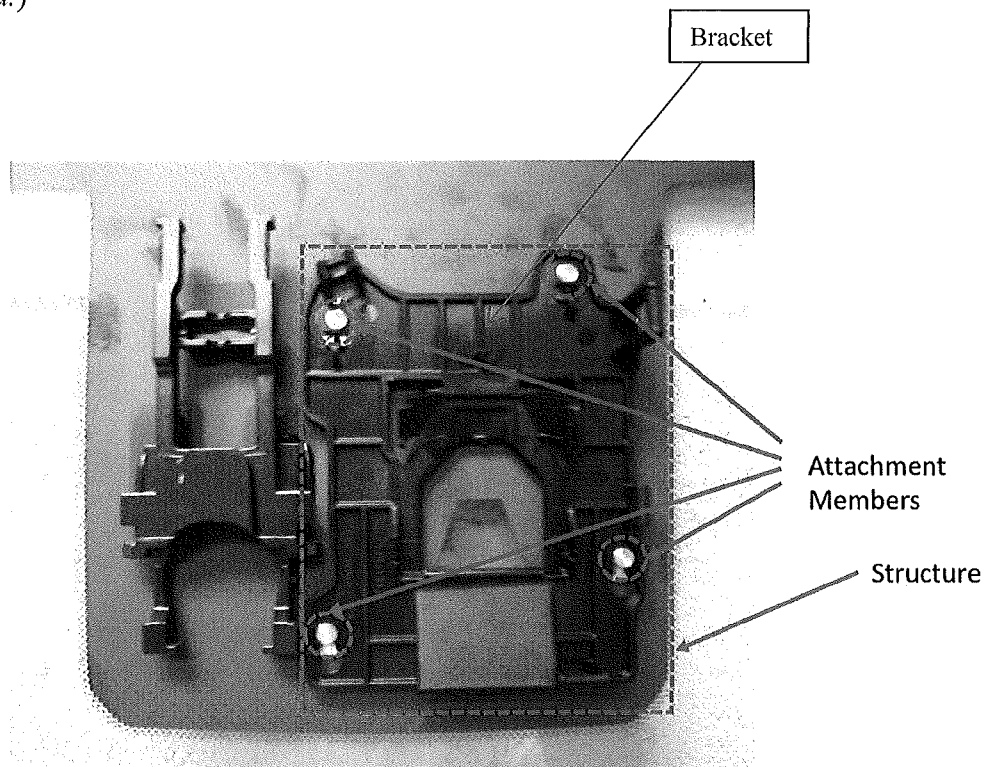


Figure 6 Attachment Member

The ALJ finds this limitation is met by the Silverado equipped with the S-cam. Specifically, the evidence shows that the S-cam installed in the Silverado has a bracket configured to accept a TRW S-cam as shown in Figure 6 Attachment Member above. (CX-0003C (Min witness stmt.) QQ. 301-04; CDX-0012.29; CPX-0045.) Additionally, the record shows that “[t]he TRW S-cam snaps into the bracket that is mounted to the windshield on the Chevrolet Silverado/GMC Sierra.” (CX-0001C (Lynam witness stmt.) Q. 159.)

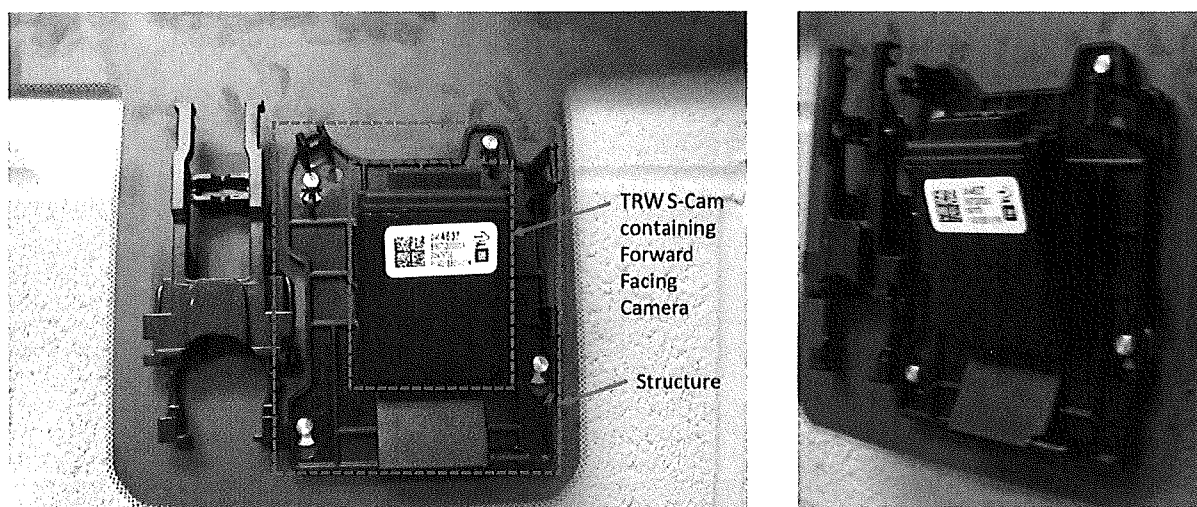


Figure 7 Structure with S-cam

Furthermore, the record shows that the bracket accepts a TRW S-cam as shown in Figure 7 Structure with S-cam above. The record also shows that the S-cam contains a forward-facing camera with a field of view through the windshield when installed in a Silverado. (Kazerooni Tr. at 533:18-534:8; CX-0003C (Min witness stmt.) QQ. 302-304; CDX-0012.30C; CPX-0032; CPX-0045.) Therefore, the ALJ finds the S-cam accessory mounting system used by GM in the Silverado satisfies this limitation.

i) Claims 3 and 90: “wherein said forward facing camera comprises a CMOS imaging device.”

Magna contends that the S-cam’s forward facing camera comprises a CMOS imaging device. (CIB at 61-62.) Magna, therefore, contends that the S-cam accessory mounting system used by GM satisfies this limitation for claims 3 and 90 of the ’659 patent. (*Id.* at 62.)

The Staff contends that the forward-facing camera in TRW S-cam devices, including the S-cam 2 installed in the Chevrolet Silverado, is a CMOS imaging device. (SIB at 56.) Accordingly, a Chevrolet Silverado with a TRW S-cam device installed satisfies each of the limitations of asserted claims 3 and 90 of the ’659 patent. (*Id.*)

TRW does not dispute that this claim limitation is met.

The ALJ finds this limitation is met by the Silverado equipped with a S-cam. The evidence shows that the forward-facing camera in the TRW S-cam devices, including the S-cam installed in the Chevrolet Silverado, is a CMOS imaging device. (*See* Kazerooni Tr. at 534:9-11; CX-0022 (2012, *TRW Advances*, Issue 35) at TRW654-002289 (identifying CMOS imaging sensor in Imager PCB in the S-CAM system architecture); *see also* CX-0003C (Min witness stmt.) QQ. 310-11.) Therefore, the ALJ finds that a Chevrolet Silverado with a TRW S-cam device installed satisfies each of the limitations of asserted claims 3 and 90 of the ’659 patent.

j) Claim 90: “wherein said interior rearview mirror assembly comprise a double-ball interior rearview mirror assembly”

First, Magna points out that the independent claim 90 includes the claim elements recited in claim 1 as well as a number of additional limitations; as such, Magna submits that its previous arguments in relation to claim 1 are equally applicable to claim 90. (CIB at 62.) Magna contends that the mirror support for the interior rearview mirror assembly in the S-cam accessory mounting system used by GM has two points that can be swiveled by use of the double-ball. (*Id.*)

The Staff contends that the Silverado mirror assembly “has two points that can be swiveled by incorporation of double-ball.” (SIB at 56.) The Staff therefore submits that these two ball joints in the Silverado mirror assembly satisfy this limitation. (*Id.*)

TRW does not dispute that this claim limitation is met.

As set forth *supra* in Sections V.C.1.a through V.C.1.i, the ALJ has already found the Silverado equipped with the TRW S-cam satisfies the first 11 limitations of Claim 90 as those limitations are the same as the limitations in Claim 1. The ALJ now takes up the new limitations in Claim 90. First, the ALJ finds this first new limitation is met by the Silverado installed with the S-cam. The evidence shows that the mirror assembly has two points that can be swiveled by incorporation of double-ball. (CX-0003C (Min witness stmt.) Q. 334.) The ALJ further finds that Dr. Min’s witness statement coupled with the reference to CDX-0012.31C shows a double ball interior rearview mirror assembly and therefore this limitation is satisfied.

k) Claim 90: “wherein, with said structure received by and supported by said attachment members, said mirror mount can be mounted to said mirror mounting button of said attachment element and can be demounted from said mirror mounting button of said attachment element without demounting said structure from said attachment members.”

Magna contends that the claimed “structure” in the mounting system for the S-cam is received by and supported by multiple attachment members and the interior rearview mirror has a mirror mount, which mounts the interior rearview mirror to the mirror mounting button. (CIB at 63.) Moreover, Magna submits that “[i]n the S-cam accessory mounting system used by GM, the mirror mount has a mirror mounting screw that securely attaches the interior rearview mirror to the mirror mounting button, which is itself attached to the windshield.” (*Id.*) Specifically, Magna points out that the mirror mounting screw is tightened to securely mount the interior rearview mirror to the mirror mounting button. (*Id.*) And, Magna then submits that the

TRW/GM sensor farm bracket structure is located separately and to the right of the mirror mounting button therefore mounting and demounting of the interior rearview mirror does not affect the TRW/GM sensor farm bracket structure and can be done without removing the structure, which is received by and supported by the attachment members. (*Id.*) Therefore, Magna argues that the S-cam accessory mounting system used by GM satisfies this limitation.

TRW does not dispute that this claim limitation is met.

The Staff argues that the Chevrolet Silverado satisfies this limitation because it is possible to remove the interior rearview mirror from the windshield without first removing the bracket housing the TRW S-cam by removing a single screw from the mirror mount, thus allowing the mirror assembly to slide off of the mirror mounting button. (SIB at 56.) Thus, the Staff submits that the mirror mount can be mounted and demounted from the button without disturbing the installation of the structure because the “structure” housing the forward-facing camera is installed to the right of the mirror assembly and is completely separate from the attachment element containing the mirror mounting button. (*Id.*) So, according to the Staff, a Chevrolet Silverado with a TRW S-cam installed satisfies each limitation of claim 90 of the ’659 patent.⁷

The ALJ finds this limitation is met by the Silverado equipped with the S-cam. The evidence shows that the interior rearview mirror can be removed from the windshield without removing the bracket housing by removing a single screw from the mirror mount, thus allowing the mirror assembly to slide off of the mirror mounting button. (CX-0003C (Min witness stmt.) QQ. 336-37.) The record shows that the mirror mount can be mounted and demounted from the

⁷ However, in subsection V.F.1.e of the Staff’s initial pre-hearing brief, the Staff contends that this element, while not indefinite, fails to satisfy the written description requirement of 35 U.S.C. § 112.

button without disturbing the installation of the structure because the “structure” housing the forward-facing camera is installed to the right of the mirror assembly and is completely separate from the attachment element containing the mirror mounting button,. (CX-0003C (Min witness stmt.) QQ. 336-37.) Thus, the ALJ finds a Chevrolet Silverado with a TRW S-cam installed satisfies each limitation of claim 90 of the ’659 patent.

l) Claim 91: “wherein a light absorbing layer disposed at the vehicle windshield at least partially masks the presence of said attachment element from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.”

First, Magna points out that Claim 91 depends from independent claim 90 and further recites “wherein a light absorbing layer disposed at the vehicle windshield at least partially masks the presence of said attachment element from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.” (CIB at 64.) Magna contends the mounting system for the S-cam used in GM vehicles satisfies this claim limitation under its proposed constructions because the attachment element is located on the dark shaded area on the vehicle windshield, which blocks the light from outside the vehicle from entering, *i.e.*, the claimed “light absorbing layer.” (*Id.*) Furthermore, Magna submits that the entire area of the attachment element is located behind the dark shaded area on the windshield, *i.e.*, the claimed “light absorbing layer,” masking the presence of the attachment element from view by a viewer who is viewing from outside the vehicle through the vehicle windshield. (*Id.*) Therefore, Magna argues that the S-cam accessory mounting system used by GM satisfies this limitation. (*Id.*)

The Staff submits that there is a light absorbing layer on the windshield of a Chevrolet Silverado with TRW S-cam device installed, in the form of a roughly rectangular dark shaded area behind the attachment element and bonding buttons. (SIB at 57.) Moreover, the Staff

points out that the aforementioned light absorbing layer renders it difficult, if not impossible, to see the attachment element when viewed from outside the equipped vehicle through the vehicle windshield. (*Id.*) So, according to the Staff, a Chevrolet Silverado with a TRW S-cam installed satisfies each limitation of claim 91. (*Id.*)

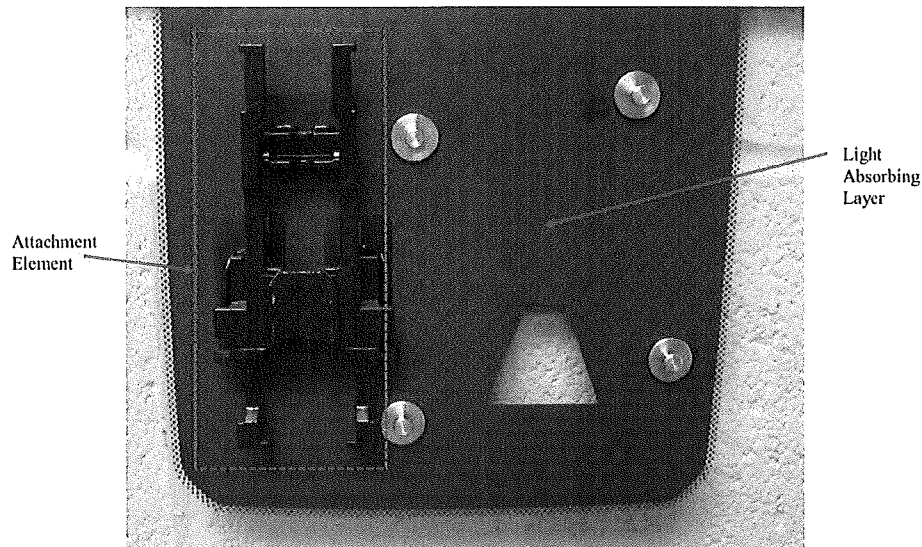


Figure 8 Light Absorbing Layer

As set forth *supra* in Sections V.C.1.a through V.C.1.k, the ALJ has already found the Silverado equipped with the TRW S-cam satisfies the limitations of Claim 90 and Claim 91 depends from Claim 90 with this one additional limitation. The ALJ finds this limitation is met by the Silverado equipped with the S-cam. The record shows that there is a light absorbing layer on the Silverado windshield as shown in Figure 8 Light Absorbing Layer above. (CX-0003C (Min witness stmt.) QQ. 343-44; CDX-0012.33C; CPX-0032.)

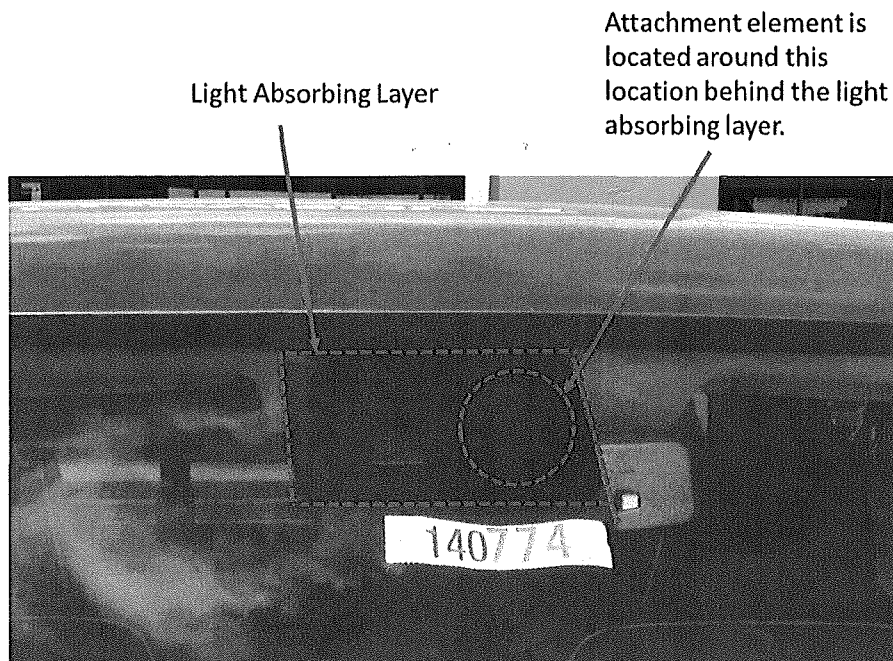


Figure 9 Windshield Depiction

Furthermore, the evidence shows that the Silverado with an installed TRW S-cam has a light absorbing layer in the form of a roughly rectangular dark shaded area behind the attachment element and bonding buttons and this light absorbing layer renders it difficult, if not impossible, to see the attachment element when viewed from outside the equipped vehicle through the vehicle windshield as shown in Figure 9 Windshield Depiction above. (CX-0003C (Min witness stmt.) QQ. 343-44; CDX-0012.34; CPX-0032; CPX-0045.) Thus, the ALJ finds that a Chevrolet Silverado with a TRW S-cam installed satisfies each limitation of claim 91.

m) Claim 92: “wherein said light absorbing layer disposed at the vehicle windshield further at least partially masks the presence of said structure from view by a viewer who is viewing from outside the equipped vehicle through the vehicle windshield.”

First, Magna points out that Claim 92 depends from Claim 91 and further recites “wherein said light absorbing layer disposed at the vehicle windshield further at least partially masks the presence of said structure from view by a viewer who is viewing from outside the

equipped vehicle through the vehicle windshield.” (CIB at 64.) Magna contends that the mounting system for the S-cam used in GM vehicles satisfies this claim limitation as the TRW/GM sensor farm bracket structure for the S-cam is located on the dark shaded area on the vehicle windshield, which blocks light from outside the vehicle from entering, *i.e.*, the claimed “light absorbing layer.” (*Id.*) Specifically, Magna contends that “[a] substantial portion of the sensor farm bracket structure, *i.e.*, all but the area corresponding to the opening on the dark shaded area, is located behind the dark shaded area on the windshield, *i.e.*, the claimed ‘light absorbing layer,’ which thus masks a substantial portion of that structure from view by a viewer who is viewing from outside the vehicle through the vehicle windshield.” (*Id.* at 64.) Magna then contends that the S-cam accessory mounting system used by GM satisfies this limitation. (*Id.*) Thus, Magna submits that it has established by a preponderance of the evidence that the S-cam accessory mounting system used by GM satisfies every limitation of claim 92 of the ’659 patent. (*Id.*)

The Staff notes that a Chevrolet Silverado with a TRW S-cam installed also satisfies this element as the structure is mounted on bonding buttons that are located within the rectangular light absorbing layer on the windshield. (SIB at 57.) The Staff contends that the light absorbing layer renders it difficult, if not impossible, to see the attachment element when viewing from outside the equipped vehicle through the vehicle windshield. (*Id.* at 58.) And, the Staff points out that the only part of the accessory mounting system visible from outside the vehicle through the windshield is the forward-facing camera itself, visible through a triangular cutout in the light absorbing layer. (*Id.*) Thus, according to the Staff, a Chevrolet Silverado with a TRW S-cam installed satisfies each limitation of asserted claim 92. (*Id.*) Accordingly, the Staff states that when TRW’s accused devices are installed in vehicles manufactured by third parties, including at

least the Chevrolet Silverado, the resulting combination directly infringes asserted claims 3 and 92 of the '659 patent. (*Id.*)

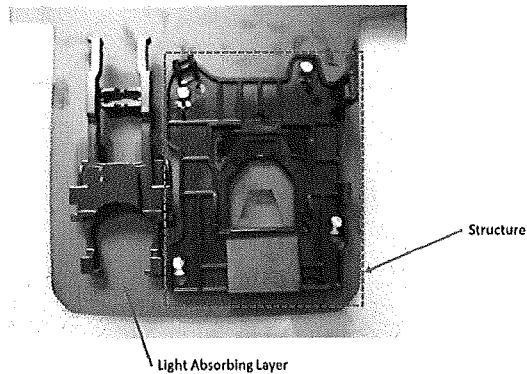


Figure 10 Structure on Windshield with Light Absorbing Layer

As set forth *supra* in Sections V.C.1.a through V.C.1.1, the ALJ has already found the Silverado equipped with the TRW S-cam satisfies the limitations of dependent Claim 91 and Claim 92 depends from Claim 91 with this one additional limitation. The ALJ finds this limitation is met by the Silverado equipped with the S-cam 2. The record shows that a structure is mounted on bonding buttons which are located within the rectangular light absorbing layer on the windshield and the light absorbing layer renders it difficult, if not impossible, to see the attachment element when viewing from outside the equipped vehicle through the vehicle windshield as shown in Figure 10 Structure on Windshield with Light Absorbing Layer above. (CX-0003C (Min witness stmt.) QQ. 349-50; CDX-0012.34C; CPX-0032.) Thus, the ALJ finds that a Chevrolet Silverado with a TRW S-cam installed satisfies each limitation of claim 92.

Accordingly, the ALJ finds that vehicles manufactured by third parties installed with the TRW S-cams, such as the Silverado, directly infringe asserted claims 3 and 92 of the '659 patent.

2. Contributory Infringement

Magna submits that to prevail on a claim of contributory infringement, it must show that, *inter alia*: (1) there is an act of direct infringement in violation of Section 337; (2) TRW imported, sold for importation, or sold after importation within the United States, an accused component that contributed to another's direct infringement; (3) the component is a material part of the claimed invention; and (4) the accused device has no substantial non-infringing uses. (CIB at 66.)

First, Magna contends that it has proven by a preponderance of the evidence that GM vehicles, *e.g.*, the Chevrolet Silverado and GMC Sierra pickup trucks, that are imported into the United States and that contain the S-cam 2 accessory mounting system, directly infringe claim 3 of the '659 patent. (CIB at 67.) Second, Magna contends that TRW sells S-cam 2s to GM with the knowledge that GM will import vehicles containing the infringing S-cam accessory mounting system into the United States. (*Id.*) Additionally, Magna submits that the S-cams sold to GM contain components that TRW imports into the United States, including the Mobileye EyeQ2 chip. (*Id.*) Third, Magna contends that the S-cam is a material part of the claimed invention. Moreover, Magna submits that a POSITA would have read the claims of the '659 patent to require a forward facing camera. (*Id.*) Thus, Magna argues that claims 3 and 90 explicitly specify the nature of the forward facing camera and thus specifically require a forward facing camera. (*Id.*) Additionally, Magna notes that the purpose of the claimed mounting system is to hold the forward facing camera. (*Id.*) Further, Magna points out that "U.S. Patent No. 6,243,003 (RX-8), which is incorporated by reference in the '659 patent describes a forward facing camera as part of the mounting assembly." (*Id.*) Magna also points out that TRW has elsewhere acknowledged that the '659 patent claims a forward facing camera. (*Id.* at 68.) Fourth, Magna contends that the S-cam 2s sold to GM has no substantial non-infringing use because the

[REDACTED]
[REDACTED]
[REDACTED] Specifically, Magna also contends that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] Furthermore, Magna points out that the S-cam 2s sold to GM have physical differences from the S-cam 2s sold to other car manufacturers. (*Id.* at 68-69.) Additionally, Magna submits that [REDACTED]
[REDACTED]

[REDACTED] (*Id.* at 69.) Last, Magna argues that TRW provides absolutely no evidence that GM has ever used the S-cam in a non-infringing accessory mounting system and as a matter of law, a substantial non-infringing use cannot be merely hypothetical, illusory, impractical, aberrant or experimental. (*Id.*)

In opposition, TRW contends that “[a] finding of contributory infringement under 271(c) requires that the accused infringer made, used, sold or imports a ‘component...constituting a material part of the invention.’” (RIB at 15.) TRW further argues that the camera is not an element of the asserted claims and so TRW cannot be found liable for contributory infringement. (*Id.*)

TRW contends that it did not possess the requisite knowledge for a finding of indirect infringement because, for example, TRW does not have knowledge of the infringement at least so far as it believes the pins are mounted through an autoclave process without glue. (*Id.* 15-16.) Therefore, TRW contends that its belief about the pins negates knowledge of infringement,

regardless of whether it is correct and additionally it has a good faith belief of invalidity. (*Id.* at 16.)

TRW points out that “a sale of an article which though adapted to an infringing use is also adapted to other and lawful uses, is not enough to make the seller a contributory infringer.” (*Id.*) Furthermore, TRW proffers that the *patentee* has the ultimate burden to prove that an article has no substantial non-infringing uses. (*Id.*) Additionally, TRW points out that “where the product is ‘interchangeably capable of both infringing and substantial non-infringing uses, a claim for contributory infringement does not lie.” (*Id.*) TRW argues that “[f]ar from showing no substantial non-infringing use, Magna is actually *relying* upon evidence of an *admitted* non-infringing use to prove the intent requirement of indirect infringement—that is TRW’s activities regarding its design of its own bracket (the “TRW bracket”) [and] [h]owever, the use of the S-cam in the TRW bracket is *admitted* to be non-infringing.” (*Id.* at 17. (emphases in original).) TRW also points out that the S-cam is mounted [REDACTED]

[REDACTED] (*Id.*) TRW also submits that “the S-cam is ‘interchangeably capable of both [the alleged] infringing and [the admitted] substantial non-infringing uses.’” (*Id.* at 18.) Furthermore, TRW submits that the S-cam’s external housing is the same for every customer, so all S-cams would fit “interchangeably” into the GM mounting system and the TRW bracket. (*Id.*) TRW then shows the interchangeability of the GM mounting system (left) with the TRW bracket (right) in Figure 11 GM Mounting System (left) with the TRW Bracket (right) below. (*Id.*)

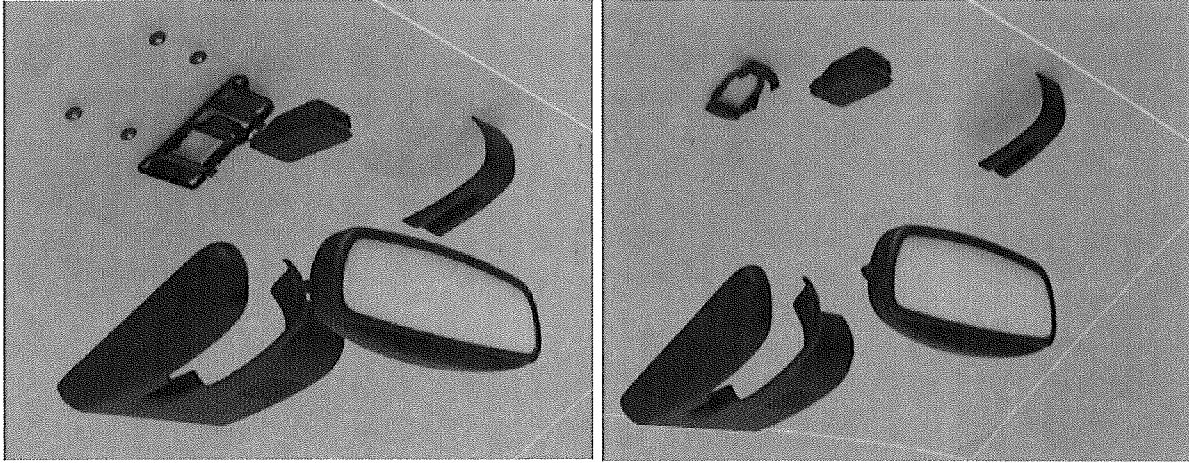


Figure 11 GM Mounting System (left) with the TRW Bracket (right)

Therefore, TRW contends its bracket could be used in every GM platform to mount the S-cam sold to GM and that it would function properly. (*Id.* at 19.) TRW points out that Dr. Min noted that the windshield rake angle is the only thing having an effect on the calibration of the S-cam in a vehicle. (*Id.*)

TRW submits that [REDACTED] platforms which use the S-cam [REDACTED] [REDACTED] (*Id.*) Moreover, TRW points out that at the hearing Dr. Newton noted that [REDACTED] platform [REDACTED] [REDACTED] (*Id.*) Thus, TRW argues that its TRW bracket for [REDACTED]

(*Id.*) Therefore, TRW submits that the evidence showed significant non-infringing uses which were not “unusual, farfetched, illusory, impractical, occasional, aberrant, or experimental” because [REDACTED]

The Staff contends that “TRW’s actions in providing S-cam 2 devices to General Motors for use in the Chevrolet Silverado, which directly infringes, constitutes contributory infringement of the asserted claims of the ’659 patent.” (SIB at 58.) As the Staff discussed in its subpart IV.E

of its initial post-hearing brief and discussed in subsection V.B.2 above, the Staff contends that there are no substantial noninfringing uses for the TRW accused devices and the only use for the S-cam 2 made to be used in the Chevrolet Silverado is as a material part of the vision-based driver assistance system in that vehicle. (*Id.*) Furthermore, the Staff contends that TRW's accused devices are not staple articles or commodities of commerce. (*Id.*)

Moreover, as the Staff discussed in its subpart IV.E.2 of its initial post-hearing brief and discussed in subsection V.B.2 above, the Staff contends that TRW knew that the vision-based driver assistance system in Chevrolet Silverados, for which its S-cam 2 devices were specially made, was both patented and infringing at the time that it sold the S-cam 2 components to General Motors. (*Id.*) Finally, as Staff discussed in its subpart IV.E.2 of its initial post-hearing brief and discussed in subsection V.B.2 above, the Staff submits that TRW sold its products after issuance of the '659 patent. (*Id.*) "The Staff submits, therefore, that TRW has sold within the United States 'a component of a patented machine, manufacture, combination or composition' that is not a staple article or commodity of commerce, knowing that that component was specially made for use in an infringement of the '659 patent." (*Id.* at 59.) Last, the Staff contends that "TRW is accordingly liable for contributory infringement of the asserted claims of the '659 patent through its sale of the S-cam 2." (*Id.*)

For the reasons set forth below and also as set forth *supra* in section V.B.2 with respect to the '840 patent, the ALJ finds that Magna has not proven by a preponderance of the evidence that TRW is liable for contributory infringement of the asserted claims of the '659 patent. Although TRW had notice of the '659 patent in April 2014 when Magna provided TRW with notice and a copy of the issued '659 patent, TRW did not immediately have knowledge of infringement as shown by TRW's good faith belief of invalidity. (RX-0370C at QQ. 132-139;

RX-0077; citing *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2067 (2011) (“a violator of § 271(c) must know ‘that the combination for which his component was especially designed was both patented and infringing.’”) (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 337 U.S. 476, 488 (1964) (*Aro II*) (emphasis added).) TRW’s good faith belief is shown by the opinion it received from the law firm of Knechtel, Demeur & Samlan that the ’659 patent is invalid. (*Id.* at Q. 137; see RX-0077 (’659 Invalidity Opinion dated August 22, 2014.)) Furthermore, the ALJ finds that TRW’s good faith belief of patent invalidity as obtained from the aforementioned invalidity opinion from Knechtel, Demeur & Samlan is also shown by TRW’s action to obtain the opinion within a reasonable time (*i.e.*, approximately 4 months from the date of issuance of the ’659 patent). (RX-0077 (’659 Invalidity Opinion dated August 22, 2014.)) Although the record shows that the S-cam supplied by TRW to GM for use in the Chevrolet Silverado is not a staple article or commodity of commerce suitable for substantial non-infringing use and the S-cam itself and its [REDACTED]

[REDACTED] these facts do not prove that TRW had the requisite knowledge of infringement. (See Min Tr. at 289:6-21, 304:17-305:6; CX-0003C (Min witness stmt.) Q. 266.) Accordingly, the ALJ finds that TRW is not liable for contributory infringement of the asserted claims of the ’659 patent.

3. Induced Infringement

Magna argues that “TRW knowingly induces GM to infringe the ’659 patent in at least two distinct ways.” (CIB at 69.) First, Magna contends that TRW’s offering to sell as well as its continuing offers to sell the S-cam 2 to GM encourages GM to buy the S-cam 2 and install it in the accessory mounting system, thereby infringing the ’659 patent. (*Id.*) Furthermore, Magna points out that “[e]ven if, as TRW sometimes contends, a camera were not a limitation of the

asserted claims of the '659 patent, TRW would still induce GM to install in vehicles a bracket configured to accommodate a forward facing camera.” (*Id.* at 69-70.) Magna therefore argues that GM would not install in vehicles a bracket “configured to accommodate” TRW’s forward facing camera without the sale of the S-cam,² and thereby results in the infringement of the '659 patent. (*Id.* at 70.) Second, Magna submits that “TRW induces infringement of the '659 patent by designing and participating in the design of the TRW/GM sensor farm bracket (*i.e.*, the structure that accommodates the S-cam).” (*Id.*) Magna proffers that TRW confirmed that one reason GM awarded the K2xx⁸ program to TRW (*i.e.*, supplying S-cams to fit in GM brackets) was the capability of TRW’s engineering team. (*Id.*) Additionally, Magna contends that TRW has taken active steps to encourage direct infringement, such as instructing how to engage in an infringing use. (*Id.*) And, Magna submits that TRW’s aforementioned efforts took place before the asserted patents issued in April 2014 and have continued after issuance. (*Id.*)

In addition, Magna contends that the bracket for a particular vehicle must be configured for that vehicle because the windshield angles are different on different vehicles, the bracket design must be modified so that it is in an optimal position, *i.e.*, positioned in an angle that minimizes the glare. (CIB at 70-71.) Magna also states that [REDACTED]

[REDACTED] (*Id.* at 71.) And, Magna points out that TRW provides, *inter alia*, specific [REDACTED]

[REDACTED] (*Id.*) Specifically, Magna submits that [REDACTED]
[REDACTED] specific changes [REDACTED]

⁸ K2xx” refers to a GM vehicle platform with an infringing accessory mounting system that includes a TRW S-cam and a bracket for mounting the camera that TRW helped GM to design and develop. *See, e.g.*, Tr. at 335:6-11; CDX-16C (2014 K-5C1 Silverado diagram of forward facing camera).

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[REDACTED] (*Id.*) Magna also points out that [REDACTED]
[REDACTED] design of the [REDACTED]
[REDACTED] (*Id.*) Magna contends that although TRW states that
[REDACTED]
[REDACTED]
[REDACTED] the mounting bracket [REDACTED]
[REDACTED] (*Id.* at 72.)

TRW contends that it has not actively induced infringement of the '659 patent under 35 U.S.C. §271(b), which provides that "[w]hoever actively induces infringement of a patent shall be liable as an infringer." (RIB at 20.) First, TRW argues that Magna's alleged evidence of inducing behavior by TRW as contained in Dr. Min's direct witness statement does not and cannot prove induced infringement by TRW because "(1) as admitted by Dr. Min, much of the evidence relied upon by him mistakenly relates to TRW's interactions with its other customers and potential customers, not GM, (2) the evidence cited relating to TRW's interactions with GM all pertain to pre-issuance activities, and (3) Dr. Min cites to and characterizes testimony which is not in the evidentiary record and should therefore be afforded no weight." (*Id.* at 21.) Specifically, TRW submits that Dr. Min cited numerous documents to support his allegation that TRW induces GM's infringement of the asserted claims but these documents on their face clearly do not relate to GM or TRW's interactions with GM. (*Id.*) TRW also contends that "Dr. Min admitted that these documents were mistakenly cited and that these documents do not say anything about whether TRW allegedly induces GM to infringe the '659 patent." (*Id.* at 21 and FN19.) TRW then submits, on the contrary, that "Mr. Newton provided un-refuted testimony that [REDACTED]"

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██████████ the document related to TRW's ██████████ and (3) the document was ██████████ (Id. at 21-22.)

Additionally, TRW contends that Dr. Min citations to CX-0344C, CX-0347C, CX-0349C, CX-0350C, and CX-0351C pertained to activities performed in 2011 and 2012. (*Id.* at 23.) Specifically, TRW submits that “Dr. Min admitted that all of these documents represent communications with TRW ‘[c]ertainly prior to the ’659 patent.’” (*Id.*) And, TRW contends that Dr. Min admitted that the GM mounting system accused of infringing the ’659 patent was in production before the issuance of the ’659 patent and Dr. Min could not identify any changes that occurred to the accused GM mounting system in production from before the ’659 patent issued to the time after the ’659 patent issued. (*Id.*) Then, TRW points out that Dr. Min’s aforementioned admission is consistent with unrefuted testimony provided by TRW’s witness Mr. Newton, that [REDACTED]

changes

mounting bracket

██████████ (*Id.*) Thus, according to TRW, “Dr. Min’s reliance pre-issuance activity cannot support Magna’s allegations regarding TRW’s inducement of GM to infringe the ’659 patent.” (*Id.*)

Moreover, TRW contends that “the mere sale of TRW’s S-cam 2 to GM after the issuance of the ’659 patent is insufficient to establish induced infringement when the alleged inducing activity occurred pre-issuance and the design of the alleged infringing product was finalized pre-issuance, because the mere sale [of] a non-patented product (even with knowledge that it could be used in an infringement) is not sufficient for a finding of inducement.” (*Id.* at 23-

24.) Rather, TRW argues that “the patentee must prove an *act* of inducement.” (*Id.* at 24.) TRW then states “[a]ccordingly, under Federal Circuit precedent neither (1) pre issuance activities nor (2) post-issuance sales (without an act of inducement) are sufficient for a finding of inducement.” (*Id.*) TRW then submits that alleged inducing acts occurring prior to the issuance of a patent with the continuation of sales of an accused product after issuance also cannot give rise to inducement liability—as the underlying acts are not acts which violate §271(b). (*Id.* (emphasis in original).)

Furthermore, TRW contends that “[t]he activity alleged by Magna is also insufficient to prove inducement because Magna has failed to prove and cannot prove that TRW induced infringement of *all* (or even a majority) of the elements of the asserted claims.” (*Id.* at 25.) TRW also submits that the Supreme Court’s opinion in *Limelight Networks, Inc. v. Akamai Technologies, Inc.* supports the concept that induced infringement may only be found if the inducer encourages the performance of each and every claim limitation. (*Id.*) TRW also avers that the Supreme Court’s *Limelight Networks, Inc.* decision reaffirmed the basic principle that a patent is “the conferral of rights in a particular claimed set of elements” and, thus, “[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention.” (*Id.*) Thus, according to TRW, “the Supreme Court has precluded a finding under § 271(b) where the evidence only shows inducement as to one claim limitation, but not other limitations.” (*Id.* at 26.)

TRW argues that “Magna has not and cannot prove that any alleged inducing activity by TRW related to all—or even most—of the elements of the asserted claims.” (*Id.* at 26.) As an example, TRW contends that “independent claim 1 (from which asserted dependent claim 3 depends) [of the ’659 patent] consists of at least ten elements, yet the alleged inducing activity

identified by Magna relates to only one element—the structure.” (*Id.*) TRW contends that “Magna does not identify any alleged inducing activity by TRW with respect to: (1) the attachment element, (2) the mirror mounting button, (3) the attachment members, (4) the mirror mount, (5) the mirror support, (6) the mirror head, (7) the interior rearview mirror assembly, (8) the mirror reflective element, or (9) the mirror casing.” (*Id.*) Additionally, TRW argues that Magna cannot allege any inducing activity with regard to these nine elements because TRW has no involvement with them whatsoever. (*Id.* at 26-27.) TRW, in any case, submits that “even if Magna could show TRW induced a portion of the claimed ‘structure’ Magna cannot even show TRW induce all aspects of the structure which requires: (1) the structure to be ‘configured for mounting to said plurality of attachment members attached at the in-cabin surface of the vehicle windshield’ and (2) ‘said structure configured to receive and be supported by said plurality of attachment members that are adhesively attached at the in-cabin surface of the vehicle windshield.’” (*Id.* at 27.)

Furthermore, TRW contends that it did not induce GM to develop a structure configured to accommodate a FFC as required by the asserted claims but that GM requires the FFC to fit into the “structure” or sensor farm of GM’s mounting system. (*Id.* at 27-28.) Specifically, TRW avers that “Mr. Newton testified that [REDACTED]

[REDACTED] platforms [REDACTED]

[REDACTED] (*Id.*) Additionally, TRW contends that [REDACTED]

[REDACTED] mounting bracket, [REDACTED]

[REDACTED] (*Id.* at 28.)

TRW points out that [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] (*Id.*) According to TRW, Dr. Min admitted that [REDACTED]
[REDACTED]

[REDACTED] bracket) does not make the claim any more or less infringed. (*Id.*) Additionally, TRW argues that Dr. Min's reliance on and use of demonstrative CDX-0015C does not support his claim of inducement because this demonstrative shows that the alleged infringing configuration (which is also the configuration Magna relies upon for domestic industry) was used by GM long before TRW began selling its S-cam. (*Id.*)

TRW continues its contentions by stating that "[i]nducement requires 'knowledge that the induced acts constitute patent infringement.'" (*Id.* at 29.) According to TRW, "[t]he evidence presented at the hearing establishes that TRW did not and does not have the requisite knowledge of infringement or the specific intent to induce infringement. (*Id.*) TRW points out that it was notified of the asserted patents days before the patents issued and was sued on these patents within a few days thereafter. (*Id.*) TRW contends "[h]owever, mere knowledge of the patents and an allegation of infringement do not prove that the accused infringer had the requisite knowledge and specific intent to induce infringement." (*Id.*) TRW then submits that Mr. Austen's testimony shows that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] (*Id.*)

TRW also contends that it requested independent invalidity opinions from outside counsel to

assure and confirm its already held belief of non-infringement and invalidity. (*Id.* at 30.) And, TRW contends that “[t]hese independent opinions from outside counsel merely reinforced TRW’s good-faith understanding and belief that the asserted patents are invalid and therefore not infringed.” (*Id.*) In addition, TRW submits that “[it] has no knowledge of infringement or any specific intent to induce infringement of the asserted claims because TRW did not choose the mounting scheme used by GM and has absolutely no involvement with the vast majority of the components in the accused GM mounting system.” (*Id.*)

Furthermore, TRW argues that the evidence presented at the hearing affirmatively establishes that TRW in fact does not have knowledge of infringement of the asserted claims as Mr. Newton testified that [REDACTED]

[REDACTED] mounted to [REDACTED] [REDACTED] (*Id.* at 30.) Additionally, TRW submits that “[o]n cross-examination, Dr. Min admitted that TRW believes that GM’s mounting buttons are not glued to the windshield.” (*Id.* at 30-31.) Thus, TRW contends that it has a good-faith belief that the mounting buttons are not glued to the windshield and therefore “[it] cannot know that it is inducing infringement because TRW does not believe that the accused plurality of attachment members are *adhesively attached* at an in-cabin surface of the vehicle windshield, as required by the asserted claims, and therefore does not believe that the asserted claims are infringed.” (*Id.* at 31 (emphasis in original).)

In sum, TRW contends that “Magna has failed to provide any evidence that TRW knew that its acts induced infringement and specifically intended to induce GM to infringe the ’659 patent; instead relying on supposition and innuendo.” (*Id.* at 31.) TRW argues “[t]o the contrary, the record contains specific examples of TRW’s lack of knowledge of inducing infringement and

lack of specific intent to induce infringement.” (*Id.*) Accordingly, TRW submits that “Magna cannot succeed on its induced infringement claim with regard to the ’659 patent.” (*Id.*)

As discussed in subsection IV.E.3 of the Staff’s initial post-hearing brief, the Staff submits that it is a very close call as to whether the evidence shows that TRW induced infringement of the ’659 patent. (SIB at 59.) The Staff, however, does not believe the record establishes that TRW has induced infringement of the asserted claims of the ’659 patent because although Magna presented evidence of TRW’s activities regarding the design of the K2xx bracket, these activities appear to have either (1) occurred before the ’659 activity, or (2) relate to a bracket for the S-cam 3.5 that has yet not been produced. (*Id.*)

For the reasons set forth below and also as set forth *supra* in section V.B.3 with respect to the ’840 patent, the ALJ finds that Magna has failed to prove by a preponderance of the evidence that TRW is liable for induced infringement of the asserted claims of the ’659 patent. The ALJ finds that any collaboration between TRW and GM with respect to the S-cam used in the subject GM vehicles occurred before the issuance of the ’659 patent as the ’659 patent issued on April 8, 2014 (*See* JX-0003-0002.) Also, the bracket design [REDACTED] [REDACTED] (Newton Tr. at 404:23-406:17.) Thus, the collaboration between TRW and GM occurred before the issuance of the ’659 patent. Additionally, the ALJ finds that any collaboration [REDACTED] [REDACTED] as shown by the testimony of Mr. Newton. (Newton Tr. at 407:19-408:8.) Accordingly, the ALJ finds that TRW is not liable for induced infringement of the asserted claims of the ’659 patent because the evidence clearly shows that TRW and GM only collaborated about the use of the S-cam prior to the issuance of the ’659 patent and inducement only applies to acts that occur after the issuance of the patent. (*See*

National Presto Industries, Inc. v. West Bend Co., 76 F.3d 1185, 1196 (Fed. Cir. 1996) (“... inducement of infringement under § 271(b) does not lie when the acts of inducement occurred before there existed a patent to be infringed.”) Additionally, as set forth *supra* in Section V.C.2, the ALJ finds that TRW did not have the requisite knowledge to prove induced infringement of asserted claims of the ’659 patent. Accordingly, the ALJ finds that TRW is not liable for induced infringement of the asserted claims of the ’659 patent.

VI. VALIDITY

A. Burden of Proof

One cannot be held liable for practicing an invalid patent claim. *See Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). However, the claims of a patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). Although a complainant has the burden of proving a violation of section 337, it can rely on this presumption of validity.

Respondents have the burden of proving invalidity of the patent. This “burden is constant and never changes and is to convince the court of invalidity by clear evidence.” *i4i v. Microsoft Corp.*, 131 S. Ct. 2338, 2243 (2010) (citing Judge Rich in *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F. 2d 1350, 1360 (CA Fed. 1984)). Respondents’ burden of persuasion *never shifts*. *Id.* The risk of “decisional uncertainty” remains on the respondent. *Technology Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008); *see also PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303, 1305 (Fed. Cir. 2008); *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1360 (Fed. Cir. 2007). Thus, it is Respondent’s burden to prove by clear and convincing evidence that any of the alleged prior art references anticipate or render obvious the asserted claims of the patents in suit. Failure to do so means that Respondents lose

on this point. *Id.* (stating, “[I]f the fact trier of the issue is left uncertain, the party with the burden [of persuasion] loses.”).

Respondents also bear the burden of going forward with evidence, *i.e.*, the burden of production. *Id.* This is “a shifting burden the allocation of which depends on where in the process of a trial the issue arises.” *Id.* However, this burden does not shift until a respondent presents “evidence that might lead to a conclusion of invalidity.” *Pfizer*, 480 F.3d at 1360. Once a respondent “has presented a prima facie case of invalidity, the patentee has the burden of going forward with rebuttal evidence.” *Id.*

B. 35 USC § 112: Indefiniteness and Written Description

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(b); *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). “The fact that [a patentee] can articulate a definition supported by the specification ... does not end the inquiry. Even if a claim term's definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.” *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008).

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.

Halliburton Energy Servs., 514 F.3d at 1255.

“[B]ecause claim construction frequently poses difficult questions over which reasonable minds may disagree, proof of indefiniteness must meet ‘an exacting standard.’” *Wellman, Inc. v. Eastman Chemical Co.*, 642 F.3d, 1355, 1366 (Fed. Cir. 2011) (citations omitted). “An accused infringer must ... demonstrate by clear and convincing evidence that one of ordinary skill in the relevant art could not discern the boundaries of the claim based on the claim language, the specification, the prosecution history, and the knowledge in the relevant art.” *Id*

In addition, the first paragraph of 35 U.S.C. § 112 requires:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art ... to make and use the same ...

(35 U.S.C. § 112.)

The Federal Circuit has interpreted 35 U.S.C. § 112, ¶ 1, to include a written description requirement that requires a patent specification reasonably convey “to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010). “Compliance with the written description requirement is a question of fact.” *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1376 (Fed. Cir. 2009). Terms need not be used *in haec verba*, *Eiselstein v. Frank*, 52 F.3d 1035, 1038 (Fed. Cir. 1995), and the requirement can be satisfied by “words, structures, figures, diagrams, formulas, etc.,” *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997). A description that merely renders the claimed subject matter obvious, however, does not satisfy the requirement. *Id.* at 1571-72.

**1. '840 Patent: Written Description under 35
U.S.C. § 112**

TRW argues that the two limitations of (1) “a control” and (2) “controls” in the asserted claims of the '840 patent are not adequately disclosed in the common specification and therefore do not satisfy the written description requirement of 35 U.S.C. § 112. (RIB at 94-97.) Magna contends that the invention is adequately described and “conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” (CIB at 45.) The Staff submits that the aforementioned limitations are disclosed in the specification, either expressly or inherently, and that the '840 patent contains an adequate written description of the claimed invention. (SIB at 25.) For the reasons set forth below, the ALJ finds that TRW has failed to prove by clear and convincing evidence that the asserted claims of the '840 patent are invalid for lack of satisfying the written description requirement under 35 U.S.C. § 112.

a) “a control”

TRW contends that the specification does not disclose any “device that performs operations” or “means or device to direct and regulate a process or sequence of events” which performs both the claimed limitations of controlling a forward facing camera and communicating over a vehicle network and therefore, claims 30 and 36 are invalid as both indefinite and lacking supporting written description. (RIB at 95.)

Magna contends that the term “a control” was well-known to a POSITA and also further defined by the three claim limitations (1) “wherein said control comprises digital circuitry and a microprocessor;” (2) “wherein said control controls at least said forward facing camera;” and (3) “wherein said control at least one of sends data to at least one other accessory or system of the equipped vehicle via a vehicle network of the equipped vehicle and receives data from at least one other accessory or system via said vehicle network of the equipped vehicle.” (CIB at 45.)