

*In the Matter of*

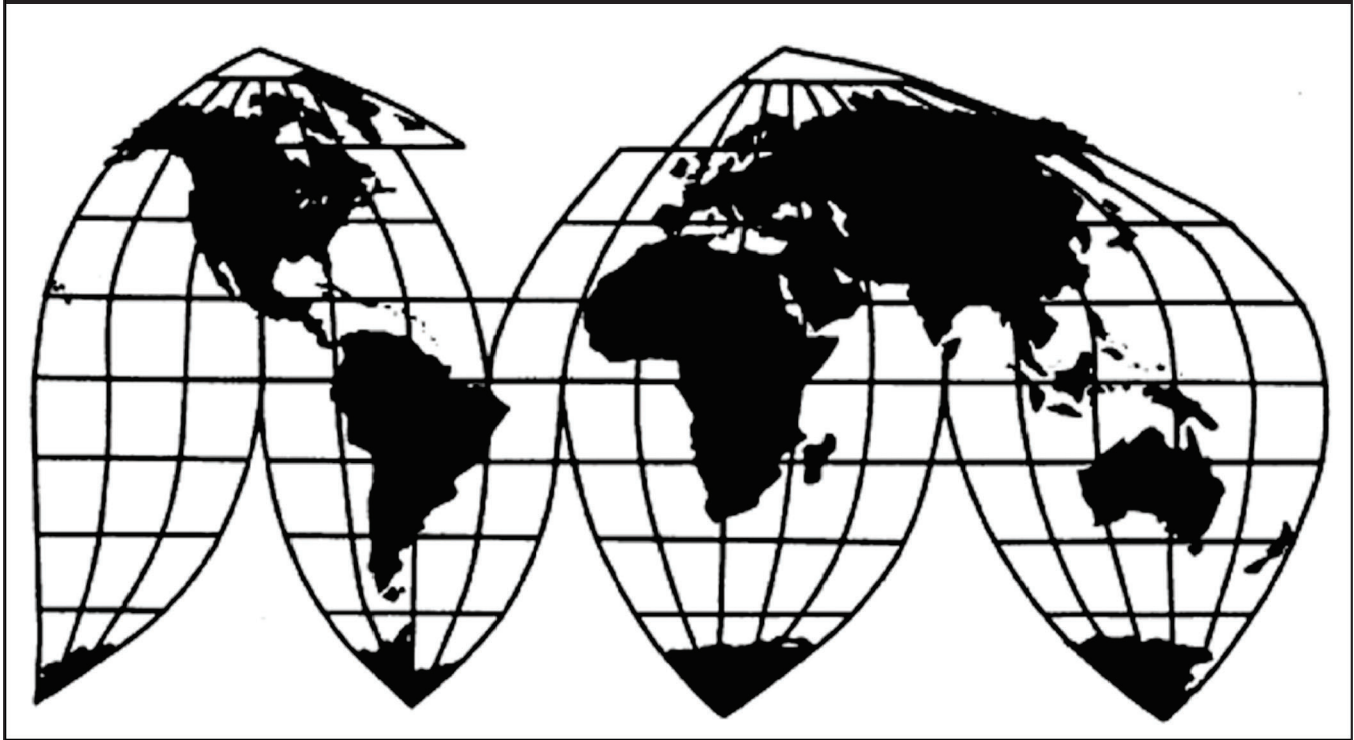
**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR, AND CERTAIN  
PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

Investigation Nos. 337-TA-1007&1021

Publication 4934

September 2019

**U.S. International Trade Commission**



Washington, DC 20436

# **U.S. International Trade Commission**

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United States International Trade Commission  
Washington, DC 20436**

# U.S. International Trade Commission

Washington, DC 20436  
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*In the Matter of*

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR, AND CERTAIN  
PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

Investigation Nos. 337-TA-1007 & 1021



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

**In the Matter of**

**CERTAIN PERSONAL  
TRANSPORTERS, COMPONENTS  
THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**And**

**CERTAIN PERSONAL  
TRANSPORTERS AND COMPONENTS  
THEREOF**

**Investigation No. 337-TA-1007  
Investigation No. 337-TA-1021  
(Consolidated)**

**NOTICE OF A COMMISSION FINAL DETERMINATION OF VIOLATION OF  
SECTION 337; ISSUANCE OF REMEDIAL ORDERS; TERMINATION OF  
INVESTIGATION**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission (“the Commission”) has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended in the above-captioned investigation. The Commission has issued a limited exclusion order (“LEO”) directed to products of respondents Swagway LLC of South Bend, Indiana (“Swagway”) and Segaway of Studio City, California (“Segaway”); and a cease and desist order (“CDO”) directed to respondent Swagway. The investigation has been terminated.

**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 <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission’s electronic docket (EDIS) at <https://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

**SUPPLEMENTARY INFORMATION:** The Commission instituted Inv. No. 337-TA-1007, *Certain Personal Transporters, Components Thereof, and Packaging and Manuals Therefor* under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 (“section 337”), on June 24, 2016, based on a complaint filed by Segway, Inc. of Bedford, New Hampshire; DEKA Products Limited Partnership of Manchester, New Hampshire; and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China (collectively, “Complainants”). 81 FR 41342-43 (Jun. 24, 2016). The complaint alleges a violation of section 337 by reason of infringement of certain claims of U.S. Patent Nos. 6,302,230 (“the ‘230 patent”); 6,651,763 (“the ‘763 patent”); 7,023,330 (“the ‘330 patent”); 7,275,607 (“the ‘607 patent”); 7,479,872 (“the ‘872 patent”); and 9,188,984 (“the ‘984 patent”); and U.S. Trademark Registration Nos. 2,727,948 (“the ‘948 TM”) and 2,769,942 (“the ‘942 TM”). The named respondents for Investigation No. 337-TA-1007 are (“Inventist”), Inc. of Camas, Washington; PhunkeeDuck, Inc. of Floral Park, New York; Razor USA LLC of Cerritos, California; Swagway; Segaway; and Jetson Electric Bikes LLC of New York, New York. The Commission’s Office of Unfair Import Investigations (“OUII”) was also named as a party to this investigation. 81 FR 41342 (Jun. 24, 2016).

On September 21, 2016, the Commission instituted Inv. No. 337-TA-1021, *Certain Personal Transporters and Components Thereof*, based on a complaint filed by the same Complainants. 81 FR 64936-37 (Sept. 21, 2016). The complaint alleges a violation of section 337 by reason of infringement of certain claims of the ‘230 and ‘607 patents. The named respondents for Investigation No. 337-TA-1021 are Powerboard LLC of Scottsdale, Arizona; Metem Teknoloji Sistemleri San of Istanbul, Turkey; Changzhou Airwheel Technology Co., Ltd. of Jiangsu, China; Airwheel of Amsterdam, Netherlands; Nanjing Fastwheel Intelligent Technology Co., Ltd. of Nanjing, China; Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star of Shenzhen, China; Hangzhou Chic Intelligent Technology Co., Ltd. of Hangzhou, China; Hovershop of Placentia, California; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel of Shenzhen City, China; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway of Shenzhen, China; and Inventist. OUII was also named as a party to this investigation. 81 FR 64936 (Sept. 21, 2016). The Commission directed the presiding ALJ to consolidate Inv. Nos. 337-TA-1007 and 337-TA-1021. *See id.* at 64937.

Subsequently, the Commission determined not to review an initial determination (“ID”) finding respondents PhunkeeDuck, Inc. and Segaway in default. Order No. 9 (Sept. 1, 2016) (*not reviewed* Oct. 3, 2016). The Commission further determined not to review an ID granting complainants’ corrected motion to amend the complaint and notice of investigation to assert the ‘763, ‘330, and ‘872 patents against respondent Jetson Electric Bikes LLC, and to terminate the investigation with respect to all asserted claims of the ‘984 patent as to all respondents. Order No. 17 (Nov. 14, 2016) (*not reviewed* Dec. 7, 2016). The Commission also determined not to review an ID terminating the investigation as to respondent Nanjing Fastwheel Intelligent Technology Co., Ltd. based on a Consent Order Stipulation. Order No. 18 (Nov. 15, 2016) (*not reviewed* Dec. 7, 2016). The Commission likewise determined not to review an ID granting a motion to terminate the investigation as to the ‘763 patent. Order No. 19 (Dec. 16, 2016) (*not reviewed* Jan. 10, 2017). The Commission further determined not to review an ID finding respondents Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel; Guangzhou Kebye Electronic Technology Co.,

Ltd., a.k.a. Gotway; Metem Teknoloji Sistemleri San; and Airwheel Netherlands in default. Order No. 22 (Jan. 9, 2017) (*not reviewed* Feb. 7, 2017). The Commission also determined not to review an ID terminating this investigation with respect to all asserted claims of the '330 patent and the '872 patent as to all respondents. See Order No. 24 (Jan. 10, 2017) (*not reviewed* Feb. 7, 2017).

Furthermore, on January 17, 2017, Complainants and respondent Inventist filed a joint motion to terminate this investigation based on consent order stipulation and proposed consent order. On January 30, 2017, the ALJ issued an ID (Order No. 25) granting the joint motion. The Commission determined to review Order No. 25 because the proposed Consent Order contained express provisions that were mutually inconsistent, and multiple typographical and formatting errors. See Notice of Review dated February 22, 2017. The Commission requested corrections to be made in the proposed Consent Order. See *id.* at 2. The corrected proposed Consent Order was filed with the Commission on February 27, 2017. On October 12, 2017, the Commission determined to affirm Order No. 25 based on the corrected proposed Consent Order.

As a result, the following two patents (with 13 asserted claims) and two trademarks remain at issue in this investigation: claims 1, 3-5, and 7 of the '230 patent; claims 1-4 and 6 of the '607 patent; the '948 TM; and the '942 TM. See ID at 5.

The evidentiary hearing on the question of violation of section 337 was held from April 18 through April 21, 2017. The final ID finding a violation of section 337 was issued on August 10, 2017. On August 10, 2017, the ALJ issued his final ID finding a violation of section 337. The ID found that the accused products do not infringe the asserted claims of the '230 and '607 patents which were not found to be invalid. The ID also found that the technical prong of the domestic industry requirement was not satisfied for the '230 or '607 patents, and therefore the domestic industry requirement was not satisfied for those patents. The ID further found that the Swagway accused products infringe the '948 TM and '942 TM, for which the domestic industry requirement was satisfied. ID at 192-93; 82; 147.

The ALJ issued his recommended determination on remedy, the public interest and bonding on August 22, 2017. The ALJ recommended that if the Commission finds a violation of section 337 in the present investigation, the Commission should: (1) issue a GEO covering accused products found to infringe the asserted patents; (2) issue a LEO covering accused products found to infringe the asserted patents if the Commission does not issue a GEO; (3) issue an LEO covering accused products found to infringe the asserted trademarks; (4) issue CDOs; and (5) not require a bond during the Presidential review period. RD at 1-18.

On August 23, 2017, the Commission issued a Notice of Request for Statements on the Public Interest. No written submissions from the public were filed with the Commission. Complainants timely filed a public interest submission on September 21, 2017. 19 C.F.R. § 210.50(a)(4).

All parties to this investigation that participated in the evidentiary hearing (with the exception of respondent Powerboard LLC) filed timely petitions for review of various portions of the final ID. The parties likewise filed timely responses to the petitions.

The Commission determined to review various portions of the final ID and issued a Notice to that effect. 82 FR 48724-26 (Oct. 19, 2017) (“Notice of Review”). In the Notice of Review, the Commission also set a schedule for the filing of written submissions on the issues under review, including certain questions posed by the Commission, and on remedy, the public interest, and bonding. The parties have briefed, with initial and reply submissions, the issues under review and the issues of remedy, the public interest, and bonding.

Having examined the record in this investigation, including the parties’ submissions filed in response to the Notice of Review, the Commission has determined as follows:

(1) To affirm the ID’s determination that the claim term “maximum operating velocity” should be construed to mean “a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle,” ID at 44;

(2) To affirm the ID’s determination that “nothing in the plain language of the disputed limitation [‘the motorized drive arrangement causing, when powered, automatically balanced operation of the system’] in claim 1 of the ‘230 patent requires the operation by a rider. The claim only requires the ‘motorized drive arrangement causing, when powered, automatically balanced operation of the system,’” *see* ID at 82;

(3) To affirm the ID’s infringement, validity, and domestic industry (technical prong) determinations pertaining to the ‘230 patent, with the exception of the ID’s findings and analysis pertaining to the discussion of the non-infringement determination regarding the ‘230 patent that are based on Complainants’ incorrect construction of the term “maximum operating velocity,” *see* ID at 51-77. The Commission takes no position on these findings and analysis. *See Beloit Corporation v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir.1984);

(4) To modify, as detailed in the accompanying Commission Opinion, the ID’s discussion and conclusion with respect to the “actual confusion” factor regarding the SEGWAY mark on pages 171-172 of the ID, to find that the “actual confusion” factor does not weigh in favor of a finding of a likelihood of confusion.

Having reviewed the submissions on remedy, the public interest and bonding filed in response to the Commission’s Notice of Review, and the evidentiary record, the Commission has determined that the appropriate form of relief in this investigation is: (1) an LEO prohibiting the importation into the United States of (a) SWAGWAY-branded personal transporters, components thereof, and packaging and manuals thereof manufactured outside the United States that infringe one or more of the ‘948 TM and ‘942 TM and that are manufactured abroad by or on behalf of, or imported by or on behalf of, Respondent Swagway; and (b) personal transporters, components thereof, and packaging and manuals therefor manufactured outside the United States that infringe one or more of the ‘948 TM and ‘942 TM, which cover the “SEGWAY” marks, and that are

manufactured by or on behalf of, or imported by or on behalf of, Respondent Segaway; and (2) a CDO directed against Respondent Swagway.

The Commission has further determined that the public interest factors enumerated in subsections (d)(1), (f)(1), and (g)(1) (19 U.S.C. §§ 1337(d)(1), (f)(1), (g)(1)) do not preclude issuance of the above-referenced remedial orders. Finally, the Commission has determined to set the bond amount at zero (0) percent of the entered value of Respondent Swagway's accused products and at 100 percent of the entered value of defaulted Respondent Segaway's accused products during the Presidential review period (19 U.S.C. § 1337(j)). The investigation is terminated.

The Commission's orders, opinion, and the record upon which it based its determination were delivered to the President and to the United States Trade Representative on the day of their issuance. The Commission has also notified the Secretary of the Treasury of the orders.

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

By order of the Commission.



Lisa R. Barton  
Secretary to the Commission

Issued: December 11, 2017



**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **December 11, 2017**.



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

**On Behalf of Complainants Segway Inc., DEKA Products  
Limited Partnership, and Ninebot (Tianjin) Technology Co.,  
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**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 2

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**On Behalf of Respondent Hangzhou Chic Intelligent  
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Airwheel

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Amsterdam, Netherlands

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 Other: \_\_\_\_\_

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 3

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

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**UNITED STATES INTERNATIONAL TRADE COMMISSION**  
**Washington, DC**

**In the Matter of**

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND  
PACKAGING AND MANUALS THEREFOR**

**and**

**CERTAIN PERSONAL TRANSPORTERS  
AND COMPONENTS THEREOF**

**Inv. No. 337-TA-1007  
Inv. No. 337-TA-1021  
(Consolidated)**

**CORRECTED LIMITED EXCLUSION ORDER**

The United States International Trade Commission (“Commission”) has determined that there is a violation of Section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), in the unlawful importation, sale for importation, or sale within the United States after importation by respondent Swagway LLC of South Bend, Indiana (“Swagway”) of certain personal transporters, components thereof, and packaging and manuals therefor that infringe U.S. Trademark Registration Nos. 2,727,948 and 2,769,942, which cover the “SEGWAY” marks. The Commission has also found respondent Segaway of Studio City, California (“Segaway”) in default pursuant to subsection (g)(1) of section 337, 19 U.S.C. § 1337(g)(1), and section 210.16 of the Commission’s Rules of Practice and Procedure, 19 C.F.R. § 210.16, for failing to respond to a Complaint and Notice of Investigation that alleged a violation of section 337 with respect to the unlawful importation, sale for importation, and sale after importation of certain personal

transporters, components thereof, and packaging and manuals therefor that infringe U.S.

Trademark Registration Nos. 2,727,948 and 2,769,942, which cover the "SEGWAY" marks.

Having reviewed the record of this investigation, including the written submissions of the parties, the Commission has made its determination on the issues of remedy, the public interest, and bonding. The Commission has determined that the appropriate form of relief is a limited exclusion order prohibiting the unlicensed entry of covered personal transporters, components thereof, and packaging and manuals therefor manufactured by or on behalf of, or imported by or on behalf of, respondents Swagway and Segaway or any of their affiliated companies, parents, subsidiaries, or other related business entities, or its successors or assigns.

The Commission has also determined that the public interest factors enumerated in 19 U.S.C. § 1337(d)(1), (f)(1) and (g)(1) do not preclude the issuance of the limited exclusion order. The Commission has further determined that the bond during the period of Presidential review shall be in the amount of zero percent (*i.e.*, no bond) of the entered value of the imported subject articles of respondent Swagway and 100 percent of the entered value of the imported subject articles of respondents Segaway.

Accordingly, the Commission hereby **ORDERS** that:

1. SWAGWAY-branded and SEGAWAY-branded personal transporters, components thereof, and packaging and manuals thereof manufactured outside the United States that infringe one or more of the following U.S. Trademark Registration Nos. 2,727,948 and 2,769,942 and that are manufactured abroad by or on behalf of, or imported by or on behalf of, respondents Swagway or Segaway, or any of their affiliated companies, parents, subsidiaries, or other related business entities, or its successors or assigns, are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, except if imported by,

under license from, or with the permission of the trademark owner, or as provided by law, until such date as the trademarks are abandoned, canceled, or rendered invalid or unenforceable.

2. Notwithstanding paragraph 1 of this Order, respondent Swagway's personal transporters, components thereof, and packaging and manuals thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of zero percent of the entered value (*i.e.*, no bond), and respondent Segaway's personal transporters, components thereof, and packaging and manuals thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of 100 percent of the entered value, pursuant to subsection (j) of Section 337 (19 U.S.C. § 1337(j)) and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 *Fed. Reg.* 43,251), from the day after this Order is received by the United States Trade Representative until such time as the United States Trade Representative notifies the Commission that this Order is approved or disapproved but, in any event, not later than sixty days after the date of receipt of this Order.
3. At the discretion of U.S. Customs and Border Protection ("CBP") and pursuant to procedures that it establishes, persons seeking to import personal transporters, components thereof, and packaging and manuals thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state

that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraph 1 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses as are necessary to substantiate the certification.

4. In accordance with 19 U.S.C. § 1337(l), the provisions of this Order shall not apply to personal transporters, components thereof, and packaging and manuals thereof imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.
5. Complainants Segway Inc., DEKA Products Limited Partnership, and Ninebot (Tianjin) Technology Co., Ltd. (collectively, "Complainants") shall file a written statement with the Commission, made under oath, each year on the anniversary of the issuance of this Order stating whether Segway continues to use each of the aforesaid trademarks in commerce in the United States in connection with personal transporters, components thereof, and packaging and manuals thereof, whether any of the aforesaid trademarks has been abandoned, canceled, or rendered invalid or unenforceable, and whether Segway continues to satisfy the economic requirements of Section 337(a)(2).
6. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).
7. The Secretary shall serve copies of this Order upon each party of record in this investigation and upon CBP.

8. Notice of this Order shall be published in the *Federal Register*.

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton', written in a cursive style.

Lisa R. Barton  
Secretary to the Commission

Issued: February 7, 2018



**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **February 7, 2018**.



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

**On Behalf of Complainants Segway Inc., DEKA Products  
Limited Partnership, and Ninebot (Tianjin) Technology Co.,  
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**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
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Certificate of Service – Page 2

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

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**Respondents:**

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Airwheel

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**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
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Certificate of Service – Page 3

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

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 Via First Class Mail  
 Other: \_\_\_\_\_

Shenzhen Jomo Technology Co., Ltd.  
a/k/a Koowheel  
Floor 4t h and 7t h , Caiyue Bldg., Meilong Road  
Bao'an Dist.  
Shenzhen City, 518112, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Guangzhou Kebye Electronic Technology Co., Ltd.  
a/k/a Got way  
A2, 2nd floor, Building 39, Dayangtian Industry Park  
Wanfeng, No. 56, Fengtang Road  
Bao'an District, Shenzhen, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, DC**

**In the Matter of**

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND  
PACKAGING AND MANUALS THEREFOR**

**and**

**CERTAIN PERSONAL TRANSPORTERS  
AND COMPONENTS THEREOF**

**Inv. No. 337-TA-1007  
Inv. No. 337-TA-1021  
(Consolidated)**

**LIMITED EXCLUSION ORDER**

The United States International Trade Commission (“Commission”) has determined that there is a violation of Section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), in the unlawful importation, sale for importation, or sale within the United States after importation by respondent Swagway LLC (“Swagway”) of certain personal transporters, components thereof, and packaging and manuals therefor that infringe U.S. Trademark Registration Nos. 2,727,948 and 2,769,942, which cover the “SEGWAY” marks. The Commission has also found respondent Segaway in default pursuant to subsection (g)(1) of section 337, 19 U.S.C. § 1337(g)(1), and section 210.16 of the Commission’s Rules of Practice and Procedure, 19 C.F.R. § 210.16, for failing to respond to a Complaint and Notice of Investigation that alleged a violation of section 337 with respect to the unlawful importation, sale for importation, and sale after importation of certain personal transporters, components thereof, and packaging and manuals therefor that

infringe U.S. Trademark Registration Nos. 2,727,948 and 2,769,942, which cover the “SEGWAY” marks.

Having reviewed the record of this investigation, including the written submissions of the parties, the Commission has made its determination on the issues of remedy, the public interest, and bonding. The Commission has determined that the appropriate form of relief is a limited exclusion order prohibiting the unlicensed entry of covered personal transporters, components thereof, and packaging and manuals therefor manufactured by or on behalf of, or imported by or on behalf of, respondents Swagway and Segaway or any of their affiliated companies, parents, subsidiaries, or other related business entities, or its successors or assigns.

The Commission has also determined that the public interest factors enumerated in 19 U.S.C. § 1337(d)(1), (f)(1) and (g)(1) do not preclude the issuance of the limited exclusion order. The Commission has further determined that the bond during the period of Presidential review shall be in the amount of zero percent (*i.e.*, no bond) of the entered value of the imported subject articles of respondent Swagway and 100 percent of the entered value of the imported subject articles of respondents Segaway.

Accordingly, the Commission hereby **ORDERS** that:

1. SWAGWAY-branded personal transporters, components thereof, and packaging and manuals thereof manufactured outside the United States that infringe one or more of the following U.S. Trademark Registration Nos. 2,727,948 and 2,769,942 and that are manufactured abroad by or on behalf of, or imported by or on behalf of, respondents Swagway or Segaway, or any of their affiliated companies, parents, subsidiaries, or other related business entities, or its successors or assigns, are excluded from entry for consumption into the United States, entry for consumption from a foreign trade zone, or withdrawal from a warehouse for consumption, except if imported by, under license from, or with the permission of

the trademark owner, or as provided by law, until such date as the trademarks are abandoned, canceled, or rendered invalid or unenforceable.

2. Notwithstanding paragraph 1 of this Order, respondent Swagway's personal transporters, components thereof, and packaging and manuals thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of zero percent of the entered value (*i.e.*, no bond), and respondent Segaway's personal transporters, components thereof, and packaging and manuals thereof are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of 100 percent of the entered value, pursuant to subsection (j) of Section 337 (19 U.S.C. § 1337(j)) and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 *Fed. Reg.* 43,251), from the day after this Order is received by the United States Trade Representative until such time as the United States Trade Representative notifies the Commission that this Order is approved or disapproved but, in any event, not later than sixty days after the date of receipt of this Order.
3. At the discretion of U.S. Customs and Border Protection ("CBP") and pursuant to procedures that it establishes, persons seeking to import personal transporters, components thereof, and packaging and manuals thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are

not excluded from entry under paragraph 1 of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses as are necessary to substantiate the certification.

4. In accordance with 19 U.S.C. § 1337(l), the provisions of this Order shall not apply to personal transporters, components thereof, and packaging and manuals thereof imported by and for the use of the United States, or imported for, and to be used for, the United States with the authorization or consent of the Government.
5. Complainants Segway Inc., DEKA Products Limited Partnership, and Ninebot (Tianjin) Technology Co., Ltd. (collectively, "Complainants") shall file a written statement with the Commission, made under oath, each year on the anniversary of the issuance of this Order stating whether Segway continues to use each of the aforesaid trademarks in commerce in the United States in connection with personal transporters, components thereof, and packaging and manuals thereof, whether any of the aforesaid trademarks has been abandoned, canceled, or rendered invalid or unenforceable, and whether Segway continues to satisfy the economic requirements of Section 337(a)(2).
6. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).
7. The Secretary shall serve copies of this Order upon each party of record in this investigation and upon CBP.
8. Notice of this Order shall be published in the *Federal Register*.

By order of the Commission.

A handwritten signature in black ink, appearing to read "Lisa R. Barton". The signature is stylized and cursive.

Lisa R. Barton  
Secretary to the Commission

Issued: December 11, 2017



**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **COMMISSION ORDER** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **December 11, 2017**.



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

**On Behalf of Complainants Segway Inc., DEKA Products  
Limited Partnership, and Ninebot (Tianjin) Technology Co.,  
Ltd.:**

Tony V. Pezzano, Esq.  
**HOGAN LOVELLS US LLP**  
875 Third Avenue  
New York, NY 10022

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Swagway, LLC:**

Lei Mei, Esq.  
**MARK & MEI LLP**  
818 18th Street, NW, Suite 410  
Washington, DC 20006

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Inventist, Inc.:**

Jonathan J. Engler, Esq.  
**ADDUCI, MASTRIANI & SCHAUMBERG, LLP**  
1133 Connecticut Avenue, NW, 12th Floor  
Washington, DC 20036

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Jetson Electric Bikes LLC:**

Ezra Sutton, Esq.  
**EZRA SUTTON, P.A.**  
900 Route 9 North, Suite 201  
Woodbridge, NJ 07095

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**  
Certificate of Service – Page 2

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**On Behalf of Respondent Hangzhou Chic Intelligent  
Technology Co., Ltd.:**

Qingyu Yin, Esq.  
**FINNEGAN, HENDERSON, FARABOW, GARRETT &  
DUNNER, LLP**  
901 New York Ave. NW  
Washington, DC 20001

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Powerboard LLC:**

L. Peter Farkas, Esq.  
**HALLORAN FARKAS + KITTLA, LLP**  
1101 30<sup>th</sup> Street NW, Suite 500  
Washington, DC 20007

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Changzhou Airwheel Technology  
Co., Ltd.:**

Harold H. Davis, Jr., Esq.  
**K&L GATES, LLP**  
Four Embarcadero Center, Suite 1200  
San Francisco, CA 94111

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**Respondents:**

Segaway  
3431 Laurel Canyon Blvd., #376  
Studio City, CA 91604

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

PhunkeeDuck, Inc.  
250 Jericho Turnpike  
Floral Park, NY 11001

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Airwheel  
Kabelweg 43 1014BA  
Amsterdam, Netherlands

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 3

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

Shenzhen Chenduoxing Electronic Technology Ltd., China a/k/a  
C-Star  
4F, Block C11, Fuyuan Industrial Area  
Jiuwei, Xixiang, Bao'an, Shenzhen, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Metem Teknoloji Sistemleri San  
Necatibey Cad. No. 61  
Karakoy, Istanbul, Turkey

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Shenzhen Jomo Technology Co., Ltd.  
a/k/a Koowheel  
Floor 4th and 7th, Caiyue Bldg., Meilong Road  
Bao'an Dist.  
Shenzhen City, 518112, China

- Via Hand Delivery  
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 Other: \_\_\_\_\_

Guangzhou Kebye Electronic Technology Co., Ltd.  
a/k/a Got way  
A2, 2nd floor, Building 39, Dayangtian Industry Park  
Wanfeng, No. 56, Fengtang Road  
Bao'an District, Shenzhen, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
Washington, DC**

**In the Matter of**

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND  
PACKAGING AND MANUALS THEREFOR**

**and**

**CERTAIN PERSONAL TRANSPORTERS  
AND COMPONENTS THEREOF**

**Inv. No. 337-TA-1007  
Inv. No. 337-TA-1021  
(Consolidated)**

**CEASE AND DESIST ORDER**

**IT IS HEREBY ORDERED THAT** Swagway LLC, 3431 William Richardson Drive, Suite F, South Bend, IN 46628, cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, marketing, advertising, distributing, transferring (except for exportation) and soliciting United States agents or distributors for personal transporters, components thereof, and packaging and manuals therefor that infringe U.S. Trademark Registration Nos. 2,727,948 or 2,769,942, in violation of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337.

**I. Definitions**

As used in this order:

- (A) "Commission" shall mean the United States International Trade Commission.
- (B) "Complainants" shall mean Segway Inc. of Bedford, New Hampshire; DEKA Products Limited Partnership of Manchester, New Hampshire; and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China.

- (C) "Respondent" shall mean Swagway LLC, 3431 William Richardson Drive, Suite F, South Bend, IN 46628.
- (D) "Person" shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) "United States" shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms "import" and "importation" refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term "covered products" shall mean SWAGWAY-branded personal transporters, components thereof, and packaging and manuals therefor that infringe one or more of U.S. Trademark Registration Nos. 2,727,948 and 2,769,942.

## **II. Applicability**

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them, insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

## **III. Conduct Prohibited**

The following conduct of Respondent in the United States is prohibited by this Order.

While U.S. Trademark Registration Nos. 2,727,948 and 2,769,942 remain valid and enforceable, Respondent shall not:

- (A) import, sell for importation, or sell after importation into the United States

covered products;

- (B) market, distribute, offer for sale, or otherwise transfer (except for exportation) in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, transfer, or distribution of covered products.

#### **IV. Conduct Permitted**

Notwithstanding any other provision of this Order, specific conduct otherwise prohibited by the terms of this Order shall be permitted if, in a written instrument, the owner of U.S. Trademark Registration Nos. 2,727,948 and 2,769,942 licenses or authorizes such specific conduct, or such specific conduct is related to the importation or sale of covered products by or for the United States, as applicable.

#### **V. Reporting**

For purposes of this requirement, the reporting periods shall commence on July 1 of each year and shall end on the subsequent June 30. The first report required under this section shall cover the period from the date of issuance of this order through June 30, 2018. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in U.S. dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-947") in a prominent place on the cover pages and/or the first page. *See Handbook for Electronic Filing Procedures*, [http://www.usitc.gov/secretary/fed\\_reg\\_notices/rules/handbook\\_on\\_electronic\\_filing.pdf](http://www.usitc.gov/secretary/fed_reg_notices/rules/handbook_on_electronic_filing.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the original with the Office of the Secretary and must serve a copy of the confidential version on Complainants' counsel.<sup>1</sup>

Any failure to make the required report or the filing of any false or inaccurate report shall constitute a violation of this Order, and the submission of a false or inaccurate report may be referred to the U.S. Department of Justice as a possible criminal violation of 18 U.S.C. § 1001.

## **VI. Record-Keeping and Inspection**

(A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.

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<sup>1</sup> Complainants must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

(B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal offices during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of this Order.

#### **VII. Service of Cease and Desist Order**

Respondent is ordered and directed to:

(A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, or sale of imported covered products in the United States;

(B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and

(C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

#### **VIII. Confidentiality**

Any request for confidential treatment of information obtained by the Commission pursuant to section V of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which



confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

#### **IX. Enforcement**

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

#### **X. Modification**

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

#### **XI. Bonding**

The conduct prohibited by section III of this order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)), under bond in the amount of zero percent of the entered value (*i.e.*, no bond). This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of

temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainant's counsel.<sup>2</sup>

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it within the review period), unless (i) the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or (ii) Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

This bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

By order of the Commission.



Lisa R. Barton  
Secretary to the Commission

Issued: December 11, 2017

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<sup>2</sup> *See* Footnote 1.

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **COMMISSION ORDER** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **December 11, 2017**.



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

**On Behalf of Complainants Segway Inc., DEKA Products  
Limited Partnership, and Ninebot (Tianjin) Technology Co.,  
Ltd.:**

Tony V. Pezzano, Esq.  
**HOGAN LOVELLS US LLP**  
875 Third Avenue  
New York, NY 10022

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: \_\_\_\_\_

**On Behalf of Respondent Swagway, LLC:**

Lei Mei, Esq.  
**MARK & MEI LLP**  
818 18th Street, NW, Suite 410  
Washington, DC 20006

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: \_\_\_\_\_

**On Behalf of Respondent Inventist, Inc.:**

Jonathan J. Engler, Esq.  
**ADDUCI, MASTRIANI & SCHAUMBERG, LLP**  
1133 Connecticut Avenue, NW, 12th Floor  
Washington, DC 20036

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: \_\_\_\_\_

**On Behalf of Respondent Jetson Electric Bikes LLC:**

Ezra Sutton, Esq.  
**EZRA SUTTON, P.A.**  
900 Route 9 North, Suite 201  
Woodbridge, NJ 07095

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: \_\_\_\_\_

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**  
Certificate of Service – Page 2

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**On Behalf of Respondent Hangzhou Chic Intelligent  
Technology Co., Ltd.:**

Qingyu Yin, Esq.  
**FINNEGAN, HENDERSON, FARABOW, GARRETT &  
DUNNER, LLP**  
901 New York Ave. NW  
Washington, DC 20001

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 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Powerboard LLC:**

L. Peter Farkas, Esq.  
**HALLORAN FARKAS + KITTLA, LLP**  
1101 30<sup>th</sup> Street NW, Suite 500  
Washington, DC 20007

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**On Behalf of Respondent Changzhou Airwheel Technology  
Co., Ltd.:**

Harold H. Davis, Jr., Esq.  
**K&L GATES, LLP**  
Four Embarcadero Center, Suite 1200  
San Francisco, CA 94111

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**Respondents:**

Segaway  
3431 Laurel Canyon Blvd., #376  
Studio City, CA 91604

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

PhunkeeDuck, Inc.  
250 Jericho Turnpike  
Floral Park, NY 11001

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Airwheel  
Kabelweg 43 1014BA  
Amsterdam, Netherlands

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 3

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

Shenzhen Chenduoqing Electronic Technology Ltd., China a/k/a  
C-Star  
4F, Block C11, Fuyuan Industrial Area  
Jiuwei, Xixiang, Bao'an, Shenzhen, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Metem Teknoloji Sistemleri San  
Necatibey Cad. No. 61  
Karakoy, Istanbul, Turkey

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Shenzhen Jomo Technology Co., Ltd.  
a/k/a Koowheel  
Floor 4th and 7th, Caiyue Bldg., Meilong Road  
Bao'an Dist.  
Shenzhen City, 518112, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

Guangzhou Kebye Electronic Technology Co., Ltd.  
a/k/a Got way  
A2, 2nd floor, Building 39, Dayangtian Industry Park  
Wanfeng, No. 56, Fengtang Road  
Bao'an District, Shenzhen, China

- Via Hand Delivery  
 Via Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**PUBLIC VERSION**

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

**In the Matter of**

**CERTAIN PERSONAL  
TRANSPORTERS, COMPONENTS  
THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**AND**

**CERTAIN PERSONAL  
TRANSPORTERS AND COMPONENTS  
THEREOF**

**Investigation No. 337-TA-1007  
Investigation No. 337-TA-1021  
(Consolidated)**

**COMMISSION OPINION**

**I. BACKGROUND AND PROCEDURAL HISTORY**

The Commission instituted Inv. No. 337-TA-1007, *Certain Personal Transporters, Components Thereof, and Packaging and Manuals Therefor* under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“section 337”), on June 24, 2016, based on a complaint filed by Segway, Inc. of Bedford, New Hampshire; DEKA Products Limited Partnership of Manchester, New Hampshire; and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China (collectively, “Complainants”). 81 *Fed. Reg.* 41342-43 (Jun. 24, 2016). The complaint alleges a violation of section 337 by reason of infringement of certain claims of U.S. Patent Nos. 6,302,230 (“the ‘230 patent”); 6,651,763 (“the ‘763 patent”); 7,023,330 (“the ‘330 patent”); 7,275,607 (“the ‘607 patent”); 7,479,872 (“the ‘872 patent”); and 9,188,984 (“the ‘984 patent”); and U.S. Trademark Registration Nos. 2,727,948 (“the ‘948 TM”) and 2,769,942 (“the ‘942 TM”). The named respondents for Investigation No. 337-TA-1007 are Inventist, Inc. of Camas, Washington; PhunkeeDuck, Inc. of Floral Park, New York (“PhunkeeDuck”); Razor USA LLC

## PUBLIC VERSION

of Cerritos, California; Swagway LLC of South Bend, Indiana (“Swagway”); Segaway of Studio City, California (“Segaway”); and Jetson Electric Bikes LLC of New York, New York (“Jetson”). The Commission’s Office of Unfair Import Investigations (“OUII”) was also named as a party to this investigation. 81 Fed. Reg. 41342 (Jun. 24, 2016).

On September 21, 2016, the Commission instituted Inv. No. 337-TA-1021, *Certain Personal Transporters and Components Thereof*, based on a complaint filed by the same Complainants. 81 Fed. Reg. 64936-37 (Sept. 21, 2016). The complaint alleges a violation of section 337 by reason of infringement of certain claims of the ‘230 and ‘607 patents. The named respondents for Investigation No. 337-TA-1021 are Powerboard LLC of Scottsdale, Arizona (“Powerboard”); Metem Teknoloji Sistemleri San of Istanbul, Turkey (“Metem”); Changzhou Airwheel Technology Co., Ltd. of Jiangsu, China (“Airwheel”); Airwheel of Amsterdam, Netherlands (“Airwheel NL”); Nanjing Fastwheel Intelligent Technology Co., Ltd. of Nanjing, China; Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star of Shenzhen, China (“C-Star”); Hangzhou Chic Intelligent Technology Co., Ltd. of Hangzhou, China (“Chic”); Hovershop of Placentia, California; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel of Shenzhen City, China (“Koowheel”); Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway of Shenzhen, China (“Gotway”); and Inventist. OUII was also named as a party to this investigation. 81 Fed. Reg. 64936 (Sept. 21, 2016). The Commission directed the presiding ALJ to consolidate Inv. Nos. 337-TA-1007 and 337-TA-1021. *See id.* at 64937.

Subsequently, the Commission determined not to review an initial determination (“ID”) finding respondents PhunkeeDuck and Segaway in default. Order No. 9 (Sept. 1, 2016) (*not reviewed*, Notice, Oct. 3, 2016). The Commission further determined not to review an ID

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granting complainants' corrected motion to amend the complaint and notice of investigation to assert the '763, '330, and '872 patents against respondent Jetson, and to terminate the investigation with respect to all asserted claims of the '984 patent as to all respondents. Order No. 17 (Nov. 14, 2016) (*not reviewed*, Notice, Dec. 7, 2016).

Only the following respondents remain active in the consolidated investigation: Airwheel; Chic; Jetson; Powerboard; and Swagway. ID at 9-10. The remaining respondents were found in default or entered into the consent orders. At the time PhunkeeDuck and Segaway were found in default, claims 1-3 and 5-20 of the '984 patent remained pending against them.

The following two patents (with 13 asserted claims) and two trademarks remain at issue in this investigation: claims 1, 3-5, and 7 of the '230 patent; claims 1-4 and 6 of the '607 patent; the '948 TM; and the '942 TM. *See* ID at 5.

The technology at issue relates to “vehicles and methods for transporting individuals, and more particularly to balancing vehicles and methods for transporting individuals over ground having a surface that may be irregular.” ‘230 patent, 1:5-8. ID at 17. It also pertains to “control of personal transporters, and more particularly to devices and methods for providing user input with respect to either directional or velocity control of such transporters (having any number of ground-contacting elements) based on the position or orientation of a user.” ‘607 patent, 1:21-26. ID at 17-18.

The '230 patent, entitled “Personal mobility vehicles and methods,” issued on October 16, 2001. The invention of the '230 patent pertains to vehicles and methods for transporting individuals, and more particularly to balancing vehicles and methods for transporting individuals over ground having a surface that may be irregular. While a wide range of vehicles and methods



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used for transportation typically rely on static stability, being designed so as to be stable under all foreseen conditions of placement of their ground-contacting members, '230 patent, 1:5-16, an alternative to a static stability is dynamic stability that may be maintained by action of the user, as in the case of a bicycle or motorcycle or scooter, or in accordance with embodiments disclosed in the '230 patent. '230 patent, 6:66-7:2. The '230 patent discloses a dynamically balanced vehicle that determines the real-time maximum operating velocity under the current conditions of the vehicle and monitors "the difference between the maximum velocity of the vehicle and the present velocity of the vehicle." '230 patent, Abstract. The vehicle generates a warning when such a difference falls below a specified limit. *Id.*

The '607 patent, entitled "Control of a personal transporter based on user position," issued on October 2, 2007. The invention disclosed in the '607 patent is directed to dynamically stabilized transporters, *i.e.*, to personal transporters having a control system that actively maintains the stability of the transporter while the transporter is operating. The control system maintains the stability of the transporter by continuously sensing the orientation of the transporter, determining the corrective action to maintain stability, and commanding the wheel motors to make the corrective action. '607 patent, 1:30-37. The disclosed invention pertains to control of personal transporters, and more particularly to devices and methods for providing user input with respect to either directional or velocity control of such transporters (having any number of ground-contacting elements) based on the position or orientation of a user. '607 patent, 1:21-26. The '607 patent discloses an automatically balanced vehicle with a "controller for providing user input of a desired direction of motion or orientation." '607 patent, Abstract. "The controller has an input for receiving specification by a user of a value based on a detected

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body orientation of the user.” *Id.*

The ‘948 TM for the mark SEGWAY covers “motorized, self-propelled, wheeled personal mobility devices, namely, [wheelchairs], scooters, utility carts, and chariots.” ID at 165 (citing JX-0005 (brackets in original)). The ‘942 TM for the stylized SEGWAY mark covers “motorized, self-propelled, wheeled personal mobility devices, namely, wheelchairs, scooters, utility carts, and chariots.” ID at 165 (citing JX-0007).

The evidentiary hearing in this investigation was held from April 18 through April 21, 2017. On August 10, 2017, the ALJ issued his final ID finding a violation of section 337 based on trademark infringement. The ID found that the accused products do not infringe the asserted claims of the ‘230 and ‘607 patents, which were not found to be invalid. The ID also found that the technical prong of the domestic industry requirement was not satisfied for the ‘230 or ‘607 patents, and therefore the domestic industry requirement was not satisfied for those patents. The ID further found that the Swagway accused products infringe the ‘948 TM and ‘942 TM, for which the domestic industry requirement was satisfied. ID at 192-93; 82; 147. The ALJ issued his Recommended Determination (“RD”) on remedy and bonding on August 22, 2017.

All active parties to this investigation (with the exception of respondents Powerboard and Airwheel)<sup>1</sup> filed timely petitions for review of various portions of the final ID, as well as timely responses to the petitions.

The Commission determined to review the final ID in part, and issued a notice dated

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<sup>1</sup> Respondent Airwheel timely filed a joinder to Chic’s Petition. It also filed a response to Complainants’ petition. Respondent Powerboard requested leave to file a contingent petition for review of the ID one day out of time on August 24, 2017. The Chairman denied the request because good cause had not been shown.

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October 13, 2017 (“the Commission Notice”) in which the Commission specified the issues under review and the questions pertaining to such issues. *See* 82 *Fed. Reg.* 48724-26 (Oct. 19, 2017). In particular, the Commission determined to review the following:

- (1) the ID’s determination that the claim term “maximum operating velocity” should be construed to mean “a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle,” *see* ID at 44;
- (2) the ID’s determination that “nothing in the plain language of the disputed limitation [‘the motorized drive arrangement causing, when powered, automatically balanced operation of the system’] from claim 1 of the ‘230 patent requires the operation by a rider. The claim only requires the ‘motorized drive arrangement causing, when powered, automatically balanced operation of the system,’” *see* ID at 82;
- (3) the ID’s infringement, validity, and domestic industry (technical prong) determinations pertaining to the ‘230 patent;
- (4) the instances in the ID that refer to a disclaimer of “manual input” with respect to the ‘607 patent and on review, determined that this disclaimer is actually a disclaimer of “manual input via joystick.” The Commission’s analysis on this issue is provided in this opinion below; and
- (5) the ID’s finding with respect to actual confusion regarding the SWAGWAY mark, *see* ID at 171-72.<sup>2</sup>

*Id.* at 48725. The Commission determined not to review the remainder of the ID. *Id.*

The Commission requested the parties to brief their positions on only the following issues, with reference to the applicable law and the evidentiary record:

1. The ID determined with respect to the ‘230 patent that “the claim term ‘maximum operating velocity’ should be construed to mean ‘a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle.’” ID at 44.

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<sup>2</sup> In addition, the Commission determined to correct two typographical errors in the ID: In the first line of the last paragraph on page 170 “the Swagway ‘trademark’” was replaced with “the Segway ‘trademark’”; and in the first line on page 171 “Swagway” was replaced with “Segway”. 82 *Fed. Reg.* 48725.

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a. Does intrinsic evidence support the ID's above determination?

b. Does extrinsic evidence support the ID's above determination?

2. The ID determined with respect to the '230 patent that "nothing in the plain language of the disputed limitation ['the motorized drive arrangement causing, when powered, automatically balanced operation of the system'] from claim 1 of the '230 patent requires the operation by a rider. The claim only requires the 'motorized drive arrangement causing, when powered, automatically balanced operation of the system.'" ID at 82.

a. Does intrinsic evidence support the ID's above determination?

b. Does extrinsic evidence support the ID's above determination?

82 *Fed. Reg.* 48726.

In accordance with the Commission Notice, parties to this investigation filed timely opening written submissions, and timely reply submissions.<sup>3</sup> On August 23, 2017, the Commission issued a Notice of Request for Statements on the Public Interest. No written submissions from the public were filed with the Commission. Complainants timely filed a public interest submission on September 21, 2017. 19 C.F.R. § 210.50(a)(4). Respondents did not file any public interest submissions.

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<sup>3</sup> One of the active respondents, Powerboard, did not file any pleadings in response to the Review Notice. Respondent Jetson filed only an opening pleading in response to the Review Notice.

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### II. SUMMARY OF DETERMINATIONS

The Commission has determined as follows with respect to the issues under review and the issues of remedy, the public interest, and bonding. The Commission affirms any findings under review that are not specifically discussed below.

The Commission affirms the ID's determination that the claim term "maximum operating velocity" should be construed to mean "a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle," ID at 44. The Commission likewise affirms the ID's determination that "nothing in the plain language of the disputed limitation ['the motorized drive arrangement causing, when powered, automatically balanced operation of the system'] from claim 1 of the '230 patent requires the operation by a rider. The claim only requires the 'motorized drive arrangement causing, when powered, automatically balanced operation of the system,'" ID at 82. The Commission affirms the ID's infringement, validity, and domestic industry (technical prong) determinations pertaining to the '230 patent, with the exception of the ID's findings and analysis in its discussion of the non-infringement of the '230 patent that are based on Complainants' proffered construction of the term "maximum operating velocity," *see* ID at 51-77, on which the Commission takes no position.

Finally, the Commission modifies, as detailed *infra*, the ID's discussion and conclusion with respect to the "actual confusion" factor regarding the SEGWAY mark on pages 171-172 of the ID, to find that the "actual confusion" factor does not weigh in favor of a finding of a likelihood of confusion.

The Commission determines to issue: (1) an LEO prohibiting the importation into the

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United States of (a) SWAGWAY-branded personal transporters, components thereof, and packaging and manuals thereof manufactured outside the United States that infringe one or more of the '948 TM and '942 TM and that are manufactured abroad by or on behalf of, or imported by or on behalf of, Respondent Swagway, or any of its affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns; and (b) personal transporters, components thereof, and packaging and manuals therefor manufactured outside the United States that infringe one or more of the '948 TM and '942 TM, which cover the "SEGWAY" marks, and that are manufactured by or on behalf of, or imported by or on behalf of, Respondent Segaway, or any of its affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns; and (2) a CDO directed against SWAGWAY-branded personal transporters, components thereof, and packaging and manuals therefor that infringe one or more of the '948 TM and '942 TM. The Commission further determines that the public interest will not be adversely affected by entry of these remedial orders. Finally, the Commission determines to set the bond amount at zero (0) percent of the entered value of Respondent Swagway's accused products and at 100 percent of the entered value of defaulted Respondent Segaway's accused products during the Presidential review period (19 U.S.C. § 1337(j)).

### III. COMMISSION REVIEW

Commission review of an initial determination is limited to the issues set forth in the notice of review and all subsidiary issues therein. *Certain Bar Clamps, Bar Clamp Pads, and Related Packaging Display and Other Materials*, Inv. No. 337-TA-429, Comm'n Op. at 3 (Jan. 4, 2001). Once the Commission determines to review an initial determination, its review is conducted under a *de novo* standard. *Certain Polyethylene Terephthalate Yarn and*

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*Products Containing Same*, Inv. No. 337-TA-457, Comm'n Op. at 9 (Jun. 18, 2002). Upon review the "Commission has 'all the powers which it would have in making the initial determination,' except where the issues are limited on notice or by rule." *Certain Flash Memory Circuits and Products Containing Same*, Inv. No. 337-TA-382, Comm'n Op. on the Issues Under Review and on Remedy, the Public Interest, and Bonding at 9-10 (Jun. 2, 1997), USITC Pub. 3046 (July 1997) (quoting *Certain Acid-Washed Denim Garments and Accessories*, Inv. No. 337-TA-324, Comm'n Op. at 5 (Nov. 1992)).

On review, "the Commission may affirm, reverse, modify, set aside or remand for further proceedings, in whole or in part, the initial determination of the administrative law judge. . . . The Commission also may make any findings or conclusions that in its judgment are proper based on the record in the proceeding." 19 C.F.R. § 210.45(c).

## IV. DISCUSSION

### A. ISSUES UNDER REVIEW

1. **The ID's determination that the claim term "maximum operating velocity" should be construed to mean "a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle"**

We affirm the ID's claim construction, *see* ID at 44.

2. **The ID's determination that "nothing in the plain language of the disputed limitation ['the motorized drive arrangement causing, when powered, automatically balanced operation of the system'] from claim 1 of the '230 patent requires the operation by a rider. The claim only requires the 'motorized drive arrangement causing, when powered, automatically balanced operation of the system'"**

We likewise affirm the ID's claim construction, *see* ID at 82.

3. **The ID's infringement, validity, and domestic industry (technical prong) determinations pertaining to the '230 patent**

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We affirm the ID's infringement, validity, and domestic industry (technical prong) determinations with respect to the '230 patent, with one modification. After the ALJ made non-infringement findings based on the correct claim construction of "maximum operating velocity," *see* ID at 50-52, he additionally analyzed the accused products under the incorrect claim construction proposed by Complainants, which he had properly rejected. Based on this additional analysis, the ID made additional non-infringement findings. *See* ID at 52-57. The Commission takes no position on these findings. *See Beloit Corporation v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir.1984).

#### **4. A disclaimer of "manual input" with respect to the '607 patent.**

The Commission previously determined that the ID's disclaimer of "manual input" with respect to the '607 patent is actually a disclaimer of "manual input via joystick." *See* 82 *Fed. Reg.* 48724-26 (Oct. 19, 2017). The ID found that the evidence shows that Complainants disavowed manual inputs, in addition to tilting, from inclusion in the "body orientation of a user" limitation during prosecution of the '607 patent. ID at 112 (citing Resps. Br. at 25-26). The ID found that in the same March 6, 2007 Response to the Office Action in which the applicants disavowed tilting angle to overcome a rejection in view of Furukawa, the applicants also made statements to overcome a rejection in view of U.S. Patent No. 5,791,425 to Kamen ("Kamen '425") (RX-0020). The ID noted that the applicants stated that the Kamen '425 reference to a joystick cannot be "taken to subsume 'body orientation of a user'" and that manual input via joystick is provided "in absolute indifference to the orientation of the user." ID at 113 (citing JX-0004 ('607 Patent File History) at 55). The ID stated that thus the applicants made clear that manual input is not the same as "a detected body orientation." ID at 113 (citing RX-0050C



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(Nourbakhsh WS) at Q/A 155).

Complainants contend that, contrary to the ID's finding, applicants did not disclaim manual inputs beyond manual input via joystick. Complainants argue that during prosecution of the '607 patent, applicants disclaimed the manual operation of a joystick as not being within the scope of their claimed invention, because operation of a joystick does not correspond to the body orientation of a user. ComplPet at 39 (citing CX-1968C (Ganssle WS) at Q/A 179).<sup>4</sup>

Complainants assert that applicants were clear that the disclaimed subject matter only related to a joystick. See ComplPet at 39-40 (citing JX-0004 ('607 patent file history) at SEGWAY\_1007ITC0087708).

Complainants argue that the ID erred by finding a disclaimer that would exclude any yaw control based on any "manual input." ComplPet at 40. Complainants point out that the term "manual input" does not appear in the applicants' March 6, 2007, Response to the Office Action

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<sup>4</sup> The following abbreviations of the parties' pleadings are used in this Opinion: ComplPet – "Complainants' Petition For Review On the Issues Of Infringement And Technical Prong Of Domestic Industry And Contingent Petition For Review On Certain Issues Relating To Patent Validity;" SwagwayPet – "Petition For Review Of Initial Determination by Respondent Swagway, LLC;" ComplResp – "Complainants' Response To Respondents Jetson's, Powerboard's And Chic's Contingent Petitions And Respondent Swagway's Petition For Review;" SwagwayResp – "Response To Complainants' Petition For Review Of Initial Determination By Respondent Swagway, LLC;" IAResp – "Response Of The Office Of Unfair Import Investigations To The Private Parties' Petitions For Review Of The Initial Determination On Violation Of Section 337;" IAOpenNotice – "Response Of The Office Of Unfair Import Investigations To The Commission Determination To Review In Part A Final Initial Determination;" RespOpenNotice – "Brief Of Chic, Swagway, And Airwheel On The Issues Under Review And Brief Of Chic, Swagway, And Airwheel On Remedy, Bond, And The Public Interest;" ComplReplyNotice – "Complainants' Reply Submission On Claim Construction And Remedy, The Public Interest And Bonding;" ComplOpenRemedy – "Complainants' Written Submission On Remedy, The Public Interest, And Bonding, And Response To Commission Notice Seeking Additional Information;" Compl. PI Statement – "Complainants' Submission On The Public Interest;" RespReplyRemedy – "Respondents' Reply To Complainants' And OUII's Written Submission On Remedy, The Public Interest, And Bonding."

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at all. They argue that since any disclaimer must be “clear” and “unmistakable,” the only disclaimer that could have been clear and unmistakable is the use of a joystick to effect an input of desired yaw and yaw rate. Complainants assert that other inputs based on a detected body orientation of the user, and any manual input other than a joystick, was not within the scope of the disclaimer because the statements made did not refer to anything other than a joystick and were made to circumvent a specific prior art reference that only disclosed the use of a joystick. ComplPet at 40.

It appears that the ID uses the term “manual input” interchangeably with the term “manual input via joystick.” In its claim construction analysis, the ID stated that the evidence shows that Complainants have disavowed manual inputs, ID at 112, and that manual input is not the same as “a detected body orientation,” *id.* at 113 (citations omitted). The ID determined that the claim term “based on a detected body orientation of the user” should be construed to mean “based on a detected lean position of the user’s body, as opposed to being based upon manual input or tilting of the vehicle.” *Id.* at 115. However, during its domestic industry (technical prong) analysis with respect to the ‘607 patent, the ID interpreted the subject waiver as applying to “manual input via joystick” rather than “manual input,” while interpreting the claim term “based on a detected body orientation of the user” with relation to the asserted Segway DI products. Thus, the ID stated that:

Complainants argue that the LeanSteer handlebar is not a joystick because it “is a much larger input that couples to the base of the Segway Personal Transporters. As previously explained, the LeanSteer Stick was specifically designed so that the user would grip it and couple their entire body to the device, making input of all desired direction and turning intuitive.” *See* CX-1968C (Ganssle) at Q/A 1408. However, complainants appear to have taken a different position in their prehearing brief, when discussing

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why the Heinzmann (RX-0018) prior art reference does not anticipate the '607 patent:

Respondents' logic applies equally to a joystick - *i.e.*, pushing the joystick to the right can also be said to "encourage" a rider to lean to the right. *See* CX-1969C (Nayfeh Statement) at A296. However, turning is based solely on the joystick input, just as in Heinzmann where turning is based solely on the grip input. *Id.* Thus, encouraging a certain body orientation does not amount to detecting a certain body orientation. Because the prosecution history makes clear that steering inputs based on the displacement of a joystick are not inputs "based on a detected body orientation of the user," neither are steering inputs based on the rotation of a hand grip.

Compls. P.H. Br. at 545.

According to complainants, if a prior art device can be "commanded to the left if the [handlebar] is moved to the left, in absolute indifference to the orientation of the user," or its handlebar "encourages" a rider to lean in the direction that the user pushes the handlebar, that handlebar is called a joystick. However, if the Segway DI products can be "commanded to the left if the [handlebar] is moved to the left, in absolute indifference to the orientation of the user," or its handlebar "encourages" a rider to lean in the direction that the user pushes the handlebar, that handlebar is no longer a joystick, but the embodiment of LeanSteer technology.

Complainants cannot be permitted to alter their interpretation of the claim to suit their validity and infringement positions. "It is axiomatic that claims are construed the same way for both invalidity and infringement." *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003).

Thus, the evidence shows that the Segway DI products do not practice the limitation "at least the desired yaw and yaw rate being based on a detected body orientation of the user."

*Id.* at 145-147 (citations omitted) (emphasis added). This portion of the ID's technical prong analysis shows that it used "manual input" and "manual input via joystick" in the context of the subject waiver interchangeably. *Compare* ID at 112 *with* ID at 146.

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In arriving at its claim construction determination, the ID relied, *inter alia*, on the opinion of Dr. Nourbakhsh. See ID at 113 (“Thus, as Chic argues, the applicants made clear that manual input is not the same as ‘a detected body orientation.’”) (citing RX-0050C (Nourbakhsh WS) at Q/A 155.). Thus, the ID’s interchangeable use of these terms is consistent with the use of these terms by Respondents’ expert, Dr. Nourbakhsh. Notably, Complainants cite the same testimony of Dr. Nourbakhsh. See ComplPet at 40 (citing RX-0050C (Nourbakhsh WS) at Q/A 155). Dr. Nourbakhsh stated as follows:

Q: And what about manual input?

A: The arguments we discussed with respect to lean position also indicate that manual input is not “based on a detected body orientation.” Indeed, in discussing the same reference with a joystick, the applicant stated that the joystick cannot be “taken to subsume ‘body orientation of a user’” and that manual input via joystick is provided “in absolute indifference to the orientation of the user.” JX-0004.55. Thus, the applicant made clear that manual input is not the same as “a detected body orientation.”

RX-0050C (Nourbakhsh WS) at Q/A 155 (emphasis added). In other words, Dr. Nourbakhsh uses the “manual input” and the “manual input with joystick” in the context of this investigation interchangeably, providing the basis for doing the same by the ID. And by expressly citing and relying on Dr. Nourbakhsh’s testimony, Complainants appear to accept the interchangeability of the terms in question.

The intrinsic evidence supports a finding that the applicants did not broadly disclaim “manual input,” but instead disclaimed “manual input via joystick.” In particular, during the prosecution of the ‘607 patent, applicants stated as follows in response to the rejection based on U.S. Patent No. 5,791,425 (RX-0020) (“Kamen ‘425”):

Kamen [‘425] teaches yaw control at col. 6, lines 12-14, in the

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following terms: “A left turn similarly is accomplished by leftward motion of the joystick. For a right turn, the joystick is moved to the right.” Surely, the position of the joystick cannot be taken to subsume “body orientation of a user.” The device will be commanded to the left if the joystick is moved to the left, in absolute indifference to the orientation of the user. (The user might lean to the right, but if the joystick is hard over left, that’s where the Kamen [‘425] device will turn.).

JX-0004 (‘607 patent file history) at SEGWAY\_1007ITC0087708. This portion of the prosecution history indicates that applicants disclaimed subject matter pertaining to a joystick, or “manual input via joystick,” and this is the only basis the ID cites for disclaimer. ID at 145. *See Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325–26 (Fed. Cir. 2003) (“[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable.”). The extrinsic evidence is consistent with the intrinsic record and supports the same conclusion. *See e.g. CX-1968C (Ganssle WS)* at Q/A 179. Accordingly, we modify the ID’s finding of disclaimer to cover only manual input via joystick.

The record shows that the ID did not err in its application of the subject disclaimer even though it omitted the term “via joystick.” Thus, in its technical prong analysis the ID applied a disclaimer consistent with our finding. *See ID at 145-146. See also ID at 149* (holding as part of its anticipation analysis that “Thus, complainants have represented that a joystick is not an input based on a detected body orientation of the user that falls within the scope of the ‘607 patent.”). Accordingly, our modification of the ID’s disclaimer does not change the ID’s application of the disclaimer.

- 5. The ID’s finding with respect to actual confusion regarding the SWAGWAY mark, ID at 172-73.**

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The ID stated that although actual confusion is not required to prevail on a claim of trademark infringement, “actual confusion is routinely considered by the Commission as proof of trademark infringement as it is ‘undoubtedly the best evidence of likelihood of confusion.’” ID at 171 (citing *Certain Handbags, Luggage, Accessories, and Packaging Thereof*, Inv. No. 337-TA-754 , Order No. 16 (ID Granting Complainants’ Motion for Summary Determination of Violation) at 14 (Mar. 5, 2012) (unreviewed, Apr. 12, 2012) (citing *Daddy’s Junky Music Stores, Inc. v. Big Daddy’s Family Music Center*, 109 F.3d 275, 284 (6th Cir. 1997); *Certain Strip Lights*, Inv. No. 337-TA-287, 1989 WL 608725 (Jun. 27, 1989)). The ID considered Complainants’ evidence of numerous instances of actual consumer confusion with respect to SWAGWAY-branded products. *See* ID at 171. The ID noted that the documentary evidence describing actual confusion by consumers who purchased a Swagway product with the Segway brand was detailed by Mr. Leary.<sup>5</sup> ID at 171-72 (citing CX-1972C (Leary WS) at Q/A 15-29). The ID concluded that “[a]ccordingly, the overwhelming evidence shows that the SWAGWAY mark infringes the ‘948 and ‘942 TMs.” ID at 172.

Swagway argues that, first, the proffered evidence on which the ID’s conclusion of actual confusion is based is legally insufficient to support a finding that a likelihood of confusion exists. In particular, it submits that when properly considered in the context of the significant volume of sales of SWAGWAY-branded products, the evidence of actual confusion is insufficient to support a finding of a likelihood of confusion. SwagwayPet at 21.

Swagway contends that, second, the proffered evidence consisting of emails and

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<sup>5</sup>Mr. Joseph Leary is the Service Manager at Segway. *See* CX-1972C (Leary WS) at Q/A 2.

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telephone calls allegedly received by Complainant Segway is unreliable and should be given little weight, if any, at least because (i) it was not Segway's policy to confirm whether senders of the alleged emails actually purchased a Swagway product; (ii) despite the purported volume of the alleged calls, Segway generated "no documentation whatsoever" regarding these alleged calls, including no contemporary internal memoranda, emails, or any other documentation either corroborating the purported number of calls received or whether Swagway products were at issue, or reflecting any concern by Segway or its employees about the alleged "overwhelm[ing]" volume of calls; (iii) the Segway witnesses who testified as to the alleged calls, *i.e.*, Mr. Buccella<sup>6</sup> and Mr. Leary, have no personal knowledge of what was actually said by the alleged callers, including whether they specifically identified Swagway products; and (iv) although the two Segway employees, who purportedly spoke with the alleged callers are still employed by Segway, neither employee provided any sworn testimony in this Investigation. SwagwayResp at 21-22; *see also id.* at 23-28. Complainants and Commission investigative attorney ("the IA") oppose Swagway's position and support the ID on this issue. *See* ComplResp at 74-77; IAResp at 57-58.

We find it appropriate to consider not only the absolute number of incidents indicating actual consumer confusion offered by Complainants, but also those incidents in the context of the total number of Swagway products sold in the United States. *See, e.g., Nutri/System, Inc. v. Con-Stan Industries, Inc.*, 809 F.2d 601, 606-607 (9th Cir. 1987); *see also* 5 McCarthy § 23:14 (2017) ("Evidence of the number of instances of actual confusion must be placed against the

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<sup>6</sup> Mr. Brian Buccella is Vice President of Business Development and Marketing at Segway. *See* CX-1971C (Buccella WS) at Q/A 3.

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background of the number of opportunities for confusion before one can make an informed decision as to the weight to be given the evidence.”). The evidence shows that 60 emails and 600-900 telephone calls amount to less than 0.36% of the approximately 267,000 units of SWAGWAY-branded products sold in the U.S. between June 2015 and May 2016. SwagwayPet at 21 (citing CX-1971C (Buccella WS), Q/A 136: CX-1637; RX-0054C (Zhu WS), Q/A 56-61). Complainants and the IA fail to rebut this calculation. See ComplResp at 74-77; IAResp at 57. The IA even admitted that “it is undisputed that the evidence presented in this Investigation points to a small number (relative to the number of SWAGWAY-branded products sold in the U.S.) of instances of actual confusion.” IAResp at 57. Swagway argues that when properly considered in the context of the significant volume of sales of SWAGWAY-branded products, Complainants’ alleged evidence of only “isolated instances of actual confusion or misdirected mail,” which is “insufficient to sustain a finding of likelihood of confusion.” See SwagwayPet at 21 (citing RIB at 240-243; RRB at 57-63; *Union Carbide Corp. v. Ever-Ready, Inc.*, 531 F.2d 366, 383 (7th Cir. 1976); 5 McCarthy § 23:14 (2017) (“Evidence of only a small number of instances of actual confusion can be dismissed as inconsequential or *de minimis*.”)).

The IA points out, however, that, as Swagway itself has noted, “a showing of actual confusion is not necessary to establish a likelihood of confusion.” IAResp at 57 (citing SwagwayPet. at 17, citing *In re i.am.symbolic, LLC*, No. 2016-1507, -1508, -1509, 2017 WL 3393456 at \*3 (Fed. Cir. Aug. 8, 2017)). The IA argues that the ID does not rely solely on actual confusion in order to conclude that a likelihood of confusion is caused by use of the SWAGWAY mark. The IA argues that actual confusion is but one factor cited by the ID in conjunction with other factors that Swagway itself also notes must be balanced together. IAResp



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at 57 (citing SwagwayPet. at 16-17 (listing 6 factors to be considered in determining whether a reasonable consumer is likely to be confused as to the source of sponsorship)).

While the ID considers, and relies on, the evidence of absolute numbers of incidents of actual confusion, the Commission must also look to the relative significance of these absolute numbers in the context of the volume of sales of SWAGWAY-branded products, *see* discussion *supra*. *See* ID at 171-72. The ID likewise does not address Swagway's argument noted *supra* that the proffered evidence consisting of emails and telephone calls allegedly received by Complainant Segway is unreliable and should be given little weight, if any.<sup>7</sup> Moreover, Complainants and the IA do not adequately rebut Swagway's argument and supporting evidence. *See* ComplResp at 76-77; IAResp at 57-58.

Based on the foregoing, we find that Complainants have not introduced sufficient evidence of actual confusion with respect to the SWAGWAY mark. *See Nutri/System, Inc.*, 809 F.2d at 606-607; *Amstar Corp. v. Domino's Pizza, Inc.*, 615 F.2d 252, 263 (5th Cir. 1980); *Scott Paper Co. v. Scott's Liquid Gold, Inc.*, 589 F.2d 1225, 1231 (3d Cir. 1978); *see also* 5 McCarthy § 23:14 (2017) ("If there is a very large volume of contacts or transactions which could give rise to confusion and there is only a handful of instances of actual confusion, the evidence of actual confusion may receive relatively little weight.") Therefore, we find that this factor does not weigh in favor of a finding of a likelihood of confusion.

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<sup>7</sup> *See* SwagwayPet at 21-22; *id.* at 23-28. *See also* RIB at 242 (citing JX-0027 Leary Dep. Tr. at 40:3-15; Leary Tr. 139:11-18; Leary Tr. 136:16-19); *id.* at 243 (citing JX-0027 Leary Dep. Tr. at 27:6-17; 28:7-31:3; JX-0018 (Buccella Dep. Tr.) at 32:23-33:2; 54:6-10; Buccella Tr. 126:13-19 (no company memos generated); Leary Tr. 141:9-12 (no call logs maintained); Buccella Tr. 127:13-15; Leary Tr. 135:6-10; Buccella Tr. 131:13-16; Buccella Tr. 125:4-24; Leary Tr. 142:18-23).

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Accordingly, we modify the ID by finding that evidence of actual confusion does not weigh in favor of likelihood of confusion. Although we modify the ID with respect to this single factor, we note that the ID's ultimate finding of likelihood of confusion and trademark infringement of the Segway marks by Swagway is correct. Evidence supporting the other factors considered by the ID, including the degree of similarity between the two marks in appearance, the pronunciation of the words, and the strength of the SEGWAY marks strongly support the ID's finding of infringement.<sup>8</sup>

### **B. Remedy, the Public Interest, and Bonding**

#### **1. Remedy**

In a Section 337 proceeding, the Commission has "broad discretion in selecting the form, scope, and extent of the remedy." *Viscofan, S.A. v. United States Int'l Trade Comm'n*, 787 F.2d 544, 548 (Fed. Cir. 1986).

##### **a. LEO**

Section 337(d) authorizes the Commission to issue an LEO directed to a respondent's infringing products. 19 U.S.C. § 1337(d). An LEO instructs U.S. Customs and Border Protection ("CBP") to exclude from entry all articles that are covered by the intellectual property at issue that originate from a named respondent in the investigation. *Fuji Photo Film Co. Ltd. v.*

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<sup>8</sup> We also note that the ID's statement that "[a]ccordingly, the overwhelming evidence shows that the SWAGWAY mark infringes the '948 and '942 TMs," ID at 172, was premature irrespective of whether the record shows actual confusion because at the point of making this statement, the ID had not completed its trademark infringement analysis. *See* ID at 172-184. In fact, the ID does not make its infringement finding regarding the asserted trademarks until page 183. *See* ID at 183 ("Accordingly, complainants have shown that SWAGWAY products infringe the SEGWAY marks, but it has not been shown that SWAGTRON products infringe the SEGWAY marks.").

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*Int'l Trade Comm'n*, 474 F.3d 1281, 1286 (Fed. Cir. 2007).

Consistent with our determination on the issues of violation, *i.e.*, that there was no violation of section 337 in this investigation with respect to any of the asserted patents, and that there was a violation of section 337 only with respect to accused products bearing the SWAGWAY mark by reason of infringement of the '948 TM and the '942 TM, we find that the issuance of an LEO against Swagway's products is appropriate in this investigation.

We note that seven Respondents were found in default, namely, PhunkeeDuck, Segaway, Metem, Airwheel NL, C-Star, Koowheel, and Gotway. *See* Order No. 9 (Sep. 1, 2016) (unreviewed, Oct. 3, 2016); Order No. 22 (Jan. 9, 2017) (unreviewed, Feb. 7, 2017); IAOpenNotice at 12-13. We do not issue an LEO against the products of Metem, Airwheel NL, C-Star, Koowheel, and Gotway because these defaulted respondents were accused of infringement of the '230 and/or '607 patents only, and the Commission found that the domestic industry requirement was not met for these patents, *see* discussion *supra*. *See Certain Motorized Self-Balancing Vehicles*, Inv. 337-TA-1000, Notice of Comm'n Det. to Review-in-Part an ID Finding No Violation of Section 337, at 3-4 (July 28, 2017) (finding the matter of a default remedy moot in view of a finding that the domestic industry requirement was not met). We likewise do not issue an LEO against defaulted respondents PhunkeeDuck and Segaway with respect to the '984 patent because Complainants stated that they "withdrew the '984 patent from this Consolidated Investigation and are not requesting an exclusion order be issued with respect to any participating Respondent or defaulting Respondent for infringement of the '984 patent." ComplReplyNotice at 28-29. However, we do issue an LEO against defaulted respondent Segaway with respect to the asserted trademarks. Specifically, the LEO excludes Segaway's

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personal transporters, components thereof, and packaging and manuals therefor that infringe one or more of the '948 TM and '942 TM, as asserted against Segaway in the 1007 Complaint. *See* 1007 Complaint at ¶¶ 136-142. *See also* IAOpenNotice at 14; *id.* (Exhibit C); IAREplyNotice at 13.

We grant Respondents' request for a certification provision in the LEO. RespOpenNotice at 18. The Commission frequently incorporates such provisions in its LEOs. *See e.g. Certain Multiple Mode Outdoor Grills and Parts Thereof*, Inv. No. 337-TA-895, Comm'n Op., 56 (Feb. 20, 2015) ("It has been Commission practice for the past several years to include certification provisions in all exclusion orders to aid [CBP] in enforcing the Commission's remedial orders.")

With respect to Respondents' request that any exclusion order include an exception to allow for Respondents' continued service and repair of any products already sold to consumers before the effective date of any remedial order, *see* RespOpenNotice at 17 (citing RD at 14), we note that the ALJ's recommendation provides that "Such a public interest exemption may be included here to the extent that respondents show that such importations occur and that the exemption is warranted." *See* RD at 14. The record shows, however, that Respondents failed to make such a showing. Specifically, their argument in the opening brief is limited to a single sentence. *See* RespOpenNotice at 17 ("[T]o the extent an exclusion order issues, it should include an exception to allow for Respondents' continued service and repair of any products already sold to consumers before the effective date of any remedial order issued, as the ALJ has recommended") (citations omitted). In light of this record, we find that respondents have not shown that an exemption is warranted and, therefore, the LEO does not contain an exemption

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that would allow for Respondents' continued service and repair of any products already sold to consumers before the effective date of any remedial order issued.

### b. CDO

Under section 337(f)(1), the Commission may issue a CDO in addition to, or in lieu of, an exclusion order. 19 U.S.C. § 1337(f)(1). Cease and desist orders are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order.<sup>9</sup> *See, e.g., Certain Table Saws Incorporating Active Injury Mitigation Technology and Components Thereof*, Inv. No. 337-TA-965, Comm'n Op. at 4-6 (Feb. 1, 2017) (public version); *Certain Protective Cases and Components Thereof*, Inv. No. 337-TA-780, USITC Pub. No. 4405 (July 2013), Comm'n Op. at 28 (Nov. 19, 2012) (citing *Certain Laser Bar Code Scanners and Scan Engines, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-551, Comm'n Op. at 22 (June 14, 2007)). A complainant seeking a CDO must demonstrate, based on the record, that this remedy is necessary to address the violation found in the investigation so as to not undercut the relief provided by the exclusion order. *Certain Integrated Repeaters, Switches, Transceivers, and Products Containing Same*, Inv. No. 337-TA-435, USITC Pub. No. 3547 (Oct. 2002), Comm'n Op. at 27 (Aug. 16, 2002)

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<sup>9</sup> When the presence of infringing domestic inventory is asserted as the basis for a cease and desist order under section 337(f)(1), Chairman Schmidtlein does not subscribe to the view that the inventory needs to be "commercially significant" in order to issue a cease and desist order. *See, e.g., Certain Table Saws Incorporating Active Injury Mitigation Technology and Components Thereof*, Inv. No. 337-TA-965, Comm'n Op. at 6-7, n.2 (Feb. 1, 2017) (public version). In Chairman Schmidtlein's view, the presence of some infringing domestic inventory, regardless of the commercial significance, provides a basis to issue a cease and desist order. *See id.*

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("[C]omplainants bear the burden of proving that respondent has such an inventory."); *see also* H.R. Rep. No. 100-40, at 160 (1987) ("When the Commission determines that both remedies [*i.e.*, an exclusion order and cease and desist order] are necessary, it should be without legal question that the Commission has authority to order such relief.").

Complainants request the issuance of a CDO against each respondent found in violation, citing the existence of commercially significant domestic inventories of accused products. RD at 15 (citing Compls. Br. at 296-98). The ALJ found that the evidence shows that respondents maintain commercially significant inventories of accused products. RD at 15-16.

We have found only Swagway in violation of section 337, and only with respect to the asserted trademarks. The record shows that Swagway maintains commercially significant amounts of domestic inventory of the SWAGWAY- branded accused products. RD at 15 (citing Staff Br. at 175-76; CX-1967C (Milani WS) at Q/A 266, 270-74 (citing inventory levels for the various respondents' accused products)). Accordingly, we determine to issue a CDO directed against Swagway only.<sup>10</sup>

### **2. Public Interest**

Before issuing a remedy for a violation of Section 337, the Commission must consider the effect of the remedy on certain public interest considerations: (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) the U.S. production of articles that are like or directly competitive with those which are the subject of the investigation, and (4) U.S. consumers. 19 U.S.C. §§ 1337(d), (f), (g); *Certain Ink Jet Print Cartridges and Components*

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<sup>10</sup> Complainants did not request CDOs against defaulted respondents PhunkeeDuck and Segaway.

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*Thereof*, Inv. No. 337-TA-446, Comm'n Op. at 14 (Oct. 2002).

Complainants argue that the entry of a GEO, LEOs, and CDOs in this investigation is consistent with the public interest. ComplOpenRemedy at 13-24. Respondents do not contend that this investigation raises public interest concerns. RespOpenNotice at 16. The IA submits that the public interest factors do not weigh against the entry of remedial orders against Respondents. On August 23, 2017, the Commission issued a Notice of Request for Statements on the Public Interest, and no written submissions were received from the public in response. Complainants timely filed their submission on the public interest on September 21, 2017 ("Compls. PI Statement"), 19 C.F.R. § 210.50(a)(4). No public interest submissions were filed by any of the Respondents.

### a. Public health and welfare

The record shows that the issuance of an LEO directed to the Respondents will not adversely impact the public health, safety, or welfare in the United States. Compls. PI Statement at 2. Complainants point out that the Accused Products are one and two wheel personal transporters for individual riders, and that access to Respondents' infringing personal transporters does not implicate any reasonably conceivable public health, safety or welfare concern. *Id.* at 2-3. The IA submits that he is not aware of any effect on the public health and welfare that would be caused by excluding any of the accused products in this Investigation. IAOpenNotice at 18. Respondents do not express any disagreement with Complainants' and the IA's positions on this issue. *See* RespReplyRemedy at 12 ("Respondents do not contend that this investigation raises public interest concerns.")

### b. Competitive conditions in the U.S. economy

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The record indicates that motorized vehicles will continue to be available from non-infringing sources such as sellers of motor scooters, motorcycles, powered bicycles and the like. *See ComplReplyNotice* at 20-23. As complainants point out, there are no public interest concerns where, as in the present case, domestic demand for Respondents' products can be met by competitors whose products do not infringe the Complainants' intellectual property rights. *Compls. PI Statement* at 3-4 (citing *Inkjet Ink Supplies & Components Thereof*, Inv. No. 337-TA-691, *Comm'n Op. on Remedy, the Public Interest, & Bonding* at 15 (Jan. 28, 2011)). Complainants submit that, therefore, competitive conditions in the United States will not be adversely affected by the issuance of remedial orders. *Compls. PI Statement* at 3. The IA states that he is not aware of any evidence to the contrary. *IAOpenNotice* at 19. Respondents do not respond to Complainants' assertion. *See RespReplyRemedy* at 12.

### c. U.S. production of relevant articles

No party proffered evidence that the accused products or products resembling the infringing products have been or are currently manufactured in the United States. It appears that the market can be adequately supplied with articles that are like or directly competitive with Respondents' accused products.

### d. U.S. consumers

Complainants argue that U.S. consumers would have access to products from Complainants and third-parties in amounts sufficient to meet demand, should infringing personal transporters be excluded from the United States. *See ComplReplyNoticey* at 20. Complainants submit that U.S. consumers will therefore not be adversely affected by the issuance of the requested relief. *Id.* The IA submits that it appears U.S. consumers will have like or directly



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competitive options to choose from. IAOpenNotice at 19. Respondents do not disagree. See RespReplyRemedy at 12. In conclusion, we find that the record does not support a finding of any adverse effect on the public health and welfare, competitive conditions in the U.S. economy, the U.S. production of articles that are like or directly competitive with those which are the subject of the investigation, or U.S. consumers sufficient to preclude issuance of the proposed remedial orders. Based on the foregoing, we find that entry of the remedial orders in accordance with our determinations on the issues of violation would not be contrary to the public interest in this investigation.

### 3. Bond During Presidential Review Period

Pursuant to section 337(j)(3), the Commission must determine the amount of bond to be required of a respondent during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission determines to issue a remedy. 19 U.S.C. § 1337(j)(3). The purpose of the bond is to protect the complainant from any injury. 19 C.F.R. § 210.42(a)(1)(ii), § 210.50(a)(3). The amount of bond must “be sufficient to protect the complainant from any injury.” 19 U.S.C. § 1337(j)(3); *see also* 19 C.F.R. § 210.50(a)(3). When reliable price information is available, the Commission has often set bond by eliminating the differential between the domestic product and the imported, infringing product. *Certain Microsphere Adhesives, Processes for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm’n Op. at 24 (1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *Certain Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm’n Op. at

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41 (1995), and a 100 percent bond has been required when no effective alternative existed, *Certain Flash Memory Circuits and Products Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Comm'n Op. at 26-27 (July 1997) (a 100 percent bond imposed when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimis* and without adequate support in the record). Complainant bears the burden of establishing the need for a bond. *Certain Rubber Antidegradants, Components Thereof, and Prods. Containing Same*, Inv. No. 337-TA-533, Comm'n Op. at 39, 40 (July 21, 2006); *see also Certain Laser Imageable Printing Plates*, Inv. No. 337-TA-636, Comm'n Op. at 9 (November 30, 2009).

In his recommended determination, the ALJ considered Complainants' argument that a bond rate of 100 percent is appropriate "both because reliable price information for the Accused Products is not available; and because the prices for the Accused Products differ across retailers." RD at 17 (citing Compls. Br. at 298). The ALJ noted that Complainants submit that the prices for respondents' accused products range from \$135 to \$553, whereas the average price of the Segway Domestic Industry Products ("DI Products") is [[ ]]. *Id.* (citing Compls. Br. at 299).

The ALJ further noted that, as argued by the IA and Respondents, Complainants' Ninebot by Segway miniPRO (hands-free, two-wheel self-balancing scooter) and the One S1 (a single-wheel device) are products that more closely resemble and, thus, are more competitive with respondents' accused products than the Segway DI Products. RD at 17-18 (citing Staff Br. at 177-78; Resps. Br. at 292). The ALJ found that complainants failed to present any evidence regarding price differentials between respondents' accused products and the Ninebot by Segway miniPRO or One S1 products. RD at 18. The ALJ stated that while a realistic bond rate could

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have been determined based on price differentials if complainants presented evidence with respect to the more relevant miniPRO and One S1 products, Complainants failed to do so. The ID held that Complainants should not benefit from a higher bond rate when it was within their means to propose an alternative. The ALJ, accordingly, recommended that no bond should be imposed during the Presidential review period.

Complainants request that, if a violation of Section 337 is found and an exclusion order is issued, the Commission require a bond equal in value to that of the Accused Products (*i.e.* one hundred percent) in order to mitigate harm during the Presidential review period.

ComplOpenRemedy at 24. Complainants argue that available pricing data supports a bond equal in value to that of the Accused Products. ComplOpenRemedy at 25-28. Complainants contend that the bond rate cannot be calculated on the basis of a reasonable royalty because data is not available to calculate such a rate. *Id.* at 28-29. Complainants submit that without reliable pricing data or data for a reasonable royalty, a bond equal in value to that of the Accused Products is most appropriate. Complainants argue that when reliable price information is not available, or if the prices for the Accused Products differ, the Commission typically sets the bond at 100 percent of the price of the infringing imported products. ComplOpenRemedy at 29 (citing *Certain Cigarettes and Packaging Thereof*, 337-TA-643, Comm'n Op. at 30-31 (Oct. 1, 2009)).

Respondents argue that the record supports the ALJ's recommendation that no bond should be imposed during the Presidential review period. RespOpenNotice at 24-25 (citing RD at 18). Respondents contend that Complainants failed to present any evidence that they will suffer injury from the continued sale or importation of the accused products during the 60-day Presidential Review period, and that Complainants' own economic expert admitted that the

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domestic industry products will not be at a competitive disadvantage if consumers can purchase the accused products. RespOpenNotice at 25 (citing Milani Tr. 426:15-22).

Respondents point out that the domestic industry products and the Accused Products are sold at extremely different price points: the average price for the domestic industry products is [[ ]], while the accused products average between \$135 and \$553. RespOpenNotice at 25 (citing Milani Tr. 425:22-426:5). Respondents contend that the Accused Products are not sold into any of the same markets that the domestic industry products are sold into, *i.e.*, tour group operators, public law enforcement, and private security agencies. *Id.* (citing Milani Tr. 430:11-21). Respondents assert that Complainants acknowledge that no distribution channels sell both the accused products and the domestic industry products. RespOpenNotice at 25-26 (citing Milani Tr. 426:11-14). Respondents also submit that Complainants' own economic expert admitted that he was not aware of any prospective purchaser of a domestic industry product that purchased an Accused Product instead. RespOpenNotice at 26 (citing Milani Tr. 426:6-10).

Respondents contend that Complainants' One S1 and MiniPro products – which are manufactured in China by Segway's Chinese owner Ninebot – are the products that more closely resemble the accused products, in that they are sold into a similar consumer segment of the market. *Id.* (citing Milani Tr. 428:12-16).<sup>11</sup> Respondents submit that because Complainants are not competitors in the U.S. hoverboard market, where the Accused Products compete, Complainants would not be harmed during the Presidential Review Period, and that, therefore, no bond should be imposed. *See id.* at 26-27.

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<sup>11</sup> We note that Complainants' lower priced One S1 and MiniPro products bear the Segway marks, *i.e.*, the Ninebot by Segway miniPro and the Ninebot One S1 by Segway. *See ID* at 16; *see also* 1007 Complaint at ¶ 159.

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The IA observes that the ALJ found that Complainants failed to present any evidence regarding price differentials between Respondents' Accused Products and the more comparable products marketed and sold by Complainants. IAOpenNotice at 17 (citing RD at 17-18). The IA notes that, rather, Complainants only compared the average price of their Segway DI products – *i.e.*, [[ ]] – to the average prices of Respondents' accused products – *i.e.*, \$135 to \$553 – to argue that a 100 percent bond is appropriate. IAOpenNotice at 17 (citations omitted). The IA notes that the ALJ found that a realistic bond rate based on price differentials could have been determined if Complainants presented evidence with respect to the more relevant Ninebot by Segway miniPRO (a hands-free, two-wheel self-balancing scooter) and One S1 (a single-wheel device) products, which more closely resemble and, thus, are more competitive with Respondents' accused products. *Id.* at 17-18 (citations omitted). The IA concludes that no bond should be imposed during the Presidential review period.

We find that, for the reasons provided in the ALJ's RD, the record supports the ALJ's recommendation that no bond is appropriate in this investigation with respect to respondent Swagway. *See* RD at 16-18. *See also* RespOpenNotice at 24-27; IAOpenNotice at 17-18. Accordingly, consistent with the ALJ's recommendation on this issue, we determine to set the bond amount at zero (0) percent of the entered value of Respondent Swagway's accused products during the Presidential review period.

The Commission generally sets the bond at 100 percent of entered value when a party defaults. *See Certain Carbon Spine Board, Cervical Collar, CPR Masks And Various Medical Training Manikin Devices, And Trademarks, Copyrights Of Product Catalogues, Product Inserts And Components Thereof*, Inv. No. 337-TA-1008, Comm'n Op. at 13 (Jun. 14, 2017).

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Accordingly, we determine to set the bond at 100 percent of the entered value of defaulted Respondent Segaway's accused products during the period of Presidential review. *See Certain Foam Footwear*, Inv. No. 337-TA-567 (Remand), Comm'n Op. at 9 (setting different bond amounts for covered products of different respondents during the period of Presidential review) (Aug. 2, 2011).

## V. CONCLUSION

Having considered the ALJ's Initial Determination and Recommended Determination, the parties' submissions filed in response to the Commission's Notice, and the evidentiary record, the Commission has determined to issue (1) an LEO prohibiting the importation into the United States of (a) SWAGWAY-branded personal transporters, components thereof, and packaging and manuals thereof manufactured outside the United States that infringe one or more of the '948 TM and '942 TM and that are manufactured abroad by or on behalf of, or imported by or on behalf of, Respondent Swagway, or any of its affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns; and (b) personal transporters, components thereof, and packaging and manuals therefor manufactured outside the United States that infringe one or more of the '948 TM and '942 TM, which cover the "SEGWAY" marks, and that are manufactured by or on behalf of, or imported by or on behalf of, Respondent Segaway, or any of its affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns; and (2) a CDO directed against SWAGWAY concerning SWAGWAY-branded personal transporters, components thereof, and packaging and manuals therefor that infringe one or more of the '948 TM and '942 TM.

The Commission has further determined that the public interest factors enumerated in

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subsections (d)(l), (f)(1), and (g)(1) (19 U.S.C. §§ 1337(d)(l), (f)(1), (g)(1)) do not preclude issuance of the above-referenced remedial orders. Finally, the Commission has determined to set the bond amount at zero (0) percent of the entered value of Respondent Swagway's accused products and at 100 percent of the entered value of defaulted Respondent Segaway's accused products during the Presidential review period (19 U.S.C. § 1337(j)).

By order of the Commission.

Lisa R. Barton  
Secretary to the Commission

Issued:

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **January 12, 2018**.



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

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**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 2

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**On Behalf of Respondent Hangzhou Chic Intelligent  
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Airwheel

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**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 3

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

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

**In the Matter of**

**CERTAIN PERSONAL  
TRANSPORTERS, COMPONENTS  
THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**And**

**CERTAIN PERSONAL  
TRANSPORTERS AND COMPONENTS  
THEREOF**

**Investigation No. 337-TA-1007  
Investigation No. 337-TA-1021  
(Consolidated)**

**NOTICE OF A COMMISSION DETERMINATION TO REVIEW IN PART A FINAL  
INITIAL DETERMINATION; SCHEDULE FOR FILING WRITTEN SUBMISSIONS  
ON CERTAIN ISSUES UNDER REVIEW AND ON REMEDY, THE PUBLIC  
INTEREST, AND BONDING**

**AGENCY:** U.S. International Trade Commission.

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission (“the Commission”) has determined to review in part the final initial determination (“ID”) issued by the presiding administrative law judge (“ALJ”) finding in part a violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337) (“section 337”), in the above-referenced investigation on August 10, 2017. The Commission requests certain briefing from the parties on the issues under review, as indicated in this notice. The Commission also requests briefing from the parties and interested persons on the issues of remedy, the public interest, and bonding.

**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 <https://www.usitc.gov>. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <https://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

**SUPPLEMENTARY INFORMATION:** The Commission instituted Inv. No. 337-TA-1007, *Certain Personal Transporters, Components Thereof, and Packaging and Manuals Therefor* under section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“section 337”), on June 24, 2016, based on a complaint filed by Segway, Inc. of Bedford, New Hampshire (“Segway”); DEKA Products Limited Partnership of Manchester, New Hampshire (“DEKA”); and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China (“Ninebot”) (collectively, “Complainants”). 81 *Fed. Reg.* 41342-43 (Jun. 24, 2016). The complaint alleges a violation of section 337 by reason of infringement of certain claims of U.S. Patent Nos. 6,302,230 (“the ‘230 patent”); 6,651,763 (“the ‘763 patent”); 7,023,330 (“the ‘330 patent”); 7,275,607 (“the ‘607 patent”); 7,479,872 (“the ‘872 patent”); and 9,188,984 (“the ‘984 patent”); and U.S. Trademark Registration Nos. 2,727,948 and 2,769,942. The named respondents for Investigation No. 337-TA-1007 are Inventist, Inc. of Camas, Washington; PhunkeeDuck, Inc. of Floral Park, New York; Razor USA LLC of Cerritos, California; Swagway LLC of South Bend, Indiana (“Swagway”); Segaway of Studio City, California; and Jetson Electric Bikes LLC of New York, New York (“Jetson”). The Commission’s Office of Unfair Import Investigations (“OUII”) was also named as a party to this investigation. 81 *Fed. Reg.* 41342 (Jun. 24, 2016).

On September 21, 2016, the Commission instituted Inv. No. 337-TA-1021, *Certain Personal Transporters and Components Thereof*, based on a complaint filed by the same Complainants. 81 *Fed. Reg.* 64936-37 (Sept. 21, 2016). The complaint alleges a violation of section 337 by reason of infringement of certain claims of U.S. Patent Nos. 6,302,230 and 7,275,607. The named respondents for Investigation No. 337-TA-1021 are Powerboard LLC of Scottsdale, Arizona (“Powerboard”); Metem Teknoloji Sistemleri San of Istanbul, Turkey; Changzhou Airwheel Technology Co., Ltd. of Jiangsu, China (“Airwheel”); Airwheel of Amsterdam, Netherlands; Nanjing Fastwheel Intelligent Technology Co., Ltd. of Nanjing, China; Shenzhen Chenduoqing Electronic Technology Ltd., China, a.k.a. C-Star of Shenzhen, China; Hangzhou Chic Intelligent Technology Co., Ltd. of Hangzhou, China (“Chic”); Hovershop of Placentia, California; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel of Shenzhen City, China; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway of Shenzhen, China; and Inventist, Inc. of Camas, Washington. OUII was also named as a party to this investigation. 81 *Fed. Reg.* 64936 (Sept. 21, 2016). The Commission directed the presiding ALJ to consolidate Inv. Nos. 337-TA-1007 and 337-TA-1021. *See id.* at 64937.

Subsequently, the Commission determined not to review an ID finding respondents PhunkeeDuck, Inc. and Segaway in default. Order No. 9 (Sept. 1, 2016) (*not reviewed* Oct. 3, 2016). The Commission further determined not to review an ID granting complainants’ corrected motion to amend the complaint and notice of investigation to assert the ‘763, ‘330, and ‘872 patents against respondent Jetson Electric Bikes LLC, and to terminate the investigation with respect to all asserted claims of the ‘984 patent as to all respondents. Order No. 17 (Nov. 14, 2016) (*not reviewed* Dec. 7, 2016). The Commission also determined not to review an ID terminating the investigation as to respondent Nanjing Fastwheel Intelligent Technology Co., Ltd. based on a Consent Order Stipulation. Order No. 18 (Nov. 15, 2016) (*not reviewed* Dec. 7, 2016).

The Commission likewise determined not to review an ID granting a motion to terminate the investigation as to the '763 patent. Order No. 19 (Dec. 16, 2016) (*not reviewed* Jan. 10, 2017). The Commission further determined not to review an ID finding respondents Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway; Metem Teknoloji Sistemleri San; and Airwheel Netherlands in default. Order No. 22 (Jan. 9, 2017) (*not reviewed* Feb. 7, 2017). The Commission also determined not to review an ID terminating this investigation with respect to all asserted claims of the '330 patent and the '872 patent as to all respondents. *See* Order No. 24 (Jan. 10, 2017) (*not reviewed* Feb. 7, 2017).

Furthermore, the Commission determined to review an ID terminating respondent Inventist, Inc. in this investigation based on a Consent Order Stipulation and proposed Consent Order. Order No. 25 (Jan. 31, 2017) (Notice of Review issued Feb. 22, 2017 ("Notice of Review")). The Commission requested corrections to be made in the proposed Consent Order. *See* Notice of Review at 2. The corrected Consent Order was filed with the Commission on February 27, 2017. The Commission determined to affirm Order No. 25, and terminated the investigation as to Inventist and issued a Consent Order on October 12, 2017.

The Commission also determined not to review an ID to terminate this investigation as to Razor USA, LLC based on a Settlement Agreement and Release. Order No. 28 (Mar. 22, 2017) (*not reviewed* Apr. 24, 2017). Also, the Commission determined not to review an ID granting Complainants' motion for summary determination concerning the technical prong of the domestic industry requirement with respect to the asserted trademarks. Order No. 32 (Apr. 6, 2017) (*not reviewed* May 9, 2017). Finally, the Commission determined not to review an ID granting Complainants' motion to terminate the investigation as to respondent Hovershop for good cause. *See* Order No. 34 (Apr. 13, 2017) (*not reviewed* May 15, 2017).

As a result, the following two patents (and 13 claims) and two trademarks remain at issue in this investigation: claims 1, 3-5, and 7 of the '230 patent; claims 1-4 and 6 of the '607 patent; U.S. Trademark Registration No. 2,727,948; and U.S. Trademark Registration No. 2,769,942. The following respondents participated in the evidentiary hearing and remain in the investigation: Airwheel, Chic, Jetson, Powerboard, and Swagway.

The evidentiary hearing on the question of violation of section 337 was held from April 18 through April 21, 2017. The final ID finding in part a violation of section 337 was issued on August 10, 2017. The ALJ issued his recommended determination on remedy, the public interest and bonding on August 22, 2017. The ALJ recommended that if the Commission finds a violation of section 337 in the present investigation, the Commission should: (1) issue a general exclusion order ("GEO") covering accused products found to infringe the asserted patents; (2) issue a limited exclusion order ("LEO") covering accused products found to infringe the asserted patents if the Commission does not issue a GEO; (3) issue an LEO covering accused products found to infringe the asserted trademarks; (4) issue cease and desist orders; and (5) not require a bond during the Presidential review period. RD at 1-2; 18. No public interest statements were filed by the public in this investigation.

All parties to this investigation that participated in the evidentiary hearing (with the exception of respondent Powerboard) filed timely petitions for review of various portions of the final ID. The parties likewise filed timely responses to the petitions.

On September 11, 2017, Complainants filed a “Request For Acceptance of Memorandum Correcting Misstatements of the Record Found In Respondents Chic’s and Airwheel’s Oppositions and OUII’S Response to Complainant’s Petition For Review” (“Request”). The IA and Respondents Chic and Airwheel filed timely responsive pleadings opposing Complainants’ Request. The Commission notes that no such further briefing is normally permitted, and that in any event it can resolve the relevant facts from the established record in this Investigation without additional briefing from Complainants or any other party in determining whether to review the final ID. Accordingly, Complainants’ Request is denied.

Having examined the record in this investigation, including the final ID, the petitions for review, and the responses thereto, the Commission has determined to review the final ID in part. In particular, the Commission has determined as follows:

- (1) to review the ID’s determination that the claim term “maximum operating velocity” should be construed to mean “a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle,” *see* ID at 44;
- (2) to review the ID’s determination that “nothing in the plain language of the disputed limitation [‘the motorized drive arrangement causing, when powered, automatically balanced operation of the system’] from claim 1 of the ‘230 patent requires the operation by a rider. The claim only requires the ‘motorized drive arrangement causing, when powered, automatically balanced operation of the system,’” *see* ID at 82;
- (3) to review the ID’s infringement, validity, and domestic industry (technical prong) determinations pertaining to the ‘230 patent;
- (4) to review the instances in the ID that refer to a disclaimer of “manual input” with respect to the ‘607 patent. On review, the Commission finds that this disclaimer is actually a disclaimer of “manual input via joystick.” The Commission notes that the ID uses these terms interchangeably and determines not to review any other portion of the ID’s analysis or findings pertaining to this disclaimer. The Commission’s analysis on this issue will be provided in our opinion, which will issue upon conclusion of the investigations;
- (5) to review the ID’s finding with respect to actual confusion regarding the SWAGWAY mark, *see* ID at 171-72.

In addition, the Commission has determined to correct two typographical errors: in the first line of the last paragraph on page 170 “the Swagway ‘trademark’” is replaced with “the Segway ‘trademark’”; and in the first line on page 171 “‘Swagway’” is replaced with “‘Segway’”.

The Commission has determined not to review the remainder of the ID.

The parties are requested to brief their positions on only the following issues, with reference to the applicable law and the evidentiary record:

1. The ID determined with respect to the '230 patent that "the claim term 'maximum operating velocity' should be construed to mean 'a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle.'" ID at 44.

a. Does intrinsic evidence support the ID's above determination?

b. Does extrinsic evidence support the ID's above determination?

2. The ID determined with respect to the '230 patent that "nothing in the plain language of the disputed limitation ['the motorized drive arrangement causing, when powered, automatically balanced operation of the system'] from claim 1 of the '230 patent requires the operation by a rider. The claim only requires the 'motorized drive arrangement causing, when powered, automatically balanced operation of the system.'" ID at 82.

a. Does intrinsic evidence support the ID's above determination?

b. Does extrinsic evidence support the ID's above determination?

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue one or more cease and desist orders that could result in the respondents being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered, including against the defaulted respondents. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or are likely to do so. For background, see *Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843, Comm'n Op. at 7-10 (Dec. 1994).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist orders would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005, 70 FR 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury.

**WRITTEN SUBMISSIONS:** The parties to the investigation are requested to file written submissions on the issues under review. The submissions should be concise and thoroughly referenced to the record in this investigation. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest and bonding. Such submissions should address the recommended determination on remedy, the public interest and bonding issued on August 22, 2017, by the ALJ and the appropriate remedy for the respondents previously found in default. Complainants and the Commission investigative attorney are also requested to submit proposed remedial orders for the Commission's consideration.

Complainants are further requested to provide the expiration date of the '230 patent, the HTSUS numbers under which the accused articles are imported, and any known importers of the accused products. The written submissions and proposed remedial orders must be filed no later than the close of business on October 30, 2017. Reply submissions must be filed no later than the close of business on November 6, 2017. No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document electronically on or before the deadlines stated above and submit 8 true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 CFR 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1007,' 'Investigation No. 337-TA-1021' (Consolidated))" in a prominent place on the cover page and/or the first page. (*See Handbook for Electronic Filing Procedures, [http://www.usitc.gov/secretary/fed\\_reg\\_notices/rules/handbook\\_on\\_electronicfiling.pdf](http://www.usitc.gov/secretary/fed_reg_notices/rules/handbook_on_electronicfiling.pdf)*). Persons with questions regarding filing should contact the Secretary (202-205-2000).

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the Commission for purposes of this Investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel, solely



for cybersecurity purposes. All contract personnel will sign appropriate nondisclosure agreements. All non-confidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

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

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton', with a large, stylized flourish at the end.

Lisa R. Barton  
Secretary to the Commission

Issued: October 13, 2017

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **October 13, 2017**.



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

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**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING  
AND MANUALS THEREFOR**

Certificate of Service – Page 2

**Inv. No. 337-TA-1007/1021  
(Consolidated)**

**On Behalf of Respondent Hangzhou Chic Intelligent  
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**PUBLIC VERSION**

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C. 20436**

**In the Matter of**

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND  
PACKAGING AND MANUALS THEREFOR**

**And**

**CERTAIN PERSONAL TRANSPORTERS  
AND COMPONENTS THEREOF**

**Inv. No. 337-TA-1007  
Inv. No. 337-TA-1021  
(Consolidated)**

**FINAL INITIAL DETERMINATION**

**Administrative Law Judge David P. Shaw**

Pursuant to the notices of investigation, 81 Fed. Reg. 41342 (June 24, 2016) and 81 Fed. Reg. 64936 (September 21, 2016), this is the Initial Determination in *Certain Personal Transporters, Components Thereof, and Packaging and Manuals Therefor, and Certain Personal Transporters and Components Thereof*, United States International Trade Commission Investigation No. 337-TA-1007/337-TA-1021 (Consolidated).

It is held that a violation of section 337 (19 U.S.C. § 1337) has not occurred with respect to U.S. Patent No. 6,302,230; and U.S. Patent No. 7,275,607. A violation of section 337 has occurred with respect to U.S. Trademark Registration No. 2,727,948; and U.S. Trademark Registration No. 2,769,942.

**PUBLIC VERSION**

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## PUBLIC VERSION

The following abbreviations may be used in this Initial Determination:

ALJ	-	Administrative Law Judge
CDX	-	Complainants' Demonstrative Exhibit
CPX	-	Complainants' Physical Exhibit
CX	-	Complainants' Exhibit
Dep.	-	Deposition
EDIS	-	Electronic Document Imaging System
JPX	-	Joint Physical Exhibit
JX	-	Joint Exhibit
P.H.	-	Prehearing
RDX	-	Respondents' Demonstrative Exhibit
RPX	-	Respondents' Physical Exhibit
RWS	-	Rebuttal Witness Statement
RX	-	Respondents' Exhibit
Tr.	-	Transcript
WS	-	Witness Statement

## PUBLIC VERSION

### I. Background

#### A. Institution of the Investigation; Procedural History

By publication of a notice in the *Federal Register* on June 24, 2016, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the Commission instituted Investigation No. 337-TA-1007 to determine:

- (a) Whether 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 personal transporters, components thereof, and packaging and manuals therefor by reason of infringement of one or more of claims 1, 3–5, and 7 of the ‘230 patent [U.S. Patent No. 6,302,230]; claims 1–5 and 7 of the ‘763 patent [U.S. Patent No. 6,651,763]; claims 1–3 and 5 of the ‘330 patent [U.S. Patent No. 7,023,330]; claims 1–4 and 6 of the ‘607 patent [U.S. Patent No. 7,275,607]; claims 1, 3–5, 10–12, and 17 of the ‘872 patent [U.S. Patent No. 7,479,872]; and claims 1–3 and 5–20 of the ‘984 patent [U.S. Patent No. 9,188,984], and whether an industry in the United States exists as required by subsection (a)(2) of section 337;
- (b) whether there is a violation of subsection (a)(1)(C) 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 personal transporters, components thereof, and packaging and manuals therefor by reason of infringement of the ‘948 trademark [U.S. Trademark Registration No. 2,727,948] and the ‘942 trademark [U.S. Trademark Registration No. 2,769,942 ], and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

81 Fed. Reg. 41342 (June 24, 2016).

By publication of a notice in the *Federal Register* on September 21, 2016, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended, the



**PUBLIC VERSION**

Commission instituted Investigation No. 337-TA-1021 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 personal transporters, components thereof, and packaging and manuals therefor by reason of infringement of one or more of claims 1, 3, and 4 of the '230 patent [U.S. Patent No. 6,302,230] and claims 1-4 and 6 of the '607 patent [U.S. Patent No. 7,275,607], and whether an industry in the United States exists as required by subsection (a)(2) of section 337;

81 Fed. Reg. 64936 (Sept. 21, 2016).

The Commission designated the undersigned as the presiding administrative law judge:

The Commission has determined to assign this investigation to Judge Shaw, who is the presiding administrative law judge in *Certain Personal Transporters, Components Thereof, and Packaging and Manuals Therefor*, Inv. No. 337-TA-1007, and hereby directs Judge Shaw to consolidate the two proceedings in view of the overlapping general exclusion orders requested in the two investigations.

*Id.*

The complainants for the consolidated investigation are Segway, Inc. of Bedford, New Hampshire; DEKA Products Limited Partnership of Manchester, New Hampshire; and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China.

The named respondents for Investigation No. 337-TA-1007 are Inventist, Inc. of Camas, Washington; PhunkeeDuck, Inc. of Floral Park, New York; Razor USA LLC of Cerritos, California; Swagway LLC of South Bend, Indiana; Segaway of Studio City, California; and Jetson Electric Bikes LLC of New York, New York. The Office of

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Unfair Import Investigations is also a party to this investigation. 81 Fed. Reg. 41342 (June 24, 2016).

The named respondents for Investigation No. 337-TA-1021 are Powerboard LLC of Scottsdale, Arizona; Metem Teknoloji Sistemleri San of Istanbul, Turkey; Changzhou Airwheel Technology Co., Ltd. of Jiangsu, China; Airwheel of Amsterdam, Netherlands; Nanjing Fastwheel Intelligent Technology Co., Ltd. of Nanjing, China; Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star of Shenzhen, China; Hangzhou Chic Intelligent Technology Co., Ltd. of Hangzhou, China; Hovershop of Placentia, California; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel of Shenzhen City, China; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway of Shenzhen, China; and Inventist, Inc. of Camas, Washington. The Office of Unfair Import Investigations is also a party to this investigation. 81 Fed. Reg. 64936 (Sept. 21, 2016).

The target date for completion of the consolidated investigation was set at approximately fourteen months and three weeks, *i.e.*, December 11, 2017. *See* Order No. 11 (Sept. 22, 2016) (Initial Determination),<sup>1</sup> *aff'd*, Notice of Commission Determination Not to Review an Initial Determination Setting the Target Date for Completion of the Consolidated Investigations (Oct. 24, 2016). Accordingly, the due date for the Initial Determination on violation is August 10, 2017.

On October 3, 2016, the Commission determined not to review an initial determination finding respondents PhunkeeDuck, Inc. and Segaway in default. Order

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<sup>1</sup> Due to consolidation, the target date of December 11, 2017, for Investigation No. 337-TA-1007, is approximately seventeen months and two weeks after institution of that investigation.

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No. 9 (Sept. 1, 2016), *aff'd*, Notice of Commission Determination Not to Review an Initial Determination Finding Respondents PhunkeeDuck, Inc. and Segaway in Default (Oct. 3, 2016).

On December 7, 2016, the Commission determined not to review an initial determination granting complainants' corrected motion to amend the complaint and notice of investigation to assert the '763, '330, and '872 patents against respondent Jetson Electric Bikes LLC, and to terminate the investigation with respect to all asserted claims of the the '984 patent as to all respondents. Order No. 17 (Nov. 14, 2016), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Granting Complainants' Motion to Amend the Complaint and Notice of Investigation (Dec. 7, 2016).

On December 7, 2016, the Commission determined not to review an initial determination terminating the investigation as to respondent Nanjing Fastwheel Intelligent Technology Co., Ltd. based on a Consent Order Stipulation. Order No. 18 (Nov. 15, 2016), *aff'd*, Notice of a Commission Determination Not to Review an ID Granting Complainants' Motion Terminating the Investigation as to Respondent Nanjing Fastwheel Intelligent Technology Co., Ltd. Based on a Consent Order Stipulation (Dec. 7, 2016).

On January 10, 2017, the Commission determined not to review an initial determination granting a motion to terminate the investigation as to the '763 patent. Order No. 19 (Dec. 16, 2016), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Granting Complainants' Motion Terminating the Investigation in Part as to all Asserted Claims of U.S. Patent No. 6,651,763 (Jan. 10,

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2017).

On February 7, 2017, the Commission determined not to review an initial determination finding respondents Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway; Metem Teknoloji Sistemleri San; and Airwheel in default. Order No. 22 (Jan. 9, 2017), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Finding Five Respondents in Default (Feb. 7, 2017).

On February 7, 2017, the Commission determined not to review an initial determination terminating this investigation with respect to all asserted claims of the '330 patent and the '872 patent as to all respondents. See Order No. 24 (Jan. 10, 2017), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Granting Complainants' Motion Terminating the Investigation in Part as to All Asserted Claims of U.S. Patent Nos. 7,023,330 and 7,479,872 (Feb. 7, 2017). Accordingly, the following two patents (and 13 claims) and two trademarks remain at issue in this investigation: claims claims 1, 3-5, and 7 of the '230 patent; claims 1-4 and 6 of the '607 patent; U.S. Trademark Registration No. 2,727,948; and U.S. Trademark Registration No. 2,769,942. See *id.*

On February 22, 2017, the Commission determined to review an initial determination terminating respondent Inventist, Inc. in this investigation based on a Consent Order Stipulation and proposed Consent Order. Order No. 25 (Jan. 31, 2017), *aff'd*, Notice of a Commission Determination to Review an Initial Determination Granting Complainants' Motion Terminating the Investigation as to Respondent

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Inventist, Inc. Based on a Consent Order Stipulation and Proposed Consent Order (Feb. 22, 2017).

On April 24, 2017, the Commission determined not to review an initial determination to terminate this investigation as to Razor USA, LLC based on a Settlement Agreement and Release. Order No. 28 (Mar. 22, 2017), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Granting Joint Motion to Terminate the Investigation as to Respondent Razor USA, LLC Based on a Settlement Agreement and Release (Apr. 24, 2017).

On May 9, 2017, the Commission determined not to review an initial determination granting complainants' motion for summary determination concerning the technical prong of the domestic industry requirement with respect to the asserted trademarks. Order No. 32 (Apr. 6, 2017), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Granting Complainant's Motion for Summary Determination on the Technical Prong of the Domestic Industry Requirement with Respect to the Asserted Trademarks (May 9, 2017).

On May 15, 2017, the Commission determined not to review an initial determination granting complainants' motion to terminate the investigation as to respondent Hovershop for good cause. *See* Order No. 34 (Apr. 13, 2017), *aff'd*, Notice of a Commission Determination Not to Review an Initial Determination Granting Complainants' Motion to Terminate the Investigation as to Respondent Hovershop for Good Cause (May 15, 2017).

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A prehearing conference was held on April, 18, 2017, with the evidentiary hearing in this investigation commencing immediately thereafter. The hearing concluded on April 21, 2017. *See* Order No. 15 (Oct. 4, 2016); P.H. Tr. 1-37; Tr. 1-1036. The parties were requested to file post-hearing briefs not to exceed 300 pages in length, and to file reply briefs not to exceed 80 pages in length. *See* P.H. Tr. 11. On May 11, 2017, the parties filed a joint outline of the issues to be decided in the Final Initial Determination. *See* Joint Outline of Issues to Be Decided in the Final Initial Determination (“Joint Outline”) (EDIS Doc. ID No. 611533).<sup>2</sup>

### **B. The Parties**

The complainants are Segway, Inc. (“Segway”) of Bedford, New Hampshire; DEKA Products Limited Partnership of Manchester, New Hampshire; and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China.

Segway is a corporation organized and existing under the laws of Delaware, having its principal place of business in Bedford, New Hampshire. *See* 1007 Complaint, ¶ 7. Segway designs, develops, manufactures, distributes, and services personal transporters, which were first sold to the public in 2002. *See id.* Segway is the exclusive licensee under the asserted ‘230 and ‘607 patents in the relevant field pursuant to a license agreement with DEKA Products Limited Partnership. *See id.*, ¶ 17.

DEKA Products Limited Partnership (“DEKA”) is a limited partnership existing under the laws of New Hampshire, having its principal place of business in Manchester,

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<sup>2</sup> Any pending motion that has not been adjudicated is denied, unless otherwise noted.

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New Hampshire. *See id.*, ¶ 8. DEKA is the assignee and owner of the asserted '230 and '607 patents. *See id.*, ¶¶ 18, 27; Exhibits 7, 10.

DEKA's sole general partner is DEKA Research & Development Corp. *See* 1007 Complaint, ¶ 8. DEKA Research & Development Corp. focuses on the research and development of innovative technologies, including the technologies on which the patented SEGWAY personal transporter is allegedly based. *See id.*

Ninebot (Tianjin) Technology Co., Ltd. ("Ninebot") is a corporation organized and existing under the laws of the People's Republic of China, having its principal place of business in Tianjin, China. *See id.*, ¶ 9. Ninebot manufactures and sells personal transporters. Ninebot is a sublicensee under the asserted '230 and '607 patents pursuant to a sublicense agreement with Segway. *See id.*, ¶ 17. Ninebot Acquisition Corporation, an entity related to Ninebot (Tianjin) Technology Co., Ltd., acquired Segway Inc. on March 31, 2015. *See id.*, at ¶ 9.

The named respondents for Investigation No. 337-TA-1007 were initially Inventist, Inc. of Camas, Washington; PhunkeeDuck, Inc. of Floral Park, New York; Razor USA LLC of Cerritos, California; Swagway LLC of South Bend, Indiana; Segaway of Studio City, California; and Jetson Electric Bikes LLC of New York, New York. The Office of Unfair Import Investigations is also a party to this investigation. 81 Fed. Reg. 41342 (June 24, 2016).

The named respondents for Investigation No. 337-TA-1021 were initially Powerboard LLC of Scottsdale, Arizona; Metem Teknoloji Sistemleri San of Istanbul, Turkey; Changzhou Airwheel Technology Co., Ltd. of Jiangsu, China; Airwheel of Amsterdam, Netherlands; Nanjing Fastwheel Intelligent Technology Co., Ltd. of

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Nanjing, China; Shenzhen Chenduoqing Electronic, Technology Ltd., China, a.k.a. C-Star of Shenzhen, China; Hangzhou Chic Intelligent Technology Co., Ltd. of Hangzhou, China; Hovershop of Placentia, California; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel of Shenzhen City, China; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway of Shenzhen, China; and Inventist, Inc. of Camas, Washington. 81 Fed. Reg. 64936 (Sept. 21, 2016).

Respondent Changzhou Airwheel Technology Co., Ltd. (“Airwheel”) is a Chinese company with its principal place of business in Changzhou, China. *See* 1021 Complaint, ¶ 11; Respondent Changzhou Airwheel Technology Co. Ltd.’s and Airwheel Technology Holding (USA) Co., Ltd.’s<sup>3</sup> Response to Complaint and Notice of Investigation (“Airwheel’s Answer to 1021 Complaint”), ¶ 11 (Oct. 27, 2016). Airwheel manufactures and sells self-balancing unicycles and smart electric bicycles, in addition to developing smart transportation technologies and artificial intelligence technologies.

Respondent Hangzhou Chic Intelligent Technology Co., Ltd. (“Chic”) is a Chinese corporation with its principal place of business in Hangzhou, China. *See* 1021 Complaint, ¶ 13; Respondent Hangzhou Chic Intelligent Technology Co., Ltd.’s Response to the Complaint and Notice of Investigation (“Chic’s Answer to 1021 Complaint”), ¶ 13 (Oct. 11, 2016). Chic manufactures and sells a variety of products, including self-balancing personal transporter vehicles.

Respondent Jetson Electric Bikes LLC (“Jetson”) is a limited liability company existing under the laws of New York, with its principal place of business in Brooklyn,

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<sup>3</sup> Airwheel Technology Holding (USA) Co., Ltd. was not named a respondent in the notice of institution of investigation. 81 Fed. Reg. 64936 (Sep. 21, 2016).



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New York. *See* 1007 Complaint, ¶ 15; Response of Respondent Jetson Electric Bikes LLC to Complaint of Segway, Inc., DEKA Products Limited Partnership, and Ninebot (Tianjin) Technology Co. Ltd., and Notice of Investigation Under Section 337 of the Tariff Act of 1930 (“Jetson’s Answer to 1007 Complaint”), ¶ 11 (Jul. 21, 2016). Jetson sells self-balancing personal transporter vehicles under the Jetson brand that are manufactured by third parties.

Respondent Powerboard LLC (“Powerboard”) is a limited liability company existing under the laws of Delaware, with its principal place of business in Scottsdale, Arizona. *See* 1021 Complaint, ¶ 10; Respondent Powerboard LLC’s Response to the Complaint and Notice of Investigation (“Powerboard’s Answer to 1021 Complaint”), ¶ 10 (Nov. 14, 2016). Powerboard sells self-balancing personal transporter vehicles under the Powerboard brand that are manufactured by third parties.

Respondent Swagway, LLC (“Swagway”) is a limited liability company existing under the laws of Indiana, with its principal place of business in South Bend, Indiana. 1007 Complaint, ¶ 13; Swagway, LLC’s Response to the Complaint and Notice of Investigation (Jul. 12, 2016). Swagway sells self-balancing personal transporter vehicles in the United States.

The Office of Unfair Import Investigations is also a party to the consolidated investigation. *See* 81 Fed. Reg. 64936 (Sept. 21, 2016).

### **C. Products at Issue**

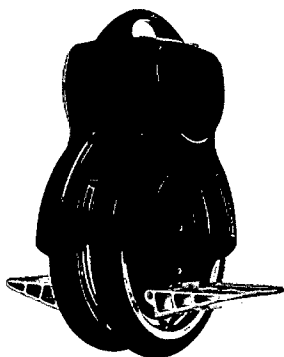
The accused products consist of two broad categories of personal transporter vehicles: (i) hoverboards and (ii) unicycle-type devices. The accused hoverboard devices generally have two wheels that are positioned parallel to one another and are generally

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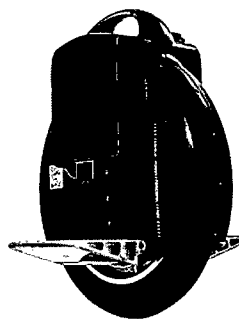
lateral to the feet placed on the hoverboard when operated by a user (*i.e.*, the feet are positioned substantially between the two wheels). The Chic, Jetson, Powerboard, and Swagway accused products are all hoverboards. The unicycle-type devices have a wheel (which may include one or two tires) that are medial to the feet placed on the unicycle-type device (*i.e.*, the wheel is situated between the two feet). The Airwheel accused products are all unicycle-type devices. Additionally, manuals and packaging relating to Swagway's products are accused of infringing the asserted trademarks. *See* 1007 Complaint, ¶¶ 111-22; Staff Br. at 14-18.

### a. Airwheel Products

Complainants accuse the Airwheel Q1, Q3, Q5, and Q6 (collectively, "Q series"), and X3 and X8 (collectively, "X series") self-balancing unicycle-type products (collectively, "Airwheel accused products") of infringing the '230 and '607 patents. Specifically, both the Q series and X series products are alleged to infringe claims 1 and 3 of the '230 patent, and claims 1 and 2 of the '607 patent; the Q series products are also accused of infringing claim 4 of the '230 patent.



Airwheel Q1<sup>4</sup>



Airwheel X3<sup>5</sup>

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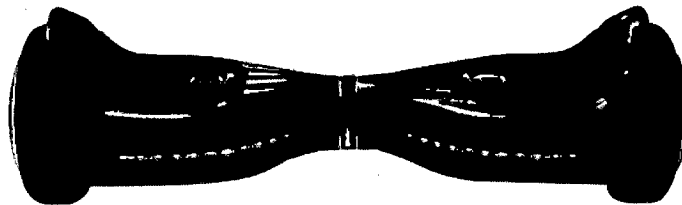
<sup>4</sup> Staff Br. at 15, citing image available at <http://www.airwheel.net/home/product/q1> (last visited Apr. 4, 2017).

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Airwheel and complainants have stipulated that the Q1 product and the X3 product are representative of the physical aspects of the Q series and X series products, respectively. See Staff Br. at 15 (citing Compls. P.H. Br. at 76; Resps. P.H. Br. at 15). The Q series and X series products are also referred to as the “Mars Rover” products. See CX-0136 (Airwheel user manual).

**b. Chic Products**

Complainants accuse the Chic Smart B, Smart C, Smart C1, CHIC-Smart C1, Smart F, Smart S, Smart S1, CHIC-Smart S1, Smart-S3, Smart-S4, and Smart K2 (collectively, “Smart products”), and [ ] (collectively, “Chic accused products”) of infringing the ‘230 and ‘607 patents. The Chic accused products are alleged to infringe claims 1, 3, and 4 of the ‘230 patent, and claims 1-4 and 6 of the ‘607 patent.



Chic Smart B<sup>6</sup>

Chic and complainants have stipulated that the Smart B is representative of the Smart products and the [ ]. See Staff Br. at 15-16 (citing Compls. P.H. Br. at 77).

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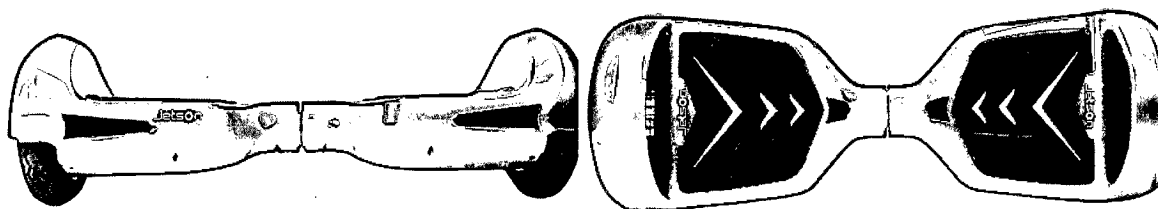
<sup>5</sup> Staff Br. at 15, citing image available at <http://www.airwheel.net/home/product/x3> (last visited Apr. 4, 2017).

<sup>6</sup> Staff Br. at 15, citing image available at <http://www.hoverboardchic.com/hoverboard/bluetooth-hoverboard/2016-new-design-smart-b-original-io-hoverboard.html> (last visited Apr. 4, 2017).

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### c. Jetson Products

Complainants accuse the Jetson V5, V6, and V8 self-balancing hoverboard products (collectively, “Jetson accused products”) of infringing the ‘230 and ‘607 patents. Specifically, the Jetson accused products are alleged to infringe claims 1, 3, and 4 of the ‘230 patent and claims 1-4 and 6 of the ‘607 patent.



Jetson V6<sup>7</sup>

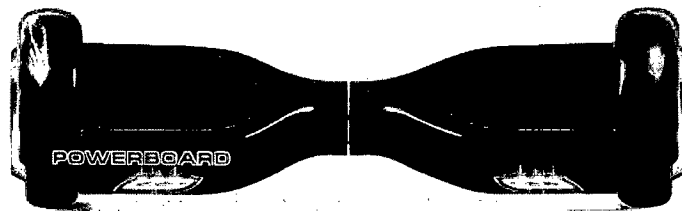
Jetson and complainants have stipulated that the V6 is representative of the Jetson accused products. *See* Staff Br. at 16 (citing Compls. P.H. Br. at 77).

### d. Powerboard Products

Complainants accuse the Powerboard PB-001, PB-15004, PB15003-D, and PB15003-C self-balancing hoverboard products (collectively, “Powerboard accused products”) of infringing the ‘230 and ‘607 patents. Specifically, the Powerboard accused products are alleged to infringe claims 1, 3, and 4 of the ‘230 patent and claims 1–4 and 6 of the ‘607 patent.

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<sup>7</sup> Staff Br. at 16, citing image available at <http://www.target.com/p/jetson-v6-hoverboard-with-bluetooth-blue/-/A-51294646> (last visited Apr. 4, 2017).



Powerboard<sup>8</sup>

Powerboard and complainants have stipulated that the source code in the Jetson V6 product is representative of that in the Powerboard accused products and that each of the Powerboard accused products is representative of the others. *See* Staff Br. at 16-17 (citing Compl. P.H. Br. at 77; Resps. P.H. Br. at 16 (only with respect to source code)).

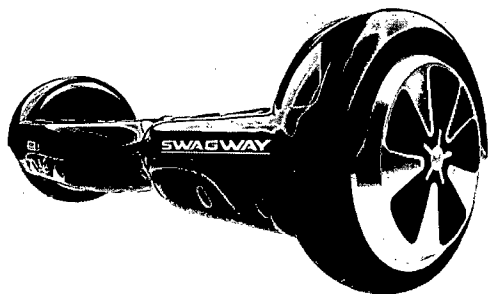
**e. Swagway Products**

Complainants accuse the SWAGWAY X1 and X2 and the SWAGTRON T1, T3, and T5 self-balancing hoverboard products (collectively, “Swagway accused products”) of infringing the ‘230 and ‘607 patents. Specifically, the Swagway accused products are alleged to infringe claims 1, 3, and 4 of the ‘230 patent and claims 1-4 and 6 of the ‘607 patent. The Swagway accused products are also accused of infringing the ‘948 TM and ‘942 TM.

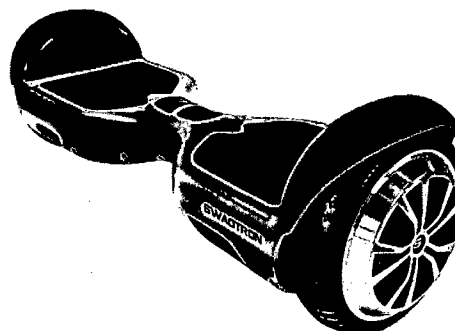
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<sup>8</sup> Staff Br. at 17, citing image available at <https://thepowerboard.com/collections/powerboards/products/powerboard-2-wheel-self-balancing-scooter-black?variant=10813307905> (last visited Apr. 4, 2017).

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SWAGWAY X1<sup>9</sup>



SWAGTRON T1<sup>10</sup>

Swagway and complainants have stipulated that the SWAGWAY X1 is representative of the SWAGWAY X2 and the SWAGTRON T1 is representative of the SWAGTRON T5. See Staff Br. at 17-18 (citing Compl. P.H. Br. at 77; Resps. P.H. Br. at 14-15).

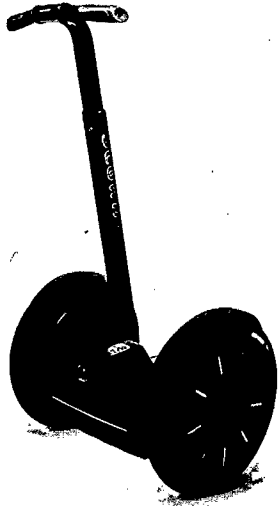
**f. Domestic Industry Products**

Complainants argue that the Segway i2, x2, i2 SE, and x2 SE personal transporters (“PT”) (collectively, “Segway DI products”) practice each of the asserted claims of the ‘230 patent (claims 1, 3, and 4) and ‘607 patent (claims 1-4 and 6). The i2 and i2 SE are optimized for indoor/outdoor use, while the x2 and x2 SE are optimized for outdoor use in more varied terrain. See CX-0488 (Segway reference manual) at 16; CX-0619 (Segway SE user manual) at 14.

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<sup>9</sup> Staff Br. at 17, citing image available at <https://swagtron.com/product/swagway-x1-recertified-hoverboard-free-bag/> (last visited Apr. 4, 2017).

<sup>10</sup> Staff Br. at 18, citing image available at <https://swagtron.com/product/hoverboard-self-balancing-scooter-for-sale/> (last visited Apr. 4, 2017).



Segway i2 SE<sup>11</sup>



Segway x2 SE<sup>12</sup>

The i2 and x2 PTs were introduced to the market in 2006. The i2 SE and x2 SE PTs were introduced into the market in 2014. Segway discontinued manufacturing the i2 and x2 PTs in 2014 around the time the SE models came to the market.

Complainants also manufacture the Ninebot by Segway miniPro and the Ninebot One S1 by Segway products that complainants allege to practice the asserted patents. *See* CX-1967C (Milani WS) at Q/A 44. However, these products are manufactured in China. Complainants do not assert either of them to be domestic industry products.

#### **D. Technological Background**

United States Patent No. 6,302,230 (“the ‘230 patent), entitled “Personal mobility vehicles and methods,” issued on October 16, 2001, to named inventors Dean L. Kamen;

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<sup>11</sup> Staff Br. at 18, citing image available at <http://www.segway.com/products/consumer-lifestyle/segway-i2-se> (last visited Apr. 4, 2017).

<sup>12</sup> Staff Br. at 18, citing image available at <http://www.segway.com/products/consumer-lifestyle/segway-x2-se> (last visited Apr. 4, 2017).

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Robert R. Ambrogio; Robert J. Duggan; J. Douglas Field; Richard Kurt Heinzmann; Burl Amesbury; and Christopher C. Langenfeld. JX-0001 ('230 Patent). The '230 patent issued from Application No. 09/325,978, filed on June 4, 1999. *Id.* The '230 patent relates to “vehicles and methods for transporting individuals, and more particularly to balancing vehicles and methods for transporting individuals over ground having a surface that may be irregular.” JX-0001 ('230 Patent) at col. 1, lns. 5-8. The '230 patent has a total of seven claims. Complainants assert claims 1, 3, and 4 of the '230 patent. *See* Compls. Br. at 54.

United States Patent No. 7,275,607 (“the '607 patent), entitled “Control of a personal transporter based on user position,” issued on October 2, 2007, to named inventors Dean Kamen; Robert R. Ambrogio; Janes J. Dattolo; Robert J. Duggan; J. Douglas Field; Richard Kurt Heinzmann; Matthew M. McCambridge; John B. Morrell; Michael D. Piedmonte; and Richard J. Rosasco. JX-0003 ('607 Patent). The '607 patent issued from Application No. 10/939,955, filed on September 13, 2004. *Id.*<sup>13</sup> The '607 patent relates to “control of personal transporters, and more particularly to devices and methods for providing user input with respect to either directional or velocity control of such transporters (having any number of ground-contacting elements) based on the position or orientation of a user.” JX-0003 ('607 Patent) at col. 1, lns. 21-26. The '607

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<sup>13</sup> The '607 patent is a continuation-in-part application of U.S. Application No. 10/308,850, filed December 3, 2002, now U.S. Patent No. 6,789,640, which is a continuation-in-part application of U.S. Application No. 10/044,590, filed January 11, 2002, now abandoned, which is a division of U.S. Application No. 09/635,936, filed August 10, 2000, now U.S. Patent No. 6,367,817, which is a division of U.S. Application No. 09/6325,978, filed on June 4, 1999, now U.S. Patent No. 6,302,230. *Id.*



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patent has a total of nine claims. Complainants assert claims 1-4 and 6 of the '607 patent. *See* Compls. Br. at 99.

### II. Jurisdiction and Importation

Section 337(a)(1)(B) declares unlawful, *inter alia*, “[t]he 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 . . . infringe a valid and enforceable United States patent.” 19 U.S.C. § 1337(a)(1)(B). Section 337(a)(1)(C) declares unlawful “[t]he 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 infringe a valid and enforceable United States trademark registered under the Trademark Act of 1946.” 19 U.S.C. § 1337(a)(1)(C).

Respondents, with the exception of Airwheel, do not contest the subject matter jurisdiction of the Commission to adjudicate this Investigation. *See* Resps. Br. at 284 (“With the exception of Airwheel, Respondents do not contest the subject matter or personal jurisdiction of the Commission to adjudicate this Investigation.”). Complainants have properly filed complaints alleging a violation of this subsection by the respondents, including Airwheel, and the Commission therefore has subject matter jurisdiction. *See Amgen, Inc. v. Int’l Trade Comm’n*, 902 F.2d 1532, 1535-37 (Fed. Cir. 1990).

Respondents, with the exception of Airwheel, do not contest the personal jurisdiction of the Commission to adjudicate this investigation. *See* Resps. Br. at 284. Respondents, including Airwheel, have appeared and participated in this investigation. The Commission therefore has personal jurisdiction over respondents. *See, e.g., Certain*

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*Liquid Crystal Display Modules, Prods. Containing Same, & Methods for Using the Same*, Inv. No. 337-TA-634 (“LCD Modules”), ID at 3 (June 12, 2009) (unreviewed).

Respondents, with the exception of Airwheel, do not contest that they import and sell the accused personal transporter products. *Id.*; *see also* CX-1054C (Importation Stipulation), ¶ 2. Due to the respondents’ importations or sales of the accused personal transporter products, the Commission has *in rem* jurisdiction over the accused products. *See, e.g., Sealed Air Corp. v. Int’l Trade Comm’n*, 645 F.2d 976, 985-86 (C.C.P.A. 1981) (noting that the Commission has jurisdiction over imported goods). Airwheel does not contest that the Airwheel accused products were previously imported into the United States. *See* Resps. Br. at 284. Airwheel argues that it no longer imports accused products into the United States or sells accused products in the United States. Thus, the Commission has *in rem* jurisdiction over the Airwheel accused products as well. *Certain Optical Disc Drives, Components Thereof, and Prods. Containing the Same*, Inv. No. 337-TA-897, Order No. 101 at 3-4 (Sep. 22, 2014) (EDIS Doc. No. 542510).

### III. General Principles of Applicable Law

#### A. Claim Construction

Claim construction begins with the plain language of the claim.<sup>14</sup> Claims should be given their ordinary and customary meaning as understood by a person of ordinary

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<sup>14</sup> Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vanderlande Indus. Nederland BV v. Int’l Trade Comm.*, 366 F.3d 1311, 1323 (Fed. Cir. 2004); *Vivid Tech., Inc. v. American Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

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skill in the art, viewing the claim terms in the context of the entire patent.<sup>15</sup> *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

In some instances, claim terms do not have particular meaning in a field of art, and claim construction involves little more than the application of the widely accepted meaning of commonly understood words. *Phillips*, 415 F.3d at 1314. “In such circumstances, general purpose dictionaries may be helpful.” *Id.*

In many cases, claim terms have a specialized meaning, and it is necessary to determine what a person of skill in the art would have understood the disputed claim language to mean. “Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks to ‘those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.’” *Phillips*, 415 F.3d at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). The public sources identified in *Phillips* include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.* (quoting *Innova*, 381 F.3d at 1116).

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<sup>15</sup> Factors that may be considered when determining the level of ordinary skill in the art include: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984).

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In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Phillips*, 415 F.3d at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). The specification is, however, always highly relevant to the claim construction analysis, and is usually dispositive. *Phillips*, 415 F.3d at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Moreover, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Id.* at 1316.

Claims are not necessarily, and are not usually, limited in scope to the preferred embodiment. *RF Delaware, Inc. v. Pacific Keystone Techs., Inc.*, 326 F.3d 1255, 1263 (Fed. Cir. 2003); *Decisioning.com, Inc. v. Federated Dep’t Stores, Inc.*, 527 F.3d 1300, 1314 (Fed. Cir. 2008) (“[The] description of a preferred embodiment, in the absence of a clear intention to limit claim scope, is an insufficient basis on which to narrow the claims.”). Nevertheless, claim constructions that exclude the preferred embodiment are “rarely, if ever, correct and require highly persuasive evidentiary support.” *Vitronics*, 90 F.3d at 1583. Such a conclusion can be mandated in rare instances by clear intrinsic evidence, such as unambiguous claim language or a clear disclaimer by the patentees during patent prosecution. *Elektta Instrument S.A. v. O.U.R. Sci. Int’l, Inc.*, 214 F.3d 1302, 1308 (Fed. Cir. 2000); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319 (Fed. Cir. 2002).

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the

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patent and the prosecution history, and includes inventor testimony, expert testimony, and learned treatises. *Phillips*, 415 F.3d at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent. *Id.* at 1318. Extrinsic evidence may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

### **B. Infringement**

Under 35 U.S.C. §271(a), direct infringement consists of making, using, offering to sell, or selling a patented invention without consent of the patent owner. The complainant in a section 337 investigation bears the burden of proving infringement of the asserted patent claims by a “preponderance of the evidence.” *Certain Flooring Products*, Inv. No. 337-TA-443, Comm’n Notice of Final Determination of No Violation of Section 337, 2002 WL 448690, at \*59, (Mar. 22, 2002); *Enercon GmbH v. Int’l Trade Comm’n*, 151 F.3d 1376 (Fed. Cir. 1998).

Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, *i.e.*, when the properly construed claim reads on the accused device exactly.<sup>16</sup> *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).

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<sup>16</sup> Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991). If an accused device lacks a limitation of an independent claim, the device cannot infringe a dependent claim. *See Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

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

“An element in the accused product is equivalent to a claim limitation if the differences between the two are insubstantial. The analysis focuses on whether the element in the accused device ‘performs substantially the same function in substantially the same way to obtain the same result’ as the claim limitation.” *AquaTex Indus. v. Techniche Solutions*, 419 F.3d 1374, 1382 (Fed. Cir. 2005) (quoting *Graver Tank*, 339 U.S. at 608); *accord Absolute Software*, 659 F.3d at 1139-40.<sup>18</sup>

Prosecution history estoppel can prevent a patentee from relying on the doctrine of equivalents when the patentee relinquished subject matter during the prosecution of the

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<sup>17</sup> “Infringement, whether literal or under the doctrine of equivalents, is a question of fact.” *Absolute Software, Inc. v. Stealth Signal, Inc.*, 659 F.3d 1121, 1130 (Fed. Cir. 2011).

<sup>18</sup> “The known interchangeability of substitutes for an element of a patent is one of the express objective factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention. Independent experimentation by the alleged infringer would not always reflect upon the objective question whether a person skilled in the art would have known of the interchangeability between two elements, but in many cases it would likely be probative of such knowledge.” *Warner-Jenkinson*, 520 U.S. at 36.

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

### C. Validity

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). Nevertheless, each claim of a patent is presumed to be valid, even if it depends from a claim found to be invalid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986).

A respondent that has raised patent invalidity as an affirmative defense must overcome the presumption by “clear and convincing” evidence of invalidity. *Checkpoint Systems, Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 761 (Fed. Cir. 1995).

#### 1. Anticipation

Anticipation under 35 U.S.C. § 102 is a question of fact. *z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). Section 102 provides that, depending on the circumstances, a claimed invention may be anticipated by variety of prior art, including publications, earlier-sold products, and patents. *See* 35 U.S.C. § 102 (e.g., section 102(b) provides that one is not entitled to a patent if the claimed invention “was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States”).

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The general law of anticipation may be summarized, as follows:

A reference is anticipatory under § 102(b) when it satisfies particular requirements. First, the reference must disclose each and every element of the claimed invention, whether it does so explicitly or inherently. *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1375 (Fed.Cir.2006). While those elements must be “arranged or combined in the same way as in the claim,” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed.Cir.2008), the reference need not satisfy an *ipsissimis verbis* test, *In re Bond*, 910 F.2d 831, 832-33 (Fed.Cir.1990). Second, the reference must “enable one of ordinary skill in the art to make the invention without undue experimentation.” *Impax Labs., Inc. v. Aventis Pharms. Inc.*, 545 F.3d 1312, 1314 (Fed.Cir.2008); see *In re LeGrice*, 49 C.C.P.A. 1124, 301 F.2d 929, 940-44 (1962). As long as the reference discloses all of the claim limitations and enables the “subject matter that falls within the scope of the claims at issue,” the reference anticipates -- no “actual creation or reduction to practice” is required. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1380-81 (Fed.Cir.2003); see *In re Donohue*, 766 F.2d 531, 533 (Fed.Cir.1985). This is so despite the fact that the description provided in the anticipating reference might not otherwise entitle its author to a patent. See *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562 (Fed.Cir.1991) (discussing the “distinction between a written description adequate to support a claim under § 112 and a written description sufficient to anticipate its subject matter under § 102(b)”).

*In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

### 2. Obviousness

Under section 103 of the Patent Act, a patent claim is invalid “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”<sup>19</sup> 35 U.S.C. § 103. While the ultimate determination of whether an invention would have been

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<sup>19</sup> The standard for determining whether a patent or publication is prior art under section 103 is the same as under 35 U.S.C. § 102, which is a legal question. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).



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obvious is a legal conclusion, it is based on “underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness.” *Eli Lilly and Co. v. Teva Pharmaceuticals USA, Inc.*, 619 F.3d 1329 (Fed. Cir. 2010).

The objective evidence, also known as “secondary considerations,” includes commercial success, long felt need, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). “[E]vidence arising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Secondary considerations, such as commercial success, will not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007) (commercial success did not alter conclusion of obviousness).

“One of the ways in which a patent’s subject matter can be proved obvious is by noting that there existed at the time of invention a known problem for which there was an obvious solution encompassed by the patent’s claims.” *KSR*, 550 U.S. at 419-20. “[A]ny need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.*

Specific teachings, suggestions, or motivations to combine prior art may provide helpful insights into the state of the art at the time of the alleged invention. *Id.* at 420. Nevertheless, “an obviousness analysis cannot be confined by a formalistic conception of

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the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way.” *Id.* “Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.” *Id.* A “person of ordinary skill is also a person of ordinary creativity.” *Id.* at 421.

Nevertheless, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so.” *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1360 (Fed. Cir. 2007); *see KSR*, 550 U.S. at 416 (a combination of elements must do more than yield a predictable result; combining elements that work together in an unexpected and fruitful manner would not have been obvious).<sup>20</sup>

### 3. Written Description

The issue of whether a patent is invalid for failure to meet the written description requirement of 35 U.S.C. § 112, ¶ 1 is a question of fact. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 670 F.3d 1171, 1188 (Fed. Cir. 2012). A patent’s written description must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed. The test for sufficiency of a written description is

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<sup>20</sup> Further, “when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 52 (1966)).

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“whether the disclosure of the application relied upon reasonable conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)).

### 4. Enablement

The Patent Act requires that “[t]he full scope of the claimed invention . . . be enabled.” *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008); *see also Northpoint Tech. Ltd. v. MDS America Inc.*, 413 F.3d 1301, 1308-10 (Fed. Cir. 2005) (affirming a finding of invalidity for lack of enablement due to the patent’s failure to disclose an embodiment with an antenna that met the “directional reception range” limitation of each claim). Namely, “[a] patentee who chooses broad claim language must make sure the broad claims are fully enabled. ‘The scope of the claims must be less than or equal to the scope of enablement’ to ‘ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.’” *Sitrick*, 516 F.3d at 999 (quoting *Nat’l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1195-96 (Fed. Cir. 1999)). The enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation. *AK Steel Corp. v. Sollac & Ugine*, 344 F.3d 1234, 1244 (Fed. Cir. 2003), citing *In re Wands*, 858 F.2d 731, 737.(Fed. Cir. 1988).

The question of undue experimentation is a matter of degree, and what is required is that the amount of experimentation not be “unduly extensive.” *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004) (quoting *PPG Indus., Inc. v. Guardian Indus., Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996)). For example, the fact that a clinician’s involvement may be necessary to determine effective amounts of the single compound effervescent agent and its corresponding soluble acid source does not itself

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constitute undue experimentation. *See Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365–66 (Fed. Cir. 2008) (“[E]ven if clinical trials informed the anticonvulsively effective amount, this record does not show that extensive or ‘undue’ tests would be required to practice the invention.”). In addition, extensive experimentation does not necessarily render the experiments unduly extensive where the experiments involve repetition of known or commonly used techniques. *See Johns Hopkins Univ. v. CellPro, Inc.*, 152 F.3d 1342, 1360 (Fed. Cir. 1998) (finding that the difficulty in producing certain antibodies could not be attributed to the shortcomings in the disclosure of the patent at issue, but rather, the difficulty was attributed to the technique commonly used during experimentation that generally required repetition). Thus, the focus “is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance . . . .” *PPG Indus., Inc.*, 75 F.3d at 1564 (citation and quotation omitted).

*Cephalon, Inc. v. Watson Pharms., Inc.*, 70 F.3d 1330, 1338-39 (Fed. Cir. 2013).

Enablement is determined from the viewpoint of persons of ordinary skill in the field of the invention at the time the patent application was filed. *Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1345 (Fed. Cir. 2000). Thus, a claim in an issued patent can be rendered invalid due to lack of enablement if its scope is not fully enabled. *Id.*

### **D. Domestic Industry**

A violation of section 337(a)(1)(B), (C), (D), or (E) can be found “only if an industry in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.” 19 U.S.C. § 1337(a)(2). Section 337(a) further provides:

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned—

(A) significant investment in plant and equipment;

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(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

These statutory requirements consist of an economic prong (which requires certain activities)<sup>21</sup> and a technical prong (which requires that these activities relate to the intellectual property being protected). *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 13 (May 16, 2008) (“*Stringed Musical Instruments*”). The burden is on the complainant to show by a preponderance of the evidence that the domestic industry requirement is satisfied. *Certain Multimedia Display and Navigation Devices and Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-694, Comm'n Op. at 5 (July 22, 2011) (“*Navigation Devices*”).

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that “whether a complainant has established that its investment and/or employment activities are significant with respect to the articles

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<sup>21</sup> The Commission practice is usually to assess the facts relating to the economic prong at the time that the complaint was filed. See *Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-560, Comm'n Op. at 39 n.17 (Apr. 14, 2010) (“We note that only activities that occurred before the filing of a complaint with the Commission are relevant to whether a domestic industry exists or is in the process of being established under sections 337(a)(2)-(3).”) (citing *Bally/Midway Mfg. Co. v. U.S. Int'l Trade Comm'n*, 714 F.2d 1117, 1121 (Fed. Cir. 1983)). In some cases, however, the Commission will consider later developments in the alleged industry, such as “when a significant and unusual development occurred after the complaint has been filed.” See *Certain Video Game Systems and Controllers*, Inv. No. 337-TA-743, Comm'n Op., at 5-6 (Jan. 20, 2012) (“[I]n appropriate situations based on the specific facts and circumstances of an investigation, the Commission may consider activities and investments beyond the filing of the complaint.”).

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protected by the intellectual property right concerned is not evaluated according to any rigid mathematical formula.” *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm’n Op. at 27 (Feb. 17, 2011) (“*Printing and Imaging Devices*”) (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm’n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines “the facts in each investigation, the article of commerce, and the realities of the marketplace.” *Id.* “The determination takes into account the nature of the investment and/or employment activities, ‘the industry in question, and the complainant’s relative size.’” *Id.* (citing *Stringed Musical Instruments* at 26).

### **E. Trademarks**

In analyzing allegations of trademark infringement, the Commission generally uses a two-prong test: (1) whether the complainant’s mark merits protection (*e.g.*, whether the mark is valid and enforceable); and (2) whether the respondent’s use of a similar mark is likely to cause any consumer confusion. *Certain Handbags, Luggage, Accessories, and Packaging Thereof*, Inv. No. 337-TA-754 (“*Handbags*”), Order No. 16 (ID Granting Complainants’ Motion for Summary Determination of Violation) at 8-9 (Mar. 5, 2012) (unreviewed, Apr. 12, 2012); *see also Certain Protective Cases and Components Thereof*, Inv. No. 337-TA-780 (“*Protective Cases*”), Final ID at 84-85 (June 29, 2012) (unreviewed in relevant parts, Aug. 30, 2012).

Federal registration of a mark is *prima facie* evidence of the validity of a trademark, as well as of the registrant’s ownership of and exclusive right to use the mark. 15 U.S.C. §§ 1057(b), 1115(a); *Handbags*, Order No. 16 at 6. This presumption “shift[s] the burden of production to the defendant.” *See Apple Inc. v. Samsung Elec. Co.*, 786

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F.3d 983, 995 (Fed. Cir. 2015) (internal citations omitted). If this presumption is overcome, however, the registration loses its legal significance. *Id.*

Although actual confusion is not required to prevail on a claim of trademark infringement, “actual confusion is routinely considered by the Commission as proof of trademark infringement as it is ‘undoubtedly the best evidence of likelihood of confusion.’” *Handbags*, Order No. 16 at 14 (citing *Daddy’s Junky Music Stores, Inc. v. Big Daddy’s Family Music Center*, 109 F.3d 275, 284 (6th Cir. 1997); *Certain Strip Lights*, Inv. No. 337-TA-287, 1989 WL 608725 (Jun. 27, 1989)).

In determining whether any consumer confusion is likely, the Commission may balance the following factors: (1) the degree of similarity between the designation and the trademark in appearance, the pronunciation of words used, verbal translation of pictures or designs involved, and suggestion; (2) the intent of the actor in adopting the designation; (3) the relation in use and manner of marketing between the goods and services marked by the actor and those by the other; and (4) the degree of care likely to be exercised by purchasers. *Protective Cases*, Final ID at 85-86. The Commission may also consider additional factors, such as the strength of the mark or actual confusion, and all factors must be evaluated in the context of the ultimate question of likelihood of confusion as to the source or sponsorship of the product. *Certain Purple Protective Gloves*, Inv. No. 337-TA-500, Order No. 17 at 13 (Sept. 23, 2004) (unreviewed, Oct. 19, 2004); *Certain Hair Irons and Packaging Thereof*, Inv. No. 337-TA-637, Order No. 14 at 22 (Mar. 10, 2009) (unreviewed, Apr. 23, 2009).

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### IV. U.S. Patent No. 6,302,230

United States Patent No. 6,302,230 (“the ‘230 patent”), entitled “Personal mobility vehicles and methods,” issued on October 16, 2001, to named inventors Dean L. Kamen; Robert R. Ambrogi; Robert J. Duggan; J. Douglas Field; Richard Kurt Heinzmann; Burl Amesbury; and Christopher C. Langenfeld. JX-0001 (‘230 Patent). The ‘230 patent issued from Application No. 09/325,978, filed on June 4, 1999. *Id.* The ‘230 patent relates to “vehicles and methods for transporting individuals, and more particularly to balancing vehicles and methods for transporting individuals over ground having a surface that may be irregular.” JX-0001 (‘230 Patent) at col. 1, Ins. 5-8. The ‘230 patent has a total of seven claims.

Complainants assert independent apparatus claim 1 and dependent claims 3 and 4 of the ‘230 patent. *See* Compls. Br. at 54.

As discussed below, the evidence shows that (1) the asserted claims of the ‘230 patent are not infringed by the accused products; (2) complainants have not satisfied the technical prong of the domestic industry requirement; and (3) the asserted claims are not invalid.

Asserted claims 1, 3, and 4 read as follows:

1. A vehicle for carrying a payload including a user, the vehicle comprising:
  - a. a platform which supports the user;
  - b. a ground-contacting module, to which the platform is mounted, which propels the user in desired motion over an underlying surface;
  - c. a motorized drive arrangement, coupled to the ground-contacting module; the drive arrangement, ground-contacting module and payload comprising a system being unstable with respect to tipping when the



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motorized drive is not powered; the motorized drive arrangement causing, when powered, automatically balanced operation of the system wherein the vehicle has a present velocity and a maximum operating velocity, determined by a requirement of acceleration to maintain balance and, in operation, has a balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle;

d. a balancing margin monitor, coupled to the ground-contacting module, for generating a signal characterizing the balancing margin; and

e. an alarm, coupled to the balancing margin monitor, for receiving the signal characterizing the balancing margin and for warning when the balancing margin falls below a specified limit.

3. A device according to claim 1, wherein the alarm is audible.

4. A device according to claim 1, wherein the ground-contacting module includes a plurality of laterally disposed ground-contacting members.

JX-0001 ('230 Patent) at col. 18, lns. 36-62; lns. 66-67 col. 19, lns. 1-3.

### A. Claim Construction<sup>22</sup>

#### 1. A Person of Ordinary Skill in the Art

Complainants argue:

Complainants contend that a person of ordinary skill in the art (a "POSITA") with respect to the '230 and '607 patents at the time of their respective inventions would have had at least an undergraduate Bachelor's degree in mechanical, aerospace, or electrical engineering, robotics, and/or computer science, or their equivalent, along with at least three years of relevant experience or training in any of the noted disciplines, or a master's or other graduate level degree in any of the noted disciplines, or someone with the equivalent amount (e.g., 7 years) of training or work experience in such disciplines.

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<sup>22</sup> See Section III.A of this final ID for the legal discussion concerning claim construction.

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Compls. Br. at 15.<sup>23</sup>

Respondents' positions on the level of ordinary skill in the art differ, as shown below:

### 1. Chic's Position

For the patents asserted in this investigation, a person of ordinary skill in the art ("POSITA") would have at least (i) a bachelor's degree in mechanical engineering, electrical engineering, aerospace engineering, or another related technical field and at least two (2) years of experience performing mechanical design, dynamic analysis, and/or control design for mechatronic systems; or (ii) a master's degree (or higher) in mechanical engineering, electrical engineering, aerospace engineering, or another related technical field.

### 2. Swagway's Position

The relevant field of art for the '230 and '607 patents is vehicles and methods for transporting individuals. One of ordinary skill in the art at the time of the inventions of the '230 and '607 patents would have at least 1) a bachelor's degree in mechanical engineering, electrical engineering, aerospace engineering, or another related technical field and at least two years of experience performing mechanical design, dynamic analysis, and/or control design for mechatronic systems; or 2) a master's degree (or higher) in mechanical engineering, electrical engineering, aerospace engineering, or another related technical field. These requirements are not rigid, and superior qualifications with respect to either education or experience may compensate for a deficit in the other.

In the alternative, one of ordinary skill in the art at the time of the inventions of the '230 and '607 patents would have at least a bachelor's degree in mechanical engineering, electrical engineering, computer science, or a related field, or equivalent experience, and would additionally possess 1) at least two years of experience in the area of (i) robotics or feedback control for electromechanical systems; (ii) mechanical design, dynamic analysis, and/or control design for mechatronic systems, or (iii) equivalent experience; or 2) a master's degree (or higher) in mechanical engineering, electrical engineering, aerospace engineering, or another related technical field. These requirements are not rigid, and superior qualifications with respect to

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<sup>23</sup> Citations omitted unless noted otherwise.

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either education or experience may compensate for a deficit in the other. See RX-0053C (Sorensen RWS) at Q/A 70.

### 3. Airwheel's Position

It is Airwheel's position that a person having ordinary skill in the art would have (1) a bachelor's degree in mechanical engineering, electrical engineering, computer science, aerospace engineering or a related field, or equivalent experience, and (2) (a) at least two years of experience in the area of (i) robotics or feedback control for electromechanical systems; (ii) mechanical design, dynamic analysis, and/or control design for mechatronic systems, or (iii) equivalent experience; or (b) a master's degree (or higher) in mechanical engineering, electrical engineering, computer science, aerospace engineering, or another related technical field. These requirements are not rigid, and superior qualifications with respect to either education or experience may compensate for a deficit in the other.

Resps. Br. at 6-7.

The Staff argues:

The Staff believes that a person of ordinary skill in the art with respect to the '230 and '607 patents is someone who had at least (i) a bachelor's degree in mechanical engineering, electrical engineering, aerospace engineering, robotics, computer science, or another related technical field and at least two years of experience performing mechanical design, dynamic analysis, and/or control design for mechatronic systems; or (ii) a master's degree in mechanical engineering, electrical engineering, aerospace engineering, robotics, computer science, or another related technical field. These requirements are not rigid, and superior qualifications with respect to either education or experience may compensate for a deficit in the other.

Staff Br. at 25-26.

The parties have slightly different definitions of the skill level required of a person of ordinary skill with respect to the asserted patents. The primary difference between the skill level offered by complainants, and that proposed by Chic, Swagway, and Airwheel is that complainants believe a relevant bachelor's degree followed by three years of work experience is required, while the three respondents believe a relevant

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bachelor's degree followed by two years of work experience will suffice. The private parties also believe the skill level can also be met by a person with a master's degree in a relevant field. The Staff agrees with the respondents.

The respondents' and the Staff's proposed level of ordinary skill is more persuasive. Their proposed level is not rigid, and superior qualifications with respect to either education or experience may compensate for a deficit in the other. Thus, as proposed by the respondents and the Staff, the administrative law judge finds that a person of ordinary skill in the art with respect to the '230 patent is a person who has at least (1) a bachelor's degree in mechanical engineering, electrical engineering, aerospace engineering, robotics, computer science, or another related technical field, and at least two years of experience performing mechanical design, dynamic analysis, and/or control design for mechatronic systems; or (2) a master's degree in mechanical engineering, electrical engineering, aerospace engineering, robotics, computer science, or another related technical field.

### 2. Undisputed Claim Constructions

The parties have agreed on the following constructions for the '230 patent:

<b>Claim Term</b>	<b>Claim</b>	<b>Joint Proposed Construction</b>
requirement of acceleration to maintain balance	1	the acceleration needed to maintain vehicle balance and control
balancing margin	1	difference between the present vehicle velocity and a maximum operating velocity

Staff Br. at 26.

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3. “ground-contacting module”

Below is a chart showing the parties’ proposed claim constructions.

“ground-contacting module”	
Complainants’ and Staff’s Construction	Respondents’ Construction
“structure supporting an individual including at least one member contacting an underlying surface”	<u>Means Plus Function</u> <u>Function</u> : contacting the ground <u>Structure</u> : a single platform, two wheels, a forceplate or other force sensor disposed on the platform

Compls. Br. at 16-19; Resps. Br. at 8-9; Staff Br. at 28-29.

The disputed claim term “ground-contacting module” appears in asserted claims 1 and 4 of the ‘230 patent.

The meaning of this term is readily understood by a person of ordinary skill in the art at the time of the inventions, especially in the context of the specification and claims of the ‘230 patent. *See* Resps. Br. at 8-9. Respondents argue it is a means plus function term. Complainants and the Staff disagree. *See* Compls. Br. at 16-19; Staff Br. at 28-29.

As the claim does not invoke the term “means,” it is presumed that the claim and the term “ground-contacting module” does not invoke 35 U.S.C. § 112, ¶ 6. *See Personalized Media Commc’ns*, 161 F.3d at 703-04. Respondents have not met their burden to demonstrate that the term “fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function’” in order to overcome that presumption. *EnOcean*, 742 F.3d at 958. Respondents failed to present any argument regarding a lack of sufficiency in the patent regarding the structure. Respondents’ entire argument is shown below:

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A POSITA would understand the term “ground-contacting module” in Claims 1 and 4 of the ‘230 patent to be a means plus function claim, where the function is “contacting the ground,” and the structure is a single platform, two wheels, a force plate or other force sensor disposed on the platform. RX-0031 (Updated Joint Claim Construction Statement) at 6; RX-0053C (Sorensen RWS) at Q/A 81. For example, the ‘230 patent identifies the “entire ground-contacting module” with the number 6 in Fig. 1. of the patent. *See* JX-0001 (‘230 patent) at col. 8, ln:58 – col. 9, ln 14; RX-0053C (Sorensen RWS) at Q/A 81-84. This embodiment is the only one in the detailed description of the embodiments in the specification. Sorensen Tr. 658:6-11.

Resps. Br. at 8-9.

Respondents’ conclusory argument is not persuasive. Indeed, the specification supports the construction for “ground-contacting module” proposed by complainants and the Staff and contradicts the structure proposed by respondents. For example, respondents argue the “ground-contacting module” consists of “a single platform” and “two wheels.” A person of ordinary skill referring to the ‘230 patent would understand that the “single platform” is not a part of the “ground-contacting module.” Moreover, Claim 1b recites, in relevant part, “a ground-contacting module, to which the platform is mounted.” If the platform is a structure that is integral to and a part of the “ground-contacting module,” then the platform cannot be mounted to the very module of which it is already considered a part. Further, the requirement of “two wheel” proposed by respondents is contradicted by the specification, which provides that in some embodiments “the number of ground-contacting members may be any number equal to, or greater than, one.” JX-0001 (‘230 Patent) at col. 9, lns. 6-8.

Accordingly, the administrative law judge has determined that the claim term “ground-contacting module” should be construed to mean “structure supporting an individual including at least one member contacting an underlying surface.”

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4. “maximum operating velocity”

Below is a chart showing the parties’ proposed claim constructions.

“maximum operating velocity”	
Complainants’ Construction	Respondents’ and Staff’s Construction
“a maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle”	“a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle”

Compls. Br. at 19-27; Resps. Br. at 9-13; Staff Br. at 29-32.

The disputed term “maximum operating velocity” appears in asserted claim 1 of the ‘230 patent.

The parties’ proposed constructions are nearly identical, except that respondents and the Staff argue that a person of ordinary skill in the art would understand the maximum velocity to be “variable,” whereas complainants do not include that language. The construction proposed by respondents and the Staff is supported by the claim, the prosecution history, and the testimony of the inventor of the ‘230 patent, Mr. Dean Kamen.

The term “maximum operating velocity” must be read in the context of claim 1 of the ‘230 patent, which reads, in relevant part:

c. a motorized drive arrangement, coupled to the ground-contacting module; the drive arrangement, ground-contacting module and payload comprising a system being unstable with respect to tipping when the motorized drive is not powered; the motorized drive arrangement causing, when powered, automatically balanced operation of the system wherein the vehicle has a present velocity and a *maximum operating velocity*, determined by a requirement of acceleration to maintain balance and, in operation, has a balancing margin determined by the difference between the *maximum operating velocity* and the present velocity of the

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vehicle;

JX-0001 ('230 Patent) at col. 18, lns. 36-62 (emphasis added).<sup>24</sup>

Claim 1 requires that the “maximum operating velocity” be “determined by a requirement of acceleration to maintain balance,” that is inherently dependent on the “present velocity” of the vehicle at a given time in order to achieve “automatically balanced operation of the system.” There is no dispute that the “maximum operating velocity” as claimed in the '230 patent is not the maximum possible velocity of the vehicle. In fact, the “maximum operating velocity” of the vehicle must be a velocity lower than the maximum possible velocity of the vehicle to ensure that acceleration is always possible. *See, e.g.*, Ganssle Tr. 363-364; *see also* CX-1968C (Ganssle WS) at Q/A 77.

The normal operating conditions of the vehicles can vary, depending on at least the surface conditions (which affect the frictional forces imparted on the vehicle), the incline on the surface (which affects the gravitational forces imparted on the vehicle) on which the vehicle is operated, and the weight of the load (*i.e.*, the weight of the user riding the vehicle) on the vehicle. Given that the velocity of the vehicles can vary based on a number of conditions, a person of ordinary skill would understand that the maximum operating velocity of the vehicle would also necessarily have to vary based on the operating conditions being imposed upon the vehicle at a given time. If the maximum operating velocity is a fixed number, there may be situations, even under normal operating conditions, where the vehicle cannot “maintain acceleration potential to ensure vehicle balance.” For example, Mr. Ganssle agreed that the velocity would go lower if a

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<sup>24</sup> Emphasis in original unless noted otherwise.



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user was riding up a steep hill. *See* Ganssle Tr. 210. He also agreed that if a heavy rider was going up a steep hill, the velocity would go even lower. *See id.* at 211. Similarly, if the battery were drained, the velocity could go lower still. *See id.* Segway's Director of Electrical Engineering, James Carter, testified to the same effect. *See* JX-0009C (Carter Dep. Tr.) at 55, 76-77.

Complainants' witness Mr. Dean Kamen, one of the inventors of the '230 patent, explained that the ability of the vehicle to maintain vehicle balance was not about speed limits, but assuring that under any given condition, sufficient acceleration potential was available to restore the vehicle to balance:

Q. And so it would be -- and so if you wanted to maintain balance, it would be dangerous to set a hard fixed speed limit?

THE WITNESS: Yes. **Speed limits have nothing to do with this.** That's what I'm trying to tell you.

Q. So let me say it a different way. If you wanted to maintain balance, it would be dangerous to only look at the speed and not at the power that you're capable of delivering at that time?

THE WITNESS: If you were looking at your instantaneous speed but were not doing something to assure yourself **that under the conditions you're now in, you could produce enough power to accelerate the device to restore it to its vertical condition, you're in trouble.**

JX-0011C (Kamen Dep. Tr.) at 95-96 (emphasis added). If the maximum operating velocity is a fixed number, as complainants argue, the maximum operating velocity cannot be something that is "determined by a requirement of acceleration to maintain balance" at a given condition.

To support their position that the "maximum operating velocity" can be a fixed number, complainants rely on an ambiguous phrase from the specification of the '230 patent. Compl. Br. at 20, citing JX-0001 ('230 Patent) at col. 4, lns. 55-57 ("a specified

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maximum velocity of the vehicle”). Complainants argue that “specified,” as used in the context of that embodiment disclosed in the specification, means “fixed.” *Id.* However, during prosecution of the ‘230 patent, the applicant amended the relevant portion of claim 1 as follows:

the motorized drive arrangement causing, when powered, automatically balanced operation of the system wherein the vehicle has a present velocity and a [specified] maximum operating velocity, determined by the requirement of acceleration to maintain balance and, in operation, has [headroom] balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle[.]

JX-0002 at 220 (page 2 of Nov. 3, 2000 Applicant’s response to Oct. 4, 2000 Office Action). The claim was amended to delete the reference to a “specified maximum velocity” and add in its place “maximum operating velocity, determined by the requirement of acceleration to maintain balance.” *Id.* This amendment was made by the applicant to overcome an obviousness rejection. *Id.* at 224. For the reasons discussed earlier, the present velocity of the vehicle will change with differing road conditions and the user of the vehicle. Thus, it follows that the maximum operating velocity must be variable, in order for the maximum operating velocity of the vehicle to be varied in order to adapt to the changing acceleration potential at any given speed over differing road conditions and users.

Claim 1 was allowed when it was amended to delete the reference to a “specified maximum velocity” and changed to “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” *Id.* at 220. With that change, the applicant adopted all of the properties and conditions inherent to a velocity that is “determined by the requirement of acceleration to maintain balance,” including the

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property of variability. As the Federal Circuit has stated, “[c]laims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.” *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995); *see also Ekchian v. Home Depot, Inc.*, 104 F.3d 1299, 1304 (Fed. Cir. 1997) (“since, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover, he is by implication surrendering such protection”).

Accordingly, the administrative law judge has determined that the claim term “maximum operating velocity” should be construed to mean “a variable maximum velocity where adequate acceleration potential is available to enable balance and control of the vehicle.”

**5. “balancing margin monitor”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“balancing margin monitor”</b>	
<b>Complainants’ Construction</b>	<b>Respondents’ and Staff’s Construction</b>
No construction necessary. The term should be ascribed its plain and ordinary meaning, in view of the proposed construction for “balancing margin”	“a device that determines the difference between the present vehicle velocity and a maximum operating velocity”

Compls. Br. at 27-29; Resps. Br. at 14; Staff Br. at 33-35.

The term “balancing margin monitor” appears in asserted claim 1 of the ‘230 patent.

As noted by complainants, the parties have agreed to construction for the term “balancing margin,” *i.e.*, “difference between the present vehicle velocity and a

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maximum operating velocity.” *See* Compls. Br. at 27-29; RX-0031 (Updated Joint Claim Construction Statement).

Complainants propose that “balancing margin monitor” should be given its plain and ordinary meaning. That is, a person of ordinary skill would understand that a balancing margin monitor is something that monitors the balancing margin, which the parties have agreed is “the difference between the present vehicle velocity and a maximum operating velocity.” *See* CX-1968C (Ganssle WS) at Q/A 137. Respondents and Staff propose a construction of “balancing margin monitor” as “a device that determines the difference between the present vehicle velocity and a maximum operating velocity.” *See* Staff Br. at 33-35; Resps. Br. at 14.

“Complainants’ view is that the balancing margin monitor need not be a dedicated, standalone device.” Compls. Br. at 28. Complainants agree that “even if the balancing margin monitor is software code, it would be on a microprocessor,” which is a device. *Id.* However, as argued by complainants, the balancing margin monitor need not be a dedicated, standalone device.

In support of their position, respondents argue:

The ‘230 patent specification confirms this understanding. For example, in one embodiment, the specification states that “the balancing margin between a specified maximum power output and the current power output of the motors may be monitored.” JX-0001 (‘230 patent) at col. 15, lns. 15-17. In another embodiment, the ‘230 patent states that “[a]nother method is to measure the voltages of the battery and the motor and to monitor the difference between the two.” *Id.* at col. 15, lns. 32-34. In each of these embodiments, the specification makes clear that, when *monitoring* the difference between two values, a difference is actually determined.

Resps. Br. at 14.

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Although the Staff appears to indicate that it is a foregone conclusion that a balancing margin monitor can be implemented as software on a microprocessor, Dr. Derby has opined that it cannot. RX-0051C (Derby RWS) at Q/A 89 (“A. A general purpose microprocessor is quite different from a ‘monitor’ device for the specific purpose of monitoring balancing margin.”). Contrary to respondents’ arguments, nothing in the ‘230 patent specification indicates that a balancing margin monitor need be a separate device. *See* CX-1968C (Ganssle WS) at Q/A 141.

The balancing margin need not specifically calculate the difference between the present velocity and the maximum operating velocity. Rather, the balancing margin monitor only has to monitor or compare values. *See* CX-1968C (Ganssle WS) at Q/A 138-41. A person of ordinary skill would not understand the term to require that any particular difference be calculated. *Id.* at Q/A 139. Dr. Nourbakhsh, Chic’s expert, agreed during cross-examination that a comparison is a form of calculation. Nourbakhsh Tr. at 766-77 (“And of course, a comparison is something that you do computationally. It’s math. And so of course, it’s a form of calculation, yes.”).

Accordingly, the administrative law judge has determined that the claim term “balancing margin monitor” should be given its plain and ordinary meaning, *i.e.*, “a device that monitors the balancing margin (the difference between the present vehicle velocity and a maximum operating velocity).”

### **B. Infringement Analysis of the ‘230 Patent<sup>25</sup>**

As discussed above, complainants assert independent apparatus claim 1 and

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<sup>25</sup> *See* Section III.B of this final ID for the legal discussion concerning infringement.

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dependent claims 3 and 4 of the '230 patent. Complainants assert claims 1, 3 and 4 against all Accused Products (Chic Smart line and [ ] products, SWAGWAY X1, X2 and SWAGTRON T1, T3 and T5 products, Jetson, Powerboard and Airwheel's Q Series and X Series products), except claim 4 (directed to "a plurality of laterally disposed contacting members") is not asserted against Airwheel's one wheel X series products. *See* Compls. Br. at 54.

### 1. Accused Products

The accused products consist of two broad categories of personal transporter vehicles: (i) hoverboards and (ii) unicycle-type devices. The accused hoverboard devices generally have two wheels which are positioned parallel to one another and are generally lateral to the feet placed on the hoverboard when operated by a user (*i.e.*, the feet are positioned substantially between the two wheels). The Chic, Jetson, Powerboard, and Swagway accused products are all hoverboards. The unicycle-type devices have a wheel (which may include one or two tires) that are medial to the feet placed on the unicycle-type device (*i.e.*, the wheel is situated between the two feet). The Airwheel accused products are all unicycle-type devices. *See* 1007 Complaint, ¶¶ 111-22; Staff Br. at 14-18.<sup>26</sup>

### 3. Direct Infringement

As discussed above, complainants assert independent apparatus claim 1 and dependent claims 3 and 4 of the '230 patent. Complainants assert claims 1, 3 and 4 against all Accused Products (Chic Smart line and [ ] SWAGWAY X1, X2 and

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<sup>26</sup> *See* Section I.C of this final ID for additional detailed information concerning specific accused products.

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SWAGTRON T1, T3 and T5 products, Jetson, Powerboard and Airwheel's Q Series and X Series products), except claim 4 (directed to "a plurality of laterally disposed contacting members") is not asserted against Airwheel's one wheel X series products.

*See Compls. Br. at 54.*

Asserted claims 1, 3, and 4 read as follows:

1. A vehicle for carrying a payload including a user, the vehicle comprising:
  - a. a platform which supports the user;
  - b. a ground-contacting module, to which the platform is mounted, which propels the user in desired motion over an underlying surface;
  - c. a motorized drive arrangement, coupled to the ground-contacting module; the drive arrangement, ground-contacting module and payload comprising a system being unstable with respect to tipping when the motorized drive is not powered; the motorized drive arrangement causing, when powered, automatically balanced operation of the system wherein the vehicle has a present velocity and a maximum operating velocity, determined by a requirement of acceleration to maintain balance and, in operation, has a balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle;
  - d. a balancing margin monitor, coupled to the ground-contacting module, for generating a signal characterizing the balancing margin; and
  - e. an alarm, coupled to the balancing margin monitor, for receiving the signal characterizing the balancing margin and for warning when the balancing margin falls below a specified limit.
3. A device according to claim 1, wherein the alarm is audible.
4. A device according to claim 1, wherein the ground-contacting module includes a plurality of laterally disposed ground-contacting members.

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JX-0001 ('230 Patent) at col. 18, lns. 36-62; lns. 66-67 col. 19, lns. 1-3.

For the reasons discussed below, the evidence shows that the accused products do not infringe any of the asserted claims of the '230 patent.<sup>27</sup>

### a. Airwheel Products

Complainants accuse the Airwheel Q series and X series self-balancing unicycle-type products of infringing claims 1 and 3 of the '230 patent. Complainants also accuse the Q series products of infringing claim 4 of the '230 patent. Airwheel and complainants have stipulated that the Q1 product and the X3 product are representative of the physical aspects of the Q series and X series products, respectively.

#### Independent Claim 1

**“a ground-contacting module, to which the platform is mounted, which propels the user in desired motion over an underlying surface”**

Airwheel argues that the recitation of the phrase “the platform” requires that only a single platform can be mounted to the ground-contacting module. Given that each Airwheel accused product has two pedals instead of a single platform, Airwheel argues that its accused products do not meet this limitation.

Claim 1 reads, in part: “A vehicle for carrying a payload including a user, the vehicle comprising: (a) a platform which supports the user[.]” The first claim element recites “a platform which supports the user,” which carries the meaning of one or more

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<sup>27</sup> In their prehearing brief, respondents addressed only certain limitations. *See* Resps. P.H. Br. at 59-84. To the extent respondents failed to address the other claim elements in their infringement analysis of the accused products, under Ground Rule 7c, respondents have waived any noninfringement argument based on those elements that are not addressed in their prehearing brief. Thus, only those limitations that are analyzed with respect to infringement in respondents' prehearing brief are discussed below. Limitations not specifically addressed by respondents or the Staff are deemed to be met by the respondents' accused products. *See* Staff Br. at 54.



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platforms. *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342 (Fed. Cir. 2008) (“this court has repeatedly emphasized that an indefinite article ‘a’ or ‘an’ in patent parlance carries the meaning of ‘one or more’ in open-ended claims containing the transitional phrase ‘comprising’”) (citing *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000)). Thus, the recitation of the phrase “the platform” later in the claim is merely a reference back to the same “a platform.” *Baldwin Graphic Sys.*, 512 F.3d at 1342 (“subsequent use of definite articles ‘the’ or ‘said’ in a claim to refer back to the same claim term does not change the general plural rule, but simply reinvoles that non-singular meaning”). Airwheel’s reliance on the deposition testimony of Mr. Ganssle, who is not a legal expert, to argue that “two platforms” cannot meet this limitation is not persuasive.

Airwheel argues that its accused products do not meet this limitation under respondents’ means plus function interpretation of the disputed term “ground-contacting module.” *See* Resps. Br. at 48-50. The structure under the respondents’ construction requires, *inter alia*, two wheels and a forceplate or other force sensor on the platform, whereas the Airwheel products have a single wheel and lack any forceplate or other force sensor. However, under the proper construction of “ground-contacting module” proposed by complainants and the Staff, there are no such requirements and the evidence shows that this claim element is met by the Airwheel accused products. *See* CX-1968C (Ganssle WS) at Q/A 1137-49.

**“maximum operating velocity, determined by a requirement of acceleration to maintain balance”**

Complainants argue that a line of code from the source code in the Airwheel

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accused products sets a variable known as [ ] at a fixed value of 15, which represents 15 kilometers per hour (km/hr). *Id.* at Q/A 1177-78. Complainants argue that [ ] or 15 km/hr figure is the maximum operating velocity in the Airwheel accused products. *Id.* at Q/A 1179.

Under the correct claim construction for “maximum operating velocity” (which requires a *variable* maximum velocity), the fixed value of 15 km/hr for [ ] cannot meet this claim element. Indeed, complainants make a similar argument, although in the context of a validity argument over a prior art reference:

There is nothing to suggest that the threshold is determined based on a requirement of acceleration to maintain balance, as is required by claim 1 of the ‘230 patent. However, even at (and potentially below) this speed limit threshold, there is no guarantee that the vehicle can accelerate to maintain balance even though it could possibly reach a higher speed given enough time. Simply being able to speed up is not enough to ensure that the vehicle is able to accelerate to maintain balance – if it cannot speed up quickly enough it cannot remain under the rider, and the rider will fall. As recognized by the ‘230 patent, what is required is to look at a balancing margin, determined by comparing the present velocity not to an [maximum possible velocity] or speed limit, but to an [maximum operating velocity]. *Id.* Unlike the speed limit in Kamen ‘478, the maximum operating velocity claimed in the ‘230 is determined by a requirement of acceleration to maintain balance.

Compls. Br. at 139. Mr. Ganssle testified, however, that:

[R]outine test parameters could be set to determine a fixed maximum operating velocity based on these conditions that maintains acceleration potential to ensure balance. In my opinion, all of the Respondents undertook such a test to set the maximum operating velocity in their vehicles to ensure the safety of their riders. Dr. Derby agreed with this position during his deposition—that given various dynamic factors such as slope, terrain, weight of the user, and battery level, that one can set a fixed maximum operating velocity of a vehicle.

CX-1968C at Q/A 1191.

The evidence shows that under the correct claim construction or the

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complainants' proposed construction for "maximum operating velocity," [ ] does not meet this claim element. For instance, [ ] is fixed for reasons of safety and is not "determined by the requirement of acceleration to maintain balance," and the acceleration needed was not part of the consideration [ ] See RX-0051C (Derby WS) at Q/A 79-83; CX-1986C at Q/A 1185; RX-0052C (Bin WS) at Q/A 20. During the prosecution of the '230 patent, the applicant took the position that "facilitating vehicle safety" was a different purpose than "balancing vehicles." See RX-0051C at Q/A 84; JX-0002 ('230 patent file history) at 219-27.

In addition, complainants' infringement expert Mr. Jack Ganssle stated that the '230 patent requires that the "maximum operating velocity" cannot be a velocity higher than the maximum possible velocity of the vehicle. Ganssle Tr. 363-364 ("Q. So I guess it would logically follow, then, that the maximum operating velocity cannot be set at a velocity that is higher than the maximum possible velocity, right? A. That's correct."). He further testified that if the accused products are used in the normal operating mode, the way they were designed to be used, then he expected that the accused products infringe the claims. *Id.* at 355-356 ("Q. Well, yesterday you stated you could pick up – well, let me start over. Yesterday, you stated but if you're using it in the normal operating mode, the way it was designed to be used, then it should meet the claims. A. Agreed.").

Mr. Ganssle agreed that many of the parameters for normal operating conditions are disclosed in the user manuals for most of the accused products, including the Airwheel Q series and X series devices. *Id.* at 356-359. The Airwheel user manual

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discloses that the rider should be under 120 kilograms (kg), the various Q and X series devices range from 9.6 to 13.7 kg, and the device should not be ridden up an incline exceeding about 15 degrees. *See* CX-0136 (Airwheel user manual) at 18-19 (CZAWL\_0000086-87). In addition, a separate Airwheel technical specification sheet discloses the power output of the single motor in the Airwheel accused products to be 350 watts (W). *See* CX-0181C (Airwheel X3 technical construction file) at 9. Finally, as noted above, Mr. Ganssle asserts that the “maximum operating velocity” for the Airwheel accused products [ ], and is fixed at a value of 15 kilometers per hour (km/hr) in the Airwheel accused products. CX-1968C (Ganssle WS) at Q/A 1177-78.

With these data points, the Staff effectively challenged complainants’ argument that Airwheel accused products meet the claim limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” Dr. Illah Nourbakhsh, who is a Professor of Robotics at Carnegie Mellon University and has technical expertise in the field of robotics (which integrates computer science, electrical engineering, mechanical engineering, and human-robot interaction systems), agreed with the Staff that one can determine the maximum possible velocity that each of the accused devices going up a hypothetical frictionless incline can reach using the simple formula power (P) equals force (F) times velocity (v). *See* RX-0050C (Nourbakhsh WS) at Q/A 4, 6; Nourbakhsh Tr. 807-809. Although information to account for the frictional forces between the tires of the accused products and the surface on which they are being ridden has not been determined by any party (including complainants), one can account for the gravitational force, which equals mass (m) times acceleration of gravity (g) (which is 9.8 meters per

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second squared ( $m/s^2$ ) times the sine of the angle ( $\theta$ ) of the incline. *Id.* Applying this equation for the Airwheel accused devices, with a motor having a power rating of 350 W, and assuming an 80 kg rider on a device weighing 10 kg riding up a 15° incline:

$$P = F \times v \quad \text{and} \quad F = m \times g \times \sin \theta$$

$$350 \text{ W} = (80 \text{ kg rider} + 10 \text{ kg device}) \times 9.8 \text{ m/s}^2 \times \sin (15^\circ) \times v$$

$$350 \text{ W} = 90 \text{ kg} \times 9.8 \text{ m/s}^2 \times 0.2588 \times v$$

$$350 \text{ W} = 228.26 \text{ kg-m/s}^2 \times v$$

$$v = 1.533 \text{ m/s, which is equivalent to } 5.52 \text{ km/hr}^{28}$$

*See Ganssle Tr. 372-380; SDX-0002.* Under these normal operating conditions (*i.e.*, all within the parameters disclosed in the Airwheel user manual), at least with respect to rider weight and angle of incline, the maximum possible velocity that can be achieved by this rider going up an incline is 5.52 km/hr. Indeed, as Mr. Ganssle acknowledges, once one accounts for friction between the tires of the accused products and the surface on which the vehicles are being ridden, the maximum possible velocity that can be achieved is even less than this calculated value. *See Ganssle Tr. 382-383; see also Nourbakhsh Tr. 808-809* (the calculated maximum possible velocity will be smaller once one accounts for friction).

In addition, Mr. Ganssle confirmed that the rated motor power is the maximum power that the motor will output:

3 Q When it says that the rated motor power is 250

4 watts, what does that -- what does that mean?

5 A Well, I mean, we're reading what looks like a

6 user manual. I mean, if we were looking at a technical

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<sup>28</sup> There are 3600 seconds per hour and 1000 meters per kilometer. Thus, 1.533 m/s times 3600 seconds per hour divided by 1000 meters per kilometer equals 5.52 km/hr.

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7 document, like from the motor vendor, **it would be the**  
8 **maximum amount of power that the motor could consume.**

9 So you could translate that basically into  
10 horsepower.

11 Q So that's the maximum amount of power the motor  
12 can consume. **Would that also equate to the maximum power**  
13 **that the motor will output?**

14 A Yes, absolutely.

Ganssle Tr. 365 (emphasis added). Mr. Ganssle's testimony is clear. Thus, complainants' argument that these motors can output more power (and, therefore, increase the maximum possible velocity of the vehicle) than they are actually rated for is contradicted by the testimony of their infringement expert.<sup>29</sup>

Mr. Ganssle's testimony is consistent with that of Chic's noninfringement expert, Dr. Illah Nourbakhsh. Dr. Nourbakhsh explained that motors are capable of exerting a power greater than its rated power output "[m]aybe for transient time, but generally you do damage to a motor if you do that for any amount of time. So you can't depend on that." *Id.* at 805. He further explained that inasmuch as the vehicle's other parts such as the controller for the motor are typically rated for the same, not greater, power output as the motor, "usually it's patently impossible to go above the rating, because you've minimized the cost of all the parts in your robot." *Id.* at 805-806.

The Staff demonstrated that under these normal operating conditions set forth

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<sup>29</sup> On redirect, complainants attempted to rehabilitate their position through Mr. Ganssle, who testified that motors have a peak motor power, which is "power that the motor can achieve for a much shorter period of time, it's usually a function of the heating of the motor," than continuous motor power, which "a motor can maintain for unlimited amount of time." However, as Dr. Nourbakhsh explained, running a motor above the continuous motor power will damage the motor and essentially cause the device to fail and no longer function. *See* Nourbakhsh Tr. 805.

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above, which are well within the parameters defined in the user manual for the Airwheel accused products, the maximum possible velocity of the vehicle is far below the fixed velocity of 12 km/hr that complainants assert to satisfy the “maximum operating velocity” that meets the claim limitation. Indeed, Mr. Ganssle conceded that (under these normal operating conditions) inasmuch as the maximum possible velocity of the Airwheel accused products cannot reach the maximum operating velocity (*i.e.*, is below the maximum operating velocity), the Airwheel accused products do not meet the claim limitation:

6 Q And I just showed you, if my math is correct, an  
7 example of a vehicle being operated under normal operating  
8 conditions as specified in the user manual wherein that  
9 vehicle cannot achieve that maximum operating velocity  
10 that’s hard-coded into the Airwheel device; right?

11 A Given those assumptions, yes.

12 Q Right. **So in that situation, what you called**  
13 **the maximum operating velocity of 15 kilometers per hour as**  
14 **hard-coded into the Airwheel device, that cannot meet the**  
15 **claim limitation; right?**

16 A **Again, given those assumptions, that’s true.**  
17 Certainly, at smaller slopes it would -- it would have no  
18 trouble meeting that limitation.

19 MR. KOO: I’ll just mark this as Staff’s

20 Demonstrative Exhibit 2.

21 (Exhibit SDX-0002 identified.)

Ganssle Tr. 380 (emphasis added).

Moreover, complainants failed to provide test results or any other evidence that supports their infringement theory with respect to the limitation “maximum operating

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velocity, determined by a requirement of acceleration to maintain balance.”

Complainants, thus, have failed to meet their burden to establish that this claim limitation is met by the Airwheel accused products.

**“a balancing margin monitor, coupled to the ground-contacting module, for generating a signal characterizing the balancing margin”**

Complainants argue that function [

] is the balancing margin monitor. *See* CX-1968C

(Ganssle WS) at Q/A 1218. Mr. Ganssle testified that this function [ ]

monitors the present speed of the vehicle, “Speed,” with respect to the maximum operation velocity “[ ].” *See id.* at Q/A 1220. Complainants argue that

[ ] which is allegedly a

function of the balancing margin and a signal characterizing the balancing margin. *See id.* at Q/A 1221. However, as discussed above in the section concerning “maximum

operating velocity,” the evidence establishes that [ ] value cannot represent the maximum operating velocity. Therefore, to the extent that function [

] against the present speed of the vehicle (“Speed”), then, by definition, function [ ] cannot be a balancing margin monitor.

**“an alarm, coupled to the balancing margin monitor, for receiving the signal characterizing the balancing margin and for warning when the balancing margin falls below a specified limit”**

Complainants argue that the Airwheel accused devices have a tilt-back that is triggered when the balancing margin falls below a defined limit. *See* CX-1968C (Ganssle WS) at Q/A 1230-35. If the balancing margin falls even further to a lower limit (*i.e.*, zero) then an audible alarm will sound. *Id.* at Q/A 1236-38. However, as discussed in



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above in the section concerning “maximum operating velocity,” the evidence shows that [ ] value cannot represent the maximum operating velocity. Therefore, to the extent that function [ ] (identified by complainants as the balancing margin monitor in the Airwheel accused products) monitors the [ ] against the present speed of the vehicle (“Speed”), then [ ] cannot be the balancing margin monitor. Inasmuch as complainants have not identified anything else as a possible monitor, the Airwheel accused products cannot meet this claim element.

### **Dependent Claims 3 and 4**

Claims 3 and 4 are each dependent from claim 1. Only the Airwheel Q series products, and not the X series products, are accused of infringement of claim 4 of the ‘230 patent. For the reasons already discussed above in the section concerning “maximum operating velocity,” complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Airwheel accused products. Thus, the Airwheel accused products cannot infringe dependent claims 3 and 4. *Wahpeton Canvas Co., Inc. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989) (“One who does not infringe an independent claim cannot infringe a claim dependent on (and thus containing all the limitations of) that claim.”).

### **b. Chic Products**

Complainants accuse the Chic Smart and [ ] products of infringing claims 1, 3, and 4 of the ‘230 patent. Chic and complainants have stipulated that the Smart B is representative of the Smart products and the [ ].

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**Independent Claim 1**

**“motorized drive arrangement causing, when powered, automatically balanced operation of the system”**

Chic argues that when a Chic accused product is powered on, the vehicle does not automatically balance. *See* Resps. Br. at 46. “[T]hey sit out of balance; they do not start self-balancing until a user stands on the foot pads and activate the sensors.” *Id.* Chic’s argument that this places its products outside the scope of the claim element is incorrect.

By Chic’s description, “the user must first power on the device, and then the vehicle will wait in standby.” *Id.*, citing RX-0050C (Nourbakhsh WS) at Q/A 75. Chic appears to equate powering on the vehicle by pressing the power switch with powering the motorized drive arrangement. However, the evidence shows that they can be mutually exclusive events in the Chic accused products.

It is not until the vehicle is powered on and the user places his or her feet on the foot pedals that [

].

Thus, the “motorized drive arrangement” is powered not simply by turning on the Chic accused products via the external power switch, [

], causing the

machinery (*i.e.*, “the motorized drive arrangement”) to be powered on. *See* CX-1968C (Ganssle WS) at Q/A 303-22. Thus, the evidence shows that this claim element is met by the Chic accused products.

**“maximum operating velocity, determined by a requirement of acceleration to maintain balance”**

Complainants argue that [

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].

See CX-1968C (Ganssle WS) at Q/A 325-26. Complainants argue that [

].” *Id.* at Q/A

328. According to complainants, the value of the [

]. *Id.* at Q/A 328-31.

Under the correct claim construction for “maximum operating velocity” (which requires a variable maximum velocity), [

“ [ cannot meet this claim element. That, in effect, would be the end of the infringement analysis. In fact, complainants agree with this very same argument, although in the context of a validity argument over a prior art reference:

There is nothing to suggest that the threshold is determined based on a requirement of acceleration to maintain balance, as is required by claim 1 of the ‘230 patent. However, *even at (and potentially below) this speed limit threshold, there is no guarantee that the vehicle can accelerate to maintain balance even though it could possibly reach a higher speed given enough time. Simply being able to speed up is not enough to ensure that the vehicle is able to accelerate to maintain balance – if it cannot speed up quickly enough it cannot remain under the rider, and the rider will fall.* As recognized by the ‘230 patent, *what is required is to look at a balancing margin, determined by comparing the present velocity not to an [maximum possible velocity] or speed limit, but to an [maximum operating velocity].* *Id.* Unlike the speed limit in Kamen ‘478, the maximum operating velocity claimed in the ‘230 is determined by a requirement of acceleration to maintain balance.

Compls. Br. at 139 (emphasis added). Mr. Ganssle opines, however, that:

*[R]outine test parameters could be set to determine a fixed maximum operating velocity based on these conditions that maintains acceleration potential to ensure balance. In my opinion, all of the Respondents undertook such a test to set the maximum operating velocity in their*

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*vehicles* to ensure the safety of their riders.

CX-1968C at Q/A 342 (emphasis added).

The evidence shows that under the correct construction of the complainants' proposed construction for "maximum operating velocity," [ " ] as set in the Chic source code cannot meet this claim element. Complainants' infringement expert Mr. Jack Ganssle stated that the '230 patent requires that the "maximum operating velocity" cannot be a velocity higher than the maximum possible velocity of the vehicle. Ganssle Tr. 363-364 ("Q. So I guess it would logically follow, then, that the maximum operating velocity cannot be set at a velocity that is higher than the maximum possible velocity, right? A. That's correct.>"). He further testified that if the accused products are used in the normal operating mode, the way they were designed to be used, then he expected that the accused products infringe the claims. *Id.* at 355-356 ("Q. Well, yesterday you stated you could pick up – well, let me start over. Yesterday, you stated but if you're using it in the normal operating mode, the way it was designed to be used, then it should meet the claims. A. Agreed.>").

Mr. Ganssle also agreed that many of the parameters for normal operating conditions are disclosed in the user manuals for most of the accused products, including the Chic Smart B device, which Complainants and Chic have stipulated is representative of the Chic accused products. *Id.* at 360-361. The Chic Smart products' user manual discloses that the rider should be between 20 and 100 kg, the device itself weighs 10.5 kg, and the device should not be ridden up an incline exceeding 15 degrees. *See* CX-0889 (Chic Smart user manual) at 29. In addition, Chic's website discloses the power

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output of each of the two motors in the Chic Smart products to be 300 W, for a combined power output of 600 W. *See* SX-0012 (Chic website) at 2; Lin Tr. 721-722. Finally, as noted above, Mr. Ganssle asserts that the “maximum operating velocity” for the Chic accused products is set [

] and represents the maximum operating velocity of the Chic accused products. *See* CX-1968C (Ganssle WS) at Q/A 328-31.

With these data points, the Staff effectively challenged complainants’ argument that Chic accused products meet the claim limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” As discussed above in the section concerning “maximum operating velocity” regarding the Airwheel accused products failing to meet this same claim limitation, a person of ordinary skill can calculate the maximum possible velocity that the Chic accused devices can reach going up an incline using the simple formula power (P) equals force (F) times velocity (v). *See* Nourbakhsh Tr. 807-809. Applying the equation for the Chic accused devices, with the two 300 W motors having a combined power output of 600 W, and assuming a 75 kg rider on a device weighing 10 kg riding up a 15° incline:

$$\begin{aligned} P &= F \times v \quad \text{and} \quad F = m \times g \times \sin \theta \\ 600 \text{ W} &= (75 \text{ kg rider} + 10 \text{ kg device}) \times 9.8 \text{ m/s}^2 \times \sin (15^\circ) \times v \\ 600 \text{ W} &= 85 \text{ kg} \times 9.8 \text{ m/s}^2 \times 0.2588 \times v \\ 600 \text{ W} &= 215.60 \text{ kg-m/s}^2 \times v \\ v &= 2.783 \text{ m/s, which is equivalent to } \underline{\underline{10.02 \text{ km/hr}}}^{30} \end{aligned}$$

*See* Nourbakhsh Tr. 806-809; SDX-0004; *see also* Ganssle Tr. 372-380. Under these

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<sup>30</sup> There are 3600 seconds per hour and 1000 meters per kilometer. Thus, 2.873 m/s times 3600 seconds per hour divided by 1000 meters per kilometer equals 10.02 km/hr.

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normal operating conditions (*i.e.*, all within the parameters disclosed in the Chic Smart device user manual), at least with respect to rider weight and angle of incline, the maximum possible velocity that can be achieved by this rider going up an incline is 10.02 km/hr. As Mr. Ganssle acknowledges, once one accounts for friction between the tires of the accused products and the surface on which the vehicles are being ridden, the maximum possible velocity that can be achieved is even less than this calculated value. *See* Ganssle Tr. 382-383; *see also* Nourbakhsh Tr. 808-809 (the calculated maximum possible velocity will be smaller once one accounts for friction).

The Staff demonstrated that under these normal operating conditions set forth above, which are well within the parameters defined in the user manual for the Chic accused products, one would expect the maximum possible velocity of the vehicle to be far below the [ “

] that complainants assert satisfies the “maximum operating velocity” that meets the claim. For the same reasons discussed above in the section concerning “maximum operating velocity” regarding the Airwheel accused products failing to meet this same claim limitation, the Chic accused products cannot meet the claim limitation.

Indeed, complainants failed to provide any test results or any other evidence that supports their infringement theory with respect to the limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” Thus, complainants failed to meet their burden to establish that this claim limitation is met by the Chic accused products.

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**“balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle” / “balancing margin monitor”**

Complainants argue that the balancing margin in the Chic accused products is found in [ ]. See Compls. Br. at 87; CX-1968C (Ganssle WS) at Q/A 352. Mr. Ganssle testified that “the balancing margin [ ], i.e., the difference between the maximum operating velocity and the present velocity of the vehicle) is characterized by the value of [ ].” See Compls. Br. at 86-87; CX-1968C (Ganssle WS) at Q/A 353. Complainants argue that [ ], thus acting as the balancing margin monitor. See Compls. Br. at 86-87; CX-1968C (Ganssle WS) at Q/A 353. However, as discussed above in the section concerning “maximum operating velocity,” the evidence establishes that [ ] value cannot represent the maximum operating velocity. Therefore, to the extent that the [ ] to compare against the present speed of the vehicle, then, by definition, the [ ] cannot be a balancing margin monitor.

**Dependent Claims 3 and 4**

Claims 3 and 4 are each dependent from claim 1. For the reasons discussed above in the section concerning “maximum operating velocity,” complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by

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the Chic accused products. Thus, the Chic accused products cannot infringe dependent claims 3 and 4. *Wahpeton Canvas*, 870 F.2d at 155.

### c. Jetson and Powerboard Products

Complainants accuse the Jetson V5, V6, and V8 self-balancing hoverboard products of infringing claims 1, 3, and 4 of the '230 patent. Jetson and complainants have stipulated that the V6 is representative of the Jetson accused products.

Complainants also accuse the Powerboard self-balancing hoverboard products of infringing claims 1, 3, and 4 of the '230 patent. Powerboard and complainants have stipulated that the source code in the Jetson V6 product is representative of that in the Powerboard accused products. Thus, unless explicitly stated otherwise, for the purposes of the analysis of infringement of the '230 patent, any reference to the Jetson accused products will also include, by proxy, the Powerboard accused products.

As an initial matter, neither Jetson nor Powerboard can rely on expert testimony to counter the infringement opinions and evidence presented by complainants. The administrative law judge struck the witness statement of their noninfringement expert Dr. Jason Janét in its entirety. *See* Order No. 29 (Mar. 22, 2017), Order No. 36 (Apr. 17, 2017) at 3-4 (granting complainants' motion *in limine* no. 2 to preclude Dr. Janét from, *inter alia*, offering opinions on noninfringement and testifying as a fact witness). As such, Jetson and Powerboard can only rely on a finding that complainants failed to meet their burden to prove infringement of the '230 patent in order for the Jetson and Powerboard accused products to be found not to infringe the '230 patent.



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### **Independent Claim 1**

#### **“motorized drive arrangement causing, when powered, automatically balanced operation of the system”**

The evidence shows that the “motorized drive arrangement” is powered not simply by turning on the Jetson accused products via the external power switch, but by performing the additional act of placing the feet on the foot pedals/pads such that it causes the “motorized drive arrangement” to be powered on and cause automatic balancing. *See* CX-1968C (Ganssle WS) at Q/A 859 (“each side of the transporter includes an optical interrupter (a force sensor) that, when the portion of the platform immediately above the interrupter is depressed, will cause the transporter to self-balance”). Jetson and Powerboard do not dispute that the Jetson accused products, when powered on and a rider stands on the product with both feet on the foot pedals, will operate to self-balance. Thus, the evidence shows that this claim element is met by the Jetson and Powerboard accused products. *Id.* at Q/A 857-90.

#### **“maximum operating velocity, determined by a requirement of acceleration to maintain balance”**

Mr. Ganssle opines that at line 123 from the source code file config.h in the Jetson and Powerboard accused products sets a variable known as the “OverSpeed” at a fixed value of 12, which represents 10 kilometers per hour (km/hr). *See* CX-1968C (Ganssle WS) at Q/A 892-94. Complainants argue that this is the speed “above which the transporter may be unable to balance.” *See* CX-1968C (Ganssle WS) at Q/A 895.

Under the correct construction for “maximum operating velocity” (which requires a variable maximum velocity), the fixed value of 10 km/hr for the “OverSpeed” variable cannot meet this claim element. Mr. Ganssle opines, however, that:

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*a maximum velocity at which the transporter can maintain balance under the worst-case intended use condition would be a fixed maximum operating velocity.* For example, the **Jetson User Manual** states that the maximum load allowed is 300 lbs and that the maximum incline allowed is 20°.

Similarly, the *Powerboard User Manual* specifies a maximum weight of 220 lbs and a minimum battery power level of 10%. *These worst-case intended use conditions can be used to determine a speed for ensuring user safety.* In the Jetson and Powerboard Accused Devices, because OverSpeed was selected to ensure the safety of the user, and *because the safety of the user requires the device to maintain balance, OverSpeed is a maximum operating velocity.*

*Id.* at Q/A 902 (internal citations omitted) (emphasis added).

The evidence shows that, under the correct claim construction or complainants' proposed construction for "maximum operating velocity," the "OverSpeed" as set in the Jetson source code do not meet this claim element. Complainants' infringement expert Mr. Ganssle opines that the '230 patent requires that the "maximum operating velocity" cannot be a velocity higher than the maximum possible velocity of the vehicle. Ganssle Tr. 363-364. He further testified that if the accused products are used in the normal operating mode, the way they were designed to be used, then he expected that the accused products infringe the claims. *Id.* at 355-356. Mr. Ganssle also agreed that many of the parameters for normal operating conditions are disclosed in the user manuals for most of the accused products, including the Jetson V6 device, which complainants, Jetson, and Powerboard have stipulated is representative of the Jetson and Powerboard accused products. *Id.* at 361-363. The Jetson V6 user manual discloses that the rider should be under 300 pounds, the device weighs 22 pounds,<sup>31</sup> and the device should not be

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<sup>31</sup> It is not disputed that 300 pounds and 22 pounds are equivalent to 136 kg and 10 kg, respectively.

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ridden up an incline exceeding 20 degrees. *See* CX-0805 (Jetson V6 user manual) at 3. The manual further discloses the power output of the single dual hub motor in the Jetson V6 product to be 700 W. *Id.* Finally, as noted above, Mr. Ganssle opines that the “maximum operating velocity” for the Jetson and Powerboard accused products is set by the “OverSpeed” value in the Jetson source code, which is a fixed value representing 10 km/hr. *See* CX-1968C (Ganssle WS) at Q/A 892-94.

With these data points, the Jetson and Powerboard accused products do not meet the claim limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” Using the same formula power (P) equals force (F) times velocity (v) discussed above in the sections concerning “maximum operating velocity,” regarding the Airwheel and Chic accused products failing to meet this same claim limitation, the maximum possible velocity that the Jetson and Powerboard accused devices can reach going up an incline can be calculated. *See, e.g.,* Nourbakhsh Tr. 807-809. Applying the equation for the Jetson accused devices, with the single 700W motor, and assuming a 100 kg rider on a device weighing 10 kg riding up a 15° incline:

$$\begin{aligned} P &= F \times v \quad \text{and} \quad F = m \times g \times \sin \theta \\ 700 \text{ W} &= (100 \text{ kg rider} + 10 \text{ kg device}) \times 9.8 \text{ m/s}^2 \times \sin (15^\circ) \times v \\ 700 \text{ W} &= 110 \text{ kg} \times 9.8 \text{ m/s}^2 \times 0.2588 \times v \\ 700 \text{ W} &= 279.01 \text{ kg-m/s}^2 \times v \\ v &= 2.509 \text{ m/s, which is equivalent to } \underline{\mathbf{9.03 \text{ km/hr}}}^{32} \end{aligned}$$

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<sup>32</sup> There are 3600 seconds per hour and 1000 meters per kilometer. Thus, 2.509 m/s times 3600 seconds per hour divided by 1000 meters per kilometer equals 9.03 km/hr.

In addition, while this calculation specific to the Jetson and Powerboard products was not performed before Mr. Ganssle or Dr. Nourbakhsh at the evidentiary hearing, it is the same equation used for the calculation of maximum possible velocity for the Airwheel, Chic, and Swagway accused products.

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*See, e.g.*, Nourbakhsh Tr. 806-809; *see also* Ganssle Tr. 372-380. Under these normal operating conditions (*i.e.*, all within the parameters disclosed in the Jetson V6 user manual), at least with respect to rider weight and angle of incline, the maximum possible velocity that can be achieved by this rider going up an incline is 9.03 km/hr. Indeed, as Mr. Ganssle acknowledges, once one accounts for friction between the tires of the accused products and the surface on which the vehicles are being ridden, the maximum possible velocity that can be achieved is even less than this calculated value. *See* Ganssle Tr. 382-383; *see also* Nourbakhsh Tr. 808-809 (the calculated maximum possible velocity will be smaller once one accounts for friction).

The Staff demonstrated that under these normal operating conditions set forth above, which are well within the parameters defined in the user manual for the Jetson accused products, one would expect the maximum possible velocity of the vehicle to be far below the fixed velocity of 10 km/hr that is set for the “OverSpeed” value that complainants argue satisfies the “maximum operating velocity” that meets the claim. For the same reasons discussed above in the section concerning “maximum operating velocity” regarding the Airwheel accused products failing to meet this same claim limitation, the Jetson and Powerboard accused products do not meet the claim limitation.

Complainants failed to provide any test results or any other evidence that supports their infringement theory with respect to the limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” Complainants failed to meet their burden to establish that this claim limitation is met by the Jetson and Powerboard accused products.

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**“balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle” / “balancing margin monitor”**

Complainants argue that the minimum balancing margin, “OverSpeedRange,” in the Jetson and Powerboard accused products is found in lines 123-128 of source code file config.h for the main board. *See* Compl. Br. at 83; CX-1968C (Ganssle WS) at Q/A 920. Mr. Ganssle testified that the “OverSpeed” is used by another value, “RiseFootPlateSpeedMax,” in an operation at line 137 of config.h to convert “OverSpeed” into units inversely proportional to velocity. *See* CX-1968C (Ganssle WS) at Q/A 922. According to Mr. Ganssle, another value, known as “StartRiseFootPlateSpeed,” is also calculated based on the “OverSpeed” value (*i.e.*, allegedly the maximum operating velocity) and “OverSpeedRange” value, which Mr. Ganssle characterizes as the minimum balancing margin. *Id.* at Q/A 921-22. The balancing margin monitor allegedly exists in lines 476-483 of the source code file UART.c for the main board, where it compares “StartRiseFootPlateSpeed,” “RiseFootPlateSpeedMax,” and the present speed of the vehicle (U16SpeedPeriod) as part of the balancing margin monitor. *Id.* at Q/A 923. However, as discussed above in the section concerning “maximum operating velocity,” the evidence establishes that the “OverSpeed” value cannot represent the maximum operating velocity. Therefore, to the extent that the UART.c file relies on the “OverSpeed” (allegedly representing the maximum operating velocity) to compare against the present speed of the vehicle, then, by definition, the Jetson source code does not have a balancing margin monitor, inasmuch as complainants have not identified any other alternative to “OverSpeed” as representing the maximum operating velocity.

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### Dependent Claims 3 and 4

Claims 3 and 4 depend from claim 1. For the reasons discussed above in the section concerning “maximum operating velocity,” complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Jetson and Powerboard accused products. Thus, the Jetson and Powerboard accused products cannot infringe dependent claims 3 and 4. *See Wahpeton Canvas*, 870 F.2d at 155.

#### d. Swagway Products

Complainants accuse the SWAGWAY X1 and X2 and the SWAGTRON T1, T3, and T5 self-balancing hoverboard products of infringing claims 1, 3, and 4 of the ‘230 patent. Swagway and complainants have stipulated that the SWAGWAY X1 is representative of the SWAGWAY X2 and the SWAGTRON T1 is representative of the SWAGTRON T5. *See* Staff Br. at 17-18 (citing Compls. P.H. Br. at 77; Resps. P.H. Br. at 14-15). From a dynamics and controls perspective, all of the models of the Swagway accused products behave in an equally representative manner because the Swagway source code analyzed by the experts in this Investigation is representative of all of the Swagway accused products. *See* RX-0053C (Sorensen WS) at Q/A 47. In addition, each of the Swagway accused products “are operated by a user in substantially the same way.” *Id.*

### Independent Claim 1

**“a ground-contacting module, to which the platform is mounted, which propels the user in desired motion over an underlying surface”**

Swagway argues that the Swagway accused products do not meet this limitation

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under respondents' means-plus-function interpretation of the disputed term "ground-contacting module," *i.e.*, function: contacting the ground, and structure: a single platform, two wheels, a forceplate or other force sensor disposed on the platform. *See* Resps. Br. at 48-50. The structure under the respondents' construction requires, *inter alia*, a single platform, whereas the Swagway products have two platforms. However, under the correct construction of "ground-contacting module," there is no such requirement. The evidence shows that this claim element is met by the Swagway accused products. *See* CX-1968C (Ganssle WS) at Q/A 558-73.

Swagway argues its accused products do not practice this claim element because its products do not use sensors that are allegedly taught by the '230 patent to overcome the problem of providing a mechanism for allowing a user to command turning. *See* Resps. Br. at 48-50. Swagway's arguments are not relevant for analyzing whether this particular claim element is met. Swagway cannot import embodiments (*e.g.*, handle/grip for turning control, turning based on the orientation of the user) from the specification to argue that this claim element is not met. *Id.*

**"wherein the vehicle has a present velocity and a maximum operating velocity, determined by a requirement of acceleration to maintain balance"**

Complainants argue that the variable "roll\_time" that appears in lines 164-175 of the source code file attitude.c is the present speed of the transporter, determined by the average speed of the center of the Swagway device. *See* Compl. Br. at 67; CX-1968C (Ganssle WS) at Q/A 597-99. The "roll\_time" variable is expressed in internal units which are inversely proportional to speed; a "roll\_time" value below 90 corresponds to a

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speed above 8 miles per hour (or 12 km/hr),<sup>33</sup> which, according to complainants, represents the maximum operating velocity. *See* CX-1968C (Ganssle WS) at Q/A 600-02.

Under the correct construction for “maximum operating velocity” (which requires a variable maximum velocity), the fixed value of 12 km/hr for the “roll\_time” value of 90 cannot meet this claim element. That, in effect, would be the end of the infringement analysis. Mr. Ganssle opines, however, that:

***[R]outine test parameters could be set to determine a fixed maximum operating velocity based on these conditions that maintains acceleration potential to ensure balance. In my opinion, all of the Respondents undertook such a test to set the maximum operating velocity in their vehicles to ensure the safety of their riders.***

*Id.* at Q/A 614 (emphasis added).

The evidence shows that, under the correct claim construction or complainants’ proposed construction for “maximum operating velocity,” the “roll\_time” value of 90 as set in the Swagway source code do not meet this claim element. Mr. Ganssle stated that the ‘230 patent requires that the “maximum operating velocity” cannot be a velocity higher than the maximum possible velocity of the vehicle. Ganssle Tr. 363-364. He further testified that if the accused products are used in the normal operating mode, the way they were designed to be used, then he expected that the accused products infringe the claims. *Id.* at 355-356. Mr. Ganssle also agreed that many of the parameters for normal operating conditions are disclosed in the user manuals for most of the accused products, including the SWAGTRON T1 device, which Swagway and complainants have

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<sup>33</sup> It is noted that 8 miles per hour actually corresponds to 12.8 km per hour, inasmuch as 1 mile is equivalent to 1.6 km.



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stipulated is representative of the SWAGTRON T5. *Id.* at 359-360. The SWAGTRON T1 user manual discloses that the rider should be between 20 kg and 100 kg, the device weighs 10 kg, and the device should not be ridden up an incline exceeding 30 degrees. *See* CX-1618 (SWAGTRON T1 user manual) at 28 (SWAG00147384). In addition, a separate Swagway product guide discloses the power output of each the two motors in the SWAGTRON T1 device to be 250 W, for a combined power output of 500 W. *See* CX-0268 (SWAGTRON T1 sales kit and product guide) at 13. Finally, as noted above, Mr. Ganssle opines that the “maximum operating velocity” for the Swagway accused products is set by the “roll\_time” value in the Swagway source code, which is a fixed value representing 8 mph or 12.8 km/hr. *See* CX-1968C (Ganssle WS) at Q/A 600-02.

With these data points, the Staff effectively challenged complainants’ argument that Swagway accused products meet the claim limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” As discussed above in the section concerning “maximum operating velocity” regarding the Airwheel accused products failing to meet this same claim limitation, one can calculate the maximum possible velocity that the Swagway accused devices can reach going up an incline using the simple formula power (P) equals force (F) times velocity (v). *See* Nourbakhsh Tr. 807-809. Applying the equation for the Swagway accused devices, with the two 250 W motors having a combined output of 500 W, and assuming an 80 kg rider on a device weighing 10 kg riding up a 15° incline:

$$P = F \times v \quad \text{and} \quad F = m \times g \times \sin \theta$$

$$500 \text{ W} = (80 \text{ kg rider} + 10 \text{ kg device}) \times 9.8 \text{ m/s}^2 \times \sin (15^\circ) \times v$$

$$500 \text{ W} = 90 \text{ kg} \times 9.8 \text{ m/s}^2 \times 0.2588 \times v$$

$$500 \text{ W} = 228.28 \text{ kg-m/s}^2 \times v$$

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$v = 2.19 \text{ m/s}$ , which is equivalent to 7.89 km/hr<sup>34</sup>

See Ganssle Tr. 380-383. Under these normal operating conditions (*i.e.*, all within the parameters disclosed in the SWAGTRON T1 user manual), at least with respect to rider weight and angle of incline, the maximum possible velocity that can be achieved by this rider going up an incline is 7.89 km/hr.<sup>35</sup> As Mr. Ganssle acknowledges, once one accounts for friction between the tires of the accused products and the surface on which the vehicles are being ridden, the maximum possible velocity that can be achieved is even less than this calculated value. See Ganssle Tr. 382-383; *see also* Nourbakhsh Tr. 808-809 (the calculated maximum possible velocity will be smaller once one accounts for friction).

The Staff demonstrated that under these normal operating conditions set forth above, which are well within the parameters defined in the user manual for the Swagway accused products, the maximum possible velocity of the vehicle is far below the fixed velocity of 12.8 km/hr that is set for the “roll\_time” value that complainants argue satisfies the “maximum operating velocity” that meets the claim. For the same reasons discussed above in the section concerning “maximum operating velocity,” the Swagway accused products do not meet the claim limitation.

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<sup>34</sup> There are 3600 seconds per hour and 1000 meters per kilometer. Thus, 2.19 m/s times 3600 seconds per hour divided by 1000 meters per kilometer equals 7.89 km/hr.

<sup>35</sup> For the SWAGTRON T5, the device weighs 8.6 kg and each of the two motors are only rated for 200 W, for a combined power output of 400 W. See CX-0268 (SWAGTRON T1 sales kit and product guide) at 13. Thus, assuming an 80 kg rider going up a 15° incline, the theoretical maximum speed that could be achieved is 6.41 km/hr. Again, once one accounts for the friction between the tires of the accused products and the surface on which the vehicles are being ridden, the maximum possible velocity that can be achieved is even less than this calculated value.

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Complainants failed to provide any test results or any other evidence that supports their infringement theory with respect to the limitation “maximum operating velocity, determined by a requirement of acceleration to maintain balance.” Thus, complainants failed to meet their burden to establish that this claim limitation is met by the Swagway accused products.

**“in operation, has a balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle”**

Complainants argue that the balancing margin in the Swagway accused products is characterized by the value of the source code `roll_time`. *See* Compl. Br. at 67; CX-1968C (Ganssle WS) at Q/A 628. However, complainants argue that a `roll_time` value of 90 corresponds to the maximum operating velocity of 8 mph or 12.8 km/hr for the Swagway accused products. *See* Compl. Br. at 67; CX-1968C (Ganssle WS) at Q/A 600-02. Complainants failed to clearly explain how one `roll_time` value can represent a maximum operating velocity while other `roll_time` values represent a balancing margin, which is determined by the difference between two different velocities.

Nonetheless, as discussed above in the section concerning “maximum operating velocity,” the evidence establishes that the “`roll_time`” value of 90 cannot represent the maximum operating velocity. Therefore, to the extent that the “`roll_time`” balancing margin relies on the “`roll_time`” value of 90 to compare against the present speed of the vehicle, then, by definition, the “`roll_time`” balancing margin cannot be a balancing margin. The balancing margin that satisfies this claim limitation cannot be determined in the Swagway accused products because complainants have not identified any other alternative for “`roll_time`” value of 90 as representing the maximum operating velocity.

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### **“a balancing margin monitor, coupled to the ground-contacting module, for generating a signal characterizing the balancing margin”**

Complainants argue that the balancing margin monitor is coded by the function “cor\_angle()” in the Swagway source code. *See* CX-1968C (Ganssle WS) at Q/A 640. However, for the reasons discussed above in the section concerning “maximum operating velocity,” the evidence establishes that the “roll\_time” value of 90 do not represent the maximum operating velocity. As discussed above, complainants cannot demonstrate how a balancing margin is determined. Without a balancing margin, the balancing margin monitor also cannot exist.

### **Dependent Claims 3 and 4**

Claims 3 and 4 depend from claim 1. For the reasons discussed above in the section concerning “maximum operating velocity,” complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Swagway accused products. Thus, the Swagway accused products do not infringe dependent claims 3 and 4. *See Wahpeton Canvas*, 870 F.2d at 155.

### **C. Domestic Industry (Technical Prong)**

Respondents argue that the Segway DI products<sup>36</sup> do not practice claims 1, 3, or 4 of the ‘230 patent. *See* Resps. Br. at 127-30. Claim 1 of the ‘230 patent requires a “motorized drive arrangement causing, when powered, automatically balanced operation of the system.” JX-0001 (‘230 Patent). Respondents argue that this limitation is not met because the Segway DI products do not automatically balance when the motorized drive arrangement is powered. *See* RX-0050C (Nourbakhsh WS) at Q/A 109.

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<sup>36</sup> *See* Section I.C of this final ID for additional detailed information concerning specific domestic industry products.

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Complainants argue:

The domestic industry products, the Segway PTs, practice claims 1 and 3-4 of the '230 patent. Respondents and Staff do not dispute that the Segway PTs practice the majority of the elements of claim 1 of the '230 patent. In fact, the only dispute remaining is whether the Segway PTs practice a single limitation of claim 1: "... the motorized drive arrangement causing, when powered, automatically balanced operation of the system ...". Respondents and Staff contend that the Segway PTs do not practice claim 1 of the '230 patent solely because they do not enter into a balancing mode *immediately* after being turned on. This interpretation is meritless for several reasons:

- Respondents' and Staff's position relies on reading a temporal limitation into the claim language that simply is not there – that is, they read in that the motorized drive arrangement must automatically balance *immediately* or *as soon as* it is powered on. This is wholly improper. *See, e.g., Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1325 (Fed. Cir. 2003) ("courts must take extreme care when ascertaining the proper scope of the claims, lest they simultaneously import into the claims limitations that were unintended by the patentee"). It is particularly improper to import a temporal limitation into a claim when no such temporal language appears in the claim itself. *See, e.g., Zi Corp. of Canada Inc. v. Tegic Commc'ns Inc.*, 243 F.3d 564, 2000 WL 1586310 at \*3-4 (Fed. Cir. 2000) (finding that a district court erred by construing the term "when" to be a temporal limitation when the specification and prosecution history did not support such an interpretation); *Flatworld Interactive Servs. LLC v. Samsung Electronics Co., Ltd.* 2014 WL 7464143 (D. Del. Dec. 31, 2014) (agreeing that "when" in a claim imposes only a conditional limitation, compelling a result at some point but not necessarily at the same moment). The use of "when powered" in claim 1 introduces no such temporal limitation, but rather only requires that the motorized drive causes automatically balanced operation at some time when they are powered. JX-0001 ('230 Patent) at col. 18, lns. 43-49. Clearly, as the ALJ observed at the Hearing, the Segway PTs are automatically balanced when powered and being operated by a user, and there is no dispute that the motorized drives cause this automatically balanced operation.

- Respondents' and Staff's position is contrary to the claim language which discusses "automatically balanced operation" of the system. How the Segway PTs behave when powered, but not being operated by a user, is irrelevant. The

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specification of the '230 patent contemplates a difference between *operation* of the device, with a user present, and a *stationary* mode, when the user is not present. JX-0001 ('230 Patent) at col. 2, lns. 14-17, col. 4, lns. 30-33. Claim 1 of the '230 patent is clear that it should be interpreted in the context of the device in *operation* by a user - that is, with a rider present.

- Respondents' and Staff's position further ignores the context of the claim, namely that the claim is reciting a property of the motorized drive with respect to the "system" defined in the claim itself as comprising "the drive arrangement, ground contacting module and payload," with the payload earlier claimed as "including a user." JX-0001 ('230 Patent) at col. 18, lns. 36-45. The argument that the claim limitation is not met because the Segway PTs do not automatically balance immediately when powered and no user is present on the device is easily dismissed. When interpreted consistent with the claim language, the motorized drive causes automatically balanced operation of the "system" (the motorized drive, ground contacting module, and payload – including a user) when they are powered and in operation with a rider present. There is no dispute that the Segway PTs automatically balance when powered with a rider present, as even Chic's expert witness Dr. Nourbakhsh admitted at the hearing that the Segway PTs automatically balance when powered with a user standing on them.

Compls. Br. at 249-51 (certain citations omitted).

The evidence shows that the Segway DI products do not practice claims 1, 3, or 4 of the '230 patent.

"The test for satisfying the 'technical prong' of the domestic industry requirement is essentially same as that for infringement, *i.e.*, a comparison of domestic products to the asserted claims." *Alloc v. Int'l Trade Comm'n*, 342 F.3d 1361, 1375 (Fed. Cir. 2003).

Thus, complainants bear the burden of "establish[ing] by a preponderance of the evidence that one or more claims of the patent read on the [domestic industry product] literally or under the doctrine of equivalents." *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1310 (Fed. Cir. 2005). Complainants failed to meet that burden.

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When the Segway DI products are powered on, the evidence shows that the motors are powered and tested. *See* RX-0050C at Q/A 110. However, even though the motors are powered on, the devices do not automatically balance until a user stands on the Segway. This was confirmed by Segway's Director of Electrical Engineering, James Carter.

11 Q. So when you first turn on the Segway, does  
12 it power up the motors?

13 **A. *The circuits are energized, yes.***

14 Q. Now, you mentioned that the user turns on  
15 the device. Is that the standby mode?

16 **A. *The standby mode? That is a pre -- like***  
17 ***the mode that it goes into when you first power it***  
18 ***up?***

19 Q. Yes.

20 **A. *So it goes into its self check mode and***  
21 ***awaits the rider to stand on the machine.***

22 Q. Is there a name for the mode where it's  
23 waiting for the rider to stand on the machine?

24 **A. [**

25

1

2

].

3 Q. In that state where it's waiting for the  
4 rider to step on the machine, is the vehicle self  
5 balancing?

6 **A. *No. The machine is not balancing at that***  
7 ***point in time.***

8 Q. When does the machine start balancing?

9 **A. *When the user stands on the machine, then***  
10 ***the self balancing, and the motors are commanded to***  
11 ***talk to self balance.***

JX-0009C (Carter Dep. Tr.) at 23-24 (emphasis added). Mr. Carter reiterated again in his deposition that in standby mode, when the Segway DI products do not automatically

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balance, that the motors are powered on.

4 Q. I think we talked about before that when  
5 you power on, there are a number of self tests that  
6 are performed; is that right?

7 **A. *That's correct.***

8 Q. And I think you also mentioned that a self  
9 test is performed on the motors as well; is that  
10 right?

11 **A. *Yes.***

12 Q. And so in the standby mode, the motors  
13 would be provided power to run those self tests;  
14 is that right?

15 **A. *The electronics are powered up, yes.***

*Id.* at 66 (emphasis added).

Mr. Carter's testimony is further confirmed by the source code for the Segway DI products. *See* RX-0050C (Nourbakhsh WS) at Q/A 115. Dr. Nourbakhsh identifies the function [ ] from the source code as the function performed to enter standby mode in the Segway DI products. *Id.* at Q/A 117. [

]. *Id.* [

]. *Id.*

Thus, the preponderance of the evidence shows that when the motorized drive arrangement in the Segway DI products is powered, the vehicles do not begin automatically balanced operation of the system. *Id.* at Q/A 119. Instead, the vehicles enter standby mode and enable power to the motors, but the vehicle remains unstable at this point. *Id.*

Complainants argue that "Claim 1 of the '230 patent is clear" that the claim



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limitation (“the motorized drive arrangement causing, when powered, automatically balanced operation of the system”) “should be interpreted in the context of the device in operation by a user - that is, with a rider present.” Compls. Br. at 250. However, nothing in the plain language of the disputed limitation from claim 1 of the ‘230 patent requires the operation by a rider. The claim only requires the “motorized drive arrangement causing, when powered, automatically balanced operation of the system.” Inasmuch as claims 3 and 4 each depend from claim 1, those claims also cannot be practiced by the Segway DI products.

Accordingly, the evidence shows that the Segway DI products do not practice claims 1, 3, or 4 of the ‘230 patent.

### **D. Validity of the ‘230 Patent<sup>37</sup>**

Respondents argue that (1) PCT Application Publication No. WO 96/23478 (“Kamen ‘478 Application”) anticipates the asserted claims of the ‘230 patent; (2) Kamen ‘478 Application in view of U.S. Patent No. 5,215,159 (“Nishida”) renders obvious the asserted claims of the ‘230 patent; (3) Kamen ‘478 Application in view of U.S. Patent No. 4,964,679 (“Rath”) renders obvious the asserted claims of the ‘230 patent; and (4) the asserted claims of the ‘230 patent are invalid for lack of enablement. *See* Resps. Br. at 144-72.

Complainants and the Staff disagree. *See* Compls. Br. at 134-61; Staff Br. at 116-27.

For the reasons set forth below, respondents have not shown by clear and

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<sup>37</sup> *See* Section III.C of this final ID for the legal discussion concerning validity.

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convincing evidence that the asserted claims of the '230 patent are invalid.<sup>38</sup>

### 1. Anticipation (“Kamen ‘478 Application”)

Respondents argue that PCT Application Publication No. WO 96/23478 (“Kamen ‘478 Application”) (RX-0010) anticipates the asserted claims 1, 3, and 4 of the ‘230 patent. *See* Resps. Br. at 144-59. The Kamen ‘478 application was filed on February 3, 1995. It is assigned to the same patent owner as the ‘230 patent. *See* RX-0030C (Cochran WS) at Q/A 62. Kamen ‘478 Application shares four named inventors with the ‘230 patent, as well as nearly identical figures and language. *Id.* Kamen ‘478 Application was published on August 8, 1996. Thus, it is § 102(b) prior art to the ‘230 patent, which claims priority to June 4, 1999. Kamen ‘478 Application was considered by the examiner during prosecution of the ‘230 patent. *See* CX-1969C (Nayfeh RWS) at Q/A 158.

As discussed below, respondents failed to demonstrate that Kamen ‘478 Application discloses certain claim limitations of the asserted claims of the ‘230 patent.

#### **Independent Claim 1**

Complainants argue that claim 1 of the ‘230 patent is not anticipated by Kamen ‘478 Application because it lacks the disclosure of four claim elements of claim 1.

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<sup>38</sup> In their prehearing brief, complainants addressed only certain limitations. *See* Compl. P.H. Br. at 456-520. To the extent complainants failed to address the other claim elements in their validity analysis of each prior art reference, under Ground Rule 7.c, complainants have waived any validity argument based on those elements that are not addressed in their prehearing brief. Thus, only those limitations that are analyzed in respondents’ prehearing brief are discussed below. Limitations not specifically addressed by complainants or the Staff are deemed to be met by each prior art reference.

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**“wherein the vehicle has a present velocity and a maximum operating velocity, determined by a requirement of acceleration to maintain balance”**

Respondents argue:

*Kamen '478* discloses that the vehicle has a present velocity and a maximum operating velocity, determined by a requirement of acceleration to maintain balance. First, *Kamen '478* discloses a “present velocity” and a “maximum operating velocity.” *Kamen '478* discloses that the vehicle has a vehicle velocity, i.e., the “present velocity” of the vehicle, and a determined threshold or speed limit, i.e., a “maximum operating velocity.” Just like the maximum operating velocity in the '230 patent, the speed limit in *Kamen '478* is a speed threshold under the maximum possible velocity that prevents the vehicle from reaching the maximum possible velocity, as admitted by Dr. Nayfeh. In fact, the '230 patent and *Kamen '478* provide the exact same disclosure on these velocities. For example, the '230 patent describes that “the present invention may be provided with *speed limiting to maintain balance and control*, which may otherwise be lost if the wheels...were permitted to reach the maximum speed of which they are currently capable of being driven.” Verbatim, *Kamen '478* discloses that “the present invention may be provided with *speed limiting to maintain balance and control*, which may otherwise be lost if the wheels...were permitted to reach the maximum speed of which they are currently capable of being driven.” Both the '230 patent and *Kamen '478* further disclose in the exact same words that “speed limiting occurs whenever the velocity of the vehicle exceeds a threshold that is the determined speed limit of the vehicle.” Thus, the determined threshold or speed limit of *Kamen '478* is a “maximum operating velocity,” much like the determined threshold or speed limit of the '230 patent.

Resps. Br. at 149-50.<sup>39</sup>

Complainants argue that *Kamen '478* Application contains no disclosure, teaching, or suggestion of a maximum operating velocity determined by a requirement of acceleration to maintain balance. See Compl. Br. at 138, citing CX-1969C (Nayfeh RWS) at Q/A 159. As argued by complainants, *Kamen '478* Application only describes a speed limiting feature, which is implemented to “pitch back” the transporter when a

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<sup>39</sup> Emphasis in original unless noted otherwise.

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determined threshold or speed limit is exceeded. *See* RX-0010 (Kamen '478 Application) at 33-34; CX-1969C (Nayfeh RWS) at Q/A 160. Kamen '478 Application describes setting a speed limit based on the maximum possible velocity of the vehicle in order to provide an alert to the user before the wheels are permitted to reach the maximum possible speed. *See* CX-1969C (Nayfeh RWS) at Q/A 160-61.

Complainants argue that nothing in Kamen '478 Application suggests that the threshold is determined based on a requirement of acceleration to maintain balance, as is required by this limitation of claim 1 of the '230 patent. *See* Compls. Br. at 139.

Complainants argue:

There is nothing to suggest that the threshold is determined based on a requirement of acceleration to maintain balance, as is required by claim 1 of the '230 patent. *Id.* Simply being able to speed up, as may be possible at the threshold in Kamen '478, is not enough to ensure that the vehicle is able to accelerate to maintain balance – if it cannot speed up quickly enough it cannot remain under the rider, and the rider will fall. *Id.* As recognized by the '230 patent, what is required is to look at a balancing margin, determined by comparing the present velocity not to an MPV or speed limit, but to an MOV. *Id.* Unlike the speed limit in Kamen '478, the maximum operating velocity claimed in the '230 is determined by a requirement of acceleration to maintain balance. *Id.*

Compls. Br. at at 139.

As argued by complainants, the pitch back function in Kamen '478 Application does not relate to a requirement of acceleration to maintain balance; rather, that function is based solely on a set speed that is lower than the maximum possible velocity of the vehicle. *See* Compls. Br. at 141. Indeed, there is no teaching in Kamen '478 Application that this pitch back function renders the vehicle capable of accelerating to maintain balance at the speed limit. *See* CX-1969C (Nayfeh RWS) at Q/A 169. Kamen '478 Application does not disclose a balancing margin determined from a maximum

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operating velocity, so the vehicle may not have the ability to accelerate quickly enough to achieve the pitch back and maintain balance. *Id.* Inasmuch as the requirement of acceleration to maintain balance has not been taken into account, the vehicle in Kamen '478 Application may not be able to pitch back rapidly enough depending on the speed, and the rider may still fall. *Id.*

**“in operation, has a balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle”**

Respondents argue:

*Kamen '478* discloses that the vehicle “in operation, has a balancing margin determined by the difference between the maximum operating velocity and the present velocity of the vehicle.” For example, *Kamen '478*, like the '230 patent, discloses that one method for determining the speed limit of the vehicle “is to measure the voltages of the battery and the motor and to monitor the difference between the two; the difference provides an estimate of the amount of velocity margin currently available to the vehicle.” *Compare* JX-0001 ('230 patent) at col. 15, lns. 24-36 with RX-0010 (*Kamen '478*) at p. 34, lns. 1-6. Thus, just like the '230 patent, *Kamen '478* discloses a velocity margin, i.e., a balancing margin, that is estimated based on a difference between the battery voltage and motor voltage of the vehicle. RX-0030C (Cochran WS) at Q/A 78.

Resps. Br. at 153-54.

Complainants argue that *Kamen '478* Application does not disclose this element of claim 1 of the '230 patent because *Kamen '478* Application does not disclose, teach, or suggest the claimed “balancing margin.” *See* Compls. Br. at 142-43.

As discussed in the preceding section, *Kamen '478* Application does not disclose, teach, or suggest a maximum operating velocity, so by definition, the concept of balancing margin cannot exist in *Kamen '478* Application. *See* CX-1969 (Nayfeh WS) at Q/A 171. Rather, *Kamen '478* Application discloses a “velocity margin,” which it

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defines as the difference between the present velocity (PV) and the maximum possible velocity (MPV). *Id.* This velocity margin does not take into account the requirement of acceleration to maintain balance and, therefore, is unrelated to the balancing margin claimed in the '230 patent. *Id.* Thus, Kamen '478 Application fails to disclose this claim limitation.

### **“a balancing margin monitor, coupled to the ground-contacting module, for generating a signal characterizing the balancing margin”**

Respondents argue:

There is no real dispute regarding the “balancing margin monitor” limitation, other than whether “balancing margin” is disclosed by *Kamen '478*. As discussed above, *Kamen '478* discloses a “balancing margin.”

Both the '230 patent and *Kamen '478* disclose identical balancing margin monitors that are coupled to the ground-contacting module, in order to generate a signal characterizing the balancing margin. Methods mentioned above, such as monitoring the battery voltage or monitoring the difference between the battery voltage and motor voltage are identically described in the '230 patent and *Kamen '478*. In particular, *Kamen '478* discloses that one method for determining the speed limit of the vehicle is to monitor the battery voltage, and another method “is to measure the voltages of the battery and the motor and to monitor the difference between the two; the difference provides an estimate of the amount of velocity margin currently available to the vehicle.” Thus, *Kamen '478* discloses a balancing margin monitor that generates a signal characterizing the balancing margin between the “maximum operating velocity” and the present velocity by measuring the battery voltage and motor voltage. *Kamen '478* also discloses that pitch modification is done by pitching the vehicle backward when the vehicle velocity exceeds the determined speed limit, and that this is achieved by “looking at the difference between the vehicle velocity and the determined speed limit, integrated over time.” This also discloses a balancing margin monitor that generates a signal characterizing the balancing margin.

Resps. Br. at 155-56.

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Complainants argue that Kamen '478 Application does not disclose this element of claim 1 of the '230 patent because Kamen '478 Application does not disclose, teach, or suggest the claimed "balancing margin monitor." *See* Compl. Br. at 144.

For the same reasons discussed above (*i.e.*, there is no disclosure in Kamen '478 Application of a maximum operating velocity, no disclosure of a balancing margin), Kamen '478 Application does not disclose a balancing margin monitor. *See* CX-1969C (Nayfeh RWS) at Q/A 176. Kamen '478 Application cannot disclose a monitor of something that is not present. Inasmuch as it does not disclose the claimed "balancing margin," it cannot disclose the claimed balancing margin monitor or generating a signal that characterizes a balancing margin. *See id.* at Q/A 175. At most, Kamen '478 Application discloses a velocity margin monitor, which is something different than the claimed balancing margin monitor. *See id.* at Q/A 175-77.

**"an alarm, coupled to the balancing margin monitor, for receiving the signal characterizing the balancing margin and for warning when the balancing margin falls below a specified limit"**

Respondents argue:

Complainants do not dispute that *Kamen '478* discloses the "alarm" element. They only argue that in *Kamen '478* the alarm is not triggered when the balancing margin "falls below a specified limit." *Id.*

*Kamen '478* discloses an alarm that alerts the rider that the vehicle's speed is being limited by pitching it back when the balancing margin falls below a specified limit, under Complainants' broad interpretation of "alarm." RX-0030C (Cochran WS) at Q/A 81; *see also* CX-1968C (Ganssle WS) at Q/A 1229-1235 (arguing that a pitch back of the Airwheel accused products is an alarm). For example, *Kamen '478* discloses that "[s]peed limiting is accomplished by pitching the vehicle back," which "occurs whenever the vehicle velocity exceeds a threshold that is the determined speed limit of the vehicle."

Resps. Br. at 157 (certain citations omitted).

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Complainants argue that Kamen '478 Application does not disclose this element of claim 1 of the '230 patent because Kamen '478 Application does not disclose, teach, or suggest the claimed "alarm . . . for warning when the balancing margin falls below a specified limit." Compls. Br. at 144; CX-1969C (Nayfeh RWS) at Q/A 178.

As argued by complainants, the pitch back feature of Kamen '478 Application occurs when the present velocity of the vehicle exceeds the speed limit threshold, whereas the '230 patent claims an alarm that triggers when the balancing margin falls below a specified speed limit threshold. *See* Compls. Br. at 144; CX-1969C (Nayfeh RWS) at Q/A 179. As Dr. Cochran confirmed at the hearing, the balancing margin claimed by the '230 patent is used to warn a user when the balancing margin falls below a specified limit. *See* Cochran Tr. at 872. Looking at a speed limit threshold is not the same as determining whether a balancing margin (which itself implies a range, or margin) has fallen below a specified limit as is required by claim 1 of the '230 patent. *See* CX-1969C (Nayfeh RWS) at Q/A 179-81.

\* \* \*

Accordingly, Kamen '478 Application fails to disclose all elements of claim 1 of the '230 patent. Respondents failed to meet their burden to demonstrate that Kamen '478 Application anticipates claim 1 of the '230 patent.

### **Dependent Claims 3 and 4**

To the extent any of the limitations of claim 1 of the '230 patent are not met by Kamen '478 Application, those same limitations will not be met in claims 3 and 4 of the '230 patent, as they each depend from claim 1. Thus, respondents cannot meet their



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burden to demonstrate that Kamen '478 Application anticipates claims 3 or 4 of the '230 patent.

### **2. Obviousness (“Kamen ‘478 Application”)**

Respondents argue that that claims 1, 3, and 4 of the '230 patent are invalid under 35 U.S.C. § 103(a) as rendered obvious by (1) Kamen '478 Application in view of U.S. Patent No. 5,215,159 (“Nishida”); and (2) Kamen '478 Application in view of U.S. Patent No. 4,964,679 (“Rath”). *See Resps. Br. at 159-67.*

As discussed below, the evidence shows that Kamen '478 Application, Nishida, and Rath fail to disclose certain limitations of the asserted '230 patent claims.

#### **a. Kamen ‘478 Application in view of U.S. Patent No. 5,215,159 (“Nishida”) (RX-0011)**

Respondents argue that U.S. Patent No. 5,215,159 (“Nishida”), in combination with Kamen '478 Application, renders obvious the asserted claims of the '230 patent. *See Resps. Br. at 159-63.*

Nishida was filed on May 31, 1991, and claims priority to a Japanese patent application filed on June 4, 1990. Nishida issued on June 1, 1993. Thus, Nishida is prior art to the '230 patent. The evidence shows that respondents failed to meet their burden to prove invalidity by Kamen '478 Application in view of Nishida.

For the reasons discussed above in the anticipation section, Kamen '478 Application does not disclose four elements of claim 1: “maximum operating velocity,” “balancing margin,” “balancing margin monitor,” and “an alarm . . . for warning when the balancing margin falls below a specified limit.” Complainants argue that Nishida fails to remedy these deficiencies. *See Compls. Br. at 145; CX-1969C (Nayfeh RWS) at*

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Q/A 186. As an initial matter, Nishida teaches a system for limiting speed of an automobile based on the distance between the automobile and the vehicle in front of it. CX-1969C (Nayfeh RWS) at Q/A 188; RX-0011 ('159 Patent) at col. 3, lns. 9-15, lns. 59-68. Nishida is designed to aid in preventing vehicle collisions, not to maintain vehicle balance. *See* CX-1969C (Nayfeh RWS) at Q/A 192.

As Dr. Nayfeh explained, a person of ordinary skill would not consider modifying Kamen '478 Application to include the alarm system described in Nishida to be the mere application of a known technique to a piece of prior art ready for the improvement. *See id.* Kamen '478 does not suggest any concern with inter-vehicle distance or applying brakes to avoid a collision. In fact, Kamen '478 Application lacks any component to determine the distance to an object in front of it. *See id.* Respondents do not explain how the teachings of Nishida could be implemented in Kamen '478 Application, when Kamen '478 Application does not even contain the necessary sensors or have the same type of braking system. Thus, a person of ordinary skill would not consider Kamen '478 Application and Nishida to be in the same field. Respondents have not met their burden to demonstrate why a person of ordinary skill in the art would be motivated to combine the teachings of Kamen '478 Application with that of Nishida.

In sum, both Kamen '478 Application and Nishida, either independently or taken together, fail to disclose all elements of claim 1 of the '230 patent, including: "maximum operating velocity," "balancing margin," "balancing margin monitor," and "an alarm . . . for warning when the balancing margin falls below a specified limit." Thus, respondents failed to meet their burden to demonstrate that Kamen '478 Application in view of Nishida renders obvious claim 1 of the '230 patent. For the same reasons, Kamen '478

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Application in view of Nishida does not render obvious dependent claims 3 and 4 of the '230 patent.

\* \* \*

Accordingly, respondents have not shown by clear and convincing evidence that Kamen '478 Application in view of Nishida renders obvious the asserted claims of the '230 patent.

**b. Kamen '478 Application in view of U.S. Patent No. 4,964,679 ("Rath") (RX-0012)**

Respondents argue that U.S. Patent No. 4,964,679, in combination with Kamen '478 Application, renders obvious the asserted claims of the '230 patent. *See* Resps. Br. at 163-67.

Rath was filed on February 23, 1989, and claims priority to a German patent application filed on February 23, 1988. Rath issued on October 23, 1990. Thus, Rath is prior art to the '230 patent. The evidence adduced at the hearing is insufficient to prove invalidity by Kamen '478 Application in view of Rath.

For the reasons discussed above in the anticipation section, Kamen '478 Application does not disclose four elements of claim 1: "maximum operating velocity," "balancing margin," "balancing margin monitor," and "an alarm . . . for warning when the balancing margin falls below a specified limit." Complainants properly argue that Rath fails to remedy these deficiencies. *See* Compls. Br. at 145-46; CX-1969C (Nayfeh RWS) at Q/A 199. Rath teaches a system for controlling the braking system of a heavy-duty vehicle by monitoring a variety of parameters, such as vehicle velocity, axle load,

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transverse acceleration, brake temperature, brake wear condition, tire pressure, and state of a compressed air reservoir. *See* CX-1969C (Nayfeh RWS) at Q/A 201. According to Rath, the system warns the driver if the measured parameters indicate to the system that the stopping distance will be longer than a predetermined rated stopping distance for the given conditions. *See id.* Thus, like Nishida, Rath is designed to aid in preventing vehicle collisions, not to maintain vehicle balance. *See id.* at Q/A 205. Thus, Kamen '478 Application and Rath are not analogous art and respondents have not met their burden to demonstrate why a person of ordinary skill in the art would be motivated to combine the teachings of Kamen '478 Application with that of Rath.

In sum, both Kamen '478 Application and Rath, either independently or taken together, fail to disclose all elements of claim 1 of the '230 patent, including: "maximum operating velocity," "balancing margin," "balancing margin monitor," and "an alarm . . . for warning when the balancing margin falls below a specified limit." Thus, respondents failed to meet their burden to demonstrate that Kamen '478 Application in view of Rath renders obvious claim 1 of the '230 patent. For the same reasons, Kamen '478 Application in view of Rath does not render obvious dependent claims 3 and 4 of the '230 patent.

\* \* \*

Accordingly, respondents have not shown by clear and convincing evidence that Kamen '478 Application in view of Rath renders obvious the asserted claims of the '230 patent.

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### c. Secondary Considerations

The objective evidence, also known as “secondary considerations,” includes commercial success, long felt need, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 13-17 (1966); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006). “[E]vidence arising out of the so-called ‘secondary considerations’ must always when present be considered en route to a determination of obviousness.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Secondary considerations, such as commercial success, will not always dislodge a determination of obviousness based on analysis of the prior art. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 426 (2007) (commercial success did not alter conclusion of obviousness).

Complainants argue there is substantial evidence of secondary indicia of non-obviousness of the invention in the ‘230 patent. *See* Compl. Br. at 147-58.

Complainants argue several factors weigh in favor of a finding of non-obviousness:

- the claimed invention of the ‘230 patent is a pioneering invention
- the claimed invention of the ‘230 patent is a commercial success
- there is substantial recognition in the industry of the claimed invention of the ‘230 patent

The evidence supports the first of the three factors and shows a nexus with the merits of the claimed invention of the ‘230 patent. *Demaco*, 851 F.2d at 1392. Thus, the evidence supports the validity of the ‘230 patent.

#### **Whether the Invention Is a Pioneering Invention**

A “pioneering advance in the field” can be objective indicia of non-obviousness. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1563 (Fed. Cir. 1997). The ‘230

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patent, which complainants argue was implemented in the Segway Gen 1 products, covers a wholly novel device, but is also directed to structure, function, and operation never before performed. *See* CX-1969C (Nayfeh RWS) at Q/A 369. The structure, function, and operation ensure a commercially safe product. *See id.* According to complainants, the Segway Gen 1 products incorporated the claimed invention of (i) a balancing margin monitor and limit to maintain the ability to accelerate to maintain balance and control of the personal transporter, and (ii) an alarm, such as a lift back of the platform and/or audio warning, to alert a rider when a maximum operating velocity is approaching so that the rider does not surpass such speed and compromise her ability to accelerate and maintain balance and control of the transporter. *See id.* The evidence shows that the two aforementioned aspects of the claimed invention of the '230 patent makes the personal transporter safe because without such a balancing margin limit and warning, a rider would risk exceeding a maximum operating velocity compromising the ability of the personal transporter to accelerate and maintain balance. *See* Compls. Br. at 147-48, citing CX-1969C (Nayfeh RWS) at Q/A 369.

### **Commercial Success**

Complainants argue that the Segway Domestic Industry Products (the Segway PT i2, i2 SE, x2, and x2 SE) (“Segway DI products”), the Ninebot by Segway miniPRO and One S1, and respondents’ accused products practice the ‘230 patent, and have been commercially successful. *See* Compls. Br. at 149-50. For the reasons discussed above in the infringement sections concerning “maximum operating velocity,” respondents’ accused products do not practice the ‘230 patent. In addition, for the reasons discussed above in the domestic industry section concerning “maximum operating velocity,”

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complainants have not demonstrated that the '230 patent is implemented in the Segway DI products, or any other products. Moreover, in discussing how the invention of the '230 patent was a pioneering one, complainants represented that the Segway Gen 1 products embodied the invention of the '230 patent. *See* Compl. Br. at 147-49. Yet, complainants do not include the Segway Gen 1 product in its list of commercial successes. *Id.* Furthermore, complainants did not present admissible evidence that shows that the Segway Gen 1 products and the Ninebot by Segway miniPRO and One S1 products actually practice the '230 patent. *See, e.g.,* Compl. Br. at 150 (“Dr. Nayfeh provides claim charts of an element by element analysis comparing the Ninebot miniPRO and One S1 products with asserted claims 1 and 3 of the '230 patent.”). Claim charts are not probative evidence. Without any commercialized products embodying the '230 patent, complainants cannot establish a nexus to the '230 patent.

### **Evidence of Recognition in the Industry**

Complainants argue that there has been “substantial recognition in the industry of the claimed invention of the '230 patent.” Compl. Br. at 157-58. Yet, complainants only offer two posts from “SegwayChat,” one posted December 15, 2002 and a second posted nearly four years later on October 9, 2006, that allegedly “show recognition in the industry.” *See* CX-1969C (Nayfeh RWS) at Q/A 377, CX-1827C (Kamen Dep. Exhibits) at 192, 201. These posts are contained in proposed exhibit CX-1827C. However, this is insufficient evidence of recognition in the industry. The “substantial recognition” cited by Dr. Nayfeh comes from two users identified only as “Redkey” and “Stan671” from the SegwayChat forum. *See* CX-1969C (Nayfeh RWS) at Q/A 377. Typically, patentees demonstrate recognition in the industry by citing industry association awards and

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accolades, peer-reviewed journal articles, media reports, and similar evidence. Two brief posts on “SegwayChat” by individuals whose identities are known over a four year period does not support a finding of substantial recognition in the industry.

\* \* \*

Accordingly, the administrative law judge finds that there is some evidence of secondary considerations that tend to support non-obviousness of the claims of the asserted patents.

### 3. Enablement

Respondents argue that the ‘230 patent is invalid for lack of enablement. *See* Resps. Br. at 167-72.

Respondents argue that the specification of the ‘230 patent does not describe how to calculate a “maximum operating velocity” and fails to enable the full scope of the claimed invention. The evidence shows that a person of ordinary skill in the art can calculate a “maximum operating velocity,” based on the specification. *See* CX-1969C (Nayfeh RWS) at Q/A 212. At a minimum, the ‘230 patent specification provides at least two methods of determining a “maximum operating velocity.” JX-0001 (‘230 Patent) at col. 15, lns. 29-36. The specification teaches that one method of determining a “maximum operating velocity” is to monitor the battery voltage, which is then used to estimate the maximum velocity the vehicle is capable of maintaining. JX-0001 (‘230 Patent) at col. 15, lns. 29-32. Alternatively, the voltages of the battery and the motor can be measured and monitored, with the difference providing an estimate of the amount balancing margin currently available to the vehicle. *Id.* at col. 15, lns. 32-36.



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Despite respondents' arguments to the contrary, the evidence shows that a person of ordinary skill in the art can readily make that determination. *See* CX-1969C (Nayfeh RWS) at Q/A 210-17. The person of ordinary skill in the art would understand that the acceleration to maintain balance depends on the "present power output and a specified maximum power output" with the balancing margin determined by the difference between the two. *Id.* at Q/A 214; JX-0001 ('230 Patent) at col. 2, lns. 32-36. The patent specification further teaches that "the balancing margin between a specified maximum power output and the current power output of the motors may be monitored." JX-0001 ('230 Patent) at col. 15, lns. 15-19.

Accordingly, respondents failed to meet their burden to demonstrate that the '230 patent is invalid for lack of enablement.

### V. U.S. Patent No. 7,275,607

United States Patent No. 7,275,607 ("the '607 patent), entitled "Control of a personal transporter based on user position," issued on October 2, 2007, to named inventors Dean Kamen; Robert R. Ambrogi; Janes J. Dattolo; Robert J. Duggan; J. Douglas Field; Richard Kurt Heinzmann; Matthew M. McCambridge; John B. Morrell; Michael D. Piedmonte; and Richard J. Rosasco. JX-0003 ('607 Patent). The '607 patent issued from Application No. 10/939,955, filed on September 13, 2004. *Id.*<sup>40</sup> The '607 patent relates to "control of personal transporters, and more particularly to devices and

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<sup>40</sup> The '607 patent is a continuation-in-part application of U.S. Application No. 10/308,850, filed December 3, 2002, now U.S. Patent No. 6,789,640, which is a continuation-in-part application of U.S. Application No. 10/044,590, filed January 11, 2002, now abandoned, which is a division of U.S. Application No. 09/635,936, filed August 10, 2000, now U.S. Patent No. 6,367,817, which is a division of U.S. Application No. 09/6325,978, filed on June 4, 1999, now U.S. Patent No. 6,302,230. *Id.*

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methods for providing user input with respect to either directional or velocity control of such transporters (having any number of ground-contacting elements) based on the position or orientation of a user.” JX-0003 (‘607 Patent) at col. 1, lns. 21-26. The ‘607 patent has a total of nine claims.

Complainants assert independent apparatus claim 1 and dependent claims 2, 3, 4, and 6 of the ‘607 patent. *See* Compls. Br. at 99.

As discussed below, the evidence shows that (1) the asserted claims of the ‘607 patent are not infringed by the accused products; (2) complainants have not satisfied the technical prong of the domestic industry requirement; and (3) the asserted claims are not invalid.

Asserted claims 1-4 and 6 read as follows:

1. A controller for a transporter having at least one primary ground-contacting element, the transporter characterized by a roll angle, the controller comprising:
  - a. an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user;
  - b. a pitch state estimator for sensing a pitch of the transporter and outputting a pitch state signal; and
  - c. a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the pitch state signal based on the pitch of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter.
2. A controller in accordance with claim 1, wherein the input adapted to receive specification by a user is more particularly adapted to receive specification by the user of a fore/aft direction.

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3. A controller in accordance with claim 1, further comprising:

a summer for differencing an instantaneous yaw value from the desired yaw to generate a yaw error value such that the yaw command signal generated by the processor is based at least in part on the yaw error value.

4. A controller in accordance with claim 1, wherein the input for receiving adapted to receive user specification includes a pressure sensor disposed to detect orientation of the user.

6. A controller in accordance with claim 1, wherein the input for receiving user specification includes a force sensor disposed on a platform supporting the user for detecting weight distribution of the user.

JX-0003 ('607 Patent) at col. 18, lns. 9-25, 26-29, 30-35, 36-39, 43-46.

### A. Claim Construction<sup>41</sup>

#### 1. A Person of Ordinary Skill in the Art

As an initial matter, the parties did not differentiate between the two asserted patents with respect to the proposed definitions for a person of ordinary skill in the art. *See* Joint Outline at 1; Compls. Br. at 15; Resps. Br. at 5-7; Staff Br. at 25-26.

Thus, for the same reasons discussed above with respect to the '230 patent, the administrative law judge finds that a person of ordinary skill in the art with respect to the '607 patent is a person who has at least (1) a bachelor's degree in mechanical engineering, electrical engineering, aerospace engineering, robotics, computer science, or another related technical field, and at least two years of experience performing mechanical design, dynamic analysis, and/or control design for mechatronic systems; or

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<sup>41</sup> *See* Section III.A of this final ID for the legal discussion concerning claim construction.

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(2) a master’s degree in mechanical engineering, electrical engineering, aerospace engineering, robotics, computer science, or another related technical field.

**2. Undisputed Claim Constructions**

The parties have agreed on the following constructions for the ‘607 patent:

<b>Claim Term</b>	<b>Claim</b>	<b>Joint Proposed Construction</b>
pitch state estimator	1	an element that estimates the pitch of the transporter
an instantaneous yaw value	3	current yaw value
yaw error value	3	difference between the current yaw and the desired yaw

Staff Br. at 26.

**3. (“desired” / “specified” / “user specified”) “yaw”**

Below is a chart showing the parties’ proposed claim constructions.

<b>(“desired” / “specified” / “user specified”) “yaw”</b>	
<b>Complainants’ Construction</b>	<b>Respondents’ and Staff’s Construction</b>
(user directed) rotation about a vertical axis	(user directed) angle of rotation about a vertical axis

Compls. Br. at 29-33; Resps. Br. at 15-20; Staff Br. at 35-37.

The terms “(desired” / “specified” / “user specified”) “yaw” appear in asserted claims 1 and 3 of the ‘607 patent.

The two proposed constructions are nearly identical, except that respondents and the Staff argue that a person of ordinary skill in the art would understand that yaw is not merely a rotation, but an angle of rotation. Although complainants do not explicitly state as such, it appears that they interpret “yaw” as a verb, whereas respondents and the Staff

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construe it as a noun, as it is intended in the context of the asserted claims. The construction proposed by respondents and the Staff is supported by the claim and the understanding of a person of ordinary skill in the art.

As instructed by the Federal Circuit, 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.” *Phillips*, 415 F.3d at 1316. Thus, we should start with the relevant portion of claim 1 itself:

an input adapted to receive specification by a user of a desired *yaw*, *yaw rate*, and direction of motion of the transporter, at least the desired *yaw* and *yaw rate* being based on a detected body orientation of the user.

JX-0003 (‘607 Patent) (emphasis added). The claim recites an input that receives, *inter alia*, a desired yaw and a yaw rate. If complainants’ proposed construction for “yaw” is substituted in the context of claim 1, it a person of ordinary skill in the art would be left to wonder how an input can receive a desired (or user directed) rotation about a vertical axis. The input must receive a value for the amount of rotation; it does not “receive” the act of rotation. The flaw in complainants’ argument is revealed further when their proposed construction is evaluated in the context of claim 3:

A controller in accordance with claim 1, further comprising: a summer for differencing an instantaneous *yaw* value from the desired *yaw* to generate a *yaw* error value such that the *yaw* command signal generated by the processor is based at least in part on the *yaw* error value.

JX-0003 (‘607 Patent) (emphasis added). The term is recited in conjunction with the term “value” three times. Even where the claim refers to a “desired yaw,” the claim recites that a summer takes the difference between the “instantaneous yaw value” and the “desired yaw” in order “to generate a yaw error value.” *See also* JX-0003 (‘607 Patent)

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at col. 5, lns.21-25 (“FIG. 2 depicts the differencing, in summer 522, of the current yaw value  $\Psi$  with respect to the desired yaw value  $\Psi_{\text{desired}}$  to obtain the current yaw error  $\Psi_{\text{err}}$ . Desired yaw value  $\Psi_{\text{desired}}$  is obtained from a user input, various embodiments of which are described herein.”). Under complainants’ proposed construction, claim 3 recites a summer that takes the difference between a value (*i.e.*, “instantaneous yaw value”) and an action (*i.e.*, “user directed rotation about a vertical axis”). This is not persuasive.

Furthermore, dictionary definitions are consistent with the correct claim construction. *See* RX-0032 (Dictionary of Science and Technology) at 7 (defining “yaw” as “angular rotation of an aircraft or other vessel about a vertical axis”); RX-0034 (Van Nostrand’s Scientific Encyclopedia) at 4 (defining “yaw, aircraft” as “this is the angular displacement about the normal axis of an aircraft”).

Accordingly, the administrative law judge has determined that the claim term “yaw” should be construed to mean “angle of rotation about a vertical axis.” In addition, each of the terms “desired yaw,” “specified yaw,” and “user-specified yaw” should be construed to mean “user directed angle of rotation about a vertical axis.”

**4. “summer”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“summer”</b>	
<b>Complainants’ Construction</b>	<b>Respondents’ and Staff’s Construction</b>
“an element used to compare inputs”	“device whose output equals the sum of its inputs”

Compls. Br. at 33; Resps. Br. at 20-21; Staff Br. at 37-39.

The term “summer” appears in asserted claim 3 of the ‘607 patent.

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The core dispute between the two proposed constructions appears to be that complainants believe the use of the word “sum” in the respondents and the Staff’s proposed construction improperly limits the term “summer.” Respondents and the Staff disagree that the “summer” merely “compares” inputs.

One of ordinary skill in the art would understand that subtracting one number from a second number is identical to taking the sum of the second number and the negative of the first number. In fact, Figure 2 of the ‘607 patent, which shows the summer 522 in context, shows two inputs into the summer: a current yaw value ( $\Psi$ ) and the desired yaw ( $\Psi_{\text{DESIRED}}$ ).

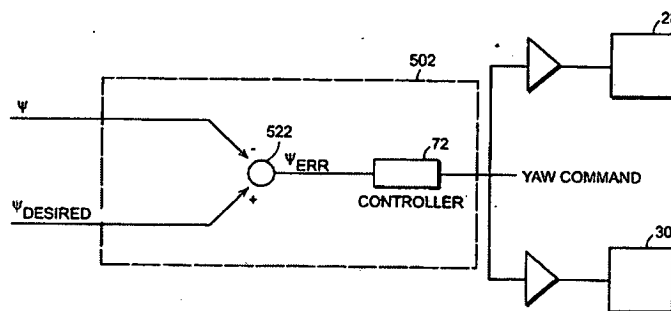


FIG. 2

Next to the input for current yaw value, there is a minus sign label (“-”), whereas by the input for the desired yaw, there is a plus sign label (“+”), with both inputs being entered and combined in the summer to generate the yaw error ( $\Psi_{\text{ERR}}$ ). This figure is consistent with a person of ordinary skill in the art’s understanding of a “sum” and its use in the context of respondents and the Staff’s proposed construction.

With respect to the term “compare,” one of ordinary skill in the art would not understand that term necessarily includes the adding or subtracting of two values. For example, when one compares one price to another, the act of comparing is merely noting

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whether one price is greater than, lesser than, or equal to the second price. On the other hand, it appears that complainants equate comparing values with adding or subtracting them. Compls. Br. at 33 (“receives the two inputs, and compares them, such as by adding or subtracting”). As such, complainants’ proposed construction renders the term confusing, and could alter the meaning of the term “summer.”

Accordingly, the administrative law judge has determined that the claim term “summer” should be construed to mean “device whose output equals the sum of its inputs.”

**5. “pitch”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“pitch”</b>	
<b>Complainants’ Construction</b>	<b>Respondents’ and Staff’s Construction</b>
“rotation about a lateral axis of the transporter”	“angle of rotation about a lateral axis of the transporter”

Compls. Br. at 33-34; Resps. Br. at 21-24; Staff Br. at 39-40.

The term “pitch” appears in asserted claim 1 of the ‘607 patent.

The two proposed constructions are nearly identical, except that respondents and the Staff argue that a person of ordinary skill in the art would understand that pitch is not merely a rotation, but an angle of rotation. Complainants argue that no particular angle of rotation is required. The construction proposed by respondents and the Staff is supported by the claim, and the understanding of a person of ordinary skill in the art.

The term “pitch” appears in claim 1 of the ‘607 patent, which recites in relevant part:



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a *pitch* state estimator for sensing a *pitch* of the transporter and outputting a *pitch* state signal; and a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the *pitch* state signal based on the *pitch* of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter.

JX-0003 ('607 Patent) (emphasis added). The “pitch command signal” is disclosed in the specification as “based on a pitch error.” *Id.* at col. 2, lns. 6-7. One of ordinary skill in the art understands that a pitch error has to be a numerical value. *See* RX-0050C (Nourbakhsh) at Q/A 160.

Furthermore, it would not make sense for a “pitch state estimator” to be an element that merely senses a rotation or a directionality of rotation. As an estimator, it must output a value, which can only be expressed in degrees (of an angle). This is supported by the specification’s specific reference to U.S. Patent No. 6,332,103 (“the ‘103 patent”) (RX-0017), which describes the pitch state estimator. *See* JX-0003 ('607 Patent) at col. 12, lns. 2-7. The ‘103 patent clearly discloses that “[p]itch state”... includes both the pitch in the fore-aft plane and the pitch rate of the vehicle, i.e.  $\Theta$  and  $\Theta_r$ , where  $\Theta_r$  is the time rate of change of  $\Theta$ ” and further describes “pitch” as follows: “character  $\Theta$  identifies the fore-aft inclination i.e. the pitch angle.” RX-0017 at col. 3, lns. 3-6, 13-17. Each reference to pitch is in the context of an angle ( $\Theta$ ).

Accordingly, the administrative law judge has determined that the claim term “pitch” should be construed to mean “angle of rotation about a lateral axis of the transporter.”

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**6. “detecting weight distribution of the user”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“detecting weight distribution of the user”</b>	
<b>Complainants’ and Chic’s and Staff’s Construction</b>	<b>Other Respondents’ Construction</b>
No construction necessary. The term should be ascribed its plain and ordinary meaning.	“sensing the difference in the user’s weight across at least two force sensors”

Compls. Br. at 48-49; Resps. Br. at 33-34; Staff Br. at 40-41.

The term “detecting weight distribution of the user” appears in asserted claim 6 of the ‘607 patent.

In the Updated Joint Claim Construction Statement, the Staff joined the construction proposed by respondents Swagway, Jetson, and Powerboard, *i.e.*, “sensing the difference in the user’s weight across at least two force sensors.” *See* RX-0031. After evaluating the arguments raised by complainants, the Staff adopted complainants and respondent Chic’s position that construction of this term is unnecessary and should be given its plain and ordinary meaning. *See* Staff Br. at 40-41.

Respondents Swagway, Jetson, Powerboard, have proposed that the term be construed to mean “sensing the difference in the user’s weight across at least two force sensors.” Those respondents’ proposed construction has no support in the ‘607 patent specification or intrinsic evidence. As complainants’ expert Jack Ganssle testified, a person of ordinary skill would not understand anything in the ‘607 patent specification or intrinsic evidence to require at least two force sensors, or sensing the difference between them. *See* CX-1968C (Ganssle WS) at Q/A 182-83. Further, claim 6 refers to “a force

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sensor,” and it is a well-known convention in patent law that the indefinite article “a” in a patent claim means “one or more.” *See, e.g., Baldwin Graphic Sys., Inc. v. Seibert, Inc.*, 512. F.3d 1338, 1342 (Fed. Cir. 2008). In addition, nowhere does the patent specification disclose that two or more such sensors are required. For example, the ‘607 patent specification also discloses “a force sensor disposed on a platform supporting the user for detecting weight distribution of the user.” *See* JX-0003 (‘607 Patent) at col. 2, lns. 20-21.

Accordingly, the administrative law judge has determined that the claim term “detecting weight distribution of the user” should be given its plain and ordinary meaning.

**7. “based on a detected body orientation of the user”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“based on a detected body orientation of the user”</b>		
<b>Complainants’ Construction</b>	<b>Other Respondents’ Construction</b>	<b>Chic and Staff’s Construction</b>
“based on a mechanism designed to correspond to the body position of the user”	“based on the detected position of the user’s body and not on tilting angle”	“based on a detected lean position of the user’s body, as opposed to being based upon manual input or tilting of the vehicle”

Compls. Br. at 35-48; Resps. Br. at 24-33; Staff Br. at 41-48.

The term “based on a detected body orientation of the user” appears in asserted claim 1 of the ‘607 patent.

The central dispute between the complainants’ construction and the other two proposed constructions is that complainants, by excluding the “not on tiling angle” limitation, appear to be seeking to recapture in the claim scope something they disavowed

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during prosecution.

The relevant portion of claim 1 of the '607 patent where this disputed term appears is reproduced below:

an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being *based on a detected body orientation of the user*

JX-0003 ('607 Patent) (emphasis added). Thus, the term, as used in the claim, refers to a “specification by a user of a . . . desired yaw and yaw rate that are based on a detected body orientation of the user.”

### **Whether Tilting Angle Was Disavowed During Prosecution**

During prosecution of the '607 patent, the applicant had to overcome a rejection for anticipation in view of a Japanese patent application publication no. JP 4-201793 to Furukawa (“Furukawa”) (RX-0022, original Japanese document; RX-0023, English translation of Furukawa; RX-0029, certified English translation of Furukawa). *See* JX-0004 ('607 Patent File History) at 55. In order to do so, the applicant stated:

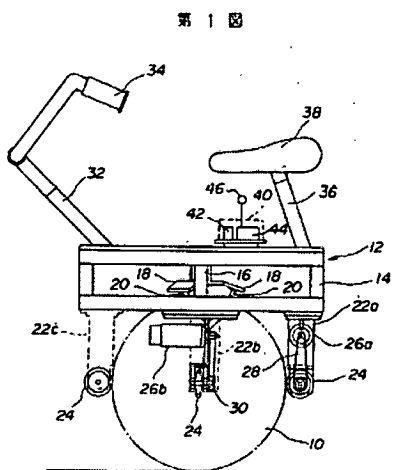
Similarly, Applicant’s representative finds no teaching in Furukawa for yaw based on user orientation. Mention is made in Furukawa, while not necessarily enabled, of travel in x and y directions based on tilting angle of the frame of the device. The current claims, however, require a command based on input other than titling [sic] angle, namely body orientation of the user.

*Id.* (Mar. 6, 2007 Response to Office Action, p. 6). The applicant’s response is explicit that the claims of the '607 patent “require a command based on input other than tilting angle, namely body orientation of the user.” Complainants are now improperly attempting to recapture their disavowed claim scope by removing the “not on tilting angle” restriction from the interpretation of the term “based on a detected body

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orientation of the user.” In the passage from the prosecution history quoted above, the applicants unequivocally state that, with respect to the ‘607 patent, a command based on tilting angle is excluded from and different than a command based on body orientation of the user and that the former is outside the scope of the claim. Thus, in construing the term “based on a detected body orientation of the user,” complainants are barred from seeking to include “based on tilting angle” back into the term that is “based on . . . body orientation of the user.” *Biogen Idec*, 713 F.3d at 1095 (“when the patentee unequivocally and unambiguously disavows a certain meaning to obtain a patent, the doctrine of prosecution history disclaimer narrows the meaning of the claim consistent with the scope of the claim surrendered”).

Complainants argue that the prosecution history disclaimer is not as broad as the plain language of the applicant’s response makes clear. Complainants argue that the applicant was merely trying to distinguish Figure 1 in Furukawa, which was used in the earlier Office Action to reject the claims as anticipated.



RX-0022 (Furukawa) at Fig. 1. Instead, complainants state that there is no disavowal of a yaw command based on tilting angle because Figure 1 of Furukawa does not disclose a

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vehicle that is capable of yaw movement. *Id.* at 128-30. Thus, even though the frame of the vehicle disclosed in Figure 1 of Furukawa is capable of being tilted by the user and can be used to turn the vehicle, complainants' argument is essentially that they did not disavow any claim scope because the Furukawa Figure 1 vehicle does not yaw and, thus, is not invalidating prior art to the '607 patent.

The applicants' response to the Office Action stated: "Similarly, Applicant's representative finds no teaching in Furukawa for yaw based on user orientation. Mention is made in Furukawa, while not necessarily enabled, of travel in x and y directions based on tilting angle of the frame of the device." *See* JX-0004 ('607 Patent File History) at 55. If the applicants believed that Furukawa was not invalidating § 102 art because the disclosed vehicle was not capable of yaw movement, the argument should have ended there. However, the applicants went further and essentially argued that in addition to Furukawa allegedly not disclosing a vehicle capable of yaw, the claims of the '607 patent are also distinguished from Furukawa because the claims of the '607 patent "require a command based on input other than titling [sic] angle, namely body orientation of the user." *See id.* In other words, the applicants either: (i) implicitly acknowledged that Furukawa discloses commands based on tilting angle or (ii) argued that regardless of what Furukawa does or does not disclose, the claims of the '607 patent "require a command based on input other than tilting angle, namely body orientation of the user." *See id.* The reader of this portion of the prosecution history, whether he or she is a person of ordinary skill in the art or not, can only come to the conclusion that the applicants made the second argument, inasmuch as complainants argue that Furukawa does not disclose a vehicle capable of yaw based on tilting angle.

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The language used by the applicants to traverse the examiner's rejection was solely the applicants. The disavowal of tilting angle (irrespective of whether Furukawa discloses a vehicle that yaws) is absolutely clear.

Similarly, Applicant's representative finds no teaching in Furukawa for yaw based on user orientation. Mention is made in Furukawa, while not necessarily enabled, of travel in x and y directions based on tilting angle of the frame of the device. The current claims, however, require a command based on input other than tilting angle, namely body orientation of the user.

*Id.* Complainants are not allowed to reinterpret or rewrite the statements they made during the prosecution history. If the applicants were merely disclaiming tilting angle in order to distinguish the Furukawa reference, they would have to explain that the "current claims, however, require a command based on input other than tilting angle, namely body orientation of the user," for "travel in x and y directions," but commanding a yaw in the current claims has no restriction as to tilting angle. But this is not the explanation that applicants included in their response to the Office Action. Without this explanation, the plain language of the words chosen by the applicants in preparing their response to the Office Action must be interpreted in a plain, straightforward manner. The only conclusion to be drawn from such an interpretation is a broad disclaimer that the "current claims . . . require a command based on input other than tilting angle, namely body orientation of the user."

### **Manual Inputs**

The evidence shows that complainants have disavowed manual inputs, in addition to tilting, from inclusion in the "body orientation of a user" limitation during prosecution of the '607 patent. *See* Resps. Br. at 25-26. In the same March 6, 2007 Response to the Office Action, in which the applicants disavowed tilting angle to overcome a rejection in

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view of Furukawa, the applicants also made statements to overcome a rejection in view of U.S. Patent No. 5,791,425 to Kamen (“Kamen ‘425”) (RX-0020). They stated that the Kamen ‘425 reference to a joystick cannot be “taken to subsume ‘body orientation of a user”” and that manual input via joystick is provided “in absolute indifference to the orientation of the user.” *See* JX-0004 (‘607 Patent File History) at 55. Thus, as Chic argues, the applicants made clear that manual input is not the same as “a detected body orientation.” *See* RX-0050C (Nourbakhsh WS) at Q/A 155.

### Lean Position

The prosecution history also supports the conclusion that this term must be limited to detecting a lean position of the user. In order to overcome the rejection in view of Kamen ‘425, the applicants distinguished Kamen ‘425, which disclosed a manual input with a joystick, and noted that this was not the same as detection of a user’s body orientation:

The user might lean to the right, but if the joystick is hard over left, that’s where the Kamen device will turn.

JX-0004 (‘607 Patent File History) at 55. Chic correctly notes that the applicants themselves made clear that if the reference could not detect the lean of the user, it did not detect the user’s body orientation.” *See* Resps. Br. at 27-28. This statement by the applicant to distinguish over prior art should be binding on complainants. *See Spectrum Int’l, Inc. v. Sterlite Corp.*, 164 F.3d 1372, 1378 (Fed. Cir. 1998) (stating that “explicit statements made by a patent applicant during prosecution to distinguish a claimed invention over prior art may serve to narrow the scope of a claim.”). “That explicit arguments made during prosecution to overcome prior art can lead to narrow claim



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interpretations makes sense, because “[t]he public has a right to rely on such definitive statements made during prosecution.” *Id.*, quoting *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335 (Fed. Cir. 1998). “Claims may not be construed one way in order to obtain their allowance and in a different way against accused infringers.” *Southwall Techs.*, 54 F.3d at 1576 (citing *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1562 (Fed. Cir. 1991)). Thus, the prosecution history shows that the detection of body orientation, in the context of the ‘607 patent, requires detection of a user’s lean position.

\* \* \*

Complainants’ proposed construction for the term “based on a detected body orientation of the user,” *i.e.*, “based on a mechanism designed to correspond to the body position of the user,” rewrites the claim and gives it a different meaning, function, and purpose. Claim 1, in relevant portion, recites an input that receives user specifications, such as a desired yaw and yaw rate, which are based on a detected body orientation. In other words, the information received (*i.e.*, user specifications) by the “input” is information (such as the desired yaw and yaw rate) that is based on detected body orientation.

Complainants’ proposed construction rewrites the claim so that the information received by the “input” is information based on a mechanism that “corresponds” to body orientation. In other words, complainants are inserting another mechanism into the claim, when no such mechanism is recited or contemplated by the claim. Furthermore, something which “corresponds” to body orientation is not the same thing as “detected” body orientation. Something which “corresponds” is something that (i) conforms, (ii) is

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similar or analogous to, or (iii) is equivalent to. Something that is “detected,” on the other hand, means that it is (i) perceived, (ii) noticed, or (iii) discovered. *See* Staff Br. at 47. Complainants’ proposed construction impermissibly rewrites the claim.

Accordingly, the administrative law judge has determined that the claim term “based on a detected body orientation of the user” should be construed to mean “based on a detected lean position of the user’s body, as opposed to being based upon manual input or tilting of the vehicle.”

**8. “input adapted to receive specification by a user”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“input adapted to receive specification by a user”</b>	
<b>Complainants’ Construction</b>	<b>Respondents’ and Staff’s Construction</b>
<p>No construction necessary. The term should be ascribed its plain and ordinary meaning.</p> <p><u>Alternatively</u>, if this term is construed as a means-plus-function term:</p> <p><u>Function</u>: receive specification by a user of a desired yaw, yaw rate, and direction of motion</p> <p><u>Structure</u>: ultrasonic body position sensor(s); foot force sensors(s); handlebar lean; mechanical sensor of body position; pressure sensor(s); force sensor(s); rotating yaw grip; mechanical device to track body movement; linear slide mechanism(s); pivoting footplate(s)</p>	<p><u>Means Plus Function</u></p> <p><u>Function</u>: receive specification by a user of a desired yaw, yaw rate, and direction of motion</p> <p><u>Structure</u>: yaw grip assembly, ultrasonic sensor, foot force sensor, vehicle handlebar, knee motion tracker, steel whiskers, body torso position sensors, linear slide directional input, or laterally pivoting footplates.</p>

Compls. Br. at 49-53; Resps. Br. at 34-38; Staff Br. at 48-50.

The term “input adapted to receive specification by a user” appears in asserted claims 1, 2, 4, and 6 of the ‘607 patent.

As an initial matter, inasmuch as the claim does not invoke the term “means,” it is

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presumed that the term “input adapted to receive specification by a user” does not invoke 35 U.S.C. § 112, ¶ 6. *Personalized Media Commc'ns*, 161 F.3d at 703-04. Respondents cite the testimony of Chic’s expert Dr. Illah Nourbakhsh to support their allegation that the term “input” does not have a well understood structural meaning in the relevant art field, thus failing to recite sufficiently definite structure. *See* Resps. Br. at 35, citing RX-0050C (Nourbakhsh WS) at Q/A 163; *EnOcean*, 742 F.3d at 958. It is undisputed that Dr. Nourbakhsh is a person of ordinary skill in the art. Complainants did not offer evidence contradicting Dr. Nourbakhsh’s testimony in this regard.

If the claim term is deemed to be a means-plus-function limitation, all of the parties agree as to the function: “receive specification by a user of a desired yaw, yaw rate, and direction of motion.” Many of complainants’ proposed structures overlap with those proposed by respondents and the Staff. However, complainants’ inclusion of “mechanical sensor of body position,” “mechanical device to track body movement,” and “pivoting footplate(s)” is not supported by the specification. *See* Compls. Br. at 52-53.

A “mechanical sensor of body position” and a “mechanical device to track body movement” are not defined structures. They are merely general descriptors of functionality. The terms are vague and broad, and they essentially render the structure meaningless, as the terms could encompass any ill-defined “sensors” and “devices,” along with any equivalents thereof. *See* 35 U.S.C. § 112, ¶ 6 (a means-plus-function claim “shall be construed to cover the corresponding structure . . . and equivalents thereof”). Furthermore, as respondents argue, neither of these so-called structures are used in the ‘607 patent. *See* Resps. Br. at 36.

As to the “pivoting footplate(s),” the ‘607 patent only discloses laterally pivoting

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footplates. *See* RX-0050C (Nourbakhsh WS) at Q/A 167. For example, the specification discloses a “linear slide” directional input that uses a “shear force sensitive means” that includes a “platform that can slide in the lateral direction of the machine.” JX-0003 (‘607 Patent) at col. 16, ln. 65 – col. 17, ln. 3. Complainants cannot broaden the scope of the disclosed structure (*i.e.*, laterally pivoting footplates) to encompass structures that were not described in the specification (*i.e.*, pivoting footplates generally). *See Creo Prods., Inc. v. Presstek, Inc.*, 305 F.3d 1337 (Fed. Cir. 2002) (“[P]roper application of § 112 ¶ 6 generally reads the claim element to embrace distinct and alternative described structures for performing the claimed function. Specifically, disclosed structure includes that which is described in a patent specification, including any alternative structures identified.”) (internal citations omitted).

Accordingly, the administrative law judge has determined that the claim term “input adapted to receive specification by a user” should be construed as a means-plus-function limitation as proposed by respondents and the Staff.

**9. “direction of motion”**

Below is a chart showing the parties’ proposed claim constructions.

<b>“direction of motion”</b>		
<b>Complainants’ Construction</b>	<b>Most Respondents’ and Staff’s Construction</b>	<b>Airwheel’s Construction</b>
No construction necessary, the term should be afforded its plain and ordinary meaning. <u>Alternatively:</u> forward or backward movement of the transporter	“forward or backward movement of the transporter”	Indefinite

Compls. Br. at 34-35; Resps. Br. at 24; Staff Br. at 50-51.

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The term “direction of motion” appears in asserted claim 1 of the ‘607 patent.

Previously, in the Updated Joint Claim Construction Statement (RX-0031), the respondents argued that the term is indefinite, while the Staff proposed the construction “forward or backward movement of the transporter.” However, in the respondents’ prehearing brief, the respondents, with the exception of Airwheel, adopted the Staff’s proposed construction. Complainants argue that no construction is necessary, and the term should be afforded its plain and ordinary meaning. Alternatively, however, complainants also adopt the Staff’s proposed construction. Respondents’ experts have applied the construction “forward or backward movement of the transporter” to the term “direction of motion.” *See* RX-0050 (Nourbakhsh RWS) at Q/A 172; RX-0053 (Sorensen RWS) at Q/A 127.

Airwheel is the only party that did not adopt the Staff’s proposed construction. Rather, Airwheel argues that the term is indefinite. However, in respondents’ prehearing brief, the sole discussion regarding the alleged indefiniteness of the term is expressed in the single sentence: “Airwheel’s expert, Dr. Derby, further opines that ‘direction of motion’ is indefinite.” *Resps. P.H. Br.* at 57. To the extent respondents’ prehearing brief lacks any detail of Airwheel’s contention that the term is indefinite, Airwheel’s contention is abandoned or withdrawn. *See* GR 7.c.

Furthermore, the administrative law judge finds that the claim construction proposed by the Staff and respondents (other than Airwheel) is consistent with plain language of the claim term and the specification. Accordingly, the administrative law judge has determined that the claim term “direction of motion” should be construed to mean “forward or backward movement of the transporter.”

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### **B. Infringement Analysis of the '607 Patent<sup>42</sup>**

As discussed above, complainants assert independent apparatus claim 1 and dependent claims 2-4 and 6 of the '607 patent. Complainants assert claims 1-4 and 6 against respondents Chic and Swagway; claims 1, 2, 4 and 6 against Jetson/Powerboard; and claims 1 and 2 against Airwheel. *See* Compl. Br. at 99.

#### **1. Accused Products**

The accused products consist of two broad categories of personal transporter vehicles: (i) hoverboards and (ii) unicycle-type devices. The accused hoverboard devices generally have two wheels which are positioned parallel to one another and are generally lateral to the feet placed on the hoverboard when operated by a user (*i.e.*, the feet are positioned substantially between the two wheels). The Chic, Jetson, Powerboard, and Swagway accused products are all hoverboards. The unicycle-type devices have a wheel (which may include one or two tires) that are medial to the feet placed on the unicycle-type device (*i.e.*, the wheel is situated between the two feet). The Airwheel accused products are all unicycle-type devices. *See* 1007 Complaint, ¶¶ 111-22; Staff Br. at 14-18.<sup>43</sup>

#### **2. Direct Infringement**

As discussed above, complainants assert independent apparatus claim 1 and dependent claims 2-4 and 6 of the '607 patent. Complainants assert claims 1-4 and 6 against respondents Chic and Swagway; claims 1, 2, 4 and 6 against Jetson/Powerboard;

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<sup>42</sup> *See* Section III.B of this final ID for the legal discussion concerning infringement.

<sup>43</sup> *See* Section I.C of this final ID for additional detailed information concerning specific accused products.

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and claims 1 and 2 against Airwheel. *See* Compls. Br. at 99.

Asserted claims 1-4 and 6 read as follows:

1. A controller for a transporter having at least one primary ground-contacting element, the transporter characterized by a roll angle, the controller comprising:
  - a. an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user;
  - b. a pitch state estimator for sensing a pitch of the transporter and outputting a pitch state signal; and
  - c. a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the pitch state signal based on the pitch of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter.
2. A controller in accordance with claim 1, wherein the input adapted to receive specification by a user is more particularly adapted to receive specification by the user of a fore/aft direction.
3. A controller in accordance with claim 1, further comprising:
  - a summer for differencing an instantaneous yaw value from the desired yaw to generate a yaw error value such that the yaw command signal generated by the processor is based at least in part on the yaw error value.
4. A controller in accordance with claim 1, wherein the input for receiving adapted to receive user specification includes a pressure sensor disposed to detect orientation of the user.
6. A controller in accordance with claim 1, wherein the input for receiving user specification includes a force sensor disposed on a platform supporting the user for detecting weight distribution of the user.

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JX-0003 ('607 Patent) at col. 18, lns. 9-25, 26-29, 30-35, 36-39, 43-46.

For the reasons discussed below, the evidence shows that the accused products do not infringe any of the asserted claims of the '607 patent.<sup>44</sup>

### a. Airwheel Products

Complainants accuse the Airwheel Q series and X series self-balancing unicycle-type products of infringing claims 1 and 2 of the '607 patent. Airwheel and complainants have stipulated that the Q1 product and the X3 product are representative of the physical aspects of the Q series and X series products, respectively.

#### **Independent Claim 1**

**“an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter”**

The first portion of this claim element, “an input adapted to receive specification by a user,” is properly construed as a means plus function limitation. The proper description of the corresponding structure, identified by respondents is a “yaw grip assembly, ultrasonic sensor, foot force sensor, vehicle handlebar, knee motion tracker, steel whiskers, body torso position sensors, linear slide directional input, or laterally pivoting footplates.” The Airwheel accused products do not include any of these structures; they also lack any of the structures recited in complainants’ alternative means-plus-function proposed construction for “an input adapted to receive specification by a

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<sup>44</sup> In their prehearing brief, respondents addressed only certain limitations. *See* Resps. P.H. Br. at 84-137. To the extent respondents failed to address the other claim elements in their infringement analysis of the accused products, under Ground Rule 7.c, respondents have waived any noninfringement argument based on those elements that are not addressed in their prehearing brief. Thus, only those limitations that are analyzed with respect to infringement in respondents’ prehearing brief are discussed below. Limitations not specifically addressed by respondents or the Staff are deemed to be met by the respondents’ accused products. *See* Staff Br. at 54.



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user.” *See* Resps. Br. at 110, *citing* RX-0051C (Derby WS) at Q/A 112. Rather, the Airwheel accused products measure only acceleration and angular velocity. *Id.*

In addition, Airwheel disputes Mr. Ganssle’s opinion that the foot pedals of the Airwheel accused products and the MPU-6050 gyroscope/accelerometer comprise “inputs.” *See* Resps. Br. at 110. Airwheel represents that the pedals lack any type of sensor. *See* Resps. Br. at 110; RX-0051C at Q/A 113-14; RX-0052C at Q/A 14-15; Ganssle Tr. 327. Moreover, the MPU-6050 inputs comprise current angular velocity and acceleration, and not “desired yaw, yaw rate, and direction of motion of the transporter.” *See* Resps. Br. at 110, *citing* RX-0051C at Q/A 118-39, CX-0160 (MPU-6050 specification).

**“the desired yaw and yaw rate being based on a detected body orientation of the user”**

Under the correct claim construction, “based on a detected lean position of the user’s body, as opposed to being based upon manual input or tilting of the vehicle” — the Airwheel accused products do not meet this claim element. The acceleration and angular velocity inputs from the MPU-6050 sensor are based on the position of the entire Airwheel accused product, and not on “a detected body orientation of the user.” *See* RX-0051C (Derby WS) at Q/A 141-46. The MPU-6050 sensor moves along with the chassis of the entire Airwheel accused product and, thus, is not sensing anything that is “based on a detected body orientation of the user.” Complainants’ position does not recognize the difference between the body orientation of the user and the orientation of the platform that the sensors detect. *See* Ganssle Tr. 328.

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### **“a pitch state estimator for sensing a pitch of the transporter and outputting a pitch state signal”**

Airwheel’s noninfringement expert Dr. Stephen Derby opines that the software variable “Ang,” which was identified by complainants as the pitch state signal, do not meet this claim element because it is “not the same as the hardware signal output by the pitch state estimator as required by the ‘607 patent.” *See* CX-1968C (Ganssle WS) at Q/A 1309, RX-0051C (Derby WS) at Q/A 171, 174. Dr. Derby’s testimony on this issue, however, appears to be limited to conclusory statements, and does not contradict the testimony of Airwheel’s engineer that the “Ang is the forward pitch angle” that is calculated from the quaternion, which includes information about the current attitude (pitch, roll, and yaw) of the device. *See* CX-1968C (Ganssle WS) at Q/A 1281, 1310-11. Airwheel’s arguments are not persuasive with respect to this claim element.

### **“a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input”**

Complainants argue that a variable called PMW is the command signal that meets this claim element. *See* CX-1968C (Ganssle WS) at Q/A 1315. Mr. Ganssle states that the variable “Ang is then used to generate the PWM command signal to control the motors.” *See* CX-1968C (Ganssle WS) at Q/A 1316. However, Airwheel notes that Ang represents the pitch of the Airwheel accused products. The pitch is completely independent from both yaw and yaw rate inasmuch as the latter measures rotation and rotation rate about an orthogonal axis (*i.e.*, the axes are perpendicular to one another). *Id.* Knowing the rotation about a lateral axis (pitch) provides no information regarding rotation or rotation rate about a vertical axis (yaw and yaw rate). *See* RX-0051C (Derby

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WS) at Q/A 152-60. Thus, the Airwheel accused products do not meet this claim element.

\* \* \*

Complainants did not present sufficient evidence to demonstrate that three of the four enumerated claim elements discussed above are met by the Airwheel accused products. Thus, the Airwheel accused products do not infringe claim 1 of the '607 patent.

**Dependent Claim 2**

Claim 2 is dependent from claim 1. For the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Airwheel accused products. Thus, the Airwheel accused products do not infringe dependent claim 2. *See Wahpeton Canvas*, 870 F.2d at 155.

**b. Chic Products**

Complainants accuse the Chic Smart and [ ] products of infringing claims 1-4 and 6 of the '607 patent. Chic and complainants have stipulated that the Smart B is representative of the Smart products and the [ ].

**Independent Claim 1**

**“receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter”**

Chic argues that its accused products do not receive a specification by a user of a “desired yaw” under the proper construction for “yaw” proposed by respondents and the Staff. *See Resps. Br.* at 80-81. Chic argues that its accused products only receive a “yaw

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rate” from the user when one of the foot platforms is tilted more than the second platform. *See* RX-0050C (Nourbakhsh WS) at Q/A 178. Chic argues that the devices also are not capable of calculating an angle of rotation. *See id.* Chic argues that its accused products cannot receive a specification of a “desired yaw” because “[w]hat is in the user’s head is not input to the vehicle, as the vehicle cannot read minds.” *See id.* Chic’s arguments are incorrect.

The ‘607 patent specification explains how a current value of yaw is derived. *See* JX-0003 (‘607 Patent) at col. 5, lns. 21-25 (“FIG. 2 depicts the differencing, in summer 522, of the current yaw value  $\Psi$  with respect to the desired yaw value  $\Psi_{\text{desired}}$  to obtain the current yaw error  $\Psi_{\text{err}}$ . Desired yaw value  $\Psi_{\text{desired}}$  is obtained from a user input, various embodiments of which are described herein.”). Whether the claimed input of the claim element “an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter” receives the specification of yaw directly from the user, or the specification of yaw is obtained by calculations made from other specifications received directly from the user is not the key issue. The relative depression of one foot pedal to a greater degree than a second pedal is not a specification of yaw rate that is received directly from the user; that relative degree of difference has to be processed by the vehicle with various algorithms to determine a numerical yaw rate. The evidence shows that the source code, as detailed by Mr. Ganssle, shows how the desired yaw, yaw rate, and direction of motion are input to the controller for the Chic accused products. *See* CX-1968C (Ganssle WS) at Q/A 413-18.

Chic argues that its [ ] do not meet this claim element because the recitation of “an input” allegedly requires a single input that receives all three values:

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desired yaw, yaw rate, and direction of motion. Chic's argument is contradicted by Federal Circuit case law on the claim interpretation of indefinite articles such as "an." See *Baldwin Graphic Sys.*, 512 F.3d at 1342 ("this court has repeatedly emphasized that an indefinite article 'a' or 'an' in patent parlance carries the meaning of 'one or more' in open-ended claims containing the transitional phrase 'comprising'"). The evidence shows that the Chic accused products satisfy this limitation.

**"at least the desired yaw and yaw rate being based on a detected body orientation of the user"**

Under the correct claim construction, the evidence shows that the Smart products do not infringe. The Smart products are caused to yaw when one foot platform is tilted to a greater degree than the second foot platform. See RX-0050C (Nourbakhsh WS) at Q/A 188; RX-0049C (Lin RWS) at Q/A 34-35. When one foot platform is tilted to a greater degree than the second foot platform, there is no dispute that there is an angle between the plane of the first foot pedal and the plane of the second pedal, thus, a tilting angle. *Id.* As a result, the Smart products will rotate about a vertical axis (*i.e.*, yaw). Inasmuch as the prosecution history disclaimer requires the exclusion of "tilting angle" and "tilting of the vehicle" from the scope of "a detected position of the user's body," the Smart products do not meet this claim element. The turning of the Smart products is effectuated solely by the difference in the platform angles, completely irrespective of the user's body position, which is not detected by the products. See RX-0049C at Q/A 34-35; RX-0050C at Q/A 190.

With respect to the [ ] complainants did not meet their burden to demonstrate that the [ ]. Rather,

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[

]. See Resps. Br. at 84-85; RX-0049C (Lin

RWS) at Q/A 62. Chic describes how [

].” See Resps. Br. at 85-86, citing RX-0050C

(Nourbakhsh WS) at Q/A 191. Thus, the evidence shows that the [

]. Thus, the [ ] do not meet this limitation under the

proper construction of the claim term “based on a detected body orientation of the user.”

**“a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the pitch state signal based on the pitch of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter”**

Chic argues that its accused products “use the difference in platform angles, or yaw rate, but they do not receive an input of or calculate a desired yaw.” See RX-0050C (Nourbakhsh WS) at Q/A 197. Thus, according to Chic, the accused products lack a command signal generated “*based at least on the user-specified yaw*” as required under this claim element. However, as discussed above with respect to “yaw,” the ‘607 patent specification explains how a current value of yaw is derived. See JX-0003 (‘607 Patent) at col. 5, lns. 21-25. The source code, as explained by Mr. Ganssle, governs how the yaw is received or calculated and that the Chic accused products satisfy this claim limitation. See CX-1968C (Ganssle WS) at Q/A 413-18.

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**“an input adapted to receive specification by a user”**

This term is properly construed as a means-plus-function limitation. Under the correct claim construction, the claimed structures are a “yaw grip assembly, ultrasonic sensor, foot force sensor, vehicle handlebar, knee motion tracker, steel whiskers, body torso position sensors, linear slide directional input, or laterally pivoting footplates.” The Chic accused products do not include any of these structures. Thus, under the proper construction, the Chic accused products do not meet this claim element. Mr. Ganssle opines that the Smart products include the “pivoting footplates” recited in complainants’ proposed construction. *See* CX-1968C (Ganssle WS) at Q/A 407-08.

To the extent complainants argue that the Smart products meet this claim element by including “mechanical sensors of body position” or “mechanical devices to track body movement,” the evidence shows that the tilting foot platforms of the Smart products do not track body position or body movement. *See* RX-0050C (Nourbakhsh WS) at Q/A 175. Furthermore, the foot platforms of the Chic accused products do not track body position or movement. *Id.* Instead, the platforms can be adjusted irrespective of the user’s body position or movement. *Id.*

\* \* \*

Thus, under the correct claim construction for “at least the desired yaw and yaw rate being based on a detected body orientation of the user,” the Chic accused products do not meet that claim element and, thus, cannot be shown to infringe claim 1 of the ‘607 patent. In addition, under the proper construction of the term “an input adapted to receive specification by a user” as a means plus function limitation, the Chic Smart products do

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not meet that claim element and, thus, do not infringe claim 1 of the '607 patent.

### **Dependent Claim 2**

Claim 2 is dependent from claim 1. For the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Chic accused products. Thus, the Chic accused products do not infringe dependent claim 2. *Wahpeton Canvas*, 870 F.2d at 155.

### **Dependent Claim 3**

Claim 3 is dependent from claim 1 and provides:

A controller in accordance with claim 1, further comprising:

a summer for differencing an instantaneous yaw value from the desired yaw to generate a yaw error value such that the yaw command signal generated by the processor is based at least in part on the yaw error value.

Chic argues that the variable identified by Mr. Ganssle in Chic's source code as the calculation for the "instantaneous yaw value," *i.e.*, the [ ] cannot be the "instantaneous yaw value," inasmuch as it is not a "current yaw value," which is the construction agreed upon by the parties for the term "instantaneous yaw value." *See* RX-0031 (Updated Joint Claim Construction Statement). Chic argues that [ ] *See* RX-0050C (Nourbakhsh WS) at Q/A 204. It does not appear that complainants dispute this point directly. In fact, Mr. Ganssle explains that [ ] *See* CX-1968C (Ganssle WS) at Q/A 478. Instead, complainants argue that whether it is a yaw value or a yaw rate value, the element is met under the doctrine of equivalents. However, under Order Nos. 30 and 36, complainants cannot rely on that late disclosed doctrine of equivalents theory.



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See Order No. 30 (Mar. 27, 2017), Order No. 36 at 4 (Apr. 17, 2017). Thus, the Chic products cannot be demonstrated to satisfy the additional limitation of claim 3.

Additionally, for the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Chic accused products. Thus, the Chic accused products do not infringe dependent claim 3. See *Wahpeton Canvas*, 870 F.2d at 155.

### **Dependent Claim 4**

Claim 4 is dependent from claim 1 and provides:

A controller in accordance with claim 1, wherein the input for receiving adapted to receive user specification includes a pressure sensor disposed to detect orientation of the user.

Chic disputes that the Smart products include an “input for receiving adapted to receive user specification” of claim 1 that is a “pressure sensor disposed to detect orientation of the user.” In order to practice claim 4, the product must include a pressure sensor disposed to detect orientation of the user and the same pressure sensor must receive desired yaw, yaw rate, and direction of motion of the transporter specification by a user. Mr. Ganssle identified [ ] in the Smart products that allegedly meet this claim limitation. See CX-1968C (Ganssle WS) at Q/A 486-89. However, those [ ] can only trigger the commencement of the balancing operation and have no role in providing yaw, yaw rate, or direction of motion. See RX-0049C (Lin RWS) at Q/A 27. These sensors merely sense the presence of the user and are unable to distinguish between any different orientations of the user. See RX-0049C at Q/A 26; RX-0050C(Nourbakhsh WS) at Q/A 205.

Chic also disputes that the [ ] include an “input for receiving adapted to

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receive user specification” of claim 1 that is a “pressure sensor disposed to detect orientation of the user.” *See* Resps. Br. at 88. Chic argues that [ ]]. *See* Resps. Br. at 88; RX-0050C at Q/A 206. Dr. Nourbakhsh described an example [

]. *See* RX-0050C at Q/A 206. The evidence shows that the [

]. *See* RX-0049C (Lin RWS) at Q/A 62. Thus, the evidence does not show that either of the Chic accused products satisfies the limitation added in the dependent claim.

Additionally, for the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Chic accused products. Thus, the Chic accused products do not infringe dependent claim 4. *See Wahpeton Canvas*, 870 F.2d at 155.

### **Dependent Claim 6**

Claim 6 is dependent from claim 1 and provides:

A controller in accordance with claim 1, wherein the input for receiving user specification includes a force sensor disposed on a platform supporting the user for detecting weight distribution of the user.

Chic disputes that the Smart products include an “input for receiving adapted to receive user specification” of claim 1 that is a “force sensor disposed on a platform supporting the user for detecting weight distribution of the user.” In order to practice

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claim 6, the product must include a force sensor disposed to detect weight distribution of the user and the same force sensor must receive desired yaw, yaw rate, and direction of motion of the transporter specification by a user. Mr. Ganssle identified [

] in the Smart products that allegedly meet this claim limitation. *See* CX-1968C (Ganssle WS) at Q/A 491-92. However, according to Chic, those [

] can only trigger the commencement of the balancing operation and have no role in providing yaw, yaw rate, or direction of motion. *See* RX-0049C (Lin RWS) at Q/A 26-27. In addition, the [ ] do not detect the user's weight distribution; rather, they merely sense the placement of the user's feet on the platforms. *See* RX-0050C (Nourbakhsh WS) at Q/A 209; RX-0049C at Q/A 26.

Chic also disputes that the [ ] include an "input for receiving adapted to receive user specification" of claim 1 that is a "force sensor disposed on a platform supporting the user for detecting weight distribution of the user." *See* Resps. Br. at 89.

Chic argues that [

] *See* Resps. Br. at 89; RX-0050C at Q/A 211. Dr. Nourbakhsh provided an example [

]. *Id.* Thus, the evidence shows that the [

].

Additionally, for the reasons discussed above with respect to claim 1,

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complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Chic accused products. Thus, the Chic accused products do not infringe dependent claim 6. *See Wahpeton Canvas*, 870 F.2d at 155.

### c. Jetson and Powerboard Products

Complainants accuse the Jetson V5, V6, and V8 self-balancing hoverboard products of infringing claims 1-4 and 6 of the '607 patent. Jetson and complainants have stipulated that the V6 is representative of the Jetson accused products. Complainants accuse the Powerboard self-balancing hoverboard products of infringing claims 1-4 and 6 of the '607 patent. Powerboard and complainants have stipulated that the source code in the Jetson V6 product is representative of that in the Powerboard accused products. Thus, unless explicitly stated otherwise, for the purposes of the analysis of infringement of the '607 patent, any reference to the Jetson accused products will also include, by proxy, the Powerboard accused products.

As an initial matter, neither Jetson nor Powerboard can rely on expert testimony to counter the infringement opinions and evidence presented by complainants. The administrative law judge struck the witness statement of their noninfringement expert Dr. Jason Janét in its entirety. *See* Order No. 29 (Mar. 22, 2017), Order No. 36 (Apr. 17, 2017) at 3-4 (granting complainants' motion *in limine* no. 2 to preclude Dr. Janét from, *inter alia*, offering opinions on noninfringement and testifying as a fact witness). Thus, without any testimony to contradict the infringement testimony and evidence presented by complainants, Jetson and Powerboard can only rely on a finding that complainants failed to meet their burden to prove infringement of the '607 patent in order for the Jetson and Powerboard accused products to be found not to infringe the '607 patent.

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### **Independent Claim 1**

#### **“an input adapted to receive specification by a user”**

This claim element is properly construed as a means-plus-function limitation.

Under the proper construction, the claimed structures are a “yaw grip assembly, ultrasonic sensor, foot force sensor, vehicle handlebar, knee motion tracker, steel whiskers, body torso position sensors, linear slide directional input, or laterally pivoting footplates.” *See* Section V.A.9, *supra*, (discussion of claim construction for “input adapted to receive specification by a user”). Mr. Ganssle opines that the user inputs that meet this claim element are the left and right platform sections that rotate when the user pivots his ankles to cause the rotation. *See* CX-1968C (Ganssle WS) at Q/A 990.

Although Jetson and Powerboard do not have any expert testimony to rely upon, a visual comparison of the Jetson V6 and V8 Rover products (CPX-0014 and CPX-0015, respectively) and the Powerboard product (CPX-0016) to the Chic Smart C (CPX-0018 and CPX-0019), Chic Smart F (CPX-0020), and SWAGTRON T1 (CPX-0010) products demonstrates that the pivoting footplates of the Jetson accused products are not “laterally pivoting footplates.” Complainants do not argue that any other component or structure of the Jetson and Powerboard accused products satisfies this claim element. Thus, complainants have not met their burden to prove that the Jetson and Powerboard accused products include any of the claimed structures.

#### **“an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter”**

Jetson and Powerboard have no evidence to present that contradicts the evidence discussed by Mr. Ganssle in his infringement analysis of the Jetson accused products of

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this claim element. *See* CX-1968C (Ganssle WS) at Q/A 989-1026. However, as discussed in the subsection immediately above, under the correct claim construction of the disputed claim term “an input adapted to receive specification by a user,” a visual inspection of the Jetson V6 and V8 Rover products (CPX-0014 and CPX-0015, respectively) and the Powerboard product (CPX-0016) demonstrates that the pivoting footplates of the Jetson accused products are not “laterally pivoting footplates.” Complainants do not argue that any other component or structure of the Jetson accused product satisfies this claim element. Thus, complainants have not met their burden to prove that the Jetson and Powerboard accused products include any of the claimed structures.

**“a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the pitch state signal based on the pitch of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter”**

Jetson and Powerboard have no evidence to present that contradicts the evidence discussed by Mr. Ganssle in his infringement analysis of the Jetson accused products of this claim element. *See* CX-1968C (Ganssle WS) at 1039-50.

\* \* \*

Under the proper construction of the term “an input adapted to receive specification by a user” as a means plus function limitation, complainants cannot meet their burden to demonstrate that the Jetson and Powerboard accused products infringe claim 1 of the ‘607 patent.

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### **Dependent Claims 2-4 and 6**

Claims 2-4 and 6 depend from claim 1. For the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Jetson and Powerboard accused products. Thus, the Jetson and Powerboard accused products do not infringe dependent claims 2-4 and 6. *See Wahpeton Canvas*, 870 F.2d at 155.

#### **d. Swagway Products**

Complainants accuse the SWAGWAY X1 and X2 and the SWAGTRON T1, T3, and T5 self-balancing hoverboard products of infringing claims 1-4 and 6 of the '607 patent. Swagway and complainants have stipulated that the SWAGWAY X1 is representative of the Swagway X2 and the SWAGTRON T1 is representative of the SWAGTRON T5. *See* Staff Br. at 17-18 (citing Compls. P.H. Br. at 77; Resps. P.H. Br. at 14-15).

### **Independent Claim 1**

**“an input adapted to receive specification by a user of a desired yaw”**

Swagway argues that its accused products do not receive a specification by a user of a “desired yaw” under the proper construction for “yaw” proposed by respondents and the Staff. *See* Resps. Br. at 90-94. Swagway argues that its accused products only receive a “yaw rate” from the user when one of the foot platforms is tilted more than the second platform. *See* RX-0053C (Sorensen WS) at Q/A 177. Swagway argues that neither Mr. Ganssle nor Swagway’s expert Dr. Khalid Sorensen have identified any portion of source code that represents yaw or desired yaw. *See* RX-0053C (Sorensen WS) at Q/A 177. Swagway argues that its accused products cannot receive a

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specification of a “*desired yaw*” because the “type of yaw controller depicted in Figure 2 of the ‘607 patent . . . resides within the brain of the operator.” *See id.* Swagway’s arguments are not persuasive.

The ‘607 patent specification explains how a current value of yaw is derived. *See* JX-0003 (‘607 Patent) at col. 5, lns. 21-25 (“FIG. 2 depicts the differencing, in summer 522, of the current yaw value  $\Psi$  with respect to the desired yaw value  $\Psi_{\text{desired}}$  to obtain the current yaw error  $\Psi_{\text{err}}$ . Desired yaw value  $\Psi_{\text{desired}}$  is obtained from a user input, various embodiments of which are described herein.”). Whether the claimed input of the claim element “an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter” receives the specification of yaw directly from the user, or the specification of yaw is obtained by calculations made from other specifications received directly from the user is not the key issue. The relative depression of one foot pedal to a greater degree than a second pedal is not a specification of yaw rate that is received directly from the user; that relative degree of difference has to be processed by the vehicle with various algorithms to determine a numerical yaw rate. The evidence shows that the source code, as explained by Mr. Ganssle, shows how the desired yaw, yaw rate, and direction of motion are input to the controller for the Swagway accused products. *See* CX-1968C (Ganssle WS) at Q/A 692-713. Thus, the Swagway accused products were shown to satisfy this limitation with respect to “desired yaw.”

Mr. Ganssle opines that the user inputs that meet this claim element are the left and right platform sections that rotate when the user pivots his ankles to cause the rotation. *See* CX-1968C (Ganssle WS) at Q/A 691. Under the proper construction of the term “input adapted to receive specification by a user” as a means-plus-function



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limitation, the claimed structures are a “yaw grip assembly, ultrasonic sensor, foot force sensor, vehicle handlebar, knee motion tracker, steel whiskers, body torso position sensors, linear slide directional input, or laterally pivoting footplates.” Complainants do not argue that any other component or structure of the Swagway accused product satisfies this claim element. However, the pivoting footplates of the Swagway accused products are not “laterally pivoting footplates.” Thus, complainants have not met their burden to prove that the Swagway accused products include any of the claimed structures.

### **“being based on a detected body orientation of the user”**

Under the correct claim construction, the Swagway products have not been shown to infringe. The Swagway accused products are caused to yaw when one foot platform is tilted to a greater degree than the second foot platform. *See* RX-0053C (Sorensen WS) at Q/A 127. When one foot platform is tilted to a greater degree than the second foot platform, there is no dispute that there is an angle between the plane of the first foot pedal and the plane of the second pedal, and that angle is caused by the tilting of one pedal relative to the other; thus, a tilting angle. *See id.* As a result, the Swagway accused products will rotate about a vertical axis. *See id.* However, inasmuch as the proper construction excludes “tilting angle” and “tilting of the vehicle” from the scope of “a detected position of the user’s body,” the Swagway products do not meet this claim element. *See id.* at Q/A 91, 178.

Furthermore, Dr. Sorensen performed extensive testing of the SWAGTRON T3 product, demonstrating that the differential footplate angle can be controlled independent of a user’s position/orientation on the device. *See* RX-0053C (Sorensen WS) at Q/A 128-29, 178; *see also* RPX-0007 through RPX-0412 (data collected by the Vicon Motion

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Capture System from Dr. Sorensen's SWAGTRON T3 experiments). Swagway further notes that during the prosecution of the '607 patent, the applicants expressly disclaimed devices that could be commanded "in absolute indifference to the body orientation of the user" and those that could turn in a direction opposite that of user body orientation or lean. *See* JX-0004 ('607 Patent File History) at 55 (March 6, 2007 Response to Office Action, p.6); *see also* RX-0053C (Sorensen WS) at Q/A 91.

Thus, the Swagway accused products do not meet this claim element.

**"a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the pitch state signal based on the pitch of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter"**

Swagway argues that the processor in its accused products does not receive a user-specified yaw. *See* Resps. Br. at 97-101; RX-0053C (Sorensen WS) at Q/A 179. In addition, Swagway argues that its accused products are incapable of achieving a specified yaw, because it has no mechanism in the products to compare the current yaw to the unknown user-specified yaw. *See id.* However, as discussed above, the '607 patent specification explains how a current value of yaw is derived. *See* JX-0003 ('607 Patent) at col. 5, lns. 21-25. The evidence shows that the code, as described by Mr. Ganssle, governs how the yaw is received or calculated. *See* CX-1968C (Ganssle WS) at Q/A 692-713.

\* \* \*

Under the correct claim construction for "at least the desired yaw and yaw rate

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being based on a detected body orientation of the user,” the Swagway accused products do not meet that claim element and, thus, cannot be shown to infringe claim 1 of the ‘607 patent.

### **Dependent Claim 2**

Claim 2 is dependent from claim 1. For the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Swagway accused products. Thus, the Swagway accused products do not infringe dependent claim 2. *See Wahpeton Canvas*, 870 F.2d at 155.

### **Dependent Claim 3**

Claim 3 is dependent from claim 1 and provides:

A controller in accordance with claim 1, further comprising:

a summer for differencing an instantaneous yaw value from the desired yaw to generate a yaw error value such that the yaw command signal generated by the processor is based at least in part on the yaw error value.

Mr. Ganssle identified line 288 of source code file attitude.c of Swagway’s source code, which allegedly relates to the claimed “summer.” *See CX-1968C (Ganssle WS) at Q/A 752-55*. Line 288 recites a function motor1\_attitude\_pid(), which subtracts “attitude\_motor1\_angle\_last\_1F4” (allegedly “represents the current yaw of the device”) from “attitude\_motor1\_angle\_1CC” (allegedly “representative of the desired yaw”). *See id.* at Q/A 753. According to Mr. Ganssle, this subtraction is an error signal used to calculate kd and represents the difference between the desired yaw and the instantaneous yaw. *Id.* However, Swagway disputes the premise of Mr. Ganssle’s opinion. *See RX-0053C (Sorensen WS) at Q/A 181*.

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Dr. Sorensen opines that parameter discussed by Mr. Ganssle actually does not contain yaw information about the device and is exclusively representative of footplate pitch angle, not yaw. *Id.* Dr. Sorensen explains that the parameter kd is representative of the pitch angle of the footplate corresponding to motor1 (although technically not the actual foot-plate angle). *Id.* According to Dr. Sorensen, the parameter kd is derived in the source code from the actual footplate angle, motor1\_mpu\_angle\_1C4, summed with various footplate angle correction terms. *Id.* Thus, the parameter kd is exclusively representative of footplate pitch angle and does not contain yaw information about the device. *Id.* The weight of the evidence supports Swagway's argument that the added limitation in claim 3 is not satisfied.

Additionally, for the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Swagway accused products. Thus, the Swagway accused products do not infringe dependent claim 3. *See Wahpeton Canvas*, 870 F.2d at 155.

### **Dependent Claim 4**

Claim 4 is dependent from claim 1 and provides:

A controller in accordance with claim 1, wherein the input for receiving adapted to receive user specification includes a pressure sensor disposed to detect orientation of the user.

Swagway disputes that its accused products include an "input for receiving adapted to receive user specification" of claim 1 that is a "pressure sensor disposed to detect orientation of the user." In order to practice claim 4, the product must include a pressure sensor disposed to detect orientation of the user and the same pressure sensor must

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receive desired yaw, yaw rate, and direction of motion of the transporter specification by a user. Mr. Ganssle identified optical interrupters in the Swagway accused products that allegedly meet this claim limitation. *See* CX-1968C (Ganssle WS) at Q/A 759-62.

However, Dr. Sorensen explains that those optical sensors are only capable of issuing data that corresponds to whether the rider of the device is on a footplate, or off a footplate and have no role in providing yaw, yaw rate, or direction of motion. *See* RX-0053C (Sorensen WS) at Q/A 133. Thus, the limitation added in dependent claim 4 has not been shown to be satisfied by the Swagway products.

Additionally, for the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Swagway accused products. Thus, the Swagway accused products do not infringe dependent claim 4. *See Wahpeton Canvas*, 870 F.2d at 155.

### **Dependent Claim 6**

Claim 6 is dependent from claim 1 and provides:

A controller in accordance with claim 1, wherein the input for receiving user specification includes a force sensor disposed on a platform supporting the user for detecting weight distribution of the user.

Swagway disputes that its accused products include an “input for receiving adapted to receive user specification” of claim 1 that is a “force sensor disposed on a platform supporting the user for detecting weight distribution of the user.” In order to practice claim 6, the product must include a force sensor disposed to detect weight distribution of the user and the same force sensor must receive desired yaw, yaw rate, and direction of motion of the transporter specification by a user. Mr. Ganssle identified optical

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interrupters in the Swagway accused products that allegedly meet this claim limitation. *See* CX-1968C (Ganssle WS) at Q/A 764-67. However, Dr. Sorensen explains that those optical sensors are only capable of issuing data that corresponds to whether the rider of the device is on a footplate, or off a footplate and have no role in providing yaw, yaw rate, or direction of motion. *See* RX-0053C (Sorensen WS) at Q/A 133. In addition, the optical sensors do not detect use weight distribution. *See id.* at Q/A 182-83. Thus, the evidence does not demonstrate that the additional limitation of claim 6 is satisfied by the Swagway accused products.

Additionally, for the reasons discussed above with respect to claim 1, complainants cannot prove by a preponderance of the evidence that each of the elements of independent claim 1 is met by the Swagway accused products. Thus, the Swagway accused products do not infringe dependent claim 6. *See Wahpeton Canvas*, 870 F.2d at 155.

### **C. Domestic Industry (Technical Prong)**

Respondents argue that the Segway DI products<sup>45</sup> do not practice any of claims 1, 2, or 3 of the '607 patent. *See* Compls. Br. at 130-41.

As discussed below, the evidence shows that the limitation “at least the desired yaw and yaw rate being based on a detected body orientation of the user” from claim 1 is not practiced by the Segway DI products. In addition, claims 2 and 3 also cannot be practiced by the Segway DI products, inasmuch as they each depend from claim 1.

Complainants argue that the LeanSteer handlebar is designed to work by tracking

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<sup>45</sup> *See* Section I.C of this final ID for additional detailed information concerning specific domestic industry products.

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the user's lean position. See CX-1968C (Ganssle WS) at Q/A 1407. They argue that even if a user theoretically could lean his body in one direction while pushing the LeanSteer handlebar in the opposite direction, in practice, the Segway DI products are not designed to be ridden that way. *Id.* However, this is contradicted by the Segway user manual.

### Step 8: Turning

The Segway PT turns in the direction that you lean the Handlebar. You turn the PT by leaning the Handlebar left or right.

#### Turning In Place

First, practice turning in place. To turn in place, slowly pivot the Handlebar to the side in the direction that you want to turn. The PT will rotate in that direction, turning in place. Practice turning to the right and to the left using this technique.

#### Turning While Moving

After you are comfortable going forward and backward and turning in place, try slowly riding forward and turning at the same time. Keep your knees slightly bent and lean in the direction of the turn in coordination with the angle of the LeanSteer Frame. Keep your body aligned with the LeanSteer Frame while turning. Because abrupt turns may have unintended consequences, always lean into turns slowly and smoothly.

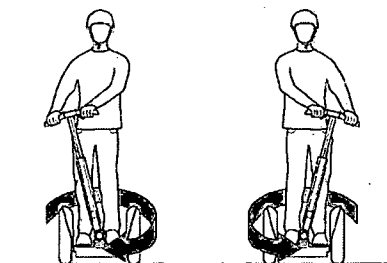


Figure 48: Turning In Place

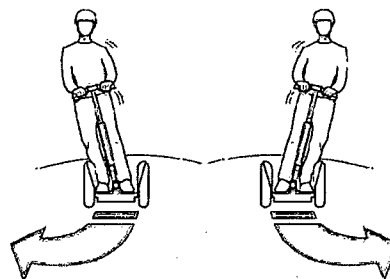


Figure 49: Turning While Moving

See CX-0619 (User Manual Segway Personal Transporter (PT) – i2 SE, x2 SE, x2 SE Turf) at SEGWAY\_1007ITC0125321. The manual explicitly teaches the user to turn (*i.e.*, yaw) in place by “pivot[ing] the Handlebar to the side in the direction that you want to turn.” The accompanying Figure 48 shows the rider in an upright, nonleaning stance while tilting the LeanSteer handlebar. This description is also confirmed by Mr. Carter, Segway's Director of Electrical Engineering, who testified that a user can command a turn on the Segway DI products without leaning. See JX-0009C (Carter Dep. Tr.) at 35. In fact, Mr. Carter confirmed that the LeanSteer handlebar is mechanically indifferent to

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the user's lean (*i.e.*, the user can lean right, but pivot the handlebar to the left, and the vehicle will turn left). *See id.* at 36.

Complainants argue that regardless of whether the user can lean in an opposite direction of the pivot direction of the LeanSteer handlebar, “in practice, the Segway PTs should not be ridden that way.” *See* CX-1968C (Ganssle WS) at Q/A 1407. However, during the prosecution of the ‘607 patent, the applicants argued otherwise. *See* JX-0004 (‘607 Patent File History) at 55. When the applicants faced a rejection based on U.S. Patent No. 5,791,425 (RX-0020), which disclosed joystick turn commands, the applicants argued:

***that a joystick is not an input based on a detected body orientation of the user: “Surely, the position of the joystick cannot be taken to subsume ‘body orientation of a user.’ The device will be commanded to the left if the joystick is moved to the left, in absolute indifference to the orientation of the user.”***

*See* Compls. Br. at 171 (complainants arguing why a joystick turning mechanism disclosed in Kamen ‘965 (RX-0014) does not anticipate the ‘607 patent), *quoting* JX-0004 (‘607 Patent File History) at 55 (emphasis added).

Complainants argue that the LeanSteer handlebar is not a joystick because it “is a much larger input that couples to the base of the Segway Personal Transporters. As previously explained, the LeanSteer Stick was specifically designed so that the user would grip it and couple their entire body to the device, making input of all desired direction and turning intuitive.” *See* CX-1968C (Ganssle) at Q/A 1408. However, complainants appear to have taken a different position in their prehearing brief, when discussing why the Heinzmann (RX-0018) prior art reference does not anticipate the ‘607 patent:



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Respondents' logic applies equally to a joystick – *i.e.*, pushing the joystick to the right can also be said to “encourage” a rider to lean to the right. *See* CX-1969C (Nayfeh Statement) at A296. However, turning is based solely on the joystick input, just as in *Heinzmann* where turning is based solely on the grip input. *Id.* Thus, *encouraging* a certain body orientation does not amount to *detecting* a certain body orientation. Because the prosecution history makes clear that steering inputs based on the displacement of a joystick are not inputs “based on a detected body orientation of the user,” neither are steering inputs based on the rotation of a hand grip.

Compls. P.H. Br. at 545.<sup>46</sup>

According to complainants, if a prior art device can be “commanded to the left if the [handlebar] is moved to the left, in absolute indifference to the orientation of the user,” or its handlebar “encourages” a rider to lean in the direction that the user pushes the handlebar, that handlebar is called a joystick. However, if the Segway DI products can be “commanded to the left if the [handlebar] is moved to the left, in absolute indifference to the orientation of the user,” or its handlebar “encourages” a rider to lean in the direction that the user pushes the handlebar, that handlebar is no longer a joystick, but the embodiment of LeanSteer technology.

Complainants cannot be permitted to alter their interpretation of the claim to suit their validity and infringement positions. “It is axiomatic that claims are construed the same way for both invalidity and infringement.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003).

Thus, the evidence shows that the Segway DI products do not practice the limitation “at least the desired yaw and yaw rate being based on a detected body

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<sup>46</sup> It is noted that complainants removed the sentence “Thus, *encouraging* a certain body orientation does not amount to *detecting* a certain body orientation” in their posthearing brief. *See* Compls. Br. at 177.

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orientation of the user.” Thus, the Segway DI products do not practice claim 1 of the ‘607 patent. Claims 2 and 3 also are not practiced by the Segway DI products, inasmuch as each of these claims depend from claim 1.

### **D. Validity of the ‘607 Patent<sup>47</sup>**

Respondents argue that (1) U.S. Patent No. 5,701,965 (“Kamen ‘965”) anticipates the asserted claims of the ‘607 patent; (2) U.S. Patent No. 6,288,505 (“Heinzmann”) anticipates the asserted claims of the ‘607 patent; (3) JP4-201793 (“Furukawa”) anticipates the asserted claims of the ‘607 patent; (4) Kamen ‘965 alone or in view of U.S. Patent No. 6,050,357 (“Staelin”) renders obvious the asserted claims of the ‘607 patent; (5) Kamen ‘965 in view of U.S. Patent Publication No. 2004/0055796 (“Kamen ‘796”) renders obvious the asserted claims of the ‘607 patent; and (6) the asserted claims of the ‘607 patent are invalid for lack of written description. *See Resps. Br.* at 161-204.

Complainants and the Staff disagree. *See Compls. Br.* at 161-204; *Staff Br.* at 127-43.

For the reasons set forth below, respondents have not shown by clear and convincing evidence that the asserted claims of the ‘607 patent are invalid.<sup>48</sup>

### **1. Conception and Reduction to Practice**

The application for the ‘607 patent was filed on September 13, 2004. Although it

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<sup>47</sup> *See* Section III.C of this final ID for the legal discussion concerning validity.

<sup>48</sup> In their prehearing brief, complainants addressed only certain limitations. *See Compls. P.H. Br.* at 520-89. To the extent complainants failed to address the other claim elements in their validity analysis of each prior art reference, under Ground Rule 7.c, complainants have waived any validity argument based on those elements that are not addressed in their prehearing brief. Thus, only those limitations that are analyzed in respondents’ prehearing brief are discussed below. Limitations not specifically addressed by complainants or the Staff are deemed to be met by each prior art reference.

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claims common lineage back to a U.S. application filed on June 4, 1999 (*i.e.*, the application for the '230 patent), complainants argue that each claim element of the '607 patent was conceived and actually reduced to practice by May 20, 2002. *See* Compls. Br. at 161-69. In particular, the May 20, 2002 is the day a video, known as the [

] was taken which allegedly shows several prototypes of the personal transporters embodying the invention claimed in the '607 patent being tested, thus demonstrating that they work for their intended purpose. *See* Compls. Br. at 161, citing CPX-0037C (yaw-off video). In addition, complainants cite the [ ] (CX-1483C), which allegedly provides details on a number of the prototypes being developed and which were tested at the May 20, 2002 "[ ]" *See* Compls. Br. at 162, citing CX-1970C (Kamen WS) at Q/A 59-84.

To the extent the prototypes of the personal transporters demonstrated and recorded on the May 20, 2002 [ ] and discussed in the [ ] are alleged to be identical in implementation to the LeanSteer technology that complainants allege to be the implementation of the invention of the '607 patent in the Segway DI products, it is complainants' burden to prove that the prototypes are, indeed, implementations of the '607 patent. Complainants have not met that burden. Thus, the priority date for the new matter in the '607 patent is September 13, 2004.

### **2. Anticipation**

#### **a. Anticipation by U.S. Patent No. 5,701,965 ("Kamen '965") (RX-0014)**

Respondents argue that U.S. Patent No. 5,701,965 anticipates the asserted claims 1-4 and 6 of the '607 patent. *See* Resps. Br. at 173-91.

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Kamen '965 was filed on May 27, 1994, and claims priority to U.S. application filed on February 24, 1993, since abandoned. Kamen '965 issued on December 30, 1997. Thus, it is § 102(b) prior art to the '607 patent, which was filed on September 13, 2004. However, the evidence shows that Kamen '965 fails to disclose certain limitations of these claims.

According to Dr. Nayfeh, Kamen '965 describes two input mechanisms for turning: (1) a joystick, and (2) leaning on a forceplate. *See* CX-1969C (Nayfeh RWS) at Q/A 237. As an initial matter, as noted by complainants, during the prosecution of the '607 patent, applicants faced a rejection based on a similar Kamen patent, U.S. Patent No. 5,791,425 (RX-0020), which disclosed joystick turn commands similar to the disclosures in Kamen '965. *See* Compls. Br. at 170-71. In response to the rejection, applicants stated:

[T]he applicant argued that a joystick is not an input based on a detected body orientation of the user: "Surely, the position of the joystick cannot be taken to subsume 'body orientation of a user.' The device will be commanded to the left if the joystick is moved to the left, *in absolute indifference to the orientation of the user.*" [JX-0004] at 55 (SEGWAY\_1007ITC0087708 (page 6 of the Response to Office Action dated 3/7/2007)). The examiner agreed, as indicated by his subsequent allowance. *Id.* at 37 (SEGWAY\_1007ITC0087690) (Notice of Allowance dated May 24, 2007).

*See* Compls. Br. at 171 (emphasis added). Thus, complainants have represented that a joystick is not an input based on a detected body orientation of the user that falls within the scope of the '607 patent.

Respondents argue that "Kamen '965 discloses sensing a user's leaning to detect direction and rate of turn, meeting the claimed 'desired yaw' and 'yaw rate' limitations." *See* RX-0030C (Cochran WS) at Q/A 147. Complainants acknowledge that Kamen '965

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does disclose an input of a “desired yaw rate,” but only as it pertains to the joystick embodiment. That is evident from the Kamen ‘965 specification. *See* Compl. Br. at 170, citing RX-0014 (Kamen ‘965) at col. 13, lns. 38-53 (“A directional input along the Y axis rotates the reference coordinate system about its Z axis at an angular velocity proportional to the displacement of the joystick.”).

With respect to the forceplate embodiment in Kamen ‘965, complainants correctly argue that there is only minimal disclosure related to turning, and none related to yaw rate. *See* CX-1969C (Nayfeh RWS) at Q/A 243, citing RX-0014 (Kamen ‘965) at col. 8, lns. 51-62. Although Kamen ‘965 discloses that “[a]ppropriate force transducers may be provided to sense leftward and rightward leaning and related controls provided to cause left and right turning as a result of the sensed leaning,” there is no indication that the transducers or the proximity sensors that are also disclosed in Kamen ‘965 determine any proportionality with respect to the user’s position. *See* CX-1969C (Nayfeh RWS) at Q/A 246-47. Furthermore, there is no indication that these transducers or sensors can be used to input a desired yaw rate. *Id.* Kamen ‘965 does not disclose the forceplate embodiment receiving a desired yaw rate as input, only desired yaw. *Id.* at Q/A 247.

The evidence shows that Kamen ‘965 fails to disclose all elements of claim 1 of the ‘607 patent, namely “an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user.” Thus, respondents have not met their burden to demonstrate that Kamen ‘965 anticipates claim 1 of the ‘607 patent.

Further, to the extent any of the limitations of claim 1 of the ‘607 patent are not

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met by Kamen '965, those same limitations will not be met in claims 2, 3, 4, and 6 of the '607 patent, as each of those claims depends from claim 1. Accordingly, respondents have not met their burden to demonstrate that Kamen '965 anticipates claims 2, 3, 4, and 6 of the '607 patent.

**b. Anticipation by U.S. Patent No. 6,288,505  
("Heinzmann") (RX-0018)**

Respondents argue that U.S. Patent No. 6,288,505 anticipates the asserted claims 1-4 and 6 of the '607 patent. *See* Resps. Br. at 207-17.

Heinzmann was filed on December 18, 2000, and claims priority to a U.S. application filed on October 13, 2000. Thus, it is § 102(b) prior art to the '607 patent, which was filed on September 13, 2004. However, the evidence shows that Heinzmann fails to disclose certain limitations of these claims.

According to Dr. Nayfeh, Heinzmann does not disclose an input based on the body orientation of the rider, but only discloses receiving inputs from hand-control type steering mechanisms, like thumbwheels and rotatable shafts attached to the handlebar. *See* CX-1969C (Nayfeh RWS) at Q/A 293. "Hand-control type steering mechanisms, however, are not inputs 'based on the body orientation of the rider.'" *Id.* Respondents argue that the rotatable grips receive inputs based on the body orientation of the rider because Heinzmann discloses setting the direction of rotation such that riders are "encouraged" to lean into a turn. *See* RX-0030C (Cochran WS) at Q/A 246.

Complainants answer this argument, stating:

Respondents' logic applies equally to a joystick – *i.e.*, pushing the joystick to the right can also be said to "encourage" a rider to lean to the right. *See* CX-1969C (Nayfeh Statement) at A296. However, turning is based solely on the joystick input, just as in Heinzmann where turning is based solely

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on the grip input. *Id.* Because the prosecution history makes clear that steering inputs based on the displacement of a joystick are not inputs “based on a detected body orientation of the user,” neither are steering inputs based on the rotation of a hand grip.

Compls. Br. at 177.<sup>49</sup>

The evidence shows that Heinzmann fails to disclose all elements of claim 1 of the ‘607 patent, in particular “an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user.” Thus, respondents have not met their burden to demonstrate that Heinzmann anticipates claim 1 of the ‘607 patent.

Further, to the extent any of the limitations of claim 1 of the ‘607 patent are not met by Heinzmann, those same limitations will not be met in claims 2, 3, 4, and 6 of the ‘607 patent, as each of those claims depends from claim 1. Accordingly, respondents have not met their burden to demonstrate that Heinzmann anticipates claims 2, 3, 4, and 6 of the ‘607 patent.

**c. Anticipation by JP4-201793 (“Furukawa”) (RX-0022, RX-0023, RX-0029)<sup>50</sup>**

Respondents argue that Japanese publication of unexamined application no. JP4-201793 anticipates the asserted claims 1-3 of the ‘607 patent. *See* Resps. Br. at 179-82.

Furukawa was filed on November 30, 1990. Thus, it is § 102(b) prior art to the

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<sup>49</sup> As noted in Section V.C concerning technical prong, *supra*, complainants removed the sentence “Thus, *encouraging* a certain body orientation does not amount to *detecting* a certain body orientation” in their posthearing brief. *See* Compls. P.H. Br. at 545.

<sup>50</sup> RX-0022 is the original Japanese publication. RX-0023 is an English translation of RX-0022. RX-0029 is a certified English translation of RX-0022.

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'607 patent, which was filed on September 13, 2004. However, the evidence shows that Furukawa fails to disclose certain claim limitations of these claims.

Furukawa discloses two types of transporters: a single spherical-wheeled transporter (depicted in RX-0022 (Furukawa) at Figure 1) and a two-wheeled transporter (depicted in RX-0022 (Furukawa) at Figure 8). The single wheeled vehicle employs a seat connected via a frame, which is connected to the uniball by rollers, which rotate the uniball when the vehicle is powered. *See* CX-1969C (Nayfeh RWS) at Q/A 306. It is undisputed that the driver's body lean position can cause the single-wheeled vehicle of Furukawa to be tilted. *See id.* at Q/A 308. However, the parties dispute whether this single wheeled vehicle embodiment of Furukawa is capable of yaw based on the tilt of the vehicle caused by the user's body. Specifically, the parties dispute the interpretation of the following passage:

The practical embodiment of the present invention is configured as indicated previously so that it is possible to travel with the vehicle at a speed which is proportional to the speed at which the driver tilts his body in the tilting direction so that the driver can drive the vehicle in any direction including forward and backward or from left to right. Since there is one contact point, the driver can make small turns and the invention is suitable for operating inside caves and other cramped spaces. . . . Further, this "turning in place" involves tilting the driver's seat to an indicated direction by using the skill of the operator so that it can also be carried out by the driver bending his body in another direction.

RX-0023 at 7. Complainants argue that the "turning in place" that is taught in the last sentence of the above passage is not a yaw movement, but merely translating the device to mimic a turn by moving the device in increments in the x and y directions. *See* CX-1969C (Nayfeh RWS) at Q/A 313.

The two-wheeled transporter is a self-balancing vehicle wherein the driver is



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seated and controls by manipulating a joystick. *See* RX-0022 (Furukawa) at Figure 8. While it is undisputed the two-wheeled transporter is capable of yaw, the experts appear to agree that such movements are caused by inputs from a joystick in Furukawa, not from the tilting caused by the body orientation of the driver. For reasons already discussed with respect to the Kamen '965 and Heinzmann references, the inputs based on the displacement of a joystick are not inputs "based on a detected body orientation of the user."

Furukawa fails to disclose the elements of claim 1 of the '607 patent, in particular "an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user." Thus, respondents failed to meet their burden to demonstrate that Furukawa anticipates claim 1 of the '607 patent.

Further, to the extent any of the limitations of claim 1 of the '607 patent are not met by Furukawa, those same limitations will not be met in claims 2 and 3 of the '607 patent, as each of those claims depends from claim 1. Thus, respondents have not met their burden to demonstrate that Furukawa anticipates claims 2 and 3 of the '607 patent.

### **3. Obviousness**

Respondents argue that the claims 1-4 and 6 are invalid under 35 U.S.C. § 103(a) as rendered obvious by (1) Kamen '965 alone or in view of U.S. Patent No. 6,050,357 ("Staelin"); and (2) Kamen '965 in view of U.S. Patent Publication No. 2004/0055796 ("Kamen '796"). *See* Resps. Br. at 192-207.

As discussed below, the evidence shows that Kamen '965, Staelin, and Kamen '796 fail to disclose certain limitations of these claims.

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**a. Kamen '965 alone or in view of U.S. Patent No. 6,050,357 ("Staelin") (RX-0015)**

Respondents argue that U.S. Patent No. 6,050,357 ("Staelin"), in combination with Kamen '965, renders obvious the asserted claims of the '607 patent. *See* Resps. Br. at 192-200.

Staelin claims priority to a PCT application filed on May 31, 1995, which was published on November 13, 1997. Staelin issued on April 18, 2000. Thus, Staelin is prior art to the '607 patent, which was filed on September 13, 2004. The evidence shows that respondents failed to meet their burden to prove invalidity by Kamen '965 in view of Staelin.

For the reasons discussed above in the anticipation section, Kamen '965 does not disclose the elements of claim 1 of the '607 patent, in particular "an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user." Complainants argue that Staelin fails to remedy these deficiencies. *See* Compls. Br. at 183-88.

Staelin describes a motorized skateboard with pressure sensors on the upper surface of the board. *See* CX-1969C (Nayfeh RWS) at Q/A 261. The evidence shows that a person of ordinary skill in the art would not consider Staelin (which involves a stable, four-wheeled skateboard) to be analogous art to Kamen '965 (which described an unstable, two-wheeled vehicle that is dynamically balanced). *See id.* at Q/A 262-67.

Additionally, as Dr. Nayfeh explained:

The skateboard in Staelin cannot attain a desired yaw rate independently from a forward direction of movement and velocity. This is

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because rotation of the truck in Staelin will not cause yaw unless the skateboard has a forward or reverse velocity. In contrast, the personal transporter in Kamen '965 can maneuver in tight spaces and even turn in place because the microcontroller can send different command signals to each motor. This allows a user to turn irrespective of the forward or backward velocity of the transporter.

*See id.* at Q/A 266. Thus, respondents have not met their burden to demonstrate why a person of ordinary skill in the art would be motivated to combine the teachings of Kamen '965 with that of Staelin.

Both Kamen '965 and Staelin, either independently or taken together, fail to disclose all elements of claim 1 of the '607 patent. Thus, respondents failed to meet their burden to demonstrate that Kamen '965 in view of Staelin renders obvious claim 1 of the '607 patent. For the same reasons, Kamen '965 in view of Staelin does not render obvious dependent claims 2, 3, 4, and 6 of the '607 patent.

### **b. Kamen '965 in view of U.S. Patent Publication No. 2004/0055796 ("Kamen '796") (RX-0016)**

Respondents argue that U.S. Patent Publication No. 2004/0055796 ("Kamen '796"), in combination with Kamen '965, renders obvious the asserted claims of the '607 patent. *See Resps. Br.* at 200-07.

Kamen '796 was filed on July 11, 2003 and claims priority to a U.S. provisional application filed on July 12, 2002. Respondents argue Kamen '796 is prior art to the '607 patent, which was filed on September 13, 2004. However, complainants argue Kamen '796 is not prior art, because the '607 patent is entitled to an earlier priority date of May 20, 2002. For the reasons discussed above in the anticipation section, the '607 patent is only entitled to a September 13, 2004 priority date.

Kamen '965 in view of Kamen '796 does not render obvious the asserted claims

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of the '607 patent. The vehicle described in Kamen '796 is stable in the fore-aft plane, whereas the vehicles of the '607 patent and Kamen '965 are statically unstable in the fore-aft plane. *See* CX-1969C (Nayfeh RWS) at Q/A 283. Kamen '796 does disclose a second embodiment which is statically unstable with respect to the fore-aft plane. *See* RX-0016 (Kamen '796) at Figure 3, ¶¶ 8, 26. However, complainants argue this embodiment also lacks “an input adapted to receive specification by a user of a desired yaw, yaw rate, and direction of motion of the transporter, at least the desired yaw and yaw rate being based on a detected body orientation of the user.” *See* CX-1969C (Nayfeh RWS) at Q/A 285.

Respondents argue that this second embodiment discloses controlling yaw by referring to the disclosure that “lateral shifts in the center of gravity control steering of the transporter.” *See* RX-0016 at ¶ 38; RX-0030C (Cochran WS) at Q/A 221. However, that applies only to transporters that “in addition to being statically stable in the fore-aft plane, the transporter may also be statically stable with respect to tipping in the lateral plane.” *See* CX-1969C (Nayfeh RWS) at Q/A 286. Thus, complainants correctly argue that “Kamen '796 neither discloses nor suggests the combination of the pressure sensing of lateral shifts in the center of gravity of ¶ 38 with the sensing of tilts in the fore/aft direction in the statically unstable transporter of ¶ 26.” *Id.* Kamen '796 further does not disclose sensing of yaw and yaw rate. *Id.*

Both Kamen '965 and Kamen '796, either independently or taken together, fail to disclose all elements of claim 1 of the '607 patent. Thus, respondents failed to meet their burden to demonstrate that Kamen '965 in view of Kamen '796 renders obvious claim 1 of the '607 patent. For the same reasons, Kamen '965 in view of Kamen '796 does not

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render obvious dependent claims 2, 3, 4, and 6 of the '607 patent.

### c. Secondary Considerations

Complainants argue there is substantial evidence of secondary indicia of non-obviousness of the invention in the '607 patent. *See* Compls. Br. at 192-99.

Complainants argue several factors weigh in favor of a finding of non-obviousness:

- the claimed invention of the '607 patent is a pioneering invention
- the claimed invention of the '607 patent is a commercial success
- there is substantial recognition in the industry of the claimed invention of the '607 patent
- Chic's copying of the '607 patent.

However, for the reasons discussed above with respect to infringement and technical prong of the domestic industry requirement, complainants have not demonstrated that the '607 patent is implemented in the Segway DI products, or any other products. Thus, complainants did not establish a nexus between the record evidence and the merits of the claimed invention of the '607 patent. *See Demaco*, 851 F.2d at 1392. Therefore, the evidence would be insufficient to overcome a determination of obviousness over the prior art.

### **Whether the Invention Is a Pioneering Invention**

A "pioneering advance in the field" can be objective indicia of non-obviousness. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1563 (Fed. Cir. 1997). The '607 patent, which complainants argue was implemented in the Segway DI products, covers a wholly novel device, but is also directed to structure, function, and operation never before performed. *See* CX-1969C (Nayfeh RWS) at Q/A 380. However, for the reasons discussed above with respect to infringement and technical prong of the domestic

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industry requirement, complainants have not demonstrated that the '607 patent is implemented in the Segway DI products, or any other products. Furthermore, complainants cite to their expert's testimony that the "'lean steer' capability of the '607 claimed invention has been lauded as breaking new ground in this pioneering field." Compls. Br. at 193, citing CX-1969C (Nayfeh RWS) at Q/A 381. However, that testimony by Dr. Nayfeh is merely a string cite from Mr. Dean Kamen's deposition transcript describing various aspects of his work relating to the '607 patent. Even if the inventor's self-description of praise from others could be considered reliable, none of the passages cited from Mr. Kamen's deposition relate to the issue of praise from others "as breaking new ground in this pioneering field."

Whereas the administrative law judge found that the invention of the '230 patent was a pioneering one, despite the fact that complainants failed to demonstrate that the '230 patent is implemented in the Segway DI products (or any other products), the situation is different for the '607 patent. Namely, in the '230 patent, the claimed invention is the balancing margin monitor and limit to maintain the ability to accelerate to maintain balance and control of the personal transporter, and (ii) an alarm, such as a lift back of the platform and/or audio warning, to alert a rider when a maximum operating velocity is approaching so that the rider does not surpass such speed and compromise her ability to accelerate and maintain balance and control of the transporter. The '230 patent is not embodied by the DI products for failing to meet a limitation that is unrelated to that claimed invention. For the '607 patent, complainants argue it is the "lean steer" capability of the Segway DI products that embodies the claimed invention of the '607 patent. *See* CX-1969C (Nayfeh RWS) at Q/A 380. However, for the reasons discussed

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above with respect to technical prong of the domestic industry requirement, it is that very so-called “lean steer” capability that actually does not fall within the claim scope of the ‘607 patent. Thus, for that reason, the administrative law judge does not find that the claimed invention of the ‘607 patent is a pioneering invention.

### **Commercial Success**

Complainants argue that the Segway Domestic Industry Products (the Segway PT i2, i2 SE, x2, and x2 SE) (“Segway DI products”), the Ninebot by Segway miniPRO and One S1, and respondents’ accused products practice the ‘607 patent, and have been commercially successful. *See* Compl. Br. at 194-96. The administrative law judge found that the respondents’ accused products do not practice the ‘607 patent. For the reasons discussed above with respect to technical prong of the domestic industry requirement, complainants have not demonstrated that the ‘607 patent is implemented in the Segway DI products, or any other products. Furthermore, complainants did not present admissible evidence that demonstrates the Ninebot by Segway miniPRO and One S1 products actually practice the ‘607 patent. *See, e.g.*, Compl. Br. at 194 (“Dr. Nayfeh provides claim charts of an element by element analysis comparing the Ninebot miniPRO and One S1 products with asserted claims 1-3 of the ‘607 patent.”). Claim charts are not probative evidence. Without any commercialized products embodying the ‘607 patent, complainants cannot establish a nexus to the ‘607 patent.

### **Evidence of Recognition in the Industry**

Complainants argue that the User Manuals across the industry described above that emphasize to consumers the revolutionary lean steer feature claimed in the ‘607 patent” is evidence of recognition in the industry. *See* Compl. Br. at 197. This

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argument is not persuasive. For the reasons discussed above with respect to infringement, the respondents' accused products do not infringe the '607 patent. *See* Compls. Br. at 196, citing CX-0136C (Airwheel user manual), CX-0889 (4WRD-Smart B user manual), CX-0904 (4WRD-Smart-C user manual), CX-0931 (4WRD-Smart-F user manual), CX-0805 (Jetson V6 user manual), CX-0244 (Jetson V8 manual), CX-1592C (SWAGWAY X1 manual), CX-1618 (SWAGTRON T1 manual), CX-1619 (SWAGTRON T3 manual).

Complainants further cite four additional articles (CX-1845 (*Urban Transport* article), CX-1843 (*Orange County Register* article), CX-1851 (*Scientific American* article), and CX-1837 (*Machine Design* article)) from public media sources that allegedly tout the second generation Segway products' incorporation of the LeanSteer technology complainants argue embodies the '607 patent. However, for the reasons discussed above with respect to infringement and technical prong of the domestic industry requirement, complainants have not demonstrated that the '607 patent is implemented in the Segway DI products, or any other products.

**Copying**

For the reasons discussed above with respect to infringement, the Chic [ ] do not infringe (and, therefore, do not copy) the '607 patent.

\* \* \*

Accordingly, the evidence on secondary considerations of non-obviousness is insufficient to overcome a determination of obviousness of the '607 patent over the prior art.



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### 4. Written Description

Respondents argue that the last limitation of claim 1 is not described in the specification or drawings of the '607 patent; namely: “a processor of a kind that generates a command signal governing motion of the at least one ground-contacting element based at least on the user-specified yaw and yaw rate received by the input, in conjunction with the pitch state signal based on the pitch of the transporter, in such a manner as to maintain balance of the transporter in the course of achieving the specified yaw and direction of motion of the transporter.” *See* Resps. Br. at 225-27; RX-0030C (Cochran WS) at Q/A 289.

The issue of whether a patent is invalid for failure to meet the written description requirement of 35 U.S.C. § 112, ¶ 1 is a question of fact. *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 670 F.3d 1171, 1188 (Fed. Cir. 2012). A patent’s written description must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed. The test for sufficiency of a written description is “whether the disclosure of the application relied upon reasonable conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* (quoting *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*)).

The evidence offered by respondents to support their argument is not sufficient for respondents to meet their burden to prove invalidity by clear and convincing evidence.

Respondents’ expert Dr. John Cochran opines that “nowhere does the specification or drawings of the '607 patent disclose that a command signal generated by

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a processor is based at least on ‘the user-specified yaw and yaw rate.’” *See* CX-0030C at Q/A 290. However, the ‘607 patent describes using the handle of the transporter shown in Figure 1 of the ‘607 patent to provide a user-specified yaw rate. *See* JX-0003 (‘607 Patent) at col. 9, ln. 45 – col. 13, ln. 22; Figs. 7A-H. By “pivoting the bar near the base of the machine, the user can move his or her body at high speeds and merely hold onto the handlebar to command an input.” *See* JX-0003 (‘607 Patent) at col. 9, lns. 59-62. The specification further describes how to determine the user-specified yaw based on the input from the handlebar with an equation:  $\dot{\psi}_{cmd} = K(\Phi_{HB} - \Phi_{Roll})$ . *See id.* at col. 10, lns. 15-16. Dr. Nayfeh explains that the  $\psi$  represents yaw, with the overhead dot notation indicating a derivative or rate of change; thus, persons of ordinary skill in the art would understand that  $\dot{\psi}_{cmd}$  represents a yaw rate. *See* CX-1969C (Nayfeh RWS) at Q/A 327. Thus, the ‘607 patent discloses a “command signal . . . based at least on the user-specified [] yaw rate received by the input.”

Furthermore, complainants explain that Figure 2 of the ‘607 patent shows that a user-specified desired yaw is used to derive a yaw command signal. The current yaw error is derived from the difference between current yaw value and the desired yaw value. *See* CX-1969C (Nayfeh RWS) at Q/A 328; JX-0003 (‘607 Patent) at col. 5, lns. 21-31. Persons of ordinary skill in the art would understand that the desired yaw value could be derived from the time integral of the user indicated yaw rate. *See* CX-1969C (Nayfeh RWS) at Q/A 328.

Dr. Cochran opines that “[w]hile certain material may discuss pitch by itself, there is no disclosure of generating a command signal using both the user-specified yaw and yaw rate “in conjunction with the pitch state signal.” *See* RX-0030C (Cochran WS) at

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Q/A 293. Complainants argue that this is disclosed in the '607 patent by its incorporation of the '230 patent. According to Dr. Nayfeh, the '230 patent explains in detail how sensed pitch is used to balance a transporter and to control fore and aft movement. *See* CX-1969C (Nayfeh RWS) at Q/A 330. Figure 5 from the '230 patent is a block diagram of a control system used to “control the motor drives and actuators of the embodiment of FIGS. 1-3 to achieve locomotion and balance.” *See* JX-0001 ('230 Patent) at col. 11, ln. 66 – col. 12, ln. 2. This figure is also a block diagram of the control system in Figure 1 of the '607 patent, inasmuch as Figure 1 in the '230 patent is identical to Figure 1 in the '607 patent. *See* CX-1969C (Nayfeh RWS) at Q/A 330.

The block diagram shows a pitch sensor for sensing the pitch of the device. *See* JX-0001 ('230 Patent) at Figure 5. The specification further explains: “The control system has data inputs including user interface 561, pitch sensor 562 for sensing fore-aft pitch, and wheel rotation sensors 563, and pitch rate sensor 564.” *See id.* at co. 12, lns. 5-8. Then, “as described in connection with FIG. 5 and as further described below, the pitch of the vehicle is sensed and may be used to govern operation of the control loop, so that if the subject leans forward, the vehicle will move forward to maintain a desired velocity or to provide desired acceleration.” *Id.* at col. 12, lns. 19-25.

According to Dr. Nayfeh, a person of ordinary skill in the art would understand these inputs could be used to generate command signals to the left and right motors. *See* CX-1969C (Nayfeh RWS) at Q/A 331. Dr. Nayfeh’s opinion and supporting evidence is more credible. Thus, the evidence offered by respondents that the limitations of claim 1 are not described in the specification or drawings of the '607 patent is not sufficient for respondents to meet their burden to prove by clear and convincing evidence that the

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written description requirement is not satisfied for the '607 patent.

### 5. Indefiniteness

Airwheel appears to maintain that the term “direction of motion,” which appears in asserted claim 1 of the '607 patent is indefinite. *See* Resps. Br. at 24, 114. However, as discussed in the claim construction section of this final ID, respondents' prehearing brief lacks any detail or argument regarding indefiniteness. *See* Resps. P.H. Br. at 57. Airwheel's argument regarding indefiniteness is abandoned or withdrawn. *See* GR 7c.

### VI. Asserted Trademarks

U.S. Trademark Registration No. 2,727,948 (“the '948 TM”) for the mark SEGWAY covers “motorized, self-propelled, wheeled personal mobility devices, namely, [wheelchairs], scooters, utility carts, and chariots.” JX-0005 (brackets in original). The registration issued on June 17, 2003. *Id.* Segway asserts the mark was first used in commerce on December 3, 2001. *Id.*

U.S. Trademark Registration No. 2,769,942 (“the '942 TM”) for the stylized mark **SEGWAY** covers “motorized, self-propelled, wheeled personal mobility devices, namely, wheelchairs, scooters, utility carts, and chariots.” JX-0007. The registration issued on September 30, 2003. *Id.* Segway asserts the mark was first used in commerce on December 3, 2001. *Id.*

Complainants accuse the SWAGWAY X1 and X2 and the SWAGTRON T1, T3, and T5 self-balancing hoverboard products of infringing the '948 TM and '942 TM. *See* Staff Br. at 17-18 (citing Compls. P.H. Br. at 77; Resps. P.H. Br. at 14-15).

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### A. Applicable Law

In analyzing allegations of trademark infringement, the Commission generally uses a two-prong test: (1) whether the complainant's mark merits protection (*e.g.*, whether the mark is valid and enforceable); and (2) whether the respondent's use of a similar mark is likely to cause any consumer confusion. *Certain Handbags, Luggage, Accessories, and Packaging Thereof*, Inv. No. 337-TA-754 (“*Handbags*”), Order No. 16 (ID Granting Complainants' Motion for Summary Determination of Violation) at 8-9 (Mar. 5, 2012) (unreviewed, Apr. 12, 2012); *see also Certain Protective Cases and Components Thereof*, Inv. No. 337-TA-780 (“*Protective Cases*”), Final ID at 84-85 (June 29, 2012) (unreviewed in relevant parts, Aug. 30, 2012).

Federal registration of a mark is *prima facie* evidence of the validity of a trademark, as well as of the registrant's ownership of and exclusive right to use the mark. 15 U.S.C. §§ 1057(b), 1115(a); *Handbags*, Order No. 16 at 6. This presumption “shift[s] the burden of production to the defendant.” *See Apple Inc. v. Samsung Elec. Co.*, 786 F.3d 983, 995 (Fed. Cir. 2015) (internal citations omitted). If this presumption is overcome, however, the registration loses its legal significance. *Id.*

Although actual confusion is not required to prevail on a claim of trademark infringement, “actual confusion is routinely considered by the Commission as proof of trademark infringement as it is ‘undoubtedly the best evidence of likelihood of confusion.’” *Handbags*, Order No. 16 at 14 (citing *Daddy's Junky Music Stores, Inc. v. Big Daddy's Family Music Center*, 109 F.3d 275, 284 (6th Cir. 1997); *Certain Strip Lights*, Inv. No. 337-TA-287, 1989 WL 608725 (June 27, 1989)).

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In determining whether any consumer confusion is likely, the Commission may balance the following factors: (1) the degree of similarity between the designation and the trademark in appearance, the pronunciation of words used, verbal translation of pictures or designs involved, and suggestion; (2) the intent of the actor in adopting the designation; (3) the relation in use and manner of marketing between the goods and services marked by the actor and those by the other; and (4) the degree of care likely to be exercised by purchasers. *Protective Cases*, Final ID at 85-86. The Commission may also consider additional factors, such as the strength of the mark or actual confusion, and all factors must be evaluated in the context of the ultimate question of likelihood of confusion as to the source or sponsorship of the product. *Certain Purple Protective Gloves*, Inv. No. 337-TA-500, Order No. 17 at 13 (Sept. 23, 2004) (unreviewed, Oct. 19, 2004); *Certain Hair Irons and Packaging Thereof*, Inv. No. 337-TA-637, Order No. 14 at 22 (Mar. 10, 2009) (unreviewed, Apr. 23, 2009).

### **B. Trademark Infringement**

Complainants argue infringement of U.S. Trademark Registration No. 2,727,948 (“the ‘948 TM”) for the SEGWAY mark and U.S. Trademark Registration No. 2,769,942 (“the ‘942 TM”) for the stylized **SEGWAY** mark by the Swagway personal transporters, components thereof, and packaging and manuals therefor bearing the SWAGWAY mark or the SWAGTRON mark.

For the reasons discussed below, the evidence shows that the SWAGWAY mark infringes the SEGWAY marks, but it has not been shown that the SWAGTRON mark infringes the SEGWAY marks.

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### 1. Whether the Asserted Trademarks Are Valid and Enforceable

“As discussed above, a federal registration is *prima facie* evidence of the validity of the registered mark, the registrant’s ownership of the mark, and the registrant’s exclusive right to use the registered mark in commerce on or in connection with the goods or services specified in the certificate, subject to any conditions or limitations stated in the certificate.” *Protective Cases*, Final ID at 85. Segway obtained federal registrations issued by the U.S. Patent and Trademark Office for each of the marks at issue. These registrations are indisputable *prima facie* evidence of the validity of the asserted marks, as well as the exclusive rights of Segway to use them in commerce in connection with the goods identified in the registration certificates. *See* 15 U.S.C. § 1057(b).

Swagway argues that the SEGWAY mark is generic for motorized transport devices with a platform and a handlebar. *See* Resps. Br. at 273-76. Swagway argues that “Complainants do not require or enforce its licensees’ use of the registered trademark symbol ® when using the term ‘Segway’ to describe certain personal transporters.” *Id.* at 275, citing CX-1636 (Capital Segway, Washington DC website). However, the evidence and case law cited by complainants show that the SEGWAY mark has not become generic. *See* Compls. Br. at 205-10.

The Trademark Clarification Act of 1984 set forth the test for genericness: “The primary significance of the registered mark to the relevant public rather than purchaser motivation shall be the test for determining whether the registered mark has become the generic name of goods or services on or in connection with which it has been used.” 15

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U.S.C. § 1064(3); *Magic Wand, Inc. v. RDB, Inc.*, 940 F.2d 638, 640 (Fed. Cir. 1991).

To determine that a trademark is generic and thus pitch it into the public domain is a fateful step. It penalizes the trademark’s owner for his success in making the trademark a household name and forces him to scramble to find a new trademark. . . . The fateful step ordinarily is not taken until the trademark has gone so far toward becoming the exclusive descriptor of the product that sellers of competing brands cannot compete effectively without using the name to designate the product they are selling. Imagine the pickle that sellers would be in if they were forbidden to use “brassiere,” “cellophane,” “escalator,” “thermos,” “yo-yo,” or “dry ice” to denote products — all being former trademarks that have become generic terms. The problem is not that language is so impoverished that no other words could be used to denote these products, but that if no other works *have* emerged as synonyms it may be difficult for a seller forbidden to use one of the trademarked words or phrases to communicate effectively with consumers.

*Ty Inc. v. Softbelly’s Inc.*, 353 F.3d 528, 531–32 (7th Cir. 2003).

Swagway cites a handful of examples of the alleged use of the term “Segway” in a generic fashion. *See* Resps. Br. at 275, citing CX-1629 (Consumer Reports article); CX-1632 (CNET article); CX-1633 (TechCrunch article); CX-1634 (Daily Hover article), CX-1636 (Capital Segway webpage); RX-0068 (City Segway Tours webpage); RX-0069 (Segs in the City webpage). However, in each of these examples, there is no indication the term “Segway” is being used in a generic manner; rather, it appears they are referring to the Segway brand personal transporters.

Exhibit	Reference to “Segway” in the document	Exhibit description
CX-1629	“Novel, electric urban transportation devices are a minitrend at CES this year, but the way the IO Hawk miniaturizes self-balancing technology—first made famous by the Segway—is pretty fascinating.”	“IO Hawk is like a mini Segway,” CONSUMER REPORTS



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Exhibit	Reference to “Segway” in the document	Exhibit description
CX-1632	“The Hovertrax comes in black or white (both models have red accents), and is available on Solowheel’s Inventist Web storefront for less than a Segway -- \$995 (which is about £660 or AU\$1,230).”	“Cruise around hands-free on Solowheel’s Segway-like Hovertrax,” CNET
CX-1633	“The Hovertrax Is Like Two Dumb Little Segways For Your Feet”	“The Hovertrax Is Like Two Dumb Little Segways For Your Feet,” TECHCRUNCH
CX-1634	“In addition to simply moving objects around, its self-balancing, four-wheel system can be used for personal transport, much like a Segway.”	“Ford Debuts Segway-like Vehicle Called Carr-E,” DAILY HOVER
CX-1636	passim	<a href="http://www.capitalsegway.com">http://www.capitalsegway.com</a>
RX-0068	passim	<a href="http://www.citysegwaytours.com">http://www.citysegwaytours.com</a>
RX-0069	“Segways are easy to use and our guides not only provide expert training, but they offer an insiders [sic] knowledge to the local history and happenings.”	<a href="http://www.segsinthecity.com">http://www.segsinthecity.com</a>

In each of these references, the word “Segway” is capitalized and the context in which the term is used implies to the reader the specific Segway brand personal transporters. Swagway’s argument concerning these examples is conclusory in nature and no additional argument or evidence has been raised regarding the alleged genericness. *See* Resps. Br. at 273-76; Resps. P.H. Br. at 226-27.

Swagway has not demonstrated that the Swagway “trademark has gone so far toward becoming the exclusive descriptor of the product that sellers of competing brands cannot compete effectively without using the name to designate the product they are selling.” Indeed, the parties themselves have referred to the accused products using different descriptors, such as “personal transporters,” “hoverboards,” “self-balancing vehicles,” and/or some combination of those terms. Thus, Swagway’s argument that the

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term “Swagway” is generic is not persuasive and suffers from lack of supporting credible, admissible evidence.

Thus, the asserted trademarks are valid and enforceable, and Swagway has not presented sufficient evidence to overcome the presumption of validity.

### 2. Actual Confusion

Although actual confusion is not required to prevail on a claim of trademark infringement, “actual confusion is routinely considered by the Commission as proof of trademark infringement as it is ‘undoubtedly the best evidence of likelihood of confusion.’” *Handbags*, Order No. 16 at 14 (citing *Daddy’s Junky Music Stores, Inc. v. Big Daddy’s Family Music Center*, 109 F.3d 275, 284 (6th Cir. 1997); *Certain Strip Lights*, Inv. No. 337-TA-287, 1989 WL 608725 (Jun. 27, 1989)).

#### “SWAGWAY”

Complainants offered evidence of numerous instances of actual consumer confusion. For example, in October 2015 through December 2015, Segway received requests about hoverboards and 60 emails from consumers that suggested the consumer believed Swagway was affiliated or associated with Segway or that Swagway products were manufactured by Segway. *See* Compl. Br. at 211-18; CX-1972C (Leary WS) at Q/A 10-11. Segway estimates that for each email, they received about 10-15 telephone calls from consumers. *Id.* Thus, in the same three month period, Segway received between 600 and 900 telephone calls from consumers who believed there was some sort of association between Swagway and Segway.

The documentary evidence detailing actual confusion by consumers who purchased a Swagway product with the Segway brand is detailed further by Mr. Leary.

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*Id.* at Q/A 15-29. For example, Mr. Leary details a number of inquiries from consumers who provided SKU numbers from Swagway products to the Segway technical support team. *Id.*, citing CX-1406C, CX-1407C, CX-1409C through CX-1411C, CX-1413C, CX-1418C, CX-1421C, CX-1427C, and CX-1475C (documentation of misdirected customer inquiries involving Swagway to Segway); *see also* CX-1971C (Buccella WS) at Q/A 125-27 (detailing communications from consumers and an attorney which suggest they believed Swagway products were manufactured by or affiliated with Segway). Segway continues to receive calls from consumers regarding Swagway's products. *See* Compls. Br. at 211-18; CX-1972C (Leary WS) at Q/A 29; CX-1971C (Buccella WS) at Q/A 123-24.

Accordingly, the overwhelming evidence shows that the SWAGWAY mark infringes the '948 and '942 TMs.

### **"SWAGTRON"**

Complainants argue: "Segway has received returned Swagtron product and continues to receive misdirected calls regarding Swagway's products, including the SWAGTRON product."<sup>51</sup> *See* Compls. Br. at 212, citing CX-1972C (Leary WS) at Q/A 24-27, CDX-0505; CX-1429C (Segway Tech support email); Leary Tr. 141.

Complainants argue that "during a two-week period in January of 2017, just one of the Technical Support Department employees received five calls specifically mentioning the SWAGTRON product." *See* Compls. Br. at 212, citing Leary Tr. 141. Complainants and the Staff argue that "at least one distributor, Amazon, has also mistakenly returned two

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<sup>51</sup> It is noted that the USPTO issued a notice that the SWAGTRON mark "will now register and the registration certificate will issue in due course." *See* RX-0074 (USPTO Office Action and Notice) at 1.

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Swagtron T5 products to Segway.” *See* Compls. Br. at 212 and Staff Br. at 153, citing Leary Tr. 142. However, Mr. Leary’s testimony is scant with respect to the Amazon return,<sup>52</sup> and with respect to telephone calls shows that he was relying on his discussions with [ ]. [ ] did not testify at the hearing. Thus, this evidence is not persuasive.

The documentary evidence cited by complainants shows that there was only one potential instance of actual consumer confusion. In an email, one consumer asks: “The product is Swagtron which I believe is made by Segway?” *See* CX-1429C (Segway Tech support email). This email, which stands alone, provides little insight into the thoughts of the writer.

Furthermore, the evidence allegedly showing actual confusion is insufficient when considered in the context of the significant volume of sales of SWAGTRON products. *See* Resps. Br. at 241, 255-56; Zhu Tr. 627 (In 2016 alone, Swagway sold over [ ] units of SWAGTRON products in the United States.).

Although evidence of actual confusion may be the best evidence of likelihood of confusion, “isolated instances of actual confusion or misdirected mail have been held insufficient to sustain a finding of likelihood of confusion.” *Union Carbide Corp. v. Ever-Ready, Inc.*, 531 F.2d 366, 383 (7th Cir. 1976). “Evidence of only a small number of instances of actual confusion can be dismissed as inconsequential or *de minimis* ... .” 5 McCarthy § 23:14 (2017). As McCarthy explains:

Evidence of the number of instances of actual confusion must be placed against the background of the number of opportunities for confusion before one can make an informed decision as to the weight to be

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<sup>52</sup> There is no documentary evidence concerning the alleged Amazon return.

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given the evidence. If there is a very large volume of contacts or transactions which could give rise to confusion and there is only a handful of instances of actual confusion, the evidence of actual confusion may receive relatively little weight.

*Id.* (noting also “the possibility that e-mails were misdirected by people because they were inattentive or careless, as opposed to being actually confused”).

\* \* \*

Thus, the preponderance of the evidence relating to actual confusion does not show that the SWAGTRON mark infringes the SEGWAY marks.

### 3. Likelihood of Confusion

As noted above, in determining whether any consumer confusion is likely, the Commission may balance the following factors: (1) the degree of similarity between the designation and the trademark in appearance, the pronunciation of words used, verbal translation of pictures or designs involved, and suggestion; (2) the intent of the actor in adopting the designation; (3) the relation in use and manner of marketing between the goods and services marked by the actor and those by the other; and (4) the degree of care likely to be exercised by purchasers. *Protective Cases*, Final ID at 85-86. The Commission may also consider additional factors, such as the strength of the mark or actual confusion, and all factors must be evaluated in the context of the ultimate question of likelihood of confusion as to the source or sponsorship of the product. *Certain Purple Protective Gloves*, Inv. No. 337-TA-500, Order No. 17 at 13 (Sept. 23, 2004) (unreviewed, Oct. 19, 2004); *Certain Hair Irons and Packaging Thereof*, Inv. No. 337-TA-637, Order No. 14 at 22 (Mar. 10, 2009) (unreviewed, Apr. 23, 2009).

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The factors are analyzed below.

a. Degree of Similarity

“SWAGWAY”

The evidence shows that the SWAGWAY mark is nearly identical to the SEGWAY marks. There is a high degree of similarity between the stylized appearance of the SWAGWAY and SEGWAY marks.

**SEGWAY**  
**SWAGWAY™**

See JX-0008 ('942 TM Registration) at 2; CX-0773 (SWAGWAY user manual) at 15.

Furthermore, the pronunciation of Segway and Swagway are highly similar. Indeed, as discussed above, complainants offered overwhelming evidence of actual confusion between the two marks.

“SWAGTRON”

The evidence shows that the SWAGTRON mark is not similar in appearance to the SEGWAY marks.

**SEGWAY**  
**SWAGTRON®**

See JX-0008 ('942 TM Registration) at 2; CX-0771 (SWAGTRON user manual) at 17.

The pronunciation of Segway and Swagtron are also dissimilar. Complainants argue that the evidence shows that Swagway created confusion by referring to Swagtron

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in conjunction with “by Swagway.” Compls. Br. at 222-24, 245. It is argued that the tagline “Swagtron by Swagway” or similar association of the two marks was used across several different marketing platforms. *See* Compls. Br. at 222-23, 240; citing CX-0434 (Swagway website screenshot offering for sale Swagtron red hoverboard by Swagway); CX-1437 (article from the Verge describing Swagway’s new Swagtron hoverboard has Bluetooth); CX-2222 through CX-2233 (Swagway Instagram pages showing “#Swagtron by #Swagway”). However, this evidence of association does not establish that an association was actually made, and is not persuasive in determining the similarity between the SWAGTRON mark and the SEGWAY mark. Complainants have not shown the two marks to be similar.<sup>53</sup>

### **b. Intent of the Actor**

Complainants argue that Swagway adopted its designation in bad faith. *See* Compls. Br. at 233-39. Complainants argue that Swagway had actual knowledge of the SEGWAY marks, as Swagway unsuccessfully attempted to trademark the names “Swegway” and “Swagway.” *Id.* Complainants presented evidence demonstrating how Swagway has advertised its SWAGWAY and SWAGTRON branded products in conjunction with the term “segway” or “hands free segway.” *Id.* at 236, citing, *e.g.*, CX-1441, CX-1515, CX-1519, CX-1520 (all four are Swagway websites).

Yet, Swagway’s founder, Mr. Johnny Zhu, testified that the name Swagway was derived around July 2015 from the term “swag,” which he understood to mean trendy or cool. *See* RX-0054C (Zhu WS) at Q/A 78; Zhu Tr. 606 (“And at a mall in Shanghai, we

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<sup>53</sup> It is noted that complainants have not offered survey evidence relating to the accused marks. Surveys are not a prerequisite to showing trademark infringement.

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saw a store selling these hoverboard products. And my sons were really fascinated by it, and both of them were trying on it. And both of them kept saying oh, so swag, oh, this is way too swag, that inspired me of making Swagway, it's the only way, thought.”).

Mr. Zhu explained that after he received a cease and desist letter dated December 3, 2015 from Segway's counsel (CX-0440), Swagway began the process of finding a different name and soon after settled on the name Swagtron. Zhu Tr. 606-607. One month after the cease and desist letter from Segway, the Swagtron name was introduced to the public at the Consumer Electronics Show in January 2016. *Id.* Then, around February 2016, the swagway.com and swagtron.com websites began to run a disclaimer stating “Swagway and Swagway LLC are not authorized by, endorsed by, affiliated with or otherwise approved by Segway, Inc.” *Id.* at 640-642. However, this disclaimer did not appear on each page or subpage. *See* CX-1440 (swagway.com website screenshot without the disclaimer).

The credibility of a witness' testimony is called into question when the testimony advances his or her self-interest. However, in this instance, there appears to be concrete actions taken by Mr. Zhu that lend credibility to his testimony regarding his lack of intent to infringe on the Segway trademarks.

### **c. Relation in Use and Manner of Marketing**

Complainants have presented evidence demonstrating that Segway's and Swagway's products are both used for personal transportation and recreational purposes and, thus, can often be found on the same websites or even at brick-and-mortar stores, such as Target, Wal-Mart, Best Buy, and Frye's. *See* Compl. Br. at 241, citing CX-1971C (Buccella WS) at Q/A 108-19.



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Swagway does not appear to challenge this, but argues that the average price point for Swagway's products is a fraction of the average price of Segway's domestic industry products. For example, complainants' economic expert calculated that the average selling price of the accused SWAGWAY products ranges between \$[ ] and \$[ ], compared to "the average selling price of the Domestic Industry Products [being] \$[ ]." *See* CX-1967C (Milani WS), Q/A 233-234, 257. Additionally, complainants' economic expert calculated that the average selling price of the accused SWAGTRON products ranges between \$[ ] and \$[ ], compared to "the average selling price of the Domestic Industry Products [being] \$[ ]." *See* CX-1967C (Milani WS), Q/A 233-234, 257. Stated differently, the goods offered in connection with the asserted trademarks are, on average, between [ ] times more expensive than the SWAGWAY products, and between [ ] times more expensive than the SWAGTRON products. As a result, while the goods offered in connection with the asserted trademarks are marketed as personal transporters, Swagway markets its accused products as toys, both to teenagers (who use the product) and to their parents (who purchase the product). *See* Zhu Tr. 578, 634.

Thus, as argued by Swagway, the likelihood of confusion caused by the common channels is low. *See* Resps. Br. at 250-52.

Therefore, this factor weighs against a finding that use of the SWAGWAY and SWAGTRON marks is likely to cause consumer confusion.

### **d. Degree of Care**

As noted above, the price point for Swagway's products is a small fraction of the average price of Segway's domestic industry products. Yet, at \$[ ] to \$[ ] for

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SWAGWAY products, and \$[ ] to \$[ ] for SWAGTRON products, the price is not so negligible that consumers take no degree of care. In fact, given recent media stories involving the recall of hoverboard products by the Consumer Products Safety Commission in June 2016 and reports of fires from hoverboards catching fire, it is likely that the degree of care exercised by consumers is higher than one would otherwise suspect for a similar type of consumer product at a similar price point. Neither complainants nor Swagway presented any evidence regarding this factor. *See* Compls. Br. at 242-43; Resps. Br. at 252-53, 261-62.

### e. The Strength of SEGWAY Marks

The distinctiveness of a mark is evaluated under a two-prong test: (1) the conceptual strength of the mark, *i.e.*, its distinctiveness; and (2) the commercial strength of the mark, *i.e.* the marketplace recognition of the mark. *See Fortune Dynamic, Inc. v. Victoria's Secret Stores Brand Mgmt.*, 618 F.3d 1025, 1032 (9th Cir. 2010).

As discussed below, complainants have shown that this factor weighs in favor of finding that use of the SWAGWAY and SWAGTRON marks is likely to cause consumer confusion. *See* Compls. Br. at 227-33.

#### Conceptual Strength

The conceptual strength is evaluated on a spectrum of distinctiveness with five categories running from weakest to strongest: generic, descriptive, suggestive, arbitrary, and fanciful, often referred to as the *Abercrombie* continuum. *See, e.g., Abercrombie & Fitch Co. v. Hunting World, Inc.*, 537 F.2d 4, 9 (2d Cir. 1976).

As argued by complainants, the SEGWAY Marks sit near the very top of the *Abercrombie* continuum, slightly below made-up words with no discernible meaning

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such as Kodak but above actual, common words such as apple that are arbitrary in connection with their products. *Abercrombie*, 537 F.2d at 9. (“The lines of demarcation . . . are not . . . always bright.”). The mark SEGWAY was coined for the sole purpose of functioning as a trademark and has no other meaning other than acting as a trademark. *See* CX-1971C (Buccella WS) at Q/A 45; CX-1469 (Dictionary entry for SEGWAY); CDX-1189 (CX-1971C (Buccella WS) at Q/A 45; CX-1469 (Dictionary Definitions) at SEGWAY\_1007ITC0143824, SEGWAY\_1007ITC0143824, SEGWAY\_1007ITC0143824) The SEGWAY Marks are not actual words; indeed, the word “Segway” does not appear in any English dictionary of which Complainants are aware except to reference the term as a trademark or brand and its unique goods. *See* CX-1971C (Buccella WS) at Q/A 45; CX-1469 (Dictionary entry for SEGWAY); CDX-1189 (CX-1971C (Buccella WS) at Q/A 45; CX-1469 (Dictionary Definitions) at SEGWAY\_1007ITC0143824, SEGWAY\_1007ITC0143824, SEGWAY\_1007ITC0143824).

Thus, the conceptual strength of the mark is high. This conclusion is further bolstered by the fact that the SEGWAY Marks are registered on the Principal Register and have obtained incontestable status. *See* CX-1971C (Buccella WS) at Q/A 18-26; JX-0006 (‘948 Trademark Reg.); JX-0008 (‘942 Trademark Reg.); CX-1470 (Segway Website); CDX-1185 (CX-1971C (Buccella WS) at Q/A 23; JX-0006 (‘948 Trademark File History) at SEGWAY\_1007ITC0105375; JX-0008(‘942 Trademark File History) at SEGWAY\_1007ITC0105440).

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### Commercial Strength

As argued by complainants, Segway is an example of a company and brand immediately making a powerful impression on the general public. Before the Segway personal transporter was even revealed, it was already the subject of “months and hype and rampant press speculation.” *See* Compl. Br. at 229, citing CX-1971C (Buccella WS) at Q/A 9-11; CX-1435 (Segway News Articles); CX-0522 (UNH Segway Article); CDX-1183 (CX-1971C (Buccella WS) at Q/A 11; CX-1435 (2001 News Articles) at SEGWAY\_10070143470, SEGWAY\_1007ITC0143471, SEGWAY\_1007ITC0143475, SEGWAY\_1007ITC0046915, SEGWAY\_1007ITC0143506). “Amazon founder Jeff Bezos and legendary venture capitalist John Doerr were early and enthusiastic investors.” *See* CX-1435 (Segway News Articles) at p. 58. After seeing prototypes of the Segway personal transporter, co-founder of Apple Steve Jobs said “If enough people see the machine, you won’t have to convince them to architect cities around it. It’ll just happen.” *Id.*

Segway further promotes its products through authorized companies engaged in tourist activities. Segway’s products are utilized by third party customers to offer Segway tours across the United States, including in Alabama, Alaska, Arizona, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Hawaii, Illinois, Indiana, Kentucky, Maryland, Michigan, Missouri, Montana, Nevada, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, and Wisconsin. Over 700 tours use Segway personal transporters across the globe. During Segway Tours, individuals have the opportunity to ride Segway’s personal transporters as they explore local jurisdictions. These activities

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have further strengthened the SEGWAY brand and the association of the brand with the products among consumers. *See* Compl. Br. at 231, citing CX-1971C (Buccella WS) at Q/A 57-62; CX-1552 (Authorized Segway Tours).

### f. Safe Distance Rule

Complainants argue that Swagway's adoption of the SWAGTRON mark violates the safe distance rule. *See* Compl. Br. at 243-46. Complainants state that the "safe distance rule . . . provides that where a party has engaged in unfair competition (such as trademark infringement), he should be required to keep a safe distance from the margin and avoid all likelihood of confusion." *See id.* at 244, citing *Certain Plastic Food Storage Containers*, Inv. No. 337-TA-152, Comm'n Op. at 8 (Jul. 13, 1984), Publ. No. 1563 (EDIS Doc. No. 230878). Complainants argue that the "rule was designed to prevent an infringer from making only insignificant changes to the infringing mark and continuing the same conduct." *See* Compl. Br. at 244, citing 5 McCarthy § 30:21 (4th ed.).

The Commission Opinion in *Plastic Food Storage Containers* refers to keeping a "safe distance" to prohibit the adjudicated infringer in that investigation from avoiding the relief granted to the complainant: "Having crossed over the line dividing fair from unfair competition, respondents may now be ordered to keep a safe distance from it." *See Plastic Food Storage Containers*, Comm'n Op. at 8. It was only after the respondents in *Plastic Food Storage Containers* were found to infringe the asserted trademark that the Commission issued remedial orders. *See id.* at 1-2.

The reasonable interpretation of the Commission's statement is that it serves as a warning to the adjudicated infringers to stay a safe distance away from the asserted

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trademarks. This is consistent with the manner in which it has been applied by the courts. *See Taubman Co. v. Webfeats*, 319 F.3d 770, 779-80 (6th Cir. 2003) (“the Safe Distance Rule was meant to be applied only against proven infringers”) (*citing Broderick & Bascom Rope Co. v. Manoff*, 41 F.2d 353, 354 (6th Cir. 1930)); *John Allan Co. v. Craig Allen Co. LLC*, 540 F.3d 1133, 1142 (10th Cir. 2008) (the safe distance rule “was created to protect against defendants, found to have infringed upon a trademark from preserv[ing] . . . good will acquired through fraud”) (internal citations omitted); *Tamko Roofing Prods., Inc. v. Ideal Roofing Co., Ltd.*, 282 F.3d 23, 40 (1st Cir. 2002) (“the safe distance rule, which counsels that an infringer, once caught, must expect some fencing in”) (internal citations omitted); *Conan Prods., Inc. v. Conans Pizza, Inc.*, 752 F.2d 145, 154 (5th Cir. 1985) (“a competitive business, once convicted of unfair competition in a given particular, should thereafter be required to keep a safe distance away from the margin line — even if that requirement involves a handicap as compared with those who have not disqualified themselves”) (*citing Chevron Chem. Co. v. Voluntary Purchasing Groups, Inc.*, 659 F.2d 695, 705 (5th Cir. 1981), *cert. denied*, 457 U.S. 1126 (1982)); *Scotts Co. v. United Indus. Corp.*, 315 F.3d 264, 282, n.5 (4th Cir. 2002); *Plough, Inc. v. Kreis Labs.*, 314 F.2d 635, 639 (9th Cir. 1963); *Cumulus Media, Inc. v. Clear Channel Commc’ns, Inc.*, 304 F.3d 1167, 1179 (11th Cir. 2002); *see also* 5 McCarthy on Trademarks and Unfair Competition § 30:21 (4th ed. 2017) (“The safe distance rule . . . is designed to prevent a proven infringer from evading contempt charges by making only insignificant changes to the infringing mark and continuing its conduct.”).

There has not been a final determination that SWAGWAY products infringe the SEGWAY marks. Thus, it is premature to apply the safe distance rule in this

investigation.

\* \* \*

Accordingly, complainants have shown that SWAGWAY products infringe the SEGWAY marks, but it has not been shown that SWAGTRON products infringe the SEGWAY marks.

**C. Domestic Industry**

On April 6, 2017, the administrative law judge granted summary determination of satisfaction of the technical prong of the domestic industry requirement for the asserted '942 and '948 trademarks. *See* Order No. 32: ID Granting in Part Summary Determination Motion (Apr. 6, 2017) (unreviewed, May 7, 2017).

**VII. Domestic Industry (Economic Prong)<sup>54</sup>**

Complainants argue:

Complainants offered two witnesses in support of their showing on the domestic industry economic prong, namely, Ms. Judy Cai and Mr. Michael Milani. Ms. Cai is currently the Interim President of Segway, and has also been its Chief Financial Officer for several years. Ms. Cai is responsible for the day to day operation of the company, including all aspects of the finance department. CX-1973C (Cai WS) at Q/A 1-3.

Mr. Milani is a Managing Director of Ocean Tomo, LLC, an economic consulting firm, specializing in assessing financial, economic and market related issues pertaining to intellectual property matters. CX-1967C (Milani WS) at Q/A 2-4. Respondents did not proffer an economic expert to rebut the testimony of Mr. Milani.

Compls. Br. at 276.

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<sup>54</sup> *See* Section III.D of this final ID for the legal discussion concerning domestic industry.

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Complainants argue: “A domestic industry exists in the United States by virtue of Segway’s significant investments in plant and equipment in the United States relating to the engineering, development, production, testing, marketing, distribution, customer service, repair, and warranty fulfillment for the Segway Domestic Industry Products, as well as packaging, and manuals therefor that are sold, marketed, advertised and/or promoted under the SEGWAY Marks.” Compl. Br. at 276-77.

Complainants argue:

Segway employs in the United States significant labor and capital for activities related to the production, engineering, development, manufacture, testing, marketing, distribution, customer service and warranty fulfillment concerning the Segway Domestic Industry Products. Mr. Milani thoroughly examined Segway’s books and records and determined the various categories of employees that were specifically involved in supporting production of the Domestic Industry Products.

Mr. Milani then allocated the wages and benefits associated with the Segway employees dedicated to the production line and assembly areas to the Domestic Industry Products.

Compl. Br. at 284.

Respondents argue: “Complainants fail to show any significant investment in plant and equipment because they fail to compare the activities in the U.S. with the activities in China and fail to prove the investment is significant in the context of the industry in question.” Resps. Br. at 278. Respondents argue: “For same reasons as those stated above regarding prong (A), it is impossible to determine whether Complainants’ employment of labor or capital is significant. Specifically, Complainants failed to provide financial data of NINEBOT products and failed to take this data into account in their analysis. Thus, Complainants failed to show significant employment of labor or capital.” Resps. Br. at 281.



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The Staff argues:

Complainants assert that they have satisfied the economic prong of the domestic industry requirement through significant investment in plant and equipment (19 U.S.C. § 1337(a)(3)(A)) or substantial investment in labor and capital (19 U.S.C. § 1337(a)(3)(B)). The Staff submits that the evidence proffered by Complainants at the evidentiary hearing is sufficient to establish satisfaction of the economic prong of domestic industry only under subsection (B), by demonstrating significant employment of labor or capital with respect to the Segway DI products. 19 U.S.C. § 1337(a)(3)(B). Unfortunately, the data underlying Complainants' assertions are buried within spreadsheets and neither Complainants' prehearing brief nor Mr. Milani's witness statement lay out the information in a clear format for the fact finder to review the data and verify its accuracy. However, at least with respect to the investments relating to employment of labor having a nexus to the alleged Segway DI products, the Staff was able to unearth the relevant data and confirm at least some of the alleged investments.

Staff Br. at 163-64 (footnote omitted).

With respect to the economic prong, and whether or not section 337(a)(3)(A) or (B) is satisfied, the Commission has held that "whether a complainant has established that its investment and/or employment activities are significant with respect to the articles protected by the intellectual property right concerned is not evaluated according to any rigid mathematical formula." *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm'n Op. at 27 (Feb. 17, 2011) ("*Printing and Imaging Devices*") (citing *Certain Male Prophylactic Devices*, Inv. No. 337 TA-546, Comm'n Op. at 39 (Aug. 1, 2007)). Rather, the Commission examines "the facts in each investigation, the article of commerce, and the realities of the marketplace." *Id.* "The determination takes into account the nature of the investment and/or employment activities, 'the industry in question, and the complainant's relative size.'" *Id.* (citing *Stringed Musical Instruments* at 26).

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### A. Investments in Plant and Equipment

Complainants failed to provide an alleged total dollar investment in the domestic industry for plant and equipment. *See* Compls. Br. at 276-83. Complainants argue that the 2013 assessed value of \$[ ] for the Bedford facility should be included as part of its plant and equipment investment under subpart (A). *See id.* at 277. Yet, they fail to recite their proposed allocation dollar figure in their posthearing brief. Complainants cite to an alleged investment of \$[ ] (of which \$[ ] is allegedly properly allocated to the DI products) in equipment used in the main production line for the DI products. *See id.* at 278, citing CX-1967C (Milani WS) at Q/A 86. However, they fail to note that Mr. Milani is relying on a spreadsheet that “reflects Segway’s Active Asset Details per Cost Center Report from January 1, 2000 – December 31, 2016.” *See* CX-1967C (Milani WS) at Q/A 87. The alleged Segway domestic industry products were not manufactured until 2006. It is not clear from that spreadsheet which investments are actually allocable to the domestic industry products, inasmuch as the spreadsheet includes investments in equipment made from 2000 through 2006 which, at least for part of their life cycle, were used for purposes other than the alleged domestic industry products.

A similar problem exists with complainants’ argument that an additional \$[ ] was spent on shared equipment (of which \$[ ] is allegedly properly allocated to the DI products). *See* Compls. Br. at 280-81, citing CX-1967C (Milani WS) at Q/A 110-14. Mr. Milani relies, in part, on investments made prior to 2006, so at least those investments predating 2006 are unlikely to be allocable to the domestic industry products. *See* CX-1967C (Milani WS) at Q/A 111 (citing CX-2203C through CX-2205C, CX-2207C, CX-2208C (financial statements detailing investments in shared equipment)).

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Complainants argue that “as of May 2016, Segway had invested \$[ ] in fixed assets for manufacturing, manufacturing support, design and engineering of the Segway domestic industry transporters at the Bedford Facility, beginning in 2001.” Compls. Br. at 281. Complainants have not indicated in their brief if or how this figure is properly allocated to the alleged domestic industry products. Therefore, this \$[ ] figure cannot be properly included as domestic industry investment.

Thus, in addition to failing to present sufficient information regarding their alleged investment in plant and equipment, the figures complainants present in their initial posthearing brief are fundamentally flawed in that they rely at least in part on assets purchased several years prior to the existence of the alleged domestic industry products in 2006. The burden of demonstrating the satisfaction of domestic industry rests with complainants. Yet, they have not carried the burden.

### **B. Employment of Labor and Capital**

Complainants argue that from 2013 to 2016, Segway invested \$[ ] in labor and capital, which allegedly includes \$[ ] in 2016 alone. *See* Compls. Br. at 286; CX-1967C (Milani WS) at Q/A 151. Although complainants included in these figures incorrectly categorized investments, Segway’s investment in labor and capital from 2013 to 2016 of \$[ ] is significant.

As of June 2016, Segway employed [ ] individuals at the Bedford facility. *See* CX-1973C (Cai WS) at Q/A 28. Of the [ ] employees, [ ] were dedicated to the engineering and manufacture of the Segway DI products and related accessories, including direct manufacturing, quality assurance and warranty service, engineering, procurement, and preparation of user materials. *See id.* at Q/A 29.

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Mr. Milani opines that over the period from 2013 to 2016, Segway invested \$[ ] in wages and benefits associated with three categories of Segway employees (*i.e.*, manufacturing engineering, direct manufacturing, and software engineering) dedicated to the production line and subassembly areas for the personal transporters, which includes not only the Segway DI products, but also [

]. *See* CX-1967C (Milani WS) at Q/A

139-41. This information is shown in CX-2173C (calculation of labor compensation dedicated to Segway PT production line, 2013-2016):

[

]

By utilizing the calculated percentage of revenues generated from by the Segway DI products as compared to the revenues generated from all Segway personal transporters produced at the Bedford facility, Mr. Milani allocated the investments in labor for each of the years from 2013 to 2016 (varying between [ ]% and [ ]% to determine the total allocation of investment in labor for employees dedicated to the production line and subassembly areas for the Segway DI products to be \$[ ] for the same period. *See* CX-1967C (Milani WS) at Q/A 142-43.

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[

CDX-0092C (demonstrative exhibit).

Mr. Milani opines that over the period from 2013 to 2016, Segway invested \$[ ] in wages and benefits associated with seven categories of Segway employees (*i.e.*, operations, materials, supply chain, quality, field service, product development (PD) engineering, and engineering – Ninebot) [

]. See CX-1967C (Milani

WS) at Q/A 144-45. This information is shown in CX-2171C (calculation of shared labor compensation (DI and non-DI), 2013-2016):

[

By utilizing the calculated percentage of revenues generated from by the Segway DI products as compared to the revenues generated from all Segway personal transporter vehicles, parts and accessories (P&A), and services, Mr. Milani allocated the investments in labor for each of the years from 2013 to 2016 (varying between [ ]% and [ ]%

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to determine the total allocation of investment in labor for employees [

]. *See* CX-1967C (Milani WS) at Q/A 146-49.

[

]

CDX-0094C (demonstrative exhibit).

Thus, Segway's total investment in labor that is properly allocated to the alleged DI products is \$[ ] for the period from 2013 to 2016. This figure represents [

].

Mr. Milani categorizes alleged investments in "major physical assets that are used when producing the Domestic Industry Products" as investments in capital. *See* CX-1967C (Milani WS) at Q/A 150-52. However, this is erroneous, inasmuch as the alleged investments in dedicated equipment (\$[ ]) and shared equipment (\$[ ]) (totaling \$[ ]) were also included in Mr. Milani's calculation of plant and equipment investments under 19 U.S.C. § 1337(a)(3)(A). *See* Milani Tr. 475-477.

Thus, the evidence shows that for the period from 2013 to 2016, Segway invested

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over \$[ ] in the employment of labor having a nexus to the alleged Segway DI products. Inasmuch as the entirety of the manufacturing operation for the alleged Segway DI products takes place in the United States, this investment is significant.

### VIII. Conclusions of Law

1. The Commission has subject matter, personal, and *in rem* jurisdiction in this investigation.
2. The accused products have been imported or sold for importation into the United States.
3. The accused products do not infringe the asserted claims of U.S. Patent No. 6,302,230.
4. The accused products do not infringe the asserted claims of U.S. Patent No. 7,275,607.
5. The domestic industry requirement has not been satisfied with respect to U.S. Patent No. 6,302,230.
6. The domestic industry requirement has not been satisfied with respect to U.S. Patent No. 7,275,607.
7. It has not been shown by clear and convincing evidence that the asserted claims of U.S. Patent No. 6,302,230 are invalid.
8. It has not been shown by clear and convincing evidence that the asserted claims of U.S. Patent No. 7,275,607 are invalid.
9. The Swagway accused products infringe U.S. Trademark Registration No. 2,727,948 and U.S. Trademark Registration No. 2,769,942.
10. The domestic industry requirement has been satisfied with respect to U.S.

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Trademark Registration No. 2,727,948 and U.S. Trademark Registration No. 2,769,942.

### **IX. Initial Determination and Order**

Accordingly, it is the INITIAL DETERMINATION of the undersigned that a violation of section 337 (19 U.S.C. § 1337) has not occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation, of certain personal transporters, components thereof, and packaging and manuals therefor that infringe the asserted claims of U.S. Patent No. 6,302,230; and U.S. Patent No. 7,275,607. A violation of section 337 has occurred with respect to U.S. Trademark Registration No. 2,727,948; and U.S. Trademark Registration No. 2,769,942.

Further, this Initial Determination, together with the record of the hearing in this investigation consisting of (1) the transcript of the hearing, with appropriate corrections as may hereafter be ordered, and (2) the exhibits received into evidence in this investigation, is CERTIFIED to the Commission.

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

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


Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to § 210.43(a) or the Commission, pursuant to § 210.44, orders on its own motion a review of the ID or certain issues herein.



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\* \* \*

To expedite service of the public version, the parties shall file a joint document with the Commission Secretary no later than August 18, 2017, a copy of this initial determination with brackets to show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the undersigned, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.<sup>55</sup>



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David P. Shaw  
Administrative Law Judge

Issued: August 10, 2017

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<sup>55</sup> Confidential business information (“CBI”) is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

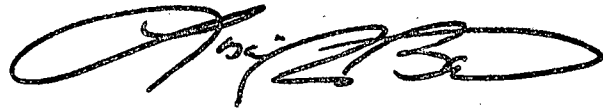
**AND**

**CERTAIN PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

**INV. NOS. 337-TA-1007 AND -1021 (CONSOLIDATED)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **Final Initial Determination** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on **SEP 08 2017**.



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

**FOR COMPLAINANTS SEGWAY INC.; DEKA PRODUCTS LIMITED  
PARTNERSHIP; AND NINEBOT (TIANJIN) TECHNOLOGY CO., LTD.:**

Tony V. Pezzano, Esq.  
**HOGAN LOVELLS US LLP**  
875 Third Avenue  
New York, NY 10022

- Via Hand Delivery
- Express Delivery
- Via First Class Mail
- Other: \_\_\_\_\_

**FOR RESPONDENT SWAGWAY LLC:**

Lei Mei, Esq.  
**MEI & MARK LLP**  
818 18th Street NW, Suite 410  
Washington, DC 20006

- Via Hand Delivery
- Express Delivery
- Via First Class Mail
- Other: \_\_\_\_\_

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**AND**

**CERTAIN PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

**INV. NOS. 337-TA-1007 AND -1021 (CONSOLIDATED)**

<b>FOR RESPONDENT INVENTIST, INC.:</b>	
Jonathan J. Engler, Esq. <b>ADDUCI, MASTRIANI &amp; SCHAUMBERG, L.L.P.</b> 1133 Connecticut Avenue, NW, 12th Floor Washington, DC 20036	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
<b>FOR RESPONDENT JETSON ELECTRIC BIKES LLC:</b>	
Ezra Sutton, Esq. <b>EZRA SUTTON, P.A.</b> 900 Route 9 North, Suite 201 Woodbridge, NJ 07095	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
<b>FOR RESPONDENT HANGZHOU CHIC INTELLIGENT TECHNOLOGY CO., LTD.:</b>	
Qingyu Yin, Esq. <b>FINNEGAN, HENDERSON, FARABOW, GARRETT &amp; DUNNER, LLP</b> 901 New York Avenue, NW Washington, DC 20001-4413	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
<b>FOR RESPONDENT POWERBOARD LLC:</b>	
L. Peter Farkas, Esq. <b>HALLORAN FARKAS + TOIKKA, LLP</b> 1101 30 <sup>th</sup> Street, NW, Suite 500 Washington, DC 20007	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**AND**

**CERTAIN PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

**INV. NOS. 337-TA-1007 AND -1021 (CONSOLIDATED)**

**FOR RESPONDENT CHANGZHOU AIRWHEEL TECHNOLOGY CO., LTD.:**

Harold H. Davis, Jr., Esq.

**K&L GATES LLP**

Four Embarcadero Center, Suite 1200

San Francisco, CA 94111

Via Hand Delivery

Express Delivery

Via First Class Mail

Other: \_\_\_\_\_

**PUBLIC VERSION**

**UNITED STATES INTERNATIONAL TRADE COMMISSION  
WASHINGTON, D.C. 20436**

**In the Matter of**

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND  
PACKAGING AND MANUALS THEREFOR**

**And**

**CERTAIN PERSONAL TRANSPORTERS  
AND COMPONENTS THEREOF**

**Inv. No. 337-TA-1007  
Inv. No. 337-TA-1021  
(Consolidated)**

**RECOMMENDED DETERMINATION ON REMEDY AND BONDING**

**Administrative Law Judge David P. Shaw**

Pursuant to the notices of investigation, 81 Fed. Reg. 41342 (June 24, 2016) and 81 Fed. Reg. 64936 (September 21, 2016), this is the Recommended Determination on remedy and bonding in *Certain Personal Transporters, Components Thereof, and Packaging and Manuals Therefor; and Certain Personal Transporters and Components Thereof, United States International Trade Commission Investigation No. 337-TA-1007/337-TA-1021 (Consolidated)*.

For the reasons stated herein it is recommended that if a violation of section 337 is found in this investigation, the Commission should: (1) issue a general exclusion order (“GEO”) covering accused products found to infringe the asserted patents; (2) issue a limited exclusion order (“LEO”) covering accused products found to infringe the asserted patents if the Commission does not issue a GEO; (3) issue an LEO covering accused products found to

infringe the asserted trademarks; (4) issue a cease and desist order; and (5) not require a bond during the Presidential review period.

## **I. Procedural Background**

On August 10, 2017, the final initial determination (“ID”) issued in this investigation, finding that (1) a violation of section 337 (19 U.S.C. § 1337) has not occurred with respect to U.S. Patent No. 6,302,230; and U.S. Patent No. 7,275,607; and (2) a violation of section 337 has occurred with respect to U.S. Trademark Registration No. 2,727,948; and U.S. Trademark Registration No. 2,769,942.

The Commission Rules provide that subsequent to issuing an initial determination on the question of violation of section 337, the administrative law judge shall issue a recommended determination containing findings of fact and recommendations concerning: (1) the appropriate remedy in the event that the Commission finds a violation of section 337; and (2) the amount of the bond to be posted by the respondents during Presidential review of Commission action under section 337(j).<sup>1</sup> 19 C.F.R. § 210.42(a)(1)(ii).

### **The Parties**

The complainants for the consolidated investigation are Segway, Inc. of Bedford, New Hampshire; DEKA Products Limited Partnership of Manchester, New Hampshire; and Ninebot (Tianjin) Technology Co., Ltd. of Tianjin, China. *See* 81 Fed. Reg. 41342 (June 24, 2016); 81 Fed. Reg. 64936 (Sept. 21, 2016).

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<sup>1</sup> The recommended determination should also address the public interest under sections 337(d)(1) and (f)(1) in investigations in which the Commission has ordered the administrative law judge, under 19 C.F.R. § 210.50(b)(1), to take evidence with respect to the public interest. In this consolidated case, the notices of investigation did not order the administrative law judge to take such evidence.

The named respondents for Investigation No. 337-TA-1007 are Inventist, Inc. of Camas, Washington; PhunkeeDuck, Inc. of Floral Park, New York; Razor USA LLC of Cerritos, California; Swagway LLC of South Bend, Indiana; Segaway of Studio City, California; and Jetson Electric Bikes LLC of New York, New York. The Office of Unfair Import Investigations is also a party to this investigation. *See* 81 Fed. Reg. 41342 (June 24, 2016).

The named respondents for Investigation No. 337-TA-1021 are Powerboard LLC of Scottsdale, Arizona; Metem Teknoloji Sistemleri San of Istanbul, Turkey; Changzhou Airwheel Technology Co., Ltd. of Jiangsu, China; Airwheel of Amsterdam, Netherlands; Nanjing Fastwheel Intelligent Technology Co., Ltd. of Nanjing, China; Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star of Shenzhen, China; Hangzhou Chic Intelligent Technology Co., Ltd. of Hangzhou, China; Hovershop of Placentia, California; Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel of Shenzhen City, China; Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway of Shenzhen, China; and Inventist, Inc. of Camas, Washington. The Office of Unfair Import Investigations is also a party to this investigation. *See* 81 Fed. Reg. 64936 (Sept. 21, 2016).

On October 3, 2016, the Commission determined not to review an initial determination finding respondents PhunkeeDuck, Inc. (“PhunkeeDuck”) and Segaway in default. Order No. 9 (Sept. 1, 2016), *aff’d*, Notice of Commission Determination Not to Review an Initial Determination Finding Respondents PhunkeeDuck, Inc. and Segaway in Default (Oct. 3, 2016).

On December 7, 2016, the Commission determined not to review an initial determination terminating the investigation as to respondent Nanjing Fastwheel Intelligent Technology Co., Ltd. based on a Consent Order Stipulation. Order No. 18 (Nov. 15, 2016), *aff’d*, Notice of a Commission Determination Not to Review an ID Granting Complainants’ Motion Terminating

the Investigation as to Respondent Nanjing Fastwheel Intelligent Technology Co., Ltd. Based on a Consent Order Stipulation (Dec. 7, 2016).

On February 7, 2017, the Commission determined not to review an initial determination finding respondents Shenzhen Chenduoxing Electronic, Technology Ltd., China, a.k.a. C-Star (“C-Star”); Shenzhen Jomo Technology Co., Ltd., a.k.a. Koowheel (“Koowheel”); Guangzhou Kebye Electronic Technology Co., Ltd., a.k.a. Gotway (“Gotway”); Metem Teknoloji Sistemleri San (“Metem”); and Airwheel in default. Order No. 22 (Jan. 9, 2017), *aff’d*, Notice of a Commission Determination Not to Review an Initial Determination Finding Five Respondents in Default (Feb. 7, 2017).

On February 22, 2017, the Commission determined to review an initial determination terminating respondent Inventist, Inc. in this investigation based on a Consent Order Stipulation and proposed Consent Order. Order No. 25 (Jan. 31, 2017), *aff’d*, Notice of a Commission Determination to Review an Initial Determination Granting Complainants’ Motion Terminating the Investigation as to Respondent Inventist, Inc. Based on a Consent Order Stipulation and Proposed Consent Order (Feb. 22, 2017).

On April 24, 2017, the Commission determined not to review an initial determination to terminate this investigation as to Razor USA, LLC based on a Settlement Agreement and Release. Order No. 28 (Mar. 22, 2017), *aff’d*, Notice of a Commission Determination Not to Review an Initial Determination Granting Joint Motion to Terminate the Investigation as to Respondent Razor USA, LLC Based on a Settlement Agreement and Release (Apr. 24, 2017).

On May 15, 2017, the Commission determined not to review an initial determination granting complainants’ motion to terminate the investigation as to respondent Hovershop for good cause. *See* Order No. 34 (Apr. 13, 2017), *aff’d*, Notice of a Commission Determination



Not to Review an Initial Determination Granting Complainants' Motion to Terminate the Investigation as to Respondent Hovershop for Good Cause (May 15, 2017).

\* \* \*

In summary, the participating respondents are: (1) Changzhou Airwheel Technology Co., Ltd. ("Airwheel"); (2) Hangzhou Chic Intelligent Technology Co., Ltd. ("Chic"); (3) Jetson Electric Bikes LLC ("Jetson"); (4) Powerboard LLC ("Powerboard"); and (5) Swagway, LLC ("Swagway").

## II. General Exclusion Order

A GEO is warranted when "a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons" or "there is a pattern of violation of this section and it is difficult to identify the source of infringing products." 19 U.S.C. § 1337(d)(2)(A); 19 U.S.C. § 1337(d)(2)(B). Satisfaction of either criterion is sufficient for imposition of a GEO. *Certain Cigarettes and Packaging Thereof*, Inv. No. 337-TA-643, Comm'n Op. at 24 (Oct. 1, 2009) ("*Certain Cigarettes*"). The Commission "now focus[es] principally on the statutory language itself" when determining whether a GEO is warranted. *Certain Ground Fault Circuit Interrupters and Products Containing Same*, Inv. No. 337-TA-615, Comm'n Op. at 25 (Mar. 27, 2009). The Commission may look not only to the activities of active respondents, but also to those of non-respondents as well as respondents who have defaulted or been terminated from an investigation. *See, e.g., Certain Electronic Paper Towel Dispensing Devices and Components Thereof*, Inv. No. 337-TA-718, Recommended Determination at 7-8 & n.9-10 (July 12, 2011); *Certain Coaxial Cable Connectors and*

*Components Thereof and Products Containing Same*, Inv. No. 337-TA-650, Comm'n Op. at 59 (April 14, 2010).

A determination to grant relief under section 337(d)(2) must be anchored in substantial, reliable, and probative evidence. *See Certain Digital Multimeters, and Products with Multimeter Functionality*, Inv. No. 337-TA-588, Comm'n Op. (May 14, 2008) (stating the standards for finding a violation under 337(d)(2) are the same as those for finding a violation under 337(g)(2)).

Complainants argue: "Given the ample source of supply, a lack of product differentiation, low switching costs and easy access to distribution in the electronic self-balancing scooter industry, Respondents would be able to circumvent a limited exclusion order by, among other things, changing corporate identities, changing suppliers, changing product brand names, and/or removing any source and branding references." Compls. Br. at 292.

Complainants argue: "A general exclusion order is also supported by the pattern of violation that exists, given the significant number of parties that are currently, or at one time were, Respondents in this investigation. And, as discussed previously, there are a significant number of manufacturers and resellers who are not among the Respondents, yet sell electric self-balancing scooters that are similar in form and function to the products sold by the Respondents." Compls. Br. at 296.

Respondents argue: "Complainants' contentions urging for broader relief are overly broad and overreaching, at least because they seek a general exclusion order without support for such a relief and/or an exclusion order that would encompass products not found to have been in violation." Resps. Br. at 287. Respondents find fault with much of complainants' expert Michael Milani's testimony. *See* Resps. Br. at 287-89. Respondents argue that "it is not 'difficult to identify the source of infringing products,' as required by 17 U.S.C. § 1337(d)(2)(B),

because the imported hoverboard products are required to comply with a new set of safety guidelines and UL maintains a list of the certified entities.” Resps. Br. at 289.

The Staff argues:

In the Staff’s view, if a violation of Section 337 is found with respect to the asserted patents, Complainants’ evidence is expected to show that the issuance of a GEO in this Investigation is warranted under either §§ 337(d)(2)(A) or (d)(2)(B). However, in the absence of a determination of infringement of the asserted patents by any of the Respondents who have participated in this Investigation, the Staff respectfully submits that the issuance of a GEO would not be appropriate. Complainants did not proffer any evidence at the evidentiary hearing regarding the infringement of the asserted patents or trademarks by any of the defaulting respondents.

Staff Br. at 171.

**A. Circumvention of Limited Exclusion Orders**

For the reasons discussed below, should a violation of section 337 be found based on a finding that respondents’ accused products infringe either the ‘230 or ‘607 patents, the evidence shows that the conditions referenced in section 337(d)(2)(A) exist (“a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons”). *See* 19 U.S.C. § 1337(d)(2)(A). If the Commission finds that one or more of the asserted claims of the ‘230 patent or ‘607 patent is infringed by the participating respondents, the evidence establishes that a limited exclusion order directed to the respondents found to be in violation could be circumvented.

There are many suppliers offering self-balancing scooters. Respondents could easily switch suppliers in an attempt to circumvent a limited exclusion order. *See* CX-1967C (Milani WS) at Q/A 181-83. For example, as complainants’ expert Michael Milani testified, a search of Alibaba.com (China’s largest online commerce site) using the term “hoverboard” revealed over 50,000 products available from various Chinese suppliers in a wide variety of lot sizes. Other

sources have estimated up to 1,000 different suppliers of self-balancing personal transporters in Shenzhen, China alone. Mr. Milani testified that the significant number of manufacturers results, at least in part, from the fact that neither significant capital investment, nor government policy, present meaningful barriers to begin manufacturing self-balancing scooters. *See* CX-1967C (Milani WS) at Q/A 184-186; CX-2276 (Milani Errata Sheet); CX-1937 (Alibaba hoverboard search printout).

With regard to capital investments, the relative ease (and speed) with which foreign entrepreneurs and manufacturers can build (or retool) a factory capable of producing these products is discussed in a variety of articles. *See* CX-1967C (Milani WS) at Q/A 186-187; CX-1915; CX-1938 (*WIRED*, “The Weird Origin Story of the Viral, Dangerous Hoverboard”). Low barriers to entry also result from a lack of government policy. The only government policy restricting an entrant’s ability to sell electric self-balancing scooters is the need to obtain UL 2272 certification, and products lacking that certification continue to be sold in the United States. Further, many suppliers have already obtained the UL 2272 certification, and those suppliers represent alternative sources of supply for UL 2272 certified products. For those suppliers that are not UL 2272 certified, that certification can be obtained relatively quickly, according to Ms. Liya Si, Vice President of respondent CHIC. *See* CX-1967C (Milani WS) at Q/A 190-91, 193; CX-2276 (Milani Errata Sheet). *See* JX-0021C (Perry Dep. Tr.) at 44.

A lack of product differentiation contributes to respondents’ ability to circumvent a limited exclusion order. Many of the self-balancing personal transporters on the market today lack any form of product differentiation that would make any particular product more or less attractive than another. *See* CX-1967C (Milani WS) at Q/A 195-96. For example, although many self-balancing scooters are branded, many of the “brands” used to market the products are

generic and therefore contribute nothing to product differentiation. Many self-balancing scooters are sold with no branding at all. Those unbranded products are offered for sale under names that simply describe the type and/or color of the product. *See* CX-1967C (Milani WS) at Q/A 197-99.

Nor are self-balancing scooters differentiated through product features. The self-balancing personal transporters sold by respondents and non-respondents are very similar in terms of form, function and design. *See* CX-1967C (Milani WS) at Q/A 200; CX-2276 (Milani Errata Sheet). This lack of differentiation through either branding and/or product features contributes to respondents' ability to circumvent a limited exclusion order. Given the overall lack of brand awareness and feature differentiation, respondents wishing to circumvent a limited exclusion order could do so by bringing seemingly new products to market under newly introduced brands. Alternatively, respondents could remove any brand or product references from the accused products. The lack of feature differentiation significantly enhances the ease with which respondents can change the source of supply for their products, inasmuch as similar or same products are available through a wide variety of manufacturers. *See* CX-1967C (Milani WS) at Q/A 206.

Another factor that contributes to respondents' ability to circumvent a limited exclusion order is that self-balancing scooters sold by respondents and non-respondents are easily marketed and sold over the Internet. For example, an eBay search using the term "hoverboard" results in over 6,000 hits, while the same search on Amazon.com results in almost 4,000 hits. Respondents wishing to disguise the source of their products also have easy access to an extensive (and readily available) low-cost marketing and distribution network that can not only provide a high level of anonymity, but also allows for fast and low-cost changes to corporate/on-line identities. *See* CX-1967C (Milani WS) at Q/A 207-08.

To illustrate the ease with which self-balancing personal transporter products can be sold over the Internet, complainants' expert Michael Milani created a website through GoDaddy.com with the web address [www.hoverboard312.com](http://www.hoverboard312.com). The website purports to offer for sale three of the products that had been confirmed with suppliers. On the site, each product is available in multiple colors. The specific products offered for sale include one "branded" hoverboard, one generic hoverboard and one "branded" solowheel product. Mr. Milani testified that it took less than 24 hours to confirm product availability, pricing and delivery terms and to create and launch the website. The upfront cost involved in launching the website was less than \$30, with a recurring fee of \$10.50 per month. Both fees were/are paid to GoDaddy.com in exchange for website-related services. Since launching the website on September 28, 2016, it has generated over 1,200 hits, despite not being registered with Google or any other search engine, optimized to attract additional web traffic, or advertised via google AdWords, or any other mechanism. To date, no orders have been placed through the website, given that each product is listed as being "out of stock," and no prices are listed for any of the products. *See* CX-1967C (Milani WS) at Q/A 209-12.

Accordingly, if the Commission finds that one or more of the asserted claims of the '230 patent or '607 patent is infringed by the participating respondents, the evidence shows that a limited exclusion order directed to the respondents found to be in violation could be circumvented.

**B. Pattern of Importation and Identification of the Source of Infringing Goods**

A general exclusion order is also supported by the pattern of violation that exists, given the significant number of parties that are currently, or at one time were, respondents in this investigation. As discussed above with respect to circumvention, there are a significant number

of manufacturers and resellers who are not among the respondents, yet sell electric self-balancing scooters that are similar in form and function to the products sold by the respondents. *See* CX-1915 (*Buzzfeed*, “How to Make Millions of Hoverboards (Almost) Overnight”); CX-1947 (*The Guardian*, “Inventor of the Hoverboard Says He’s Made No Money”); CX-1967C (Milani WS) at Q/A 222-28; CX-2276 (Milani Errata Sheet). Thus, if the Commission determines that one or more of the asserted patent claims are infringed by the accused products, the same evidence discussed above with respect to 337(d)(2)(A) will also support a recommendation that a GEO is warranted under section 337(d)(2)(B).

### **III. Limited Exclusion Order**

The Commission has broad discretion in selecting the form, scope, and extent of the remedy in a section 337 proceeding. *Viscofan, S.A. v. United States Int’l Trade Comm’n*, 787 F.2d 544, 548 (Fed. Cir. 1986). A limited exclusion order directed to respondents’ infringing products is among the remedies that the Commission may impose. *See* 19 U.S.C. § 1337(d).

Complainants request issuance of a general exclusion order with respect to the asserted patents, but argue that “should the Commission decide not to grant such relief, a limited exclusion order is warranted.” *See* Compls. Br. at 296.

Complainants also request issuance of a limited exclusion order with respect to the asserted trademarks. Complainants argue: “The Commission should issue a limited exclusion order prohibiting entry into the United States of all personal transporters, packaging, and accompanying materials, including accessories thereof that originate from Swagway and that feature the Infringing Swagway and Swagtron Marks, or any other marks that are confusingly similar to, or trade upon the goodwill of, the SEGWAY Marks.” *See* Compls. Br. at 289.

Respondents argue:

If the Commission finds that one or more of Respondents violated Section 337 and a remedy is required, the scope and form of any remedy that issues should be limited so as not to restrict legitimate commerce. Specifically, the appropriate remedy would be a limited exclusion order and should identify and apply to (1) the specific parties who import into the U.S., sell for importation into the U.S., or sell within the U.S. the specific products and models found to infringe the asserted claims of the Asserted Patents or Asserted Trademarks; and (2) those specific products found to infringe the asserted claims of the Asserted Patents or Asserted Trademarks. Further, to the extent an exclusion order issues, it should include an exception to allow for Respondents' continued service and repair of any products already sold to consumers before the effective date of any remedial order issued.

Resps. Br. at 287.

The Staff argues:

Should a violation of Section 337 with respect to the asserted patents be found but the Commission decline to issue a general exclusion order, the Staff recommends that a limited exclusion order issue against each of the Respondents found to be in violation that excludes from entry into the United States personal transporters, components thereof, and packaging and manuals therefor that infringe the valid, asserted claims of the '230 and '607 patents.

Staff Br. at 173-74.

The Staff argues:

Should a violation of Section 337 with respect to one or more of the asserted trademarks be found, the Staff recommends that a limited exclusion order issue against each of the Respondents found to be in violation that excludes the Respondent's personal transporters, components thereof, and packaging and manuals that infringe the '948 or '942 trademarks, or any marks confusingly similar thereto or that are otherwise misleading as to source, origin, or sponsorship.

Staff Br. at 174.

"The Staff recommends that limited exclusion orders issue against each of these defaulting respondents for each patent claim and trademark asserted against the defaulting respondent in the 1007 Complaint or 1021 Complaint." Staff Br. at 174.

As noted above, the administrative law judge recommends a general exclusion order in the event the Commission determines that a violation of section 337 has occurred with respect to



the asserted patents, and if consideration of the statutory public interest factors does not require that remedies be set aside or modified. If the Commission declines to issue a GEO, the administrative law judge recommends that the Commission issue an LEO covering all of the infringing articles imported, sold for importation, or sold after importation by participating respondents Airwheel, Chic, Jetson, Powerboard, and Swagway. The limited exclusion order should apply to those respondents' affiliated companies, parents, subsidiaries or other related business entities, or their successors or assigns.

In the event the Commission determines that a violation of section 337 has occurred with respect to one or more of the asserted trademarks, the administrative law judge recommends that a limited exclusion order issue against each of the respondents found to be in violation that excludes respondent's personal transporters, components thereof, and packaging and manuals that infringe the '948 or '942 trademarks, or any marks confusingly similar thereto or that are otherwise misleading as to source, origin, or sponsorship.

In their initial posthearing brief, complainants did not address the respondents that have been found in default, *i.e.*, PhunkeeDuck, Segaway, C-Star, Koowheel, Gotway, Metem, and Airwheel.<sup>2</sup> The administrative law judge recommends that limited exclusion orders issue against each of these defaulting respondents for each patent claim and trademark asserted against the defaulting respondent in the 1007 complaint or 1021 complaint.

Respondents argue that "any exclusion order should include a certification provision." Resps. Br. at 289. Indeed, in the event the Commission does issue a limited exclusion order in this investigation, the exclusion order should include a provision that allows the respondents to

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<sup>2</sup> "Complainants state that their failure to address the defaulting Respondents regarding a LEO was a mere oversight, and we ask that the ALJ endorse the Staff's position as stated." Compls. Reply Br. at 80 n.24.

certify, pursuant to procedures to be specified by U.S. Customs and Border Protection, that they are familiar with the terms of the order, that they have made appropriate inquiry, and that, to the best of their knowledge and belief, the products being imported are not excluded from entry under the order.

Respondents argue that any exclusion order should “include an exception to allow for Respondents’ continued service and repair of any products already sold to consumers before the effective date of any remedial order issued.” *Id.* at 287. Such exemptions allowing the importation of repair and replacement parts are often allowed to avoid injuring consumers who have already purchased products covered by the order. Such a public interest exemption may be included here to the extent that respondents show that such importations occur and that the exemption is warranted.

#### **IV. Cease and Desist Order**

Section 337 provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a cease and desist order as a remedy for a violation of section 337. 19 U.S.C. § 1337(f)(1). The Commission “generally issues a cease and desist order only when a respondent maintains a commercially significant inventory of infringing products in the United States.” *Certain Ground Fault Circuit Interrupters and Products Containing Same*, Inv. No. 337-TA-615, Comm’n Op. at 24 (Mar. 26, 2009); *Certain Video Game Systems, Accessories, and Components Thereof*, Inv. No. 337-TA-473, Comm’n Op. at 2 (Dec. 24, 2002). Cease and desist orders are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order.” *See Certain Elec. Skin Care Devices, Brushes & Chargers Therefor, & Kits Containing the Same*, Inv. No. 337-

TA-959, Comm'n Op. at 26 (Feb. 6, 2017) (citations omitted).<sup>3</sup>

Complainants request the issuance of a cease and desist order, citing the existence of commercially significant domestic inventories of accused products. *See* Compls. Br. at 296-98. The evidence shows that respondents maintain commercially significant inventories of accused products:

<b>Respondent</b>	<b>Accused Product Model</b>	<b>Domestic inventories</b>
Airwheel	Q1	[ ] units
	Q3	[ ] units
	Q5	[ ] units
	Q6	[ ] units
Chic	Smart B	[ ] units
	Smart F	[ ] units
	Smart C	[ ] units
	Smart S	[ ] units
Jetson		stipulated to commercially significant
Powerboard		stipulated to commercially significant
Swagway	Swagway X1	stipulated to commercially significant
	Swagway X2	"[ ]"
	Swagtron T1	[ ] units
	Swagtron T3	[ ] units
	Swagtron T5	[ ] units

*See* Staff Br. at 175-76; CX-1967C (Milani WS) at Q/A 266, 270-74 (citing inventory levels for the various respondents' accused products).

<sup>3</sup> Some commissioners have adopted different approaches to analyzing when it is appropriate to issue cease and desist orders, particularly with respect to the question of whether a commercially significant inventory is a prerequisite for obtaining a cease and desist order. *See Certain Automated Teller Machines, ATM Modules, Components Thereof, and Products Containing the Same*, Inv. No. 337-TA-989, Comm'n Op. at 25 n.11 (Aug. 3, 2017) (Chairman Schmidlein finds that the presence of some infringing domestic industry, regardless of the commercial significance, provides a basis to issue cease and desist orders); *Certain Network Devices, Related Software and Components Thereof (II)*, Inv. No. 337-TA-945, Comm'n Op. at 126 n.74 (June 1, 2017); *Automated Teller Machines*, Inv. No. 337-TA-972, Comm'n Op. at 28 n.19 (June 12, 2017).

Respondent Airwheel argues that the evidence of a combined [ ] units of the Airwheel Q1, Q3, Q5, and Q6 products in the United States is not commercially significant and, thus, does not warrant the issuance of a cease and desist order against Airwheel. *See* Resps. Br. at 290; Resps. Reply Br. at 79. A summary table using the average price for each Airwheel model calculated by complainants is shown below.

Model	# of units	Price per unit	Inventory value
Q1	[ ]	[\$ ]	[\$ ]
Q3	[ ]	[\$ ]	[\$ ]
Q5	[ ]	[\$ ]	[\$ ]
Q6	[ ]	[\$ ]	[\$ ]
TOTAL VALUE			[\$ ]

*See* Staff Reply Br. at 37; CX-1967C (Milani WS) at Q/A 251-53. As argued by the Staff, an inventory of [ ] units having a value of over \$[ ] is commercially significant because such an inventory could be sold to circumvent an exclusion order.

Accordingly, if a violation is found, the administrative law judge recommends that the Commission issue a cease and desist order as to participating respondents Airwheel, Chic, Jetson, Powerboard, and Swagway and those respondents' affiliated companies, parents, subsidiaries or other related business entities, or their successors or assigns. Complainants have not made any argument that a cease and desist order directed to the defaulting respondents is warranted. Thus, the administrative law judge does not recommend issuance of such an order.

## V. Bond

Pursuant to section 337(j)(3), the administrative law judge and the Commission must determine the amount of bond to be required of a respondent, during the 60-day Presidential review period following the issuance of permanent relief, in the event that the Commission

determines to issue a remedy. The purpose of the bond is to protect the complainant from any injury. 19 U.S.C. § 1337(j)(3); 19 C.F.R. §§ 210.42(a)(1)(ii), 210.50(a)(3).

When reliable price information is available, the Commission has often set bond by eliminating the differential between the domestic product and the imported, infringing product. *Certain Microsphere Adhesives, Processes for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 24 (1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained. *Certain Integrated Circuit Telecommunication Chips and Products Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm'n Op. at 41 (1995). A 100 percent bond has been required when no effective alternative existed. *Certain Flash Memory Circuits and Products Containing Same*, Inv. No. 337-TA-382, USITC Pub. No. 3046, Comm'n Op. at 26-27 (July 1997) (a 100% bond imposed when price comparison was not practical because the parties sold products at different levels of commerce, and the proposed royalty rate appeared to be *de minimis* and without adequate support in the record).

Complainants argue that a bond rate of 100% is appropriate “both because reliable price information for the Accused Products is not available; and because the prices for the Accused Products differ across retailers.” Compls. Br. at 298. Complainants conclude that the prices for respondents’ accused products range from \$[ ] to \$[ ], whereas the average price of the Segway Domestic Industry Products (“DI Products”) is \$[ ]. See Compls. Br. at 299..

As argued by the Staff and respondents, complainants’ Ninebot by Segway miniPRO (hands-free, two-wheel self-balancing scooter) and the One S1 (a single-wheel device) are products that more closely resemble and, thus, are more competitive with respondents’ accused

products than the Segway DI Products. *See* Staff Br. at 177-78; Resps. Br. at 292. Yet, complainants failed to present any evidence regarding price differentials between respondents' accused products and the Ninebot by Segway miniPRO or One S1 products. A realistic bond rate could have been determined based on price differential if complainants presented evidence with respect to the more relevant miniPRO and OneS1 products. Complainants failed to do so. Complainants should not benefit from a higher bond rate when it was within their means to propose an alternative.

Accordingly, based on the current record, it is the recommendation of the administrative law judge that no bond should be imposed during the Presidential review period.

#### **VI. Recommended Determination and Order**

It is recommended that if a violation of section 337 is found in this investigation, the Commission should: (1) issue a general exclusion order covering accused products found to infringe the asserted patents; (2) issue a limited exclusion order covering accused products found to infringe the asserted patents if the Commission does not issue a general exclusion order; (3) issue a limited exclusion order covering accused products found to infringe the asserted trademarks; (4) issue a cease and desist order; and (5) not require a bond during the Presidential review period.

To expedite service of the public version, the parties shall file a joint document with the Commission Secretary no later than August 30, 2017, a copy of this recommended determination with brackets to show any portion considered by the party (or its suppliers of information) to be confidential, accompanied by a list indicating each page on which such a bracket is to be found. At least one copy of such a filing shall be served upon the office of the undersigned, and the brackets shall be marked in red. If a party (and its suppliers of information) considers nothing in

the initial determination to be confidential, and thus makes no request that any portion be redacted from the public version, then a statement to that effect shall be filed.<sup>4</sup>



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David P. Shaw  
Administrative Law Judge

Issued: August 22, 2017

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<sup>4</sup> Confidential business information (“CBI”) is defined in accordance with 19 C.F.R. § 201.6(a) and § 210.5(a). When redacting CBI or bracketing portions of documents to indicate CBI, a high level of care must be exercised in order to ensure that non-CBI portions are not redacted or indicated. Other than in extremely rare circumstances, block-redaction and block-bracketing are prohibited. In most cases, redaction or bracketing of only discrete CBI words and phrases will be permitted.

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**


**AND**

**CERTAIN PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

**INV. NOS. 337-TA-1007 AND -1021 (CONSOLIDATED)**

**PUBLIC CERTIFICATE OF SERVICE**

I, Lisa R. Barton, hereby certify that the attached **Recommended Determination on Remedy and Bonding** has been served by hand upon the Commission Investigative Attorney, **Brian Koo, Esq.**, and the following parties as indicated, on SEP 06 2017



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

**FOR COMPLAINANTS SEGWAY INC.; DEKA PRODUCTS LIMITED  
PARTNERSHIP; AND NINEBOT (TIANJIN) TECHNOLOGY CO., LTD.:**

Tony V. Pezzano, Esq.  
**HOGAN LOVELLS US LLP**  
875 Third Avenue  
New York, NY 10022

Via Hand Delivery  
 Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_

**FOR RESPONDENT SWAGWAY LLC:**

Lei Mei, Esq.  
**MEI & MARK LLP**  
818 18th Street NW, Suite 410  
Washington, DC 20006

Via Hand Delivery  
 Express Delivery  
 Via First Class Mail  
 Other: \_\_\_\_\_



**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**AND**

**CERTAIN PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

**INV. NOS. 337-TA-1007 AND -1021 (CONSOLIDATED)**

<b>FOR RESPONDENT INVENTIST, INC.:</b>	
Jonathan J. Engler, Esq. <b>ADDUCI, MASTRIANI &amp; SCHAUMBERG, L.L.P.</b> 1133 Connecticut Avenue, NW, 12th Floor Washington, DC 20036	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
<b>FOR RESPONDENT JETSON ELECTRIC BIKES LLC:</b>	
Ezra Sutton, Esq. <b>EZRA SUTTON, P.A.</b> 900 Route 9 North, Suite 201 Woodbridge, NJ 07095	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
<b>FOR RESPONDENT HANGZHOU CHIC INTELLIGENT TECHNOLOGY CO., LTD.:</b>	
Qingyu Yin, Esq. <b>FINNEGAN, HENDERSON, FARABOW, GARRETT &amp; DUNNER, LLP</b> 901 New York Avenue, NW Washington, DC 20001-4413	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____
<b>FOR RESPONDENT POWERBOARD LLC:</b>	
L. Peter Farkas, Esq. <b>HALLORAN FARKAS + TOIKKA, LLP</b> 1101 30 <sup>th</sup> Street, NW, Suite 500 Washington, DC 20007	<input type="checkbox"/> Via Hand Delivery <input checked="" type="checkbox"/> Express Delivery <input type="checkbox"/> Via First Class Mail <input type="checkbox"/> Other: _____

**CERTAIN PERSONAL TRANSPORTERS,  
COMPONENTS THEREOF, AND PACKAGING AND  
MANUALS THEREFOR**

**AND**

**CERTAIN PERSONAL TRANSPORTERS AND  
COMPONENTS THEREOF**

**INV. NOS. 337-TA-1007 AND -1021 (CONSOLIDATED)**

**FOR RESPONDENT CHANGZHOU AIRWHEEL TECHNOLOGY CO., LTD.:**

Harold H. Davis, Jr., Esq.  
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