

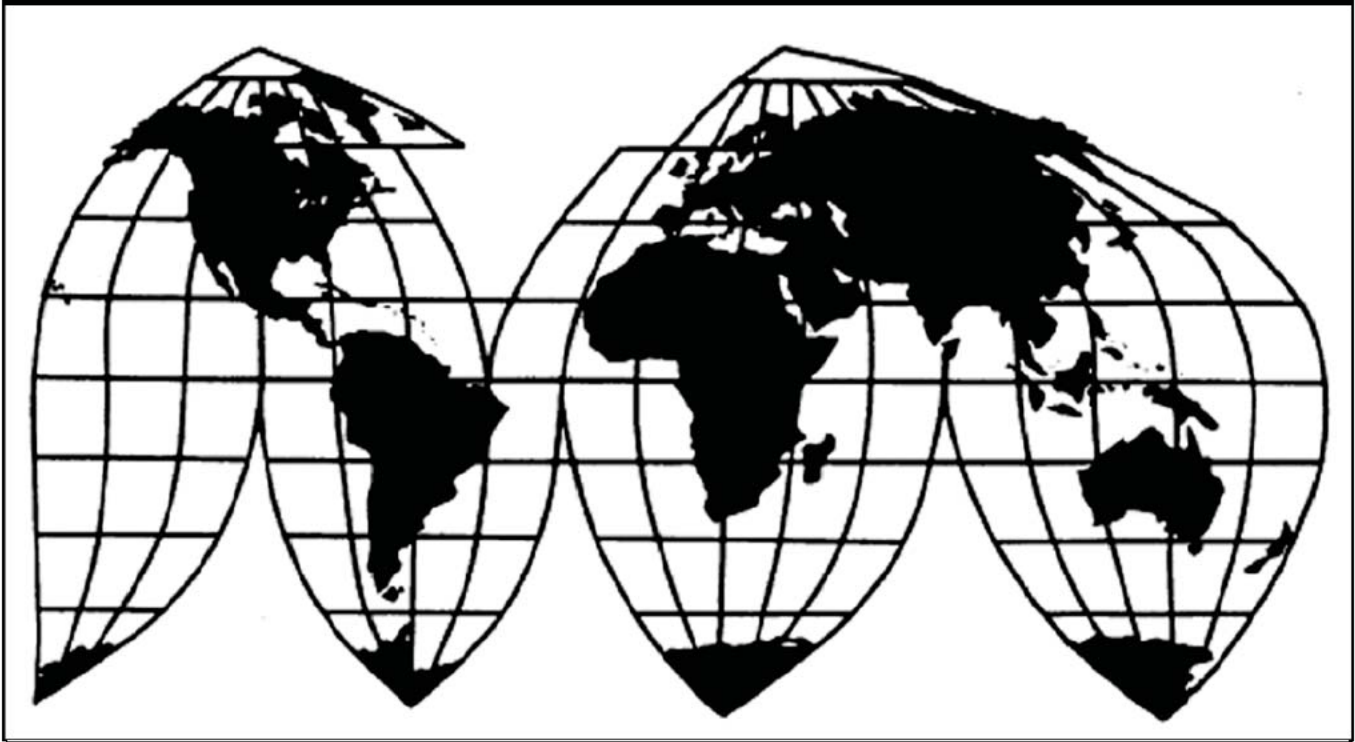
*In the Matter of*  
**Certain Multimedia Display and Navigation  
Devices and Systems, Components  
Thereof, and Products Containing Same**

Investigation No. 337-TA-694

Publication 4292

November 2011

**U.S. International Trade Commission**



Washington, DC 20436

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

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**Washington, DC 20436**

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

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Investigation No. 337-TA-694





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

**In the Matter of**

**CERTAIN MULTIMEDIA DISPLAY  
AND NAVIGATION DEVICES AND  
SYSTEMS, COMPONENTS THEREOF,  
AND PRODUCTS CONTAINING SAME**

**Investigation No. 337-TA-694**

**NOTICE OF COMMISSION DETERMINATION THAT NO VIOLATION OF  
SECTION 337 EXISTS; TERMINATION OF INVESTIGATION**

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

**ACTION:** Notice.

**SUMMARY:** Notice is hereby given that the U.S. International Trade Commission has determined to affirm, on modified grounds, the final initial determination (“ID”) issued by the presiding administrative law judge (“ALJ”) on December 16, 2010, finding no violation of section 337 in the above-captioned investigation.

**FOR FURTHER INFORMATION CONTACT:** Daniel E. Valencia, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-1999. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. The public record for this investigation may be viewed on the Commission’s electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

**SUPPLEMENTARY INFORMATION:** The Commission instituted the instant investigation on December 16, 2009, based on a complaint filed by Pioneer Corporation of Tokyo, Japan and Pioneer Electronics (USA) Inc. of Long Beach, California (collectively, “Pioneer”). 74 *Fed. Reg.* 66676 (Dec. 16, 2009). The complaint alleged violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain multimedia display and navigation devices and systems, components thereof, and products containing same by reason of infringement of various claims of United States Patent Nos. 5,365,448 (“the ‘448 patent”), 5,424,951 (“the ‘951 patent”), and 6,122,592 (“the ‘592 patent”). The complaint named Garmin International, Inc. of Olathe, Kansas, Garmin Corporation of Taiwan (collectively, “Garmin”)


and Honeywell International Inc. of Morristown, New Jersey ("Honeywell") as the proposed respondents. Honeywell was subsequently terminated from the investigation.

On December 16, 2010, the ALJ issued a final ID. In his final ID, the ALJ found no violation of section 337 by Garmin. Specifically, the ALJ found that the accused products do not infringe claims 1 and 2 of the '448 patent, claims 1 and 2 of the '951 patent, or claims 1 and 2 of the '592 patent. The ALJ found that the '592 patent was not proven to be invalid and that Pioneer has established a domestic industry under 19 U.S.C. § 1337(a)(3)(C). On February 23, 2011, the Commission determined to review the final ID in part. On April 18, 2011, the Commission determined to extend the target date and requested supplemental briefing.

Having examined the record of this investigation, including the ALJ's final ID and the submissions of the parties, the Commission has determined to affirm, on modified grounds, the ALJ's finding that Garmin has not violated section 337. In particular, the Commission has determined to reverse the ALJ's finding that Garmin's products do not infringe the asserted claims of the '951 patent, affirm his finding that Garmin's products do not infringe the asserted claims of the '592 patent, reverse his finding that the asserted claims of the '592 patent are not invalid under the written description requirement of 35 U.S.C. § 112, first paragraph, and reverse his finding that Pioneer has established a licensing-based domestic industry for the '951 and '592 patents. The '448 patent is no longer asserted. The investigation is terminated.

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 sections 210.42-.50 of the Commission's Rules of Practice and Procedure (19 C.F.R. §§ 210.42-.50).

By order of the Commission.



James R. Holbein  
Secretary to the Commission

Issued: June 24, 2011

**CERTAIN MULTIMEDIA DISPLAY AND NAVIGATION  
DEVICES AND SYSTEMS, COMPONENTS THEREOF, AND  
PRODUCTS CONTAINING SAME**

**337-TA-694**

**CERTIFICATE OF SERVICE**

I, James R. Holbein, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, Christopher G. Paulraj, Esq., and the following parties as indicated, on June 24, 2011.



James R. Holbein, Secretary  
U.S. International Trade Commission  
500 E Street, SW  
Washington, DC 20436

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**CORRECTED PUBLIC VERSION**

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

**In the Matter of**

**CERTAIN MULTIMEDIA DISPLAY AND  
NAVIGATION DEVICES AND SYSTEMS,  
COMPONENTS THEREOF, AND  
PRODUCTS CONTAINING SAME**

**Investigation No. 337-TA-694**

**COMMISSION OPINION**

On December 16, 2010, the presiding administrative law judge (“ALJ”) issued a final initial determination (“ID”) finding no violation of section 337 of the Tariff Act of 1930, 19 U.S.C. § 1337, in the above-captioned investigation by respondents Garmin International, Inc. of Olathe, Kansas and Garmin Corporation of Taiwan (collectively, “Garmin”). On February 23, 2011, we determined to review the ALJ’s ID in part. Having reviewed the record of this investigation, we affirm, on modified grounds, the ALJ’s finding that Garmin has not violated section 337. In particular, we affirm the ALJ’s finding that Garmin’s products do not infringe U.S. Patent No. 6,122,592 (“the ‘592 patent”), but reverse his finding that Garmin’s products do not infringe U.S. Patent No. 5,424,951 (“the ‘951 patent”). We reverse the ALJ’s finding that the economic prong of the domestic industry requirement is satisfied for the asserted patents. Finally, we find the asserted claims of the ‘592 patent are invalid for lack of written description under 35 U.S.C. § 112, ¶ 1. This opinion sets forth our reasoning for this final determination. We adopt all findings and conclusions in the ID that are not inconsistent with this opinion.

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### I. BACKGROUND

#### A. Procedural History

The Commission instituted this investigation on December 16, 2009, based on a complaint filed by Pioneer Corporation of Tokyo, Japan and Pioneer Electronics (USA) Inc. of Long Beach, California (collectively, "Pioneer"). 74 *Fed. Reg.* 66676 (Dec. 16, 2009). The complaint alleges violations of section 337 in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain multimedia display and navigation devices and systems, components thereof, and products containing the same by reason of infringement of claims 1 and 2 of U.S. Patent No. 5,365,448 ("the '448 patent"), claims 1 and 2 of the '951 patent, and claims 1 and 2 of the '592 patent. The complaint named Honeywell International Inc. of Morristown, New Jersey ("Honeywell") and Garmin as respondents. On February 16, 2010, Honeywell was terminated from the investigation based on a settlement agreement.

The ALJ held an evidentiary hearing from September 13, 2010, through September 21, 2010, and received post-hearing briefs from the parties thereafter. On December 16, 2010, the ALJ issued a final ID finding no violation of section 337 by Garmin. On January 5, 2011, Pioneer, Garmin, and the Commission investigative attorney ("IA") each filed petitions for review. On January 13, 2011, Pioneer, Garmin, and the IA each filed responses to each other's petitions. On February 23, 2011, the Commission determined to review the ALJ's ID in part. In particular, the Commission determined to review: (1) the ALJ's construction and related infringement findings for "second memory means" of the '951 patent; (2) the ALJ's construction and related infringement findings for "extracting means" of the '592 patent; (3) the ALJ's findings relating to the validity of the '592 patent under the written description requirement of 35 U.S.C. § 112; and (4) the ALJ's finding that the economic prong of the domestic industry

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requirement is satisfied. On March 9, 2011, Pioneer, Garmin, and the IA filed their initial submissions addressing the issues that the Commission determined to review. On March 21, 2011, Pioneer, Garmin, and the IA each filed their reply submissions. On April 18, 2011, the Commission extended the target date and requested supplemental briefing from the parties and the public. The Commission's supplemental briefing questions were directed to the domestic industry requirement of section 337(a)(3)(C). On May 17, 2011, Pioneer, Garmin, and the IA each filed their initial submissions and, on May 23 and 24, 2011, these parties filed their reply submissions. On May 24, 2011, the Commission also received submissions from various members of the public.<sup>1</sup>

### **B. Patents and Products at Issue<sup>2</sup>**

Pioneer asserts infringement of claims 1 and 2 of the '951 patent by Garmin's Nuvi and Zumo product lines in combination with its map update cards. Joint Statement Regarding Identification of Accused Products (Aug. 9, 2010), ¶ 2. Pioneer accuses Garmin's Nuvi 3750, 3760T, and 3790T model devices of infringing claims 1 and 2 of the '592 patent. *Id.* at ¶ 3-4.

The '951 patent, entitled "On-Board Navigation Apparatus Having User Registering Function," issued on June 13, 1995, to Kenichi Nobe and Morio Araki. The patent is directed to an on-vehicle navigation system having a simplified way for users to "register" locations of interest. '951 patent (JX-2), Abstract. In the context of the patent, "registration" refers to saving a particular location selected by the user as a favored location so that an icon representing that

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<sup>1</sup> Public comments were received from Tessera, Inc.; nVidia Corp.; Qualcomm Incorporated; Greenberg Traurig, LLP; Washington Legal Foundation; Rovi Corporation; Google Inc., Hewlett-Packard Co., and Cisco Systems, Inc.; and Colleen Chien of Santa Clara University Law School.

<sup>2</sup> Pioneer has abandoned its claim of a violation of section 337 with respect to the '448 patent by failing to petition for review of the ID's findings of non-infringement. *See* 19 C.F.R. § 210.43(b). Thus, only the '951 and '592 patents are before the Commission on review.

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location will be displayed on the navigation map whenever the vehicle approaches the location's vicinity. *Id.* at col. 1, ll. 26-45.

According to the '951 patent, in early navigation systems, users had to perform complicated manual operations to "register" a location. *Id.* at col. 1, ll. 46-55. The solution offered by the '951 patent simplifies the number of user operations for registering a particular location by providing a "registration" key when the user is presented with a list of selectable service facilities (e.g., a restaurant). '951 patent, col. 4, ll. 4-10. When the user selects a location from the list of service facilities and presses the registration key, position coordinate data (*i.e.*, longitude and latitude data) of the selected location, along with icon data representing that location, are accessed from a read-only memory (ROM) and stored into a "position registration data table" in a random-access memory (RAM). '951 patent, col. 5, ll. 1-15, Figures 2-3. Position coordinate data and icon data for the registered location can then be accessed from the position registration data table in RAM and displayed on the navigation map whenever the user approaches the location's vicinity. '951 patent, col. 6, ll. 24-28.

The '592 patent (JX-3), entitled "Navigation Apparatus With Enhanced Positional Display Function," issued on September 19, 2000, to Takeharu Arakawa, Morio Araki, Kenichi Nobe, and Kiyoshi Yamanaka. The '592 patent claims priority to a United States patent application, filed on February 11, 1993, which claims foreign priority from two Japanese applications filed on March 30, 1992 and February 18, 1992. The '592 patent has a lengthy specification with several different inventions. The claims of the '592 patent are more narrowly directed to a navigation system having an improved way of ordering and displaying various locations of interest surrounding a user destination. According to Mr. Morio Araki, a co-inventor of the '592 patent, the claimed invention allows a user to select a destination and to

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select a single category among various available categories of locations, then displays a sub-list of locations in the selected category that are in the vicinity of the destination in order of distance from the destination. Araki, Tr. at 125-126; *see also* '592 patent, col. 19-20.

## II. DISCUSSION

### A. Domestic Industry: Economic Prong

#### 1. Introduction

In order to prove a violation of section 337 in a patent-based investigation, a complainant must demonstrate by a preponderance of the evidence that a domestic industry in the United States either exists or is in the process of being established. *See* 19 U.S.C. § 1337(a)(2). Although a complainant can satisfy the requirement in a variety of different ways, in this investigation, Pioneer relies exclusively on its investments in licensing the asserted patents. Complaint at ¶¶ 74-81. Among the issues presented in regard to whether Pioneer has satisfied the statutory standard are the extent to which Pioneer's investment in licensing a large portfolio of patents may be attributed to the patents-in-suit and whether Pioneer's investment in licensing the patents-in-suit is "substantial." 19 U.S.C. § 1337(a)(3)(C). We summarize the findings of the presiding ALJ before turning to our analysis.

The ALJ found under section 337(a)(3)(C) that Pioneer has made substantial investments in the United States to exploit the asserted patents through licensing. ID at 143-144. The ALJ found that Pioneer made consistent efforts to license its navigation patent portfolio beginning in 2004, including (1) employing engineers, licensing attorneys, and others to work on licensing matters, (2) traveling in support of its licensing programs, (3) purchasing products from potential licensees for evaluation and testing, and (4) consulting with outside counsel. *Id.* at 144.

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The ALJ analyzed Pioneer’s licensing efforts with respect to several target licensees, including [ ] Garmin, and Honeywell. *Id.* at 151-154. The ALJ found that Pioneer made a good faith effort to estimate the costs related to these licensing efforts and that, [ ], these efforts totaled approximately [ ]. *Id.* at 155. The costs were broken down to approximately [ ] in employee salaries, [ ] in employee bonuses, [ ] in travel expenses, [ ] in product purchasing, and [ ] in outside-counsel fees. *Id.* at 157-166.

The ALJ observed that, although Pioneer’s efforts with Garmin did not bear fruit, its efforts with [ ] and Honeywell did. *Id.* at 165. The ALJ acknowledged that Pioneer’s license agreement with [ ] does not [ ], but nevertheless found that it relates to Pioneer’s entire navigation patent portfolio and thus to the asserted patents. *Id.* The Honeywell cross-license, on the other hand, specifically identifies [

], including the asserted ‘448, ‘592, and ‘951 patents. The ALJ concluded that Pioneer’s investment of [ ] was a “substantial investment” and therefore that Pioneer satisfied the domestic industry requirement of section 337(a)(3)(C). *Id.* at 156-166. The Commission determined to review.

**2. Our Analysis of Section 337(a)(3)(C)**

Sections 337(a)(2) and (3) set forth the domestic industry requirement in its entirety where, as here, the violation alleged is based on patent infringement:

(2) Subparagraphs (B), (C), (D), and (E) of paragraph (1) apply only if an industry in the United States, relating to the articles protected by the patent, copyright, trademark, mask work, or design concerned, exists or is in the process of being established.

(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—

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- (A) significant investment in plant and equipment;
- (B) significant employment of labor or capital; or
- (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. §§ 1337(a)(2) and (3). In amending section 337 in 1988 to include subsection (C), Congress intended to liberalize the domestic industry requirement so that it could be satisfied by all “holders of U.S. intellectual property rights who are engaged in activities genuinely designed to exploit their intellectual property” in the United States. *Certain Digital Processors and Digital Processing Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-559, Final Initial Determination at 93 (unreviewed in relevant part) (May 11, 2007) (“*Digital Processors*”) (quoting S. REP. NO. 71, 100th Cong., 1<sup>st</sup> Sess., at 130 (1987)).

Complainants who seek to satisfy the domestic industry requirement by their investments in patent licensing must establish that their asserted investment activities satisfy three requirements of section 337(a)(3)(C). First, the statute requires that the investment in licensing relate to “its exploitation,” meaning an investment in the exploitation of the asserted patent.<sup>3</sup> 19 U.S.C. § 1337(a)(3)(C); *Semiconductor Chips with Minimized Chip Package Size and Products Containing Same*, Inv. No. 337-TA-432, Order No. 13 at 11-13 (unreviewed) (Jan. 24, 2001) (“*Semiconductor Chips I*”). *Accord Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-650, Comm’n Op. at 44-51 (Apr. 14, 2010) (“*Coaxial Cable Connectors*”). Second, the statute requires that the investment relate to “licensing.” 19 U.S.C. § 1337(a)(3)(C); *Coaxial Cable Connectors*, at 50-51 (“A complainant

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<sup>3</sup> Several members of the public requested that the Commission revisit its interpretation of the applicability of the technical prong to a domestic industry claim based on licensing. See e.g., May 24, 2011 comments of Tessera at 13. This issue is beyond the scope of review in this investigation.

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must clearly link each activity to licensing efforts concerning the asserted patent.”). Third, any alleged investment must be domestic, *i.e.*, it must occur in the United States. 19 U.S.C. § 1337(2),(3). Investments meeting these requirements merit consideration in our evaluation of whether a complainant has satisfied the domestic industry requirement. Only after determining the extent to which the complainant’s investments fall within these statutory parameters can we evaluate whether complainant’s qualifying investments are “substantial,” as required by the statute. 19 U.S.C. § 1337(a)(3)(C). If a complainant’s activity is only partially related to licensing the asserted patent in the United States, the Commission examines the strength of the nexus between the activity and licensing the asserted patent in the United States.<sup>4</sup>

### *a. Nexus to the Asserted Patents*

This case tests the extent to which a complainant may rely on licensing activities directed to an entire patent portfolio to prove the existence of a domestic industry related to the asserted patents under section 337(a)(3)(C), that is, under the section which is premised on substantial investment in exploitation. Because Pioneer’s activities are associated both with the asserted patents and unasserted patents, a key issue presented is the strength of the nexus between the activities and the asserted patents.<sup>5</sup>

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<sup>4</sup> See *Certain Plastic Encapsulated Integrated Circuits*, Inv. No. 337-TA-315, USITC Pub. 2574, Final Initial Determination at 87 (unreviewed in relevant part) (Nov. 1992) (“*Plastic Encapsulated Circuits*”) (finding the nexus to the asserted patent to be attenuated); *Certain Wireless Communications Equipment, Articles Therein, and Products Containing the Same*, Inv. No. 337-TA-577, Order No. 20 at 7 (April 19, 2007) (“*Wireless Communications Equipment*”) (denying complainant’s motion for summary determination that a section 337(a)(3)(C) domestic industry exists because it failed to prove a nexus between its alleged licensing activities and the United States); *Certain Coaxial Cable Connectors and Components Thereof and Products Containing Same*, Inv. No. 337-TA-650, Public Remand Initial Determination at 11-13 (unreviewed) (June 15, 2010) (“*Coaxial Cable Connectors Remand*”) (finding the nexus to licensing to be attenuated).

<sup>5</sup> Our administrative law judges have addressed the issue of whether a nexus between the activities and the asserted patents exists in prior investigations. See *Semiconductor Chips I*, Inv.



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Section 337(a)(3)(C) requires that licensing investments be in exploitation of the “patent . . . concerned.” 19 U.S.C. § 1337(a)(3)(C). Thus, our inquiry focuses on the strength of the nexus between the licensing activity and the asserted patent. Where the complainant’s licensing activities and investments involve a group of patents or a patent portfolio, the complainant must present evidence that demonstrates the extent of the nexus between the asserted patent and the complainant’s licensing activities and investments.

Depending on the facts in each investigation, a complainant may be able to establish the strength of the nexus between the asserted patent and its licensing activities by means of evidence showing that its licensing activities are particularly focused on the asserted patent among the group of patents in the portfolio or through other evidence that demonstrates the relative importance or value of the asserted patent within the portfolio. For example, in *Coaxial Cable Connectors Remand*, at 24-25, the evidence of record showed that one of the patents was clearly more important and more valuable than the other. In our assessment of the strength of the

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No. 337-TA-432; *Plastic Encapsulated Circuits*, Inv. No. 337-TA-315; *Digital Processors*, Inv. No. 337-TA-559; *Certain Semiconductor Chips Having Synchronous Dynamic Random Access Memory Controllers and Products Containing Same*, Inv. No. 337-TA-661, Order No. 21 (unreviewed) (Oct. 7, 2009) (“*Semiconductor Chips Having Synchronous DRAM Controllers*”); *Certain 3G Wideband Code Division Multiple Access (WCDMA) Handsets and Components Thereof*, Inv. No. 337-TA-601, Order No. 20 (unreviewed) (Feb. 23, 2009) (“*3G Mobile Handsets*”); *Certain NAND Flash Memory Devices & Products Containing Same*, Inv. No. 337-TA-553, Initial Determination (Nov. 20, 2006) (“*NAND Flash Memory*”) (terminated based on settlement prior to final determination); *Certain Digital Satellite System (DSS) Receivers and Components Thereof*, 337-TA-392, USITC Pub. 3418, Final Initial Determination (Apr. 2001) (“*DSS Receivers*”) (domestic industry finding not reached by the Commission); *Certain Semiconductor Chips with Minimized Chip Package Size and Products Containing Same*, Inv. No. 337-TA-605, Initial Determination at 193-202 (February 9, 2009) (unreviewed in relevant part) (“*Semiconductor Chips II*”); *Certain Computer Products Computer Components and Products Containing Same*, Inv. No. 337-TA-628, Final Initial Determination (Mar. 16, 2009) (unreviewed) (“*Computer Products*”); *Certain Nitrile Gloves and Certain Nitrile Rubber Gloves (consolidated)*, Inv. No. 337-TA-608 and 337-TA-612, Final Initial Determination (Aug. 25, 2008) (unreviewed in relevant part) (“*Nitrile Gloves*”); *Certain Short-Wavelength Light Emitting Diodes, Laser Diodes and Products Containing Same*, Inv. No. 337-TA-640, Order No. 72 (May 8, 2009) (“*Short-Wavelength LEDs*”) (terminated based on settlement prior to final determination).

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nexus between a complainant's licensing activities and an asserted patent included in a large patent portfolio, a potentially important consideration is whether the licensee's efforts relate to "an article protected by" the asserted patent under section 337(a)(2)-(3). For example, if a licensee's product is an "article protected by" the patent, then the license is by definition connected to that patent. The Commission may also consider other factors including, but not limited to, (1) the number of patents in the portfolio, (2) the relative value contributed by the asserted patent to the portfolio, (3) the prominence of the asserted patent in licensing discussions, negotiations and any resulting license agreement, and (4) the scope of technology covered by the portfolio compared to the scope of the asserted patent.

Evidence demonstrating the relative value and/or importance of an asserted patent in a portfolio may indicate the focus of complainant's investment and, in turn, may reflect the strength of the nexus between these activities and the asserted patent.<sup>6</sup> For example, the asserted patent may be shown to be particularly important or valuable within the portfolio where there is evidence that (1) it was discussed during the licensing negotiation process, (2) it has been successfully litigated before by complainant, (3) it relates to a technology industry standard, (4) it is a base patent or a pioneering patent, (5) it is infringed or practiced in the United States, or

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<sup>6</sup> See *Semiconductor Chips II* at 116 (the ALJ found a nexus between complainant's activities and the asserted patents because the patents are "base patents" that laid the foundation for a portfolio of 150 patents for improvements in chip packaging technology); *3G Mobile Handsets* at 6-16 (in examining a large patent portfolio, the ALJ found the asserted patents, along with the other portfolio patents, were related to the "3G" communication standard); *Semiconductor Chips Having Synchronous DRAM Controllers* at 7-9 (finding a nexus where an asserted patent was part of a particular patent portfolio where complainant had different portfolios for different technologies).

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(6) the market recognizes its value in some other way.<sup>7</sup> We recognize that certain facts pertaining to the importance or value of a particular patent in a portfolio may, in some instances, be difficult to establish as a result of the varying perspectives of the complainant, potential licensees, and third parties. As Pioneer points out, a patent may be important to the patentee or the potential licensee for different reasons. Complainants' Brief in Response to Request for Supplemental Briefing at 9-10 ("Pioneer Supp. Br."). Frequently, there is no evidence as to what motivated the licensee to agree to take a license. Nevertheless, this type of evidence, when present in the record, is useful in determining the focus of complainant's licensing activity. A showing that the asserted patent is relatively important within the portfolio is not required to show a nexus between that patent and the licensing activities, *see 3G Mobile Handsets* at 16, but may be one indication of the strength of the nexus.

All things being equal, the nexus between licensing activities and an asserted patent may be stronger when the asserted patent is among a relatively small group of licensed patents.<sup>8</sup> The

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<sup>7</sup> *See Nitrile Gloves* at 117 (finding the "[asserted] Patent plays an important role in [complainant's] licensing activities thereby [sic] provides a sufficient nexus"); *DSS Receivers* at 11 (finding that complainant has litigated the patent-at-issue as "an extension of its licensing program"); *3G Mobile Handsets* at 7, 13 (finding evidence that the patents-at-issue related to certain technology standards); *Semiconductor Chips Having Synchronous DRAM Controllers* at 6-9 (finding that complainant's technology which is licensed is in fact covered by the asserted patents and noting that complainant highlighted the asserted patents during actual licensing negotiations); *Certain Integrated Circuits, Chipsets, and Products Containing Same Including Televisions, Media Players, and Cameras*, Inv. No. 337-TA-709, Order No. 33 at 7 (Jan. 5, 2011) (unreviewed) ("*Integrated Circuits*") (noting that the patent-at-issue was identified to potential licensees); *Semiconductor Chips II* at 117-18 (finding evidence that the asserted patents were of "particular import" to complainant's licensing efforts because the asserted patents had been litigated previously, and licensees had asked about licensing the asserted patents); *Computer Products* at 163 (discussing evidence of presentations involving specific patent claims).

<sup>8</sup> *See Short-Wavelength LEDs* at 13 (finding "no genuine issue regarding nexus in complainant's 'portfolio' in this investigation, which consists of only two patents"); *DSS Receivers* at 10 (finding a sufficient nexus between licensing activities directed to a portfolio of six U.S. patents

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scope of the technology covered by the license and the congruence of the patents contained in the portfolio may also indicate the strength of the nexus to a particular patent. *See Certain Dynamic Sequential Gradient Compression Devices and Component Parts Thereof*, Inv. No. 337-TA-335, Final ID, USITC Pub. 2575 at 63 (Nov. 1992) (“To include activities which are in the same field of technology but which do not have the requisite nexus to the patent would be contrary to the statute.”). Evidence showing how the asserted patents fit together congruently with other patents in the portfolio covering a specific technology may demonstrate a stronger nexus to the licensing activity than evidence indicating that the patents cover a wide variety of technologies bearing only a limited relationship to one another.

Evidence that the patent-at-issue is practiced or infringed in the United States may also be relevant to the value of the patent and may suggest a high value relative to that of the other patents in the portfolio. Conversely, evidence that a patent is not practiced or infringed may indicate relatively less value. *See Coaxial Cable Connectors Remand*, at 24-25 (finding that one of the two patents at issue was less valuable based on evidence that target licensees had designed around it).

The burden is on complainant to show that there is a nexus between its alleged licensing activities and an asserted patent. A complainant cannot establish that the asserted patent is more valuable than the remainder of the patents in a portfolio merely by filing a section 337 action alleging infringement of that patent.

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and the patent-at-issue where the five unasserted patents in the portfolio issued from applications related to the only asserted patent in the portfolio); *Digital Processors* at 97 (finding “a clear nexus exists between the [asserted] patent and [complainant’s] investments in the exploitation of its patents through licensing” based on “the small size of [complainant’s] portfolio”). Although the number of patents licensed may be a relevant factor, we agree with the view generally expressed by commenters that the magnitude of complainant’s investments in the asserted patents cannot be derived via a pro rata allocation of investments in the licensing of a portfolio to its constituent patents.

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Several commenters argued that the Commission should adopt a policy whereby any investment in a patent portfolio should *ipso facto* be allocated in its entirety to every individual patent in the portfolio. In support, they generally note that there may be certain cost efficiencies in portfolio licensing and that a portfolio may be especially attractive to potential licensees. We decline to adopt such a policy. Neither the statute nor the legislative history indicates that Congress intended for the Commission to credit all investments in the licensing of a portfolio to each patent of the portfolio when evaluating the extent to which complainant's activities meet the requirement that there be "substantial" investment in exploitation of the "patent...concerned."<sup>9</sup> As noted above, section 337(a)(3)(C) requires a substantial investment in the exploitation of the asserted patent. *Coaxial Cable Connectors*, at 51-54. Each investigation requires a fact-focused and case-specific inquiry to determine whether this statutory requirement has been satisfied by the complainant. The Commission's case-by-case approach recognizes that the evidence in a particular case may show that the asserted patent is significant and valuable regardless of the number of patents in the portfolio.<sup>10</sup>

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<sup>9</sup> Section 337(a)(3)(C) was added to benefit domestic entities with limited resources like universities and start-up companies that license their inventions to manufacturers, as well as large entities that produce intellectual property through design and research and development activities in the United States, but outsource production-related activities through licensing. *See Digital Processors* at 97-98 ("[T]he licensing provision of subsection (a)(3)(C) was intended to cover businesses ranging from large Hollywood movie studios, to research and development programs at universities, to small start-up companies that are too small to manufacture any products for themselves."); H. REP. 100-40 at 157; S. REP. NO. 100-71 at 129; 132 CONG. R. H1782 (Apr. 10, 1986).

<sup>10</sup> To demonstrate the strength of the nexus between the asserted patent and complainant's licensing activities, Chairman Okun would also consider fact-focused and case-specific evidence that licensing the asserted patent as part of a portfolio makes the asserted patent more valuable to targeted licensees, and increases the likelihood that a potential licensee would take a license to that patent. She would consider economic evidence that good faith efforts to license the portfolio are necessary in the particular industry because licensing the asserted patent individually would have little value to potential licensees who desire to obtain the rights to the universe of inventions that might benefit their products and achieve freedom to operate and innovate.

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### *b. Nexus to Licensing*

As the Commission recently concluded in *Coaxial Cable Connectors*, section 337(a)(3)(C) also requires complainant's activities to relate to licensing. Comm'n Op at 54 (finding the link between complainant's activity and licensing to be "particularly attenuated"). Some activities are *solely* related to licensing while others can serve multiple purposes. *Id.* at 50-51 ("The mere fact, however, that a license is executed does not mean that a complainant can necessarily capture all prior expenditures to establish" a domestic industry). For example, the evidence may show that analyzing another company's product for infringement may relate to licensing, but it may also occur with an eye toward litigation seeking injunctive relief against that company. *See Coaxial Cable Connectors Remand*, at 11-13 (finding litigation expenses not related to licensing where a permanent injunction issued, but a license agreement was ultimately reached).

### *c. Nexus to the United States*

The most obvious requirement of section 337(a)(3) is that the investment occur in the United States. 19 U.S.C. § 1337(a)(3). When a complainant's licensing activity is performed and directed within the United States, this weighs in favor of a strong nexus between the activities and the United States.<sup>11</sup> The Commission's analysis is a fact-focused and case-specific.

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Evidence demonstrating that licensing activities relating to the patent portfolio considerably enhance the market value of the asserted patent and increase the likelihood of a successful licensing effort may support the existence of the required nexus between the asserted patent and the licensing activities.

<sup>11</sup> *See Computer Products* at 163 (finding that complainant's licensing employees including engineers and attorneys are located in the United States); *DSS Receivers* at 11 (finding all licensing performed by five employees in the United States); *Semiconductor Chips III* at 7 (finding that "[e]ssentially all of [complainant's] licensing activities have primarily taken place, or been directed from, the United States"); *Nitrile Gloves* at 117 (finding licensing activities performed at complainant's headquarters in U.S); *Semiconductor Chips* at 8 (noting that all of complainant's patent exploitation activities occur in the United States); *Semiconductor Chips*

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inquiry that takes into account the extent to which the complainant conducts its licensing operations in the United States, including the employment of U.S. personnel and utilization of U.S. resources in its licensing activities.<sup>12</sup>

### *d. Whether the Investment is “Substantial”*

Once a complainant’s investment in licensing the asserted patent in the United States has been assessed in the above manner, the next inquiry is whether the investment is substantial. 19 U.S.C. § 1337(a)(3)(C). In performing our analysis, we adopt a flexible approach whereby a complainant whose showing on one or more of the three section 337(a)(3)(C) requirements is relatively weak may nevertheless establish that its investment is “substantial” by demonstrating that its activities and/or expenses are of a large magnitude.<sup>13</sup> The Commission has indicated that whether an investment is substantial may depend on the industry and the size of the complainant. *Stringed Instruments*, at 25; *Short-Wavelength LEDs*, at 7 (noting that “[c]omplainant ... is not a large company with many employees; rather, she is an individual”). The type of efforts that are considered a “substantial investment” under section 337(a)(3)(C) will vary depending on the nature of the industry and the resources of the complainant.

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*Having Synchronous DRAM Controllers* at 5, 8 (noting that complainant’s licensing activities are based out of its headquarters in the United States).

<sup>12</sup> Because the statute requires that investments satisfy all three of these requirements, the absence of a nexus to any one of them will defeat complainant’s attempt to satisfy the domestic industry requirement.

<sup>13</sup> Compare *Short-Wavelength LEDs* at 13 (finding “no genuine issue regarding nexus in complainant’s ‘portfolio’ in this investigation, which consists of only two patents”) with *Semiconductor Chips I* at 14 n.9 (“The question is whether, without a specific allocation of [complainant’s technology] licensing investment to the ... [patents-in-suit] it can be found that a substantial investment has been made with respect to those patents-in-suit... [I]n view of the large investment made by [complainant] in ... licensing [the technology-at-issue], there is no doubt that [complainant] has made a substantial investment in the exploitation of the ... patents-in-suit”).

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Other factors that might be relevant in determining whether a complainant's investment is substantial are (1) the existence of other types of "exploitation" of the asserted patent such as research, development, or engineering, (2) the existence of license-related ancillary activities such as ensuring compliance with license agreements and providing training or technical support to its licensees, (3) whether complainant's licensing activities are continuing, and (4) whether complainant's licensing activities are those that are referenced favorably in the legislative history of section 337(a)(3)(C). The complainant's return on its licensing investment (or lack thereof) may also be circumstantial evidence of the complainant's investment.

### 3. Whether Pioneer Satisfies the Domestic Industry Standard

Pioneer owns hundreds of GPS and navigation patents in the United States and throughout the world. Complaint at ¶ 77 ("Pioneer's multimedia display and navigation system patent portfolio...numbers in the hundreds of issued patents"); Complaint, Ex. 19 ("The Asserted Patents are part of [Pioneer's multimedia display and navigation system patent portfolio]" which includes "several hundred patents"); CX-405 at GARM-01-5395. Pioneer identifies, targets, and engages potential licensees. *See* ID at 147-48. Pioneer estimates its investment in licensing to be [ ]. This figure includes [ ] in (in-house) expenses for the licensing activities of Discovision Associates ("DVA"), a licensing entity related to Pioneer, and [ ] in outside counsel fees.<sup>14</sup> After engaging Honeywell and Garmin in licensing discussions with limited success, Pioneer retained outside counsel to conduct [ ] related to the products accused of infringement in this investigation. *See e.g.*, JX-123C. All of these expenses were incurred before the filing of the complaint on which this investigation is based. The ALJ found the estimates given by Pioneer "are reasonable approximations... confirmed by the

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<sup>14</sup> DVA is a domestic licensing entity that was first retained by Pioneer to license its patents, but was later acquired by Pioneer.



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testimony of many individual employees,” and, for the purposes of our analysis, we adopt his summary of those figures as set forth on pages 155-164 of the ID. As an initial matter, we find that the ALJ’s conclusion that DVA activities are attributable to Pioneer is not clearly erroneous. Tr. at 399-411; Tr. 167-168; JX-105C; RX-307C.

***a. Pioneer’s In-House Activities***

The [ ] Pioneer’s in-house licensing activities were [ ]. The [ ] licensing project involved the efforts of DVA personnel in the United States in conducting patent and product analysis, reverse engineering, testing, and similar activities. ID at 149. Pioneer had several meetings with [ ] before a license agreement was reached in [ ]. ID at 150-51. We agree that all of these activities are related to Pioneer’s efforts to license its navigation portfolio to [ ].

With respect to Honeywell, the settlement and license agreement with Honeywell resulted from litigation in two ITC investigations, including the present investigation. In particular, on August 19, 2008, Honeywell asserted certain patents against Pioneer in Inv. No. 337-TA-657, *Certain Automotive Multimedia Display and Navigation Systems, Components Thereof, and Products Containing Same*. Shortly after Pioneer was named as a respondent in the 657 investigation, the record shows that Pioneer actively engaged Honeywell in an effort to [ ] it filed its own complaint on which this investigation is based in November 2009. Pioneer had discussions and meetings with Honeywell at least as early as [ ] and continued to have them until it settled with Honeywell in January 2010. JX-127; JX-132C; Traino Tr. at 457-68. Both investigations were terminated in January 2010 based on a settlement between Pioneer and Honeywell.<sup>15</sup> Pioneer’s activities involving Honeywell

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<sup>15</sup> The settlement and license agreement between Honeywell and Pioneer [

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were also related to licensing because Pioneer could have simply sued Honeywell rather than engage in licensing talks. JX-127; JX-132C; Traino Tr. at 457-68. Thus, considering all of these circumstances, we find Pioneer's activities related to licensing.

We also agree with the ALJ that Pioneer's efforts involving Garmin are relevant to the domestic industry analysis under section 337(a)(3)(C). See CX-390C; CX-401C; CX-402; CX-403C JX-33C; Aoyama Tr. at 235-238. The fact that [

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does not render Pioneer's efforts unrelated to licensing. JX-034C at ¶ 5.01. Pioneer could have simply sued Garmin [ ] rather than engage in any licensing efforts with Garmin, and the fact that no license agreement was reached with Garmin does not make Pioneer's licensing efforts any less of an investment. See *Coaxial Cable Connectors*, at 51 n.16. Thus, we agree with the ALJ that Pioneer's estimated expenses were generally related to licensing Pioneer's patents.

**i. Nexus to the Asserted Patents**

Pioneer's in-house activities directed to licensing [ ] and Garmin were, in large part, directed toward the entire navigation portfolio.<sup>16</sup> See CX-390C; CX-401C; CX-402C; CX-403C; CX-335C; CX-355C; JX-33C; JX-55C; JX-47C. A presentation prepared for [ ] in [ ] states that Pioneer had 200 issued patents and 143 pending applications in the United States, 105 issued patents and 198 pending patent applications in Europe, 161 issued patents and

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[ ] JX-035C at 1. Under the terms of that agreement, [ ]]. *Id.* at 5-6.

<sup>16</sup> Pioneer's in-house activities involving Honeywell were relatively minimal because [

] JX-132C; JX-98C.

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767 pending applications in Japan, 24 issued patents and 53 pending applications in China, and 321 international pending patent applications—a total of more than 1,600 issued patents and pending applications. CX-423C; CX-403C at GARM-01-5395. The [ ] license does not expressly identify the ‘951 and ‘592 [ ] patent. JX-34C at ¶ 1.04. Pioneer’s other in-house efforts were also directed at the entire navigation portfolio. *See* CX-390C; CX-401C; CX-402C; CX-403C; CX-355C; CX-423C; CX-429C; JX-33C.

We find an attenuated nexus between Pioneer’s in-house activities and the asserted patents. As an initial point, we agree with the ALJ that the licenses and related activities have at least some link to the ‘592 and ‘951 patents because the licenses cover those patents. The asserted patents are mentioned occasionally, among a handful of other patents, in the evidence regarding the circumstances under which Pioneer engaged its target licensees. *See* JX-55C; JX47C; CX-403C at GARM-01-5390. Pioneer’s discussion with [ ] mentions the ‘592 patent among 10 others, whereas Pioneer’s discussion with Garmin mentions the ‘592 and ‘951 patents among 33 others. CX-423C at PIONEER-ITC0099600.<sup>17</sup> Other than these occasional references to the asserted patents, however, Pioneer submitted no evidence to demonstrate how its in-house licensing activities were tied to the exploitation of the asserted patents. For example, there was no showing as to the relative importance or value of the asserted patents in the portfolio.

Other evidence of record indicates that a large number (more than 1,600) of Pioneer patents were involved in its in-house activities and that the technological scope of Pioneer’s navigation portfolio, [ ] is broad. CX-423C; JX-34C.

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<sup>17</sup> We note here that Pioneer’s in-house activities have a particularly weak nexus to the ‘951 patent because, unlike the ‘592 patent, there is no evidence that this patent was highlighted or discussed with [ ] before the license was granted.

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In particular, the [ ] licensing agreement broadly defines the licensed “Pioneer Patents” as [

] JX-34C at 1.04. Indeed, the evidence presented by Pioneer shows that Pioneer sought to license many technologies within the field of [

] and Pioneer has presented no evidence of how the asserted patents fit together congruently with the other patents in its portfolio.

Moreover, as Garmin points out, the [ ] license was a worldwide license [ ]. Pioneer’s patent portfolio underscores its focus on [ ]. See CX-423C. In particular, only a small percentage of the patents in the portfolio are U.S. patents—[ ]. CX-423C. [ ] is a [ ] company with a large percentage of its activities located in [ ]. See CX-351C. An internal email sent between DVA/Pioneer personnel summarizing a meeting between Pioneer and [ ] indicates that [ ]. CX-351C.

This suggests a weaker connection between Pioneer’s in-house licensing activities and the asserted U.S. patents in Pioneer’s portfolio. On balance, the evidence in this investigation warrants the conclusion that the relationship between those activities and the asserted patents is attenuated. The evidence indicates a minimal role for the asserted patents in the activities in view of (1) the many patents that were being offered by Pioneer in its proposed license agreements and (2) the scope of the portfolio as compared to the narrow focus of the asserted patents. CX-403C at GARM-01-5390; CX-423C; JX-55C.<sup>18</sup> Thus, we find that Pioneer’s [

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<sup>18</sup> In fact, in licensing discussions with Garmin, Pioneer contrasted the portfolio approach with a patent-by-patent approach. In presenting the alternatives, Pioneer touted as an advantage that entering into a portfolio license would obviate the need for “costly technical discussions to evaluate a large number of Pioneer navigation patents.” CX-403C at slide 3 (reproduced in Complainant’s Reply Brief in Response to Request for Supplemental Briefing at 12). Slide 3 provides as follows:

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] expense associated with in-house licensing bears a weak relationship to the asserted patents.

### ii. Nexus to Licensing

The evidence presented by Pioneer shows that its in-house activities were genuinely designed to license its patents to [ ], Garmin, and Honeywell. *See* CX-390C; CX-401C; CX-402; CX-403C JX-33C; Aoyama Tr. at 235-238; JX-127; JX-132C; Traino Tr. at 457-68. Indeed, there is no evidence that these activities had any other purpose. Based on the foregoing, we find a strong nexus between Pioneer's [ ] in-house expenses and licensing.

### iii. Nexus to the United States

Finally, we note that Pioneer's in-house licensing activities were performed by DVA in the United States in coordination with Pioneer Corporation of Tokyo, Japan ("Pioneer Japan"). CDX-10C; CDX-13C-18C; JX-032C; RX-414C; Aoyama Tr. at 213-219. Although Pioneer Japan was responsible for [

], in its effort to satisfy the domestic industry requirement, Pioneer claimed only the expenditures associated with DVA's licensing activities. JX-105C; Aoyama Tr. at 182:7-18, 192:12-193:16, 258:3-260:8, 292:5-7, 366:3-20, 365-370). Accordingly, we find the relationship

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PIONEER offers two types of Licensing Programs for its Navigation patent portfolio:

Portfolio Licensing Program will provide a quick and reasonable solution for Garmin. It is aimed to *save both parties time and energy* for the negotiation, and decrease the risk of litigation.

Patent by Patent Licensing Program will require Garmin to use more efforts and resources. Garmin will be asked to engage in *costly technical discussions to evaluate a large number of Pioneer navigation patents*.

*Id.* (emphasis added). This additional evidence indicates that no particular patent could be deemed the focus of Pioneer's portfolio licensing efforts with Garmin.

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between Pioneer’s in-house licensing activities through DVA (particularly, its [ ] in expenses) and the United States to be relatively strong.

***b. Outside Counsel Activities***

As to the activities of Pioneer’s outside counsel, we note initially that section 337(a)(3)(C) does not support a distinction between in-house licensing employees and outside counsel. Such a distinction would place small entities, without in-house licensing, at a severe disadvantage in establishing a licensing-based domestic industry. By adding section 337(a)(3)(C) and the language “in the process of being established” to section 337(a)(2), Congress intended to encourage entities of all sizes to establish new industries. Thus, we will not assume that outside counsel activities are less related to licensing than their in-house counterparts. Instead, we focus on the considerations set forth above, namely, the nexus between the activity and licensing the asserted patent in the United States. The invoices for Pioneer’s outside counsel for the months of [ ].

***i. Nexus to the Asserted Patents***

Although heavily redacted, Pioneer’s invoices appear to be related to the analysis of Garmin and Honeywell products as they relate to the ‘951 and ‘592 patents. JX-119C to JX123C. We therefore find the nexus between Pioneer’s outside counsel activities and the asserted patents to be relatively strong.

***ii. Nexus to Licensing***

We find that Pioneer’s outside counsel expenses for [ ] are *generally* related to its efforts to license Honeywell and Garmin, because there is evidence that Pioneer approached these entities about licensing its patents before engaging in litigation.

Because Pioneer’s redacted bills focus on [ ], and there is

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some question whether they related to other matters, we give this evidence less weight. Kaplan Tr. at 1787:9-1790:23. Moreover, these activities were conducted with an eye toward this litigation where one objective is to obtain an exclusion order. Thus, the nature of these activities is such that they are not *solely* an investment in licensing Honeywell or Garmin. *See Coaxial Cable Connectors*, at 51 (“[T]he type of activity, the relationship between the activity, licensing, and the patent at issue, and the amount of the investment” is relevant to whether an investment is “substantial.”). Indeed, Pioneer did not point to any evidence that it attempted to engage Garmin in further licensing discussions after it retained outside counsel. Thus, we find Pioneer’s investment in licensing the asserted patents through outside counsel amounts to significantly less than the [ ] in expenses it presented.

### iii. Nexus to the United States

The activities of Pioneer’s outside counsel were performed entirely in the United States. We therefore find a strong nexus to the United States.

### c. *Whether Pioneer’s Activities Constitute a “Substantial Investment”*

We now examine Pioneer’s activities, as a whole, to determine whether they represent a substantial investment under our statute. In light of the generally attenuated relationship between these activities and licensing the asserted patents in the United States, we cannot credit Pioneer’s expenses in full to its investment in exploitation of the ‘951 and ‘592 patents through licensing. Pioneer’s in-house activities have a strong connection to licensing but a weak relationship to the asserted patents. Conversely, the activities of Pioneer’s outside counsel appear to be related to the asserted patents but have a weak connection to licensing. Both activities occurred in the United States, although we note that [ ].

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Initially, we note that this is not an instance in which the complainant is an individual, a university, or other entity with limited resources. Pioneer is a large international company with significant resources. Complaint at ¶ 9; Aoyama Tr. at 340-41; CX403C. Contrary to Pioneer's argument (Pioneer Supp. Br. at 22) that the relevant market is small, its own evidence indicates that the relevant market includes many participants as it encompasses vehicle-based navigation devices, handheld portable navigation devices, and smartphones with navigation capabilities. See CX-563C; CX-364C; CX-365C; RX-307C; JX-39C; JX-148C, Le Tr. at 53-59; JX-150C, Song Tr. at 24-28; ID at 154-155; Aoyama Tr. at 190-191; Traino Tr. 406-410, 470-471.

Pioneer admits that it has no other "exploitation" or license-related ancillary activities in the United States. See Pioneer Supp. Br. at 20. Indeed, Pioneer has not presented any evidence of engineering, development, or research activities in the United States. Nor has Pioneer presented any evidence of ancillary activities in the United States, such as license compliance, licensee design assistance, or the like.<sup>19</sup>

The significance of royalties in evaluating whether Pioneer's investment is substantial was disputed by the parties and the commenters. Although royalties received by a complainant can be circumstantial evidence that an investment was made, they do not constitute the investment itself. Pioneer's [ ] on its licensing investment in [ ], while arguably considerable, must be evaluated in the context of the broad geographical and technological scope of the license. The [ ] license is a worldwide license covering over 1,600 patent documents from a variety of countries in [ ]. Moreover, of the potential licensees identified internally by Pioneer, it has licensed [ ]

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<sup>19</sup> See *Semiconductor Chips* at 6-8 (crediting evidence of engineering, research and development, and marketing to accompany licensing); *Encapsulated Circuits* at 82-93 (finding evidence of manufacture, engineering, and research and development to accompany licensing).



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] ID at 154-55 (citing CX-563C; Traino Tr. at 406-410, 470-71; JX-148C (Le Dep.) Tr. at 54-57; JX-150C (Song Dep.) Tr. 26; Aoyama Tr. at 190-91; JX-39C; RX-307C; CX-364C). The Honeywell license, which arose from litigation, involved [ ], including the '951 and '592 patents. JX-035C at Appendix B. Pioneer received [ ] and a cross-license for Honeywell's patents. We find that this [ ] and the cross-license are relatively minimal in significance.

Finally, Pioneer's activities, on the whole, reflect a revenue-driven licensing model targeting existing production rather than the industry-creating, production-driven licensing activity that Congress meant to encourage. *See Coaxial Cable Connectors*, at 49 (Congress intended to cover "licensing activities that encourage practical applications of the invention or bring the patented technology to the market.").<sup>20</sup> Although our statute requires us to consider all "licensing" activities, we give Pioneer's revenue-driven licensing activities less weight. *See Coaxial Cable Connectors*, at 51.

Consequently, taken as a whole, we find that Pioneer's activities relate only minimally to licensing the asserted patents in the United States. In light of this finding, we further find Pioneer's activities to be too limited in light of its resources and the relevant market to be a "substantial" investment under section 337(a)(3)(C). Pioneer's activities do not indicate that an industry exists or is in the process of being established under section 337(a)(2). We therefore reverse the ALJ's finding that a domestic industry exists.

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<sup>20</sup> We have recognized that there are at least two types of "licensing" activities both of which are covered by the language of section 337—production-driven licensing which encourages adoption and use of the patented technology to create new products and/or industries and revenue-driven licensing which takes advantage of the patent right solely to derive revenue by targeting existing production. *Certain Video Game Systems and Controllers*, 337-TA-743, Comm'n Op. at 9 (Apr. 14, 2011).

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### B. The '951 Patent: Infringement

Asserted claim 1 of the '951 patent, with the challenged term in bold, recites as follows:

1. An on-board navigation apparatus to display a map on a display, comprising:

first memory means for storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities;

means for reading said display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities onto said display in accordance with the read display data;

means for selectively designating one of said plurality of service facilities displayed on said display in accordance with an operator input;

means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated;

**second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means;**

means for reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display; and

means for multiplexing the position indicated by the read position coordinate data from said second memory means onto the map by a display pattern corresponding to the read display pattern data from said second memory means in order to display on said display.

'951 patent (JX-2).

The ALJ first construed the function of the claimed "second memory means" to be:

storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means, wherein the "read display pattern data" that is stored on the second memory *cannot be different information* than the "read display pattern data" that is read from the first memory.

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ID at 82 (emphasis added). According to the ALJ, the plain language of this claim requires the display pattern data on the second memory to be the same as the display pattern data on the first memory. *Id.* (citing Davis Tr. at 1527-1529). The ALJ found this reading of the claim language to be consistent with the disclosure in the specification and the prosecution history. *Id.* at 84, 89. The ALJ found that Garmin's products do not infringe claims 1 and 2 of the '951 patent because they lack the "second memory means." ID at 100-01. In particular, the ALJ found that the [ ] in the [ ] of the accused products is not the [ ] as the [ ] that is [ ] on the [ ]. The Commission determined to review.

Claim construction "begin[s] with and remain[s] centered on the language of the claims themselves." *Storage Tech. Corp. v. Cisco Sys., Inc.*, 329 F.3d 823, 830 (Fed. Cir. 2003); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*). To help inform the court of the ordinary meaning of the words, a court may consult the intrinsic evidence, including the claims themselves, the specification, and the prosecution history, as well as extrinsic evidence, such as dictionaries, treatises, and inventor and expert testimony, when appropriate. *Phillips*, 415 F.3d at 1314. Once the claims at issue have been properly construed, they are compared to the allegedly infringing device in order to determine infringement. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998) (*en banc*). Comparison of a claim to an accused device is a question of fact that requires that the patent holder establish that the accused device includes every claim limitation or its equivalent. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997).

Upon review, we conclude that the ALJ misconstrued the function of the "second memory means" limitation. The proper function of the "second memory means" is found in the

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express claim language, “for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means.” Despite the reference to “said display pattern data and said position coordinate data,” the plain meaning of “corresponding to” indicates that data stored in the first and second memories need not be the same. In the context of the ‘951 patent, “corresponding to” means “relating to,” as Pioneer suggests.

The prosecution history does not show that the patentee intended to give the claim language anything other than its ordinary meaning. The statements made in the prosecution history merely emphasize that reading display pattern data from a first memory and storing display pattern data on a second memory allows storage of display pattern data for different categories of service facilities. *See* JX-4 at PIONEER\_ITC0000655-659, 674. Moreover, the specification requires a construction that allows for the “display pattern data” stored on the “second memory means” to be derived from and/or convey the same conceptual information as the “display pattern data” from the “first memory means.” ‘951 patent, col. 3, ll. 25-39 and col. 4, ll. 27-50. Because the ordinary meaning of the claimed function, namely, the “corresponding to” language, allows for this interpretation, we modify the ALJ’s construction to adopt the function expressly recited in claim 1.

The accused products literally meet the language of the “second memory means” limitation. We find that the [ ] on the [ ] of the accused Garmin devices [ ] the [ ] on the [ ]. *See* Alexander Tr. at 889-891, 1007-1008, 1010, 1023-24; Moore Tr. at 1212. When the map update card is inserted into the accused Garmin devices, the locations (sometimes referred to as “points-of-interest” or “POIs”) stored on the card become available for user selection and can be saved by

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the user as favorites in the accused devices' internal memory. In this case, the [ ] on the [ ] and the [ ] on the [ ] are [ ] to [ ] the [ ], *i.e.*, "display pattern data." Alexander Tr. at 1010; 1023-24. Moreover, we find that the [ ] memory of the accused Garmin products meets the corresponding structural limitation of the "second memory means," as identified by the ALJ. ID at 81, 90; Alexander Tr. 886:3-23, 901:17-902:2. Accordingly, we reverse the ALJ's finding that the accused products do not infringe claim 1. We find that the accused products also satisfy the language of dependent claim 2, "wherein said second memory means has a plurality of memory locations to store said position coordinate data and said position display pattern as a pair." Comp. Br. at 17; Resp. Br. at 13; IA Br. at 11. Finally, we find that Pioneer proved direct infringement by Garmin by a preponderance of the evidence. Penny Tr. 1269; Seymour Tr. 1259; JX-143C, Peters Tr. 91-92; JX-139C, Jantz Tr. at 141-42; CX-94C.

### C. The '592 Patent: Infringement

Asserted claim 1 of the '592 patent, with the challenged terms in bold, recites:

#### 1. A map display system comprising:

**extracting means for extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations;**

a display;

a map display controller which displays a map on said display based on said map data;

an input device for inputting location information for a point of interest, said point of interest being different from a location presently occupied by a user of the map display system;

a selector device for selecting at least one category from said different

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categories;

**a calculating device which calculates respective straight-line distances from said point of interest and each of said locations of said one selected category;**

a location name display device which displays on said display the location names of said selected category in order of the respective distances between said point of interest and locations of said one selected category.

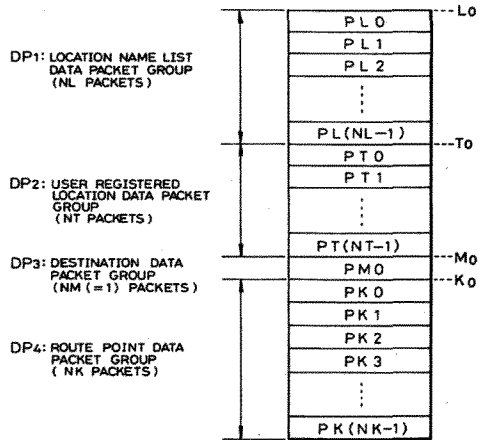
'592 patent (JX-3). The ALJ found non-infringement of independent claim 1 because the accused devices do not meet the limitations "extracting means" and "a calculating device." ID at 116-126. The ALJ found that the accused devices do not meet the "extracting means" limitation because Garmin's point-of-interest data are not "segregated into different categories" in memory as required by claim 1. ID at 118. Instead, the ALJ found that Garmin's point-of-interest data are [ ] where points-of-interest that are [ ] to [ ] are [ ] to [ ] on the [ ]. *Id.* (citing Moore Tr. at 1150-1153). The Commission determined to review.

The dispute regarding the construction of "extracting means" focuses on whether location data of different categories must be physically separated in memory. We find that both the language of claim 1 and the specification indicate that data for the "plurality of locations" are physically separated by category in memory. First, the word "segregated" itself suggests physical separation in memory. *See e.g.*, WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY (2002) at 2057.<sup>21</sup> As the IA points out, the specification only uses physical separation. Figure 27, for example, shows how various categories of location data are stored in memory:

---

<sup>21</sup> There is no evidence that one of ordinary skill in the art at the time of invention in 1993, would have understood the word "segregated" to connote something other than physical separation.

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'592 patent, Fig. 27. The memory structure of Figure 27 stores four categories of location data: "LOCATION NAME LIST," "USER REGISTERED LOCATION DATA," "DESTINATION DATA," AND "ROUTE POINT DATA." *Id.* Location data belonging to each category are stored sequentially, with one location data packet stored after another, and one entire category of location data packets stored after another entire category. '592 patent, col. 16, ll. 21-24. Thus, the patent's disclosure is consistent with the ordinary meaning of "segregated." We therefore conclude that "segregated into different categories" requires physical separation of point-of-interest data in memory. Garmin's point-of-interest data is [ ] instead of being "segregated into different categories," as required by claim 1. Therefore, Garmin's products do not meet the "extracting means" limitation, and we affirm the ALJ's finding of non-infringement on these grounds.

The ALJ applied the ordinary meaning of the "calculating device" limitation, *i.e.*, "a calculating device which calculates respective straight-line distances from said point of interest and each of said locations of said one selected category," in his infringement analysis. *ID* at 107. The ALJ concluded that "Garmin's products cannot infringe because they [

] to [ ] in the [ ]." *Id.* at

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124-125. The ALJ found, instead, that the Garmin devices [ ] on [ ] to [ ] to [ ] the [ ] to [ ] within the [ ].

*Id.* at 123. The Commission determined to review.

Upon review, we conclude that the ALJ’s application of the ordinary meaning of the “calculating device” is clearly erroneous. We agree with Pioneer that the plain language requires Garmin’s products to calculate distances to each location that is *extracted* from memory. The only antecedent basis for “each of said locations” in the “calculating device” limitation is the extracted data for “a plurality of locations” in the “extracting means” limitation. The ALJ’s infringement analysis, however, appears to have erroneously required the distances be calculated from the point-of-interest to each of the locations in the selected category. *See, e.g.*, ID at 123 (“The evidence at the hearing confirmed that the Garmin devices are [ ] to [ ] the [ ] to [ ] of the [ ] in the [ ].”)

We agree with Pioneer and the IA that the “Search Near” and “GPS Simulator” modes meet the language of the “calculating device” limitation. Moore Tr. at 1154, 1174-78. The Garmin devices use the [ ] to extract location data [ ] a [ ], then calculate the [ ] to each of these [ ]. Thus, the accused products meet the “calculating device” limitation. We reject Garmin’s argument that infringement does not occur because of the possibility that a [ ] from [ ] may [ ] the [ ]. The evidence of record shows that when the [ ] from [ ] that are [ ] the [ ], the accused device “calculates respective straight-line distances from said point of interest and each of said [extracted] locations of said one selected category,” as recited in claim 1. We therefore reverse the ALJ’s finding that the accused products do not meet the “calculating device” limitation.



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### D. The '592 Patent: Written Description Requirement

The ALJ found that the asserted claims of the '592 patent are not invalid under the written description requirement of 35 U.S.C. § 112. In particular, he found that “[t]he '592 patent specification unmistakably provides support for claims directed to displaying one or more categories” and that the specification “discloses embodiments that display locations in one, two, or all of the available categories.” ID at 141 (citing Alexander Tr. at 1930-31; '592 patent, col. 17, ll. 62-65, col. 18, ll. 6-9). The Commission determined to review.

To satisfy the written description requirement, the specification must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, the applicant was in possession of the claimed invention. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (*en banc*); *Hyatt v. Dudas*, 492 F.3d 1365, 1370 (Fed. Cir. 2007). The '592 patentee claims priority back to, at least, February 11, 1993, the filing date of the first United States patent application which, in turn, claims foreign priority to two different Japanese patent applications. Having reviewed the parties' submissions and the '592 patent, we find that claims 1 and 2 lack support from the written description and are therefore invalid under section 112, first paragraph. As of the invention date claimed by Pioneer, the '592 inventor had not invented the “map display system” of claim 1 because this subject matter is not disclosed in the original specification filed on February 11, 1993 or the detailed description of the issued '592 patent.

Prior art systems required a user to make numerous selections in order to display locations in a single category. Thus, the improvement of the '592 patent over the prior art is the ease with which locations from different categories nearest to a point-of-interest can be displayed for the user's selection. '592 patent, col. 17, ll. 47-55. The location data is stored by category so that “display manipulation can be simplified.” *Id.* at col. 16, ll. 61-62. Nowhere does the '592

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patent disclose selecting one or more particular categories let alone selecting a single category for display. On the contrary, the arrangement shown in Figure 27 allows locations of various categories to be retrieved and displayed together when close to a point-of-interest.

While we find a lack of support in the specification for selecting a single category for display, more fundamentally, there is no support for a “selector device” that allows for any type of category selection. The ‘592 specification describes retrieving location data irrespective of category, whereas claim 1 of the ‘592 patent recites “selecting at least one category” and “display[ing] the location names of said selected category.” See ‘592 patent, col. 17, l. 60 – col. 18, l. 58. In fact, the particular expert testimony cited by the ALJ acknowledges this disclosure of displaying locations irrespective of category, but nevertheless relies upon the disclosed prior art as support for displaying locations belonging to a single category. See Alexander Tr. at 1931 (“[T]here is a choice or a merging of data from different categories, two different categories . . . figure 5 is a different scenario where there is a condition choosing just a single category.”). The entire *invention* disclosure is at odds with the “selector device” language of claim 1 because it focuses on displaying all locations regardless of category. Indeed, the ‘592 specifically describes the shortcomings of the approach taken in Figures 5 and 6 as part of the motivation for the invention.

Finally, we reject Pioneer’s combination of incongruous parts of the prior art with the invention to arrive at the subject matter of claim 1. The heliport embodiment does not support Pioneer’s position. Indeed, Pioneer admits that “[b]ecause heliports existed in only two of the four categories... this part of the specification discloses selecting and displaying locations belonging to two of the four categories....” Comp. Rep. Br. at 29. Moreover, we agree with Garmin that the “conditions” that can be used to determine which locations to display are applied

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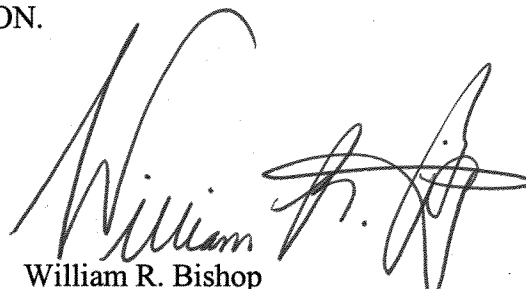
across all categories, for example, based on distance to the point-of-interest, but do not indicate that a single category can be selected and displayed.

We find that the '592 specification does not convey with reasonable clarity to those skilled in the art that the '592 inventor was in possession of the claimed invention. *See Hyatt*, 492 F.3d at 1370. It would be fundamentally unfair to allow Pioneer to expand the scope of its patent protection beyond what was disclosed in its original U.S. application in 1993. Because we find the ALJ's finding on this issue to be clearly erroneous, we reverse and find claims 1 and 2 invalid for lack of written description.

### III. CONCLUSION

For the reasons set forth above, we affirm the ALJ's finding that Pioneer failed to prove that Garmin violated section 337. In particular, we reverse the ALJ's findings that Garmin does not infringe the asserted claims of the '951 patent and reverse his finding that Pioneer established a domestic industry with respect to the '951 patent. As to the '592 patent, we reverse the ALJ's finding that the asserted claims are not invalid for lack of written description and his finding that Pioneer established a domestic industry. We adopt all of the ALJ's findings and conclusions that are not inconsistent with this opinion.

BY ORDER OF THE COMMISSION.

  
William R. Bishop  
Acting Secretary to the Commission

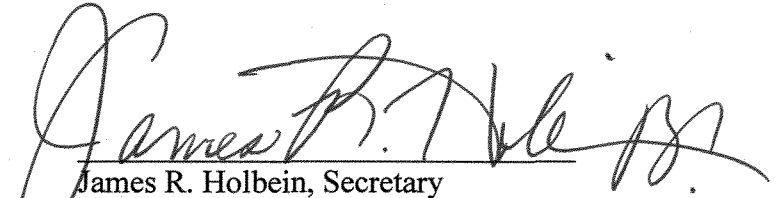
Issued: August 8, 2011

**CERTAIN MULTIMEDIA DISPLAY AND NAVIGATION  
DEVICES AND SYSTEMS, COMPONENTS THEREOF, AND  
PRODUCTS CONTAINING SAME**

**337-TA-694**

**CERTIFICATE OF SERVICE**

I, James R. Holbein, hereby certify that the attached **COMMISSION OPINION** has been served by hand upon the Commission Investigative Attorney, Christopher G. Paulraj, Esq., and the following parties as indicated, on August 8, 2011.

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

**In the Matter of**

**CERTAIN MULTIMEDIA DISPLAY  
AND NAVIGATION DEVICES AND  
SYSTEMS, COMPONENTS THEREOF,  
AND PRODUCTS CONTAINING SAME**

**Investigation No. 337-TA-694**

**NOTICE OF COMMISSION DETERMINATION TO REVIEW-IN-PART A FINAL  
DETERMINATION OF NO VIOLATION OF SECTION 337; SCHEDULE FOR FILING  
WRITTEN SUBMISSIONS ON THE 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 has determined to review certain portions of the final initial determination (“ID”) issued by the presiding administrative law judge (“ALJ”) on December 16, 2010 finding no violation of section 337 in the above-captioned investigation.

**FOR FURTHER INFORMATION CONTACT:** Jia Chen, Office of the General Counsel, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 708-4737. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street, S.W., Washington, D.C. 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. The public record for this investigation may be viewed on the Commission’s electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

**SUPPLEMENTARY INFORMATION:** The Commission instituted the instant investigation on December 16, 2009, based on a complaint filed by Pioneer Corporation of Tokyo, Japan and Pioneer Electronics (USA) Inc. of Long Beach, California (collectively, “Pioneer”). *74 Fed. Reg.* 66676 (Dec. 16, 2009). The complaint alleges violations of section 337 of the Tariff Act of 1930 (19 U.S.C. § 1337) in the importation into the United States, the sale for importation, and the sale within the United States after importation of certain multimedia display and navigation devices and systems, components thereof, and products containing same by reason of infringement of various claims of United States Patent Nos. 5,365,448 (“the ‘448 patent”),

5,424,951 (“the ‘951 patent”), and 6,122,592 (“the ‘592 patent”). The complaint names Garmin International, Inc. of Olathe, Kansas, Garmin Corporation of Taiwan (collectively, “Garmin”) and Honeywell International Inc. of Morristown, New Jersey (“Honeywell”) as the proposed respondents. Honeywell was subsequently terminated from the investigation, leaving only the Garmin respondents remaining.

On December 16, 2010, the ALJ issued a final ID, including his recommended determination on remedy and bonding. In his final ID, the ALJ found no violation of section 337 by Garmin. Specifically, the ALJ found that the accused products do not infringe claims 1 and 2 of the ‘448 patent, claims 1 and 2 of the ‘951 patent, or claims 1 and 2 of the ‘592 patent. The ALJ further found that neither Garmin nor the Commission investigative attorney (“IA”) has established that claims 1 and 2 of the ‘592 patent are invalid for obviousness under 35 U.S.C. § 103 or for failing to comply with the written description requirement under 35 U.S.C. § 112. With respect to remedy, the ALJ recommended that if the Commission disagrees with the finding of no violation, the Commission should issue a limited exclusion order directed to multimedia display and navigation devices and systems, and the components of such devices and systems, as well as a cease and desist order. The ALJ recommended that the limited exclusion order contain a certification provision. In addition, the ALJ recommended, in the event that a violation is found, that Garmin be required to post a bond equal to 0.5 percent of the entered value of any accused products that Garmin seeks to import during the Presidential review period.

On January 5, 2011, Pioneer, Garmin, and the IA each filed a petition for review of the ALJ’s final ID. On January 9, 2011, Pioneer filed a consolidated reply to Garmin’s and the IA’s petitions for review. On the same day, Garmin filed a reply to Pioneer’s petition for review and a separate reply to the IA’s petitions for review. Also on the same day, the IA filed a consolidated reply to Pioneer and Garmin’s petitions for review.

Having examined the record of this investigation, including the ALJ’s final ID and the submissions of the parties, the Commission has determined to review (1) the claim construction of the limitation “second memory means” recited in claim 1 of the ‘951 patent, (2) infringement of claims 1 and 2 of the ‘951 patent, (3) the claim construction of the limitations “extracting means” and “a calculating device” recited in claim 1 of the ‘592 patent, (4) infringement of claims 1 and 2 of the ‘592 patent, (5) validity of the ‘592 patent under the written description requirement of 35 U.S.C. § 112, and (6) the economic prong of the domestic industry requirement. No other issues are being reviewed.

The parties should brief their positions on the issues on review with reference to the applicable law and the evidentiary record. In connection with its review, the Commission is particularly interested in responses to the following questions:

1. With respect to claim 1 of the ‘951 patent, does the claimed function of the limitation “second memory means” require “the read display pattern data” stored on the “second memory means” to be in the same data format with “said display pattern data . . . from said first memory mean”? Does the scope of the claimed function allow “display pattern data” stored on the “second memory means” to be derived from and to convey the same

conceptual information as “display pattern data” from the “first memory means,” even though the display pattern data may be represented in different formats? Please provide support for your claim construction in the claims, the specification, the prosecution history, and any extrinsic evidence concerning how the claim would be understood by persons skilled in the art.

2. Assume that the scope of the claimed function of the “second memory means” limitation recited in claim 1 of the ‘951 patent encompasses “display pattern data” stored on the “second memory means” that are derived from and represented in a different format than the “display pattern data” from the “first memory means,” where both “display pattern data” represent the same conceptual information. Do the accused product combinations, *i.e.*, the product combinations identified at the top of page 3 of complainant’s petition for review, meet the “second memory means” limitation?
3. Assuming that the accused product combinations meet all of the recited limitations of claim 1 of the ‘951 patent, do they also meet dependent claim 2’s limitation “wherein said second memory means has a plurality of memory locations to store said position coordinate data and said position display data to indicate said display pattern as a pair?” Please cite to all evidence in the record for support.
4. With respect to the proper construction of the function of the “extracting means” limitation recited in claim 1 of the ‘592 patent, does claim 1 require that the recited “plurality of locations” be physically segregated into different categories in memory in view of the intrinsic evidence (see, *e.g.*, ‘592 patent, Figure 27 and Col. 16).
5. If the answer to question 4 is yes, do the accused devices meet the “extracting means” limitation of the ‘592 patent? Please cite to all evidence in the record for support.
6. With respect to the proper construction of the corresponding structure of the “extracting means” limitation recited in claim 1 of the ‘592 patent, should the Commission modify the corresponding structure identified by the ALJ from the specification as “CPU programmed to read location data from memory and a CD-ROM drive, *wherein the memory is RAM configured to store the location data as depicted in Figure 27.*” Please provide support for your claim construction in the claims, the specification, the prosecution history, and any extrinsic evidence concerning how the claim would be understood by persons skilled in the art.

7. If the answer to question 6 is yes, do the accused devices meet the “extracting means” limitation of the ‘592 patent? Please cite to all evidence in the record for support.
8. With respect to the proper construction of the limitation “a calculating device” recited in claim 1 of the ‘592 patent, does the intrinsic evidence require that the recited term “said locations” refer to the plurality of locations of the selected category that has been *extracted* by the “extracting means,” rather than all locations of the selected category?
9. If the answer to question 8 is yes, do the “Search Near” mode and the “GPS Simulator” mode of the accused device meet the limitation “a calculating device.” Please cite to all evidence in the record for support.
10. With respect to the functionality discussed on page 124, n. 19 of the ID, please cite to all evidence of record indicating how this feature operates and how this feature does or does not meet the “a calculating device” limitation of claim 1. Please cite to all evidence in the record for support.
11. Assuming that the specification of the ‘592 patent provides adequate support for the “extracting means” limitation of claim 1 and assuming that claim 1 is not directed to the disparaged problem in the prior art, does the specification provide adequate support for “a selector device” and “a location name display device” recited in claim 1 to satisfy the written description requirement of 35 U.S.C. § 112?
12. With respect to the economic prong of the domestic industry requirement, what is Pioneer’s investment as opposed to DVA’s investment for Pioneer’s licensing activities with the entity identified on page 148 of the ID?
13. With respect to Pioneer’s licensing negotiation efforts with the entity identified on page 151 of the ID, what is the contribution by Pioneer’s U.S. employees?
14. Do payments made to outside counsel by complainant prior to filing the instant investigation constitute investment in exploitation of the patent under section 337(a)(3)(C)?
15. With respect to the table provided on pages 87-88 of complainant’s post-hearing brief and adopted by the ALJ on pages 157-158 of the ID, please identify the targeted licensee for each entry.
16. Is Pioneer’s investment in exploitation of the asserted patents through licensing “substantial” under section 337(a)(3)(C), in light of the Commission’s holding on page 31, first paragraph, of *Certain Printing*



*and Imaging Devices and Components Thereof*, 337-TA-690, Comm'n Op. (Feb. 1, 2011)?

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 a respondent being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, *see In the Matter of Certain Devices for Connecting Computers via Telephone Lines*, Inv. No. 337-TA-360, USITC Pub. No. 2843 (December 1994) (Commission Opinion).

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

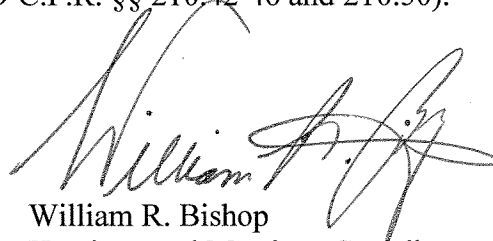
If the Commission orders some form of remedy, the United States Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005, 70 *Fed. Reg.* 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

**WRITTEN SUBMISSIONS:** The parties to the investigation are requested to file written submissions on the issues identified in this notice. 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 by the ALJ on remedy and bonding. Complainant and the Commission investigative attorney are also requested to submit proposed remedial orders for the Commission's consideration. Complainant is also requested to state the date that the patent expires and the HTSUS numbers under which the accused products are imported. The written submissions and proposed remedial orders must be filed no later than close of business on March 9, 2011. Reply submissions must be filed no later than the close of business on March 18, 2011. The written submissions must be no longer than 100 pages and the reply submissions must be no longer than 50 pages. No further submissions on these issues will be permitted unless otherwise ordered by the Commission.

Persons filing written submissions must file the original document and 12 true copies thereof on or before the deadlines stated above with the Office of the Secretary. Any person desiring to submit a document to the Commission in confidence must request confidential treatment unless the information has already been granted such treatment during the proceedings. All such requests should be directed to the Secretary of the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 C.F.R. § 210.6. Documents for which confidential treatment by the Commission is sought will be treated accordingly. All non-confidential written submissions will be available for public inspection at the Office of the Secretary.

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 sections 210.42-46 and 210.50 of the Commission's Rules of Practice and Procedure (19 C.F.R. §§ 210.42-46 and 210.50).

By order of the Commission.



William R. Bishop  
Hearings and Meetings Coordinator

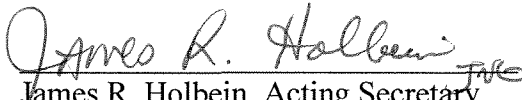
Issued: February 23, 2011

**CERTAIN MULTIMEDIA DISPLAY AND NAVIGATION  
DEVICES AND SYSTEMS, COMPONENTS THEREOF, AND  
PRODUCTS CONTAINING SAME**

**337-TA-694**

**CERTIFICATE OF SERVICE**

I, James R. Holbein, hereby certify that the attached has been served by hand upon the Commission Investigative Attorney, Christopher G. Paulraj, Esq., and the following parties as indicated, on February 23, 2011.

  
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() Via First Class Mail  
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**PUBLIC VERSION**

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

**In the Matter of**

**CERTAIN MULTIMEDIA DISPLAY  
AND NAVIGATION DEVICES AND  
SYSTEMS, COMPONENTS THEREOF,  
AND PRODUCTS CONTAINING SAME**

**Inv. No. 337-TA-694**

**INITIAL DETERMINATION  
Administrative Law Judge Carl C. Charneski**

Pursuant to a notice of investigation, 74 Fed. Reg. 66676 (2009), this is the Initial Determination in Investigation No. 337-TA-694. It is held that complainants Pioneer Corporation and Pioneer Electronics (USA) Inc. have not established that respondents Garmin International, Inc. and Garmin Corp. infringed U.S. Patent Nos. 5,365,448 (the '448 patent), 5,424,951 (the '951 patent), and 6,122,592 (the '592 patent) in violation of section 337(b) of the Tariff Act of 1930, as amended. 19 U.S.C. § 1337(b). It is further held that the '592 patent is not invalid.

**PUBLIC VERSION**

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**PUBLIC VERSION**

**I. Background**

**A. Institution of Investigation**

The Commission instituted this investigation by publication of a notice in the *Federal Register* on December 16, 2009, pursuant to subsection (b) of section 337 of the Tariff Act of 1930, as amended. 19 U.S.C. § 1337(b). This investigation was instituted:

to determine 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 multimedia display and navigation devices and systems, components thereof, and products containing same that infringe one or more of claims 1 and 2 of U.S. Patent No. 5,365,448; claims 1 and 2 of U.S. Patent No. 6,122,592; and claims 1 and 2 of U.S. Patent No. 5,424,951, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.

74 Fed. Reg. 66676 (2009).

The notice of investigation names Pioneer Corporation of Tokyo, Japan and Pioneer Electronics (USA) Inc. of Long Beach, California (collectively, “Pioneer”) as complainants.<sup>1</sup> The named respondents are Garmin International, Inc. of Olathe, Kansas, and Garmin Corporation of Taipei County, Taiwan (collectively, “Garmin”),<sup>2</sup> and Honeywell International Inc. (“Honeywell”) of Morristown, New Jersey. The Commission Investigative Staff (“Staff”) also is named as a party to this investigation.

*Id.*

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<sup>1</sup> Pioneer Electronics (USA) Inc. is a wholly-owned subsidiary of Pioneer Corporation. Pioneer has been engaged in the research, development, and manufacture of consumer home and automobile electronics. Complaint, ¶ 9.

<sup>2</sup> Garmin is engaged in the design, manufacture, and sale of multimedia display and navigation devices. Garmin Response, ¶¶ 12 & 13.



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**B. Procedural History**

On January 19, 2010, a 16-month target date of April 16, 2011 was set. *See* Order No. 6. Subsequently, on January 20, 2010, an Initial Determination terminating the investigation as to respondent Honeywell on the basis of a settlement agreement was issued. *See* Order No. 7 (Initial Determination); Comm'n Notice Not To Review Initial Determination (Feb.16, 2010). An evidentiary hearing in this investigation was held from September 13-21, 2010.

**C. The Remaining Respondents**

The respondents that remain in this investigation are Garmin International, Inc. and Garmin Corp.

**D. Products at Issue**

The accused products in this investigation are multimedia display and navigation devices and systems, components thereof, and products containing same that are or have been imported by or on behalf of Garmin. Garmin sells navigation apparatuses for the automotive market under the "nüvi" brand and for the motorcycle market under the "zūmo" brand. Pioneer has asserted the '448, '951, and '592 patents against the accused products, including Garmin's entire nüvi and zūmo product lines. Joint Statement Regarding Identification of Accused Products (Aug. 9, 2010).

Specifically, Pioneer asserts infringement of the '448 and '592 patents by the following multimedia display and navigation devices and systems and components thereof:

nüvi: 205; 205W; 255; 255W; 265T; 265WT; 275T; 465T; 500; 550;  
755T; 765T; 775T; 785T; 855; 885T; 1200; 1250; 1260; 1260T;

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1300; 1350; 1350T; 1370T; 1390T; 1450; 1490T; 1690; and 5000;  
and

zūmo: 220, 550; 660; and 665.

Joint Statement Regarding Identification of Accused Products, ¶ 2.

In addition, Pioneer asserts infringement of the ‘448 and ‘592 patents by Garmin’s nüvi 3750, 3760T, and 3790T devices. *Id.*, ¶ 3. As for infringement of the ‘951 patent, Pioneer identifies the above-listed products in combination with SD (secure data) or microSD cards containing map update software as the infringing systems. *Id.*

For the above-identified products, the parties have entered into a stipulation that the source code produced by Garmin in this investigation demonstrates the operation of relevant functionality, *i.e.*, “terminating route guidance in conjunction with a powerup sequence, saving points of interest as favorites, searching near a location other than the present location, and calculating the distance between two points.” CX-325C (Stipulation of Material Facts Relating to Garmin’s Source Code, ¶ 3).

Garmin has [ ] of its accused products. In the June 15, 2010, expert report of Dr. Randall Davis, Garmin’s expert provided non-infringement opinions concerning [ ] identified as [ ]

]” Pioneer asserts that the [ ] infringe the asserted claims of the ‘592 patent. *Id.*, ¶ 4. Dr. Davis’s report also identifies certain [ ] Pioneer does not accuse the [ ] in this investigation. *Id.*, ¶ 5

**II. Jurisdiction**

The Commission has subject matter, personal, and *in rem* jurisdiction in this investigation. 19 U.S.C. § 1337. Respondents have responded to the complaint and Notice of Investigation and have participated fully in the hearing conducted in this investigation.

**III. Importation**

Garmin has stipulated to the fact that [

] the accused multimedia display and navigation devices and components thereof. CX-490C (Stipulation of Material Facts Relating [ ]).

**IV. Technical Background**

The technology involved in this investigation relates to Global Positioning System (“GPS”) navigation devices. JX-1 (‘448 patent), JX-2 (‘951 patent) and JX-3 (‘592 patent). GPS is a satellite-based technology that was originally developed for military applications, but which subsequently gained application for use in commercial systems such as automobile navigation apparatuses. Tutorial, Tr. at 14-15. The claims of the asserted patents generally relate to various aspects of how information may be stored, retrieved, or displayed on a navigation apparatus.

**V. Overview of the Asserted Patents**

**A. U.S. Patent No. 5,365,448**

The ‘448 Patent, which is entitled “On-Vehicle Navigation Apparatus With Automatic Re-Initialization Function,” was filed on March 27, 1992, and issued on November 15, 1994. It claims priority to a Japanese application filed on April 12, 1991.

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Kenichi Nobe and Morio Araki are the named inventors. The invention disclosed in the '448 patent generally relates to “[a]n on-vehicle navigation apparatus in which destination coordinate data stored in a memory is erased when the distance from the present location to a destination is equal to or smaller than a predetermined value at the time the engine of a vehicle is started.” JX-1 ('448 patent), abstract. Pioneer has asserted claims 1 and 2 of the '448 patent.

### **B. U.S. Patent No. 5,424,951**

The '951 Patent, which is entitled “On-Board Navigation Apparatus Having Registration Function,” was filed on March 27, 1992, and issued on June 13, 1995. It claims priority to a Japanese application filed on April 12, 1991. Kenichi Nobe and Takeharu Arakawa are the named inventors. The invention disclosed in the '951 patent generally relates to “[a]n on-board navigation apparatus in which one of a plurality of service facilities displayed on a display is designated by an operator input, the position coordinate data corresponding to the designated one service facility is registered as a user position into a memory.” JX-2 ('951 patent), abstract. Pioneer has asserted claims 1 and 2 of the '951 patent.

### **C. U.S. Patent No. 6,122,592**

The '592 Patent, which is entitled “Navigation Apparatus With Enhanced Positional Display Function,” issued on September 19, 2000, and claims priority as a continuation to an application filed on February 11, 1993. It also claims priority to two Japanese applications filed on March 30, 1992 and one filed on February 18, 1992. Takeharu Arakawa, Morio Araki, Kenichi Nobe, and Kiyoshi Yamanaka are the named inventors. The invention disclosed in the '592 patent generally relates to “display

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processing for a navigation apparatus which is mounted in a vehicle” and “a map display apparatus suitable for use in a navigation system for a mobile body.” JX-3 (‘592 patent) at Col. 1, lns. 14-19. Pioneer has asserted claims 1 and 2 of the ‘592 patent.

**VI. Person of Ordinary Skill in the Art**

Pioneer has asserted that a “person of ordinary skill in the art for the asserted patents would have at least a B.S. degree in Electrical Engineering or computer science with several years of experience in the field of electronic systems involving the design, development and/or analysis of vehicle navigation systems.” Compl. Br. at 3. Pioneer further asserts that “a hypothetical person of ordinary skill would have some educational and/or vocational training in inertial systems, the Global Positioning System and/or navigation systems.” *Id.*, citing Alexander, Tr. 813-814. For the automotive-related aspects of the claims of the ‘448 patent, Pioneer asserts that “a hypothetical person of ordinary skill would also have a sound fundamental understanding of automotive power and propulsion systems, including automotive electrical and electronics systems.” Compl. Br. at 4, citing Andrews, Tr. 697-698. Pioneer’s expert, Mr. Scott Andrews, testified that such a person would have some level of either educational or on-the-job training in “inertial systems, GPS systems, and various kinds of navigation systems” and “would have a basic fundamental understanding of automotive, electrical, and electronic systems.” Andrews, Tr. 698.

Garmin’s expert, Dr. William Michalson, testified that a person of ordinary skill in the art would have a Bachelor’s degree in electrical engineering or computer science or a similar degree, and at least one year of experience with the programming of micro controllers. Michalson, Tr. 1317. Garmin’s other expert, Dr. Randall Davis, agreed with

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this skill level, but also stated that a “basic fundamental understanding” of automobiles, such as that possessed by the “average driveway mechanic” is more than sufficient to understand the automotive aspects of the ‘448 patent. Davis, Tr. 1451-1452. Garmin’s experts proposed the same level of ordinary skill for all three asserted patents, *i.e.*, a Bachelor’s degree in electrical engineering or computer science and at least one year of programming experience. Michalson, Tr. 1317; Davis, Tr. 1451-1452.

The Staff agrees with Pioneer’s proposed level of ordinary skill in the art, but submits that it is not significantly different from Garmin’s proposed skill level. The Staff further submits that the claims should be construed from the perspective of this hypothetical person of ordinary skill. Staff Br. at 7-8, 24-25, 51-52.

It is held that a person of ordinary skill in the art has a bachelor’s degree in electrical engineering or computer science and at least one year of programming experience for the asserted patents with additional “basic fundamental understanding” of automobiles for the ‘448 patent.

### **VII. General Principles of Patent Law: Claim Construction and Infringement**

Pursuant to the Commission’s notice of investigation, this is a patent-based investigation. *See* 74 Fed. Reg. 66676 (2009). All of the unfair acts alleged by complainant are instances of alleged infringement of the asserted patents. Any finding of patent infringement or non-infringement requires a two-step analytical approach. First, the asserted patent claims must be construed as a matter of law to determine their proper scope.<sup>1</sup> Second, a factual determination must be made as to whether the properly

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<sup>1</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*

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construed claims read on the accused devices. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

**A. Claim Construction**

Claim construction begins with the language of the claims themselves. Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent.

*Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).<sup>2</sup>

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

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*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).

<sup>2</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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mean.” *Id.* (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). The “sources” identified by the *Phillips* Court include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*

In cases in which the meaning of a claim term is uncertain, the specification usually is the best guide to the meaning of the term. *Id.* at 1315. As a general rule, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Markman*, 52 F.3d at 979. However, the specification is always highly relevant to the claim construction analysis, and is usually dispositive. *Id.* 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.”).

Furthermore, claim interpretations that exclude the preferred embodiment are “rarely, if ever, correct and require highly persuasive evidentiary support.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Such a conclusion can be mandated in rare instances by clear intrinsic evidence, such as unambiguous claim



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language or a clear disclaimer by the patentees during patent prosecution. *Elekta Instrument v. O.U.R. Sci. Int'l*, 214 F.3d 1302, 1308 (Fed. Cir. 2000); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319 (Fed. Cir. 2002).

If the intrinsic evidence does not establish the meaning of a claim, then extrinsic evidence may be considered. Extrinsic evidence consists of all evidence external to the patent and the prosecution history, and includes inventor testimony, expert testimony, and learned treatises. *Phillips*, 415 F.3d at 1317. Inventor testimony can be useful to shed light on the relevant art. In evaluating expert testimony, a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent. *Id.* at 1318. Extrinsic evidence may be considered if a court deems it helpful in determining the true meaning of language used in the patent claims. *Id.*

This investigation involves means-plus-function claim limitations. When a claim uses the term “means” to describe a limitation, a presumption arises that the inventor used the term to invoke the means-plus-function format authorized by 35 U.S.C. § 112, ¶ 6.<sup>3</sup> *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003). “This presumption can be rebutted when the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety.” *Id.*

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<sup>3</sup> The relevant portion of section 112 provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the

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Once a court concludes that a claim limitation is a means-plus-function limitation, two steps of claim construction remain: (1) the court must first identify the function of the limitation; and (2) the court must then look to the specification and identify the corresponding structure for that function. *Biomedino LLC v. Waters Technologies Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007). If there is no structure in the specification corresponding to the means-plus-function limitation, the claim will be found invalid as indefinite. *Id.*

While the specification must contain structure linked to claimed means, “[a]ll one needs to do in order to obtain the benefit of [§ 112, ¶ 6] is to recite some structure corresponding to the means in the specification, as the statute states, so that one can readily ascertain what the claim means and comply with the particularity requirement of [§ 112,] ¶ 2.” *Id.* (citing *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999)). Additionally, interpretation of what is disclosed in the specification must be made in light of the knowledge of one skilled in the art. *Id.* at 1380.

Thus, in order for a means-plus-function claim to be valid under section 112, the corresponding structure of the limitation “must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation. Otherwise, one does not know what the claim means.” *Id.* at 1382. However, “the testimony of one of ordinary skill in the art cannot

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corresponding structure, material, or acts described in the  
specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6.

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supplant the total absence of structure from the specification.” *Id.* (quoting *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1302 (Fed. Cir. 2005)).

“A means-plus-function claim encompasses all structure in the specification corresponding to that element and equivalent structures.” However, “[t]he statute does not permit limitation of a means-plus-function claim by adopting a function different from that explicitly recited in the claim. Nor does the statute permit incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Micro Chem. Inc. v. Great Plains Chem. Co., Inc.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

### **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).

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).<sup>4</sup> 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

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<sup>4</sup> Thus, 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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exactly. *Amhil Enters., Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996); *Southwall Tech. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed Cir. 1995).

If the accused product does not literally infringe the patent claim, infringement might be found under the doctrine of equivalents. The Supreme Court has described the essential inquiry of the doctrine of equivalents analysis in terms of whether the accused product or process contains elements identical or equivalent to each claimed element of the patented invention. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997). Thus, infringement may be found when the accused product performs substantially the same function in substantially the same way to obtain substantially the same result. *See Eagle Comtronics, Inc. v. Arrow Comm. Labs.*, 305 F.3d 1303, 1315 (Fed. Cir. 2002).

As noted, certain of the claim elements at issue in this investigation are written in means-plus-function format. “Literal infringement of a § 112, ¶ 6 limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent” to the structure identified in the written description as corresponding to the recited function. *JVW Enter. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1333 (Fed. Cir. 2005) (citing *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir.1999)). For the relevant structure in the accused device to be equivalent to the structure in the written description, differences between the two must be insubstantial. For example, the structure in the accused device must perform the claimed

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function in substantially the same way to achieve substantially the same result as the structure in the written description. *JWW*, 424 F.3d at 1333.<sup>5</sup>

Under 35 U.S.C. §271(b), “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” To establish liability, a patentee must prove direct infringement for each instance of indirect infringement. *DSU Medical Corp. v. JMS Co.*, 471 F.3d 1293, 1303 (Fed. Cir. 2006). “In order to succeed on a claim of inducement, the patentee must show, first that there has been direct infringement, and second, that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another’s infringement.” *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1312 (Fed. Cir. 2005). Mere knowledge of possible infringement by others does not amount to inducement. Specific intent and action to induce infringement must be proven. *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1363 (Fed. Cir. 2003).

### **VIII. INFRINGEMENT**

#### **A. U.S. Patent No. 5,365,448**

As noted, the ‘448 patent is titled, “On-vehicle navigation apparatus with automatic re-initialization function.” The ‘448 patent relates to “an on-vehicle navigation apparatus which displays navigation information, such as the distance and direction from

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<sup>5</sup> “The primary difference between structural equivalents under section 112, paragraph 6 and the doctrine of equivalents is a question of timing.” *Frank’s Casing, Crew & Rental Tools, Inc. v. Weatherford Int’l, Inc.*, 389 F.3d 1370, 1379 (Fed. Cir. 2004) (citing *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1321 n.2 (Fed. Cir. 1999)). As the Federal Circuit has explained, “[a] proposed equivalent must have arisen at a definite period in time, i.e., either before or after [patent filing]. If before, a § 112, ¶ 6 structural equivalents analysis applies and any analysis for equivalent structure under the doctrine of equivalents collapses into the § 112, ¶ 6 analysis. If after, a non-textual infringement analysis proceeds under the doctrine of equivalents.” *Id.*

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the present location of a vehicle to a destination.” JX-1 (the ‘448 patent) at col. 1, lns. 6-10 (Field of the Invention). Pioneer asserts claims 1 and 2. The asserted claims read as follows:

1. An on-vehicle navigation apparatus for displaying navigation information from a present location of a vehicle to a destination, comprising:

detection means for detecting present-location coordinate data representing the present location of said vehicle;

means for acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in a memory;

means for computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data;

discriminating means for discriminating whether the computed distance is greater than a predetermined value;

drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal;

means for erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal;  
and

display means for displaying at least one of said present location coordinate data and said destination coordinate data.

2. An on-vehicle navigation apparatus according to claim 1, wherein said drive-source start detecting means generates the start detection signal in accordance with a

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level of a voltage to be supplied to a starter motor when said drive source of said vehicle is an engine.

JX-1 at col. 6, lns. 22-53.

**1. Claim Construction**

The parties submitted a Joint List of Disputed Claim Terms and Proposed Constructions (“Joint List – Disputed”) on August 25, 2010. The parties also submitted a Joint List of Undisputed Claim Terms and Proposed Constructions (“Joint List – Undisputed”) on September 17, 2010.

**a. Claim 1**

**“detection means for detecting present-location coordinate data representing the present location of said vehicle”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<u>Function:</u> detecting present-location coordinate data representing the present location of said vehicle	<u>Function:</u> detecting present-location coordinate data representing the present location of said vehicle
<u>Structure:</u> a GPS device and equivalents thereof	<u>Structure:</u> processor programmed to determine present-location latitude and longitude data on the basis of a direction sensor, a distance sensor, and a Global Positioning System (GPS) device

Joint List – Disputed at 1.

There is no dispute among the parties that the claim phrase “detection means for detecting present-location coordinate data representing the present location of said vehicle” of the first element of claim 1, is a means-plus-function claim limitation.

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**Function**

The parties agree that the function of this claim element is “detecting present-location coordinate data representing the present location of said vehicle.” Joint List – Disputed at 1. The parties’ agreement is consistent with the plain language of the claimed limitation. Accordingly, the function of the first element of claim 1, *i.e.*, “detection means for detecting present-location coordinate data representing the present location of said vehicle,” is construed to mean “detecting present-location coordinate data representing the present location of said vehicle.”

**Structure**

Complainants contend that the corresponding structure for “detection means” is “a GPS device and equivalents thereof.” Compl. Br. at 8. Respondents and the Staff propose a different structure, *i.e.*, a “processor programmed to determine present-location latitude and longitude data on the basis of a direction sensor, a distance sensor, and a Global Positioning System (GPS) device.” Resps. Br. at 50-51; Staff Br. at 8.

As asserted by Garmin and the Staff, the corresponding structure for “detection means for detecting present-location coordinate data representing the present location of said vehicle” is construed to mean “processor programmed to determine present-location latitude and longitude data on the basis of a direction sensor, a distance sensor, and a Global Positioning System (GPS) device.”

The intrinsic evidence supports the structure proposed by respondents and the Staff. The structure for this limitation requires a direction sensor, a distance sensor, and a GPS device. The specification of the ‘448 patent teaches that the CPU of the navigation apparatus acquires or computes the present location coordinate data on the basis of the



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output data of direction sensor 1 and distance sensor 3 in addition to the GPS device 4.

For example, the specification of the '448 patent discloses the following in describing a preferred embodiment that is shown in FIG. 1:<sup>3</sup>

FIG. 1 presents a block diagram of an on-vehicle navigation apparatus according to one embodiment of the present invention. In the on-vehicle navigation apparatus, a direction sensor 1 detects the running direction of a vehicle, an angular velocity sensor 2 detects an angular velocity of the vehicle, a distance sensor 3 detects the traveling distance of the vehicle, and a GPS (Global Positioning System) device 4 detects the absolute location of the vehicle on the basis of latitude and longitude information and the like. Detected outputs from these sensors and device are supplied to a system controller 5. Used as the direction sensor 1 is, for example, a geomagnetic sensor which detects the running direction of the vehicle by geomagnetism (i.e., with respect to the Earth's geomagnetic field). The distance sensor 3 comprises a pulse generator which generates a pulse every rotation of a predetermined angle of the drive shaft (not shown) of the vehicle. The pulse generator is of a known type which magnetically or optically detects the rotational angle and position of the drive shaft.

The system controller 5 comprises an interface 6, a CPU (Central Processing Unit) 7, a ROM (Read Only Memory) 8, and a RAM (Random Access Memory) 9. The interface 6 receives the detection outputs of the sensors 1 to 3 and GPS device 4 and performs processing such as A/D conversion. The CPU 7 computes the driving distance, direction, coordinates for present location (longitude and latitude), etc. of the vehicle on the basis of the data from the sensors 1 to 3 and GPS device 4 which are sequentially sent from the interface 6 as well as processes a variety of image data.

JX-1 at col. 2, ln. 38 – col. 3, ln. 1 (emphasis added).

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<sup>3</sup> JX-1 at col. 2, lns. 26-27.

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The specification of the '448 patent also discloses a distance and direction computing routine that is illustrated as a flowchart in FIG. 3:<sup>4</sup>

In the distance and direction computing routine, the CPU 7 first discriminates whether or not the destination memory flag F is "1" (step S11). When F=0, which means that the destination coordinate data has not been written in the RAM 9, the subroutine will be terminated immediately. When F=1, indicating that the destination coordinate data is written in the RAM 9, the CPU 7 reads out the destination coordinate data (x0, y0) from the RAM 9 (step S12), and acquires present-location coordinate data consisting of longitude data and latitude data that represent the present location of the vehicle, on the basis of the output data of the sensors 1 and 3 (step S13).

JX-1 at col. 4, lns. 47-59 (emphasis added). Thus, this portion of the specification of the '448 patent teaches that the CPU of the navigation apparatus acquires the present location coordinate data on the basis of the output data of direction sensor 1 and distance sensor 3.

The specification of the '448 patent further discloses a destination coordinate data clearing routine that is illustrated as a flowchart in FIG. 4:<sup>5</sup>

The destination coordinate data clearing operation is executed by the CPU 7 will be described in accordance with the data clear routine illustrated as a flowchart in FIG. 4...

Upon reception of the start detection signal, the CPU 7 first discriminates whether or not the destination memory flag F is "1" (step S21). When F=0, which means that the destination coordinate data has not been written in the RAM 9, this subroutine will be terminated immediately. When F=1, indicating that the destination coordinate data is written in the RAM 9, the CPU 7 acquires present-location

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<sup>4</sup> JX-1 at col. 2, lns. 31-32.

<sup>5</sup> JX-1 at col. 2, lns. 33-34.

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coordinate data consisting of longitude data and latitude data that represent the present location of the vehicle, on the basis of the output data of the sensors 1 and 3 (step S22).

JX-1 at col. 5, lns. 5-25 (emphasis added). This portion of the specification of the '448 patent likewise teaches that the CPU of the navigation apparatus acquires the present location coordinate data on the basis of the output data of direction sensor 1 and distance sensor 3.

Pioneer's identification of only the GPS device 4 as the corresponding structure is inconsistent with the above-cited portions of the specification. It is also contrary to Federal Circuit precedent requiring that the corresponding structure for a means-plus-function limitation "must include *all structure* that actually performs the recited function." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005) (emphasis added); *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1119 (Fed. Cir. 2002) ("It remains true, of course, that corresponding structure need not include all things necessary to enable the claimed invention to work. It is equally true, however, that corresponding structure must include all structure that actually performs the recited function.").

As noted above, there are certain requirements governing how corresponding structure is identified when construing a means-plus-function limitation. First, the specification must be read as a whole to identify structures that perform the claimed function. Second, a disclosed structure is "corresponding" for purposes of claim construction only if that structure is clearly linked to the claimed function. *Id.* Finally, the corresponding structure for the claim construction "must include all structure that

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actually performs the recited function.” *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d at 1298.

Garmin and the Staff’s proposed claim construction for the “detection means” limitation identifies all of the corresponding structure explicitly disclosed in the specification that actually performs the recited function. In that regard, in addition to the GPS device (4), the specification of the ‘448 patent identifies and links the direction sensor (1) and distance sensor (3) to the function of detecting present-location coordinate data representing the present location of the vehicle. Michalson, Tr. 1320-1321.

Further, Pioneer’s expert, Dr. Alexander, conceded during cross-examination that Garmin’s and the Staff’s proposed construction is consistent with the disclosure in the specification. Alexander, Tr. 1048. While the ‘448 patent also discloses an angular velocity sensor (2), the specification does not specifically identify it as being used to detect present-location coordinate data in the manner that sensors (1) and (3) are identified. Michalson, Tr. 1321-1322.

Accordingly, the corresponding structure for “detection means for detecting present-location coordinate data representing the present location of said vehicle” is construed to mean “processor programmed to determine present-location latitude and longitude data on the basis of a direction sensor, a distance sensor, and a Global Positioning System (GPS) device.”

Pioneer argues that “[n]either direction sensor 1 nor distance sensor 3 detects present location coordinate data; those sensors perform unclaimed functions that can be used to enhance accuracy only after GPS device 4 detects the present location coordinate data (latitude and longitude).” Compls. Reply at 3, citing JX-1 at col. 2, Ins. 39-47;

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Alexander, Tr. 953-954; Michalson, Tr. 1414-1415. Pioneer also cites to the testimony of Garmin's expert, Dr. Michalson, that a "direction sensor alone" and a "distance sensor alone" cannot perform the function of detecting latitude and longitude data. Compl. Br. at 6, citing Michalson, Tr. 1414-1415.

Pioneer misstates Dr. Michalson's testimony. When specifically asked about both a distance sensor and a direction sensor, Dr. Michalson testified as follows:

Individually, they provide one observable position. Combined, they provide the two points that you need to calculate latitude and longitude. And in combination with a GPS receiver of that time, they allow you to coast your position through GPS outages and through inaccuracies.

Michalson, Tr. 1415. Dr. Michalson further testified that a distance sensor gives one dimension of information and a direction sensor gives another dimension of information.

He concluded:

The patent is not talking about calculating one dimension of position alone. It is talking about calculating a two-dimensional position, latitude and longitude. And, therefore, it is proposing the use of both types of sensors and it is also discussing the use of GPS.

Michalson, Tr. 1417.

Moreover, even Pioneer's own expert, Dr. Alexander, admitted that these sensors could determine position. Alexander, Tr. 912.

At the time the application for the '448 patent was filed, it was known to one of ordinary skill in the art that the combination of a direction sensor and distance sensor could be used to detect present-location in a "dead reckoning" type of navigation system. *Id.*, Tr. 1279-1280. Indeed, Dr. Michalson explained that is precisely the type of system

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disclosed in the '448 specification as the structure for detecting present-location coordinate data. *Id.*, Tr. 1417.

Pioneer argues that “[a] person of ordinary skill in the early 1990s knew that a GPS device alone detected latitude and longitude data—that is its very purpose.” Compls. Br. at 6. This approach to determining corresponding structure, however, has been soundly rejected by the Federal Circuit. The Court has stated that “[t]he understanding of one of skill in the art does not relieve the patentee of the duty to disclose sufficient structure to support means-plus-function claim terms.” *Lucent Techs., Inc. v. Gateway, Inc.*, 543 F.3d 710, 719 (Fed. Cir. 2008) (citations omitted); *see Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1337 (Fed. Cir. 2008) (“It is not enough for the patentee simply to state or later argue that persons of ordinary skill in the art would know what structures to use to accomplish the claimed function.”).

Finally, while there may have been commercially available systems at the time that used only GPS to determine location, Dr. Michalson testified that the use of GPS in 1992 was “really fairly unreliable” because it was “pre-IOC” (initial operational capability). Michalson, Tr. 1291-93. Indeed, one of the inventors of the '448 patent, Morio Araki, testified that GPS-only products had approximately a 100-meter error (*i.e.*, the size of a football field) at the time because that “was the accuracy of the decoding permitted by the U.S. Department of Defense.” Araki, Tr. 99-100; *see* Michalson, Tr. 1292. That provides a credible explanation as to why the inventors chose to describe a system that used *both* a GPS and direction/distance sensors for detecting present location.

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**“means for acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in a memory”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<p><u>Function:</u> acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in memory</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm in Fig. 2, steps S1-S3, and equivalents thereof</p>	<p><u>Function:</u> acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in memory</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm in Fig. 2, steps S1-S3 [as described below], and equivalents thereof</p> <p>S1 – CPU first requests the selection of destination setting</p> <p>S2 – CPU determines whether or not any designation has been made</p> <p>S3 – if the destination has been designated, the CPU obtains the longitude and latitude data of the designated point from map data, and stores the obtained data as destination coordinate data (x0, y0) in the RAM</p>

Joint List – Disputed at 1.

The second element of claim 1 is “means for acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in a memory.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6.

**Function**

The parties further agree that the claimed function for this limitation is “acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in memory.” Joint List – Disputed at 1.

The parties’ proposed function is consistent with the plain language of the claimed limitation. The function of the second element of claim 1, *i.e.*, “means for acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in a memory,” is construed to mean “acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in memory.”

**Structure**

The parties largely agree that the corresponding structure for this element is a central processing unit programmed according to the algorithm in Fig. 2, steps S1-S3. Joint List – Disputed at 1. Pioneer asserts that the corresponding structure for this limitation is “a central processing unit programmed according to the algorithm in Fig. 2, steps S1-S3 and equivalents thereof.” Compls. Br. at 7. The construction provided by Garmin and the Staff is similar to Pioneer’s construction, except that it provides additional detail about what is required by steps S1-S3 in the algorithm of Fig. 2.

As proposed by Garmin and the Staff, the corresponding structure for “means for acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in a memory” is construed to mean:



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a central processing unit programmed according to the algorithm in Fig. 2, steps S1-S3 [as described below], and equivalents thereof

S1 – CPU first requests the selection of destination setting

S2 – CPU determines whether or not any designation has been made

S3 – if the destination has been designated, the CPU obtains the longitude and latitude data of the designated point from map data, and stores the obtained data as destination coordinate data (x0, y0) in the RAM.

As noted above, the specification of the '448 patent teaches that “[t]he destination coordinate data writing process which is executed by the CPU 7 will be described in accordance with the destination setting routing illustrated as a flowchart in FIG. 2.” JX-1 at col. 3, ln. 67 – col. 4, ln. 2. The specification further teaches that Fig. 2 illustrates a process by which a user may “designat[e] [a] destination on the map with a cursor using the proper keys of the input device 21,” and in response “[t]he CPU 7 determines whether or not any designation has been made.” *Id.* at col. 4, lns. 18-21. Additionally, the specification teaches that the “CPU 7 obtains the longitude and latitude data of the designated point from the map data, and stores the obtained data as designation coordinate data (x0, y0) in the RAM 9 (step S3).” *Id.* at col. 4, lns. 21-25.

Thus, the specification discloses that (1) step S1 requires that the “CPU first requests the selection of destination setting,” (2) step S2 requires that the “CPU determines whether or not any designation has been made,” and (3) step S3 requires that “if the destination has been designated, the CPU obtains the longitude and latitude data of the designated point from map data, and stores the obtained data as destination coordinate data (x0, y0) in the RAM.” JX-1 at col. 4, lns. 14-25.

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In sum, Pioneer’s construction fails to identify what is required by steps S1-S3. Garmin and the Staff meanwhile provide the required clarity from the specification as to how steps S1-S3 are actually performed. Accordingly, Garmin’s and the Staff’s proposed construction is correct. *See Aristocrat*, 521 F.3d at 1334; *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (corresponding structure is the actual algorithm performed in the specification).

**“means for computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<p data-bbox="248 963 782 1104"><u>Function:</u> computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data</p> <p data-bbox="248 1163 794 1304"><u>Structure:</u> a central processing unit programmed according to the algorithm in Fig. 3, steps S12-S14, and equivalents thereof</p>	<p data-bbox="831 963 1365 1104"><u>Function:</u> computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data</p> <p data-bbox="831 1148 1382 1289"><u>Structure:</u> a central processing unit programmed according to the algorithm in Fig. 3, steps S12-S14 [as described below], and equivalents thereof</p> <p data-bbox="831 1333 1300 1398">S12 – CPU reads out the destination coordinate data from the RAM</p> <p data-bbox="831 1442 1382 1619">S13 – CPU acquires present location coordinate data consisting of longitude and latitude data that represents the present location of the vehicle on the basis of the output data of the sensors 1 and 3</p> <p data-bbox="831 1675 1365 1852">S14 – CPU calculates the distance and direction from the present location to the destination on the basis of the destination coordinate data and the present-location coordinate data</p>

Joint List – Disputed at 2.

The third element of claim 1 is “means for computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6.

**Function**

The parties agree that the claimed function for this limitation is “computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data.” Joint List – Disputed at 2.

The parties’ proposed function is consistent with the plain language of the claimed limitation. Accordingly, the function of the third element of claim 1, *i.e.*, “means for computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data,” is construed to mean “computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data.”

**Structure**

The parties largely agree that the corresponding structure for this element is a central processing unit programmed according to the algorithm in Fig. 3, steps S12-S14. Joint List – Disputed at 2. Pioneer asserts that the corresponding structure for this limitation is “a central processing unit programmed according to the algorithm in Fig. 3, steps S12-S14 and equivalents thereof.” Compls. Br. at 7. The construction provided by

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Garmin and the Staff is similar to Pioneer's construction, except that it provides additional detail about what is required by steps S12-S14 in the algorithm of Fig. 3.

As proposed by Garmin and the Staff, the corresponding structure for "means for computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data" is construed to mean:

a central processing unit programmed according to the algorithm in Fig. 3, steps S12-S14 [as described below], and equivalents thereof

S12 – CPU reads out the destination coordinate data from the RAM

S13 – CPU acquires present location coordinate data consisting of longitude and latitude data that represents the present location of the vehicle on the basis of the output data of the sensors 1 and 3

S14 – CPU calculates the distance and direction from the present location to the destination on the basis of the destination coordinate data and the present-location coordinate data.

The specification of the '448 patent teaches that "CPU 7 computes the . . . coordinates for present location," and can compare the present location coordinates to coordinates for a destination to determine the distance between the two points. JX-1 at col. 2, lns. 64-68; col. 4, ln. 40 – col. 5, ln. 4. The specification discloses that the method for "computing [] the distance and direction from the present location to the destination, which is executed by the CPU 7 [is] described in accordance with the distance and direction computing routine illustrated as a flowchart in FIG. 3." *Id.* at col. 4, lns. 40-44. Additionally, Fig. 3 illustrates an algorithm by which "the CPU 7 reads out the

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destination coordinate data (x0, y0) from the RAM 9 (step S12), and acquires present-location coordinate data consisting of longitude data and latitude data that represent the present location of the vehicle (step S13).” *Id.* at col. 4, lns. 53-59. Thereafter, “the CPU 7 calculates the distance and direction from the present location to the destination on the basis of the destination coordinate data and present-location coordinate data (step S14).” *Id.* at col. 4, lns. 62-65.

Thus, the specification discloses that (1) step S12 requires that the “CPU reads out the destination coordinate data from the RAM,” (2) step S13 requires that the “CPU acquires present location coordinate data consisting of longitude and latitude data that represents the present location of the vehicle on the basis of the output data of the sensors 1 and 3,” and (3) step S14 requires that “CPU calculates the distance and direction from the present location to the destination on the basis of the destination coordinate data and the present-location coordinate data.” JX-1 at col. 4, lns. 52-65.

Pioneer’s construction fails to identify exactly what is required by steps S12-S14, while Garmin and the Staff provide the required clarity from the specification as to how steps S12-S14 are actually performed. Garmin’s and the Staff’s proposed construction is correct. *See Aristocrat*, 521 F.3d at 1334; *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (corresponding structure is the actual algorithm performed in the specification).

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**“discriminating means for discriminating whether the computed distance is greater than a predetermined value”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<p data-bbox="250 453 799 558"><u>Function:</u> discriminating whether the computed distance is greater than a predetermined value</p> <p data-bbox="250 596 799 737"><u>Structure:</u> a central processing unit programmed according to the algorithm in Fig. 4, steps S22- S25, and equivalents thereof</p>	<p data-bbox="834 453 1383 558"><u>Function:</u> discriminating whether the computed distance is greater than a predetermined value</p> <p data-bbox="834 596 1383 779"><u>Structure:</u> a central processing unit programmed according to the algorithm in Fig. 4, steps S22- S25 [as described below] upon the start of the detection signal, and equivalents thereof</p> <p data-bbox="834 816 1383 999">S22 – CPU acquires present-location coordinate data consisting of longitude and latitude data that represent the present location of the vehicle, on the basis of the output data of the sensors 1 and 3.</p> <p data-bbox="834 1037 1383 1220">S23 – CPU reads out the latitude and longitude data of the destination, or the destination coordinate data from the RAM</p> <p data-bbox="834 1257 1383 1472">S24 – CPU computes the distance from the present location to the destination on the basis of these present-location coordinate data and destination coordinate data.</p> <p data-bbox="834 1524 1383 1629">S25 – CPU determines if the computed distance is equal to or smaller than a predetermined value</p>

Joint List – Disputed at 3.

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The fourth element of claim 1 is “discriminating means for discriminating whether the computed distance is greater than a predetermined value.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6.

**Function**

The parties agree that the claimed function for this limitation is “discriminating whether the computed distance is greater than a predetermined value.” Joint List – Disputed at 3.

The parties’ proposed function is consistent with the plain language of the claimed limitation. The function of the fourth element of claim 1, *i.e.*, “discriminating means for discriminating whether the computed distance is greater than a predetermined value,” is construed to mean “discriminating whether the computed distance is greater than a predetermined value.”

**Structure**

The parties largely agree that the corresponding structure for this element is a CPU programmed according to the algorithm of Fig. 4, steps S22- S25. Joint List – Disputed at 3. Pioneer asserts that the corresponding structure for this limitation is “a central processing unit programmed according to the algorithm in Fig. 4, steps S22-S25 and equivalents thereof.” Compls. Br. at 7. The construction provided by Garmin and the Staff is similar to Pioneer’s construction, except that it provides additional detail about what is required by steps S22-S25 in the algorithm of Fig. 4.

As proposed by Garmin and the Staff, the corresponding structure for “discriminating means for discriminating whether the computed distance is greater than a predetermined value” is construed to mean:

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a central processing unit programmed according to the algorithm in Fig. 4, steps S22-S25 [as described below] upon the start of the detection signal, and equivalents thereof

S22 – CPU acquires present-location coordinate data consisting of longitude and latitude data that represent the present location of the vehicle, on the basis of the output data of the sensors 1 and 3

S23 – CPU reads out the latitude and longitude data of the destination, or the destination coordinate data from the RAM

S24 – CPU computes the distance from the present location to the destination on the basis of these present-location coordinate data and destination coordinate data

S25 – CPU determines if the computed distance is equal to or smaller than a predetermined value.

The specification of the '448 patent teaches that when a destination coordinate data is written in the RAM 9, “the CPU 7 acquires present-location coordinate data consisting of longitude data and latitude data that represent the present location of the vehicle, on the basis of the output data of the sensors 1 and 3 (step S22).” JX-1 at col. 5, lns. 20-25. The specification further teaches that “[t]he CPU 7 also reads out the latitude and longitude data of the destination, or the destination coordinate data from the RAM 9 (step S23), and computes the distance D from the present location to the destination on the basis of these present-location coordinate data and destination coordinate data (step S24).” *Id.* at col. 5, lns. 25-31. Thereafter, “[t]he CPU 7 then determines if the computed distance D is equal to or smaller than the predetermined value D1 (step S25).” *Id.* at col. 5, lns. 31-33.



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Specifically, the specification discloses that (1) step S22 requires that the “CPU acquires present-location coordinate data consisting of longitude and latitude data that represent the present location of the vehicle, on the basis of the output data of the sensors 1 and 3,” (2) step S23 requires that the “CPU reads out the latitude and longitude data of the destination, or the destination coordinate data from the RAM,” (3) step S24 requires that the “CPU computes the distance from the present location to the destination on the basis of these present-location coordinate data and destination coordinate data,” and (4) step S25 requires that the “CPU determines if the computed distance is equal to or smaller than a predetermined value.”

Pioneer’s construction fails to identify exactly what is required by steps S22-S25. Garmin and the Staff, on the other hand, provide the required clarity from the specification as to how steps S22-S25 are actually performed. Garmin’s and the Staff’s proposed construction is correct. *See Aristocrat*, 521 F.3d at 1334; *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999) (corresponding structure is the actual algorithm performed in the specification).

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**“drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal”**

<b>Pioneer’s Construction</b>	<b>Garmin’s Construction</b>	<b>Staff’s Construction</b>
<p><u>Function:</u> detecting start of a drive source of said vehicle and generating a start detection signal</p> <p><u>Structure:</u> a detector and equivalents thereof</p> <p>“drive source”: power source  “start detection signal”: a signal indicating a connection with the power source</p>	<p><u>Function:</u> detecting [the] start of [an engine or motor] of said vehicle and generating a [signal that indicates the start of a vehicle’s engine or motor]</p> <p><u>Structure:</u> detector that detects the on state of a starter switch such that the voltage supplied to a starter motor rises to or above a predetermined level or that detects the number of revolutions of an engine, the temperature of the engine coolant, or the amount of intake air, and that generates a signal when any of those parameters indicate the start of the engine or motor of a vehicle</p>	<p><u>Function:</u> detecting start of a drive source of said vehicle and generating a start detection signal</p> <p><u>Structure:</u> detector that detects the on state of a starter switch such that the voltage supplied to a starter motor rises to or above a predetermined level or that detects the number of revolutions of an engine, the temperature of the engine coolant, or the amount of intake air, and that generates a signal when any of those parameters indicate the start of the engine or motor of a vehicle</p> <p>“drive source”: engine or motor  “start detection signal”: a signal that indicates the start of a vehicle’s engine or motor</p>

Joint List – Disputed at 4.

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The fifth element of claim 1 is “drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6. The parties further agree that the claimed function for this limitation is generally “detecting start of a drive-source of said vehicle and generating a start detection signal.” Joint List – Disputed at 4. The parties, however, disagree about what constitutes a “drive source” and a “start detection signal.” The parties also disagree about the corresponding structure that is required for this limitation. *Id.*

**Function**

As noted, the parties agree that the claimed function for the “drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal” limitation is generally “detecting start of a drive-source of said vehicle and generating a start detection signal.” As noted, the parties dispute the proper interpretation of the claim terms “drive source” and “start detection signal” that are recited as part of this function.

Pioneer construes “drive source” as “power source.” It construes “start detection signal” as “a signal indicating a connection with the power source.” Garmin and the Staff construe “drive source” as “engine or motor.” Garmin and the Staff construe “start detection signal” as “a signal that indicates the start of a vehicle’s engine or motor.”

As proposed by Garmin and the Staff, “drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal” is construed to mean “detecting start of a drive-source of said vehicle and generating a start detection signal” wherein the terms “drive source” is construed as “engine or motor”

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and “start detection signal” is construed as “a signal that indicates the start of a vehicle’s engine or motor.”

The interpretation of claim term “drive source” as “engine or motor” is fully supported by the specification for the ‘448 patent. For example, the first sentence in the abstract states: “[a]n on-vehicle navigation apparatus in which destination coordinate data stored in a memory is erased when the distance from the present location to a destination is equal to or smaller than a predetermined value *at the time the engine of a vehicle is started.*” JX-1, abstract (emphasis added).

Further, the specification teaches that “[a]ccording to the thus designed on-vehicle navigation apparatus, destination coordinate data stored in the memory will be erased when the distance from the present location to a destination is equal to or smaller than a predetermined value *at the time the vehicle’s engine is started.*” *Id.* at col. 2, lns. 18-23 (emphasis added). The specification also discloses that “detector 15 . . . detects the ON state of a starter switch 14 in order to *detect the start of the engine of the vehicle.*” *Id.* at col. 3, lns. 32-34 (emphasis added).

Additional portions of the specification consistently explain that the destination coordinate data is only erased upon the detection of the start of the vehicle’s engine. *Id.* at col. 5, lns. 48-55, 61-66. Significantly, each of the dependent claims in the ‘448 patent refers to the drive source as the vehicle’s engine. *Id.* at col. 6, lns. 49-67.

The specification also teaches that “[t]he type of a vehicle on which the present apparatus is installed is not limited to an engine-driven type as in the above-described embodiment, but the present invention can also apply to a motor-driven type vehicle.” *Id.* at col. 5, ln. 67 – col. 6, ln. 2. The term “motor-driven type vehicle” in this sentence

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would have been understood by one skilled in the art as referring to a vehicle with an electric motor. Andrews, Tr. 702, 788-789; Araki, Tr. 107. Thus, based on the teachings of the specification, one of ordinary skill in the art would have understood that the term “drive source” refers to the vehicle’s engine or, alternatively, a motor.

Pioneer almost exclusively relies upon the unsupported testimony of its expert, Mr. Andrews, for its construction of the claim terms “drive source” and “start detection signal.” Compls. Br. at 11-13. As explained below, this testimony is inconsistent with the specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1818 (Fed. Cir. 2005) (*en banc*) (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.”).

Mr. Andrews testified at the hearing that his opinion that drive source should be interpreted as the power source is based on the fact that the specification “talks about engine driven vehicles, and it talks about motor driven vehicles,” and “the common thing between those is that both of those represent power sources.” Andrews, Tr. 698-699. Mr. Andrews, however, did not cite to any portion of the specification, the prosecution history, or even any other extrinsic evidence that suggests that the term “drive source” would have been understood by one of ordinary skill as “power source.” Mr. Andrews also failed to cite any intrinsic or extrinsic evidence to support his testimony that the “start of a drive source is really the application of electrical power to vehicle components, typically by the turning of a key or the pressing of a button.” Andrews, Tr. 699.

The specification uses the term “power source” only once, in the following context:

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A source voltage from the battery through a so-called accessory switch 12 of the vehicle is regulated by a regulator 13 and supplied as a power source to the individual sections of the navigation apparatus.

JX-1 at col. 3, lns. 24-27. The specification refers to a “power source” supplied to the navigation system through accessory switch 12 but does not equate “power source” to the concept of a “drive source.” Davis, Tr. 1581-1582, 1606. Significantly, as admitted by Pioneer’s expert, Mr. Andrews, the ‘448 patent’s specification never uses the terms “drive source” and “power source” interchangeably. Andrews, Tr. 793; Davis, Tr. 1605. Further, the above portion of the specification does not indicate that the navigation apparatus has the ability to detect the “start” of the power source, *i.e.*, the source voltage from the battery.

Furthermore, although the specification of the ‘448 patent discloses an embodiment that “detect[s] the level of a voltage supplied to a starter motor,” that is only used as a proxy to determine whether the engine has been started. The specification explains:

There is also provided a detector 15 which detects the ON state of a starter switch 14 in order to detect the start of the engine of the vehicle. The detector 15 is connected to the output side of the starter switch 14, so that it may detect the level of a voltage supplied to a starter motor (not shown) when the starter switch 14 is turned on. In other words, when the level of the voltage supplied to the starter motor rises to or above a predetermined level, the detector 15 generates a start detection signal. The detection output of the detector 15 is coupled to the CPU 7.

*Id.* at col. 3, lns. 32-42.

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This portion of the specification does not suggest that the detection of *any* amount of voltage supplied by the vehicle's battery will satisfy the drive-source start detecting means limitation. In fact, during cross-examination, Mr. Andrews conceded that the specification does not disclose anything about detecting the start of a power source. Andrews, Tr. 793. Pioneer's proposed construction of "drive source" as "power source" is inconsistent with the intrinsic evidence. Davis, Tr. 1605:12-21.

Accordingly, because the specification is "the single best guide to the meaning of a disputed term," Garmin's and the Staff's construction of "drive source" as an "engine or motor," which is based on the teachings of the specification, is the correct construction. *Id.*, 415 at 1321.

The illogic in Pioneer's construction was exposed during Garmin's cross-examination of Mr. Andrews. For example, Mr. Andrews testified that the drive source in an engine-driven vehicle would actually be the fuel in the vehicle fuel tank. Andrews, Tr. 763-764. Inserting "fuel" for "drive source" into the claim results in "detecting the start of fuel." Thus, according to Mr. Andrews, detecting the start of the drive source in an engine-driven vehicle would involve detecting the start of the flow of fuel. Andrews, Tr. 765.

The Staff's cross-examination of Mr. Andrews further demonstrated the illogic that results from Mr. Andrews' opinions. Under Pioneer's construction of "drive source" as a "power source," a person physically pushing a vehicle in neutral would constitute the drive source of the vehicle, because they are acting as the power source that moves the vehicle. Andrews, Tr. 797. In such a scenario, Mr. Andrews testified that detecting the

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start of the drive source would require detecting the person pushing the vehicle. *Id.* This scenario is not in accord with the teachings of the '448 patent.

Aside from Mr. Andrews' testimony, Pioneer cites to the statement made by the applicants in the prosecution history that "the detector effectively detects when the engine is started." Compl. Br. at 12; JX-4 at PIONEER-ITC0000291. This statement is, in fact, consistent with Garmin's and the Staff's construction requiring the drive source to be an engine or motor. This statement does not suggest that the applicants intended the drive source to be anything other than an engine or motor. Neither the applicants, nor the patent examiner, stated during prosecution that the detector can detect a "power source" or any other indication of when the engine is about to be started. Ultimately, Pioneer's own expert acknowledged that describing a drive source as an engine or motor is "reasonable." Andrews, Tr. 771.

Finally, the construction of "start detection signal" flows from the proper construction of "drive source" and thus the claim term "start detection signal" is construed as "a signal that indicates the start of a vehicle's engine or motor." The specification describes that the detector 15 generates a start detection signal to indicate that the vehicle's engine or motor has been started when it detects voltage being applied to the starter motor through starter switch 14 to start the engine of the vehicle. JX-1 at col. 3, lns. 38-42; JX-1 at col. 5, lns. 9-14; Davis, Tr. 1575-1576. As noted above, the '448 patent repeatedly refers to this occurring at the time the engine of the vehicle is started.

Pioneer offers no support for its construction of "start detection signal" as "a signal indicating a connection with the power source." Mr. Andrews did not opine as to



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the meaning of this term. *See* Andrews, Tr. 698-700. Dr. Alexander likewise provided no support for construing “start detection signal” as “a signal indicating a connection with the power source.” Alexander, Tr. 916-918 (offering no basis for a construction of “start detection signal”).

Further, no support exists in the ‘448 specification for such a construction. The start detection signal that is sent by detector 15 to CPU 7 is merely an information signal and is not a connection of a power source to the navigation system. Davis, Tr. 1576-1578. In addition, detector 15 cannot detect when voltage from the vehicle battery has been supplied as a “power source” to the navigation system through accessory switch 12. Davis, Tr. 1580-1581.

As discussed above, the intrinsic evidence makes clear that “start detection signal” means “a signal indicating the start of an engine or motor,” and not “a signal indicating a connection with the power source.”

### **Structure**

Pioneer’s construction identifies “a detector and equivalents thereof” as the corresponding structure for this limitation. Garmin and the Staff, however, identify the corresponding structure as a “detector that detects the on state of a starter switch such that the voltage supplied to a starter motor rises to or above a predetermined level or that detects the number of revolutions of an engine, the temperature of the engine coolant, or the amount of intake air, and that generates a signal when any of those parameters indicate the start of the engine or motor of a vehicle.”

For the reasons that follow, as proposed by Garmin and the Staff, the corresponding structure for the “drive-source start detecting means for detecting start of a

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drive source of said vehicle and for generating a start detection signal” limitation is “detector that detects the on state of a starter switch such that the voltage supplied to a starter motor rises to or above a predetermined level or that detects the number of revolutions of an engine, the temperature of the engine coolant, or the amount of intake air, and that generates a signal when any of those parameters indicate the start of the engine or motor of a vehicle, and equivalents thereof.”

Garmin’s and the Staff’s proposed corresponding structure is supported by the specification. The ‘448 patent discloses several alternate structures for detecting the start of a drive source (*i.e.*, the vehicle’s engine or motor) and generating a start detection signal.

For example, in the preferred embodiment, the specification discloses the use of “detector 15 which detects the ON state of a starter switch 14 in order to detect the start of the engine of the vehicle.” JX-1 at col. 3, lns. 32-34. Additionally, the specification discloses that “[t]he detector 15 is connected to the output side of the starter switch 14, so that it may detect the level of a voltage supplied to a starter motor (not shown) when the starter switch 14 is turned on” and, “in other words, when the level of the voltage supplied to the starter motor rises to or above a predetermined level, the detector 15 generates a start detection signal.” *Id.* at col. 3, lns. 34-41.

The ‘448 patent discloses other alternate structures for detecting the start of a drive source (*i.e.*, the vehicle’s engine or motor) and generating a start detection signal.

The specification states:

The start of the engine of a vehicle is not only determined from the level of the voltage supplied to the starter motor, but may also be detected from, for instance, engine

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parameters such as the number of revolutions of the engine, the temperature of the engine coolant and the amount of the intake air.

The type of a vehicle on which the present apparatus is installed is not limited to an engine-driven type as in the above-described embodiment, but the present invention can also apply to a motor-driven type vehicle.

JX-1 at col. 5, ln. 61 – col. 6, ln. 2.

Therefore, because the specification clearly discloses the use of particular detector types for performing the claimed function, Pioneer's construction identifying the corresponding structure as any "detector or equivalents thereof" is inadequate.

Pioneer has identified a generic "detector and equivalents thereof" as the corresponding structure for this means-plus-function limitation. Compl. Br. at 9. The only support in the specification that Pioneer identifies for its construction is the disclosure of "detector 15." *Id.* In particular, the specification discloses that "[t]here is also provided a detector 15 which detects the ON state of a starter switch 14 in order to detect the start of the engine of the vehicle." JX-1 at col. 3, lns. 32-34; Fig. 1. Pioneer's own expert acknowledged, however, that the "detector 15" is not described in the specification as simply any generic detector, but is specifically a "voltage detector, which in this particular embodiment is connected or is detecting the application of voltage to the starter motor." Andrews, Tr. 786. Because the specification does not describe a generic "detector" as the structure for detecting the start detection signal, Pioneer's construction is rejected because it impermissibly amounts to "pure functional claiming." *See Aristocrat*, 521 F.3d at 1331.

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Accordingly, the corresponding structure for the “drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal” limitation is a “detector that detects the on state of a starter switch such that the voltage supplied to a starter motor rises to or above a predetermined level or that detects the number of revolutions of an engine, the temperature of the engine coolant, or the amount of intake air, and that generates a signal when any of those parameters indicate the start of the engine or motor of a vehicle, and equivalents thereof.”

**“means for erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<p><u>Function:</u> erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 4 and equivalents thereof</p>	<p><u>Function:</u> erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal</p> <p><u>Structure:</u> a central processing unit programmed to erase the destination coordinate data from the RAM after the algorithm of the discriminating means (Steps S22-S25 of FIG. 4, as described above) is met</p>

Joint List – Disputed at 5.

The sixth element of claim 1 is “means for erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6.

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### **Function**

The parties agree that the function for this element is “erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal.” Joint List – Disputed at 5; Alexander, Tr. 918 Davis, Tr. 1661-1662.

The parties’ proposed function is consistent with the plain language of the claimed limitation. The function of the sixth element of claim 1, *i.e.*, “means for erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal,” is construed to mean “erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal.”

### **Structure**

The parties disagree about the corresponding structure that is required for this limitation. Pioneer has broadly identified “a central processing unit programmed according to the algorithm of Fig. 4 and equivalents thereof.” The parties do, however, agree that the algorithm according to steps S22-S25 of Fig. 4 is the corresponding structure for the “discriminating means” limitation. Joint List – Disputed at 5. Garmin and the Staff therefore submit that the corresponding structure for the “erasing means” limitation should only be step S26 of Fig. 4, which is identified as “erase destination coordinate data from RAM.” JX-1, Fig. 4.

As asserted by Garmin and the Staff, the corresponding structure for “detection means for detecting present-location coordinate data representing the present location of

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said vehicle” is construed to mean “a central processing unit programmed to erase the destination coordinate data from the RAM after the algorithm of the discriminating means structure limitation (steps S22-S25 of FIG. 4) is met.”

The specification of the ‘448 patent describes step S26 of Fig. 4: “[w]hen  $D < D1$ , the CPU 7 erases the destination coordinate data from the RAM 9 because the vehicle has already arrived at the destination through the previous running (step S26).” *Id.* at col. 5, lns. 33-36. Thus, Garmin and the Staff’s construction focuses specifically on the erasing function in the algorithm disclosed in Fig. 4. The specification makes clear that the structure necessary to perform this function requires a central processing unit programmed to erase the destination coordinate data from the RAM *after* the algorithm of the “discriminating means” structure limitation (steps S22-S25 of FIG. 4) is met. *Id.*

It appears undisputed that the corresponding structure for the “means for erasing” limitation is at least step S26 of Fig. 4, which is identified as “erase destination coordinate data from RAM.” JX-1, Fig. 4. Without any explanation, however, Pioneer identifies the entire algorithm of Fig. 4 as the corresponding structure. Compl. Br. at 8. It is clear from Fig. 4, however, that the erasing function only takes place after steps S22-S25.

Attempting to avoid the plain language, Pioneer argues that the specification describes that “the *display* of navigation information . . . is *not erased* before the vehicle arrives at the destination.” Compl. Br. at 21. This argument must fail inasmuch as “claims are infringed, not specifications.” *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (*en banc*).

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Pioneer also offers unsupported expert opinion from Dr. Alexander that the term “erasing” means a myriad of other things besides actually erasing. Compls. Br. at 21. Dr. Alexander recited a list of terms that included “invalidating,” “de-allocating,” “flagging something as no longer relevant,” “indicating that it’s inactive,” and “indicating that it’s disabled.” Resps. Br. at 74. Pioneer, however, has not proposed to construe the term “erasing” as anything other than “erasing” in its plain and ordinary sense. Resps. Br. at 72. Moreover, none of Dr. Alexander’s numerous constructions of “erasing” find support in the intrinsic record. Rather, the specification uses “erasing” in its plain and ordinary form. Resps. Br. at 72; JX-1 at col. 1, lns. 31-32. Accordingly, Dr. Alexander’s opinion as to the meaning of “erasing” is legally irrelevant. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (*en banc*) (“[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.”).

**2. Infringement Analysis of the ‘448 Patent**

**a. Claim 1**

The preamble of claim 1 recites:

**An on-vehicle navigation apparatus for displaying navigation information from a present location of a vehicle to a destination, comprising:**

Pioneer has satisfied the preamble. Neither Garmin nor the Staff addresses the preamble in their briefs. The accused products are “on-vehicle navigation apparatus[es] for displaying navigation information from a present location of a vehicle to a destination.” Alexander, Tr. 928; CPX-1; CX-124 at PIONEER-ITC0229467. Neither Garmin nor the Staff disputes this fact.

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The first element of claim 1 recites:

**detection means for detecting present-location  
coordinate data representing the present location of  
said vehicle;**

Pioneer has not satisfied this claim element. Given the proper construction of the structure of this element, the Garmin devices do not include the claimed “detection means” of the ‘448 patent because they lack a distance sensor and a direction sensor. Michalson, Tr. 1322-1323.

The structure for “detection means for detecting present-location coordinate data representing the present location of said vehicle” has been construed to mean “processor programmed to determine present-location latitude and longitude data on the basis of a direction sensor, a distance sensor, and a Global Positioning System (GPS) device.”

It is undisputed that the accused Garmin devices determine present location based on a GPS receiver in the device. Seymour, Tr. 1226-1231; RX-272C at GARM-02-01079670. They do not use additional sensors to supplement the position information received from their GPS receiver. Seymour, Tr. 1232. Specifically, the Garmin devices do not include any direction sensor or distance sensor. Seymour, Tr. 1233; 1234; Michalson, Tr. 1323.<sup>6</sup>

Pioneer offered no opinion that the Garmin devices infringe under Garmin’s and the Staff’s construction which has been found to be the correct claim construction.

Alexander, Tr. 928-930 (only offering an opinion under Pioneer’s “GPS device” construction). Dr. Alexander identified *only* the GPS receiver in the accused products as

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<sup>6</sup> Indeed, the use of a distance sensor that involves connections to a vehicle drive shaft, would be contrary to the intended portability of Garmin’s personal navigation devices. Seymour, Tr. 1234-1235.



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satisfying the “detection means” element. Alexander, Tr. 929-30. Specifically, Dr. Alexander offered no opinion that this claim element was satisfied by a § 112, ¶6 “equivalent” to the required corresponding structure, which includes both a distance sensor and direction sensor, nor any opinion under the Doctrine of Equivalents. *See* Alexander, Tr. 928-930 (offering no such opinion). Thus, Pioneer has failed to identify any structure in the accused devices that could be considered the equivalent of a direction sensor or distance sensor as required for the “detection means” limitation.

Pioneer makes an unsupported doctrine of equivalents argument that the Garmin devices’ usage of GPS alone was “after-arising technology” that performs substantially the same function to achieve substantially the same result in substantially the same way. (Compls. Br. at 13-14.) There is no evidence in the record to support this argument. In particular, Dr. Alexander never offered this equivalents opinion.<sup>7</sup> *See* Tr. 928-930. As a result, this argument fails as a matter of law. *Tex. Instruments, Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1567 (Fed. Cir. 1996) (“[A] patentee must . . . provide particularized testimony and linking argument . . . to support a finding of infringement under the doctrine of equivalents.”).

Accordingly, a preponderance of the evidence does not establish that[ the accused products determine present location by using a GPS device along with a direction sensor and distance sensor (or their equivalents) as required by the “detection means” limitation

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<sup>7</sup> Pioneer’s “after-arising” technology argument is necessarily a doctrine of equivalents analysis, not a § 112, ¶ 6 equivalents analysis. *See Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999) (“An ‘after arising equivalent’ infringes, if at all, under the doctrine of equivalents.”).

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The second element of claim 1 recites:

**means for acquiring destination coordinate data representing said destination in accordance with an operator input and storing said destination coordinate data in a memory;**

Pioneer has satisfied this claim element. Neither Garmin nor the Staff addresses this claim limitation in their briefs. The accused products include a microprocessor programmed to allow a user to input destination coordinate data and store the destination coordinate data in memory. Alexander, Tr. 930-931; *see* CX-124 at PIONEER-ITC0229466; CX-126 at PIONEER-ITC0007216; JX-142C, Peterman, Dep. Tr. at 152; CPX-12C at GARM-03-00000047 [ ]; CPX-12C at GARM-03-00000048 [ ] Further, neither Garmin nor the Staff disputes that the accused products include this element.

The third element of claim 1 recites:

**means for computing a distance from said present location to said destination on the basis of said present-location coordinate data and said destination coordinate data;**

Pioneer has satisfied this claim element. Neither Garmin nor the Staff addresses this claim limitation in their briefs. The accused products include a microprocessor for calculating a distance from the present location to a destination on the basis of present-location coordinate data and destination coordinate data. Alexander, Tr. 931-933; JX-138C, Haigh, Dep. Tr. 101; JX-142C; Peterman, Dep. Tr. 209-210; CX-126 at PIONEER-ITC-007192; CPX-12C. Neither Garmin nor the Staff disputes that the accused products include this element.

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The fourth element of claim 1 recites:

**discriminating means for discriminating whether the computed distance is greater than a predetermined value;**

Pioneer has satisfied this claim element. The accused products include a microprocessor for discriminating whether the computed distance is greater than a predetermined value by [

] reading out [ ] calculating the [ ]  
] to the [ ] and determining [ ]

]

Alexander, Tr. 933-935; Moore, Tr. 1111-1112; CPX-12C at GARM-03-

00000047 [ ]; Peterman, Dep. Tr. 209-210.

When a user of an accused product arrives at a destination such as a shopping center, goes into the store, comes back out, and turns on the navigation unit, its location will be the same as when the device was turned off. The device will use the [

] which is [ ] Alexander, Tr. 934. Therefore, the accused products determine whether the distance between [ ] is [ ] as claimed. *See, e.g., Z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1350 (Fed. Cir. 2007) (“[I]nfringement is not avoided merely because a noninfringing mode of operation is possible.”).

Garmin has argued that its accused devices do not perform the algorithm required for the “discriminating means” limitation. Resps. Br. at 69-72. Specifically, Garmin asserts that “[t]he ‘448 patent specifies that the data clearing routine, which is shown in Fig. 4, ‘is executed only when the CPU 7 receives the start detection signal from the

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detector 15.”” *Id.* at 70, citing JX-1 at col. 5, lns. 5-9. Garmin also asserts that its “devices use [ ] rather than [ ]” *Id.*, citing Davis, Tr. 1656, 1661; Moore, Tr. 1114.

As the Staff submits, however, neither the claim language nor the algorithm of Fig. 4 require the function of “discriminating whether the computed distance is greater than a predetermined value” to be performed only after the generation of a “start detection signal.” Staff Reply at 14. Furthermore, contrary to Garmin’s non-infringement argument for this limitation, there is nothing in the claim language or the specification’s description of the corresponding algorithm that requires detection of the “present-location coordinate data” (subsequently used in the “computing” and “discriminating” functions) to be performed only *after* the navigation apparatus powers up.

The fifth element of claim 1 recites:

**drive-source start detecting means for detecting start of a drive source of said vehicle and for generating a start detection signal;**

Pioneer has not satisfied this claim element. Given the proper construction of this element, the Garmin devices do not include the claimed “drive-source start detecting means” of the ‘448 patent.]

**Function**

First, the Garmin devices do not perform the function required by this element because they do not have the ability to detect the start of an engine or a motor. Davis, Tr. 1597; Moore, Tr. 1106; Seymour, Tr. 1237-1238, 1252. Rather, the Garmin devices

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merely power on when they are connected to any external power source. Davis, Tr. 1597; Moore, Tr. 1104-1105; Seymour, Tr. 1250-1252; RPX-028.

For example, the Garmin devices will power on when plugged into a wall outlet or when plugged into a hot cigarette port in a vehicle via a cigarette lighter adapter (CLA) cable. Davis, Tr. 1597; Moore, Tr. 1104-1108; Alexander, Tr. 1053; Seymour, Tr. 1250-1252; CX-124. The devices, [

[ ] cannot [ ] and [

] Davis, Tr. 1600;

Moore, Tr. 1105-1106; Seymour, Tr. 1246-1252; Alexander, Tr. 1053-1054; RX-272C.

Moreover, even when connected to a vehicle through a CLA, the Garmin devices do not have any way of knowing, through that CLA, whether the engine or motor is being started or is running. Davis, Tr. 1599; Seymour, Tr. 1237-1238, 1252; Moore, Tr. 1106. All the Garmin devices know is whether they are receiving power. *Id.* The Garmin device is unaware of the fact that other events may coincidentally be occurring in the vehicle, such as the windows becoming powered. Davis, Tr. 1601-1602. The software in the Garmin devices does not have the ability to detect anything relating to the state of a vehicle's engine or motor. Moore, Tr. 1106. Also, the Garmin devices lack connections to internal vehicle components that would allow them to detect whether the engine or motor is being started. Davis, Tr. 1597-1598; Seymour, Tr. 1255-1266.

In addition, the Garmin devices also do not generate a "start detection signal," because they do not generate any signal indicating that the engine or motor of a vehicle is being started. Davis, Tr. 1602; Moore, Tr. 1106. While Dr. Alexander identified the [ ] this cannot be a start detection signal. Davis, Tr. 1602-

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1604. The [ ] merely tells the device [ ] and provides no indication that the engine or motor is being started. *Id.*; Seymour, Tr. 1178-1179.

Pioneer never explains how the Garmin devices perform the function required by Garmin's and the Staff's construction. Pioneer points to no evidence in the record establishing that the Garmin devices actually detect the start of an engine or motor. *See* Compls. Br. at 17-20. This is because the Garmin devices simply do not perform this function, even if a user rapidly turns a key through the ACC ON position to the START position and, even if power is interrupted as the engine or motor is being started. Resps. Br. at 64-65; Staff Br. at 20-22 (noting that the Garmin devices [ ] and [ ] the minimum few tenths of a second to start the engine as the key is turned).

Because the Garmin devices do not perform the "identical" function, the analysis ends there. *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1370 (Fed. Cir. 2010).<sup>8</sup> Despite all of Pioneer's assertions regarding "ACC power" and "ACC signals," Pioneer *never* contends that detecting accessory power is *the same as* detecting the start of an engine or motor. This is because of the obvious fact that accessory power does not actually start the engine or motor of a vehicle. Resps. Br. at 57 n.8, 67.

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<sup>8</sup> Although the doctrine of equivalents would allow a patentee to argue that an accused device performs "an equivalent function," Pioneer has not presented any such argument. *Al-Site Corp.*, 174 F.3d at 1320-21 ("Furthermore, under § 112, ¶ 6, the accused device must perform the identical function as recited in the claim element while the doctrine of equivalents may be satisfied when the function performed by the accused device is only substantially the same."); *Odetics, Inc. v. Storage Technology Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999).

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**Structure**

The Garmin devices also lack the structure required by this element. Davis, Tr. 1604. The Garmin devices contain no hardware that [ ] being [ ] Seymour, Tr. 1252. Similarly, the Garmin devices [ ] that detects the level of voltage supplied to the starter motor of a vehicle. Davis, Tr. 1604. As a result, the software of the devices [ ] Moore, Tr. 1106.

The Garmin devices do not include any [ ] that allows them to [ ] Seymour, Tr. 1241; Alexander, Tr. 1052-1053; Davis, Tr. 1604. The Garmin devices do not have a [ ] Davis, Tr. 1604; Alexander, Tr. 1053. As a result, the software of the Garmin devices [ ] Moore, Tr. 1107. Accordingly, the Garmin devices do not include any of the corresponding structures for the claimed drive source start detecting means. Davis, Tr. 1604.

Dr. Alexander offered an opinion that the Garmin devices infringe even under Garmin's and the Staff's construction. Alexander, Tr. 937-938 Dr. Alexander, however, based this opinion on an unsupported assertion that the Garmin devices "detect the on state of a starter switch." *Id.* He provided no evidentiary support whatsoever for this contention. *Id.* Moreover, this unsupported opinion was directly refuted by testimony from Garmin engineers who confirmed that the Garmin devices' [ ] both [ ] Moore, Tr. 1106; Seymour, Tr. 1252.

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In that regard, the Garmin devices do not contain a detector that detects the [ ] and they [ ]

] that would even theoretically allow them to [ ]

] Davis, Tr. 1597-1598, 1604. As Dr. Alexander conceded, the Garmin devices will power on upon receiving external power—and engaging accessory power in a vehicle does not supply any voltage to the starter. Alexander, Tr. 1053, 1056-1058. That is, accessory power does not actually start the vehicle. Andrews, Tr. 775; Araki, Tr. 146; Davis, Tr. 1580.

Curiously, Dr. Alexander opined that the Garmin devices somehow detect the on state of the starter switch, yet he was not even familiar with the wiring mechanism used to power accessories versus that used to supply power to the starter in the Nissan Xterra he used for his testing. Alexander, Tr. 1055. Nor was Dr. Alexander particularly familiar with the fact that the Toyota Prius uses separate batteries to power its accessories and electric motor. Alexander, Tr. 1058-1061. Dr. Alexander repeatedly attempted to defer to Mr. Andrews, but Mr. Andrews did not offer any infringement analysis regarding the operation of the Garmin devices in these vehicles. Alexander, Tr. 1054, 1057, 1061.

Further, in reaching his conclusion, Dr. Alexander apparently only applied a portion of Garmin's and the Staff's construction ("on state of a starter switch"). Alexander, Tr. 937-938. Dr. Alexander provided no opinion, reasoning, or evidentiary support to suggest that the Garmin devices can detect the "on" state of the starter switch such that the voltage supplied to the starter motor has risen to a predetermined level. *Id.* Similarly, when Pioneer's counsel questioned Dr. Davis during cross-examination regarding whether detecting the on state of a starter switch would, by itself, be sufficient,



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Dr. Davis referred to Garmin's proposed construction, which specifies that the on state of a starter switch is defined by a voltage applied to the starter motor. Davis, Tr. 1689-1691. This construction is consistent with the '448 specification, which specifies that the on state of the starter switch applies a predetermined level of voltage to the starter motor. JX-1 at col. 3, lns. 32-42. Accordingly, Pioneer has presented no credible evidence that the Garmin devices infringe under Garmin's and the Staff's proposed claim construction.

Finally, Dr. Alexander did not opine that the Garmin devices infringe under any theory of equivalents, whether under a theory of § 112, ¶6 structural equivalents or the Doctrine of Equivalents. Alexander, Tr. 936-938 (offering no equivalents opinion). Additionally, Mr. Andrews only opined on claim construction and offered no infringement opinions as to whether the Garmin devices infringe. Tr. 724.

Pioneer also argues that "ACC power would be considered an equivalent to the structure identified in Garmin's proposed construction" under § 112, ¶6. Compls. Br. at 20. This argument too must fail.

First, Pioneer's argument fails because "ACC power" is not a "structure." "A structure in the accused device constitutes an equivalent to the corresponding structure in the patent only if the accused structure performs the identical function 'in substantially the same way, with substantially the same result.'" *General Protecht Group, Inc. v. Int'l Trade Comm'n*, \_\_\_ F.3d \_\_\_, 2010 WL 3366161, at \*7 (Fed. Cir. Aug. 27, 2010) (citations omitted).

As noted above, Pioneer did not establish that detecting ACC power performs the identical function. Moreover, Pioneer offers no argument, and can cite to no record evidence, that actually performs this required comparison between a structure in the

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Garmin devices and the disclosed structure in the patent. Though Mr. Andrews discussed “ACC power,” he did not discuss the Garmin devices, much less compare any structure in them to structure disclosed in the patent. *See* Andrews, Tr. 689-807. Also, Dr. Alexander did not opine that the Garmin devices’ [ ] was an equivalent structure that performed the same function as detector 15 in substantially the same way, with substantially the same result. Alexander, Tr. 936-938.

Second, if detecting ACC power is somehow an equivalent structure, there is no evidence that the Garmin devices include this structure. Dr. Alexander never said the Garmin devices detect ACC power.<sup>9</sup> *Id.* Rather, the evidence demonstrated that the Garmin devices have [ ] whether it be [ ] or [ ] (Resps. Br. at 65; Staff Br. at 20.)

Third, Pioneer’s attempt to encompass “ACC power” as an equivalent is inconsistent with its representations to the European Patent Office (EPO). Pioneer had unequivocally represented to the EPO that detecting “ACC power” was not within the scope of the “drive source start detecting means” of the invention. This statement was made in connection with European patent, EP 508826, the European equivalent to the ‘448 patent, which has no material differences from the ‘448 patent. Tr. 1608-1609, 1649; RX-16; *see* Complaint at ¶ 30 & Ex. 8 (identifying EP 508826 as the European counterpart to the ‘448 patent).

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<sup>9</sup> Pioneer cites to Dr. Alexander for the conclusion that Garmin’s devices infringe even under Garmin’s constructions, but Dr. Alexander premised this opinion on the unsupported contention that they detect [ ] not that they [ ] Tr. 937-938; Resps. Br. at 66-67.

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During prosecution of the European equivalent, Pioneer distinguished a prior art reference, D1, by arguing that “D1 is dealing with the accessory (ACC) switch on a vehicle which, it will be appreciated, *is not the same as the starter switch.*” (Davis, Tr. 1649-1650; RX-16:GARM-01-00006315.) The ITC has held, and the Federal Circuit has affirmed, that representations made to foreign patent offices distinguishing prior art may limit the scope of equivalents. *Tanabe Seiyaku Co., Ltd. v. U.S.I.T.C.*, 109 F.3d 726 (Fed. Cir. 1997) (“[R]epresentations made to foreign patent offices are relevant to determine whether a person skilled in the art would consider butanone or other ketones to be interchangeable . . . . [S]tatements to foreign patent offices suggest to a person skilled in the art that other solvents, including butanone, may not be interchangeable with the claimed solvents.”)<sup>10</sup> Because Pioneer represented that detecting the closure of the ACC switch was not equivalent to the starter switch, Pioneer is not now entitled to reclaim this scope through equivalents.

Finally, Pioneer argues that Mr. Araki had developed [ ] that demonstrates that “ACC power” is an equivalent. Compl. Br. at 18-19. Pioneer’s argument that [ ] is an equivalent, however, is premised on a legally improper argument that ACC power signifies a user’s *intent* to start the vehicle because ACC power is turned on as an initial step in the user turning the key. *See* Staff Br. at 21-22. Further, Mr. Araki and Pioneer’s expert (Dr. Alexander) admit that [ ] Araki, Tr. 144-145; Alexander Tr., 774-775. The inventors’

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<sup>10</sup> It should also be noted that inconsistent statements made that limit the application of the doctrine of equivalents may similarly affect the range of equivalents under § 112, ¶6. *Wenger Mfg., Inc. v. Coating Machinery Sys., Inc.*, 239 F.3d 1225, 1239 (Fed. Cir. 2001). “[T]he relevant inquiry is whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter.” *Id.*

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decision not to disclose [ ] suggests it was not equivalent to the inventors' preferred mode. See *Fulhorst v. Toyota Motor Corp.*, 2003 WL 25827240, at \*\*17-22 (E.D. Tex. Feb. 20, 2003), *aff'd* 81 Fed. Appx. 309, 2003 WL 22701291 (Fed. Cir. Nov. 12, 2003) (based on analogous Federal Circuit precedent, holding in a factually similar case that the inventors should not be entitled to capture as a § 112, ¶ 6 equivalent, a known, but undisclosed, alternate embodiment that reset a car alarm after the key was turned to OFF rather than RUN, as disclosed in the patent).

Accordingly, Pioneer has failed to establish that the Garmin device include the “drive-source start detecting means” structure or an equivalent thereof.

The sixth element of claim 1 recites:

**means for erasing said destination coordinate data from said memory when said computed distance is judged to be not greater than said predetermined value upon generation of said start detection signal; and**

Pioneer has not satisfied this claim element. The evidence fails to establish that the accused products erase destination coordinate data from memory when the computed distance to a destination is less than a predetermined value upon the generation of a start detection signal.

The '448 patent uses the term “erasing” in “erasing said destination coordinate data from said memory” in its plain and ordinary sense. Davis, Tr. 1664; JX-1 at col. 5, lns. 33-35 (“When  $D < D1$ , the CPU 7 erases the destination coordinate data from the RAM 9...”); col. 5, lns. 42-47 (“When  $D > D1$ , the CPU 7 will terminate this routine immediately to hold the destination coordinate data in the RAM 9...”); col. 5, lns. 5-15

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(“The destination coordinate data clearing operation . . . the data clear routine . . .”)

(emphasis added).

The Garmin devices do not include the means for erasing because they [ ]  
[ ] the destination coordinate data from memory [ ]  
Davis, Tr. 1665; Moore, Tr. 1120. [ ] and the Garmin  
device determines that [ ]  
then the device will [ ]  
[ ] Alexander, Tr. 943; Moore, Tr. 1111-1112, 1114-1118; Davis,  
Tr. 1666-1668; RX-294C. This [ ] by [ ]  
[ ] to a value of [ ] *Id.* Importantly, this [ ]  
the [ ] from memory. Davis, Tr. 1668; Moore, Tr. 1117.  
[ ] to the destination coordinate data stored in memory when [ ]  
[ ] Davis, Tr. 1666, 1670; Moore, Tr. 1120.

The Garmin devices are able to stop providing guidance to the destination by  
[ ]  
Davis, Tr. 1666; Moore, Tr. 1121. This is “a wholly different mechanism for terminating  
route guidance” than the system described in the ‘448 patent in which the destination  
coordinate data stored in memory had to be erased for the system to stop providing  
guidance to the destination. Davis, Tr. 1583-1584, 1702-1703; JX-1 at col. 1, lns. 35-43.  
Though Mr. Araki suggested in his demonstrative that his solution was to “cancel  
guidance” when inside the distance threshold, he admitted that the claims do not speak in  
terms of cancelling guidance. Araki, Tr. 148-149, 154. Rather, they require erasing  
destination coordinate data as required by the claim language.

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The [ ] continues [ ] in the memory of the Garmin devices [ ] Moore, Tr. 1121. Evidence of this can be found in the fact that previous destinations remain stored in the “Recently Found” menu of the Garmin devices. Moore, Tr. 1121-1124.; Alexander, Tr. 957-958. The destination coordinate data will not be removed until [ ] Moore, Tr. 1124-1125. Though Mr. Moore testified that the [ ] can be [ ] under certain circumstances, this does not happen until both of these conditions are met [ ] Moore, Tr. 1219-1220. Further, Garmin’s source code does include [ ] from memory. Moore, Tr. 1125-1126. [ ] are not [ ] when [ ] is used to [ ] Moore, Tr. 1126.).

Dr. Alexander attempted to prove that the destination data was erased “or at least rendered invalid” by showing screenshots in which the destination no longer appeared on the screen. Alexander, Tr. 938-939. As explained by Dr. Davis, however, the act of not displaying the destination on the screen does not mean that the underlying destination data was erased from memory. For example, closing a Word document from the screen does not erase it from memory.<sup>11</sup> Davis, Tr. 1670-1672.

Dr. Alexander used an array of terms to describe the “erasing” that he claims occurs in the Garmin devices such as, [ ]

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<sup>11</sup> Curiously, Dr. Alexander testified on cross-examination that Windows does treat a closed Word document as “erased” from memory “even though it’s probably still lurking in there.” Alexander, Tr. 956.

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] Alexander, Tr. 939, 945-946, 1045-1047. Yet, Pioneer has not proposed to construe “erasing” as anything other than “erasing” in its plain and ordinary sense.

The fact of the matter is that the Garmin devices do not [ ] the [ ] in any manner when the [ ] Davis, Tr. 1669. Nor is the data [ ] Davis, Tr. 1669-1670; Moore, Tr. 1120-1121. Accordingly, Pioneer’s attempt to satisfy the literal scope of this claim element by anything other than “erasing” the destination coordinate data from memory must be rejected. Further, Dr. Alexander offered no opinion that this claim element was infringed by equivalents in the Garmin devices. Alexander, Tr. 938-947 (offering no equivalents opinion).

Pioneer argues that Garmin “cannot escape that the memory used for storing the displayed destination is clearly ‘erased,’ as seen by the destination no longer appearing on the screen when [ ]” Compl. Br. at 20-21. However, the fact that information is no longer displayed on a screen is not in any way an indication that the information has been erased from the device’s non-volatile memory. While the destination might not be displayed for “route guidance,” the fact that the destination coordinate data remains accessible from the device’s memory is easily confirmed by the fact that the prior destination can be selected by the user through a “Recently Found” folder. Alexander, Tr. 958. As Garmin engineer Moore testified, the destination coordinate data will not be removed until [ ]

] Moore, Tr. 1124-25.

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Pioneer also argues that “[t]he alignment of what is seen on the display with the ‘erasing’ language is consistent with the specification, which explains that the ‘448 patent provides a system where ‘the display of navigation information such as the distance and direction is not erased before the vehicle arrives at the destination.’” Compl. Br. at 21 citing JX-1 at col. 6, lns. 10-12; Alexander, Tr. 1064-1065). The claim language, however, expressly requires “erasing said destination coordinate data *from said memory*,” and not merely erasing the *display* of navigation information. JX-1 at col. 6, lns. 41-42 (emphasis added). Moreover, Pioneer’s own construction recognizes that the algorithm required for this limitation includes step S26 of Fig. 4, which indicates “erase destination coordinate data from RAM.” *Id.*, Fig. 4. The corresponding description of this step in the specification indicates that “[w]hen  $D < D1$ , the CPU erases destination coordinate data from the RAM 9 . . . .” *Id.* at col. 5, lns. 33-36. The specification makes clear that the “RAM 9” is a non-volatile (*i.e.*, persistent) memory:

The RAM 9 is supplied with a voltage acquired by stabilizing the output voltage of a battery (not shown) *even when the navigation apparatus is powered off, so that it may be backed up to prevent data such as destination coordinate data and a destination memory flag, which will be described later, from being erased.*

*Id.* at col. 3, lns. 6-12 (emphasis added).

It is therefore clear that the claimed function requires erasing destination coordinate data from the device’s *non-volatile* RAM, not merely any volatile RAM that is temporarily used for displaying information. Although there may be [ ] in the accused devices indicating [ ], it is also clear that the



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destination coordinate data in the memory remains “relevant” even under Dr. Alexander’s understanding of the claimed function. Alexander, Tr. 1046-1047.

Accordingly, a preponderance of the evidence does not establish that the accused devices include the “means for erasing” limitation.

The last element of claim 1 recites:

**display means for displaying at least one of said present location coordinate data and said destination coordinate data.**

Pioneer has satisfied this claim element. Neither Garmin nor the Staff addresses this claim limitation in their briefs. The accused products include a display for displaying at least one of said present location coordinate data and said destination coordinate data. Alexander, Tr. 948. For example, the “Where Am I?” screen displays present location coordinate data. CX-124 at PIONEER-ITC0229488; CX-126 at PIONEER-ITC0007210. Neither Garmin nor the Staff dispute that the accused products include this element.

**b. Claim 2**

Dependent claim 2 recites:

**An on-vehicle navigation apparatus according to claim 1, wherein said drive-source start detecting means generates the start detection signal in accordance with a level of a voltage to be supplied to a starter motor when said drive source of said vehicle is an engine.**

Claim 2 depends from claim 1. Inasmuch as Pioneer has not proven infringement of claim 1, it follows that complainants also cannot prove infringement of dependent claim 2. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

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In addition, the plain language of claim 2 requires that the “start detection signal” be generated “in accordance with a level of voltage to be supplied to a starter motor.” Davis, Tr. 1672; JX-1 (claim 2). This limitation is not present in the Garmin devices. Davis, Tr. 1672-1673. Dr. Alexander only offered conclusory, unsupported opinion that it was met and did not offer any equivalent opinion. Alexander, Tr. 948.

**B. U.S. Patent No. 5,424,951**

As noted, the ‘951 patent is entitled “On-board navigation apparatus having user registering function.” The ‘951 patent relates to an “on-board navigation apparatus which displays a map.” JX-2 (‘951 patent) at col. 7, lns. 7-8 (Field of the Invention). Pioneer asserts claims 1 and 2 of the ‘951 patent. The asserted claims read as follows:

**1. An on-board navigation apparatus to display a map on a display, comprising:**

first memory means for storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities;

means for reading said display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities onto said display in accordance with the read display data;

means for selectively designating one of said plurality of service facilities displayed on said display in accordance with an operator input;

means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated;

second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern

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data and said position coordinate data from said first memory means;

means for reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display; and

means for multiplexing the position indicated by the read position coordinate data from said second memory means onto the map by a display pattern corresponding to the read display pattern data from said second memory means in order to display on said display.

2. An on-board navigation apparatus according to claim 1, wherein said second memory means has a plurality of memory locations to store said position coordinate data and said position display pattern data to indicate said display pattern as a pair.

JX-2 at col. 6, lns. 30-67.

1. **Claim Construction**

The parties submitted a Joint List of Disputed Claim Terms and Proposed Constructions (“Joint List – Disputed”) on August 25, 2010. The parties also submitted a Joint List of Undisputed Claim Terms and Proposed Constructions (“Joint List – Undisputed”) on September 17, 2010.

- a. **Claim 1**

**“first memory means for storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities”**

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<b>Pioneer's Construction</b>	<b>Garmin's and Staff's Construction</b>
<p><u>Function</u>: storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities</p> <p><u>Structure</u>: a non-volatile memory, and equivalents thereof</p>	<p><u>Function</u>: storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities</p> <p><u>Structure</u>: an external non-volatile memory, and equivalents thereof</p>

Joint List – Disputed at 7.

The first element of claim 1 is “first memory means for storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities.” The parties agree that the “first memory means” limitation is a means-plus-function limitation subject to § 112, ¶ 6.

**Function**

The parties agree that the claimed function for this limitation is “storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities.” Joint List – Disputed at 7.

The parties’ proposed function is consistent with the plain language of the claimed limitation. The function of the first element of claim 1, *i.e.*, “first memory means,” is construed to mean “storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective

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service facilities, and position coordinate data indicative of existing positions of the service facilities.”

**Structure**

Pioneer submits that the structure for “first memory means” is “a non-volatile memory, and equivalents thereof.” Joint List – Disputed at 7. Garmin and the Staff submit that the structure for “first memory means” is “an external non-volatile memory, and equivalents thereof.” *Id.* The only difference between the parties’ construction is that Garmin and the Staff require the non-volatile memory to be external.

As proposed by Garmin and the Staff, the corresponding structure for “first memory means” is construed to mean “an external non-volatile memory, and equivalents thereof.”

In advancing a contrary construction, Pioneer asserts that “[t]he first memory means is not limited to external memory because an IC card may be internal and because the language ‘or the like’ indicates the listed non-volatile memories are non-limiting.” Compls. Br. at 25.<sup>12</sup>

Pioneer cites to the specification that “[t]he ‘951 patent describes exemplary structures corresponding to the ‘first memory means’ as ‘*not limited to the CD-ROM but can also use a non-volatile memory medium* such as a DAT, an IC card, or the like.’” *Id.* (citing JX-2 at col. 3, lns. 25-29) (emphasis in original). Pioneer, however, selectively quotes the specification, which states in full that “[t]he *external memory medium* is not limited to the CD-ROM . . . .” JX-2 at col. 3, lns. 27-28 (emphasis added).

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<sup>12</sup> Pioneer asserts that “[w]hile the limitation of the memory being ‘external’ is unnecessary, it does not impact a finding of infringement because Garmin’s SD card is external.” *Id.*, n. 6.

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Significantly, contrary to Pioneer's contention, the only corresponding structures disclosed in the specification for performing the claimed function are types of external non-volatile memory. In particular, the specification discloses that "a CD-ROM is used as an external memory medium and is a non-volatile read only memory medium." JX-2 at col. 3, lns. 25-27. The specification further discloses that "[t]he external memory medium is not limited to the CD-ROM but can also use a non-volatile memory medium such as a DAT, an IC card, or the like." *Id.* at col. 3, lns. 27-29.

Consistent with the plain language of the "first memory means" limitation, the specification discloses that the CD-ROM or other external memory is used to store "the map data ..., service list display data, detailed display data, longitude and latitude data as position coordinate data, and position display pattern data." *Id.* at col. 3, lns. 29-36. Moreover, Pioneer's own expert, Dr. Alexander, acknowledged that the portion of the specification that he relied upon only discloses the use of an external memory medium. Alexander, Tr. 961-962.

Therefore, in view of the specification disclosing only external non-volatile memory for performing the "first memory means" function, the corresponding structure for "first memory means" is construed to mean "an external non-volatile memory, and equivalents thereof."<sup>13</sup>

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<sup>13</sup> The Staff notes that "[a]lthough this claim construction issue may not affect Pioneer's direct infringement allegations (because Pioneer now only relies upon an external map update card as the claimed "first memory means"), it is relevant to the issue of whether Pioneer's Complaint in this investigation, which failed to identify *any* external memory, provided sufficient notice to Garmin that the sale of its accused devices will induce infringement of the '951 patent by its customers." Staff Reply at 16 n. 5 (emphasis in original).

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**“means for reading said display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities onto said display in accordance with the read display data”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<p><u>Function:</u> reading said display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities onto said display in accordance with the read display data</p>	<p><u>Function:</u> reading said display data from said first memory means in accordance with an operator input and displaying said plurality of service facilities onto said display in accordance with the read display data</p>
<p><u>Structure:</u> a central processing unit alone, or in combination with a display controller and a graphics controller, programmed according to the algorithm in Fig. 3, step S1, and equivalents thereof</p>	<p><u>Structure:</u> processor programmed to: (1) read display data stored on a CD-ROM or other external non-volatile memory; and (2) supply the display data to the graphic controller and allow the graphic memory to be rewritten</p>

Joint List – Disputed at 7.

The second element of claim 1 is “means for reading said display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities onto said display in accordance with the read display data.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6.

**Function**

The parties agree that the claimed functions for this limitation are: (1) “reading said display data from said first memory means in accordance with an operator input” and (2) “displaying said plurality of service facilities onto said display in accordance with the read display data.” Joint List – Disputed at 7.

The parties proposed function is consistent with the plain language of the claimed limitation. The function of the second element of claim 1, *i.e.*, “means for reading said

display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities in accordance with the read display data,” is construed to mean: (1) “reading said display data from said first memory means in accordance with an operator input;” and (2) “displaying said plurality of service facilities onto said display in accordance with the read display data.”

**Structure**

Pioneer has identified “a central processing unit alone, or in combination with a display controller and a graphics controller, programmed according to the algorithm in Fig. 3, step S1, and equivalents thereof” as the required corresponding structure for this limitation. Joint List – Disputed at 7. The Staff and Garmin have proposed a “processor programmed to: (1) read display data stored on a CD-ROM or other external non-volatile memory; and (2) supply the display data to the graphic controller and allow the graphic memory to be rewritten” as the corresponding structure.<sup>14</sup> *Id.*

As proposed by Garmin and the Staff, the corresponding structure for “means for reading said display data from said first memory means in accordance with an operator input and for displaying said plurality of service facilities onto said display in accordance with the read display data” is construed to mean “processor programmed to: (1) read display data stored on a CD-ROM or other external non-volatile memory; and (2) supply the display data to the graphic controller and allow the graphic memory to be rewritten, and equivalents thereof.”

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<sup>14</sup> While not explicitly stated in its proposed construction, the Staff also submits that the proper construction allows for equivalent structure as required under § 112, ¶ 6.



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As the Staff notes, while Pioneer's proposed construction identifies the correct steps of the algorithm required for performing the claimed function, it does not sufficiently describe the algorithm. Staff Br. at 29. In contrast, the structure identified in Garmin's and the Staff's proposed construction is an accurate description of the algorithm of Fig. 3, step S1, that is identified in all the parties' constructions.

As disclosed in the specification, the "display data" is "indicative of a plurality of service facilities" and is stored in the CD-ROM or other external non-volatile memory. JX-2 at col. 1, ln. 65; col. 3, lns. 25-36. In the preferred embodiment, "[t]he service list includes restaurants and hotels in each district." *Id.* at col. 4, lns. 28-29. The specification further discloses that "[i]n the service display routine [shown as a flowchart in FIG. 3], the CPU 7 first displays the service list on the display 17 (step S1)." *Id.* at col. 4, lns. 27-28.

In Fig. 3, step S1 is identified as a box labeled "Display Service List." *Id.*, Fig. 3. The specification additionally discloses that "[t]he CPU 7 reads out the service list display data recorded in the CD-ROM and supplies to the graphic controller 19 and allows the content in the graphic memory 18 to be rewritten." *Id.* at col. 4, lns. 29-33. It is clear from the specification that any processing unit, *i.e.*, CPU, that is identified as the corresponding structure must be programmed to (1) read display data stored on a CD-ROM or other external non-volatile memory, and (2) supply the display data to the graphic controller and allow the graphic memory to be rewritten. Pioneer's proposed construction therefore does not sufficiently identify the algorithm required to perform the claimed functions.

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Moreover, Pioneer's construction allows "a central processing unit alone" to be the corresponding structure, which is inconsistent with the specification's teaching that "the CPU 7 supplies [the service list display data] to the graphic controller 19 and allows the content in the graphic memory 18 to be rewritten." *Id.* at col. 4, lns. 31-33. The specification further reads:

In the service display routine, the CPU 7 first displays the service list on the display 17 (step S1). The service list includes restaurants and hotels in each district. The CPU 7 reads out the service list display data recorded in the CD-ROM and supplies to the graphic controller 19 and allows the content in the graphic memory 18 to be rewritten. The service list is, thus, displayed on the display 17.

*Id.* at col. 4, lns. 27-34.

Thus, as the Staff correctly argues, there is no suggestion in the '951 patent that the "graphic controller 19" and "graphic memory 18" are merely optional and unnecessary to perform the step of displaying the service list. Therefore, a graphic controller and graphic memory are necessary structures disclosed by the specification for performing the claimed functions. The structure for "means for reading said display data from said first memory means in accordance with an operator input" is construed, therefore, to mean "processor programmed to: (1) read display data stored on a CD-ROM or other external non-volatile memory; and (2) supply the display data to the graphic controller and allow the graphic memory to be rewritten and equivalents thereof."

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**“means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated”**

<b>Pioneer’s Construction</b>	<b>Garmin’s Construction</b>	<b>Staff’s Construction</b>
<p><u>Function:</u> reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 3, steps S7-S8, and equivalents thereof</p>	<p><u>Function:</u> reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated</p> <p><u>Structure:</u> a central processing unit programmed to determine if a service facility has been designated and, if so, to read display pattern data and position coordinate data from the external non-volatile memory, and equivalents thereof</p>	<p><u>Function:</u> reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 3, steps S7-S8 [as described below], and equivalents thereof</p> <p>S7 - CPU conducts a check to see if a position registration key in the input device has been operated or not</p> <p>S8 - when the position registration key is operated, CPU gives a command to the CD-ROM drive or other external non-volatile memory means in order to read out the pair of longitude and latitude data and position display pattern data corresponding to the display data read from the CD-ROM or other external non-volatile memory</p>

Joint List – Disputed at 9.

The fourth element of claim 1 is “means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said

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first memory means for every time a service facility is designated.” The parties agree that this limitation is a means-plus-function limitation subject to § 112, ¶ 6.

### **Function**

The parties agree that the claimed function for this limitation is “reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated.” Joint List – Disputed at 9.

The parties’ proposed function is consistent with the plain language of the claimed limitation. The function of the fourth element of claim 1, *i.e.*, “means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated,” is construed to mean “reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated.”

### **Structure**

Pioneer has proposed that the corresponding structure is “a central processing unit programmed according to the algorithm of Fig. 3, steps S7-S8, and equivalents thereof.” *Id.* Garmin and the Staff agree that the algorithm of steps S7-S8 of Fig. 3 should be the corresponding structure, but have provided additional clarification in their proposed constructions as to what is required by that algorithm. *Id.* As Pioneer does not sufficiently describe the algorithm required to perform the claimed function, Pioneer’s proposed construction for the corresponding structure is rejected.

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As proposed by the Staff, the corresponding structure for “means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated” is construed to mean:

a central processing unit (CPU) programmed according to the algorithm of Fig. 3, steps S7-S8 [as described below], and equivalents thereof

S7 - CPU conducts a check to see if a position registration key in the input device has been operated or not

S8 - when the position registration key is operated, CPU gives a command to the CD-ROM drive or other external non-volatile memory means in order to read out the pair of longitude and latitude data and position display pattern data corresponding to the display data read from the CD-ROM or other external non-volatile memory,

and equivalents thereof.

Substantively, Garmin and the Staff are largely in agreement regarding the corresponding structure of this limitation. The Staff submits that the structure identified in its proposed construction is an accurate description of the algorithm of Fig. 3, steps S7-S8. Staff Br. at 32. Garmin’s proposed construction identifies the corresponding structure as “a central processing unit programmed to determine if a service facility has been designated and, if so, to read display pattern data and position coordinate data from the external non-volatile memory, and equivalents thereof.”

The Staff’s proposed construction adds further detail. As noted above, while it is true that Garmin and the Staff propose a very similar structure in substance, in the final analysis, the Staff’s proposed structure stays more true to the specification’s disclosure.

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As the Staff argues, Garmin's construction does not accurately reflect the specification's description of the required algorithm.

The specification discloses the following:

When the cancel key is not operated in step S5, a check is made to see if the position registration key in the input device 21 has been operated or not (step S7). When the position registration key is operated, a command is given to the CD-ROM drive 10 in order to read out the pair of longitude and latitude data and the position display pattern data corresponding to the read detailed display data from the CD-ROM (step S8).

JX-2 at col. 4, ln. 64 – col. 5, ln. 3.

The specification discloses that other types of external non-volatile memory can be used to store position coordinate (*i.e.*, longitude and latitude data) and the position display pattern data. Accordingly, a person of ordinary skill in the art would have understood that the algorithm of steps S7-S8 requires the CPU to: (1) conduct a check to see if a "position registration key" in the input device has been operated or not and, (2) when the position registration key has been operated, to give a command to the CD-ROM drive or other external non-volatile memory means in order to read out the pair of longitude and latitude data and position display pattern data.

In addition, as the Staff submits, Garmin's construction requiring "a central processing unit programmed to determine if a service facility has been designated" falls short because it does not accurately reflect the specification's teaching that a "position registration key" must be operated in order "to read display pattern data and position coordinate data from the external non-volatile memory." Staff Br. at 33.

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Accordingly, the corresponding structure for “means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated” is construed to mean:

a central processing unit (CPU) programmed according to the algorithm of Fig. 3, steps S7-S8 [as described below], and equivalents thereof

S7 - CPU conducts a check to see if a position registration key in the input device has been operated or not

S8 - when the position registration key is operated, CPU gives a command to the CD-ROM drive or other external non-volatile memory means in order to read out the pair of longitude and latitude data and position display pattern data corresponding to the display data read from the CD-ROM or other external non-volatile memory,

and equivalents thereof.

**“second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means”**

<b>Pioneer’s, Garmin’s and Staff’s Construction</b>
<p><u>Function</u>: storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means</p> <p><u>Structure</u>: a persistent random access memory, and equivalents thereof</p>

Joint List – Disputed at 10.

The fifth element of claim 1 is “second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means.” The

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parties agree that “second memory means” limitation is a means-plus-function limitation subject to § 112, ¶ 6.

**Function**

The parties had previously stipulated that the claimed function for this limitation is “storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means.” Joint List – Disputed at 7. The parties’ proposed function for this limitation is consistent with the plain language of the claim. Under normal circumstances that would be the end of the matter, given the parties’ agreement and the proposed function’s alignment with the plain language of the claimed limitation. That is not the case here, however, inasmuch as the parties disagree as to whether the “read display pattern data” that is stored on the second memory can or cannot be different information than the “read display pattern data” that is read from the first memory.

Thus, the function of the fifth element of claim 1, *i.e.*, “second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means,” is construed to mean:

storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means, wherein the ‘read display pattern data’ that is stored on the second memory cannot be different information than the ‘read display pattern data’ that is read from the first memory.

As noted, the parties have stipulated that “second memory means” should be construed as requiring a “persistent random access memory, and equivalents thereof.”



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They did not, however, address this particular claim construction issue at the hearing. The Staff correctly notes that “[t]he primary dispute with regard to Pioneer’s infringement allegations for the ‘951 patent is not one that the parties had previously framed as a claim construction dispute. Staff Reply at 16.

The Staff argues that “the issue to be decided is whether the asserted claims require the “display pattern data” to be stored in the “second memory means” in the exact same format and provide exactly the same information (no more, no less) as the corresponding data that is read from the “first memory means.” *Id.*

Garmin frames the issue in a slightly different way by asserting that the entire dispute on the ‘951 patent hinges on the answer to a single question – *i.e.*, “for literal infringement, does the plain language of claim 1 allow the display pattern data that is stored on the second memory to be different information than the display pattern data that is read from the first memory?” Resps. Br. at 38.

The Pioneer complainants argue that “[t]he only real issue is Garmin’s continued effort to narrow the claims to require copying the exact same bits of display pattern data, without any change, from the first memory to the second memory.” Compls. Reply at 13.

As noted, the fifth element of claim 1 is “second memory means for storing *the read* display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means.” JX-2 at col. 6, lns. 50-54 (emphasis added). As clearly seen from the plain language of the claim, the display pattern data that is *read* from the first memory is the same display pattern data

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that is *stored* in the second memory.<sup>15</sup> Because the infringement inquiry here is one of literal infringement, the focus must remain on what the claim actually says, and not on what the claim might otherwise capture in an equivalents analysis. *See, e.g., Becton, Dickinson and Co. v. Tyco Healthcare Group, LP*, \_\_\_ F.3d \_\_\_, Nos. 2009-1053, 2009-1111, 2010 WL 29777612, at \*3 (Fed. Cir. July 29, 2010) (“To establish literal infringement, every limitation set forth in a claim must be found in an accused product, exactly.”) (internal quotations omitted).

Here the claim is unambiguous and explicit that the second memory means stores “the read display pattern data” from the first memory. *See* Davis, Tr. 1527-1528 (the second memory means stores “the same data that was read from the first memory means”), 1528-1529 (“It is transferring the same information from one place to another.”). The plain language of the claim leaves no room for interpretation of whether the display pattern data on the first memory can be different than the display pattern data on the second memory—the claim is explicit that the two must be the same. *See id.*

This reading is consistent not only with the ‘951 patent specification, but also with the applicants’ statements in the file history, where the applicants repeatedly emphasize that the display pattern data that is read is the same data that is stored. In the applicants’ amendment dated June 13, 1994, the applicants argued:

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<sup>15</sup> This issue has been addressed by a Delaware district court, which held that “the” combined with a past tense verb indicated that the claim element was referring to an earlier recited element. *See Advanced Medical Optics, Inc. v. Alcon Inc.*, 361 F. Supp. 2d 370, 384 (D. Del. 2005) (“The term ‘sensed vacuum levels’ in this portion of the claim is clearly referring back to the ‘sensed vacuum levels’ previously discussed because the drafter chose the word ‘the’ and used the past tense of ‘sense,’ indicating that the step of sensing has already occurred.”).

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The present invention is capable of displaying locations regarding a plurality of service facilities, each of which is classified into a different type, on a display at the same time. For example, if one selected service facility is a hotel, *display pattern data and position coordinate data* corresponding to the hotel *are selectively read from the first memory means and stored in the second memory means*. If the next selected service facility is a post office, the *display pattern data and position coordinate data* corresponding to the post office *are selectively read from the first memory means and further stored in the second memory means*. Namely, the second memory means stores the display pattern data and position coordinate data corresponding to the hotel and the post office.

JX-5 at PIONEER-ITC00000659 (Amendment dated June 13, 1994 at 6) (emphasis added); see JX-2, Figs. 2 & 3, col. 4, ln. 67 – col. 5, ln. 15.

Further, in another amendment by the applicants dated January 6, 1995, the applicants argued:

The apparatus according to the present invention includes first memory means (CD-ROM and 10) and second memory means (RAM 9). In the first memory means, display data indicative of a plurality of service facilities, display pattern data indicative of classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities are stored. *The second memory means is supplied with all of the display pattern data and position coordinate data selectively read from the first memory means.*

The display pattern data in the first memory means is read in accordance with an operator input, and then the plurality of service facilities are displayed onto a display 17 (steps S1 to S4). When one of the displayed service facilities is designated in accordance with an operator input (step S7), *the display pattern data and position coordinate data corresponding to the designated one service facility are read from the first memory means (step 8). The read display pattern data and position coordinate data are stored in the second memory means (steps S9 and S10). As shown in Fig. 3, via a step S11 after execution of the step*

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S10, the steps S1, S2, ... are executed again. Therefore, every time a service facility is designated, *the display pattern data and position coordinate data* corresponding to the designated one service facility *are read from the first memory means and then are additionally stored in the second memory means*, as shown in Fig. 2.

JX-005 at PIONEER-ITC00000672-673 (Amendment dated January 6, 1995 at 3-4)

(emphasis added); *see* Davis, Tr. 1529-1533.

The Staff argues:

Garmin's claim interpretation focuses on the language requiring the second memory means to store the "read display pattern data," but disregards the additional language indicating that the display pattern data stored in the second memory means only needs to "correspond[] to" the display pattern data read from the first memory means. Contrary to Garmin's argument, the use of the phrase "corresponding to" clearly suggests that exact same information need not be stored in both the first and second memory means. As Pioneer's expert Dr. Alexander explained, the reference to "corresponding" indicates that it is "not necessarily an identical movement from first memory to second memory."

Staff Reply at 17 (citations omitted).

The claim term "corresponding" does not support Dr. Alexander's conclusion. Pioneer's expert opines that the term "corresponding" in the asserted claims provides support for his position that the display pattern data in the first memory can be different than the display pattern data in the second memory. *See* Alexander, Tr. 1027-1028. However, Dr. Alexander's testimony is extrinsic evidence, and it is axiomatic that extrinsic evidence that conflicts with the intrinsic record can be given no weight whatsoever. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (*en banc*) ("[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

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prosecution history, in other words, with the written record of the patent.”) (internal quotations omitted).

Thus, the issue here comes down to whether the intrinsic record supports Dr. Alexander’s interpretation. It does not. The applicants’ statements in the file history demonstrate that Dr. Alexander’s interpretation is wrong.

The “corresponding” limitation identified by Dr. Alexander was added to the asserted claims in an Amendment during prosecution. *See* JX-5:PIONEER-ITC00000655-56. In arguing for patentability, the applicants explained that one of two “crucial” portions of the claim language occurred in the second memory means. *See* JX-5 at 671-72.

In particular, the applicants note that “the claim recites a second memory means for storing the data ‘corresponding to all of said display pattern data and position coordinate data from said first memory means.’” *Id.* (emphasis in original). The applicants explain what this clause meant, stating: “[t]his indicates that all of the data read from the first memory means (i.e., every time a service facility was designated) is stored in the second memory means.” *Id.* This explanation leaves no doubt as to what the applicants meant with the “corresponding” limitation in the asserted claims—just as Dr. Davis contends, the applicants explained that display pattern data for every selected service facility is stored in the second memory. *See id.*; *see also* Davis, Tr. 1534-1537.

Dr. Alexander was questioned about the specification and file history on cross-examination, and he confirmed that the intrinsic record supported the interpretation advanced by Dr. Davis. *See* Alexander, Tr. 1029 (confirming that in the context of the specification, what is read from the first memory is stored), 1033 (confirming that in the

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context of the file history, what is read from the first memory is stored), 1034 (same), 1036-1037 (confirming that, as described in the file history, corresponding means corresponding to all of the data read from the first memory).

When confronted with record evidence inconsistent with his position, Dr. Alexander repeatedly indicated that he was not sure which claim the statements from the file history were being applied to. *See* Alexander, Tr. 1033-1036. Dr. Alexander's unfamiliarity with the evidence is not helpful to his position, though, because the record evidence shows that there were only ever two claims pending—the same two claims that Dr. Alexander contends are infringed here. *See generally* JX-5. Finally, after being confronted with yet another portion of the file history that was inconsistent with his opinion, Dr. Alexander admitted that his understanding was “[n]ot particularly” informed by the statements the applicants made in the file history. *See* Alexander, Tr. 1038 (emphasis added).

In sum, there are two competing interpretations of the term “corresponding” in claim 1 of the ‘951 patent. As the record evidence demonstrates, Garmin's interpretation is supported by the plain reading of the claim, the specification, and the file history. In contrast, Dr. Alexander's interpretation is inconsistent with the plain language of the claim and, by his own admission, formed without particular regard for the applicants' explanation of their invention in the file history. Given the weight of the record evidence, Dr. Alexander's contention is rejected.

The record evidence includes an answer from the applicants to the very question requiring determination here. Again, the entire infringement dispute for the ‘951 patent comes down to a question of whether, for *literal* infringement, the display pattern data

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read from the first memory can be different than the display pattern data stored in the second memory.

During prosecution of the '951 patent, the applicants distinguished their invention from a prior art reference to Hanabusa based on this same concept. *See* JX-5 at 674. The applicants argued that, in the Hanabusa reference, “[t]he coordinate information stored in the RAM *differs* from the coordinate information included in the fetched piece of guiding spot information.” *Id.* (emphasis added). In other words, the display pattern data stored in the second memory *differs* from the display pattern data read from the first memory. *Id.* Based on this distinction, the applicants argued that “the RAM disclosed in Hanabusa et al. does not correspond to the second memory means in the present invention.” *See id.* The only conclusion to draw from this evidence is that in the claimed invention, the display pattern data stored in the second memory *cannot differ* from the display pattern data read from the first memory. *See id.* Even Dr. Alexander eventually conceded the point:

Q. ... For this distinction that we have just looked at to make sense, the claimed invention must require that what is stored in the second memory means does not differ from what was read from the first memory means? Isn't that correct?

A. Well, according to the words that are here, I agree with your statement. I just don't have my head into the full context of this discussion without going back and reviewing the document.

Alexander, Tr. 1041.

The file history confirms the plain language of the claim, and that plain language requires display pattern data to be the same information read from the first memory and

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stored on the second memory. Neither the claims nor the intrinsic record of the '951 patent allow for different information to be stored as the display pattern data in the second memory.

**Structure**

The parties had previously stipulated to the fact that the corresponding structure for the “second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means” function is “a persistent random access memory, and equivalents thereof.” Joint List – Disputed at 10. The parties’ agreement proposed structure is consistent with the specification’s disclosure of random access memory. The corresponding structure for the function of the fifth element of claim 1, *i.e.*, “second memory means,” is construed to mean “a persistent random access memory, and equivalents thereof.”



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**“means for reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display”**

<b>Pioneer’s Construction</b>	<b>Garmin’s Construction</b>	<b>Staff’s Construction</b>
<p><u>Function:</u> reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 4, steps S23-25, and equivalents thereof</p>	<p><u>Function:</u> reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 4, steps S23-25 [as defined below], and equivalents thereof</p> <p>S23 - the longitude and latitude data is read out from the persistent RAM</p> <p>S24 - Check to see if the longitude and latitude shown by the longitude and latitude data lie within the range of the map displayed at present or not</p> <p>S25 - If the longitude and latitude data are within the range of the map which is at present being displayed, the display pattern data is read out from the persistent RAM</p>	<p><u>Function:</u> reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 4, steps S23-25 [as defined below], and equivalents thereof</p> <p>S23 - the longitude and latitude data (<math>x_n, y_n</math>) is read out from the memory position designation by an address <math>A_n</math> in a position registration data table stored in the persistent RAM</p> <p>S24 - Check to see if the longitude and latitude shown by the longitude and latitude data (<math>x_n, y_n</math>) lie within the range of the map displayed at present or not</p> <p>S25 - If the longitude and latitude data are within the range of the map which is at present being displayed, the display pattern data <math>D_n</math> is read out from the memory position of the address <math>A_n</math> in the position registration data table stored in the persistent RAM</p>

Joint List – Disputed at 11.

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The parties agree that the “means for reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display” limitation is a means-plus-function limitation subject to § 112, ¶ 6. Staff Br. at 35.

### **Function**

The parties further agree that the claimed function for this limitation is “reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display.” Joint List – Disputed at 11. In view of the parties’ agreement and the fact that the proposed function is entirely consistent with the plain language of the claimed limitation, the function of the sixth element of claim 1, *i.e.*, “means for reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display,” is construed to mean “reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display.”

### **Structure**

The parties disagree about the corresponding structure that is required for this limitation. *Id.* Pioneer has proposed that the corresponding structure is “a central processing unit programmed according to the algorithm of Fig. 4, steps S23-25, and equivalents thereof.” Joint List – Disputed at 11. The Staff and Garmin agree that the algorithm of steps S23-S25 of Fig. 3 should be the corresponding structure, but have provided additional clarification in their proposed constructions about what is required by that algorithm.

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As proposed by the Staff, the corresponding structure for “means for reading the stored display pattern data and position coordinate data from said second memory means when a map is displayed on said display” is construed to mean:

a central processing unit programmed according to the algorithm of Fig. 4, steps S23-25 [as defined below], and equivalents thereof

S23 - the longitude and latitude data  $(x_n, y_n)$  is read out from the memory position designation by an address  $A_n$  in a position registration data table stored in the persistent RAM

S24 - Check to see if the longitude and latitude shown by the longitude and latitude data  $(x_n, y_n)$  lie within the range of the map displayed at present or not

S25 - If the longitude and latitude data are within the range of the map which is at present being displayed, the display pattern data  $D_n$  is read out from the memory position of the address  $A_n$  in the position registration data table stored in the persistent RAM.

Under Garmin’s construction, step S23 requires the “longitude and latitude data [to be] read out from the persistent RAM.” *Id.* Step S24 under Garmin’s construction requires the CPU to “check to see if the longitude and latitude shown by the longitude and latitude data lie within the range of the map displayed at present or not.” Finally, Step S25 under Garmin’s construction requires that “if the longitude and latitude data are within the range of the map which is at present being displayed, the display pattern data is read out from the persistent RAM.” Although the Staff generally agrees with Garmin’s descriptions of steps S23-S25, the Staff submits that they do not fully reflect the teachings of the specification concerning the required algorithm. The Staff submits that

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the structure identified in its proposed construction is an accurate description of the algorithm of Fig. 4, steps S23-25. The Staff is correct.

In particular, the specification discloses the following:  
In the registration position display routine, the CPU 7 first discriminates whether the position registration flag F has been set to 1 or not (step S21). When F=0, this means that the longitude and latitude data and the position display pattern data are not written into the position registration data table in the RAM 9, so that the processing routine is soon finished. When F=1, this means that the longitude and latitude data and the position display pattern data have been written into the position registration data table in the RAM 9, so that a variable n is set to 1 (step S22). The longitude and latitude data ( $x_n, y_n$ ) is read out from the memory position *designated by an address  $A_n$  in the position registration data table* (step S23). A check is made to see if the longitude and latitude shown by the longitude and latitude data ( $x_n, y_n$ ) lie within the range of the map displayed at present or not by the processes of the main routine (step S24). In the case of the longitude and latitude data ( $x_n, y_n$ ) within the range of the map which is at present being displayed, the position display pattern data  $D_n$  is read out *from the memory position of the address  $A_n$  in the position registration data table* (step S25).

JX-2 at col. 5, lns. 35-55 (emphasis added). Thus, the specification makes it clear that both the longitude and latitude data ( $x_n, y_n$ ) and the display pattern data  $D_n$  are read out from the memory position designation by an address  $A_n$  in a “position registration data table.” Indeed, both Pioneer and Garmin recognize that the portion of the specification cited above relates to the algorithm required for steps S23-S25 of Fig. 4. Compls. Pre-Br. at 87; Resps. Pre-Br. at 69.

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**“means for multiplexing the position indicated by the read position coordinate data from said second memory means onto the map by a display pattern corresponding to the read display pattern data from said second memory means in order to display on said display”**

<b>Pioneer’s Construction</b>	<b>Garmin’s and Staff’s Construction</b>
<p><u>Function:</u> displaying on the map the position indicated by the read position coordinate data from said second memory means using a display pattern corresponding to the read display pattern data from said second memory means when the position falls within a viewable range on the map</p> <p><u>Structure:</u> a central processing unit programmed according to the algorithm of Fig. 4, step S26, and equivalents thereof</p>	<p><u>Function:</u> displaying on the map the position indicated by the read position coordinate data from said second memory means using a display pattern corresponding to the read display pattern data from said second memory means when the position falls within a viewable range on the map</p> <p><u>Structure:</u> a central processing unit programmed to supply the position coordinate data and position display pattern data to the graphic controller, and equivalents thereof</p>

Joint List – Disputed at 12. The parties agree that the “means for multiplexing”

limitation is a means-plus-function limitation subject to § 112, ¶ 6. Staff Br. at 37.

**Function**

The parties further agree that the claimed function for this limitation is “displaying on the map the position indicated by the read position coordinate data from said second memory means using a display pattern corresponding to the read display pattern data from said second memory means when the position falls within a viewable range on the map.” Joint List – Disputed at 12.

The parties’ proposed function is consistent with the plain language of the claimed limitation. The function of the seventh element of claim 1, *i.e.*, “means for multiplexing the position indicated by the read position coordinate data from said second

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memory means onto the map by a display pattern corresponding to the read display pattern data from said second memory means in order to display on said display,” is construed to mean “displaying on the map the position indicated by the read position coordinate data from said second memory means using a display pattern corresponding to the read display pattern data from said second memory means when the position falls within a viewable range on the map.”

**Structure**

The parties disagree about the required corresponding structure. *Id.* As the corresponding structure for this limitation, Pioneer has identified “a central processing unit programmed according to the algorithm of Fig. 4, step S26, and equivalents thereof.” Joint List – Disputed at 12. The Staff and Garmin have identified “a central processing unit programmed to supply the position coordinate data and position display pattern data to the graphic controller, and equivalents thereof” as the corresponding structure. *Id.*

As proposed by Garmin and the Staff, the corresponding structure for “means for multiplexing the position indicated by the read position coordinate data from said second memory means onto the map by a display pattern corresponding to the read display pattern data from said second memory means in order to display on said display” is construed to mean:

a central processing unit programmed to supply the position coordinate data and position display pattern data to the graphic controller, and equivalents thereof.

Pioneer has not sufficiently identified the algorithm required as the corresponding structure for this limitation. Fig. 4 identifies step S26 of the algorithm only with a box labeled “display display pattern onto map.” JX-2, Fig. 4. It fails to specify how the

display pattern data is actually displayed. The body of the specification, however, further clarifies that “[t]he longitude and latitude data ( $x_n, y_n$ ) and the position display pattern data  $D_n$  are supplied to the graphic controller 19 (step S26).” *Id.* at 5, lns. 56-59.

Accordingly, Pioneer’s construction does not accurately identify the algorithm that is actually disclosed in the specification as the corresponding structure for performing the claimed “multiplexing” function.

**3. Infringement Analysis of the ‘951 Patent**

**a. Claim 1**

The preamble of claim 1 recites:

**An on-board navigation apparatus to display a map on a display, comprising:**

Pioneer has satisfied the preamble. Neither Garmin nor the Staff addresses the preamble in their briefs. The accused products are on-board navigation apparatuses that display a map on a display. Alexander, Tr. 876. Garmin did not dispute this.

The first element of claim 1 recites:

**first memory means for storing display data indicative of a plurality of service facilities, display pattern data indicative of multiple classifications of the respective service facilities, and position coordinate data indicative of existing positions of the service facilities;**

Pioneer has satisfied this claim element. Garmin’s nüvi and zūmo products include either an SD card slot or a microSD card slot (“SD slot”), which receives a Garmin map update SD card or microSD card that constitutes the claimed “first memory means.” Alexander, Tr. 876-877; CPX-2; CX-131C at 13-15; CX-124 at PIONEER-

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ITC0229453. The SD cards are external and nonvolatile, meaning data is retained without power. Alexander, Tr. 876-877.

Garmin's SD cards store the claimed display data, display pattern data, and position coordinate data. Moore, Tr. 1191-1192. When the SD card is inserted into a nüvi or zūmo device, the map data stored on the SD card, such as version 2010.10, is available for selection so that points of interest on the SD card can be displayed.

Alexander, Tr. 864-866; JX-141C, S. Moore, Dep. Tr. 67-71. Garmin does not dispute that the SD cards store the claimed "display data" and "position coordinate data."

Alexander, Tr. 864-866; JX-142C, Peterman, Dep. Tr. 39.

As to the claimed "display pattern data," Garmin engineer Moore testified: "[t]he [ ] included with the points of interest on the map update card will [ ]" Moore, Tr. 1192. Mr. Moore's testimony shows that the [ ] is [ ]

The second element of claim 1 recites:

**means for reading said display data from said first  
memory means in accordance with an operator input  
and for displaying said plurality of service facilities onto  
said display in accordance with the read display data;**

Pioneer has satisfied this claim element. Garmin has not disputed that the accused products meet this element. The accused products use a microprocessor to read the display data from the SD card and display a plurality of service facilities. Alexander, Tr. 880-882. For example, after selecting to read data from the SD card map file, the "Where To? > Points of Interest" menus can be selected to display service facilities such



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as a Krispy Kreme donut store in the food and drink category. Alexander, Tr. 865-866.

Data is displayed using the microprocessor, which is equivalent to a processor combined with a display controller and a graphics controller. Alexander, Tr. 881-882.

The third element of claim 1 recites:

**means for selectively designating one of said plurality of service facilities displayed on said display in accordance with an operator input;**

Pioneer has satisfied this claim element. Garmin does not dispute that the accused products meet this claim element. The accused products use a touch-screen display and a central processing unit to “designat[e] one of said plurality of service facilities displayed on said display in accordance with an operator input.” For example, the screenshot illustrated above contains points of interest/service facilities (donut restaurants) that were read from the SD card, and a user can designate to “Save” a point of interest as a favorite. Alexander, Tr. 882-883; CX-124 at PIONEER-ITC0229463; JX-141C, S. Moore Dep. Tr. at 71-72; JX-142C, Peterman, Dep. Tr. 61. Selecting “Save” creates a confirmation screen that the point of interest has been saved as a favorite. Alexander, Tr. 883-884.

The fourth element of claim 1 recites:

**means for reading the display pattern data and position coordinate data corresponding to the designated one service facility from said first memory means for every time a service facility is designated;**

Pioneer has satisfied this claim element. The accused products use a microprocessor to read the display pattern data and position coordinate data corresponding to the designated one service facility from the map update SD card for every time a service facility is designated. When a user saves a point of interest as a

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“Favorite,” the display pattern data [ ] and position coordinate data for the point of interest are read from the SD card. Alexander, Tr. 884, 1007; Moore, Tr. 1139-1140, 1145-1146, 1192, 1199-1200, 1207; Davis, Tr. 1557-1558, 1739-1740; JX-142C, Peterman, Dep. Tr. 62, 150-152.

The fifth element of claim 1 recites:

**second memory means for storing the read display pattern data and position coordinate data corresponding to all of said display pattern data and said position coordinate data from said first memory means;**

Pioneer has not satisfied this claim element. Pioneer cannot prove infringement of claims 1 and 2 of the ‘951 patent because it cannot show that there is any relevant data *read* from the first memory, *and stored* on the second memory in the Garmin devices as required by the properly construed “second memory means” claim limitation.

Pioneer’s expert, Dr. Alexander, contends that the first memory is the map update SD card and that the display pattern data on the SD card is [ ]  
*See* JX-2 at col. 6, lns. 30-67; Alexander, Tr. 1007-1008. Dr. Alexander also contends that the second memory is the internal [ ] memory in the Garmin devices and that the display pattern data on the [ ] memory is the [ ] *See* JX-2 at col. 6, lns. 30-67; Alexander, Tr. 1010. However, these two pieces of data cannot constitute the claim display pattern data for two distinct reasons: (1) neither the [ ] nor [ ] is ever read from a first memory and stored on a second memory; and (2) the [ ] is different information than the [ ]  
*See generally* Moore, Tr. 1137-1146.

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As to the first reason, Garmin's lead software engineer, Mr. Moore, testified that the [ ] exists on the [ ] not the [ ] Moore, Tr. 1137-1138, 1140-1141. When a user accesses a POI stored on the map update card and elects to create a favorite based on that POI, the Garmin devices will [ ]

Moore, Tr. 1139-1140

At no time during or after this process will [ ] be stored on the internal [ ] memory. Moore, Tr. 1140-1141. The reason for this complicated process is simple. The [ ] is [ ] provided by [ ] and it will not work with Garmin's devices without significant modifications. Moore, Tr. 1137-1138, 1144-1145. Thus, Garmin cannot simply read and store the [ ] from the [ ] into [ ] Moore, Tr. 1145:14-19.

As for the [ ] it is [ ] and it resides on the [ ] Moore, Tr. 1139-1140. The [ ] is never stored on the [ ] and, thus, is never read from the [ ] and stored on the [ ] when creating a Favorite. Moore, Tr. 1140. Because these two pieces of data are never read from a first memory and stored on a second memory, they cannot be the claimed display pattern data. Moore, Tr. 1140-1141. As Garmin's expert, Dr. Davis, explained, because neither the [ ] nor the [ ] is ever read from a first memory and stored on a second memory, the accused Garmin devices do not infringe the asserted claims of the '951 patent. *See generally* Davis, Tr. 1517-1559; *see also, e.g.*, Davis, Tr. 1518-1520, 1541-1543, 1545-1554, 1559.

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The second reason the Garmin devices do not contain the claimed display pattern data is because the [ ] and the [ ] are different information that serve different purposes. Moore, Tr. 1144-1145. The [ ] is [ ] data provided by [ ] Moore, Tr. 1137-1138. The purpose of [ ] is to provide categorization information for various POIs included on a map update card, not to identify [ ] See generally Moore, Tr. 1137-1146.

The [ ] however, is different information that serves a different purpose in the Garmin devices. Moore, Tr. 1144-1145; see Davis, Tr. 1551-1553. Unlike [ ] the [ ] is Garmin-specific and [ ] Moore, Tr. 1139-1140. Additionally, the [ ] cannot identify the original [ ]<sup>16</sup> Moore, Tr. 1141. As Mr. Moore testified, it is not possible to examine the [ ] and work backwards to the original [ ] Moore, Tr. 1141.

Thus, the [ ] and the [ ] are different pieces of data that do not contain the same information. Moore, Tr. 1144-1145. Indeed, Mr. Moore testified that Garmin cannot simply use the [ ] in place of the [ ] without significant modifications to the Garmin devices. Moore, Tr. 1145. In other words, the two pieces of data are so different that they are not interchangeable. *Id.* Because the [ ] is entirely different data from the [ ] it

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<sup>16</sup> As Garmin engineer Mr. Moore testified, the [ ] is not [ ]—the Garmin [ ] is designed to [ ] Moore, Tr. 1141-1142.

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cannot be the claimed display pattern data and, thus, the Garmin devices cannot be found to infringe claim 1 of the '951 patent. Davis, Tr. 1551-1554, 1559.

Pioneer did not dispute these facts at the hearing. Indeed, even Dr. Alexander recognizes that the [ ] data that is read from the [ ] is different than the [ ] that is stored in [ ] Alexander, Tr. 1023-1024 (“No, not, not identical.”). Dr. Alexander also concedes that the [ ] from the [ ] is not found on [ ] and that the [ ] from the [ ] is not stored in the [ ] when a user saves a favorite. Alexander, Tr. 1011.

Instead, Pioneer pointed to screenshots showing how a user, while viewing a POI from an SD card, may coincidentally view the same icon when looking at a Favorite. *See generally* Alexander, Tr. 845-908; Davis, Tr. 1554-1556. Pioneer and Dr. Alexander, however, do not appreciate that those icons appear as the result of [

] Moore, Tr. 1145-1146; *see* Davis, Tr. 1555-1556 (“[W]hat appears on the screen does not necessarily reflect what’s going on inside the computer. And that is the case here.”). As such, those screenshots are immaterial to the infringement analysis. Moreover, because claim 1 deals with concepts such as reading and storing from memory, merely looking to screenshots is insufficient for Pioneer to meet its burden of proof. *See* Davis, Tr. 1555-1556.

As the intrinsic record makes clear, for literal infringement the read and stored display pattern data cannot differ. The accused Garmin devices do not literally infringe claims 1 and 2 of the '951 patent because the only information identified by Pioneer is entirely different—a fact that Pioneer’s own expert does not dispute. Moreover, there

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can be no infringement under the Doctrine of Equivalents because Pioneer did not advance such a theory and, in any event, there is no evidence in the record supporting such a theory. For these reasons, Pioneer’s infringement claims fail.

In its reply brief, Pioneer argues that [ ] and [ ] “are all the same type of information.” Compl. Br. at 31. The Staff argues that [ ] and [ ] “will almost certainly convey the same information.” Staff Br. at 42. However, neither Pioneer nor the Staff argue that the [ ] and [ ] are, in fact, the same information. In contrast, the “second memory means...” limitation, as properly construed, requires the same information to be read and stored, and the accused devices do not do that.

The sixth element of claim 1 recites:

**means for reading the stored display pattern data and  
position coordinate data from said second memory  
means when a map is displayed on said display; and**

Pioneer has satisfied this claim element. Garmin’s nüvi and zūmo products read the stored display pattern data and position coordinate data of a Favorite from the [

] Alexander, Tr. 904; Moore, Tr. 1210-1211.

For example, during the hearing, Garmin engineer Mr. Moore demonstrated that Krispy Kreme that was saved as a Favorite was displayed with the fork and knife symbol to indicate that it is a restaurant. *Id.*

The last element of claim 1 recites:

**means for multiplexing the position indicated by the  
read position coordinate data from said second memory  
means onto the map by a display pattern corresponding  
to the read display pattern data from said second  
memory means in order to display on said display.**

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Pioneer has satisfied this claim element. The nüvi and zūmo products contain a central processing unit acting as a graphics controller that displays a “Favorite” on the screen at the position indicated by the read position coordinate data using a display pattern corresponding to the read display pattern data when the position falls within a viewable range of the map, as illustrated above. Alexander, Tr. 904-906. Further, using a microprocessor to draw a map and icon is equivalent to using a microprocessor and a display controller. Alexander, Tr. 904-906.

**b. Claim 2**

Dependent claim 2 recites:

**An on-board navigation apparatus according to claim 1, wherein said second memory means has a plurality of memory locations to store said position coordinate data and said position display pattern data to indicate said display pattern as a pair.**

Claim 2 depends from claim 1. Inasmuch as Pioneer has not proven infringement of claim 1, it follows that complainants also cannot prove infringement of dependent claim 2. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

**C. U.S. Patent No. 6,122,592**

As noted, the ‘592 patent is titled “Navigation Apparatus With Enhanced Positional Display Function.” The ‘592 patent relates to “display processing for a navigation apparatus which is mounted in a vehicle” and “a map display apparatus suitable for use in a navigation system for a mobile body.” JX-3 (the ‘592 patent) at col. 1, lns. 14-19. Pioneer asserts claims 1 and 2. The asserted claims read as follows:

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**1.** A map display system comprising:

extracting means for extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations;

a display;

a map display controller which displays a map on said display based on said map data;

an input device for inputting location information for a point of interest, said point of interest being different from a location presently occupied by a user of the map display system;

a selector device for selecting at least one category from said different categories;

a calculating device which calculates respective straight-line distances from said point of interest and each of said locations of said one selected category;

a location name display device which displays on said display the location names of said selected category in order of the respective distances between said point of interest and locations of said one selected category.

**2.** The map display system of claim **1**, wherein the location name display device displays the location names in ascending order based on respective distances between said point of interest and locations of said one selected category.

JX-3 at col. 19, ln. 11 – col. 20, ln. 17.

**1. Claim Construction**

The parties submitted a Joint List of Disputed Claim Terms and Proposed Constructions (“Joint List – Disputed”) on August 25, 2010. The parties also submitted a Joint List of Undisputed Claim Terms and Proposed Constructions (“Joint List – Undisputed”) on September 17, 2010.



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**a. Claim 1**

The only claim construction dispute for the ‘592 patent is over the first element (“extracting means”) of claim 1. Joint List – Disputed at 13. As to the remaining claim elements, including the preamble, the parties agree that they should be given plain and ordinary meaning. Joint List – Undisputed at 4-5.

**“extracting means for extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations”**

<b>Pioneer’s Construction</b>	<b>Garmin’s Construction</b>	<b>Staff’s Construction</b>
<p><u>Function:</u> extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations;</p> <p><u>Structure:</u> a CD-ROM drive and equivalents thereof</p>	<p><u>Function:</u> [Reading from memory] map data and location data representing a plurality of locations [stored in groups organized by] different categories and coordinate data corresponding to said plurality of locations.</p> <p><u>Structure:</u> CPU programmed to read location data from memory and a CD-ROM drive</p>	<p><u>Function:</u> extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations;</p> <p><u>Structure:</u> a CD-ROM drive and equivalents thereof</p>

Joint List – Disputed at 13.

The first element of claim 1 is “extracting means for extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations.” The parties agree that this claim element is a means-plus-function limitation subject to § 112, ¶ 6. Staff Br. at 53.

**Function**

Pioneer and the Staff submit that the claimed function for the “extracting means” limitation is “extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations.” Joint List – Disputed at 13. Garmin submits that the claimed function for the “extracting means” limitation is “[Reading from memory] map data and location data representing a plurality of locations [stored in groups organized by] different categories and coordinate data corresponding to said plurality of locations.” Thus, Garmin seeks to impose a limitation that “extracting” requires “reading from memory,” and further construes the term “segregated” to require that the data representing locations are “stored in groups organized by” different categories.

For the reasons that follow, the function of the first element of claim 1, *i.e.*, “extracting means for extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations,” is construed to mean “extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations, where said plurality of locations have been segregated into different categories prior to extraction.”

The Staff asserts that “the claimed invention allows the location data to become “segregated” during the extraction process itself. Staff Reply at 27, citing Alexander, Tr. 819-20, 836. Apparently, Pioneer does not agree with the Staff on this point. Pioneer states:

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More specifically, Pioneer does *not* contend that “location data may be ‘segregated’ *during* the extraction process.” The plain language of the claim encompasses location data being segregated *before or after* it is extracted, as Pioneer has asserted all along.

Compls. Reply at 23 (citations omitted) (emphasis in original). Garmin argues that the location data must be segregated before the extraction from memory occurs. Resps. Br. at 28. Garmin is correct on this point.

As an initial matter, this claim element includes the word “segregated,” and not “segregating” or “segregate.”<sup>17</sup> Accepting Pioneer’s argument that the “location data” may be “segregated before or after it is extracted” would amount to rewriting the claim to read:

extracting means for:

(1) extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations; or

(2) extracting map data and location data representing a plurality of locations and coordinate data corresponding to said plurality of locations and segregating said plurality of locations into different categories.

Similarly, accepting the Staff’s argument that “the claimed invention allows the location data to become “segregated” during the extraction process itself” would essentially amount to rewriting the claim to read:

extracting means for:

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<sup>17</sup> Aside from claim 1, the term “segregated” is not found anywhere in the ‘592 patent. The term “segregate” is found in the Abstract of the ‘592 patent and is discussed *infra*. JX-3 at Abstract.

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(1) extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations; and/or

(2) extracting map data and location data representing a plurality of locations and coordinate data corresponding to said plurality of locations and segregating said plurality of locations into different categories.

Thus, it is found that the plain language of this claim element requires that the locations must have been segregated into different categories prior to extraction.

Fundamentally, the parties do not appear to dispute the meaning of “segregated.” Garmin explained that “segregated” means “stored in groups organized by.” Davis, Tr. 1458-1464; 1468-1469; 1470-1471. Dr. Alexander agrees that the plain and ordinary meaning of “segregating” is “dividing into groups according to a classification.” Alexander, Tr. 819-16983. In other words, the parties agree that “segregated” reflects a division of location data into groups based on categories or classifications. The real dispute relates to timing—namely, when the location data must be “segregated.”

As for the plain language of the claim, the evidence presented at the hearing demonstrated that the data must be segregated *before* the act of extraction:

Q. You understand that Pioneer contends that the data may be extracted first and then segregated?

A. Yes.

Q. Do you agree with that position?

A. No.

Q. Why not?

A. The claim element we have in front of us seems to me plain and clear in saying a plurality of locations

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segregated into different categories. The term segregated is clearly in the past tense. The segregation has already happened.

Davis, Tr. 1479-1480.

When questioned on this precise issue, Dr. Alexander admitted that the term “segregated” is in the past tense. Alexander, Tr. 994. In other words, the “extracting means” is extracting location data, and the claim specifies that the location data that is to be extracted is “segregated” in the past-tense, *i.e.*, before extraction. The claim language requires the “extracting means” to perform the function of extracting “segregated” location data. Pioneer and the Staff rewrite the function to allow the “extracting means” to perform the function of “extracting” and “segregating” location data, but that simply is not how the claim is written.

Garmin’s proposed construction is not only supported by the claim’s plain language, but also in the detailed description of the claimed invention. When asked whether the patent specification supported Garmin’s claim construction, Dr. Alexander admitted that the ‘592 patent supports Garmin’s proposed construction because it describes storing the location data in groups organized by different categories *before* the extraction process. Alexander, Tr. 990-991. Dr. Davis later identified other portions of the ‘592 patent that support Garmin’s construction, including FIG. 2 and the related text. Davis, Tr. 1459-1471.

Further, Dr. Alexander testified that the only non-claim support for Pioneer’s construction purportedly comes from the ‘592 Abstract. Alexander, Tr. 991. Pioneer’s reliance on the ‘592 Abstract is flawed. There is no dispute that the Abstract was filed

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some seven years after the original patent application was filed. *See* JX-6, PIONEER-ITC0000968-976 (April 22, 1999, Preliminary Amendment). Pioneer's reliance on the '592 patent Abstract is also misplaced because, as demonstrated at the hearing, the '592 Abstract related to claims that were cancelled from the '592 patent prior to issuance:

Q. [D]o you think that this abstract is referring to Claim 1 of the '592 patent?

A. Yes.

\* \* \* \* \*

Q. Now, I want to look a little bit at the substance of this preliminary amendment.... Now, [the preliminary amendment] cancelled the originally filed claims that were in the '592 application and added new Claims 3 through 6, do you see that?

A. Yes.

Q. And at the same time, the applicants also introduced a new -- the new abstract that you've referred to; is that correct?

\* \* \* \* \*

[Confirming with Dr. Alexander that claim 3 and late-filed abstract share several common descriptions]

Q. ... The abstract is describing Claim 3 that was filed with the preliminary amendments, isn't it?

A. Yes, that's my understanding now.

Alexander, Tr. 996, 998-1000; *see* Davis, Tr. 1482-1484 (explaining that Abstract describes a cancelled claim).

Accordingly, the function of the first element of claim 1, *i.e.*, "extracting means for extracting map data and location data representing a plurality of locations segregated

into different categories and coordinate data corresponding to said plurality of locations” is construed to mean “extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations, where said plurality of locations have been segregated into different categories prior to extraction.”

**Structure**

Pioneer and the Staff submit that the structure for “extracting means...” is “a CD-ROM drive and equivalents thereof.” Joint List – Disputed at 13. Garmin submits that the structure for “extracting means...” is “CPU programmed to read location data from memory and a CD-ROM drive.” *Id.*

As proposed by Garmin, the corresponding structure for “extracting means...” is construed to mean a “CPU programmed to read location data from memory and a CD-ROM drive.”

The specification of the ‘592 patent discloses:

FIG. 9 shows in block form the basic configuration of the present invention when applied to a navigation apparatus for vehicle.

A navigation apparatus 100 for vehicle comprises

\* \* \* \* \*

an input unit 11 for inputting a variety of data; a CD-ROM drive 12 for reading and outputting a variety of data from a CD-ROM disk DK under the control of the system controller 5; and a display unit 13 for displaying a variety of display data under the control of the system controller 5.

The system controller 5 comprises an interface 6 for performing an interface operation with the outside; a CPU 7 for controlling the whole system controller 5; a ROM





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The Staff does not believe that this is a significant dispute and agrees that any CD-ROM drive would also necessarily require a processing unit to read data from the CD-ROM. Additionally, the specification further discloses that other types of memory than a CD-ROM, such as a non-volatile portion of RAM, may also be used to store an inputted destination name and coordinates (*e.g.*, “user registered data”). Dr. Davis testified that the structure for this limitation would require a writable memory in addition to the CD-ROM in order to store user registered data.

Staff Br. at 56 (citations omitted). Thus, the Staff now appears to agree with Garmin that the corresponding structure is a “CPU programmed to read location data from memory and a CD-ROM drive.”

Based on the intrinsic evidence and Pioneer inventor’s testimony, the corresponding structure for “extracting means...” is construed to mean a “CPU programmed to read location data from memory and a CD-ROM drive.”

**b. Claim 2**

The asserted dependent claim 2 reads as follows:

- 2.** The map display system of claim 1, wherein the location name display device displays the location names in ascending order based on respective distances between said point of interest and locations of said one selected category.

JX-3 at col. 20, lns. 14-17. As noted, the parties agree that claim 2 should be given plain and ordinary meaning. Joint List – Undisputed at 5.

**2. Infringement Analysis of the ‘592 Patent**

**a. Claim 1**

The preamble of claim 1 recites:

**A map display system comprising:**

Pioneer has satisfied the preamble. Garmin does not dispute that the accused products meet this claim element. *See* Davis, Tr. 1703. The uncontroverted evidence showed that the accused products are map display systems. Dr. Alexander testified that this element is met by the accused products because of the “examples of maps displayed with locations” presented on the accused products at the hearing. Alexander, Tr. 833.

The first element of claim 1 recites:

**extracting means for extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations;**

Pioneer has not satisfied this claim element. The evidence at the hearing confirmed that Garmin’s POI database is [ ] not “segregated into different categories” as required by the claim:

**Q.** How is this search actually working then?

**A.** So what is going on is based on the manner in which our data is stored, all of our data is [ ] So [ ] that are [ ] are [ ] There is no [ ]

Moore, Tr. 1150-1151; *see id.* at 1152-1153. Mr. Moore further testified about the actual arrangement of POI data in memory and confirmed that Garmin’s [ ]

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Q. ... If I refer again to fuel, are the fuel points of interest  
[ ]

A. No, they are not.

Q. How are the points of interest stored then?

A. The points of interest are [ ] such that  
[ ] are [ ]  
[ ]

Moore, Tr. 1163-1164. As further explained by Mr. Moore, Garmin's POI data is [ ]

Q. Does the way that the points of interest are stored in  
memory require [ ] in a  
particular way [ ]

A. [ ]. ... That's the process we were talking  
about over here on the paper of using the [ ]  
[ ] to look at [ ]

]

Q. Would Garmin's [ ]

]

A. [ ]

Moore, Tr. 1164.

Dr. Davis confirmed that Garmin's points of interest are [ ]

Q. [H]ow are the points of interest actually stored on the  
Garmin device in memory?

A. They are [ ] Roughly speaking,[ ]

[ ] So  
if there [ ]



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A. [ ] they are [ ]

Q. Give an example from the Garmin device. If I search for [ ] are the [ ] in the Garmin devices?

A. No, they are not.

Davis, Tr. 1471-1472; *see id.* at 1478-1479.

In its reply brief, Pioneer argues that the Garmin devices will extract categorized points of interest. Compl. Br. at 52. Pioneer, however, does not explain how the extracted data in the Garmin devices is “segregated.”<sup>18</sup>

The Staff similarly fails to explain how the extracted data in the Garmin devices is “segregated.” The Staff argues: “It is undisputed that information about POI’s can be displayed on an accused device based on different categories.” Staff Br. at 59. To the extent the Staff contends that displaying POI’s based on different categories satisfies this “segregated” limitation, the Staff is incorrect. If displaying a selected category of POI satisfies the “segregated limitation” as the Staff seems to contend, then the Staff’s theory renders the term “segregated” entirely superfluous. The “location name display device” limitation expressly requires the system to “display the location names of said selected category.” If “display[ing] the location names of [a] selected category” demonstrates “extracting . . . segregated” location data, then the requirement of “extracting . . . segregated” location data would have no distinct role in the claim. Of course, such a result should be avoided. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir.

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<sup>18</sup> Nor can Pioneer claim that “segregated” data is the same as “categorized” data because their expert admitted they are different and distinct concepts. Alexander, Tr. 988-990.

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2006) (“Allowing a patentee to argue that . . . characteristics specifically described in a claim are merely superfluous would render the scope of the patent ambiguous.... For that reason, claims are interpreted with an eye toward giving effect to all terms in the claim.”).

Accordingly, the Garmin devices do not meet the first element of claim 1 of the ‘592 patent.

The second element of claim 1 recites:

**a display;**

Pioneer has satisfied this claim element. Garmin does not dispute that the accused products meet this claim element. *See* Davis, Tr. 1703; JX-21C, Garmin’s Resp. to Interrogatory No. 115; Alexander, Tr. 838. Garmin engineer Moore also confirmed that the devices contain a display. Moore, Tr. 1173-1174.

The third element of claim 1 recites:

**a map display controller which displays a map on said display based on said map data;**

Pioneer has satisfied this claim element. Garmin does not dispute that the accused products meet this claim element. *See* Davis, Tr. 1703. The accused products include a map display controller which displays a map on said display based on said map data. Alexander, Tr. 837. Garmin confirmed this in their interrogatory responses, upon which Dr. Alexander relied, by stating “each of the products identified in response to Interrogatory No. 4 includes the ability to draw a map on a display” and “the products identified in response to Interrogatory No. 4 use a microprocessor to draw a map on a touchscreen display.” JX-21C, Garmin’s Resp. to Pioneer Interrog. Nos. 114, 115; Alexander, Tr. 838.

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Therefore, the microprocessor in the accused products is a map display controller used to “display a map on said display based on said map data.” Alexander, Tr. 837.

Also, Dr. Alexander presented unrebutted testimony that a microprocessor is equivalent to a graphics controller. Alexander, Tr. 837-838.

The fourth element of claim 1 recites:

**an input device for inputting location information for a point of interest, said point of interest being different from a location presently occupied by a user of the map display system;**

Pioneer has satisfied this claim element. The accused Garmin products include a touch screen display to “input[] location information for a point of interest, said point of interest being different from a location presently occupied by a user of the map display screen.” Alexander, Tr. 840. Dr. Alexander’s testimony showed that a touch screen display is interchangeable and a well known equivalent of the input devices disclosed in the patent. Alexander, Tr. 840. Garmin does not dispute this fact. *See* Davis, Tr. 1703.

Both the “Search Near” and “GPS Simulator” features allow a user to input location information of a point of interest that is different from a present location. Alexander, Tr. 840; Moore, Tr. 1147, 1171. As confirmed by Garmin engineer Mr. Moore, the “Search Near” feature presents a keyboard for entering a destination other than the user’s current location on the device’s touch screen display. Moore, Tr. 1147; Alexander, Tr. 827-829, 840. Similarly, Mr. Moore confirmed that the GPS Simulator has a “Set Location” button that allows a user to set any point of interest as the current location using the “Set Location” button. Moore Tr., 1171; Alexander, Tr. 831-832; *see* JX-141C, S. Moore, Dep. Tr. 84.

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The fifth element of claim 1 recites:

**a selector device for selecting at least one category from said different categories;**

Pioneer has satisfied this claim element. Garmin does not dispute that the accused products meet this claim element. *See* Davis, Tr. 1703. Both the “Search Near” mode and the “GPS Simulator” mode allow a user to select a category and search for points of interest in that category around a reference position using a touch screen display. In the Search Near mode, the reference position is the point of interest that was previously entered as a destination using the touch screen keyboard. Alexander, Tr. 829; Moore, Tr. 1149. In GPS simulator mode, the reference position is the point of interest that was set as the location using the “Set Location” button. Alexander, Tr. 832-833; Moore, Tr. 1171-1172.

As Mr. Moore confirmed at the hearing, in both the “Search Near” and “GPS Simulator” modes, with the reference position established, a user can return to the Points of Interest menu and select a particular category using the touch-screen display. Moore, Tr. 1149, 1171-1172; Alexander, Tr. 829, 832-833; JX-141C, S. Moore, Dep. Tr. 84; *see* CX-124 at PIONEER-ITC0229458 (“1. Touch Where To? > Points of Interest. 2. Select a category. 3. Select a subcategory.”).

The sixth element of claim 1 recites:

**a calculating device which calculates respective straight-line distances from said point of interest and each of said locations of said one selected category;**

Pioneer has not satisfied this claim element for the reasons that follow. To support complainant’s theory of infringement, Dr. Alexander gave conclusory testimony



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that, in Garmin’s products, “there is a straight-line distance calculation from the point of interested ... to each of the locations in the selected category.” Comps. Br. at 57, citing Tr. 842. Garmin argues that its products do not calculate distances to *each* of the locations in the selected category.

Pioneer further contends that “[s]aid location in ‘said’ category are the locations that were extracted by the extracting means, not every single stored location.” Compls. Br. at 58. Staff takes the same position. Staff Br. at 59. Thus, in order to infringe under Pioneer and the Staff’s theory, Garmin’s products must calculate distances to each location that is extracted from memory. Compls. Br. at 58; Staff Br. at 59.

The evidence at the hearing confirmed that the Garmin devices are not programmed to calculate the distance to each of the POIs in the selected category. Moore, Tr. 1149-1150; Davis, Tr. 1491-1492, 1512-1513. For example, when a user performs a POI search for fuel locations near Reagan Airport, the Garmin devices do not calculate the distance to each location in the fuel category in order to display a list of fuel locations near the airport ordered by distance. Moore, Tr. 1149-1150.

Instead, the Garmin devices [ ] to [ ] Davis, Tr. 1491-1492. Because the Garmin devices utilize [ ] they do not have to calculate the distance to each location in the category to return a list of locations ordered by distance. Davis, Tr. 1513-1514; Moore, Tr. 1150-1151. The Garmin devices use [ ] of [ ] to [ ] Moore, Tr. 1151-1154; Davis, Tr. 1502-1503, 1508-1509.

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All POIs associated with [ ] because [ ] Moore, Tr. 1150-1151, 1155, 1163-1164; Davis, Tr. 1472, 1478, 1485-1487, 1509-1510, 1513. Then, each [ ] to [ ] Moore, Tr. 1155, 1153; Davis, Tr. 15091510, 1486-1487. Within [ ] a [ ] is applied and a [ ] is calculated to each [ ] Moore, Tr. 1154, 1158-1159; RX-492C:19; Davis, Tr. 1501-1503.

An [ ] continues [ ] are obtained or [ ] Moore, Tr. 1154, 1158-1159; Davis, Tr. 1498-1499, 1501; RX-492C:39. These [ ] are applied for POI searches done using “Search Near” or “GPS Simulator” mode. Moore, Tr. 1156, 1159. As a result of these [ ] the Garmin devices do not calculate the distance to each POI in the category selected by the user.<sup>19</sup> Davis, Tr. 1491-1492, 1498-1499, 1512-1514; Moore, Tr. 1148-1150, 1155.

Unlike Garmin’s witnesses, Dr. Alexander did not analyze or explain how Garmin’s source code actually performs POI searches. *See* Alexander, Tr. 842. Nor did he explain in any detail how the actual operation of the code satisfies the “calculating device” element. *Id.* Instead, Dr. Alexander attempted to prove infringement using a screenshot showing distances calculated for each POI displayed on the screen. *Id.* As outlined above, however, Dr. Alexander’s assumption that the code creates this display

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<sup>19</sup> During cross-examination, Dr. Davis was asked about a test he was asked to perform during his deposition. Davis, Tr. 1705-1707. During this test, counsel had Dr. Davis perform a search for [ ] *Id.* The [ ] operation is [ ] that was accused of infringement by Dr. Alexander and involves [ ] *Id.*, 1749.

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by calculating the distance “to each of the locations in the selected category” was proven to be incorrect. Accordingly, Pioneer has presented no credible evidence of infringement for the “calculating device” element of the ‘592 patent.

Thus, even under Pioneer’s and the Staff’s theory, Garmin’s products cannot infringe because they do not calculate distance values to each extracted point of interest location in the user-selected category or, as Pioneer and the Staff contend, the “locations of said one selected category.” *See* Compl. Br. at 57. Pioneer and the Staff did not challenge or rebut this fact. This undisputed operation of the accused Garmin devices is fatal to Pioneer’s and the Staff’s infringement theory, even under their own interpretations.

Accordingly, for all these reasons including the evidence adduced at the hearing that Garmin’s devices do not calculate distances to each location that is extracted from memory, the Garmin devices do not meet the sixth element of claim 1 of the ‘592 patent.

The last element of claim 1 recites:

**a location name display device which displays on said display the location names of said selected category in order of the respective distances between said point of interest and locations of said one selected category.**

Pioneer has satisfied this claim element. Garmin does not dispute that the accused products meet this claim element. *See* Davis, Tr. 1703. And uncontroverted evidence established that the accused products include a microprocessor functioning as a graphics controller and a display that “displays on said display the location names of said selected category in order of the respective distances between said point of interest and locations of said one selected category.” Alexander, Tr. 843. For example, Pioneer’s expert

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Dr. Alexander testified regarding a demonstrative exhibit that showed American Restaurants in order of their distances from Reagan Airport in the GPS Simulator mode. Alexander, Tr. 829, 833. Further, Garmin engineer Mr. Ryan Moore confirmed that the results of searching for points of interest in the Search Near mode and the GPS Simulator mode are displayed in an ordered list. Moore, Tr. 1149, 1173-1174.

Finally, Pioneer has not alleged infringement under the doctrine of equivalents for the “extracting means” and “calculating device” elements of the ‘592 patent. *See* Alexander, Tr. 833-836 (opining only as to a microprocessor reading from memory being a § 112, ¶ 6 structural equivalent to reading from a CD-ROM), 842 (offering no equivalents opinion).) Accordingly, the Garmin devices do not infringe claim 1 of the ‘592 patent under the doctrine of equivalents.

**b. Claim 2**

Dependent claim 2 recites:

**An on-vehicle navigation apparatus according to claim 1, wherein said drive-source start detecting means generates the start detection signal in accordance with a level of a voltage to be supplied to a starter motor when said drive source of said vehicle is an engine.**

Claim 2 depends from claim 1. Inasmuch as Pioneer has not proven infringement of claim 1, it follows that complainants also cannot prove infringement of dependent claim 2. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1552 n.9 (Fed. Cir. 1989).

**IX. Validity**

**A. General Principles of Patent Law**

One cannot be held liable for practicing an invalid patent claim. *Pandrol USA, LP v. AirBoss Railway Prods., Inc.*, 320 F.3d 1354, 1365 (Fed. Cir. 2003). However, the claims of a patent are presumed to be valid. 35 U.S.C. § 282; *DMI Inc. v. Deere & Co.*, 802 F.2d 421 (Fed. Cir. 1986). 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. Obviousness**

Obviousness is grounded in 35 U.S.C. § 103, which provides, *inter alia*, that:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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. Patentability shall not be negated by the manner in which the invention was made.

35 U.S.C. § 103(a).

An allegation of obviousness is evaluated under the so-called *Graham* factors:

(1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness, the so-called “secondary considerations,” *e.g.*, commercial success, long

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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).<sup>6</sup>

“[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 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

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<sup>6</sup> “Before answering *Graham*’s ‘content’ inquiry, it must be known whether a patent or publication is in the prior art under 35 U.S.C. § 102 – a legal question.” *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).

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elements in the manner claimed.” *Id.* A “person of ordinary skill is also a person of ordinary creativity.” *Id.* at 421.

The Federal Circuit has harmonized the *KSR* opinion with many prior circuit court opinions by holding that when a patent challenger contends that a patent is invalid for obviousness based on a combination of prior art references, “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>7</sup>

The ultimate determination of whether an invention would have been obvious is a legal conclusion based on underlying findings of fact. *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

### **2. Written Description**

The first paragraph of section 112 of the Patent Act contains a “written description” requirement. It provides as follows:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the

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<sup>7</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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same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112, ¶1.

“The purpose of the written description requirement is to prevent an applicant from later asserting that he invented that which he did not.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003). To satisfy the written description requirement, the applicant (*i.e.*, in the specification) must “convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991) (emphasis in original). “[U]nder proper circumstances, drawings alone may provide a ‘written description’ of an invention as required by § 112.” *Id.* at 1565; *see Cooper Cameron Corp. v. Kvaerner Oilfield Prods., Inc.*, 291 F.3d 1317, 1322 (Fed. Cir. 2002) (“Drawings constitute an adequate description if they describe what is claimed and convey to those of skill in the art that the patentee actually invented what is claimed.”).

**B. The ‘592 Patent – Obviousness Analysis**

Garmin argues that the evidence adduced at the hearing proves that the differences between the U.S. Patent No. 5,067,081 to Person (“the Person reference” or “Person”) (RX-34) and the claimed invention, if any, are “immaterial” and “[f]or this reason, the claimed invention would have been obvious to a person of ordinary skill in the art, and the ALJ should find claims 1 and 2 of the ‘592 patent invalid as obvious.” Resps. Br. at 3.

The Staff argues that “clear and convincing evidence establishes that the asserted



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claims are invalid” because the Person reference “in view of the applicant admitted prior art for the ‘592 patent (“the ‘592 AAPA”) renders the asserted claims invalid under 35 U.S.C. § 103 for obviousness under Pioneer’s proposed constructions.” Staff Br. at 68.

Pioneer argues that “because Person lacks several limitations of the asserted claims (namely the extracting means and location name display device), and the alleged combination fails to rectify these shortcomings, the combination of Person and AAPA cannot invalidate these claims.” Compls. Reply at 32-33.

As explained below, Garmin and the Staff have not shown by clear and convincing evidence that the asserted claims 1 and 2 of the ‘592 patent are invalid under 35 U.S.C. § 103 for obviousness by the Person reference alone, or in combination with the ‘592 AAPA.

**1. Person Reference**

U.S. Patent No. 5,067,081 to Person was filed at the United States Patent and Trademark Office on August 30, 1989, and issued on November 19, 1991, qualifying as prior art with regard to the ‘592 patent under 35 U.S.C. § 102(b). RX-34. The reference discloses a portable electronic navigation apparatus, where “[l]atitude and longitude of population centers (e.g., cities, towns), major buildings, airports, and other landmarks in a geographical area are stored in a first memory.” RX-34, abstract.

The Person reference teaches the use of “an external memory storage device 26, such as a IC memory chip, a floppy disk, compact disk, or cassette tape can be inserted and connected to the internal microcomputer.” *Id.* at col. 4, ln. 65 – col. 5, ln. 1. It

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further discloses that the “[e]xternal memory devices may also contain the latitude and longitude coordinates in a linear continuum, along with the identity, and category of roadways and other linear landmarks within a geographical area such as interstate highways, state highways, roads, rivers, railways, and boundary lines.” *Id.* at col. 5, lns. 29-34.

Person also discloses the use of a video display controller and a display screen for the navigation apparatus, and further discloses that navigational data is “displayed on the display unit . . . by means of a video control circuit in the microcomputer unit.” *Id.* at col. 4, lns. 50-53, col. 5, lns. 38-43. A user of the system described by Person can push a “destination” and a “start” switch, both of which prompt the user to enter a name or the first few letters of a destination or a starting point such as “a population center, airport, building, or other landmark.” *Id.* at col. 11, lns. 1-35. Additionally, the user may press a “destination adjust” or a “start adjust” switch that permits the user “to type in or edit the name and/or latitude and longitude” for the destination or starting point. *Id.*

The system described by Person also includes several features where the radius of surrounding cities, roads, or other landmarks are displayed. *Id.* at col. 7, ln. 15 – col. 8, lns. 12. For example, “[a] ‘landmark radius display’ control switch 48 causes a display on the screen of a dot for each airport, building, or other landmark contained in permanent storage falling in whole or in part within the radius around the current or designated location, and displays at the same time the name of the feature, the mileage between the location and the destination and the bearing or direction to the destination.” *Id.* at col. 8, lns. 1-8. After a user enters a desired radius, “the calculation program in ROM memory will calculate a radius surrounding the ‘start’ or ‘destination’ coordinates

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and prompt the user to enter either ‘all’, ‘cities’, ‘landmarks’ or ‘roads’ (switches 45-48).” *Id.* at col. 11, lns. 53-58. Subsequently, the system “through a radius generation program 76 in memory 75 graphically display[s] a radius of the appropriate points or landmarks within the selected radius on the screen.” *Id.* at col. 11, lns. 63-66.

Neither Garmin nor the Staff have shown that Person teaches or suggests the “location name display device” and “extracting means” elements of claim 1. Additionally, no reason has been advanced as to why a person of ordinary skill at the time of filing the ‘592 patent would have wanted to remedy the deficiencies of Person.

**2. “location name display device”**

As noted, the seventh element of claim 1 of the ‘592 patent is “a location name display device which displays on said display the location names of said selected category in order of the respective distances between said point of interest and locations of said one selected category.” JX-3 at col. 20, lns. 10-13. The plain language of this element requires displaying “the location names . . . in order of the respective distances between said point of interest and locations of said one selected category.” Person does not disclose this feature. Jeffay, Tr. 1863-1865; Compl. Br. at 64-66. While the Staff fails to address this recitation,<sup>20</sup> Garmin offers several justifications of its position.

First, Garmin contends that “as Dr. Michalson explained, the Person reference’s disclosure of a two-dimensional map display system with distances expressly listed along with accurate geographic position is an ordered presentation of the location name information.” Resps. Br. at 11. The record evidence shows otherwise. Rather than

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<sup>20</sup> The Staff depends on AAPA to remedy the deficiency of Person. Staff Br. at 71. The Staff’s reliance on AAPA, however, is not supported by any record evidence.

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asserting that Person's system itself displays location names in order of distances, as required by the claim, Dr. Michalson actually testified that a user could look at Person's display and determine the ordering of points. Michalson, Tr. 1374-1379 ("having dots presented in their correct geographic locations . . . gives the user a 2D -- a two dimensional perspective on what are the points closest to them."). The claims, however, require that the claimed "map display system" — not a user — determine the ordering of displayed points.

Second, Garmin contends that Person discloses "displaying location names in order of the respective distances." This contention is similarly rejected. In that regard, Garmin submits that because "Dr. Jeffay identified the distance-based ordering on the display taught by the Person reference," Person discloses this element. Resps. Br. 11. Garmin's argument ignores the requirements of claim 1. The fact that Dr. Jeffay could identify the ordering of points on a screen is not relevant to the requirement that a "location name display device . . . displays . . . location names in order of the respective distances."

Finally, Garmin alleges that because Dr. Jeffay "confirmed that [this element] does not require a list," Person therefore discloses the "location name display device" element. Resps. Br. 11. Again, this argument is inconsistent with the claim's plain language. Even if claim 1 does not expressly recite "a list," Garmin still has not presented any evidence that Person discloses an electrical component that "displays . . . location names . . . in order of the respective distances." *See* Michalson Tr. 1374-1375. Person contains no such disclosure. Jeffay, Tr. 1863-1865.

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The portion of the Person specification that Garmin relies on as teaching the “location name display device” states:

A “landmark radius display” control switch 48 causes a display on the screen of a dot for each airport, building, or other landmark contained in permanent storage falling in whole or in part within the radius around the current or designated location, and displays at the same time the name of the feature, the mileage between the location and the destination and the bearing or direction to the destination. The dot is positioned on the screen relative to the latitude and longitude of the geographic feature it represents. In more sophisticated systems, each type of landmark (airport, building, or other landmark) may be further distinguished by different colors.

RX-34 at col. 8, lns.1-12; Michalson Tr. 1374-1375. This passage is silent regarding any ordering by which the landmarks in Person are displayed on a screen. At most it discloses displaying “dots” with the name of a landmark. *Id.* Further, this passage does not disclose that the landmarks are displayed along with their distances to a reference point, as Dr. Michalson incorrectly opined. Michalson, Tr. 1374-1375. Only one distance is displayed and that is the “the mileage between the location and the destination.” RX-34 at 8; Jeffay, Tr. 1917-1919. Because Person only displays a single distance, Dr. Michalson’s contention that a user could determine the ordering of the displayed landmarks in Person cannot be correct. Michalson, Tr. 1374-1379; Jeffay, Tr. 1917-1919.

Thus, neither Garmin nor the Staff has provided clear and convincing evidence that Person discloses the “location name display device” element. Jeffay, Tr. 1863-1865.

### **3. “extracting means”**

As noted, the first element of claim 1 of the ‘592 patent is “extracting means for

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extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations.” JX-3 at col. 20, lns. 10-13.<sup>21</sup>

Garmin and the Staff failed to prove by clear and convincing evidence that Person discloses the “extracting means” element of claim 1. Both Garmin and the Staff ignore that the only feature of the Person reference relied upon by Dr. Michalson to illustrate the presence of this element, *i.e.*, Person’s landmark radius display switch, does not teach or suggest “extracting map data *and* location data” as required by the claims. Michalson, Tr. 1355; Jeffay, Tr. 1858-1859, 1851; RX-34 at col. 8, lns. 1-12.

Garmin and the Staff both contend that Person’s disclosure of “display[ing] [a] map graphic” in Figure 4 teaches extracting both map data and location data. Resps. Br. at 6; Staff Br. at 70. This, however, is inconsistent with the express teachings of Person. Dr. Jeffay testified that Person discloses that *every* location that is displayed *is a landmark*. Jeffay, Tr. 1851, 1859-1860.

Specifically, the Person reference discloses “displaying points or landmarks such as population centers, roads, airports, buildings and other landmarks.” RX-34 at col. 3, lns. 44-51; Jeffay, Tr. 1851, 1859-1860. There is no concept of map data separate from location data in Person. The “map graphic” that is displayed in Figure 4 consists of only

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<sup>21</sup> The function of this claim is construed to mean “extracting map data and location data representing a plurality of locations segregated into different categories and coordinate data corresponding to said plurality of locations,” where the claim term “locations segregated into different categories” has a plain and ordinary meaning of “locations that have been segregated into different categories” in the past tense. This claim construction is not relevant to the issue of invalidity based on obviousness raised by Garmin and the Staff.

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a user designated location and landmarks of a specific type that the user selects. Jeffay, Tr. 1858-1860; RX-34 col. 8, lns. 1-12, Fig. 4.) Indeed, Person appears to limit its display purposefully, because it criticizes maps as having too much information in them, making them difficult to use. *See* RX-34 at col. 1, lns. 23-26 (“Also, the vast amount of detail included in the tiny area on many maps makes it hard to find a specific place even if it is presented by a dot and name on the map.”).

Dr. Jeffay also testified that the use of the words “map graphic” in Figure 4 “is just a term that Person is using for what it is actually displaying.” Jeffay, Tr. 1920. Person’s use of this term does not change the fact that it only discloses displaying “a dot for each airport, building or other landmark” when a user selects the landmark radius display control switch. RX-34 at col. 8, lns. 1-12. Displaying only landmarks of a specific type is not “extracting map data *and* location data.”

Garmin and the Staff selectively quote Dr. Jeffay’s testimony to argue that Person’s landmark radius display switch essentially discloses extracting both map data and location data. Resps. Br. at 6; Staff Br. at 70. Specifically, they both cite to Dr. Jeffay’s testimony that “ultimately what Person displays on the screen is a map” in alleging that he conceded this element existed in Person. This selectivity ignores the entirety of Dr. Jeffay’s testimony which reveals his opinion that Person simply does not disclose both map data and location data. In that regard, Dr. Jeffay testified:

Ultimately, what Person displays on the screen is a map. Right? I mean, the points are there. You have got relative locations. It is sufficient to orient yourself. So it is a map, right. My beef with [Person] is that there is no disclosure of extracting map data and location data. There is only one

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type of data.

Jeffay, Tr. 1892. Garmin’s and the Staff’s reliance on this testimony does not support the argument that Person discloses the claimed “extracting means.”

Garmin also argues that “the Person reference explicitly describes an embodiment that extracts and displays all landmarks... [which shows] extracting of both location data and map data.” Resps. Br. at 7. This is nothing more than unsupported attorney argument. Dr. Michalson only pointed to Person’s landmark radius display switch as disclosing the “extracting means” element. Michalson, Tr. 1355. No witness testified about the feature that Garmin contends discloses this claim element. *See id.*; Jeffay, Tr. 1858-1860. Merely entering a reference into evidence and providing no specific trial testimony relating to it is not clear and convincing evidence of anticipation or obviousness. *Koito Mfg. Co., Ltd. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1151-52 (Fed. Cir. 2004).

**4. No Reason to Modify Person**

Neither Garmin nor the Staff advanced any reason why a person of ordinary skill would modify Person to arrive at the claimed invention. *See* Resps. Br. at 3-13; Staff Br. at 69-71. In contrast, Dr. Jeffay showed that Person teaches away from the “extracting means” element and that there are reasons why a person of ordinary skill would specifically not desire to modify Person to arrive at the “location name display device.” Jeffay, Tr. 1860-1863, 1865-1867; RX-34 at col. 3, lns. 44-51, col. 14, ln. 67 – col. 15, ln. 3. Dr. Jeffay’s testimony on this point was not rebutted. Garmin and the Staff have not carried their burden of proving obviousness by clear and convincing evidence. *See*



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*Hearing Components*, 600 F.3d at 1373-74; *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1332 (Fed. Cir. 2009) (affirming denial of JMOL that claims should have been found obvious where patentee presented uncontradicted expert testimony of teaching away).

### **5. Conclusion**

In sum, Garmin and the Staff have not shown by clear and convincing evidence that the asserted claim 1 of the ‘592 patent is invalid by the Person reference alone or in combination with the ‘592 AAPA under 35 U.S.C. § 103 for obviousness.<sup>22</sup>

#### **C. The ‘592 Patent – Written Description**

Garmin focuses on the “selector device for selecting at least one category” and the “location name display device” elements of claim 1 to contend that the claims lack written description support. It argues that the claims are directed to a system that allows for selecting a single category and then displaying locations in that single category, which the inventors allegedly disparaged. Resps. Br. at 13; Michalson, Tr. 1400-1401.

For the reasons that follow, Garmin and the Staff have not shown by clear and convincing evidence that the asserted claims 1 and 2 of the ‘592 patent are invalid under the written description requirement of 35 U.S.C. § 112, ¶1.

Garmin contends that “[t]he entire written description inquiry can be resolved by answering a single question: does the specification describe to a person of ordinary skill in the art that the inventors actually invented a system for selecting a single category and

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<sup>22</sup> No evidence regarding alleged invalidity of claim 2 was presented at the hearing. Michalson, Tr. 1403.

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displaying location information for that single category.” Resps. Br. at 16. The claims, however, require more than selecting a single category and displaying location information for that single category. JX-3 at col. 19, ln. 10; col. 20, ln. 13; Alexander, Tr. 1938. Accordingly, the appropriate inquiry is whether each claim as a whole embodies a patentable invention and finds written description in the specification. *See Revolution Eyewear Inc. v. Aspex Eyewear, Inc.*, 563 F.3d 1358, 1366-67 (Fed. Cir. 2009).

The record evidence establishes that the claims are *not* directed to the allegedly disparaged prior art problem associated with selecting a single category. Alexander, Tr. 1929. As Dr. Alexander pointed out, “the invention is about many other things, including the distance calculation for remote locations, so you know, it is not trying to solve the problems you are focusing on.” *Id.* at 1938. The “selector device” is not the invention. *Id.* at 1929. The ‘592 patent and its file history highlight the “extracting means” and “calculating device” claim elements as elements of a system that improves on the prior art. Both elements are supported by the written description. *See* JX-3 at col. 17, ln. 66 – col. 18, ln. 58; JX-6 (‘592 patent file history) at PIONEER-ITC0000975.

Thus, even if selecting one category and displaying only locations in that category was a shortcoming of the prior art that ultimately became one of many elements in the issued claims, the claims still have written description support because they are not directed to solving that particular problem. *Revolution Eyewear*, 563 F.3d at 1367 (holding that claims directed to one of two disclosed inventive components satisfied the

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written description requirement because “[i]nventors can frame their claims to address one problem or several”); *In re Peters*, 723 F.2d 891, 893-894 (Fed. Cir. 1983).

Garmin’s disparagement argument relies on a case later recognized by the Federal Circuit as an outlier—*Tronzo v. Biomet, Inc.*, 156 F.3d 1154 (Fed. Cir. 1998). *Tronzo* is an exception to the general rule that disclosure of a single species provides sufficient written description support for a later-filed claim directed to a genus. *Bilstad v. Wakalopulos* 386 F.3d 1116, 1125 (Fed. Cir. 2004.) The general rule, and not the exception, applies here. Rather than being directed to “selecting a single category and displaying location information for that single selected category” as Garmin contends (Resps. Br. at 16), the claims are, in part, directed to a system that selects and displays one or more categories. JX-3 at col. 20, ln. 5 (“selecting at least one category”); Michalson, Tr. 1426 (agreeing that at least one means one or more).

The ‘592 patent specification unmistakably provides support for claims directed to displaying one or more categories. Alexander, Tr. 1931. It discloses embodiments that display locations in one, two, or all of the available categories. Alexander, Tr. 1930-1931; JX-3 at col. 17, lns. 62-65, col.18, lns. 6-9, Figs 5-6.

Moreover, applicants did not disparage selecting one category and displaying location information in that one selected category. The statements in the ‘592 patent specification that “the conventional navigation system has a disadvantage that a larger number of procedures and manipulation steps are required to obtain desired map information, which leads to complicated manipulation” is not disparagement. JX-3 at col. 4, ln. 66 – col. 5, ln. 2. This statement indicates that the prior art has a disadvantage,

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but does not in any way make clear that the invention cannot include a hierarchical menu display, as Garmin contends. In contrast, the claims recite a system that improves on the prior art selection of a category by “display[ing] the location names . . . in order of respective distances,” which allows a user to easily select a point of interest.

The Staff’s written description argument focuses on the “extracting means” element of claim 1, contending that the abstract provides the only support for this element. Staff Br. at 60-63. Because the abstract was added to the specification during prosecution, the Staff argues that the “extracting means” element constitutes new matter. *Id.* The staff is wrong on this point. In construing this claim element in the claim construction section, *supra*, the specification and the prosecution history were relied upon heavily. The intrinsic evidence of the ‘592 patent sufficiently provided written description support for the “extracting means” claim element.

In sum, Garmin and the Staff have not shown by clear and convincing evidence that the asserted claims 1 and 2 of the ‘592 patent are invalid under the written description requirement of 35 U.S.C. § 112, ¶1.

**X. Domestic Industry**

The domestic industry requirement consists of both an economic prong (*i.e.*, there must be an industry in the United States) and a technical prong (*i.e.*, that industry must relate to articles protected by the patent at issue).<sup>23</sup> *See Certain Ammonium Octamolybdate Isomers*, Inv. No. 337-TA-477, Comm’n Op. at 55, USITC Pub. 3668 (Jan. 2004). The complainant bears the burden of proving the existence of a domestic

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<sup>23</sup> The technical prong is not at issue in this investigation. Only the economic prong is at issue.

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industry. *Certain Methods of Making Carbonated Candy Products*, Inv. No. 337-TA-292, Comm'n Op. at 34-35, USITC Pub. 2390 (June 1991).

With respect to the economic prong of the domestic industry requirement, a complainant may show that a domestic industry exists or is in the process of being established under any of the three statutory grounds set forth in Section 337 (a)(3).

Section 337 (a)(3) 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, or mask work concerned –
  - (A) significant investment in plant and equipment;
  - (B) significant employment of labor or capital; or
  - (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337 (a)(3).

Given that these criteria are in the disjunctive, satisfaction of any one of them will be sufficient to meet the economic prong requirement. *Certain Integrated Circuit Chipsets and Products Containing Same*, Inv. No. 337-TA-428, Order No. 10 at 3, Initial Determination (Unreviewed) (May 4, 2000), citing *Certain Variable Speed Wind Turbines and Components Thereof*, Inv. No. 337-TA-376, Commission Op. at 15, USITC Pub. 3003 (Nov. 1996). As set forth below, Pioneer has carried its burden of establishing the economic prong of the domestic industry requirement.

In that regard, Pioneer has made substantial investments in the United States to exploit the asserted patents through licensing. Beginning as early as [

] Pioneer has consistently invested in domestic efforts to license its

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navigation patent portfolio, including the three asserted patents. It has done this through (1) employing engineers, licensing attorneys, and others to work on licensing matters; (2) traveling in support of the licensing program; (3) purchasing products from potential licensees for evaluation and testing; and (4) consulting with outside counsel.

Pioneer has estimated the costs directly related to licensing its navigation patent portfolio in the United States for the [ ] time period at approximately [ ] Compls. Br. at 75. Those licensing activities have resulted in licenses to [ ] major manufacturers of navigation devices, [

] Pioneer has also incurred expenses in connection with potential licensing efforts directed at other companies, [ ]

The evidence shows that Pioneer received more than [ ] in royalty payments for its patent portfolio license agreement with [ ] since [ ] for its license to [ ].<sup>24</sup> JX-34C; JX-35C; JX-106C; CX-452C; CX-453C; CX-454C. Licensing revenue is certainly one of the factors that favor finding the existence of a domestic industry.

A complainant may satisfy the domestic industry requirement by demonstrating that it has invested a substantial amount of money in a licensing program to exploit the asserted patents. *See, e.g., Certain Semiconductor Chips with Minimized Chip Package*

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<sup>24</sup> Pioneer entered into a license agreement with [ ] covering [ ] in [ ] Aoyama, Tr. 220-221; JX-34C. Under the terms of the license, Pioneer received [

] Aoyama, Tr. 222-225; JX-106C; CX-452C; CX-453C; CX-454C. So far, Pioneer has received over [ ] through its license with [ ]. Aoyama, Tr. 222-225; CX-452C; CX-453C; CX-454C; JX-106C.

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*Size and Products Containing Same*, Inv. No. 337-TA-432, Order No. 13 (Public Version) at 13 (unreviewed ID) (January 24, 2001) (“*Semiconductor Chips (I)*”). Successful licensing domestic industries have been based on a relatively small number of employees devoted to licensing. See, e.g., *Certain Digital Satellite System (DSS) Receivers and Components Thereof*, Inv. No. 337-TA-392, Initial Determination (Public Version) at 9-12, USITC Pub. 3418 (April 2001), at 11 (finding a domestic industry with five licensing employees); *Certain Digital Processors and Digital Processing Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-559, Order No. 24, Initial Determination on Violation (Public Version) at 84 (June 18, 2007) (not reviewed as to domestic industry) at 86 (finding domestic industry based on “an employee responsible for licensing” the company portfolio and an unknown number of licensing consultants).

As the Commission has stated, “there is no minimum expenditure that a complainant must demonstrate to qualify as a domestic industry under the ‘substantial investment’ requirement of [prong C],” although the complainant must have demonstrated a “focused and concentrated effort” to license its patents. *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Commission Opinion (Public Version) at 25 and 26, U.S.I.T.C. Pub. 4120 (December 2009).

The Commission has further made it clear that activities that have not yet resulted in licenses can still be “licensing activities.” *Certain Coaxial Cable Connectors and Components Thereof and Products Containing the Same*, Inv. No. 337-TA-650, Commission Opinion (Public Version) at 51 (April 14, 2010) (“the mere fact that a patent

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holder's efforts to obtain a license are unsuccessful does not *per se* mean that expenses associated with any related activities are not investments in the exploitation of the patent through licensing.”).

Prior complainants have relied upon the combination of unsuccessful and successful licensing efforts to support licensing domestic industries. *See, e.g., Certain Digital Processors and Digital Processing Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-559, Order No. 24 (Public Version, unreviewed ID on domestic industry issue) at 97-98 (June 21, 2007) (“[Complainant] Biax actively exploits its ‘945 patent in the United States to the benefit of all who have shared in the millions of dollars that Biax has expended in both successful and unsuccessful attempts to license its patents, including, as stipulated, the ‘945 patent.”).

Likewise, efforts to license companies who took a license only after litigation began can also support a domestic industry. *See Certain Automotive Multimedia Display and Navigation Systems, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-657, Initial Determination on Violation of Section 337 and Recommended Determination on Remedy and Bond (Public Version) at 157 (October 27, 2009) (finding licensing domestic industry where “Honeywell further argues that during the course of this investigation, former respondents DENSO, Kenwood and Alpine took licenses and that while it is not relying on the payments associated with these license agreement[s], it relies on the efforts associated with obtaining the license agreements, which Honeywell argues were incurred before the institution of this investigation.”).



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Regarding patent infringement litigation activities that are related to licensing, the Commission stated:

We conclude that patent infringement litigation activities alone, i.e., patent infringement litigation activities that are not related to engineering, research and development, or licensing, do not satisfy the requirements of section 337(a)(3)(C). However, litigation activities (including patent infringement lawsuits) may satisfy these requirements if a complainant can prove that these activities are related to licensing and pertain to the patent at issue, and can document the associated costs. The same holds true for other types of activities that are allegedly related to licensing.

*Coaxial Cable Connectors* at 43-44 (emphases added).

The Commission has further stated that “[t]he scope of the domestic industry in patent-based investigations has been determined on a case by case basis in light of the realities of the marketplace...” *Certain Dynamic Random Access Memories, Components Thereof and Products Containing Same*, Inv. No. 337-TA-242, U.S.I.T.C. Pub. No. 2034 (November 1987), Commission Opinion at 62, 1987 WL 450856 (U.S.I.T.C., September 21, 1987) (footnotes omitted) (DRAMs).

**A. Pioneer’s Navigation Licensing Program**

Pioneer’s navigation licensing program started [

] conducted by Pioneer’s subsidiary, Discovision

Associates (“DVA”).<sup>25</sup> Traino, Tr. 404-405; *see* JX-145C, Gaetje, Dep. Tr. 21-24, 26-27.

The professionals at DVA had a very successful history of licensing both patents owned

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<sup>25</sup> Since 1989, Pioneer has been the ultimate parent company of DVA. More specifically, DVA is a California partnership. The partnership has two partners, Pioneer North America and Pioneer Electronics USA, both of which are owned through subsidiary relationships by Pioneer Corporation in Japan. Traino, Tr. 399-400.

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specifically by DVA as well as Pioneer's patents relating to plasma TVs, CDs, and DVDs. *See* Traino, Tr. 398-399, 402-404. At least [ ] of DVA's licensing attorneys [ ] (Traino, Tr. 404-405; *see* JX-145C, Gaetje dep. at 21-24, 26-27.) That effort led to the conclusion that Pioneer should consider licensing its navigation patents. (*See id.*) Since that [ ] Pioneer has engaged in a continuous effort to license the navigation portfolio, including the three asserted patents.

Over the past five years, at least [ ] Pioneer employees in the United States were directly involved in Pioneer's navigation portfolio licensing operations. Those employees were responsible for negotiating license agreements, conducting technical analysis for licensing opportunities, devising patent and licensing strategy, and providing technical licensing support. Traino, Tr. 411-419.

1. [ ]

Although a number of potential navigation licensees—[ ]—were identified at the outset (*see* RX-307C) Pioneer selected [ ] Aoyama, Tr. 167, 185-186, 190-191; Traino, Tr. 406-410; JX-145C, Gaetje, Dep. Tr. 28; JX-149C, Schubert, Dep. Tr. 43-44; *see also* CX-364C; CX-365C; CX-366C; CX-367C. Pioneer referred to the efforts to license [ ] internally as [ ] Aoyama, Tr. 172. The [ ] began in [ ] and continued until a license agreement was reached in [ ] Aoyama, Tr. 167; JX-34C. Pioneer chose to work with DVA's U.S.-

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based employees in this project in light of DVA's capability and skill with respect to patent analyses and infringement investigations. *See* Aoyama, Tr. 167-68, 170-71.

Mr. Aoyama, the General Manager of Pioneer's licensing department, testified that those skills are "very important" when licensing intellectual property, and that DVA's work was the "biggest contribution in [ ] Aoyama, Tr. 170-171, 390-391. In [ ] Mr. Aoyama said that he believed DVA's work on [ ] was the "main reason why our activities this time were so successful." Aoyama, Tr. 229-231; CX-343C at Pioneer-ITC0113194.

At the beginning of [ ] DVA personnel in the U.S. conducted analysis of Pioneer's navigation patents and compared those patents with [ ] Aoyama, Tr. 167-168, 172, 181-192; JX-148C, Le, Dep. Tr. 83-85; JX-145C, Gaetje, Dep. Tr. 28-29, 39-43; JX-37C; CX-102C; CX-103C; CX-104C; CX-364C; CX-365C; CX-366C; CX-367C; CX-368C; CX-369C. David Le, a Pioneer engineer, working at the direction of DVA licensing attorneys such as Clay Gaetje and James Song, testified during his deposition that [ ]

] JX-148C, Le dep.

Tr. at 15, 59-60, 95-96; *see* JX-145C, Gaetje, Dep. Tr. 26-27. As part of his work on the navigation project, Mr. Le also conducted investigations into potential licensees' products, including purchasing, reverse engineering, testing, and analyzing these products. JX-148C, Le, Dep. Tr. 26-28, 44-46, 54-57. Mr. Le additionally traveled to navigation and electronics trade shows to learn about navigation products in the market. JX-148C, Le, Dep. Tr. 60-68.

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In [ ] Clay Gaetje became the attorney in charge on [ ]  
Aoyama, Tr. 183-184; CX-102C; CX-103C; CX-104C. From at least that time until [ ]  
] Mr. Gaetje was involved in obtaining products for analysis,  
designing tests for infringement, selecting patents that would be tested against the  
products, drafting claim charts,[

] JX-  
145C, Gaetje, Dep. Tr. 29-30, 39-41; Aoyama, Tr. 181, 183-186, 190-192, 196-200, 209-  
212; Traino, Tr. 420-421; JX-39C; JX-55; CX-105C; CX-106C; CX-107C; CX-335C;  
CX-336C; CX-355C; CX-356C; CX-357C; CX-364C; CX-365C; CX-366C; CX-367C;  
CX-384C; CX-385C; CX-408C; CX-420C.

When Mr. Gaetje [ ] James Song filled his shoes on [ ]  
] Traino, Tr. 416. Mr. Song participated in [ ]  
] Aoyama, Tr. 213-14, 216-17; CX-351C; CX-423C. He [ ]  
] Aoyama, Tr. 213-217; Traino, Tr. 412; JX-145C,  
Gaetje, Dep. Tr. 44; JX-73C; CX-351C. Mr. Takahori [ ]

] Aoyama, Tr. 217-219, 365-366; CX-373C; CX-375C; CX-429C. Eiko Kimura  
was also involved in the navigation licensing activities, including [ ]

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conducting market research and locating and purchasing products for analysis. Traino, Tr. 417-418; JX-147C, Kimura, Dep. Tr. 74-77.

As a result of those individuals' work, Pioneer entered into a license agreement with [ ] covering [ ] the three asserted patents, in [ ] Aoyama, Tr. 220-221; JX-34C. Under the terms of the license, Pioneer received [

] Aoyama, Tr. 222-225; JX-106C; CX-452C; CX-453C; CX-454C. So far, Pioneer has received over [ ] through its license with [ ] Aoyama, Tr. 222-225; CX-452C; CX-453C; CX-454C; JX-106C. Pioneer recognized this achievement by awarding the [ ] team, including the members from DVA, with its President's Prize award. Aoyama, Tr. 2262-32; Traino, Tr. 424-427; JX-78C; JX-88C; JX-89C; CX-234C; CX-343C.

**2. [ ]**

Although [ ] was identified as a potential licensee [ ] serious efforts to license [ ] began in [ ] Aoyama, Tr. 232; CX-364C; CX-365C. Pioneer turned to the licensing professionals at DVA for support, all of whom were eventually re-assigned to Pioneer North America's Intellectual Property Division ("PNA IPD"). Aoyama, Tr. 232-233. The [ ] project included veterans of [

] such as Mr. Le, Mr. Song, Mr. Takahori, and Ms. Kimura, as well as others—Victor Schubert, Michael Traino, Steve Wong, and Yuichiro Takayanagi. Traino,

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Tr. 415-419, 453-456; CX-272C; CX-462C; CX-463C; JX-65C; JX-149C, Schubert, Dep. Tr. 52-53.

Mr. Traino, Mr. Wong, Mr. Le, and Mr. Song conducted [ ] Traino, Tr. 453-456; JX-151C, Wong, Dep. Tr. 63-64; CX-272C. Mr. Traino, taking a role similar to Mr. Gaetje's role on [

] Traino, Tr. 452-456.

Victor Schubert was Mr. Traino's supervisor and also worked on [ ] Traino, Tr. 416-417, 455-56; JX-149C, Schubert dep. at 46-47, 57, 79-80. Mr. Schubert was also involved in [

] JX-149C, Schubert Dep. at 59-62, 79-80. In addition, Mr. Schubert participated in [ ] Aoyama, Tr. 238-240; Traino, Tr. 456, JX-149C, Schubert Dep. at 52, 79-80; JX-152C, Takayanagi, Dep. Tr. 99-100; JX-33C; CX-390C; CX-408C.

Mr. Takayanagi had supervisory responsibilities for the licensing team working on the [ ] JX-152C, Takayanagi Dep. at 129-130; Traino, Tr. 456.

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Mr. Takayanagi also participated in [ ] JX-152C,

Takayanagi, Dep. Tr. 99-100, 129-130. He additionally [ ] Aoyama, Tr. 239-240; JX-152C, Takayanagi, Dep. Tr. 99-100.

Despite Pioneer's efforts to license [ ] its attempts have been unsuccessful to date. [ ]

]

3. [ ]

Pioneer's efforts to license [ ] [ ] navigation products were [ ] so Pioneer did not consider [ ]

] See Traino, Tr. 456-457, 468-469. At that point, Pioneer decided to assert a number of Pioneer's patents against [ ] in an effort to license them. Traino, Tr. 456-457. [ ]

] Aoyama, Tr. 315-17; Traino, Tr. 457-459; JX-127C.

Once Pioneer received [ ]

] Traino, Tr. 462-463. Pioneer's interest had been to convince [ ] to license the Pioneer portfolio. *Id.* But after

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[ ] Pioneer's views on [ ] and Pioneer began seeking a payment by [ ] Traino, Tr. 462-463, 465; CX-448C.

Several of the same U.S.-based Pioneer employees worked to license [ ] including in particular Mr. Traino and Ms. Kimura. Ms. Kimura conducted [ ] JX-147C, Kimura, Dep. Tr. 73-74. Mr. Traino was [ ] and was [ ]

[ ] Traino, Tr. 460-462. Once [ ] Mr. [ ] Traino, Tr. 465; JX-132C. Mr. Traino [ ] Traino, Tr. 467.

Pioneer and [ ] successfully reached an agreement in [ ] JX-35C; Traino, Tr. 467-468.

**4. Other Potential Licensees**

In addition to the investments associated with attempting to license [ ] Pioneer has also incurred expenses related to potential licenses with other companies. [ ] were originally identified as potential licensees. Aoyama, Tr. 190-191; Traino, Tr. 406-410; JX-39C; RX-307C, CX-364C; CX-365C. Mr. Traino testified that he worked for some time on evaluating potential



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products of [ ] Traino, Tr. 470-471, 483. In addition, Pioneer investigated the possibility that its navigation patent portfolio, [ ] could be licensed to [ ] CX-563C; Traino, Tr. 470-471; JX-148C, Le, Dep. Tr. 54-57; JX-150C, Song, Dep. Tr. 26.

**B. Pioneer's Estimated Costs**

As noted, Pioneer has estimated the costs directly related to licensing its navigation patent portfolio in the United States for the [ ] time period at approximately [ ]

**1. Estimated Salary Costs**

The evidence shows that Pioneer spent approximately [ ] in salaries to compensate its employees for their efforts to license Pioneer's navigation portfolio.

[ ] Traino, Tr. 476-477. Thus, when attempting to quantify the amount of Pioneer's investment in its U.S. navigation portfolio licensing activities, Pioneer had to rely on estimates of how much employee time was spent on navigation licensing matters as opposed to the many other licensing responsibilities in which the employees engaged. *Id.*; *see also* Traino, Tr. 687-688.

To prepare this estimate, Pioneer first identified the primary U.S. employees involved with the navigation licensing projects. Traino, Tr. 473-474. Pioneer then determined the time frames when these employees worked on the projects, and made a

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good faith approximation of the percentage of time each employee spent working on the project during those time frames. Traino, Tr. 473-477. Pioneer employees still with the company were asked to estimate their own time for the navigation project. Traino, Tr. 475-476. For the individuals no longer with Pioneer, current Pioneer employees who worked with those individuals on the various projects consulted to reach an estimate. *Id.* Pioneer obtained salary information for each employee from the company records. JX-115C; Traino, Tr. 473-475. Pioneer's salary investment in its U.S. licensing personnel was calculated by applying the estimated time percentages to each employee's monthly salary.

While Pioneer's methodology involves certain estimates, those time estimates are reasonable approximations. They were confirmed by the testimony of many of the individual employees. *See* JX-145, Gaetje, Dep. Tr. 93-94; JX-147C, Kimura dep. Tr. at 53, 55, 74-77; JX-148C, Le, Dep. Tr. 15, 59-60, 95-96, 98-101; JX-150C, Song, Dep. Tr. 82-86, 89-90; JX-152C, Takayanagi, Dep. Tr. at 100-101. At times Pioneer's initial estimates were shown to be conservative. Kaplan, Tr. 1812-15, 1817-1818. The estimates were further corroborated by the dates shown in the many emails and contemporaneous documents introduced at the hearing showing when work was done and who did that work.

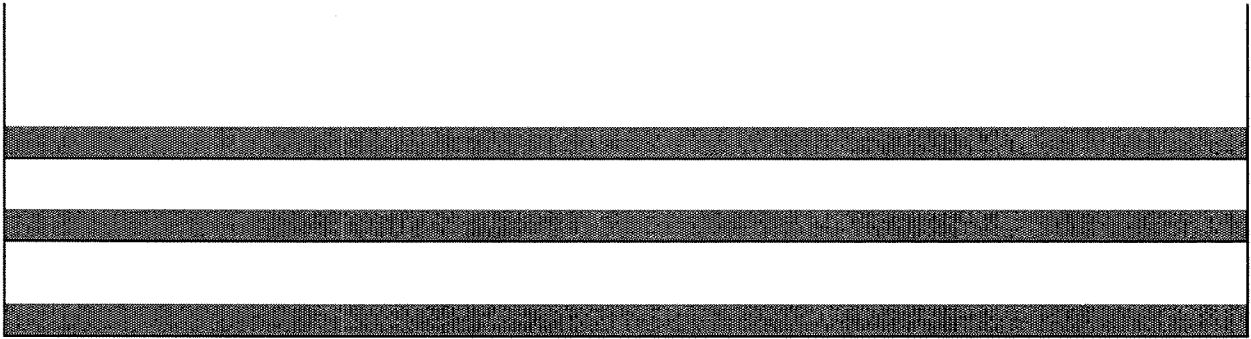
As discovery progressed and both parties obtained more information, Pioneer revised and updated its initial investment estimates accordingly. Traino, Tr. 677-679, 687. For example, when the deposition testimony of Mr. Gaetje and Mr. Takayanagi

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revealed that Pioneer's initial estimates were conservative (*see* Kaplan, Tr. 1812-1815, 1817-1818), Pioneer adjusted the relevant time frames and percentages.

After all the revisions and adjustments, the evidence shows that Pioneer spent approximately [            ] in salaries to compensate its employees for their efforts to license Pioneer's navigation portfolio, as shown in the summary table below. Compls. Br. at 87-88.

The table area is completely redacted, consisting of a grid of alternating shaded and unshaded horizontal bands. No data or text is visible within this area.



**2. Estimated Bonus Costs**

The evidence reveals that Pioneer spent approximately [ ] in bonuses to compensate its employees for their efforts to license Pioneer’s navigation portfolio.

In addition to salaries, Pioneer pays its employees annual bonuses [

] JX-115C. Those bonus payments reflect the cost to Pioneer of employing those individuals, just like their salaries. It is, therefore, appropriate to count bonus payments as part of the overall cost of employing licensing personnel during a particular time period, and the yearly bonus should be attributed to work on navigation licensing matters the same way that salaries were attributed to the navigation licensing projects—by multiplying a percentage of time spent in each month during which an employee worked on such licensing projects by the effective monthly bonus, *i.e.* 1/12<sup>th</sup> of the yearly bonus amount.<sup>26</sup>

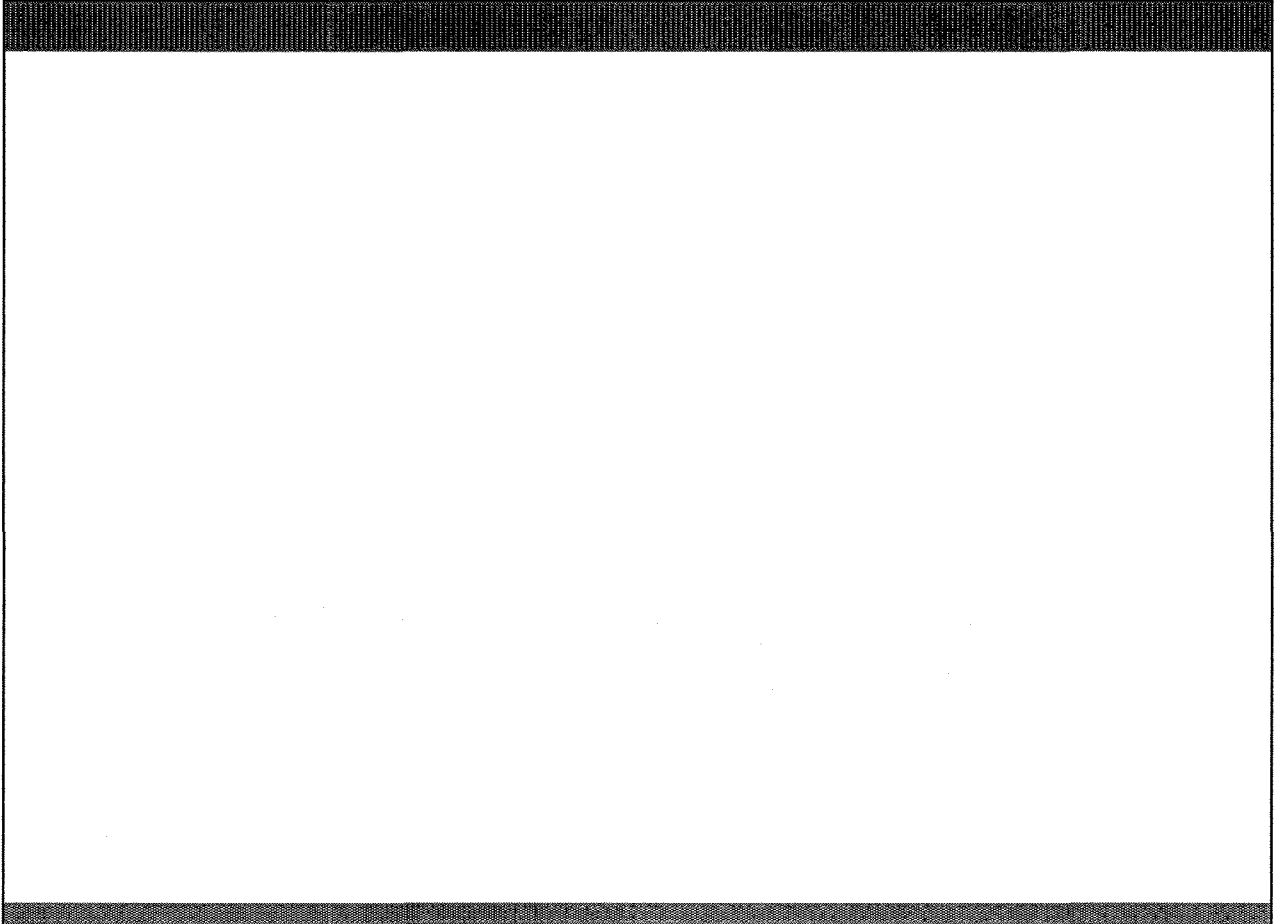
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<sup>26</sup>[

]

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Using that method, Pioneer spent an estimated [ ] in bonus payments to Pioneer employees for navigation patent portfolio licensing activities, as shown in the table below. Compls. Br. at 89.



Garmin's paid economic expert, Dr. Kaplan, took issue with the methodology for estimating bonuses, (Kaplan, Tr. 1764), but offered no other alternative. [ ]

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[ ]

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[

] (Kaplan, Tr. 1765.)

Those payments clearly reflect costs to Pioneer for employing licensing personnel. Prorating bonuses over the months preceding payment is a reasonable method of allocating bonus payments to employees who worked on the licensing navigation portfolio during those time frames.

**3. Estimated Travel Expenses**

Pioneer additionally spent approximately [ ] in travel expenses. JX-116C. Those travel expenses were incurred by Pioneer's licensing personnel in their efforts to reach agreements with the potential licensees, [

]

The expenses on which Pioneer relies include travel to meet with potential licensees of Pioneer's navigation patents, as well as meetings with other members of Pioneer to discuss the navigation project. JX-116C; *see* Aoyama, Tr. 191-192; JX-148C, Le, Dep. Tr. 65-66, 68-70. In addition, the expenses include travel to attend trade shows to learn about the navigation products marketed by potential licensees. JX-116C; JX-148C, Le, Dep. Tr. 60-68. Those expenses are summarized below.<sup>27</sup> Compls. Br. at 91.

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<sup>27</sup> Pioneer engaged in other travel in support of its navigation licensing program that is not included in the chart. For example, Mr. Gaetje and Mr. Takahori [

] Aoyama, Tr. 181-182, 185, 191-192; CX-105C; CX-106C; CX-107C; CX-366C; CX-367C; CX-368C; CX-369C. Likewise, Mr. Schubert and Mr. Takayanagi traveled to [ ] Aoyama, Tr. 238-240; JX-149C, Schubert, Dep. Tr. 52, 79-80; JX-152C, Takayanagi, Dep. Tr. 99-100.

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Totals

Garmin expert Dr. Kaplan claimed that there were “significant misallocations” in Pioneer’s travel expenses, citing [

] Kaplan, Tr. 1781-1783. Pioneer has revised its calculation of travel expenses in the above table to address those concerns.<sup>29</sup>

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<sup>28</sup> As argued by Pioneer, when preparing this table, [

] (*see* Pioneer-ITC0017929), and therefore provided a reasonable indication of the exchange rate at this time. Compl. Br. at 91.

<sup>29</sup> Pioneer explains:

Specifically, for expense reports in JX-116C related to trips involving more than one destination city, including destinations unrelated to Pioneer’s navigation licensing projects, only those expenses incurred in the related destination were included. Similarly, the overall airfare expense of these trips was divided by the number of destinations. For example, [

]

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**4. Estimated Product Purchase Costs**

Pioneer spent approximately [ ] on navigation products to identify potential licensing opportunities and determine if these products infringed Pioneer's patents. CX-416C, CX-418C. Those purchases relate directly to exploiting the asserted patents and are integral to making informed licensing decisions. *See ICU Medical Inc. v. Alaris Medical Systems Inc.*, 558 F.3d 1368, 1380 (Fed. Cir. 2009) (discussing preliminary investigations of allegedly infringing goods). David Le and Eiko Kimura purchased a range of products having varying features, costs, and manufacturers for the purpose of testing and reverse engineering them. Traino, Tr. 490-492. As shown by the product purchase receipts and testimony, those navigation products included those manufactured by [ ] Traino, Tr. 491-494.

**5. Estimated Outside Counsel Costs**

Pioneer retained outside counsel in the U.S. at a cost of approximately [ ] to assist with licensing the patents-in-suit to [ ] JX-119C-124C.

At the hearing, Dr. Kaplan opined that he could not allocate the work done by [ ] to Pioneer's asserted patents, stating that "when you have an entry that

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[ ] were included in Pioneer's revised calculations. In addition, when calculating the expense for [ ]

[ ] Further, because the report indicates that [ ]

]

Compls. Br. at 92. It is found that Pioneer's calculation method is reasonable.



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does not cite which patent the work is being done for, I am unable to determine whether it is for work done for the patents-in-suit or work done for some redacted patent I don't know about." Kaplan, Tr. 1789-90. But Pioneer need not allocate its licensing activities to specific patents where it has demonstrated efforts to license a portfolio that includes the asserted patents. *See, e.g., Certain 3G Wideband Code Division Multiple Acces (WCDMA) Handsets, supra*, Order No. 20 (Public Version) (unreviewed ID) at 14-16. In any event, each monthly invoice contains [

] For example, the

bills include descriptions such as:

[

]

These invoices describe work related to licensing Pioneer's navigation patent portfolio and to the patents-in-suit.

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Garmin and the Staff have argued that the outside counsel costs are litigation expenses and are not related to licensing Pioneer's navigation patent portfolio.<sup>30</sup> The facts show otherwise. As Mr. Aoyama testified, [ ] was a pre-litigation investigation with a view towards speeding up the licensing activities with respect to [ ] Aoyama, Tr. 240-241. During the same period, Pioneer asked [ ] to investigate Pioneer's patents with regard to [ ] for the same purpose after [

] Aoyama, Tr. 240-242. As Mr. Traino explained, litigation is sometimes considered "to push someone to a license, just so that they would understand, you know, the strength of the portfolio and bring some clarity to the situation. . . . The litigation was just a means to an end." Traino, Tr. 400-401. Even if [ ] ultimately led to litigation, it is clear that those expenses were in the larger context of a systematic effort to license Pioneer's navigation patents.

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<sup>30</sup> The Staff states that pre-litigation legal work relating to [ ] should not be counted as part of the domestic industry. Staff Br. at 96-98. As noted, the Commission held that "litigation activities (including patent infringement lawsuits) may satisfy these requirements if a complainant can prove that these activities are related to licensing and pertain to the patent at issue, and can document the associated costs." *Coaxial Cable Connectors* at 44. Further, the Staff acknowledges that "litigation activities and costs . . . may be related if, for instance, the patentee and accused infringer were in licensing negotiations before the suit was filed or while it was ongoing," if those activities "form part of a concerted licensing program or effort." Staff Br. at 98, quoting *Coaxial Cable Connectors, supra* at 54-56. That is the case with Pioneer. Pioneer developed a licensing plan, made licensing proposals to [ ] and when those efforts failed turned to outside counsel to continue in the effort to license [ ] The costs on which Pioneer relies all occurred before litigation began.

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**6. Nexus**

Pioneer's substantial licensing expenditures are directly related to its efforts to license its navigation portfolio including the three asserted patents. The [ ] license agreements resulting from those activities each cover the asserted patents, demonstrating the nexus between the licensing activities and the patents-in-suit. The [ ] agreement [

] JX-35C at 1-2. [

] Pioneer's license agreement with [ ] JX-34C. Nonetheless, the license covers [

] and there is no dispute that the asserted patents fall within that definition. JX-34C at 2.

Garmin's expert has asserted that Pioneer's licensing activities cannot always be connected to the specific patents at issue. But no such requirement exists. Where, as here, Pioneer's activities are directed at licensing an overall portfolio, those activities are related to the patents within that portfolio, including the asserted patents. Pioneer need not specifically keep track of licensing activities on a patent-by-patent basis. *See 3G Wideband Code Division Multiple Access (WDCMA) Handsets, supra*, at 14-15. The evidence, therefore, establishes the required nexus between the licensing activities and the asserted patents.

**C. Conclusion**

Pioneer has carried its burden of establishing the economic prong of the domestic industry requirement. Evidence shows that Pioneer has made substantial investments in

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the United States from [ ] at approximately [ ] to exploit the asserted patents through licensing. The evidence further shows that Pioneer received more than [ ] in royalty payments for its patent portfolio license agreement with [ ] and more than [ ] for its license to [ ]

### **XI. Remedy**

#### **A. 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).<sup>31</sup> A limited exclusion order (“LEO”) directed to respondents’ infringing products is among the remedies that the Commission may impose. *See* 19 U.S.C. § 1337(d). The Commission’s authority to order the exclusion of articles from the United States is restricted to a limited exclusion order “unless ‘(A) a general exclusion from entry of articles is necessary to prevent circumvention of an exclusion order limited to products of named persons; or (B) there is a pattern of violation of this section and it is difficult to identify the source of infringing goods.’” *GFCIs*, Comm’n Op. at 24 (quoting 19 U.S.C. § 1337(d)(2)).

Pioneer asserts that a limited exclusion order should be directed to “Garmin’s infringing products” as well as “the components of Garmin’s infringing multimedia display and navigation devices and systems, in order to avoid Garmin circumventing the

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<sup>31</sup> In determining whether to issue an exclusion order or a cease and desist order, the Commission must consider statutory public interest factors. *Certain Ground Fault Circuit Interrupters and Products Containing Same*, Inv. No. 337-TA-615 (“*GFCIs*”), Comm’n Op. at 21 (Mar. 26, 2009).

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exclusion order by importing the infringing products in parts and reassembling them after entry in the United States.” Compls. Br. at 97 (emphasis added).

Similarly, the Staff “recommends the issuance of a limited exclusion order directed to infringing multimedia display and navigation devices and systems and components.” Staff Br. at 99 (emphasis added).

Garmin does not dispute that a limited exclusion order is an appropriate remedy in the event a violation is found. Resps. Reply at 58. Respondents, however, argue that the limited exclusion order should not be directed to the components of Garmin devices. *Id.* In that regard, Garmin contends that it “does not perform any assembly of imported PND components in the United States” and that “such importation cannot constitute infringement because the asserted claims cannot be infringed by the individual components of Garmin devices.” As support for this argument, Garmin cites only to the three asserted patents, and nothing more. Resps. Reply at 58, citing JX-1; JX-2; and JX-3. Respondents’ argument that any LEO should not include “components” of Garmin devices is rejected.

The scope of an ITC investigation is defined by the notice of investigation. *Certain Chemiluminescent Compositions*, Inv. No.337-TA-285, Commission Order (Jan. 13, 1989). Thus, any exclusion order may cover all products within that scope, i.e., “the articles concerned.” 19 U.S.C. § 1337(d)(1). Moreover, Commission remedial orders cover all products that infringe and are not limited to specified models or products. *Certain Optical Disk Controller Chips and Chipsets and Products Containing Same, Including DVD Players and PC Optical Storage Devices*, Inv. No. 337-TA-506, Commission Opinion at 56 (August 7, 2006) (public version).

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As noted, the Commission instituted this investigation “to determine 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 multimedia display and navigation devices and systems, components thereof, and products containing same that infringe one or more of claims 1 and 2 of U.S. Patent No. 5,365,448; claims 1 and 2 of U.S. Patent No. 6,122,592; and claims 1 and 2 of U.S. Patent No. 5,424,951, and whether an industry in the United States exists as required by subsection (a)(2) of section 337.” 74 Fed. Reg. 66676 (2009) (emphasis added).

It is, therefore, recommended that the Commission issue a limited exclusion order in the event that a violation of section 337 is found. Such a limited exclusion order should be directed to multimedia display and navigation devices and systems, and the components of such devices and systems. Additionally, in order to facilitate the limited exclusion order’s proper enforcement, it should contain a certification provision.<sup>32</sup>

**B. 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

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<sup>32</sup> An exclusion order may contain a provision that permits entities whose products are potentially excludable under the Commission’s order to 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 thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under the order. *See Certain Semiconductor Chips with Minimized Chip Package Size or Products Containing Same*, Inv. No. 337-TA-605, Comm’n Op. at Section II.D.2. (July 29, 2009).

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infringing products in the United States.” *GFCIs*, Comm’n Op. at 24. The fact that a respondent is a foreign entity does not prevent the issuance of a cease and desist order against it. See *Certain Abrasive Products Made Using a Process for Powder Preforms, and Products Containing Same*, Inv. No. 337-TA-449, 67 Fed. Reg. 34728, Comm’n Notice (May 15, 2002) (issuance of limited exclusion order, and cease and desist order against Taiwan respondent) (vacated on other grounds, 69 Fed. Reg. 35675 (2004)).

Pioneer contends that [

]

Pioneer further contends that [

]

The Staff agrees with Pioneer, asserting that [

]

Garmin argues that [

]

The evidence establishes that [

]

Accordingly, in the event that a violation of section 337 is found, it is recommended that the Commission issue a cease and desist order.

## **XII. Bond**

The administrative law judge and the Commission must determine the amount of bond to be required of a respondent, pursuant to section 337(j)(3), 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 the bond by eliminating the differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Processes for Making Same, and Products Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. a 24 (1995). In other cases, the Commission has turned to alternative approaches, especially when the level of a reasonable royalty rate could be ascertained.



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*See 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. *See 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).

Pioneer asserts that “[a] bond of [ ] of the entered value of any infringing multimedia display and navigation devices and systems and components thereof is consistent with Pioneer’s past licensing practice, particular[ly] in the context of [ ] Compls. Br. at 98. Pioneer explains that “[

] *Id.* at 98, citing JX-35C [

] at ¶ 4.6.

The Staff contends that “a recommended bond amount based on the reasonable royalty for the asserted patents is appropriate” and that “[t]he evidence established that Pioneer has previously offered to [ ] and other potential licensees [ ] for a license to its entire navigation patent portfolio.” Staff Br. at 100, citing CX-403C [ ] at GARM-01-00005388.

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Garmin asserts that “[i]f the Commission finds a violation of Section 337, Respondents may continue to import under a bond during the sixty-day period for Presidential review, which, in this case, should be based on [ ] Resps. Reply at 59, citing JX-34C [ ]

Therefore, the parties agree that a bond amount based on the reasonable royalty rate for the asserted patents is appropriate. The dispute lies on the appropriate rate of the reasonable royalty.

As noted, Pioneer argues that the bond should be set at [ ] JX-35C [ ] at ¶ 4.6. Garmin on the other hand argues that the bond rate should be [ ] JX-34C [ ] at ¶ 5.02. Garmin is correct.

First, [ ] JX-35C [ ] at ¶¶ 4.1 and 4.5. Second, [ ] *Id* at ¶ 4.6. Finally, as Pioneer itself notes, “[w]here the domestic industry is based on licensing activity, it is appropriate to set the bond at a level consistent with the complainant’s *past licensing practices*.” Compls. Br. at 98 (emphasis added).

As argued by Pioneer with respect to the economic prong of the domestic industry requirement, the agreement with [ ] was clearly the result of licensing negotiations. JX-34C [ ( ] In contrast, the agreement with

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[ ] JX-35C [ ] at ¶ 4.5.

Moreover, as Garmin argued, the Staff's recommended rate of [ ] is not persuasive because it does not represent a negotiated rate, but rather a unilateral offer.

CX-403C [ ] at GARM-01-00005388.<sup>33</sup>

Accordingly, in the event that a violation of section 337 is found, it is recommended that respondents be required to post a bond equal to 0.5 percent of the entered value of any accused product that they seek to import during the Presidential review period.

**XI. Conclusions of Law**

1. The Commission has subject matter, personal, and *in rem* jurisdiction in this investigation.
2. The importation requirement is satisfied as to all respondents.
3. Respondents' accused products do not infringe the asserted claims of the '448 patent, '951 patent, and the '592 patent.
4. It has not been shown by clear and convincing evidence that any claim of the '592 patent is invalid due to obviousness or lack of written description.
5. The domestic industry requirement is satisfied with respect to the '448 patent, '951 patent, and the '592 patent.
6. There is no violation of section 337.

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<sup>33</sup>[

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**XII. Initial Determination and Order**

Accordingly, it is the INITIAL DETERMINATION of the undersigned that no violation of section 337 (19 U.S.C. § 1337) has occurred in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain multimedia display and navigation devices and systems, components thereof, and products containing same with respect to any asserted claim of U.S. Patent No. 5,365,448, U.S. Patent No. 5,424,951, or U.S. Patent No. 6,122,592. It is also the initial determination that U.S. Patent No. 5,424,951 is not invalid.

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, as listed in the attached exhibit lists, 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 (Order No. 1) issued in this investigation, and upon the Commission investigative attorney.

To expedite service of the public version, each party is hereby ORDERED to file with the Commission Secretary by no later than December 28, 2010, a copy of this Initial Determination with brackets that show any portion considered by the party (or its

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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 of this Initial Determination, then a statement to that effect shall be filed in lieu of a document with brackets.

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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Carl C. Charneski  
Administrative Law Judge

Issued: December 16, 2010

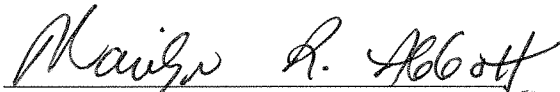
**CERTAIN MULTIMEDIA DISPLAY AND NAVIGATION DEVICES AND SYSTEMS,  
COMPONENTS THEREOF, AND PRODUCTS CONTAINING SAME**

**INV. NO. 337-TA-694**

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**PUBLIC CERTIFICATE OF SERVICE**

I, Marilyn R. Abbott, hereby certify that the attached **INITIAL DETERMINATION** has been served by hand upon the Commission Investigative Attorney, Christopher G. Paulraj, Esq., and the following parties as indicated, on **JAN 26 2011**



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**CERTAIN MULTIMEDIA DISPLAY AND NAVIGATION DEVICES AND SYSTEMS,  
COMPONENTS THEREOF, AND PRODUCTS CONTAINING SAME  
INV. NO. 337-TA-694**

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