

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FEDEX CORPORATION,
Petitioner,

v.

IPVENTURE, INC.,
Patent Owner.

Case IPR2014-00833
Patent 8,725,165 B2

Before KRISTEN L. DROESCH, MICHAEL R. ZECHER, and
J. JOHN LEE, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

INTRODUCTION

On May 30, 2014, FedEx Corporation (“FedEx”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–30 of U.S. Patent No. 8,725,165 B2 (Ex. 1001, “the ’165 Patent”). Patent Owner IpVenture, Inc. (“IpVenture”) timely filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). An *inter partes* review of claims 1–30 was instituted on December 3, 2014. Paper 14, 24 (“Dec. to Inst.”). After institution, IpVenture filed a Patent Owner Response (Paper 23, “PO Resp.”), and FedEx filed a Petitioner’s Reply (Paper 25, “Pet. Reply”). An oral hearing was held on July 29, 2015. Paper 31 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. As discussed below, FedEx has shown by a preponderance of the evidence that claims 1–30 of the ’165 Patent are unpatentable.

A. *Related Proceedings*

FedEx identifies three matters related to its Petition: (1) an *inter partes* reexamination (Reexamination Control No. 95/001,896) of a related patent, U.S. Patent No. 7,212,829 B1 (“the ’829 Patent”), filed by FedEx on February 16, 2012; (2) a district court case filed by IpVenture in the Northern District of California (No. 4:11-cv-05367), in which claims of the ’829 Patent were asserted against FedEx; and (3) a district court case filed by IpVenture in the Northern District of California (No. 4:14-cv-04894), in which claims of the ’165 Patent were asserted against FedEx. Paper 32.

B. *The ’165 Patent*

The ’165 Patent relates to “shipment of objects and, more particularly, to monitoring objects during shipment.” Ex. 1001, 2:4–5. The Summary of the Invention states:

The monitoring can produce notifications to interested parties. The notifications typically contain status information pertaining to the articles being shipped. Alternatively, interested parties can gain access to status information pertaining to the articles being shipped via a website. According to one embodiment, the status information includes at least position (location) information and shipping conditions information.

Id. at 2:50–56. The specification proceeds to discuss a system and method to implement such monitoring using “wireless tracking devices” that are “within or affixed to” the articles being shipped. *Id.* at 2:61–3:28; *see also id.* at 3:29–44 (describing a method using a “mobile communication device in or attached to the article” to obtain location information).

Further, the described system and method may provide notifications regarding an “environmental violation,” such as when “the temperature of the article has exceeded a desired limit . . . or that the article has undergone excessive forces.” Ex. 1001, 7:63–8:3. The specification further discusses various “shipping conditions” that can be monitored using the tracking devices, including “one or more of vibration, acceleration, speed, or direction of travel of, or force or pressure on, the article, . . . temperature, humidity, pressure, gaseous or liquid states, chemical compositions, wind speed, color composition, scent, light, sound, smoke, particle or radiation.” *Id.* at 5:15–35.

In addition, the specification describes “convert[ing] position information . . . into map coordinates, street addresses, etc.” Ex. 1001, 13:21–24. Position information may be further resolved “into more intelligible locations in a community,” such as the identification of a particular business or a specific floor in a building. *Id.* at 13:28–48.

C. Prosecution History of the '165 Patent

The '165 Patent issued from U.S. Patent Application No. 12/924,470 (“the '470 Application”), which was filed on September 27, 2010. The '470 Application was a continuation of U.S. Patent Application No. 11/732,581 (“the '581 Application”), which was filed on April 3, 2007. The '581 Application issued as U.S. Patent No. 7,809,377 B1.

The '581 Application was, itself, a continuation-in-part of U.S. Patent Application No. 10/397,637 (“the '637 Application”), which was filed on March 26, 2003, and issued as U.S. Patent No. 7,212,829 B1.

Further, the '637 Application was a continuation-in-part of U.S. Patent Application No. 09/797,517 (“the '517 Application”), which was filed on February 28, 2001. The '517 Application claimed priority to Provisional Application No. 60/185,480 (filed February 28, 2000), and issued as U.S. Patent No. 7,366,522 B2.

D. Challenged Claims

FedEx challenges claims 1–30 of the '165 Patent, i.e., all of the claims. Claims 1, 13, 29, and 30 are independent claims. Independent claim 13 is illustrative of the challenged claims and recites:

13. A method for tracking shipment of packages using wireless tracking devices provided within or affixed to the respective packages, the method comprising:

accessing status information pertaining to a wireless tracking device used to track shipment of a package, the status information including at least position information and shipping condition information;

transforming the position information into a point of interest pertaining to the wireless tracking device based on at least information stored in a database;

determining if a shipping condition violation has occurred during shipment of the package based on at least the shipping condition information and at least one shipping condition level;

sending an electronic notification regarding the shipping condition violation to an interested person if it is determined that the shipping condition violation has occurred during shipment; and

facilitating network-based access to enable interested persons to receive at least a portion of the status information regarding the package, including at least the point of interest transformed from the position information.

E. Instituted Grounds of Unpatentability

This *inter partes* review was instituted on the following alleged grounds of unpatentability (Dec. to Inst. 24–25):

Claims	Prior Art	Basis
1–7, 9, 10, 12–15, 17, 29, and 30	Richards ¹	§ 102(b)
8	Richards and Joao ²	§ 103(a)
11, 16, and 18–28	Richards and Zhou ³	§ 103(a)

ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are construed according to their broadest reasonable interpretation in light of the specification. 37 C.F.R. § 42.100(b); *see In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015). Only those terms in controversy

¹ U.S. Patent Application Pub. No. 2002/0000916 A1, published Jan. 3, 2002 (Ex. 1007).

² U.S. Patent No. 7,253,731 B2, filed Jan. 22, 2002 (Ex. 1010).

³ U.S. Patent No. 6,847,892 B2, filed Oct. 29, 2001 (Ex. 1008).

need to be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

In the Decision on Institution (Dec. to Inst. 6–14), the disputed claim terms below were construed preliminarily as follows:

Term	Claims	Preliminary Construction
package	1–30	a physical item that is capable of being shipped
wireless tracking device	1–28, 30	a device that is capable of monitoring both position and shipping conditions, and capable of wirelessly communicating with another device
environmental violation	1–12, 14	a state in which a measurement of the environment of, or surrounding, a package exceeds a limit
shipping condition violation	13–28, 30	a state in which a measurement of the conditions of, or surrounding, a package during shipping exceeds a limit
point of interest / enhanced location	1–30	information identifying a location that is derived from position information
individual package that is portable by a person	23	an individual package that is capable of being moved by a person

During trial, the parties continued to dispute the constructions of “wireless tracking device,” “point of interest,” and “individual package that is portable by a person.” The parties also disputed the constructions of “transforming” and “business information.” These disputed terms are

addressed below. For the terms above that are no longer disputed by the parties, we adopt the same constructions as in the Decision on Institution because the full record after trial is consistent with our previous analysis, and neither party identified evidence compelling different constructions. No other claim terms require express construction to resolve the issues raised in this *inter partes* review.

1. *wireless tracking device*

Independent claims 1, 13, and 30 recite a “wireless tracking device.” In the Decision on Institution, this term was construed preliminarily as “a device that is capable of monitoring both position and shipping conditions, and capable of wirelessly communicating with another device.” Dec. to Inst. 8–9. The parties raise several issues with respect to the construction of wireless tracking device.

FedEx argues the proper construction is “a device having one or more sensors for monitoring position (location) information *and/or* shipping conditions information and that is capable of wirelessly transmitting related data.” Pet. 11–12 (emphasis added); Tr. 5:11–9:23; *see* Pet. Reply 3 n.1. In other words, a device that can monitor position information, but *cannot* monitor shipping condition information, or vice versa, could nonetheless qualify as a wireless tracking device, according to FedEx.

Independent claims 13 and 30 both include the following limitation with respect to the recited wireless tracking device: “accessing status information pertaining to a wireless tracking device used to track shipment of a package, the status information including at least position information and shipping condition information.” Thus, these claims expressly recite that the status information pertaining to the wireless tracking device includes *both* position information *and* shipping condition information.

Although it acknowledges this language in claims 13 and 30, FedEx focuses instead on claim 1. Tr. 5:21–7:8. Claim 1 recites: “receive certain status information from a wireless tracking device . . . the certain status information being received includes position information pertaining to position of the wireless tracking device.” According to FedEx, “wireless tracking device” should be construed to reflect the “broader” scope of claim 1, which does not state expressly that the status information associated with the device includes shipping condition information. Tr. 6:13–7:8.

FedEx’s arguments are unpersuasive, however, because FedEx fails in its Petition and Reply to identify any intrinsic evidence indicating that the term “wireless tracking device” has different meanings in different claims, i.e., that the term is “broader” (Tr. 7:3–8) in claim 1 compared to claims 13 and 30. A claim term is presumed to carry the same meaning throughout a patent, unless the intrinsic record clearly indicates the same term nonetheless has different meanings in different claims. *E.g.*, *Aventis Pharms. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1380 (Fed. Cir. 2013). As discussed above and in the Decision on Institution (Dec. to Inst. 8–9), the language of independent claims 13 and 30 indicates that the recited wireless tracking device must be capable of monitoring both position information and shipping condition information.⁴ Thus, the recitation of the same wireless

⁴ At the oral hearing, FedEx asserted for the first time that the claimed wireless tracking device does not require monitoring position information or shipping condition information, so long as such information is ultimately received. *See* Tr. 6:1–18. This argument is untimely because it was not raised in the Petition (nor in the Reply). *See* 37 C.F.R. §§ 42.22(a)(2), 42.104(b)(3). Indeed, this argument contradicts the Petition, in which FedEx urged “wireless tracking device” be construed, in relevant part, as “a device having one or more sensors for *monitoring* position (location) information and/or shipping conditions information.” Pet. 11–12 (emphasis added).

tracking device in claim 1 implicates the same limitations. Moreover, claim 1 also recites: “determine if an environmental violation has occurred ***based on the certain status information*** and at least one environmental level” (emphasis added).⁵ Thus, the language of claim 1 also is consistent with the conclusion that the status information from the wireless tracking device includes shipping condition information as well.

The construction proposed by FedEx also includes a limitation requiring the recited wireless tracking device to have one or more “sensors.” Pet. 12. As discussed in the Decision on Institution (Dec. to Inst. 9), however, FedEx relies on mere embodiments to support such a requirement. *See* Pet. 12; Ex. 1011 ¶ 25. FedEx did not adduce further supporting evidence during trial. Thus, we decline to import such a limitation from the embodiments described in the specification into the claims reciting a “wireless tracking device.” *See In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004).

During trial, IpVenture raised an argument that “wireless tracking device” must be construed to require that the device be a single physical unit. Tr. 19:9–21:10; *see* PO Resp. 8–10 (arguing the asserted Richards reference does not disclose a “wireless tracking device” because the relevant structures are two separate physical units). Contrary to IpVenture’s position, however, nothing in the claim language itself compels a conclusion that the recited wireless tracking device must be a single physical unit. In addition, IpVenture was unable to identify any supporting evidence in the

⁵ As used in the ’165 Patent, an “environmental violation” is a form of “shipping condition violation.” *See* Ex. 1001, 18:39–42 (claim 14, reciting “wherein the shipping condition violation pertains to an environmental violation”).

specification for such a limitation. *See* Tr. 20:20–21:6. Nor did IpVenture offer supporting expert testimony.

In sum, the broadest reasonable interpretation of “wireless tracking device,” as recited in the ’165 Patent, is “a device that is capable of monitoring both position and shipping conditions, and capable of wirelessly communicating with another device.”

2. *point of interest / enhanced location*

Claims 1, 13, and 29 recite a “point of interest” that is obtained by transforming position/location information based on information stored in a database. Similarly, claim 30 recites an “enhanced location” that is obtained by converting position information based on information stored in a database. *Id.* at 20:41–43. The parties agree that these terms have the same meaning in the context of the ’165 Patent. *See* Pet. 16; PO Resp. 21. In the Decision on Institution, these terms were construed preliminarily as “information identifying a location that is derived from position information.” Dec. to Inst. 12–14. IpVenture argues this construction is erroneous and proposes instead the construction, “information identifying a location that is derived from position information ***and that is more particular than the location’s street address.***” PO Resp. 18–22 (emphasis added).

The parties do not dispute that a point of interest is derived from position information. The specification describes an embodiment in which “location management server 908 can interact with the map database 912 to convert position information provided by the [Global Positioning System (“GPS”)] information into map coordinates, ***street addresses***, etc.” Ex. 1001, 13:21–24 (emphasis added). Thus, a street address may be information derived from position information (e.g., GPS coordinates) and

information from a database to identify a particular location. According to IpVenture, however, a street address is not a “point of interest.” IpVenture relies on the following disclosure in the specification:

The community layout server 914 interacts with a community layout database 916 to resolve locations, such as street addresses and cross streets, into more intelligible locations in a community. For example, instead of a street address, the locations can pertain to points of interest with respect to the community.

Id. at 13:30–35. Although this disclosure describes obtaining location information that is “more intelligible” (*id.*) than a street address, IpVenture ignores that the specification makes clear this disclosure pertains to only one embodiment. *Id.* at 13:28–30 (“In one embodiment, a community can be associated with a commercial building, a shopping mall, a residential community and the like.”). Importing such a limitation from an embodiment into the claims reciting a “point of interest” is improper. *See Am. Acad. of Sci.*, 367 F.3d at 1369.

Further, the embodiment identified by IpVenture does not indicate that a street address cannot be a point of interest within the meaning of the claims. Although “more intelligible locations in a community” may be a further refinement of street address information, the specification does not state that the street address (obtained by converting GPS position information) cannot itself be a point of interest as well—in other words, refining a point of interest (street address) into a more specific point of interest (e.g., name of a business). IpVenture points to the statement, “instead of a street address, the locations can pertain to points of interest with respect to the community.” Ex. 1001, 13:34–35. This disclosure, however, appears to be referring to alternatives—i.e., a point of interest

identified as a street address or, instead, a point of interest identified with respect to the community (e.g., business name). Thus, we remain unpersuaded that the specification clearly disclaims street addresses, which are within the scope of the broadest reasonable interpretation of the claim term “point of interest.”

Consequently, the broadest reasonable interpretation of “point of interest,” as recited in the ’165 Patent, is “information identifying a location that is derived from position information.”

3. *portable by a person*⁶

Dependent claim 23 recites the additional limitation, “wherein the package is an individual package that is *portable by a person*” (emphasis added). In the Decision on Institution, this term was construed preliminarily as “capable of being moved by a person.” Dec. to Inst. 14. Relying solely on a definition in a general purpose dictionary, IpVenture contends the preliminary construction is overly broad, arguing that the proper construction is “capable of being carried by a person,” and that the term excludes the use of mechanical assistance. PO Resp. 30–33; Tr. 24:17–25. Although it contends “it’s pretty inherent to those skilled in the art what portable means” (Tr. 25:4–5), IpVenture failed to present any evidence that a skilled artisan would interpret “portable by a person” to exclude all forms of mechanical assistance—in fact, the only pertinent evidence in the record indicates otherwise (*see* Ex. 1011 ¶¶ 35–36 (Declaration of Dr. Jason L. Hill)). Nor has IpVenture identified any intrinsic evidence supporting such a

⁶ The Decision on Institution addressed the full phrase “individual package that is portable by a person,” but interpreted only the “portable by a person” portion of the phrase. Dec. to Inst. 14. The parties’ dispute about this claim language also pertains only to “portable by a person.” Thus, only that portion of the phrase is addressed here.

limitation. Indeed, the specification does not discuss size limitations or whether the use of mechanical assistance is precluded.

Based on the full record developed during trial, the broadest reasonable interpretation of “portable by a person” does not exclude the use of all forms of mechanical assistance. As explained further below, we further conclude the broadest reasonable interpretation of “portable by a person” encompasses objects the size of a crate or refrigerator. Although the parties dispute whether substantially larger objects requiring tremendous mechanical assistance to move (e.g., a cargo ship) qualify as being portable by a person, such determinations are unnecessary for purposes of this Decision. *See Vivid Techs.*, 200 F.3d at 803.

4. “transforming”

Claim 13 recites “transforming the position information into a point of interest.” Each of the remaining independent claims recites a similar limitation. Relying solely on a dictionary definition, IpVenture argues that “[t]ransformation of position data would necessarily require alteration of the position data.” PO Resp. 15 (citing Ex. 2003, 2). FedEx contends such a construction is overly narrow. Pet. Reply 8–9.

At the oral hearing, IpVenture clarified its position on the construction of “transforming”:

JUDGE LEE: If I take a longitude and latitude that I get from a GPS device and I look up in a database that that longitude and latitude corresponds to AMC Movie Theater, have I now transformed that position information into a point of interest?

MR. THOMAS: Yes, if you record that transformation.

JUDGE LEE: Even though the GPS data was not altered in any way.

MR. THOMAS: Well, you're altering it by – that's what I'm saying, you've stored it as the replacement or the more intelligent descriptor.

Tr. 34:1–10. We conclude that associating position information with a corresponding point of interest using a database is encompassed by the broadest reasonable interpretation of the transformation limitations of the challenged claims. The specification also supports such an interpretation. For example, the specification describes an embodiment in which “location management server 908 can interact with the map database 912 to convert position information provided by the GPS information into map coordinates, street addresses, etc.” Ex. 1001, 13:21–24. The specification does not support a limitation that the position information itself must be altered. We determine that “transforming” does not require further express construction for purposes of this Decision.

5. *“business information”*

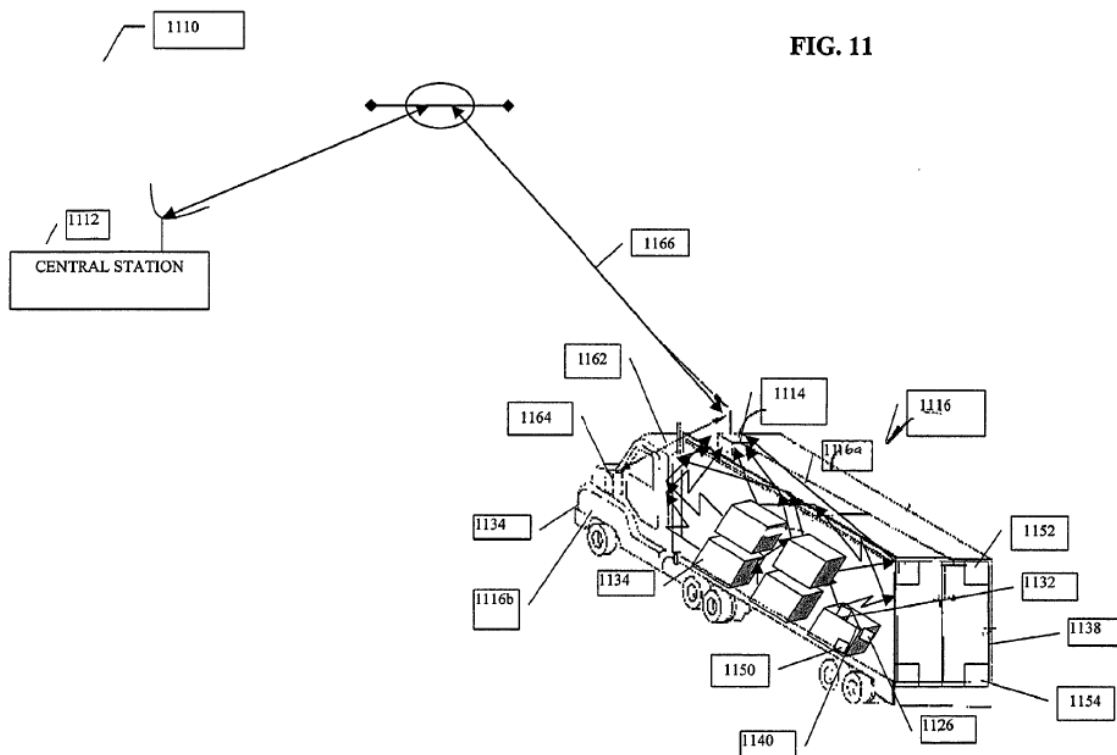
Claims 9 and 29 recite “business information.” IpVenture argues that the recited business information excludes “cargo information,” or “information about cargo.” *See* Tr. 30:23–24; PO Resp. 26. This argument is not persuasive, however, because IpVenture cites no evidence to support it. Indeed, the scope of what IpVenture considers to be “cargo information” is unclear. Although some information that could be characterized as cargo information may not qualify as business information within the meaning of the challenged claims, there is no basis on this record to exclude all information about cargo from the construction of “business information.” We conclude the term requires no further express construction for purposes of this Decision.

B. Alleged Unpatentability Under 35 U.S.C. § 102(b)

FedEx contends claims 1–7, 9, 10, 12–15, 17, 29, and 30 of the '165 Patent are anticipated by Richards. Pet. 19–51. As explained below, based on the full record after trial, FedEx has demonstrated by a preponderance of the evidence that these claims are unpatentable under § 102(b).

1. Independent Claims 1, 13, and 30

Richards relates to “monitoring systems for monitoring the location and/or status of assets, objects, people and animals.” Ex. 1007 ¶ 3. Such a system is illustrated in Figure 11, reproduced below:



Id. at Fig. 11. Figure 11 shows an “asset, object, people or animal monitor 1114,” which is associated with a truck carrying cargo 1134. *Id.* ¶ 128, Fig. 11. Cargo 1134 may be “large items such as a refrigerator or a number of smaller items on a pallet or in a crate.” *Id.* ¶ 129. Sensors 1126 are attached to cargo 1134 to monitor its status (e.g., temperature) and report to monitor

1114. *Id.* A “position determining means,” such as a GPS receiver, also may be included as part of monitor 1114. *Id.* ¶ 143. Monitor 1114 communicates wirelessly with central station 1112, such as via satellite or cellular communications. *Id.* ¶¶ 128, 146.

FedEx contends these aspects of Richards disclose the “wireless tracking device” limitations of independent claims 1, 13, and 30. Pet. 19–20, 25–27, 33–35, 37–40. More specifically, FedEx and its declarant, Dr. Jason L. Hill, assert that monitor 1114 and sensors 1126 of Richards⁷ disclose a device that monitors status information, including both position information and environmental/shipping condition information (e.g., temperature), and communicates that information wirelessly to central station 1112. *Id.*; Ex. 1011 ¶¶ 44–46.

IpVenture asserts that neither monitor 1114 nor sensors 1126 are disclosed as capable of monitoring both position information and shipping condition information. PO Resp. 6–7. According to IpVenture, monitor 1114 is disclosed as being able to monitor position but not shipping conditions, whereas sensors 1126 are disclosed as being able to monitor shipping conditions but not position. *Id.* Based on its view of the proper construction of the claims, IpVenture contends that monitor 1114 and sensors 1126 together do not disclose a wireless tracking device because they are physically separate devices. *Id.* at 8–10.

⁷ IpVenture alleges that the Petition does not assert monitor 1114 and sensors 1126 *together* disclose a wireless tracking device, but rather asserts each of them separately and individually. PO Resp. 8–10; Tr. 18:18–22. Thus, IpVenture urges that such arguments presented in the Reply be disregarded as untimely. Tr. 18:18–22. We determine that the Petition explained sufficiently FedEx’s arguments that monitor 1114 and sensors 1126, each individually *and* both together, disclose a wireless tracking device. *See* Pet. 20–21, 25–27, 33–35, 38–40.

As discussed above, however, the broadest reasonable interpretation of “wireless tracking device” is not limited to devices where all relevant components are contained in a single physical unit. As FedEx asserts, Richards discloses that monitor 1114 works in conjunction with sensors 1126, which are affixed to cargo 1134, to monitor position information and environmental/shipping conditions information, such as temperature. Ex. 1007 ¶¶ 128–29, 143, Fig. 11. Richards further discloses that monitor 1114 communicates wirelessly with central station 1112. *Id.* ¶¶ 128, 146. As such, FedEx has shown sufficiently that Richards discloses the “wireless tracking device” limitations of claims 1, 13, and 30.

FedEx also contends Richards discloses the “environmental violation” and “shipping condition violation” limitations of claims 1, 13, and 30 in its explanation of the central station’s operation. Pet. 23, 27–28, 35, 42–43; Ex. 1011 ¶ 52. As noted by FedEx and Dr. Hill, Richards explains that “central station 1112 can also process the received data and, in particular, the data relating to the actual conditions or events sensed by the on-board sensors to . . . detect sensed conditions which exceed or fall outside of acceptable limits.” Ex. 1007 ¶ 151. These arguments and evidence support a finding that Richards discloses the “environmental violation” and “shipping condition violation” limitations of claims 1, 13, and 30.

According to FedEx, Richards also discloses the “electronic notification” and “network-based access” limitations of claims 1, 13, and 30. Pet. 23–24, 28–29, 35–37. Dr. Hill provided supporting testimony, citing the description in Richards of the central station conveying a “warning message” to an interested person, such as the operator of the truck carrying the cargo, to advise him/her of potential or upcoming problems with the cargo. Ex. 1011 ¶ 52 (citing Ex. 1007 ¶ 151). Further, Richards describes

an “operator interface 1240” that communicates wirelessly with the central station and the monitor on the cargo to allow an operator to receive, for example, the cargo’s location data. Ex. 1007 ¶¶ 156–57. Thus, the evidence of record supports a finding that Richards discloses the “electronic notification” and “network-based access” limitations of claims 1, 13, and 30.

FedEx further contends Richards discloses the “point of interest” (and “enhanced location”) limitations of claims 1, 13, and 30. Pet. 25, 27, 35, 44. Specifically, FedEx and Dr. Hill cite the description in Richards regarding how location data can be transmitted to an operator by central station 1112 to identify a location “by street location or by city and state.” *Id.* (citing Ex. 1007 ¶ 157); Ex. 1011 ¶ 53. In addition, Richards explains that the central station can display current and historical location data as “an overlay on a computer generated map” to provide users with information relating to route usage, asset deployment, and other operational parameters. Ex. 1007 ¶ 150. Dr. Hill testified a person of ordinary skill would understand Richards to disclose necessarily that such information is derived from GPS data (i.e., position data). Ex. 1011 ¶ 53.

IpVenture argues Richards fails to disclose transforming or converting position information into a point of interest because: (1) Richards does not disclose “alteration of the position data” (PO Resp. 13–16); and (2) its disclosure of street addresses is insufficient because street addresses are not points of interest (*id.* at 21–22). In addition, IpVenture contends that Richards fails to disclose that the alleged transformation of position information is based on information stored in a database, as required by the claims. *Id.* at 16–18. On the full record developed during trial, we are persuaded by FedEx’s arguments and disagree with IpVenture.

As discussed above, the broadest reasonable interpretation of “point of interest” does not exclude street addresses, and “transforming” encompasses associating position information with a corresponding point of interest using a database. Richards explains that central station 1112 receives position data from monitor 1114 and provides location information to an operator in the form of a street location or city and state. Ex. 1007 ¶¶ 150, 157. It also generates an overlay over a map to display “present and historical location” information. *Id.* ¶ 150. Central station 1112 includes controller 1296 and related memory devices 1294, which are “adapted to manage a large scale relational data base, thereby supporting a variety of tables that link fields containing data of interest.” *Id.* ¶ 153, Fig. 12. Dr. Hill testified that a person of ordinary skill would have understood that the central station would “necessarily” use the disclosed database to perform these transformations of position information into these street locations, city/state information, and map positions, based on stored data. Ex. 1011 ¶ 53; *see* Ex. 1023, 92:9–94:13, 94:22–95:5, 99:18–101:11, 106:14–107:16. This testimony is unrebutted, and IpVenture presents no contrary evidence. Thus, FedEx has shown sufficiently that Richards discloses the “point of interest” (and “enhanced location”) limitations of claims 1, 13, and 30.

FedEx also contends that central station 1112 and database of Richards discloses the “tracking database” and “tracking computing device” limitations of claim 1. Pet. 19–24, 40–41 (citing Ex. 1007 ¶¶ 149–51, 153–54); Ex. 1011 ¶¶ 47–50. The evidence of record supports a finding that Richards discloses these limitations.

In conclusion, based on the parties’ arguments and the full record after trial, FedEx has established by a preponderance of the evidence that

Richards discloses, either explicitly or inherently, each limitation of claims 1, 13, and 30, thereby anticipating those claims.

2. *Independent Claim 29 and Dependent Claim 9*

Although similar to the other independent claims, claim 29 recites a “mobile communication device” instead of a “wireless tracking device.” Ex. 1001, 20:16–18. In addition, claim 29 recites “business information regarding a business associated with the location.” *Id.* at 20:19–23. FedEx relies on essentially the same arguments and evidence it presents for claims 1, 13, and 30 to account for the remaining limitations of claim 29. *See* Pet. 29–33. Claim 9 depends from claim 1 and recites additional limitations similar to the business information limitations of claim 29.

FedEx contends that the same aspects of Richards that disclose the wireless tracking device of claims 1, 13, and 30, also disclose the mobile communication device of claim 29. *See* Pet. 30–31, 33, 38–41. For example, as Dr. Hill noted, Richards explains that monitor 1114 may include a GPS receiver to determine the location of cargo in transit, which the monitor wirelessly transmits to central station 1112. Ex. 1011 ¶¶ 44–46 (citing Ex. 1007 ¶¶ 128–29, 143–44).

With respect to the “business information” limitations of claims 9 and 29, FedEx relies on the disclosures in Richards regarding customer-specific information. Pet. 42, 47–48. For example, Richards explains that an operator can input data into an operator interface that communicates wirelessly with the monitor, which transmits the data to the central station. Ex. 1007 ¶ 150. This data can include information relating to the identity and status of the cargo—such as information about loading and delivery—which enables the central station to prepare reports “tailored or customized according to the unique business requirements of a particular customer.” *Id.*

¶¶ 152, 154. According to Dr. Hill, “the information relating to cargo 1134 provided by the operator is necessarily business information,” and Richards discloses that “the operator-entered information relates to a business of a customer whose cargo is being shipped.” Ex. 1011 ¶ 60.

IpVenture does not dispute that Richards discloses the recited mobile communication device, but instead argues Richards fails to disclose both the business information limitations and transforming location information into a point of interest. PO Resp. 37–38. Regarding the latter, FedEx has shown sufficiently that Richards discloses transforming location information into a point of interest, based on information stored in a database, for the same reasons discussed above with respect to claims 1, 13, and 30. IpVenture presents the same arguments as it does for claim 1, which are unpersuasive for the same reasons.

Regarding the business information limitations, IpVenture first contends that FedEx relies on a disclosure of “cargo information,” not business information. PO Resp. 26. As discussed above, however, the broadest reasonable interpretation of “business information” does not exclude categorically all information relating to cargo. The relevant issue is whether the identified disclosures of Richards disclose information regarding a business, not whether that information (also) relates to cargo. The evidence and unrebutted testimony presented by FedEx support a finding that Richards discloses the business information limitations of claims 9 and 29. As noted above, Richards discloses that data entered by the operator may relate to, for example, the status of cargo (i.e., a package) as well as whether (and when) the cargo was delivered to a business. *See* Ex. 1007 ¶ 154. Central station 1112 applies this data to generate customized

reports relating to “the unique *business* requirements of a particular customer.” *Id.* ¶ 152 (emphasis added).

IpVenture also asserts Richards fails to disclose that the business information is provided to a wireless tracking device (or mobile communication device) by “a wireless device at the business,” as recited in claims 9 and 29. PO Resp. 25–26. This argument is not commensurate with the scope of the claim language, which does not require the business information itself be sent by a wireless device at the business to the wireless tracking device or mobile communication device. Rather, claims 9 and 29 recite that the business information is received “based on wireless communication between the [wireless tracking device/mobile communication device] and a wireless device at the business.” Richards discloses that operator interface 1240 (i.e., the wireless device) communicates wirelessly with monitor 1114 (i.e., the wireless tracking device). Ex. 1007 ¶ 154. Richards also describes that the operator can enter data through an optical scanner, for example, to “pinpoint the times at which the cargo was . . . delivered.” *Id.* This data is then sent by monitor 1114 to central station 1112 (*id.*), which produces the business-related reports discussed above (*id.* ¶ 152). Based on the full record, the evidence and un rebutted testimony support FedEx’s contention that Richards discloses the business information limitations of claims 9 and 29.

Therefore, FedEx has established by a preponderance of the evidence that Richards discloses, either explicitly or inherently, each limitation of claims 9 and 29, thereby anticipating those claims.

3. *Dependent Claims 2–7, 10, 12, 14, 15, and 17*

FedEx contends Richards further anticipates dependent claims 2–7, 10, 12, 14, 15, and 17, identifying specific portions of the Richards reference

as allegedly disclosing each additional limitation of these claims. Pet. 44–51. FedEx further relies on Dr. Hill’s unrebutted testimony, which explains how Richards discloses the limitations of these claims from the perspective of a person of ordinary skill in the art. Ex. 1011 ¶¶ 54–59, 61–65.

IpVenture does not argue separately the patentability of these dependent claims, instead relying on its arguments regarding independent claims 1 and 13. PO Resp. 22, 29. For the same reasons discussed above as to independent claims 1 and 13, those arguments are not persuasive.

Based on the parties’ arguments and the full record after trial, FedEx has established by a preponderance of the evidence that Richards discloses, either explicitly or inherently, each limitation of claims 2–7, 10, 12, 14, 15, and 17, thereby anticipating those claims.

C. Alleged Unpatentability Under § 103(a)

FedEx contends claim 8 of the ’165 Patent is unpatentable as obvious in light of the combined teachings of Richards and Joao. Pet. 51–52. In addition, FedEx contends claims 11, 16, and 18–28 of the ’165 Patent are unpatentable as obvious in light of the combined teachings of Richards and Zhou. Pet. 52–60.

1. Prior Art Status of Joao and Zhou

In the Decision on Institution (Dec. to Inst. 20–22) and our Decision on Patent Owner’s Request for Rehearing (Paper 24, 2–7), we explained our preliminary determination, for purposes of deciding whether to institute an *inter partes* review, that Joao and Zhou qualify as prior art. As we have discussed previously, FedEx met its initial burden of production by identifying certain limitations in the challenged claims that are not recited in any priority application with a filing date early enough to antedate Joao and Zhou. Dec. to Inst. 20–21; Paper 24, 3–6. The burden of production then

shifted to IpVenture to rebut FedEx's contentions, such as by identifying written description support for those limitations in earlier priority applications. Paper 24, 5–6. IpVenture did not meet this burden during trial. In fact, IpVenture did not present any arguments or evidence regarding this issue in its Patent Owner Response.⁸ PO Resp. 41–42.

Based on the evidence and arguments presented, FedEx has shown sufficiently that the challenged claims lack adequate written description support in any priority application filed before March 26, 2003. *See* Pet. 6–7. Consequently, on the full record after trial, FedEx has established that Joao and Zhou qualify as prior art to the '165 Patent.

2. *Claim 8*

Claim 8 recites the additional limitation, “wherein if the environmental violation is determined to have occurred, the electronic notification indicates that an acceleration or a force induced on the package has exceeded a predetermined level.” Ex. 1001, 17:56–59. FedEx asserts that Joao is directed to a shipment tracking system and teaches the detection and notification of an impact or force of impact by a monitoring device built into or placed within a shipment. Pet. 51–52; *see* Ex. 1010, 15:9–17, 19:35–65. Further, FedEx also cites the Declaration of Dr. Hill, who testified that one of ordinary skill would have been motivated to combine Joao with Richards because both are in the same field—systems for tracking packages—and because Joao indicates monitoring excessive forces would

⁸ IpVenture referred to its then-pending Request for Rehearing (Paper 19), which subsequently was denied (Paper 24). We note IpVenture did not request any postponement of the due date for its Patent Owner Response until after its Request for Rehearing was decided, nor did IpVenture request additional briefing after the denial of rehearing to address the issue of whether Joao and Zhou qualify as prior art.

provide the benefit of detecting when “a mishandling, a dropping, an accident, etc.” has occurred. Ex. 1011 ¶¶ 66, 69 (quoting Ex. 1010, 19:56–60). Dr. Hill concluded that a skilled artisan would have found it obvious to combine the above teachings of Joao with the teachings of Richards to arrive at the invention recited in claim 8 of the ’165 Patent. *Id.* ¶¶ 67–69.

IpVenture did not present any arguments with respect to claim 8 beyond its arguments regarding claim 1, from which claim 8 depends. *See* PO Resp. 22, 42. Those arguments, however, are not persuasive for the same reasons as discussed above for claim 1.

Based on the full record developed at trial, FedEx has demonstrated by a preponderance of the evidence that the subject matter of claim 8 would have been obvious over the combination of Richards and Joao.

3. *Claims 11, 16, and 18–28*

Zhou relates to a system that “collects position and sensor data via one or more remote localization and sensing devices,” and provides that data to end users via an “Application Service Provider (‘ASP’).” Ex. 1008, 2:38–44. Among the applications disclosed in Zhou is monitoring packages being shipped. *Id.* at 38:1–8. FedEx pinpoints specific disclosures in Richards and Zhou that it alleges teaches each limitation of dependent claims 11, 16, and 18–28. Pet. 53–60. Relying on the prior art and the testimony of Dr. Hill, FedEx further asserts that one of ordinary skill in the art would have been motivated to modify the cargo monitoring system of Richards to incorporate certain features of the person/object monitoring system of Zhou. *Id.* at 54–55, 58–60; Ex. 1011 ¶¶ 71–76, 83–88. For example, Dr. Hill testified that a person of ordinary skill would have been motivated by Zhou’s suggested benefits of its Internet-based access and notification system, whereby users

can customize environmental thresholds for monitoring specific things or locations. Ex. 1011 ¶¶ 75–76 (citing Ex. 1008, 15:50–16:12).

IpVenture did not present any arguments with respect to claims 11, 16, 18–22, and 25–28, beyond its arguments regarding claims 1 and 13, from which these claims depend. *See* PO Resp. 29, 42. Those arguments are unpersuasive for the same reasons as discussed above for claim 1. With respect to claim 23 and its dependent claim 24, IpVenture further contends that Richards does not teach the “portable by a person” limitation of claim 23. *Id.* at 29–37. IpVenture’s position, however, relies on its proposed construction for “portable by a person,” which excludes any form of mechanical assistance. *Id.* As discussed above, however, this proposed construction is overly narrow, and the intrinsic record does not support reading such a limitation into the term “portable by a person.” FedEx relies on the disclosure of cargo such as “a refrigerator or a number of smaller items on a pallet or in a crate” in Richards as teaching an individual package that is portable by a person. Pet. 57 (quoting Ex. 1007 ¶ 129). Dr. Hill testified that a person of ordinary skill would have understood a refrigerator or smaller items to be portable by a person. Ex. 1011 ¶ 80.

Based on the evidence presented, including Dr. Hill’s un rebutted testimony, we conclude that a refrigerator and a crate, as disclosed in Richards, qualify as portable by a person within the meaning of claim 23. Although FedEx also contends that an entire trailer (i.e., structure 1116 in Richards) also is portable by a person, which IpVenture disputes, we need not address those teachings for this Decision. Further, the full record after trial supports sufficiently FedEx’s remaining contentions with respect to its asserted ground of unpatentability based on Richards and Zhou. Thus, FedEx has shown by a preponderance of the evidence that the subject matter

of claims 11, 16, and 18–28 would have been obvious over the combination of Richards and Joao.

CONCLUSION

For the foregoing reasons, FedEx has shown by a preponderance of the evidence that claims 1–7, 9, 10, 12–15, 17, 29, and 30 of the '165 Patent are unpatentable under 35 U.S.C. § 102(b) as anticipated by Richards; claim 8 is unpatentable under 35 U.S.C. § 103(a) as obvious over Richards and Joao; and claims 11, 16, and 18–28 are unpatentable under 35 U.S.C. § 103(a) as obvious over Richards and Zhou.

ORDER

It is

ORDERED that claims 1–7, 9, 10, 12–15, 17, 29, and 30 of the '165 Patent are held unpatentable under 35 U.S.C. § 102(b);

FURTHER ORDERED that claims 8, 11, 16, and 18–28 of the '165 Patent are held unpatentable under 35 U.S.C. § 103(a); and

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of this Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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