

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FEDEX CORP.,
Petitioner,

v.

HUMAN SCIENCES HC LTD.,
Patent Owner.

Case IPR2017-01761
Patent 7,046,138 B2

Before JOHN F. HORVATH, ELIZABETH M. ROESEL,
and CHRISTA P. ZADO, *Administrative Patent Judges*.

ZADO, Administrative Patent Judge.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

FedEx Corp. (“Petitioner”) filed a Petition (Paper 2, “Pet.” or “Petition”) pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 11–13, 15, 22, 26, 27, 33–35, and 44 of U.S. Patent No. 7,046,138 B2 (Ex. 1001, “the ’138 patent”). Human Sciences HC Ltd. (“Patent Owner”)¹ did not file a preliminary response to the Petition, and therefore waived its right to do so. 37 C.F.R. § 42.107. Applying the standard set forth in 35 U.S.C. § 314(a), which authorizes institution of an *inter partes* review when “the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition,” we deny the petition for an *inter partes* review based on our determination that Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the challenged claims.

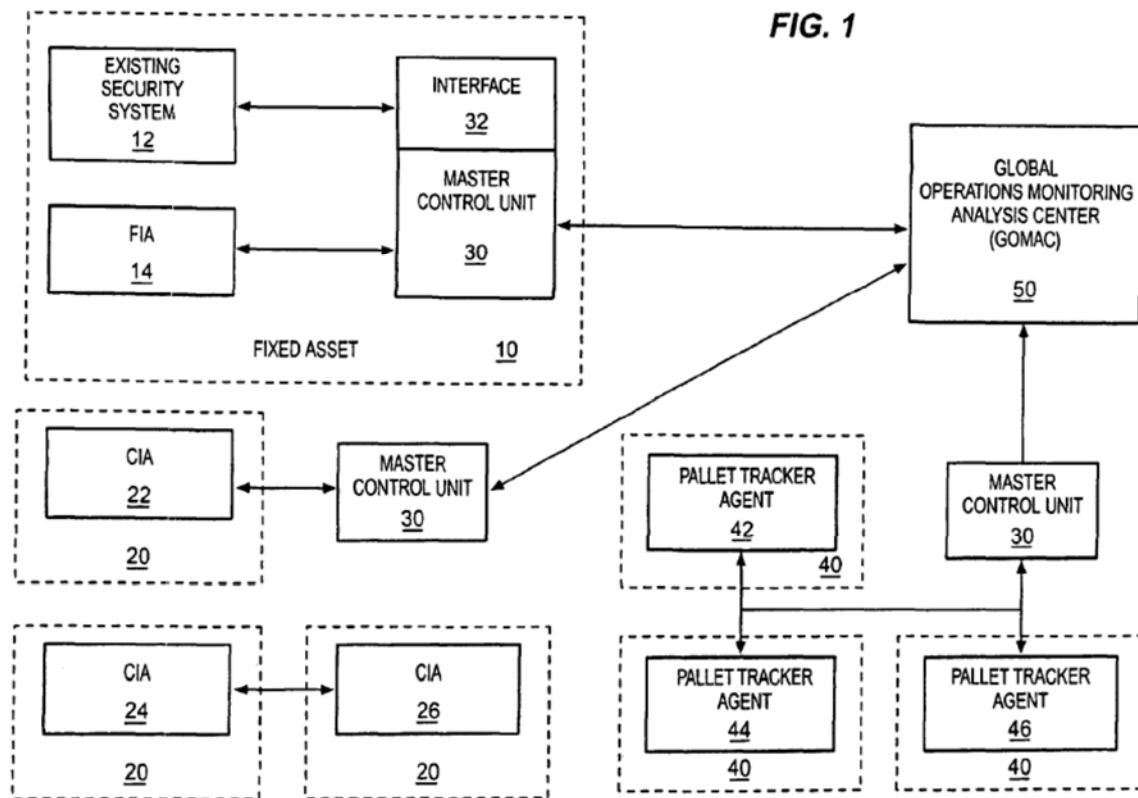
I. BACKGROUND

A. The ’138 Patent

The ’138 patent discloses a “security system and method for monitoring a security status of fixed and mobile assets.” Ex. 1001 at (57). A mobile asset may be a container, pallet, or an individual or any other asset that is mobile and traveling between an origin and destination. *Id.* at 4:56–

¹ In our Order dated November 8, 2017, we stated “the identity of the patent owner is unclear on the current record.” Paper 4, n.1. Thereafter, Patent Owner filed mandatory notices identifying Human Sciences HC Ltd. as the owner of the subject patent. Paper 5, 1. Although the record still contains conflicting information as to the identity of the patent owner (*see* Paper 4, 2), we accept the representation in Patent Owner’s mandatory notices (Paper 5) for purposes of this Decision. Until further notice, the parties should use the above caption for papers filed in this proceeding.

59. For example, mobile assets “may be cargo containers 20, pallets 40, or an individual travelling domestically or internationally.” *Id.* at 5:21–22. A fixed asset may be a building, enterprise, campus, city surveillance, transportation hub, power station or substation, nuclear power plant, or other structure or physical location. *Id.* at 4:59–62. The disclosed security system and method is described as providing “protection of fixed and mobile assets against theft, tampering, or terrorist attacks using nuclear, chemical, or biological materials.” *Id.* at 4:65–67. Figure 1 of the ’138 patent, reproduced below, is a block diagram of an exemplary system:



Id. at Fig. 1. Figure 1 depicts a global operations monitoring analysis center (“GOMAC”) 50, master control units (“MCUs”) 30 in communication with GOMAC 50, and a plurality of agents 12–14, 22–26, and 42–46. *Id.* at 5:4–7. The ’138 patent specification discloses that the term “agent” refers to a

sensing and communicating device for monitoring a physical location and a security status of a cargo container. *Id.* at 4:42–45. “The plurality of agents 12–14, 22–26, and 42–46 include sensors such as chemical, biological, and nuclear detectors, door position sensors, light sensors, and other sensors for sensing a physical and an environmental security.” *Id.* at 5:7–11. When the mobile asset is commercial, an agent is connected to the asset for monitoring the security and position of the asset. *Id.* at 5:23–25. The agent may include a position sensing device such as a position guidance system, or it may include a receiver for receiving position data. *Id.* at 5:26–28.

In an exemplary embodiment, a process flow is described with respect to Figure 5 of the ’138 patent:

Referring to the flow diagram of FIG. 5 in conjunction with the block diagrams of FIGS. 1–3, an agent is connected with the asset being monitored. At least one server 308 (FIG. 2) is provided at the GOMAC in process 500 for monitoring the security status of the asset. The GOMAC receives security status data and position data in process 600, and in process 700 the received security status is analyzed to detect a security threat. If a security threat is detected in process 700, the security threat is responded to in process 800. Periodically, the security service provider generates security reports 455 (FIG. 4) for the customer in process 900, and in process 1000 the customer is billed for the security monitoring service.

Id. at 8:11–23.

B. *Illustrative Claim*

Challenged claim 11, reproduced below, is illustrative of the challenged claims.

11. A method for providing a security service for monitoring a security status of an asset, the method comprising:

providing a computer system in wireless communication with an agent having a sensor for sensing at least one of a physical security and an environmental security of the asset, the agent connected with the asset;

said agent, processing a security data from said sensor to generate the security status;

said agent, wirelessly transmitting the security status;

said computer system:

wirelessly receiving said security status from said agent;

analyzing said security status to detect a security threat;

following a security process to respond to said detected security threat;

generating a report from said received security status; and

billing a customer for said security service;

wherein providing a computer system comprises:

providing a first server connected with a master control unit for receiving said security status from said agent;

providing a second server at a global operation center; and

said first server, retransmitting said security status to said second server.

Ex. 1001, 12:17–43.

C. Asserted Grounds of Unpatentability

Petitioner challenges claims 11–13, 15, 22, 26, 27, 33–35, and 44 on the following grounds. Pet. 11–74.

References	Ground	Claim(s)
Richards ² and Bentley ³	§ 103(a)	11–13, 15, 34, 35, 44
Richards, Bentley, and Welles ⁴	§ 103(a)	22, 26, 27, and 33

Petitioner relies also on the declaration of Jason Hill, Ph.D. Ex. 1004.

D. Real Parties-in-Interest

Pursuant to 37 C.F.R. § 42.8, the parties identify the following real parties-in-interest. Petitioner identifies FedEx Corp., FedEx Corporate Services, Inc., FedEx Freight, Inc., and FedEx Custom Critical, Inc. Pet. 75. Patent Owner identifies Human Sciences HC Ltd. Paper 5, 1.

E. Related Proceedings

The parties identify the following district court proceeding as involving the '037 patent: *Human Sciences HC Ltd. v. FedEx Corp. et al*, No. 1:16-cv-11449 (N.D. Ill.), transferred to *Human Sciences HC Ltd. v. FedEx Corp et al*, No. 2:17-cv-02462 (W.D. Tenn.). Pet. 75, Paper 5, 1.

Petitioner also filed petitions for *inter partes* review of patents related to the '138 patent, namely, petitions in IPR2017-01786 and IPR2017-

² U.S. Patent Publication 2002/0000916 A1, published January 3, 2002 (Ex. 1005, “Richards”), asserted as prior art under 35 U.S.C. § 102(b) and (e). Pet. 11.

³ U.S. Patent 6,591,094 B1, filed April 11, 2000 (Ex. 1006, “Bentley”), asserted as prior art under 35 U.S.C. § 102(e). Pet. 14.

⁴ U.S. Patent 5,686,888, filed June 7, 1995 (Ex. 1008, “Welles”), asserted as prior art under 35 U.S.C. § 102(b) and (e). Pet. 61.

001830 to review related U.S. Patents 7,775,479 and 7,209,037, respectively. Pet. 75, Paper 5, 1.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable interpretation in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–45 (2016) (upholding the use of the broadest reasonable interpretation standard). Consistent with that standard, we assign claim terms their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention, in the context of the patent’s disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Only those terms in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner proposes we construe the terms “agent,” “master control unit,” “security threat,” “an appropriate official at an appropriate agency,” and “the at least one server.” Pet. 6–11. We provide the following preliminary construction for the term “agent.” We determine no other terms need to be construed expressly at this stage of the proceeding.

1. “agent”

Independent claim 11 recites “an agent having a sensor for sensing at least one of a physical security and an environmental security of the asset.”

Departure from the ordinary and customary meaning of a claim term is appropriate when a patentee acts as its own lexicographer. *GE Lighting Solutions, LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) (citing *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). “In order to act as its own lexicographer, a patentee must ‘clearly set forth a definition of the disputed claim term,’ and ‘clearly express an intent to define the term.’” *Id.* (quoting *Thorner*, 669 F.3d at 1365). Here, the ’138 patent specification clearly expresses the patentee’s intent to define the term “agent,” and clearly sets forth a definition:

[i]n this disclosure, the term “agent” refers to a self-powered electrical or electromechanical sensing and communicating device for monitoring a physical location and a security status of a cargo container, also referred to as a communicating intelagent® agent (CIA), a pallet trakker® agent, or a fixed intelagent® agent (FIA) depending on the usage of the agent.

Ex. 1001, 4:42–48.

Petitioner urges us to adopt some, but disregard other, portions of the definition set forth in the ’138 patent specification. Pet. 6. Petitioner argues we should disregard the requirement that an “agent” monitor a physical location and a security status of a cargo container on grounds that the language “for monitoring . . .” is “superfluous of the claim language.” *Id.* Petitioner does not explain why this language is superfluous, nor cite any legal authority to support its proposition that we should disregard part of the definition provided in the ’138 patent specification. *See id.*

Therefore, in accordance with the express definition set forth in the ’138 patent specification, our preliminary construction of the term “agent” is “a self-powered electrical or electromechanical sensing and communicating

device for monitoring a physical location and a security status of a cargo container.” Our claim construction at this stage of the proceeding is not final.

B. Effective Filing Date

The ’138 patent is a continuation-in-part of U.S. Patent No. 7,012,520 (“the ’520 patent”), filed June 17, 2003. Ex. 1001 at (57). Petitioner contends the ’138 patent is not entitled to an effective filing date of June 17, 2003, the filing date of the ’520 patent, because the ’520 patent disclosure does not support certain claimed features present in all of the challenged claims, namely those relating to billing a customer for a security service. Pet. 2. At this stage of the proceeding we need not decide whether the ’138 patent is entitled to the filing date of the ’520 patent because Petitioner’s references (Richards, Bentley, and Welles) have effective dates under 35 U.S.C. §§ 102(b) or (e) that predate the ’520 patent’s filing date.

Accordingly, we treat Richards, Bentley, and Wise as prior art for purposes of this Decision.

C. Obviousness of Claims 11–13, 15, 34, 35, and 44 over Richards and Bentley

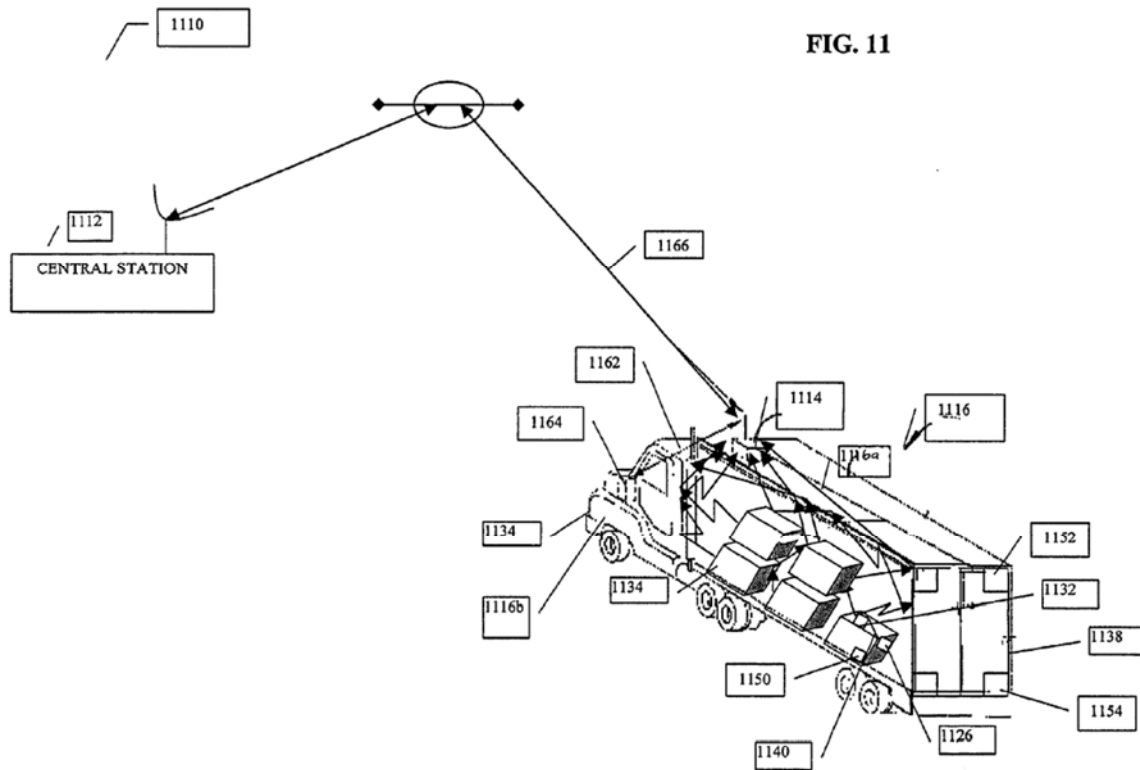
Petitioner contends that the combination of Richards and Bentley renders obvious claims 11–13, 15, 34, 35, and 44 of the ’138 patent. Pet. 11–61. As we noted above, Patent Owner has not filed a preliminary response to the Petition.

1. *Richards (Ex. 1005)*

Richards discloses a monitoring system and method for monitoring the location and/or status of assets, objects, people, or animals utilizing impulse radio techniques. Ex. 1005 at (57), ¶¶ 3, 15. The system includes a

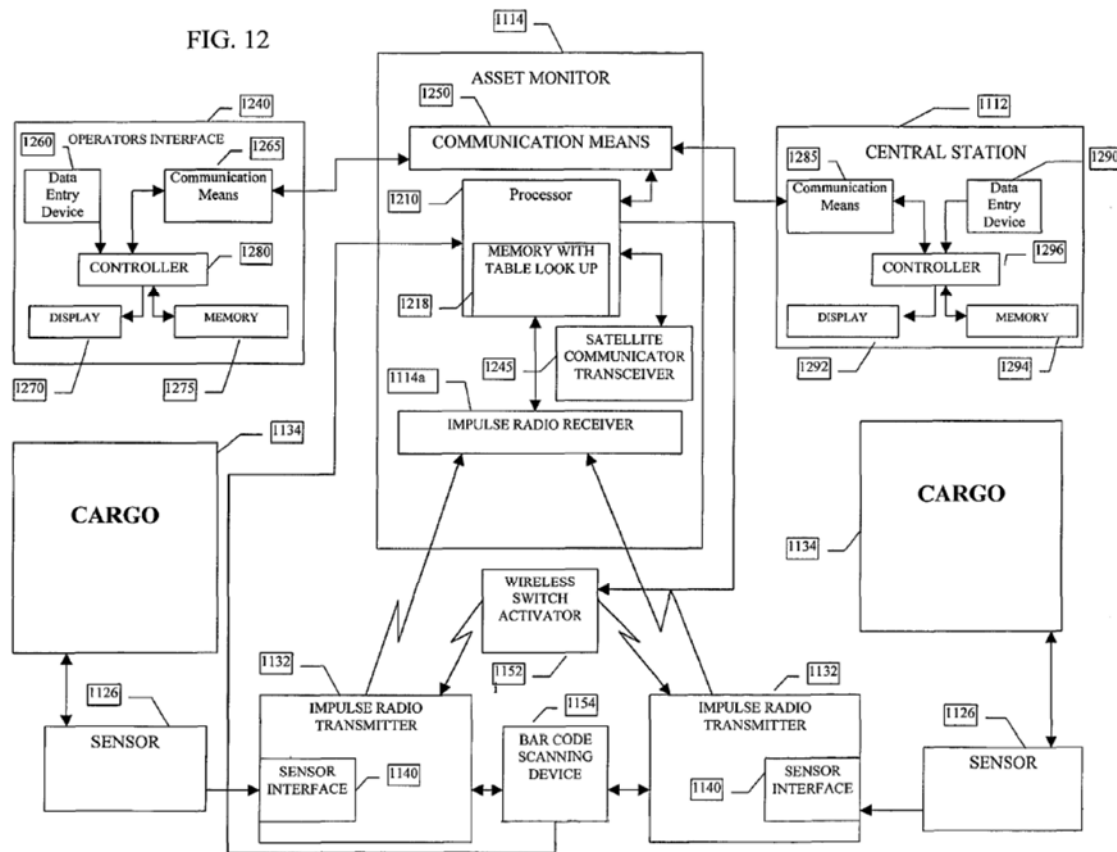
monitor for providing a remotely located central station with information relating to assets, objects, people, or animals which may be located in a structure. *Id.* ¶ 18. The monitor includes a controller and an impulse radio receiver in communication with one or more impulse radio transmitters, which are attached to the assets, objects, people, or animals to be monitored and transmit information regarding the status and location of the assets, objects, people, or animals. *Id.* The transmitters interface with sensors for determining various information about the individual contents of the monitored assets in the structure, “such as temperature, humidity, physical presence, volume, radio activity or any other required parameters.” *Id.* ¶ 20. Based on signals from the sensors, the monitor can transmit a warning signal to the central station to alert the dispatcher to a sensed condition or event. *Id.* ¶ 21. The monitor can include position-determining means, such as a Global Positioning System (“GPS”) receiver, for receiving externally supplied location data indicative of the position of the structure. *Id.* ¶ 23.

Petitioner relies on Figure 11 of Richards, which is reproduced below:



Richards Figure 11 shows monitoring system 1110, including central station 1112 and monitor 1114, which is mounted to structure 1116, such as trailer 1116a towed by tractor 1116b. Ex. 1005 ¶¶ 126, 128. According to Richards, structure 1116 can be a mobile structure, such as a rail car, or immobile structure, such as a storage warehouse. *Id.* ¶¶ 126, 127. Figure 11 also shows sensors 1126 and impulse radio transmitter 1132, each of which is secured to cargo 1134 in structure 1116a. *Id.* ¶ 129. Richards discloses monitor 1114 is adapted to receive signals from impulse radio transmitter 1132 and communicate with remotely located central station 1112 to provide information relating to structure 1116a and its contents 1134. *Id.* ¶ 128.

Petitioner also relies on Figure 12 of Richards, which is reproduced below:



Richards' Figure 12 is a block diagram of a monitoring system, including central station 1112, asset monitor 1114 with impulse radio receiver 1114a and processor 1210, impulse radio transmitters 1132 with sensor interfaces 1140, and sensors 1126. Ex. 1005 ¶¶ 41, 128, 129, 134, 147.

According to Richards, sensors 1126 are designed to monitor any type of status, such as temperature, of the cargo. *Id.* ¶ 129. Richards discloses that information from sensors 1126 is passed to impulse radio transmitter 1132, which transmits the information to impulse radio receiver 1114a for forwarding to asset monitor 1114. *Id.* Monitor 1114 transmits information over a bidirectional communications link to central station 1112. *Id.* ¶ 144. The information transmitted includes the location of trailer 1116a and sensory signals for each individual cargo 1134. *Id.* Based on this

information, central station 1112 can monitor the position and status of trailer 1116a and its cargo 1134. *Id.*

Richards discloses various applications for the monitoring system and method, including monitoring the temperature, humidity, and structural integrity of crates of biohazardous material, such as Ebola virus, during shipment (*id.* ¶¶ 135–137), monitoring the temperature and presence of crates of chocolate bars during shipment (*id.* ¶ 138), and monitoring prisoners within a prison, including their presence and whether they have forcibly removed their impulse radio transmitters (*id.* ¶ 167).

2. *Bentley (Ex. 1006)*

Bentley discloses “an automated user notification system for monitoring user items and notifying a user when selected conditions occur.” Ex. 1006 at (57). The system in Bentley includes a network operations center (“NOC”) that stores user information about one or more user items. *Id.* at 3:18–22. The system further includes at least one detector that monitors one or more user items and provides information regarding selected conditions of the user items to the NOC via a communication link that may be wired or wireless. *Id.* at 3:22–26, 4:54–55. “When the information is received by the NOC, the NOC automatically matches the received information to information stored at the NOC to determine if a condition exists wherein the user should be automatically notified.” *Id.* at 3:26–30.

In an exemplary embodiment, the user item being monitored is a vehicle. *Id.* at 5:36. The system includes detector 104 in wireless communication with NOC 102, and information may flow between detector 104 and NOC 102. *Id.* at 5:22–28, 7:63–67. In this example, one of

the detected conditions may be the state of the vehicle's ignition switch. *Id.* at 5:37–38. Detected conditions may also relate to the state of the vehicle's door locks, transmission, or tachometer. *Id.* at 6:2–4. NOC 102 includes processor 112 that receives information about the status of user items, such as detected conditions. *Id.* at 7:57–63. “When the processor 112 detects a specific condition about the user item, such as an alarm condition, processor 112 sends instructions” to a notification module to notify the user about an existing alarm condition. *Id.* at 8:1–9. After the user has been notified of the condition, the user may provide control instructions to NOC 102 for handling the condition. *Id.* at 8:31–33.

Bentley also discloses that NOC 102 may include billing module 302, which includes billing processor 322 to bill users for services provided by automated system 100. *Id.* at 8:52–54. “Billing may be based on usage, resource utilization, number of contacts in a given period or other measurable criteria.” *Id.* at 8:54–56.

3. *Claim 11 of the '138 patent*

Independent claim 11 of the '138 patent recites “an agent having a sensor for sensing at least one of a physical security and an environmental security of the asset.” Above, we preliminarily construed the term “agent” to mean “a self-powered electrical or electromechanical sensing and communicating device *for monitoring a physical location* and a security status of a cargo container.” For reasons discussed below, Petitioner has not provided sufficient evidence or argument regarding the requirement that the device Petitioner identifies as a prior art “agent” is *for monitoring a physical location*.

Petitioner contends that the combination of Richards' sensor 1126 and impulse radio transmitter 1132 comprises an "agent." Pet. 22. Regarding the requirement that the agent must be a self-powered electrical or electromechanical device, Petitioner argues Richards' radio transmitter 1132 may be powered by a battery, and sensor 1126 and radio transmitter 1132 may be implemented on a circuit board made of electrical components. *Id.* (citing Ex. 1005 ¶¶ 129, 137, 138). For the requirement that the agent must be a sensing and communicating device Petitioner identifies Richards' sensor 1126 as a sensing device, and Richard's transmitter 1132 as a communicating device. *Id.* Even though Petitioner proposes the term "agent" does not require that the agent be a device for monitoring a security status of a cargo container, Petitioner provides evidence and argument that Richards discloses this feature. For example, Petitioner identifies Richards' disclosure of monitoring biohazardous materials that must be maintained at a particular temperature and humidity level "so as to keep the hazardous material safe." *Id.* at 19 (citing Ex. 1005 ¶ 137). Petitioner also identifies Richards' disclosure of monitoring the status of detained prisoners, particularly whether the prisoners have forcibly removed a monitor from their person. *Id.* (citing Ex. 1005 ¶ 167).

However, Petitioner does not address sufficiently the requirement that the agent must be a device for monitoring a physical location of a cargo. As we discussed above, we reject Petitioner's proposal to construe the term "agent" in a manner that ignores the express definition set forth in the '138 patent specification, which recites monitoring a physical location of a cargo. *See supra* Section II.A.1. Accordingly, Petitioner must show this feature is taught by the asserted prior art references.

We note that Petitioner identifies Richards' disclosure regarding the desirability of monitoring the location and status of cargo, Pet. 12, 18, 37 (citing Ex. 1005 ¶¶ 7, 14), but Petitioner has not explained whether or how the asserted "*agent*" in Richards (i.e., sensor 1126 and transmitter 1132) monitors location, as required by claim 11. In a petition for *inter partes* review for a patent related to the '138 patent, Petitioner acknowledges that determining location in Richards is not performed by Richards' *agent*, but instead is performed elsewhere (i.e., in Richards' asset monitor 1114). *FedEx Corp. v. Human Sciences HC Ltd.*, Case IPR2017-01830, petition for *inter partes* review at 94 (PTAB July 12, 2017) (Paper 2). In this proceeding, Petitioner has not provided sufficient explanation of how the asserted "*agent*" of Richards includes location monitoring, or why it would have been obvious to include this feature in Richards.

We further note that Petitioner identifies Richards' disclosure that the transmitter 1132/sensor 1126 (the asserted "*agent*") can monitor the "physical presence" of an asset. Pet. 14, 20, 23, 24, 29, 51 (citing Ex. 1005 ¶ 20); *see also id.* at 52, 68 (quoting Richards' disclosure of monitoring particular assets, such as crates of chocolate bars, hospital patients and equipment, animals, and prisoners). Petitioner contends, however, that "physical presence is a type of physical security of the asset." *Id.* at 23. Petitioner presents no argument that Richards' disclosure of monitoring "physical presence" of an asset meets the requirement of monitoring a physical location. Instead, Petitioner relies on its argument that this aspect of the definition is "superfluous of claim language and unnecessary in the construction." Pet. 6.

For the foregoing reasons, for purposes of this Decision, we are not persuaded that Petitioner's arguments regarding the combination of Richards and Bentley provide a sufficient basis on which to institute review of independent claim 11, or claims 12, 13, 15, 34, 35, and 44 depending therefrom.

D. Obviousness of Claims 22, 26, 27, and 33 over Richards, Bentley, and Welles

Petitioner contends that the combination of Richards, Bentley and Welles renders obvious claims 22, 26, 27, and 33 of the '138 patent. Pet. 61–74. Claims 22, 26, and 27 depend directly or indirectly from claim 11, and therefore, require an “agent” as we have construed the term. Claim 33 is independent, and like claim 11, recites “an agent having a sensor for sensing at least one of a physical security and an environmental security of the asset.” As with claim 11 discussed above, with regard to obviousness based on the combination of Richards, Bentley, and Welles, Petitioner does not provide sufficient evidence or argument that the asserted “agent” of Richards includes location monitoring, or that it would have been obvious to include this feature in Richards. For the same reasons as those discussed above regarding obviousness over Richards and Bentley (*see supra* Section II.C.3), we are not persuaded that Petitioner's arguments regarding the combination of Richards, Bentley, and Welles provide a sufficient basis on which to institute review of claims 22, 26, 27, and 33.

E. Summary

For the foregoing reasons, the information presented in the Petition and accompanying evidence does not establish that there is a reasonable likelihood Petitioner would prevail in showing the unpatentability of any one

of the challenged claims, claims 11–13, 15, 22, 26, 27, 33–35, and 44 of the '138 patent.

III. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner's request for an *inter partes* review of claims 11–13, 15, 22, 26, 27, 33–35, and 44 of the '138 patent is *denied*.

IPR2017-01761
Patent 7,046,138 B2

PETITIONER:

Jeffrey Berkowitz
James D. Stein
Michael V. Young, Sr.
Bradford C. Schulz
FINNEGAN, HENDERSON, FARABOW
GARRETT & DUNNER, L.L.P.
jeffrey.berkowitz@finnegan.com
james.stein@finnegan.com
michael.young@finnegan.com
bradford.schulz@finnegan.com
FedEx-HSPTAB@finnegan.com

PATENT OWNER:

David J. Gaskey
Timothy J. Murphy
Jessica E. Zilberberg
CARLSON, GASKEY & OLDS, P.C.
dgaskey@cgolaw.com
tmurphy@cgolaw.com
jzilberberg@cgolaw.com