

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

POLARIS WIRELESS, INC.,
Petitioner,

v.

TRUEPOSITION, INC.,
Patent Owner.

Case IPR2013-00323
Patent 7,783,299 B2

Before JAMESON LEE, JONI Y. CHANG, and MICHAEL W. KIM,
Administrative Patent Judges.

KIM, *Administrative Patent Judge.*

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

I. BACKGROUND

A. Introduction

Polaris Wireless, Inc. (“Petitioner”) filed a Petition requesting *inter partes* review of claims 111–114 of U.S. Patent No. 7,783,299 B2 (Ex. 1001, “the ’299 patent”). Paper 1 (“Pet.”). Petitioner relies upon the following prior art references:

Zell	WO 99/33303	July 1, 1999	Ex. 1007 ¹
Abbadessa	U.S. Patent 6,088,587	July 11, 2000	Ex. 1011
Havinis	U.S. Patent 6,167,266	Dec. 26, 2000	Ex. 1012

TruePosition, Inc. (“Patent Owner”) timely filed a Patent Owner Preliminary Response. Paper 6 (“Prelim. Resp.”). On November 15, 2013, the Board instituted trial for claims 111–114 on the following grounds of unpatentability:

Reference(s)	Basis	Claims Challenged
Zell	§ 102(b)	111–114
Abbadessa and Havinis	§ 103(a)	111–114

Paper 9 (“Dec.”).

After institution of trial, Patent Owner filed a Patent Owner Response. Paper 21 (“PO Resp.”). Petitioner subsequently filed a Reply to the Response. Paper 30 (“Reply”). Petitioner filed a Motion to Exclude (Paper 39; “Pet. Mot.”), to which Patent Owner filed an Opposition (Paper 47; “PO

¹ Although Zell is Exhibit 1007, Zell is written in French. Accordingly, all citations to Zell in this Decision will be to Exhibit 1008, which is a certified English language translation of Zell.

Opp.”). Petitioner then filed a Reply (Paper 51; “Pet. Reply”). Patent Owner filed a Motion to Exclude (Paper 38; “PO Mot.”), to which Petitioner filed an Opposition (Paper 48; “Pet. Opp.”). Patent Owner then filed a Reply (Paper 50; “PO Reply”). An oral hearing was held on July 15, 2014. The transcript of the hearing has been entered into the record. Paper 61.

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a).

Petitioner has shown by a preponderance of the evidence that claims 111–114 of the ’299 patent are *unpatentable*.

Petitioner’s Motion to Exclude is *dismissed*.

Patent Owner’s Motion to Exclude is *dismissed-in-part* and *denied-in-part*.

B. *Related Proceedings*

Both Petitioner and Patent Owner indicate that the ’299 patent was asserted against Petitioner in a co-pending district court case captioned *TruePosition, Inc. v. Polaris Wireless, Inc.*, Case No. 1:12-cv-00646 (D. Del.). Pet. 3; Paper 23, 2.

C. *The ’299 patent*

The subject matter of the ’299 patent relates to locating wireless devices, also called mobile stations (“MS”), such as those used in analog or digital cellular systems, personal communications systems, enhanced specialized mobile radios, and other types of wireless communications systems. Ex. 1001, 1:23–28. The ’299 patent discloses that wireless location systems have been installed in more than 40,000 Base Transceiver Stations (BTS), providing emergency location coverage for wireless

subscribers across the continental United States. Ex. 1001, 1:62–67. According to the '299 patent, widespread deployment of these systems can reduce emergency response time, save lives, and save enormous costs because of the reduced use of emergency response resources. Ex. 1001, 2:6–9. In addition, the '299 patent discloses that surveys and studies have concluded that various wireless applications, such as location sensitive billing, fleet management, and others, will have great commercial value in coming years. Ex. 1001, 2:9–12.

Early work related to wireless location systems used time difference of arrival techniques to locate cellular telephones. Ex. 1001, 1:39–43. Over time, the cellular industry has increased the number of air interface protocols available for use by wireless telephones, increased the number of frequency bands in which wireless or mobile telephones may operate, and expanded the number of terms that refer or relate to mobile telephones to include “personal communications services,” “wireless,” and others. Ex. 1001, 1:51–57.

Air interface protocols use two categories of channels, where a channel is defined as one of multiple transmission paths within a single link between points in a wireless network. Ex. 1001, 2:19–22. A channel may be defined by frequency, by bandwidth, by synchronized time slots, by encoding, by shift keying, by modulation scheme, or by any combination of these parameters. Ex. 1001, 2:22–24. The first channel category, called a control or access channel, is used to convey information about the wireless telephone or transmitter, for initiating or terminating calls, or for transferring intermittent data. Ex. 1001, 2:25–28. The second channel category, known

as a voice or traffic channel, typically conveys voice or data communications over an air interface. Ex. 1001, 2:33–35.

There are some difficulties in integrating wireless location services with certain air interface protocols. For example, one protocol, Code-Division Multiple Access (“CDMA”), uses both frequency and code separation. Ex. 1001, 3:7–9. Because adjacent cell sites may use the same frequency sets, CDMA must operate under very careful power control, producing a situation known to those skilled in the art as the near-far problem, making it difficult for most methods of wireless location to achieve an accurate location. Ex. 1001, 3:9–13. In another example, networks that use Global System for Mobile Communications (“GSM”) protocol also present a number of potential problems to existing wireless location systems. Ex. 1001, 4:8–9. GSM networks use encryption on the traffic channel and use temporary nicknames (Temporary Mobile Station Identifiers (TMSID)) for security reasons, making it difficult to identify properly a desired MS in order to trigger or task wireless location systems. Ex. 1001, 4:11–15. Furthermore, an MS connected to GSM networks does not transmit signals to regional receivers except during call setup, voice/data operation, and call breakdown, reducing the number of opportunities to detect the MS. Ex. 1001, 4:15–21.

To solve these and other problems, methods and systems are disclosed that are employed by a wireless location system (WLS) for locating a wireless device operating in a geographic area served by a wireless communications system. Ex. 1001, 4:39–42. According to the ’299 patent, an exemplary method includes monitoring a set of signaling links of a

wireless communications system, and detecting at least one predefined signaling transaction occurring on at least one predefined signaling link. Ex. 1001, 4:42–46. Some examples of predefined signaling transactions are a called-number trigger, idle mobile location trigger, lists of all mobile devices recently in set of cells trigger, background location of all subscribers in set of cells trigger, and smart proximity identification trigger. Ex. 1001, 4:66–5:4. “Then, in response to the detection of the at least one predefined network transaction, at least one predefined location service is triggered.” Ex. 1001, 4:46–48.

D. Illustrative Claim

Each of claims 111 to 114 is an independent claim. Independent claim 111 is reproduced as follows:

111. A method for use by a wireless location system (WLS) for locating a wireless device operating in a geographic area served by a wireless communications system, comprising:

monitoring a set of predefined signaling links of the wireless communications system, wherein said predefined signaling links include at least an Abis link between a base transceiver station (BTS) and a base station controller (BSC), wherein said monitoring comprises passively monitoring said set of predefined links such that the operation of said wireless device and said wireless communications system is unaffected by said monitoring;

detecting at least one predefined network transaction involving a predefined trigger occurring on said Abis link, wherein said predefined network transaction comprises at least one of a mobile origination transaction and a mobile termination transaction; and

in response to the detection of said at least one predefined network transaction involving a predefined trigger, initiating at least one predefined location service.

Ex. 1001, 49:47–66.

II. ANALYSIS

For the challenged claims, Petitioner has to prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). In patent law, “the name of the game is the claim.” *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998). Therefore, we begin with claim construction, and then follow with specific analysis of the prior art.

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

1. Trigger

Each of claims 111 to 114 recites some form of trigger. For example, independent claims 111 and 113 each recite “predefined trigger,” and independent claims 112 and 114 each recite “dialed digit trigger” and “Mobile Station Identification (MSID) trigger.” Petitioner proposes construing “trigger” as “an indicium . . . that directly and but-for causes an action.” Pet. 15. Patent Owner proposes construing “trigger” as limited to

“location services,” because the claim context and Specification limit “triggers” to “location triggers.” PO Resp. 5–6. Petitioner counters that adopting Patent Owner’s construction would render, improperly, superfluous “initiating at least one predefined location service,” as recited in each of claims 111–114. Reply 1.

The Specification discloses the following concerning “trigger”:

More particularly, but not exclusively, the present invention relates to *the use of prescribed network message sequences in initiating, or triggering, location-based service applications* and re-use of existing radio interface parameters within such message sequences to provide low-accuracy location or to allow tuning of specialized receivers for high accuracy location for a particular subscriber.

Ex. 1001, 1:28–35 (emphasis added).

The use of encryption on the traffic channel and the use of temporary nicknames (Temporary Mobile Station Identifiers (TMSID)) for security render radio network monitors of limited usefulness for *triggering or tasking wireless location systems*.

Ex. 1001, 4:11–15 (emphasis added).

For example, while [U.S. Patent No. 6,782,264] describes a system that monitors communications between a base transceiver station and base station controller, and forwards mobile station (MS) information to a Wireless Location System for emergency call location, the advanced location-based services applications described herein *utilize additional network messages as triggering events and information sources for a wide variety of location-based services*.

Ex. 1001, 7:46–53 (emphasis added).

The following procedures are used for *location triggering* by the Radio Network Monitor (RNM) and/or Link Monitoring System (LMS). *A trigger for wireless location* consists of a transaction and a filter. If a transaction occurs and the filtering

matches, then a *location trigger* is generated. Each procedure contains the messaging needed for determination if a *potential location-triggering event* has occurred. The description of each message includes the fields for filtering by the preset rules for positive determination of the occurrence of a *location trigger*.

Ex. 1001, 13:6–15 (emphases added). Any of the above-described three types of triggers can be set to cause (trigger) a location estimation procedure. Ex. 1001, 22:64–66. The Specification then discloses the following concerning the content of a trigger:

Advanced *triggers* allow for radio or network events (corresponding to *specific messages or groups of messages* detectable by the LMS 11 or RNM 82) to generate high and low accuracy location estimates. *A triggering event, one that initiates a location estimation, may be a detection of a particular message or a field within a specific message.*

Ex. 1001, 26:36–42 (emphases added). Based on the above, we construe “trigger” as “an event, message, message field, or message sequence sufficient to initiate, cause, or task an action related to location-based services.” The “direct” and “but for” requirements in Petitioner’s proposed construction are not necessary to make sense of the claim, and are not required in the context of the Specification. Furthermore, the limiting of “trigger” to “location triggers” is appropriate in view of the fact that “trigger” is disclosed consistently in the Specification as being related to “location,” and does not render superfluous the “initiating” limitation, as a “trigger,” by itself, only need be capable of, but need not actually, “initiate” any action.

2. *Network Transaction*

Each of claims 111 to 114 recites “network transaction.” Petitioner proposes that “network transaction” be construed as follows:

“one or more messages on the signaling links of a network;” a genus that comprises the two subgenera: (i) Mobile Origination Transaction, and (ii) Mobile Termination Transaction, and the 14 species transactions listed in Table 1 [at column 23] of the ’299 Patent.

Pet. 15. The Specification discloses the following concerning “network transaction”: “The term ‘transaction’ refers to a *message or message sequence potentially useful to the advanced trigger invention.*” Ex. 1001, 12:66–67 (emphasis added). The Specification then discloses the following concerning the relationship between “network” and “transaction”:

Advanced triggers allow for radio or *network events (corresponding to specific messages or groups of messages detectable by the LMS 11 or RNM 82)* to generate high and low accuracy location estimates. A triggering event, one that initiates a location estimation, may be a detection of a particular message or a field within a specific message. *Network events (also called network transactions)* include: (1) Mobile originations/terminations; (2) SMS originations/terminations; (3) GPRS Mobile Attach/Detach events; (4) Location/ Routing Update (that is, a GSM “location” update for the purposes of mobility and roaming as opposed to a U-TDOA location event); (5) Handovers; and (6) Call Releases.

Ex. 1001, 26:36–47 (emphases added). We construe “network transaction” as “a message, message sequence, or group of messages detectable by a network.” Petitioner’s construction is overly restrictive. No persuasive reasoning is provided as to why the term must be regarded as a particular genus, especially a genus that includes a combination of species.

3. *Mobile Origination Transaction*

Independent claims 111 and 113 each recite “mobile origination transaction.” Petitioner proposes that “mobile origination transaction” be construed as follows:

a subgenus of ‘network transaction[’;] a genus that consists of exactly the three species: Mobile Originated Call Placed, Mobile Originated SMS Sent, and Mobile Originated Call Disconnect.

Pet. 16. The Specification sets forth an explicit definition of “mobile origination” as follows: “Mobile Origination is the act of a mobile device placing a call to the wireless network to begin a conversation or data session.” Ex. 1001, 23:31–33. Independent claims 111 and 113 recite that “mobile origination transaction” is a type of “network transaction.” Accordingly, we construe “mobile origination transaction” as “a message, message sequence, or group of messages that are detectable by a network, and correspond to the act of a mobile device placing a call to the wireless network to begin a conversation or data session.”

Petitioner’s construction is overly restrictive. No persuasive reasoning is provided as to why the term must be regarded as a particular genus, especially a genus that includes a precise number of species.

4. *Mobile Termination Transaction*

Independent claims 111 and 113 each recite “mobile termination transaction.” Petitioner proposes that “mobile termination transaction” be construed as follows:

subgenus of ‘network transaction[’;] a genus that consists of exactly the three species: Mobile Terminated Call Received,

Mobile Terminated SMS Received, and Mobile Terminated Call Disconnect.

Pet. 16. The Specification sets forth an explicit definition of “mobile termination” as follows: “Mobile termination is the act of a mobile device receiving a call from the wireless network to begin a conversation or data session.” Ex. 1001, 24:62–64. Independent claims 111 and 113 recite that “mobile termination transaction” is a type of “network transaction.” Accordingly, we construe “mobile termination transaction” as “a message, message sequence, or group of messages that are detectable by a network, and correspond to the act of a mobile device receiving a call from the wireless network to begin a conversation or data session.”

Petitioner’s construction is overly restrictive. No persuasive reasoning is provided as to why the term must be regarded as a particular genus, especially a genus that includes a precise number of species.

5. *Means for Monitoring*

Independent claims 113 and 114 each recite “means for monitoring a set of predefined signaling links of the wireless communications system . . . wherein said monitoring comprises passively monitoring said set of predefined links such that the operation of said wireless device and said wireless communications system is unaffected by said monitoring” (hereafter “means for monitoring”). Petitioner asserts that the recited “means for monitoring” should be construed in accordance with 35 U.S.C. § 112, sixth paragraph, and that the corresponding structure disclosed in the Specification for the recited “means” is a computer (Link Monitoring System 11) programmed to perform the recited “monitoring” function. Petitioner also asserts that because the recited function is not described in

the Specification as implemented by a computer without software, but instead by software implemented on a general purpose computer, the corresponding structure under § 112, sixth paragraph, is not the general purpose computer, but any disclosed algorithm for performing the claimed function. *Aristocrat Techs. Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (“computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm” (quoting *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1253 (Fed. Cir. 2005)) (internal quotation marks omitted)). The algorithm may be expressed “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.” *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376, 1385 (Fed. Cir. 2011) (quoting *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008)) (internal quotation marks omitted). Petitioner contends that the Specification does not disclose any algorithm for performing the recited “monitoring” function. Pet. 10–15; Reply 4.

Independent claims 113 and 114 each further define the recited “monitoring” function as follows: “wherein said monitoring comprises passively monitoring said set of predefined links such that the operation of said wireless device and said wireless communications system is unaffected by said monitoring.”

The Specification further discloses the following concerning “monitoring”:

As described in U.S. Pat. No. 6,782,264, it is possible to monitor the base transceiver station (BTS) to base station controller (BSC) link (e.g., the Abis link) for triggering messages and information fields. A *passive network monitor*, called the AMS (Abis Monitoring System) in the '264 patent and exemplified by monitoring the GSM Abis interface, has been extended in accordance with the present invention and is now called the Link Monitoring System, or LMS. The Link Monitoring System (LMS) can *monitor multiple cellular network data links simultaneously, scanning for data of interest*, and can detect particular messages or data fields within messages. Setting or tasking of messages or data fields of interest can take place at any time.

Ex. 1001, 10:32–44 (emphases added).

The Link Monitoring System allows for *passive, non-intrusive monitoring* of, for example, the GSM, GSM-R, GPRS, and UTMS systems. In the exemplary case of a GSM system, the LMS can *passively receive data streams* from the Abis (BTS-BSC) interface, the A (BSC-MSC) interface, and the GSM MAP interface (MSC-HLR, MSC-GMLC, MSC-GMSC and MSC-gsmSCF). The term GSM MAP (where MAP stands for Mobile Application Part) is used to refer to the global SS7 network and includes the C, D, E, F, H, Gc, Gf, Gr, Lh, and Lg interfaces.

In the exemplary case of a GPRS system, the LMS can *passively receive data streams* from the Abis (BTS-BSC or BTS-PCU) interface, the Gb (PCU-SGSN) interface, and the GSM MAP interface (SGSN-HLR, SGSN-GMLC and SGSN-gsmSCF). In the exemplary case of a UMRS system, the LMS can *passively receive data streams* from the Iub (Node B-RNC) interface, the Iu-CS (RNC-MSC) interface, the Iu-PS (RNC-SGSN) interface, and the GSM MAP interface (MSC-HLR,

MSC-GMLC and MSC-gsmSCF, SGSN-HLR, SGSN-GMLC and SGSN-gsmSCF).

The LMS can *search received data for particular messages or data fields within messages*. Setting or tasking of messages or data fields of interest can take place at any time.

Ex. 1001, 11:5–27 (emphases added). We discern the following algorithm from the aforementioned portions of claims 113 and 114, and the Specification: (1) passively receive data streams from a set of predefined links such that the operation of said wireless device and said wireless communications system is unaffected; and (2) scan or search the data streams for data of interest, such as particular messages or data fields within messages. *Finisar Corp. v. DirectTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (the algorithm may be expressed in “any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure” (citations omitted)). Accordingly, we construe the recited “means for monitoring” as corresponding to a computer that implements the aforementioned algorithm.

6. *Means for Detecting*

Independent claims 113 and 114 each recite “means for detecting at least one predefined network transaction involving a predefined trigger occurring on at least one of said predefined signaling links” (hereafter “means for detecting”). Petitioner asserts that the recited “means for detecting” should be construed in accordance with 35 U.S.C. § 112, sixth paragraph, and that the corresponding structure for the recited “means” should be an algorithm disclosed in the Specification for performing the recited “detecting” function implemented on a computer (Link Monitoring

System 11). Petitioner contends that the Specification does not disclose any algorithm for performing the recited “detecting” function. Pet. 10–15; Reply 4.

The Specification discloses the following concerning “detecting”:

The Link Monitoring System (LMS) can monitor multiple cellular network data links simultaneously, scanning for data of interest, and can *detect particular messages or data fields within messages*. Setting or tasking of messages or data fields of interest can take place at any time. *When a match occurs*, the LMS may be further triggered to perform a pre-set action, such as a write to storage memory or forwarding of the triggering message and (or) data fields to another system node.

Ex. 1001, 10:39–47 (emphases added).

The LMS can search received data for particular messages or data fields within messages. Setting or tasking of messages or data fields of interest can take place at any time. *When a match occurs*, the LMS is further triggered to perform a pre-set action, normally a write to storage memory or forwarding of the triggering message and (or) data fields to another system node.

Ex. 1001, 11:25–32 (emphasis added).

The term “filter” refers to pre-set rules in the LMS for analysis of the monitored data within the transaction. Filters can include MS identification, cell identification, location area codes, or differences between the monitored and expected pre-set information.

Ex. 1001, 13:1–5 (emphasis added). We discern the following algorithm from the aforementioned portions of the Specification: (1) setting a predefined trigger, the predefined trigger including particular messages or data fields within messages; and (2) matching or filtering-out a network transaction having the predefined trigger. Accordingly, we construe the

recited “means for detecting” as corresponding to a computer that implements the aforementioned algorithm.

7. *Means for Initiating*

Independent claims 113 and 114 each recite “means for initiating at least one predefined location service in response to the detection of said at least one predefined network transaction involving a predefined trigger” (hereafter “means for initiating”). Petitioner asserts that the recited “means for initiating” should be construed in accordance with 35 U.S.C. § 112, sixth paragraph, and that the corresponding structure for the recited “means” should be an algorithm disclosed in the Specification for performing the recited “initiating” function implemented on a computer (Link Monitoring System 11). Petitioner contends that the Specification does not disclose any algorithm for performing the recited “initiating” function. Pet. 10–15; Reply 4.

The Specification discloses the following concerning “initiating”:

A triggering event, one that initiates a location estimation, may be a detection of a particular message or a field within a specific message.

Ex. 1001, 26:39–42.

A NULL value SMS may be sent to the mobile or the asset finder location services application can *initiate an ATI message to the GMLC to initiate the location process.*

Ex. 1001, 28:50–53 (emphasis added).

If the received LAI code differs from that stored on the SIM, then the MS has entered another location area and *initiates a location update procedure to report the change to the Mobile Switching Center (MSC).*

Ex. 1001, 34:21–25 (emphasis added).

At step **842**, *the mobile can initiate a location update transaction with the wireless network*. The LMS will detect the location update event at step **843** and will *collect and deliver mobile identity data, the CGI, and RF channel to location to a location application, for example*.

Ex. 1001, 35:8–12 (emphases added).

A mobile can then *initiate a network transaction* at step **920**. The LMS can then detect the transaction at step **925** and *collect the MSID, Cell, and radio information from the transaction messaging and store that information into memory at step 930*.

Ex. 1001, 42:37–41 (emphases added). We discern this algorithm from the aforementioned portions of the Specification: (1) collecting and storing device information; and (2) sending the device information to a location application. Accordingly, we construe the recited “means for initiating” as corresponding to a computer that implements the aforementioned algorithm.

B. Principles of Law

To establish anticipation, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). While the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsissimis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990). “A reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention.” *In re*

Graves, 69 F.3d 1147, 1152 (Fed. Cir. 1995) (quoting *In re LeGrice*, 301 F.2d 929, 936 (CCPA 1962)) (internal quotation marks and emphasis omitted). In the context of anticipation, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).

Similarly, an obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). A prima facie case of obviousness is established when the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976). The level of ordinary skill in the art may be reflected by the prior art of record. See *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles.

C. *Alleged Anticipation by Zell*

Petitioner asserts that claims 111–114 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Zell, and relies on Declarations of Dr. Tarun Kumar Bhattacharya. Pet. 35–41; Reply 4–12 (citing Exs. 1005, 1037). Patent Owner disagrees with Petitioner’s assertions, and relies on the Declaration of Dr. Oded Gottesman. PO Resp. 6–29 (citing Ex. 2014).

1. Whether Zell is Prior Art

Zell has a publication date of July 1, 1999. The '299 patent issued from U.S. Patent Application No. 11/150,414 (Ex. 1034, "the '414 application"), which has a filing date of June 10, 2005. Patent Owner asserts that Zell is not prior art to claims 111–114 of the '299 patent under 35 U.S.C. § 102(b), because claims 111–114 claim the benefit of priority through a chain of continuing applications to U.S. Patent Application No. 09/227,764 (Ex. 2009, "the '764 application"), which has a filing date of January 8, 1999, i.e., before Zell's publication date. PO Resp. 6–16. Specifically, Patent Owner asserts that the '764 application provides sufficient written description support for the subject matter of claims 111–114, and asserts that each application in the chain of continuing applications has at least one inventor common with the immediately preceding application, and that such a showing is sufficient to claim the benefit of priority under 35 U.S.C. § 120.

Petitioner counters that Patent Owner has not met its burden of showing that it is entitled to the benefit of priority of the '764 application, because it has failed to meet numerous requirements for obtaining such priority under § 120. For example, Petitioner asserts that Patent Owner must show that each application in the chain of priority has sufficient written description support for the subject matter of claims 111–114, and that Patent Owner has failed to do so. Petitioner asserts further that § 120 requires that the two applications at issue must have at least one common inventor, which requirement the '414 application and the '764 application do not meet. According to the Petitioner, it is insufficient that each application in the

chain of continuing applications has at least one inventor common with the immediately preceding application in the chain. Reply 4–9.

a. Principles of Law

Section 120 (1999) prior to the implementation of the Leahy-Smith America Invents Act of 2011 (“AIA”) reads as follows²:

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, **which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application**, if filed before the patenting or abandonment of or termination of proceedings on the first application **or on an application similarly entitled to the benefit of the filing date of the first application** and if it contains or is amended to contain a specific reference to the earlier filed application.

Emphases added. Our reviewing court has stated the following concerning claiming the benefit of priority under § 120:

Under § 120, a patent is entitled to the priority date of an earlier filed application if (1) the written description of the earlier filed application discloses the invention claimed in the later filed application sufficient to satisfy the requirements of § 112; (2) **the applications have at least one common inventor**; (3) the later application is filed before the issuance or abandonment of the earlier filed application; and (4) the later application contains a reference to the earlier filed application. In addition, if the later filed application claims priority through

² As the '299 patent has a filing date before September 16, 2012, we refer to the pre-AIA version of § 120.

the heredity of a chain of applications, each application in the chain must satisfy § 112.

In re NTP, Inc., 654 F.3d 1268, 1277 (Fed. Cir. 2011) (emphases added) (citing *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed. Cir. 1997)).

If any application in the priority chain fails to make the requisite disclosure of the claimed subject matter under 35 U.S.C. § 112, first paragraph, the later-filed application is not entitled to the benefit of the filing date preceding the break in disclosure within the priority chain. *Hollmer v. Harari*, 681 F.3d 1351, 1355 (Fed. Cir. 2012). To gain the benefit of the filing date of an earlier-filed application under 35 U.S.C. § 120, each application in the chain leading back to the earlier application must comply with the written-description requirement of 35 U.S.C. § 112, first paragraph. *Zenon Envtl., Inc. v. U.S. Filter Corp.*, 506 F.3d 1370, 1378 (Fed. Cir. 2007); *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed. Cir. 1997); *In re Hogan*, 559 F.2d 595, 609 (CCPA 1977); *In re Schneider*, 481 F.2d 1350, 1356 (CCPA 1973).

b. Statutory Interpretation

As articulated by our reviewing court, the burden is on Patent Owner to show that it meets each of several requirements in order to claim the benefit of priority of a prior application under § 120. *In re NTP, Inc.*, 654 F.3d at 1277. Among them is the requirement that the applications have at least one common inventor. Fundamentally, Petitioner and Patent Owner disagree as to which applications in a chain of continuing applications must have a common inventor. To resolve this disagreement, we look to the language of the statute.

The statute begins by referring to two applications: “[a]n application for patent” and “an application previously filed.” We read “an application for patent” as the application with the claims at issue. The statute then refers for the first time to “the prior application” in the phrase “which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of **the prior application.**” Emphasis added. We read “the prior application” as referring to the “application previously filed.” The statute characterizes “the prior application” as the application with the accordable filing date. Thus, we read § 120 as indicating that a proper comparison of inventorship is between “an application for patent” and “the prior application” with the accordable filing date.

The above-discussed reading of the statute already indicates that it is the involved application and the earliest application in the priority chain which must share at least one common inventor. That is so because the earliest application in the priority chain is the prior application with the accordable filing date. The conclusion is further supported by consideration of statutory language immediately following that discussed above: “if filed before the patenting or abandonment of or termination of proceedings on **the first application or on an application similarly entitled to the benefit of the filing date of the first application.**”

Here, the statute introduces for the first time “the first application.” We read “the first application” as referring to the same “application previously filed” and the same “prior application” identified and discussed above, because the article “the” is used, and because use of the word “first”

introduces a temporal aspect, which is fulfilled by the earlier mentioned “application previously filed” and “prior application.” Thus, the covered scenario includes both a priority chain of two applications including just the earliest filed application with an accordable filing date and the involved application, and a priority chain of three or more applications, including the involved application, the earliest filed application with an accordable filing date, and one or more intervening applications. Because both situations are subject to the earlier portion of the statutory language discussed above, the requirement of comparing the involved application and the earliest application in the priority chain applies, regardless of whether there are intervening applications.

Our reading of § 120 is consistent with the instructions of the U.S. Court of Appeals for the Federal Circuit. For example, the Federal Circuit stated: “Under § 120, a patent is entitled to the priority date of an earlier filed application if . . . the applications have at least one common inventor.” *In re NTP, Inc.*, 654 F.3d at 1277. As there are only two applications mentioned, we read the Federal Circuit’s interpretation of § 120 that “the applications have at least one common inventor” as a requirement applicable to the application that issued into the patent and the “earlier-filed application” to which priority is claimed. In another example, the Federal Circuit held that the 1984 Amendment to § 120 clarified that where a later-filed application was a continuation-in-part application of an earlier-filed application, identity of inventorship in the two applications was not required to establish priority; overlapping inventorship was sufficient. *In re Chu*, 66 F.3d 292, 297 (Fed. Cir. 1995). What is instructive here is that, again, the

comparison for inventorship was directly between the later-filed application and the application with the accordable filing date. And although decided before the 1984 Amendment to § 120, we nevertheless find it instructive that the Court of Customs and Patent Appeals compared directly the inventive entity for claims on appeal with the inventive entity of a great-grandparent application to which appellant attempted to claim priority. *In re Herschler*, 591 F.2d 693, 697 (CCPA 1979); *see also Hillman v. Shyamala*, 55 USPQ2d 1220, 1221 (BPAI 2000) (informative) (“[s]ome overlap in inventorship is a requirement for benefit under 35 U.S.C. § 120”).

In addition, 37 C.F.R. § 1.78(c)(1) requires “[e]ach prior-filed application must name the inventor or a joint inventor named in the later-filed application as the inventor or a joint inventor.” In short, both § 120 and 37 C.F.R. § 1.78(c)(1) require the involved application and the earliest application in the priority chain to share at least one common inventor.

c. Analysis

There is no dispute that the ’414 application and the ’764 application do not share a common inventor. Louis A. Stilp, the sole inventor named in the ’764 application, is not identified as an inventor in the ’414 application that issued as the ’299 patent.

Furthermore, Patent Owner only provides an analysis as to how claims 111–114 have written description support in the ’764 application, but does not meet its burden of showing how each application in the chain of continuing applications leading back to the ’764 application complies with the written-description requirement of 35 U.S.C. § 112, first paragraph. Accordingly, we determine that Patent Owner has not shown that the ’414

application is entitled to the filing date of the '764 application. As a result, Zell is applicable prior art to claims 111–114.

2. *Zell (Exhibit 1008)*

Zell “relates to locating mobile telephones belonging to a mobile radio communication cellular network[,] such as networks of the GSM, DCS or PCS type.” Ex. 1008, 1:12–15. Communication between mobile telephone MS and “base station BTS_i selected under the GSM standard is done using a radio link.” Ex. 1008, 9:1–3. “The signals exchanged between the mobile telephone MS and the base station BTS_i comprise service signals” Ex. 1008, 9:3–5. The service signals include the following types of data: type of communication (call from the mobile telephone, or on the contrary received by the mobile telephone); nature of the communication (voice or data); and the identifier of the mobile telephone (IMEI – serial number). Ex. 1008, 9:10–29. The service signals are acquired by a signaling capture system or by a protocol analyzer installed at base station controller BSC of base station BTS_i. Ex. 1008, 11:16–19.

Zell discloses a location method including filtering service signals for both pre-location and fine location. Ex. 1008, 13:1–4. The filtering method is done using the protocol analyzer, and consists of isolating, at the interface between base stations BTS_i and base station controller BSC, a service signal including data that must be detected. Ex. 1008, 13:5–8. If the data sought are detected, all data relating to the service signal are transmitted for exploitation. Ex. 1008, 13:20–26. The exploitation of the data to obtain a coarse location, and to obtain the identifiers associated with the service signal, is done at a local station or equivalent module. Ex. 1008, 14:4–7.

3. *Independent Claims 111–114*

Petitioner asserts that independent claims 111–114 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Zell. Pet. 35–41; Reply 4–12. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how each claim limitation is met by Zell.

For example, independent claim 111 requires passively monitoring a predefined Abis link between a BTS and BSC and detecting a predefined network transaction. Zell discloses using a filtering method that consists of isolating, at the interface between base stations BTS_i and base station controller BSC, a service signal including data that must be detected. Ex. 1008, 13:5–8. Independent claim 111 requires further that the predefined network transaction is one of a mobile origination transaction and a mobile termination transaction. Zell discloses that the service signals include a type of communication, i.e., whether a call is from the mobile telephone, or on the contrary received by the mobile telephone. Ex. 1008, 9:15–17. Independent claim 111 requires additionally, in response to the detection, initiating a predefined location service. Zell discloses that if the data sought are detected, all data relating to the service signal are transmitted for exploitation. Ex. 1008, 13:20–26. The exploitation of the data to obtain a coarse location, and to obtain the identifiers associated with the service signal, is done at a local station or equivalent module. Ex. 1008, 14:4–7. Petitioner sets forth similar analyses for claims 112–114.

Patent Owner asserts that Zell does not disclose detecting of a predefined network transaction, as required by independent claim 111, because the “filtering” disclosed in Zell is a collection of all data from all

communications, as the sole purpose of the “filtering” in Zell is for reconstructing all simultaneous communications. According to Patent Owner, the collecting of all data in Zell is incompatible with, and thus cannot correspond properly to, the recited detecting of specific predefined data. PO Resp. 19–26. Patent Owner’s assertions are misplaced, however, as Zell does not disclose that its use of the “filtering” constitutes collection of all data. Patent Owner relies on the following disclosure of Zell:

The invention is characterized by the fact that the method includes a filtering step that is essential to enable the reconstruction of all simultaneous communications. The filtering step makes it possible to reconstruct a communication (or a plurality of specific communications) from the analyzed communication flow.

Ex. 1008, 5:6–12. If read in isolation, Patent Owner’s assertion appears to have merit. When read in conjunction with other portions of Zell, however, Patent Owner’s assertion is unpersuasive.

We read the term “filtering” as indicating a screening based upon the contents of one or more fields or other characteristics. *See Filtering Definition*, Dictionary of Communications Technology: Terms, Definitions and Abbreviations (Wiley 1998), *available at* <http://search.credoreference.com/content/entry/wileycommtech/filtering/0> (last visited Sept. 17, 2014) (“[t]he process by which a bridge, router, switch or other device examines frames, and forwards or blocks the frame based upon the contents of one or more of its fields”) (Ex. 3003); *Filter Definition*, Hargrave’s Communications Dictionary (Wiley 2001), *available at* <http://search.credoreference.com/content/entry/hargravecomms/filter/0> (last visited Sept. 17, 2014) (“[f]ilters may also be used to screen incoming mail

or newsgroups to just those sources the user wants to receive”) (Ex. 3004). Thus, a plain and ordinary meaning of the word “filtering” is contrary to Patent Owner’s position that “filtering” in Zell constitutes collecting all data. Our reading of “filtering” is consistent with other portions of Zell, which discloses “filtering said data on the basis of predetermined criteria” (Ex. 1008, 3:35–4:1) and using the filtering step to detect sought elements (Ex. 1008, 13:5–23). Specifically, both of these disclosures of Zell use “filtering” in a context more consistent with its plain and ordinary meaning, i.e., the narrowing down of data, and contrary to Patent Owner’s position that “filtering” in Zell constitutes collecting all data. Thus, we are not persuaded by Patent Owner’s assertion that filtering in Zell means collecting all data from all communications. Collecting all data from all communications is not screening based upon the contents of one or more fields or other characteristics, which is the proper meaning of “filtering” in Zell, and this proper meaning of “filtering” corresponds appropriately to the recited detecting of specific predefined data.

Patent Owner acknowledges that Zell may disclose “filtering said data on the basis of predetermined criteria” and detecting sought elements. Patent Owner asserts, however, that because Zell does not indicate the nature of the sought elements, Zell cannot meet the “detecting” limitation of claims 111–114, each of which requires identification of specific predefined network transactions. Patent Owner asserts further that while other portions of Zell may disclose certain service signal data which may correspond to the recited predefined network transactions, because Zell does not disclose any explicit connection between the sought elements and the service signal data,

a ground of unpatentability based on anticipation cannot be satisfied. As an initial matter, we are not persuaded that Zell does not disclose explicitly such a connection, as Zell discloses certain service signal data at page 13, lines 16–19, and then in the sentence that immediately follows, discloses that “[i]n the event the sought element is detected.” It is clear that the sought element would be within the service signal data disclosed in the immediately previous sentence.

Moreover, as noted above, “[a] reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention.” *In re Graves*, 69 F.3d at 1152 (citation and emphasis omitted). That means what matters is the understanding of one with ordinary skill in the art with respect to what has been described, and not the literal words of a reference. In an anticipation analysis, “it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d at 826. To that end, even without the aforementioned explicit connection between the sought elements and the service signal data, we are not persuaded by Patent Owner’s assertion that one of ordinary skill, when reading Zell, would not have understood that there is that connection between the sought elements disclosed in one portion of Zell, and the service signal data disclosed in another. Accordingly, given that Zell discloses “filtering said data on the basis of predetermined criteria” and detecting sought elements in one portion of Zell, we are not persuaded one of ordinary skill would not have made the

connection that the filtering/detecting operations would use, as the predetermined criteria, the service signal data disclosed in another portion of Zell.

4. *Conclusion*

After considering Petitioner's and Patent Owner's positions, as well as their supporting evidence, we determine that, by a preponderance of the evidence, Petitioner has shown that claims 111–114 are unpatentable under 35 U.S.C. § 102(b) as anticipated by Zell.

D. Alleged Obviousness over Abbadessa and Havinis

Petitioner asserts that claims 111–114 are unpatentable under 35 U.S.C. § 103(a) as over Abbadessa and Havinis. Pet. 41–48; Reply 12–15. Petitioner explains how a combination of Abbadessa and Havinis allegedly discloses or suggests the claimed subject matter, and also relies on the Declarations of Dr. Bhattacharya. Exs. 1005, 1037. Patent Owner disagrees with Petitioner's assertions and relies on the Declaration of Dr. Gottesman. PO Resp. 22–34 (citing Ex. 2014).

1. Abbadessa (Ex. 1011)

Abbadessa discloses a network discovery method for identifying data in GSM-type systems. Ex. 1011, 2:7–8. The network includes switching elements and radio elements, where mobile stations communicate with the radio elements. Ex. 1011, 2:8–13. The method includes monitoring signaling messages passed between the radio elements and the switching elements, and selecting a signaling message in accordance with predetermined selection criteria. Ex. 1011, 2:14–17. The method also includes extracting data from the signaling message, and correlating the

extracted data with previously extracted data. Ex. 1011, 2:17–19.

Monitoring equipment is used to monitor links on both an Abis interface and an A interface of a GSM network. Ex. 1011, 5:51–53.

The first action a mobile station takes on a new channel is establishing a link layer connection for signaling initial messages on the new channel. Ex. 1011, 13:43–45. The initial messages each carry data related to a reason initial access was triggered. Ex. 1011, 13:50–52. One possible reason for triggering the initial message is a service request (e.g., call set up, SMS, Supplementary Service Management). Ex. 1011, 13:52–57. The initial message is incorporated into two further signaling messages, the first on the Abis interface and the second on the A interface. Ex. 1011, 13:57–60. The first signaling message on the Abis interface is the monitored signaling message looked for by the present procedure. Ex. 1011, 14:1–2.

2. *Havinis (Exhibit 1012)*

Havinis is related to determining a location of a mobile station within a GSM cellular network. Ex. 1012, 1:9–23. An event that triggers location positioning of the mobile station includes a call originated by the mobile station. Ex. 1012, 6:19–21. Any triggering event can be defined by a requesting location application, and only upon occurrence of the event is the mobile station positioned. Ex. 1012, 6:44–46.

3. *Analysis*

Petitioner asserts that claims 111–114 are unpatentable under 35 U.S.C. § 103(a) as obvious over *Abbadessa* and *Havinis*. Pet. 41–48; Reply 12–15. In support of this asserted ground of unpatentability, Petitioner provides detailed explanations as to how a combination of

Abbadessa and Havinis allegedly discloses or suggests the claimed subject matter, and also relies on the Declarations of Dr. Bhattacharya. Exs. 1005, 1037.

For example, independent claim 111 requires passively monitoring a predefined Abis link between a BTS and BSC and detecting a predefined network transaction. Abbadessa discloses monitoring signaling messages passed through an Abis interface and selecting a signaling message in accordance with predetermined selection criteria. Ex. 1011, 2:14–19, 5:51–53, 14:1–2. Independent claim 111 requires further that the predefined network transaction is one of a mobile origination transaction and a mobile termination transaction. Abbadessa discloses extracting data from the signaling message, and correlating the extracted data with previously extracted data. Ex. 1011, 2:17–19. The extracted data may include one of five possible reasons for triggering an initial message that is now contained in the signal message, for example, a service request (e.g., call set up, SMS, Supplementary Service Management). Ex. 1011, 13:52–60.

Petitioner acknowledges that Abbadessa does not disclose, in response to the detection, initiating a predefined location service, as required by independent claim 111. For that, Petitioner cites Havinis for disclosing that an event that triggers location positioning of the mobile station includes a call originated by the mobile station. Ex. 1012, 6:19–21. For a rationale to combine Abbadessa and Havinis in the manner set forth in the Petition, Petitioner asserts as follows:

[B]oth Abbadessa and Havinis feature processing data in a GSM mobile cellular radio system. Ex. 1005, ¶ 85.

Thus, it would have been obvious to one of skilled in the art at the time of the purported invention to take the triggering event of mobile origination or of mobile termination taught by Havinis and apply it to the monitoring and detecting taught by Abbadessa. Ex. 1005, ¶ 86. The motivation to combine Havinis with Abbadessa is clear, as the mobile-originated call event or mobile-terminated call event taught in Havinis could have been derived from the monitored signals (*e.g.*, “initial messages” related to call setup) on the Abis link in Abbadessa. Ex. 1005, ¶ 87.

Instead of sending a message to MSC/VLR 360 to arm one or more positioning triggers, such a message could be sent to monitoring system 14 of Abbadessa instead. Ex. 1005, ¶ 88. And the matched data detected by monitoring system 14 of Abbadessa could be provided to MLC 370 in Havinis for initiating a location service. Ex. 1005, ¶ 89.

Pet. 42 (citing Ex. 1005 ¶¶ 85–89). Petitioner sets forth similar analyses for claims 112–114.

Patent Owner asserts that Abbadessa is directed to “identifying radio elements,” and not location, and thus cannot correspond properly to the recited “triggering” for location services. Patent Owner’s assertion is misplaced, as Abbadessa is cited only for triggering while Havinis is cited for disclosing location. Thus, a combination of Abbadessa and Havinis is cited for suggesting the recited “triggering” for location services. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references”).

Similarly, Patent Owner asserts that Havinis is directed to using upstream MSC/VLR network data and not Abis monitoring for location, and thus cannot correspond properly to the recited “triggering” for location

services. Again, Patent Owner's assertion is misplaced, because Abbadessa is cited for Abis monitoring and triggering and Havinis is cited for disclosing location. *In re Keller*, 642 F.2d at 426.

Patent Owner asserts further that Havinis discloses very little about how VLR position triggers are used to determine a location. Patent Owner's assertion is misplaced, as regardless of the amount of disclosure, Patent Owner admits that Havinis does disclose determining location based upon a position trigger. PO Resp. 38.

Patent Owner asserts additionally that Abbadessa does not disclose the recited "detecting," because no predetermined triggering criteria are set in Abbadessa. Patent Owner is incorrect, as Abbadessa discloses extracting data from the signaling message, and correlating the extracted data with *previously extracted data*. Ex. 1011, 2:17–19. The extracted data may include one of five possible reasons for triggering an initial message that is now contained in the signal message, for example, a service request (e.g., call set up, SMS, Supplementary Service Management). Ex. 1011, 13:52–60. It is this correlating step of Abbadessa that corresponds to the recited "triggering," and Abbadessa discloses explicitly that this correlating takes into account previously extracted data, which by definition is "predetermined."

Patent Owner asserts also that triggers in Abbadessa are for establishing initial access between an MS and BTS to set up a communication link, which has nothing to do with location. Patent Owner's assertions are misplaced because Havinis is cited for disclosing location, as noted above, and moreover the portion of Abbadessa cited for the recited

“detecting” is *after* the portion concerning establishing initial access between an MS and BTS to set up a communication link. Specifically, Abbadessa discloses the following: “the initial message sent by the MS is incorporated into two *further* messages, the first on the Abis interface and the second on the A interface.” Ex. 1011, 13:57–60 (emphasis added). It is the comparison of these two further messages, which is done after establishing initial access, which are cited as corresponding to the recited “detecting.”

Patent Owner asserts further that one of ordinary skill would not have been motivated to combine Abbadessa and Havinis in the manner described, because to do so would cause redundancy and expense. Specifically, Patent Owner asserts that combining Abbadessa and Havinis in the suggested manner would require adopting additional hardware and modifying a carrier’s standard network equipment, both of which are undesirable due to complexity and expense. For support, Patent Owner cites the Declaration of Dr. Gottesman (Ex. 2014). We are not persuaded by the argument because the law does not exclude from an obviousness determination solutions which are more complex and/or expensive. *KSR*, 550 U.S. at 417 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.”). Moreover, concerning expense specifically, the Federal Circuit wrote the following:

[T]he fact that the two [prior art disclosures] would not be combined by businessmen for economic reasons is not the same as saying that it could not be done because skilled persons in the art felt that there was some technological incompatibility that prevented their combination. Only the latter fact is telling on the issue of nonobviousness.

Orthopedic Equip. Co., Inc. v. United States, 702 F.2d 1005, 1013 (Fed. Cir. 1983). Patent Owner's assertions do not address why the proffered combination would not have been within the abilities of one of ordinary skill or would have been technologically incompatible. Indeed, Patent Owner even has not made either contention. Therefore, Patent Owner's assertions do not undermine the Petitioner's rationale to combine. *See* Ex. 1005 ¶¶ 85–89; Ex. 1037 ¶¶ 48–61.

Patent Owner asserts additionally that Abbadessa's correlating function is not a trigger, because it does not trigger any action. We are not persuaded, as Abbadessa discloses that the correlating function causes performance of other functions, as explained below:

By monitoring these two messages, and matching the initial message elements found within each, within a time window as described above, the CI for a particular TRX on a particular channel (labelled by the physical identifier given by the monitoring system) can be identified. 30 milliseconds has been found to be a suitable time window for this message pair. *Depending on the number of other steps within the network discovery method that have been successfully carried out, the CI can be allocated to a TRX identified by its TEI (Process 1), and can also be allocated to other TRXs aggregated as belonging to the same cell (Process 2).*

Ex. 1011, 14:10–21 (emphasis added).

Patent Owner asserts also that one of ordinary skill in the art would not have been motivated to combine Abbadessa and Havinis because they are directed to different problems in GSM technology, which encompasses a wide range of technologies. We are not persuaded, however, because Patent Owner has not shown why and how addressing different problems in GSM technology would have been beyond the abilities of one of ordinary skill in GSM technology, especially where the citations within both Abbadessa and Havinis are directed more narrowly to initiating events in response to other events within the boundaries of GSM technology. Indeed, Patent Owner does not assert that either Abbadessa or Havinis is non-analogous art.

Patent Owner asserts further that Petitioner's rationale for combining disparate elements of Abbadessa and Havinis includes merely summary conclusions as to what "could" be done, but does not provide an explicit motivation to do so, as required for a determination of obviousness. Patent Owner's assertions are misplaced, because an explicit teaching to combine is unnecessary in a proper obviousness analysis. *KSR*, 550 U.S. at 421–22 ("There is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art. We do not have a rigid test that requires an actual teaching to combine" (quoting *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1291 (Fed. Cir. 2006)) (internal quotation marks omitted)).

We weigh the evidence provided by Petitioner and Patent Owner concerning obviousness, and on the balance, determine that Petitioner's evidence is more persuasive. In particular, Abbadessa discloses using a correlating function to trigger other processes and Havinis discloses using a

generic event to trigger positioning, both in the realm of GSM technology. We determine that these express disclosures of Abbadessa and Havinis are persuasive particularly in supporting the conclusion that combining those two disclosures in the manner set forth by Petitioner would have been known, and thus obvious, to one of ordinary skill at the time of the invention.

Patent Owner asserts additionally that Dr. Bhattacharya's opinions were improperly made with hindsight reconstruction and biased interests, and that without Dr. Bhattacharya's testimony, Petitioner does not have sufficient facts on record to support a determination of obviousness. We note, however, the following:

Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper.

In re McLaughlin, 443 F.2d 1392, 1395 (CCPA 1971).

We are cognizant of Dr. Bhattacharya's position as Vice President of Petitioner with significant financial interests, and have weighed his testimony accordingly. Also, the rationale to combine, as articulated by Petitioner, stems from the prior art themselves as viewed from the perspective of one with ordinary skill in the art, without reliance on impermissible hindsight.

5. *Conclusion*

After considering Petitioner's and Patent Owner's positions, as well as their supporting evidence, we determine that, by a preponderance of the

evidence, Petitioner has shown that claims 111–114 are unpatentable under 35 U.S.C. § 103(a) as obvious over Abbadessa and Havinis.

E. Petitioner’s Motion to Exclude

Petitioner’s Motion to Exclude seeks to exclude portions of Dr. Gottesman’s Declaration (Ex. 2014). Paper 39. Patent Owner filed an Opposition (Paper 47), to which Petitioner filed a Reply (Paper 51).

The current situation does not require us to assess the merits of Petitioner’s Motion to Exclude. As discussed above, even having considered the identified evidence, we have concluded that Petitioner has demonstrated by a preponderance of the evidence that the challenged claims are unpatentable. Accordingly, Petitioner’s Motion to Exclude is *dismissed* as moot.

F. Patent Owner’s Motion to Exclude

Patent Owner’s Motion to Exclude seeks to exclude (1) Exhibits 1035, 1036, 1043, and 1044, and (2) the entirety of Dr. Bhattacharya’s Declarations (Exs. 1005, 1037). Paper 38. Petitioner filed an Opposition (Paper 48), to which Patent Owner filed a Reply (Paper 50).

1. Exhibits 1035, 1036, 1043, and 1044

Exhibits 1035, 1036, 1043, and 1044 (“the Exhibits”) are various non-patent literature submitted by Petitioner in support of its positions concerning the requirements for claiming the benefit of priority in a chain of continuation applications. Specifically, Exhibits 1035 and 1036 are directed to questions and answers from an examination taken to be admitted to practice before the U.S. Patent and Trademark Office, and Exhibits 1043 and 1044 are legal articles. Patent Owner seeks to exclude these exhibits

because (1) they are inadmissible hearsay under the Federal Rules of Evidence (“Fed. R. Evid.”) 801 and do not satisfy an exception under Fed. R. Evid. 802, (2) they lack authentication under Fed. R. Evid. 901, and (3) Exhibits 1043 and 1044 constitute improper expert testimony under Fed. R. Evid. 702. PO Mot. 4–11; PO Reply 1–3. Petitioner responds by asserting that the Exhibits are directed to authority concerning interpretations of the law, which is squarely within the province of the Board to consider, and that in the alternative, the Board take judicial notice of their reliability under Fed. R. Evid. 803. Pet. Opp. 2–4.

The Motion to Exclude Exhibits 1035, 1036, 1043, and 1044 is moot because we do not find the material therein which has been relied on by Petitioner to be sufficiently on point to have significance in our decision. Our decision does not rely in any part on the content of those exhibits. Accordingly, the Motion to Exclude is moot with respect to Exhibits 1035, 1036, 1043, and 1044.

2. *Dr. Bhattacharya’s Declarations (Exs. 1005, 1037)*

Patent Owner asserts that Dr. Bhattacharya’s Declarations should be excluded because they are hearsay. The assertion is without merit. In this proceeding, direct testimony ordinarily is not presented live, but taken by affidavit or declaration. 37 C.F.R. § 42.53(a). Cross-examination of the witness is provided by 37 C.F.R. § 42.51(a)(1)(ii). Indeed, Patent Owner did cross-examine Dr. Bhattacharya. Accordingly, the Declarations of Dr. Bhattacharya are not hearsay.

Patent Owner seeks further to exclude Dr. Bhattacharya’s Declarations on the basis that Dr. Bhattacharya, as an officer with significant

stock options and other interests in Petitioner, is a “quintessential paid, biased witness.” PO Reply. 4. Petitioner replies that Patent Owner ignores other indicia of reliability of Dr. Bhattacharya’s testimony. Pet. Opp. 4–5. Patent Owner’s assertions are misplaced, as the items they note go to the weight of Dr. Bhattacharya’s testimony, and not its admissibility. Indeed, as indicated *supra*, we have considered and weighed the alleged “bias” of Dr. Bhattacharya’s testimony in its analysis of the grounds of unpatentability.

Accordingly, for the aforementioned reasons, we deny Patent Owner’s Motion to Exclude concerning Dr. Bhattacharya’s Declarations.

3. Conclusion

Patent Owner’s Motion to Exclude Exhibits 1035, 1036, 1043, and 1044 is *dismissed* as moot. Patent Owner’s Motion to Exclude Exhibits 1005 and 1037 is *denied*.

III. CONCLUSION

Petitioner has proved, by a preponderance of the evidence, that claims 111–114 of the ’299 patent are unpatentable under 35 U.S.C. § 102(b) as anticipated by Zell.

Petitioner has proved, by a preponderance of the evidence, that claims 111–114 of the ’299 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over Abbadessa and Havinis.

Petitioner’s Motion to Exclude is *dismissed*.

Patent Owner’s Motion to Exclude is *dismissed-in-part* and *denied-in-part*.

IV. ORDER

It is

ORDERED that Petitioner has demonstrated by a preponderance of the evidence that claims 111–114 of U.S. Patent No. 7,783,299 B2 are unpatentable;

FURTHER ORDERED that Petitioner’s Motion to Exclude is *dismissed*;

FURTHER ORDERED Patent Owner’s Motion to Exclude is *dismissed-in-part* and *denied-in-part*; and

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

IPR2013-00323
Patent 7,783,299 B2

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