

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner,

v.

HUAWEI TECHNOLOGIES CO., LTD.,
Patent Owner.

Case No. IPR2017-01474
U.S. Patent No. 8,639,246 B2

PATENT OWNER'S NOTICE OF APPEAL

Pursuant to 35 U.S.C. §§ 141, 142, and 319, and in accordance with 37 C.F.R. §§ 90.2(a) and 90.3, Patent Owner Huawei Technologies Co., Ltd., ("Patent Owner") appeals to the United States Court of Appeals for the Federal Circuit from the final written decision of the Patent Trial and Appeal Board ("Board") in this case entered on December 11, 2018 (Paper No. 42), and from all underlying orders, decisions, rulings and opinions regarding the *inter partes* review of U.S. Patent No. 8,639,246 ("246 patent"). A copy of the final written decision is attached.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), Patent Owner indicates that the issues on appeal may include, but are not limited to: the Board's determination(s) of unpatentability of claims 1-20 of the '246 patent under 35 U.S.C. § 103, the construction(s) of those claims, the process by which the Board reached its determination(s), and any finding or determination supporting or related to these issues, as well as all other issues decided adversely to Patent Owner in any orders, decisions, rulings and opinions.

Patent Owner is filing a copy of this Notice of Appeal with (i) the Director of the U.S. Patent and Trademark Office, (ii) electronically with the Board, and (iii) the Clerk's Office for the U.S. Court of Appeals for the Federal Circuit, along with the required docketing fee.

Dated: January 31, 2019

Respectfully Submitted,

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CERTIFICATE OF FILING

I certify that the foregoing was filed electronically with the Board through the PTAB E2E System, and a paper copy was served by hand-delivery on January 31, 2019, with the Director of the United States Patent and Trademark Office, at the following address:

Director of the U.S. Patent and Trademark Office
c/o Office of the General Counsel
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

I further certify that a true and correct copy of the foregoing Notice of Appeal, along with the required filing fee, was filed electronically with the Court of Appeals for the Federal Circuit via CM/ECF on January 31, 2019. Per Fed. Cir. Rule 15(a)(1), one copy of this Notice of Appeal will be hand-delivered to the Clerk's office of the United States Court of Appeals for the Federal Circuit on January 31, 2019, at the following address:

Clerk of Court
United States Court of Appeals for the Federal Circuit
717 Madison Place NW
Washington, DC 20439

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I hereby certify that on January 31, 2019, I caused to be served a true and correct copy of the foregoing by electronic mail on the following counsel:

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HUAWEI TECHNOLOGIES CO., LTD,
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Case IPR2017-01474
Patent 8,639,246 B2

Before TREVOR M. JEFFERSON, MICHELLE N. WORMMEESTER, and
JOHN F. HORVATH, *Administrative Patent Judges*.

JEFFERSON, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Samsung Electronics Co., Ltd. (“Petitioner”)¹ filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–20 of U.S. Patent No. 8,639,246 B2 (Ex. 1001, “the ’246 patent”). Huawei Technologies Co., Ltd. (“Patent Owner”) filed a Preliminary Response (Paper 10, “Prelim. Resp.”) and we instituted an *inter partes* review of all the challenged claims. Paper 12 (“Inst. Dec.”); see 35 U.S.C. § 314(a).

Following institution, Patent Owner filed a Patent Owner Response (Paper 21, “PO Resp.”) and Petitioner filed a Reply (Paper 27, “Pet. Reply”). With our authorization, Patent Owner subsequently filed a Sur-Reply (Paper 35, “PO Sur-Reply”). Patent Owner also filed a Motion to Exclude (Paper 32), which we address below. On September 27, 2018, we conducted an oral hearing. A copy of the transcript (Paper 41, “Tr.”) is included in the record.

We have jurisdiction under 35 U.S.C. § 6(b). For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–20 of the ’246 patent are unpatentable. This final written decision is issued pursuant to 35 U.S.C. § 318(a).

B. Related Proceedings

The parties identify one related district court case: *Huawei Technologies Co. v. Samsung Electronics Co.*, Case No. 3:16-cv-02787 (N.D. Cal.). Pet. 2; Paper 5, 1. Patent Owner further identifies two related requests for *inter partes* reviews: IPR2017-01471 and IPR2017-01475.

¹ Petitioner identifies Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Research America as real parties in interest.

C. The '246 Patent (Ex. 1001)

The '246 Patent, titled “Method, Terminal, and System for Cell Reselection,” is directed to cell reselection. Ex. 1001, [54], [57], 1:23–25. In prior art LTE (Long Term Evolution or 4G) systems, a terminal decides what cell to camp on according to the priority. *Id.* at 1:49–53; *see* Pet. 8 (discussing cell reselection). The terminal measures a frequency/system having a higher priority, and if that measurement meets the terminal’s cell reselection criteria, it will reselect that cell. *Id.* at 1:52–60. Otherwise, the terminal will measure a cell having a lower priority. *Id.* The '245 patent states that:

If a terminal camps on a cell having a lower priority, a cell having a higher priority might be measured periodically. The priority-based cell reselection method may reduce the measurements by the terminal and save power energy. Meanwhile, a good priority setting may lead to load balance.

Ex. 1001, 1:58–63.

The '246 patent discloses having a mobile station receive from the LTE system a dedicated priority list for the particular mobile station. *Id.* at Abstract, 2:11–39, 2:56–3:9. When necessary, a mobile station performs a cell reselection according to the dedicated priority list when the terminal camps on a cell of a second non-LTE system, eliminating the need for the second system to establish the dedicated priority list when moving from an LTE system to a non-LTE system. *Id.* at Abstract, 2:11–39, 2:61–3:9.

D. Illustrative Claims

Petitioner challenges claims 1–20 of the '246 patent, with claims 1 and 11 being independent. Claims 1 and 11 are illustrative and reproduced below:

1. A method for inter-system cell reselection, comprising:

[1A] when a terminal is in a cell of a Long Term Evolution (LTE) system, receiving, by the terminal, a message including a dedicated priority list from the LTE system; and

[1B] when the terminal camps on a cell of a non-LTE system, performing, by the terminal, the inter-system cell reselection in accordance with the dedicated priority list before a valid time of the dedicated priority list expires.

11. A terminal comprising:

[11A] a receiver; and

[11B] a processor, wherein

[11C] when the terminal is in a cell of a Long Term Evolution (LTE) system, the receiver is configured to receive a message including a dedicated priority list from the LTE system; and

[11D] when the terminal camps on a cell of a non-LTE system, the processor is configured to perform inter-system cell reselection in accordance with the dedicated priority list before a valid time of the dedicated priority list expires.

Ex. 1001, 11:56–11:63, 12:27–37 (bracketed numbering added).

E. The Instituted Grounds

Trial was instituted on each of Petitioner's asserted grounds of unpatentability of claims 1–20 of the '246 (Inst. Dec. 17; *see* Pet. 4–5):

References	Basis	Claims Challenged
R2-075161 ² and R2-080338 ³	§ 103(a)	1–20
R2-075161, R2-080338, and Eerolainen ⁴	§ 103(a)	11–20

II. ANALYSIS

A. Patent Owner’s Motion to Exclude

Patent Owner moves to exclude portions of R2-075161 (Petitioner’s Exhibit 1005) and R2-080338 (Petitioner’s Exhibit 1007). Paper 32, 1–2 (“PO Mot.”). Patent Owner also moves to exclude certain declaration testimony of Petitioner’s expert Dr. Yaqub, namely, paragraphs 54 through 59 of Exhibit 1012, cited for public availability. *Id.* at 2. Petitioner opposes Patent Owner’s motion to exclude. Paper 36 (“Pet. Opp.”). In response, Patent Owner filed a reply to Petitioner’s opposition to the motion to exclude. Paper 38. Having reviewed the parties’ arguments and evidence, we deny Patent Owner’s motion to exclude.

1. Declaration of Dr. Yaqub (Exhibit 1012)

In paragraphs 54 through 59 of his declaration, Dr. Yaqub opines on the authenticity, public availability, and publication dates of R2-075161 and R2-080338. *See* Ex. 1012 ¶¶ 54–59. Dr. Yaqub bases his opinion, in part, on his ability to find these documents on the 3GPP ftp (file transfer protocol)

² NTT DoCoMo, Inc., *Inter-frequency/RAT idle mode mobility control*, 3GPP TSG RAN WG2 #60, Tdoc-R2-075161 (Nov. 2007) (Ex. 1005, “R2-075161”).

³ Nokia Corp. & Nokia Siemens Networks, *Reselection scenarios for multi-RAT terminals in Rel-8*, 3GPP TSG-RAN WG2 Meeting #60bis, R2-080338 (Jan. 2008) (Ex. 1007, “R2-080338”).

⁴ U.S. Pub. No. 2008/0176565, published July 24, 2008 (Ex. 1006, “Eerolainen”).

server and listserv server, and the time stamps associated with these documents on those servers. *Id.* His testimony includes screenshots of portions of the 3GPP ftp server webpage listing R2-075161 and R2-080338, and URLs (universal resource locators) pointing to R2-075161 and R2-080338 on the 3GPP ftp server. *Id.*

On December 21, 2017, Patent Owner objected to Dr. Yaqub's declaration to the extent that it "rel[ies] on web pages that were not filed as exhibits in this proceeding," and asserted that "[t]hose web pages lack authentication and contain hearsay." Paper 14, 1–2. On January 8, 2018, Petitioner provided the webpages to Patent Owner in the form of supplemental evidence. *See* Paper 15, 1; *see also* 37 C.F.R. § 42.64(b)(2). On January 11, 2018, Patent Owner objected to the webpages "as lacking authentication and containing hearsay." Paper 15, 1.

Patent Owner moves to exclude paragraphs 54 through 59 of Dr. Yaqub's declaration "because they rely on unauthenticated webpages for the truth of the matter asserted in those webpages." PO Mot. 3. Patent Owner argues that the webpages lack authentication and contain inadmissible hearsay on which Dr. Yaqub relied in determining when R2-075161 (Exhibit 1005) and R2-080338 (Exhibit 1007) were publicly accessible on the 3GPP ftp server. *Id.* at 3–4. Petitioner argues that the webpages to which Patent Owner objects are self-authenticating and have been authenticated by Dr. Yaqub's testimony regarding their distinctive characteristics. Pet. Opp. 3–4. Petitioner further argues that the webpages "are exempt from the rule against hearsay under Federal Rules of Evidence 803(6) and 807." *Id.* at 5. Patent Owner's reply asserts that Dr. Yaqub is not qualified to certify the authenticity of the webpages as regularly kept

business records because “[h]is declaration is silent as to his role in the [3GPP] group’s recordkeeping or his role, if any, in maintaining the accuracy of the 3GPP webpages.” Paper 38, 2.

Under Federal Rule of Evidence 803(6), records of a regularly conducted activity are not hearsay, provided the opposing party has not established that the source of information or the method or circumstances of their preparation indicate a lack of trustworthiness, and the party offering the records establishes through the testimony of a qualified witness that the records are (a) made at or near the time from information transmitted by someone with knowledge, (b) kept in the course of a regularly conducted business activity, and (c) made as a regular practice of that activity. Fed. R. Evid. 803(6). Under Federal Rule of Evidence 902(11), such records are self-authenticating, provided (a) they are originals or copies that meet the requirements of Rule 803(6)(a)–(c) as shown by certification of a qualified person, (b) notice of intent to offer the records is given to the opposing party before a hearing, and (c) the records and certifications are made available to the opposing party so that the opposing party has a fair opportunity to challenge them. *Id.* at 902(11).

We note that, “[b]ecause of the general trustworthiness of regularly kept records and the need for such evidence in many cases, the business records exception [to the hearsay rule] has been construed generously in favor of admissibility.” *Conoco Inc. v. Dept. of Energy*, 99 F.3d 387, 391 (Fed. Cir. 1996). Moreover, “the ‘custodian or other qualified witness’ who must authenticate business records need not be the person who prepared or maintained the records, or even an employee of the record-keeping entity, as long as the witness understands the system used to prepare the records.” *Id.*

Lastly, “documents that are standard records of the type regularly maintained by firms in a particular industry may require less by way of foundation testimony than less conventional documents proffered for admission as business records.” *Id.* at 392; *see also Gjokaj v. U.S. Steel Corp.*, 700 F. App’x 494, 502 (6th Cir. 2017) (finding a business record certified by a qualified witness is self-authenticating under Federal Rule of Evidence 902(11)).

We are persuaded by Dr. Yaqub’s testimony and find that the 3GPP webpages on which he relied in his declaration are authentic, and that their contents, including the publication dates of R2-075161 and R2-080338, are not hearsay. Dr. Yaqub is a qualifying witness for the purposes of Rules 806(b) and 902(11). *See Conoco*, 99 F.3d at 391; *see also Gjokaj*, 700 F. App’x at 502. We credit the facts qualifying Dr. Yaqub. Notably, from 1998 until 2010, Dr. Yaqub worked for various entities having an interest in developing or understanding 3GPP technologies. Ex. 1012 ¶¶ 7–12. During that time, he both participated in and contributed to 3GPP standards setting organizations, was an active member in various 3GPP plenary level and working group level meetings, and served as a rapporteur of Technical Feasibility Report TR 33.817. *Id.* ¶¶ 8, 11.

In addition, Dr. Yaqub testifies that 3GPP “produce[s] reports and specifications that define technologies covering cellular communications networks.” *Id.* ¶ 19. The specifications are “contribution-driven by 3GPP member companies,” and produced via regular and quarterly plenary meetings “where member companies’ contributions, draft specification[s], and other discussion documents are presented for approval.” *Id.* ¶ 20. Dr. Yaqub further testifies that 3GPP follows “[a] well-established process . . .

for capturing accepted proposals and changes in Technical Specifications (TS) and Technical Reports (TR).” *Id.* ¶ 24. This process includes a file naming convention so that “changes that are brought into the standard, from the past, present, and in the future, are well documented and controlled.” *Id.* ¶ 28 (quoting Ex. 1016, 5). 3GPP documents are stored on 3GPP’s ftp server in zip-compressed format, where the filename of the zip file is the same as the name of the source document. *Id.* ¶ 29 (citing Ex. 1016 § 5A). Member-contributed documents (“TDocs”) are assigned unique document numbers, and “members upload these documents to 3GPP’s public FTP server before, during, and after Working Group meetings.” *Id.* ¶ 30. The documents are uploaded “[s]oon after the end of the meeting—the same day, or at worst within a few days.” *Id.* ¶ 37. The “TDocs are publically-available and unrestricted on the online FTP server,” and are “openly published and no password is needed to access any information on the 3GPP website.” *Id.* ¶ 30; *see also* Ex. 1016 § 7.6. Documents uploaded to the 3GPP ftp server “receive a date and time stamp.” Ex. 1012 ¶ 33. The documents are “retained on the public 3GPP server indefinitely, and the date and time stamp can be relied upon to indicate when the upload occurred.” *Id.* ¶¶ 33, 37.

Based on the foregoing testimony, we find that Dr. Yaqub “understands the system used to prepare [3GPP] records,” and is a “qualified witness” or “qualified person” as those terms are used in Federal Rules of Evidence 803(6) and 902(11). *See Conoco*, 99 F.3d at 391; *see also Gjokaj*, 700 F. App’x at 502.

For the particular documents relevant to this proceeding, namely, R2-075161 and R2-080338, Dr. Yaqub testifies that he “navigated to the

relevant file” on the 3GPP ftp server and “confirm[ed] that it had been correctly uploaded.” Ex. 1012 ¶ 51. Dr. Yaqub provides the URLs that he used to navigate to the documents and testifies that he recognizes the documents located by those URLs as “true and correct” copies. *Id.* ¶¶ 54, 57. Dr. Yaqub also provides screenshots of the 3GPP ftp server directories that include the identically named zip files containing R2-075161 and R2-080338. *Id.* As discussed above, when Patent Owner objected to these screenshots, Petitioner served complete printouts of the 3GPP ftp server directories from which Dr. Yaqub took the screenshots. Paper 14, 1–2; Pet. Opp. 4–5; Exs. 1025–1028; *see also* Paper 15, 1.

Patent Owner provides no evidence that the 3GPP ftp server, the webpages disclosing the contents of the ftp server directories relied on, or the methods or circumstances by which those webpages or the contents disclosed in those webpages were prepared lack trustworthiness. *See* PO Mot. 2–4; Paper 38, 1–4. Dr. Yaqub, by contrast, testifies that the contents of the 3GPP ftp server directories (webpages) on which he relied were made and kept in the course of 3GPP’s regularly conducted business activity, and were made at or near the times indicated by their upload date and time stamps from information transmitted by 3GPP contributing members. *See* Ex. 1012 ¶¶ 24, 28–30, 33, 37, 54, 57. Dr. Yaqub’s declaration and the webpages (3GPP ftp server directory printouts) on which he relied were served on Patent Owner with notice of intent to use them, and Patent Owner was provided with the opportunity to challenge the webpages, their content, and Dr. Yaqub’s testimony regarding how that content and the webpages disclosing that content were created. *See* 37 C.F.R. § 42.51(b)(1)(ii).

Based on the evidence presented, as summarized above, we find that Dr. Yaqub’s testimony sufficiently authenticates the 3GPP ftp server directories (webpages) as well as their contents such that they are admissible under Federal Rule of Evidence 902(11) and are not hearsay under Federal Rule of Evidence 803(6). Accordingly, we deny Patent Owner’s motion to exclude paragraphs 54 through 59 of Dr. Yaqub’s declaration (Exhibit 1012).

Petitioner also argues that the 3GPP ftp server directories (webpages) on which Dr. Yaqub relies can be authenticated under Federal Rule of Evidence 901(b)(4), and that their contents are not hearsay under Federal Rules of Evidence 807. Pet. Opp. 3–5, 7–9. Patent Owner argues to the contrary. Paper 42, 1–4. Because we find that Petitioner has shown that the webpages are self-authenticating business records and that their contents are not hearsay, we need not address these issues. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on a single dispositive issue “not only [to] save the parties, the [agency], and [the reviewing] court unnecessary cost and effort,” but also to “greatly ease the burden on [an agency] faced with a . . . proceeding involving numerous complex issues and required by statute to reach its conclusion within rigid time limits”).

2. *R2-075161 (Exhibit 1005) and R2-080338 (Exhibit 1007)*

Patent Owner moves to exclude as hearsay portions of R2-075161 (Exhibit 1005) and R2-080338 (Exhibit 1007) “[t]o the extent Petitioner relies on the dates within Exhibit 1005 [and Exhibit 1007] for the purported truth of the matter asserted to show the date of public accessibility of Exhibit 1005 [and Exhibit 1007].” PO Mot. 1–2. Petitioner argues that the contents

of R2-075161 and R2-080338 are “exempt from the rule against hearsay under Federal Rules of Evidence 803(6) and 807.” Pet. Opp. 9; *see also id.* at 9–12. Patent Owner argues that “Dr. Yaqub’s role as a ‘participant in 3GPP’ is insufficient to render him a qualified individual to support admission under FRE 806(b),” and that “FRE 807 is an ‘exceptional’ remedy that Petitioner has not justified in this case.” Paper 42, 4–5.

For the reasons discussed above with respect to Exhibit 1012, we find that Dr. Yaqub is a qualified witness who has authenticated R2-075161 and R2-080338, and established their trustworthiness, so that they are not hearsay under Fed. R. Evid. 803(6). Patent Owner relies on *Kolmes v. World Fibers Corp.*, 107 F.3d 1534, 1542–43 (Fed. Cir. 1997), to argue that Dr. Yaqub is not a qualified witness. Paper 32, 4. We disagree. In *Kolmes*, a witness who “testified that he had seen [certain] documents while attending a meeting,” but failed to “testify concerning the record-keeping process related to them” was found not to be a “qualified witness” under Federal Rule of Evidence 803(6). *Kolmes*, 107 F.3d at 1542–43. In the instant case, however, Dr. Yaqub has provided extensive testimony regarding 3GPP’s record-development and record-keeping process, including the fact that member-contributed documents uploaded to the 3GPP ftp server are indefinitely maintained on that server as of their upload dates. *See* Ex. 1012 ¶¶ 24, 28–30, 33, 37, 54, 57. Dr. Yaqub is, therefore, a qualifying witness. *See Conoco*, 99 F.3d at 391. Moreover, regarding R2-075161 and R2-080338 in particular, Dr. Yaqub testifies that these documents are “true and correct” copies of the documents uploaded to the 3GPP ftp server as of their upload dates, and provides specific URLs to the

3GPP ftp server by which they are downloadable. *Id.* ¶¶ 54, 57.

Accordingly, for the reasons given, we find that R2-075161 (Exhibit 1005) and R2-080338 (Exhibit 1007) are admissible business records under Federal Rule of Evidence 902(11), and that their contents are not hearsay under Federal Rule of Evidence 803(6). We, therefore, deny Patent Owner’s motion to exclude any portions of Exhibits 1005 and 1007. Moreover, because we find Exhibits 1005 and 1007 are admissible and not hearsay under Federal Rule of Evidence 803(6), we do not address the parties’ additional arguments (*see* Pet. Opp. 10–12; Paper 32, 5) regarding whether these documents are admissible and not hearsay under Federal Rule of Evidence 807. *See Beloit*, 742 F.2d at 1423.

B. Claim Interpretation

The claim construction standard applicable to this *inter partes* review proceeding is the broadest reasonable interpretation in light of the patent specification. *See* 37 C.F.R. § 42.100(b) (2016); *Cuozzo Speed Techs. LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).⁵ Under this standard, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir.

⁵ The revised claim construction standard for interpreting claims in *inter partes* review proceedings as set forth in the final rule published October 11, 2018, does not apply to this proceeding, because the new “rule is effective on November 13, 2018 and applies to all IPR, PGR and CBM petitions filed on or after the effective date.” *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51340 (Nov. 13, 2018) (to be codified at 37 C.F.R. pt. 42).

2007). Only those terms that are in controversy, however, need to be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

Petitioner provides a proposed interpretation of “camps/camping” as recited in claims 1, 2, 7, 14, and 15. Pet. 13–14. Petitioner also contends that processor (claims 11, 13, and 16) requires no construction, in accordance with Patent Owner’s position in related litigation. Pet. 14

Patent Owner responds that “[t]his term [camps/camping] does not require express interpretation to resolve any controversy in this proceeding, so there is no need for the Board to provide a construction.” PO Resp. 8. Patent Owner also argues that the scope of “processor” is not relevant to the issues raised in the Petition and need not be decided. *Id.* at 9.

In light of the parties’ arguments, we agree with Patent Owner and determine that no term requires express interpretation to resolve any controversy in this proceeding.

C. Legal Standard

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

In that regard, 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*, 550 U.S. at 418; *see also Translogic*, 504 F.3d at 1259, 1262 (quoting *KSR*, 550 U.S. at 418). On the record before us, we find that the level of ordinary skill in the art is 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).

D. Prior Art Cited

1. R2-075161 (Ex. 1005)

R2-075161 is a Third Generation Partnership Project (3GPP) paper that relates to cell reselection. *See* Ex. 1005, 1 (“inter-frequency/RAT^[6] mobility control in idle mode”). According to the paper, “[t]he UE specific inter-frequency control should be based on absolute priorities.” *Id.* at 2. The paper states that UE specific control information may be created by the eNB. *Id.* Such information “would include a list of frequency layers/RATs that the UE should handle with specific priorities.” *Id.* The paper also states that, “since the load conditions maybe temporal, it should be possible to set an expiry timer for the UE specific control information.” *Id.* Upon expiration of that timer, the UE discards the UE specific control information and proceeds with some other cell reselection process. *Id.*

⁶ RAT stands for Radio Access Technology. *See, e.g.,* Pet. v; Ex. 1003 ¶ 52. Petitioner explains that a RAT refers to a cellular system, such as LTE, UMTS, and GSM. Pet. 28.

2. *R2-080338 (Ex. 1007)*

R2-080338 is also a 3GPP paper, which discusses reselection scenarios for multi-RAT terminals. Ex. 1007, 1. R2-080338 explains that “a UE located in an area where a E-UTRAN, a UTRAN and a GERAN network coexist will use the priorities algorithm to determine which RAT it should be camping on.” *Id.* According to one scenario, neither the UTRAN network nor the GERAN network provides the mobile (i.e., terminal or UE) with the necessary parameters (i.e., priorities and thresholds) for the priorities algorithm. *Id.* at 3. The paper proposes that one option in that scenario is to have the E-UTRAN network instead provide the parameters, which the mobile in turn stores and uses for the priority algorithm. *Id.* (discussing “Option 3”).

3. *Eerolainen (Ex. 1006)*

Eerolainen also relates to cell reselection. *See* Ex. 1006 ¶¶ 78–84. Eerolainen’s system includes a wireless network that communicates with a UE via a Node-B (base station). *Id.* ¶ 63. The UE includes a data processor and a memory that stores a program with program instructions. *Id.* When the UE executes the instructions, the UE will operate according to the embodiments described. *Id.*; *see also* ¶¶ 78–84 (describing cell reselection). Eerolainen teaches that its invention may be implemented by computer software executable by the UE’s data processor, or by hardware, or by a combination of software and hardware. *Id.* ¶ 67.

E. Obviousness based on R2-075161 and R2-080338

Petitioner asserts that claims 1–20 of the ’246 patent would have been obvious over R2-075161 and R2-080338. Pet. 23–52. For the reasons explained below, we determine that Petitioner’s argument and evidence

establish by a preponderance of the evidence that claims 1–20 would have been obvious over R2-075161 and R2-080338.

1. Independent Claims 1 and 11

Claim 1 recites a method for inter-system cell reselection, and Petitioner cites R2-075161 as discussing a priority approach to inter-system cell reselection. Pet. 27; Ex. 1005, 1; Ex. 1003 ¶ 196. Petitioner also identifies the UE in R2-080338 as a “terminal device.” See Pet. 28–29. Petitioner directs us to the title of R2-080338 (i.e., “Reselection scenarios for multi-RAT terminals in Rel-8”), and submits that “R2-080338 [] teaches a method for inter-system cell reselection.” Pet. 28; Ex. 1007, 1. Petitioner explains that “[a] ‘multi-RAT’ terminal is a UE that can operate on more than one RAT, or, a terminal that can operate on, for example, LTE, UMTS, and GSM.” Pet. 28.

Limitation 1A of claim 1 recites two steps—the first step is terminal “receiving,” “when in a terminal is in a cell of a Long Term Evolution (LTE) system, . . . a message including a dedicated priority list from the LTE system.” For this step, Petitioner directs us to R2-075161 for the LTE network communicating a dedicated priority list to the terminal, relying on UE specific control information communicated to the UE from the LTE network. See Pet. 29–30. Petitioner also argues that R2-080338 teaches that “[t]he mobile stores the parameters received from the E-UTRAN network . . . and uses these parameters for the priority algorithm,” and that “the UE would remember the thresholds and priorities received whilst in E-UTRAN.” Pet. 33–34; Ex. 1007, 3. Petitioner explains that E-UTRAN refers to an LTE network.” Pet. 31 (citing Ex. 1003 ¶ 197). We note that the parameters for the priority algorithm in R2-080338 include “priorities

and thresholds.” Ex. 1007, 3 (that is, “necessary parameters for the algorithm (i.e., priorities and thresholds)”).

The second step in limitation 1B is “performing,” “when the terminal camps on a cell of a non-LTE system, . . . “cell reselection in accordance with the dedicated priority list before a valid time of the dedicated priority list expires.” For this step, Petitioner argues that R2-080338 “teaches performing cell reselection in accordance with cell reselection priorities received from the LTE network when camping on a cell of a non-LTE system.” Pet. 33. Petitioner directs us again to where R2-080338 teaches that “[t]he mobile stores the parameters received from the E-UTRAN network . . . and uses these parameters for the priority algorithm,” and that “the UE would remember the thresholds and priorities received whilst in E-UTRAN.” Pet. 33 (quoting Ex. 1007, 3) (emphases omitted). Petitioner explains that, “when the terminal is in an area where there is no LTE network (for example, an area where there is only UMTS or GSM networks), the terminal should use the priorities from the LTE network to perform cell reselection.” *Id.* at 34 (citing Ex. 1003 ¶ 198). Petitioner relies on the declaration testimony of Dr. Williams. *Id.* (citing Ex. 1003 ¶ 156 (cross-referencing Ex. 1003 ¶¶ 119–122)).

Petitioner does not argue that R2-080338 teaches performing cell reselection according to the dedicated priority list “before a valid time of the dedicated priority list expires.” For this aspect of the “performing” step of limitation 1B, Petitioner directs us to where R2-075161 teaches that “UE specific control information is created by the eNB” and “would include a list of frequency layers/RATs that the UE should handle with specific priorities.” Pet. 31–32, 35 (quoting Ex. 1005, 2) (emphases omitted).

Petitioner also cites to where R2-075161 teaches that “[a]n expiry timer can be signaled as part of the UE specific control information,” and that, “[u]pon expiry of the timer, the UE shall discard the UE specific control information and continue with the normal cell reselection procedure.” *Id.* at 32 (quoting Ex. 1005, 2) (emphasis omitted). Petitioner identifies the UE specific control information in R2-075161 as a “dedicated priority list,” and explains that the eNB is a base station on an LTE system. *Id.* at 30.

In addition to showing that each claim element is known, however, Petitioner must provide “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); *KSR*, 550 U.S. at 418. Petitioner argues that “one of ordinary skill in the art would have been motivated to apply the teachings of a list of frequencies/RATs and timers as disclosed in R2-075161 with the teaching in R2-080338 that priority information obtained from the LTE network should be used in cell reselection when only non-LTE networks are available.” *Id.* at 26 (citing Ex. 1003 ¶¶ 223–227). Petitioner explains that, “[a]s R2-080338 already discloses this procedure using certain priority information, it would be obvious and natural for one of ordinary skill to use the dedicated list, public list and expiry timer provided in R2-075161 as the priority information provided by the LTE network.” *Id.* at 26.

For independent claim 11, Petitioner relies on R2-075161 and R2-080338 to disclose a “terminal” of the preamble and to inherently disclose the receiver of limitation 11A. Pet. 44–45. Similarly, Petitioner cites R2-075161 and R2-080338 as inherently disclosing the processor of limitation 11B and notes that Patent Owner’s litigation contentions rely on similar

arguments. *Id.* at 45 (citing Ex. 1003 ¶¶ 125–126, 220; Ex. 1011, 55). Finally, Petitioner relies on the related arguments for claim 1 to teach limitations 11C and 11D of claim 11. Pet. 46.

Patent Owner makes multiple arguments directed to the patentability of claims 1 and 11. Patent Owner first argues that neither R2-075161 nor R2-080338 teaches the “performing” step; namely in claim 1 “performing . . . cell reselection in accordance with the dedicated priority list before a valid time of the dedicated priority list expires” or the related limitation in claim 11. PO Resp. 19–20. Patent Owner specifically argues that:

In the scheme proposed in R2-075161, UE specific priorities are generated based on the load of a given LTE tracking area. Ex. 1005, 2. When a UE leaves that LTE tracking area to move to another LTE tracking area, it *discards* the UE specific priorities because they no longer represent the load of the nearby cells. *Id.*; Ex. 2005, ¶¶52-55.

PO Resp. 20 (emphasis added). Patent Owner asserts that R2-075161 “therefore discourages applying its UE specific priorities obtained in that particular LTE tracking area when in any non-LTE context, or in any situation where the UE is no longer in its original LTE tracking area.” *Id.* at 20–21; *see also id.* at 24 (stating that “a skilled person would have understood that a UE that leaves its LTE tracking area would discard its UE specific control information”).

Patent Owner further argues that “R2-075161 proposes two mechanisms to prevent a UE from using priority information that does not reflect an accurate load,” namely, a spatial limitation based on LTE tracking area and a temporal limitation based on a timer, and “teaches discarding the information once the UE . . . leaves the LTE tracking area or the timer expires.” *Id.* at 22. As such, Patent Owner contends, “[a] skilled person

would not have found within R2-075161 any motivation to use the UE specific control information outside of the LTE tracking area that generated it.” *Id.* at 23.

Petitioner counters, and we agree, that Patent Owner “ignores the combined teachings of R2-075161 and R2-080338, and in particular the fact that R2-075161’s expiry timer would be highly relevant and useful in the scenario described in Option 3 of R2-080338, where the mobile device carries the LTE dedicated priorities with it when it leaves the LTE network and moves to a non-LTE network.” *Pet. Reply* 14. Petitioner explains that, in Option 3 of R2-080338, “[w]hen the mobile device leaves the LTE network and moves to a legacy network, it stores the dedicated priority list received from the LTE network.” *Id.* at 15 (citing *Ex. 1007, 3*). According to Petitioner, “[b]ecause the mobile device in R2-080338 remembers (i.e., does not discard) the dedicated priority list that it obtained from the LTE network when it moves to a non-LTE network, the load conditions for the cells in that priority list remain highly relevant.” *Id.* (emphasis omitted). Petitioner contends that “[a] person of ordinary skill would have known that these load conditions are temporal, and therefore would have been motivated to apply an expiry timer to the priorities so that they can be discarded before they become stale.” *Id.* at 15.

We agree with Petitioner and note that Petitioner relies on *both* R2-080338 and R2-075161 for teaching the “performing” limitations of claims 1 and 11. We find that contrary to Patent Owner’s assertions, R2-075161’s spatial limitation would not have applied in the context R2-080338, because R2-080338 teaches expressly remembering the priorities after moving from an LTE network to a non-LTE network. *See Ex. 1007, 3*. On the other

hand, we find that R2-075161's temporal limitation would have applied in the context of R2-080338, as discussed above. R2-075161 teaches setting an expiry timer for the UE specific control information because the load conditions may be temporal. Ex. 1005, 2. Petitioner explains that an ordinarily skilled artisan would have combined the two references by substituting the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161, which we find would have amounted to a "simple substitution of one known element for another." *See* Pet. 26; *KSR*, 550 U.S. at 401, 417. Thus, Patent Owner's argument that R2-075161 does not teach the portion of the limitation that recites "performing" in light of R2-075161's spatial limitation does not adequately rebut Petitioner's persuasive argument and evidence that R2-080338 teaches this portion of the limitation. Patent Owner's argument also does not persuasively rebut Petitioner's argument and evidence that an ordinarily skilled artisan would have had a reason to combine R2-080338 and R2-075161 to provide the entirety of the recited "performing" limitations.

Patent Owner further asserts that R2-080338 also does not teach the performing limitations because "R2-080338 proposes to use the legacy cell-reselection algorithm, which does not rely on using LTE-obtained priorities." PO Resp. 25. When "an LTE-capable UE performs cell reselection on a network that does not provide the necessary threshold and priority parameters for the priority algorithm," such as in a non-LTE network context, Patent Owner acknowledges that R2-080338 describes various options, including Option 3, which involves "stor[ing] and reus[ing] the necessary parameters from an LTE cell." *Id.* at 25. Patent Owner notes,

however, R2-080338's additional teaching that Option 3 "would 'introduce some unreliability once the UE reselects within UTRA, as the thresholds [may be] totally different and non-applicable,'" as well as R2-080338's characterization of Option 1, which involves "us[ing] the legacy, non-priority algorithm," as "the safest option." *Id.* at 25 (citing Ex. 1007, 3). Patent Owner relies on this evidence to support its contention that R2-080338 therefore proposes using Option 1 instead of Option 3. *Id.* at 25–26. Patent Owner further argues that Table 2 of R2-080338 "confirms this choice by listing 'Use legacy algorithm' when a 'UE supporting E-UTRAN' is on a 'Legacy Network' or a 'Rel-8 network not providing priorities.'" *Id.* at 28 (citing Ex. 1007, tbl. 2).

Petitioner responds that, "[w]hen a reference teaches the alleged invention as one alternative but ultimately selects a different alternative, the invention does not automatically become non-obvious." Pet. Reply 6–7 (citing *In re Gurley*, 27 F.3d 551, 552–53 (Fed. Cir. 1994)). Indeed, Petitioner contends "a person of ordinary skill in the art would have recognized that R2-080338 teaches the use of Option 3 when Option 1 is not available." *Id.* at 8 (citing Ex. 1024 ¶ 17). As support, Petitioner directs us to where R2-080338 teaches that, "[i]n the case of scenario 8, . . . if the thresholds are broadcast, the priorities are not but the UE has received priorities via dedicated signaling (e.g. camping in UTRAN but received prioritisation whilst in E-UTRAN) then the priorities received via dedicated signally always apply – i.e. the UE remembers them." *Id.* at 8–9 (citing Ex. 1007, 3).

Patent Owner's Sur-Reply cites the deposition testimony of Petitioner's expert declarant Dr. Williams, arguing that "Option 1 was

always available” and that Dr. Williams’ argument is contrary to R2-080338’s disclosure. PO Sur-Reply 2–3 (citing Ex. 217, 81:1–10). Patent Owner also contends that, “for the first time, Petitioner now points [in its Reply] to the special case of Scenario 8 where ‘the thresholds are broadcast,’ but the Petition and Dr. Williams’ initial declaration exclusively cited to Scenarios 7 and 8, where neither the thresholds nor priorities is broadcast.” *Id.* at 3. Patent Owner asserts that “Petitioner cannot point to new embodiments in reply that it never identified as part of its challenge.” *Id.*

Upon review of the full record, we find that Patent Owner does not adequately rebut Petitioner’s persuasive argument and evidence showing that R2-080338 teaches the “performing” limitations of claims 1 and 11. “All of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art.” “A reference must be considered for everything that it teaches, not simply the described invention or a preferred embodiment.” *In re Applied Materials, Inc.*, 692 F.3d 1289, 1298 (Fed. Cir. 2012) (citing *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 907 (Fed. Cir. 1985)); *see also Application of Boe*, 355 F.2d 961, 965 (CCPA 1966) (“All of the disclosures in a reference must be evaluated for what they fairly teach one of ordinary skill in the art.”); *Raytheon Co. v. Sony Corp.*, 727 F. App’x 662, 667 (Fed. Cir. 2018) (that a reference is directed primarily to one application does not preclude the skilled artisan from combining that reference with other references for different applications). Here, the description of Option 3 in R2-080338 indicates that an ordinarily skilled artisan would have known that a UE could be configured to store parameters received from an E-UTRAN network and to use the parameters for the priority algorithm, but that such configuration is subject to one disadvantage,

namely, the introduction of “some unreliability once the UE reselects within UTRA, as the thresholds [may be] totally different and non-applicable.” *See* Ex. 1007, 3. An ordinarily skilled artisan also would have understood that Option 1 is a “preferred approach,” but not the only viable approach. *Id.* at 4 (“proposals [in Table 2] about the preferred approach”). R2-080338’s recognition of the disadvantage associated with Option 3 and its conclusion that Option 1 is “the safest option” do not sufficiently negate Petitioner’s argument that a person of ordinary skill in the art would understand Option 3 is applicable. *See Boe*, 355 F.2d at 965 (“this court affirmed rejections based on art which we concluded rendered the claimed invention obvious to those of ordinary skill in the art despite the fact that the art teachings relied upon . . . were phrased in terms of a non-preferred embodiment or as being unsatisfactory for the intended purpose”); *id.* (agreeing with the examiner that “the addition of [a feature] according to the non-preferred disclosure of [the prior art reference] and acceptance of the mentioned disadvantages does not properly constitute grounds for patentability”). Indeed, R2-080338 teaches that Option 3 provides the advantage of “allow[ing] some predictability in UE behaviour, once the UE has camped in E-UTRAN” (Ex. 1007, 3), and, as we noted in our Institution Decision, nothing in R2-080338 indicates that its system would not be able to tolerate “some unreliability” as a tradeoff for achieving “some predictability” (Inst. Dec. 13).

As we noted in our Institution Decision, “R2-080338 recommends that “multi-RAT terminals supporting E-UTRAN *should* also support the legacy algorithm.” Inst. Dec. 13; Ex. 1007, 3 (emphasis added). That R2-080338 does not require supporting the legacy algorithm further indicates

that R2-080338 contemplates using *either* Option 1 or Option 3, not just Option 1. *Id.*

Additionally, as Petitioner points out, R2-080338 identifies a specific scenario where Option 3, rather than Option 1, is used. Pet. Reply 8–9. For that scenario, R2-080338 teaches that, “if the thresholds are broadcast, the priorities are not but the UE has received priorities via dedicated signaling (e.g., camping in UTRAN but received prioritization whilst in E-UTRAN) then the priorities received via dedicated signaling always apply – i.e. the UE remembers them.” Ex. 1007, 3. This is an explicit teaching of a scenario for which R2-080338 proposes using Option 3 instead of Option 1, whether or not Option 1 is available.

We note Patent Owner’s contention that Petitioner relied in its Petition only on scenarios where neither the thresholds nor the priorities are broadcast, and further contention that Petitioner’s reliance in its Reply on the specific scenario discussed above therefore inappropriately raises a new argument. PO Sur-Reply 3. Petitioner’s reliance on the specific scenario discussed above, however, is in response to Patent Owner’s argument that R2-080338 proposes using Option 1 instead of Option 3 for Scenarios 7 and 8. *See* PO Resp. 25 (“When performing cell reselection in a non-LTE cell in Scenarios 7 and 8, R2-080338 proposes to use the legacy cell-reselection algorithm, which does not rely on using LTE-obtained priorities.”); *see also id.* at 28 (“[I]n general, the thresholds need to be broadcast in each system’ to apply the priority algorithm”) (citing Ex. 1007, 3). The specific scenario to which Petitioner refers in its Reply is, as Patent Owner acknowledges, an example of a case of Scenario 8. *See* PO Sur-Reply 3 (“special case of Scenario 8”); Ex. 1007, 3 (“In case of scenario 8 . . . if the thresholds are

broadcast, the priorities are not but the UE has received priorities via dedicated signaling . . . then priorities received via dedicated signally always apply – i.e. the UE remembers them.”). Accordingly, we find Petitioner’s discussion in its Reply of that specific scenario to be appropriate. *See* 37 C.F.R. § 42.23 (b) (“A reply may only respond to arguments raised in the . . . patent owner response.”).

Patent Owner further argues that Petitioner’s proposed combination of R2-080338 and R2-075161 “would implicate the teachings of *both* references that LTE-obtained priority algorithm parameters should not be used outside of their context, and would further lead a skilled artisan away from the claimed invention.” PO Resp. 30. In particular, Patent Owner contends:

The combination of R2-075161 and R2-080338 would directly implicate the concern R2-075161 has with applying load-balancing priorities outside of their context. R2-080338 explains that Scenarios 7 and 8 only apply “in an area where only UTRAN and GERAN coexist,” meaning that the UE has left any LTE tracking area it was in. That means that the UE has left the LTE tracking area that gave rise to the UE priorities. In other words, as R2-080338 explains, the context of its specific discussion is the case where no LTE cells exist in the new area An area where “only UTRAN and GERAN” coexist is necessarily an area outside of any previous LTE tracking area, and therefore also an area where the “load might be different.” In such a context, R2-075161 proposes not reusing the old priority information because the “load” those priorities represent no longer applies. This is *on top* of R2-080338’s concern that re-using inapplicable threshold information in Scenarios 7 and 8 would result in unreliability.

Id. at 30–31 (internal citations omitted); *see also* PO Sur-Reply 1 (“Petitioner’s and Dr. Williams’ reliance exclusively on Option 3 in Scenarios 7 and 8 for their unpatentability arguments walks squarely into

R2-080338’s reliability concerns.”). According to Patent Owner, “[t]he teachings of the references reinforce each other’s conclusion: priority algorithm parameters (i.e., priorities and thresholds) should not be reused outside of the LTE tracking area or cell in which they were provided.” *Id.* at 32.

Patent Owner additionally contends that “R2-080338 also teaches that priorities should be accurate if they are to be used in the priorities algorithm,” and, “[w]hen discussing whether to derive the parameters necessary for the priority algorithm when in a non-LTE cell, . . . explains that doing so ‘may generate uncertain [behavior] with regards to load balancing,’ and proposes that it is ‘safer to rely on the existing algorithm.’” PO Resp. 31. Patent Owner asserts that “R2-080338 thus reinforces what is made clear in R2-075161—that one should not reuse priority algorithm parameters outside of their context.” *Id.* at 31–32.

Petitioner counters that Patent Owner “ignores th[e] fact that there are situations where the mobile device leaves an LTE network and *maintains* the dedicated priority list that the LTE network provided.” Pet. Reply 15. Petitioner points out that “Option 3 of R2-080338 teaches that exact situation,” where the mobile device stores the dedicated priority list received from the LTE network when it leaves the LTE network and moves to a legacy network. *Id.* Relying on the testimony of Dr. Williams, Petitioner further contends that, “[b]ecause the mobile device in R2-080338 remembers (i.e. does not discard) the [] priority list that it obtained from the LTE network when it moves to a non-LTE network, the load conditions for the cells in that priority list remain highly relevant.” *Id.* (citing Ex. 1024 ¶ 25) (emphasis omitted). According to Petitioner, “[a] person of ordinary

skill would have known that these load conditions are temporal, and therefore would have been motivated to apply an expiry timer to the priorities so that they can be discarded before they become stale.” *Id.* at 15–16 (citing Ex. 1024 ¶ 25). Petitioner asserts that “doing so would have addressed the ‘reliability’ concern that R2-080338 identifies for Option 3,” as the expiry timer “would cause the mobile device to discard the dedicated [] priorities it received from the LTE network,” preventing it from applying non-applicable thresholds to stale priorities. *Id.* at 16 (citing Ex. 1024 ¶ 26).

To illustrate Petitioner’s argument, Dr. Williams uses an “example of load conditions varying during and after a basketball game.” Ex. 1024 ¶ 25. Dr. Williams testifies:

During the game, a priority list may assign a lower priority to the cell in which the game is taking place because it is overloaded with users. That ‘load condition’ will eventually change as people leave the basketball game and the cell frees up. If the user receives a dedicated priority list from the LTE network during the game, then moves to a 3G cell, then tries to reselect the cell where the game took place after it is over, a stale priority list may prevent him from doing that even though the cell has freed up. R2-075161 recognizes this concern and explains that the expiry timer will prevent it.

Id.

We agree with Petitioner. R2-080338 explicitly teaches using Option 3, which involves the UE remembering parameters for the priority algorithm. Ex. 1007, 3. In one case, R2-080338 teaches that the UE remembers the thresholds and priorities received from the LTE network, while noting the benefit of some predictability in UE behavior as well as the possible downside of some unreliability once the UE reselects within UTRA. *Id.* In another case, R2-080338 teaches that the non-LTE network

broadcasts the thresholds but the UE remembers the priorities received from the LTE network. *Id.* Considering either case, we find that Patent Owner does not adequately rebut Petitioner’s evidence that an ordinarily skilled artisan would have had a reason to combine R2-080338 and R2-075161 to arrive at the claimed invention. As Petitioner explains, “[b]ecause the mobile device in R2-080338 remembers (i.e. does not discard) the priority list that it obtained from the LTE network when it moves to a non-LTE network, the load conditions for the cells in that priority list remain highly relevant,” and an ordinarily skilled artisan “would have known that these load conditions are temporal, and therefore would have been motivated to apply an expiry timer to the priorities so that they can be discarded before they become stale.” Pet. Reply 15–16 (citing Ex. 1024 ¶ 25) (emphasis omitted).⁷ This explanation supports Petitioner’s argument that it would have been obvious to substitute the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161, which we find would have amounted to a “simple substitution of one known element for another.” *See* Pet. 25–26; Inst. Dec. 10–11; *KSR Int’l*, 550 U.S. at 417.

For the first case, where the UE remembers the thresholds and priorities, Dr. Williams testified during his deposition that “[R2-080338] states that UE camps on an E-UTRA macrocell and then reselects to a

⁷ *See also* Tr. 61:3–12 (“So in the same situation, this additional situation of scenario 8, you’re still going to have the mobile device with these priorities and at some point the priorities are going to become stale. . . . The load conditions that were assigned, that were in existence at the time the dedicated priority list was assigned, they’re going to become stale. . . . And so how do you avoid that situation? You have a timer associated with the priorities.”)

neighboring UTRA macrocell and then reselects to an UTRA indoor microcell.” Ex. 2017, 86:25–87:3; Ex. 1007, 3. Dr. Williams further testified that, if the timer [of R2-075161] expires while the UE is on the neighboring UTRA macrocell, then the UE will default to a legacy process, which is the best possible process for the information the UE has at that time.” Ex. 2017, 87:3–7. In addition, Dr. Williams testified that an ordinarily skilled artisan would have applied the priorities during the pendency of the timer in the UTRA macrocell rather than discarding them because “the priorities may allow that -- that E-UTRAN capable mobile device of transitioning back to an E-UTRAN RAT,” or “[t]he priorities may also allow the UE in UTRA to be directed by the network operator to other UTRA macrocells.” *Id.* at 87:8–18. According to Dr. Williams, this addresses the unreliability associated with the first case. *Id.* at 87:19–23. We find that Dr. Williams’s deposition testimony further supports Petitioner’s argument that it would have been obvious to substitute the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161.

We are not persuaded by Patent Owner’s contention that R2-080338 proposes using the legacy algorithm instead of the priority algorithm, because deriving parameters for the priority algorithm when in a non-LTE cell may generate uncertain behavior as to load balancing. *See* PO Resp. 31. R2-080338’s teaching in this regard applies in the context where parameters for the priority algorithm are derived from parameters for the legacy algorithm. Ex. 1007, 2–3. Patent Owner does not explain how the cited teaching applies in the context where parameters for the priority algorithm are received from the LTE network as in Option 3. Moreover, we note that

the cited teaching identifies a preferred approach, namely, using the legacy algorithm, without eliminating as an option the alternative approach of deriving parameters for the priority algorithm from parameters for the legacy algorithm. *See id.* (“two solutions could be standardized”). Accordingly, we find that Patent Owner’s contention here does not adequately rebut Petitioner’s showing that it would have been obvious to combine R2-080338 and R2-075161.

Patent Owner further argues that “the recommendations of R2-075161 and R2-080338 must be credited for what they actually state—that one should not re-use LTE-obtained priorities outside of LTE tracking area or cell in which they were provided.” PO Resp. 32. To reiterate, Patent Owner asserts that “*neither reference* proposed the functionality alleged to be obvious: reusing LTE-obtained priorities in a non-LTE cell, i.e., outside of their LTE tracking area.” *Id.* at 33 (emphasis omitted). According to Patent Owner, a person of ordinary skill in the art “would not have ignored the explanation in R2-075161 that maintaining UE specific control information beyond the confines of the LTE tracking area in which it was obtained ‘should be avoided[] since the load might be different.’” *Id.* at 33–34. Patent Owner also contends that an ordinarily skilled artisan likewise “would have understood the indications in R2-080338 that re-using LTE-obtained parameters for the priority algorithm in a non-LTE cell ‘would [] introduce some unreliability’ such that the legacy algorithm should be adopted when in a non-LTE cell.” *Id.* at 34. Patent Owner relies on Federal Circuit law that we “cannot ignore the guidance in and direction set by the express teachings of a reference,” and urges us to “consider the actual guidance conveyed by the prior art at issue in this proceeding, which plainly

leads the skilled person away from, rather than toward, the claimed invention.” *Id.* at 33 (citing *Polaris Indus., Inc. v. Arctic Cat, Inc.*, No. 16-1807 (Fed. Cir. Feb. 8, 2018)); *id.* at 34; *see also id.* at 32 (“the Board discounted R2-080338’s express teaching to find Option 3 was simply disfavored and irrelevant to the obviousness inquiry.”).

In its Reply, Petitioner counters that “R2-080338 does not teach away from the concept of the mobile device using priorities obtained from the LTE to perform cell reselection when camped in non-LTE.” Pet. Reply 9. Rather, Petitioner contends, “the reference expressly teaches toward this concept by explaining that Option 3 promotes predictability.” *Id.* (citing Ex. 1007, 3). Petitioner further contends that R2-080338’s explanation “that Option 3 may introduce unreliability in the specific scenario where the mobile device reselects from one UTRA cell to another . . . does not amount to criticizing, discrediting, or discouraging the solution.” *Id.* (internal citation omitted). In addition, Petitioner points out that R2-080338 “teaches a specific scenario where the Option is useful,” namely, where the non-LTE network broadcasts the thresholds while the UE remembers the priorities received from the LTE network. *Id.* at 10; Ex. 1024 ¶ 17. As for Patent Owner’s contention that R2-075161 teaches avoiding maintaining UE specific control information beyond the confines of the LTE tracking area in which it was obtained because the load might be different, Petitioner responds that “[t]he ‘spatial limitation’ that Patent Owner focuses on relates to the situation where the mobile device moves from one LTE tracking area to another LTE tracking area.” Pet. Reply 14. According to Petitioner, R2-075161’s teaching is not so broad such that it applies in “*any* situation where

the mobile device leaves an LTE tracking area, including the situation where the mobile device moves from LTE to a non-LTE system.” *Id.* at 15.

We agree with Petitioner and find that neither R2-075161 nor R2-080338 teaches away from reusing LTE-obtained priorities in a non-LTE cell. With respect to Patent Owner’s contentions about the teachings in R2-075161, we note that both parties acknowledge that the reference teaches discarding the UE specific control information in the context of moving from one LTE tracking area to another LTE tracking area. Pet. Reply 14; PO Resp. 2 (“because load conditions of LTE cells may vary *between LTE tracking areas* . . . R2-075161 requires those UE priorities to expire when the UE leaves the LTE tracking area . . . , expressly stating that UE specific priorities should not be reused outside of the LTE tracking area where they were received”) (emphasis added; original emphasis omitted); *id.* at 12 (“when leaving a first LTE tracking area and entering a second”). On the other hand, claim 1 relates to moving from an LTE network to a non-LTE network. R2-075161’s teaching that the UE discards its UE specific control information when moving from an LTE tracking area to another LTE tracking area does not necessarily apply in the context of moving from an LTE network to a non-LTE network, and, therefore, does not teach away from reusing LTE-obtained priorities in a non-LTE cell. Again, we note that, for this feature, Petitioner relies on R2-080338, which expressly teaches remembering LTE-obtained priorities when moving from an LTE network to a non-LTE network.

With respect to Patent Owner’s contentions about R2-080338’s teachings, we note that “[a] reference does not teach away . . . if it merely expresses a general preference for an alternative invention but does not

‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) (citation omitted). Although R2-080338 recognizes that using Option 3 may introduce some unreliability, it also teaches that Option 3 allows for some predictability in UE behavior. Ex. 1007, 3. As discussed above, nothing in the reference indicates that the system would not be able to tolerate some unreliability as a tradeoff for achieving some predictability. Moreover, Dr. Williams testifies that the unreliability in R2-080338 presents itself in a “narrow, specific example” without rising to “the level [where] the phone won’t be able to communicate,” indicating that Option 3 is viable. Ex. 2017, 71:9–72:21; *see also* Ex. 1007, 3 (“Example: UE camps in E-UTRA macro-cell, reselects to neighbouring UTRA macro-cell, and then reselects to UTRA indoor micro-cell.”). In addition, as discussed above, R2-080338 recommends that “multi-RAT terminals supporting E-UTRAN *should* also support the legacy algorithm.” Ex. 1007, 3 (emphasis added). That R2-080338 does not require supporting the legacy algorithm indicates the reference contemplates using *either* Option 1 or Option 3, not just Option 1. Lastly, R2-080338 further describes a specific case of Scenario 8, teaching explicitly: “if the thresholds are broadcast, the priorities are not but the UE has received priorities via dedicated signaling . . . then the priorities received via dedicated signaling always apply – i.e. the UE remembers them.” Pet. Reply 9; Ex. 1007, 3. This shows that R2-080338 does not teach away from reusing LTE-obtained priorities in a non-LTE cell. Indeed, R2-080338 explains that this case can be “particularly useful.” Ex. 1007, 3.

As the teachings in R2-075161 and R2-080338 show, the facts here are different than those in *Polaris*, where the Federal Circuit explained that the proposed combination of references “would run contrary” to the stated purpose of one of the references. *See Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1069 (Fed. Cir. 2018).

Patent Owner further argues that “[t]he timer discussed in R2-075161 assists the LTE system in maintaining the relevance of load balancing priorities, which, in the context of R2-080338, would already be irrelevant since R2-080338 discloses the situation where when a UE has left its LTE tracking area and is in a non-LTE cell.” PO Resp. 35. As support, Patent Owner contends that “R2-075161 explains that the UE specific priorities should be discarded once the timer expires, and that they should be replaced (i.e., discarded) by new UE specific priorities upon a tracking area update (e.g., leaving a first tracking area and entering a second).” *Id.* at 36. Patent Owner further contends that “[a] UE that is operating in the context of R2-080338’s Scenarios 7 and 8, however, has already left any LTE tracking area, which means R2-075161’s UE specific priorities are already inapplicable and thus irrelevant.” *Id.* According to Patent Owner, “[t]he purpose of the timer of R2-075161[] is [to] avoid the situation that has already occurred once a UE [is] in R2-080338’s Scenarios 7 and 8: its UE specific priorities no longer reliably represent the load of the available cells.” *Id.* at 37. As such, Patent Owner concludes, “[t]here would therefore have been no reason or motivation to incorporate the timer into R2-080338 because, as taught by R2-075161, doing so would not solve any problem or provide any benefit.” *Id.* at 35.

We disagree. Patent Owner's focus on applying R2-075161's teaching of a UE discarding priorities when leaving an LTE tracking area and entering a new LTE tracking area in the context of R2-080338 disregards (1) that R2-080338's Option 3 provides an explicit example of a UE remembering (rather than discarding) priorities received in an LTE network when reselecting to a non-LTE network (*see* Ex. 1007, 3), as well as (2) R2-075161's broader teaching of providing a timer to address the temporal nature of load conditions (*see* Ex. 1005, 2). Ultimately, "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference." *See In re Keller*, 642 F.2d 413, 425 (CCPA 1981). "Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *Id.* That the UE in R2-080338 *remembers* the priorities received in an LTE network when reselecting to a non-LTE network provides a reason for incorporating the timer of R2-075161, namely, to address the temporal nature of load conditions. Dr. Williams confirmed in his deposition testimony that, "during the progress of time, the load on any particular set of resources in the network, like a cell, will vary." Ex. 2009, 60:16–18. To illustrate, Dr. Williams again uses a basketball analogy:

During a [basketball] game here in DC, the cell by the basketball stadium will be overloaded with traffic. And then when the basketball game gets out and everybody leaves, that cell will be virtually empty. So over time the traffic demands on a particular cell will change So if you were roaming into an area near the basketball stadium during a basketball game, your priority may say, don't use the cell that's serving the basketball stadium. But if you roam into that same area when the basketball game isn't occurring, the priority may say, use that particular cell.

Id. at 60:21–61:13; *see also* Ex. 2017, 87: 3–7 (“So if the timer expires while the UE is on the neighboring UTRA macrocell, then the UE will default to a legacy process, which is the best possible process for the information the UE has at that time.”). As discussed above, addressing the temporal nature of load conditions supports Petitioner’s argument that it would have been obvious to substitute the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161. *See* Pet. 25–26; *KSR*, 550 U.S. at 417 (“if 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”).

Referring to our finding in the Institution Decision that Petitioner’s proposed combination of the R2-080338 and R2-075161 appears to address the concern in R2-080338 that the thresholds may be totally different and non-applicable, Patent Owner further argues that “R2-075161’s use of a timer would not resolve R2-080338’s unpredictability concern when reusing priorities that led to the rejection of Option 3.” PO Resp. 39 (citing Inst. Dec. 13). First, we note our finding that R2-080338 does not reject Option 3, as discussed above. Second, we note Petitioner’s argument in its Reply that an ordinarily skilled artisan “would have appreciated that the use of an expiry timer would alleviate this [unreliability] concern because it would cause the mobile device to discard the dedicated priorities it received from the LTE network,” and, “[t]hus, the mobile device would not be applying non-applicable thresholds to stale priorities.” Pet. Reply 16. We find this argument persuasive. Even if Petitioner’s proposed combination does not address R2-080338’s unreliability or unpredictability concern, however,

Patent Owner's argument in this regard still does not adequately rebut Petitioner's showing that it would have been obvious to combine the two references for the reasons given above. In particular, we note that using R2-075161's timer to address the temporal nature of load conditions where the UE in R2-080338 remembers the priorities received in an LTE network when reselecting to a non-LTE network supports Petitioner's argument that it would have been obvious to substitute the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161. Lastly, as discussed above, R2-080338 provides a specific case of Scenario 8 in which the thresholds are broadcast in the non-LTE network, and the UE remembers the priorities received from the LTE network. Ex. 1007, 3. This specific case not only addresses the unreliability concern in R2-080338 by providing updated thresholds, but also supports Petitioner's obviousness argument, as discussed above. *See* Pet. Reply 15–16 (“Because the mobile device in R2-080338 remembers (i.e. does not discard) the dedicated priority list that it obtained from the LTE network when it moves to a non-LTE network, the load conditions for the cells in that priority list remain highly relevant,” and an ordinarily skilled artisan “would have known that these load conditions are temporal, and therefore would have been motivated to apply an expiry timer to the priorities so that they can be discarded before they become stale.”); Tr. 61:3–12 (“So in the same situation, this additional situation of scenario 8, you’re still going to have the mobile device with these priorities and at some point the priorities are going to become stale. . . . The load conditions that were assigned, that were in existence at the time the dedicated priority list was assigned, they’re going to

become stale. . . . And so how do you avoid that situation? You have a timer associated with the priorities.”).

With respect to the specific case of Scenario 8, we note Patent Owner’s contention that “R2-080338 explains that the special case is incompatible with R2-075161’s load-balancing timer: in the special case, the LTE-obtained priorities ‘*always apply* – i.e. the UE remembers them.’” PO Resp. 29 n.7. We do not, however, read the term “always apply” to mean that the UE cannot eventually discard the LTE-obtained priorities. R2-080338’s use of the abbreviation “i.e.” implies that the term “always apply” in this context means simply that the UE remembers the LTE-obtained priorities when moving from the LTE network to the non-LTE network.

Patent Owner further argues that “Petitioner has not advanced *any* evidence to show that a person of ordinary skill in the context of the ’246 patent would have known or had reason to (1) apply LTE-obtained load-balancing priority information outside of its scope (an LTE tracking area), or (2) apply R2-075161’s load-balancing, LTE tracking area-specific timer in the context of R2-080338’s non-LTE cell.” PO Resp. 45. According to Patent Owner, the evidence of record “shows that the claimed invention was more than a simple substitution of features from R2-075161 into R2-080338” because “both references point away from the claimed invention.” *Id.* Patent Owner contends that “R2-075161 explicitly counsels *against* the re-use of its UE specific priorities ‘after a TA [LTE Tracking Area] update’ because the ‘load might be different in the new TA,’” and that “R2-080338 teaches that applying LTE-obtained priority algorithm parameters in Scenarios 7 and 8 . . . would introduce unreliability when reusing ‘totally

different and non-applicable' thresholds." *Id.* at 45–46. Patent Owner also points out that R2-075161 addresses mobility in the context of LTE, while R2-080338 addresses mobility in the context of UTRAN and GERAN (i.e., non-LTE). *Id.* at 45. Moreover, Patent Owner contends, a separate 3GPP paper indicates that “‘UMTS has certain differences from E-UTRA’ that would impact the modification” (PO Resp. 47), namely, “in UMTS the UE is generally configured with a periodic LAU/RAU and therefore dedicated priorities can be removed at that point” (Ex. 2008, 2).

We find that Patent Owner’s argument does not rebut Petitioner’s persuasive showing that it would have been obvious to combine R2-080338 and R2-075161. As discussed above, “the test [for obviousness] is what the combined teachings of the references would have suggested to those of ordinary skill in the art,” and “not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.” *In re Keller*, 642 F.2d at 425. Here, R2-080338 expressly teaches that the UE remembers the priorities received from an LTE network when reselecting to a non-LTE network, and R2-075161 describes an expiry timer that addresses the temporal nature of load conditions. Ex. 1005, 2; 1007, 3. As previously explained, we find that addressing the temporal nature of load conditions in the context of R2-080338 supports Petitioner’s argument that it would have been obvious to substitute the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161. We note that R2-080338 “identifies one specific situation where Option 3 may introduce unreliability, but otherwise highlights the benefit of the solution (predictability) and describes a[nother] specific situation where the solution should be used,” as

Petitioner points out. Pet. Reply 11; *see also* Ex. 1007, 3. Again, we find that the identification of the unreliability concern does not translate to the rejection of Option 3. Additionally, in both cases, the UE is moving from an LTE network to a non-LTE network. Ex. 1007, 3. By contrast, R2-075161's spatial limitation on priorities applies in the context of a UE moving from one LTE tracking area to another LTE tracking area. Ex. 1005, 2 ("such signaling optimization should be avoided, since the load might be different in the new [tracking area]"). Thus, R2-075161's spatial limitation on priorities does not apply in the context of R2-080338.

With respect to Patent Owner's reliance on the 3GPP paper, we note Petitioner's contention that the paper "is discussing whether it makes sense to apply the LTE-specific timer to the UMTS specific priorities," which is not relevant to Petitioner's proposed combination where "the LTE expiry timer would remain associated with the LTE-provided priorities when the mobile device moves to the non-LTE cell." Pet. Reply 17–18. That is, Petitioner's proposed combination "uses the expiry timer to extinguish the LTE priorities." *Id.* at 18. We find Petitioner's argument persuasive. Patent Owner does not dispute in its Sur-Reply that the cited discussion in the 3GPP paper would be irrelevant to Petitioner's proposed combination.

Lastly, we are not persuaded by Patent Owner's argument that Petitioner "includes no justification of why any specific functionality would have been obvious to combine with any other specific functionality beyond a reference-plus-reference argument." PO Resp. 49. In particular, Patent Owner contends that "Petitioner was required to explain not 'whether a skilled artisan not only could have made but would have been motivated to

make the [specific] combinations or modifications of prior art to arrive at the claimed invention.” *Id.* at 50 (emphases omitted).

As discussed above, Petitioner argues in its Petition that “one of ordinary skill in the art would have been motivated to apply the teachings of a list of frequencies/RATs and timers as disclosed in R2-075161 with the teaching in R2-080338 that priority information obtained from the LTE network should be used in cell reselection when only non-LTE networks are available.” Pet. at 26 (citing Ex. 1003 ¶¶ 223–227). Petitioner explains that, “[a]s R2-080338 already discloses this procedure using certain priority information, it would be obvious and natural for one of ordinary skill to use the dedicated list, public list and expiry timer provided in R2-075161 as the priority information provided by the LTE network.” *Id.* We are persuaded by Petitioner’s argument and evidence that it would have been obvious to substitute the parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161, which we find would have amounted to a “simple substitution of one known element for another.” *See KSR*, 550 U.S. at 401, 417. On its face, R2-075161 provides an express motivation for doing so, namely, to address the temporal nature of load conditions. *See Ex. 1005, 2* (cited by Pet. 34–35). Petitioner further explains in response to Patent Owner’s argument:

Because the mobile device in R2-080338 remembers (i.e. does not discard) the dedicated priority list that it obtained from the LTE network when it moves to a non-LTE network, the load conditions for the cells in that priority list remain highly relevant. A person of ordinary skill would have known that these load conditions are temporal, and therefore would have been motivated to apply an expiry timer to the priorities so that they can be discarded before they become stale.

Pet. Reply 15–16 (internal citations omitted). Based on the record before us, we are persuaded by a preponderance of the evidence by Petitioner’s showing that an ordinarily skilled artisan would have had a reason to combine R2-080338 and R2-075161.

In view of the foregoing, we determine that Petitioner has shown by a preponderance of the evidence that independent claims 1 and 11 would have been obvious over R2-080338 and R2-075161.

2. Dependent Claims

Claim 3 recites “wherein when the terminal camps on the cell of the non-LTE system, the method further comprises: performing, by the terminal, the inter-system cell reselection in accordance with a public priority list after the valid time expires.” Claim 13 recites a similar limitation. Petitioner provides argument and evidence for dependent claims 3 and 13, arguing that cell reselection applicable to limitation 1B explains how R2-075161 and R2-080338 teach cell reselection before a valid time dedicated priority list expires. Pet. 36–38, 55. Similarly, Petitioner argues that the same process described in R2-075161 teaches the limitations of dependent claim 4, which require that the public priority list be obtained by the terminal from the LTE or non-LTE network. Pet. 39. Specifically, Petitioner cites the cell reselection process in R2-75161 that

explains exactly when the public and dedicated priority lists should be used. When both common and UE specific priority lists are present, the UE is to use the specific priority list. Ex. 1005 at 2–3; Ex. 1003 at ¶ 201–02. However, when the timer expires and the UE must discard the UE specific control information (i.e., dedicated priority list), Proposal 4 states that the UE will continue with the normal reselection procedure using the common (public) priority list

Pet. 37–38 (citing Ex. 1005, 2).

We are not persuaded by Patent Owner's arguments that Petitioner has failed to meet its burden to show that claims 3–5 and 13–15 are unpatentable. PO Resp. 51–56. Patent Owner's arguments largely repeat the arguments relied on for claims 1 and 11 discussed above. *Id.* For the same reasons addressed above, we find these arguments unavailing. Indeed, Patent Owner's arguments are undermined by the teachings of R2-075161 that when both common and UE specific priorities are present and the expiry timer has not expired to apply UE specific priorities, implying that there are times to apply common priorities, e.g., when the expiry timer has expired and the UE specific priorities have been deleted. Pet. Reply 19 (citing Ex. 1005, 2; Ex. 1003 ¶ 110; Ex. 1024 ¶ 28). Thus, we find Petitioner has provided persuasive evidence that R2-075161 and R2-08033 teach the limitations of dependent claims 3 and 13 and the claims that depend therefrom, claims 4, 5, 14, and 15.

Dependent claim 6 recites “deleting, by the terminal, the dedicated priority list when the valid time expires.” Claim 16 recites a similar limitation. Upon review of the arguments and evidence we are persuaded by Petitioner that R2-075161 and R2-080338 teach the limitations of these dependent claims by a preponderance of the evidence. Pet. 41–42, 56. Accordingly, we are not persuaded by Patent Owner's generalized arguments that Petitioner has failed to show the motivation to combine or modify R2-075161 and R2-080338, which rely on arguments presented with respect to claims 1 and 11. PO Resp. 56–57. For the reasons discussed above, Petitioner has provided persuasive evidence and argument that the combination of the references teaches the limitations of claims 6 and 16.

For the remaining dependent claims 2, 7–10, 12, and 17–20, Petitioner provides sufficient and persuasive argument and evidence that R2-075161 and R2-080338 teach the limitations of the dependent claims. Pet. 34–36, 41–44, 55, 57–58. Patent Owner does not argue claims 2, 7–10, 12, and 17–20 separately. PO Resp. 58 (relying on arguments presented for claims 1 and 11).

In view of the foregoing, we determine that Petitioner has shown by a preponderance of the evidence that dependent claims 2–10 and 12–20 would have been obvious over R2-080338 and R2-075161.

F. Obviousness based on R2-075161, R2-080338, and Eerolainen

Petitioner asserts that claims 11–20 of the '246 patent would have been obvious over R2-075161, R2-080338, and Eerolainen. Pet. 48–63. We are persuaded that Petitioner has demonstrated by a preponderance of the evidence that claims 1–20 would have been obvious over R2-075161, R2-080338, and Eerolainen.

1. Analysis

Petitioner argues that claim 11 (and its respective dependent claims) would have been obvious over R2-075161, R2-080338, and Eerolainen. Pet. 48–55. Petitioner cites Eerolainen, which shows “a data processor 10A that executes the program 10C stored on memory 10B, all on the user equipment 10, which is a terminal device.” *Id.* at 51 (citing Ex. 1006, Fig. 1). According to Petitioner, Eerolainen teaches the processor and receiver of claim 11 in combination with the teachings of R2-075161 and R2-080338 discussed with respect to claim 11 in the previous ground. Pet. 51–55 (citing Ex. 1006 ¶ 144, Fig. 1). Petitioner provides citations and argument that

Eerolainen discloses a terminal, with a data processor that executes a program stored on memory, and a receiver in a cellular network which in combination with R2-075161 and R2-080338 teaches the limitations of claim 11. Pet. 51. Based on the record before us, we are persuaded by Petitioner's arguments.

Petitioner also provides "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d at 988. Specifically, Petitioner argues that "one of ordinary skill in the art would be motivated to implement the teachings shown in R2-075161 and R2-080338 in the hardware described in Eerolainen, because Eerolainen describes the precise type of hardware that one of ordinary skill in the art knows is used in LTE and non-LTE cellular systems." Pet. 50 (emphases omitted). We find Petitioner's argument persuasive. We find that adding Eerolainen's hardware to the combined system of R2-07161 and R2-080338 would have amounted to "the predictable use of prior art elements according to their established functions," as such addition simply would have enabled the combined system of R2-07161 and R2-080338 to carry out the reselection process. *See KSR*, 550 U.S. at 417.

We are not persuaded by Patent Owner's response that "[b]ecause Petitioner's Eerolainen grounds incorporate [Petitioner's] analysis of the claimed 'performing' step from the R2-080338 and R2-075161 grounds, they are therefore deficient for all the same reasons discussed above." PO Resp. 58–59. As discussed above, Petitioner has sufficiently and persuasively demonstrated that its proposed combination of R2-080338 and R2-075161 teaches the recited "performing" step. We also are persuaded by Petitioner's argument that it would have been obvious to substitute the

parameters for the priority algorithm in R2-080338 with the UE specific control information (including the timer) of R2-075161, which we find would have amounted to a “simple substitution of one known element for another.” *See KSR*, 550 U.S. at 401, 417. In particular, we note that R2-075161 expressly teaches setting an expiry timer for the UE specific control information “since the load conditions may be temporal.” Ex. 1005, 2 (cited by Pet. 33). In addition, we note that another 3GPP paper teaches deleting priorities “[i]f optional validity time of dedicated priorities expires.” Ex. 1010 § 5.2.4.1 (cited by Pet. 24). Accordingly, we find that Patent Owner does not rebut Petitioner’s persuasive showing that claim 11 would have been obvious over R2-075161, R2-080338, and Eerolainen.

Accordingly, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 11–20 would have been obvious over R2-075161, R2-080338, and Eerolainen.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1–20 are unpatentable under 35 U.S.C. § 103 as obvious over R2-080338 and R2-075161, and claims 11–20 are unpatentable under 35 U.S.C. § 103 as obvious over R2-080338, R2-075161, and Eerolainen.

IV. ORDER

In consideration of the foregoing, it is hereby:
ORDERED that claims 1–20 of the ’246 patent are held *unpatentable*;
FURTHER ORDERED that Patent Owner’s Motion to Exclude is *denied*; and

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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.

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