

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CRADLEPOINT, INC., HONEYWELL INTERNATIONAL, INC.,
SIERRA WIRELESS, INC., TCL COMMUNICATION TECHNOLOGY
HOLDINGS LIMITED, TCT MOBILE INTERNATIONAL LIMITED,
TCT MOBILE, INC., TCT MOBILE (US) INC., TCT MOBILE (US)
HOLDINGS INC., and THALES DIS AIS DEUTSCHLAND GMBH,

Petitioner,

v.

3G LICENSING SA,

Patent Owner.

IPR2021-00639

Patent 8,189,611 B2

Before MONICA S. ULLAGADDI, AARON W. MOORE, and
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

DIRBA, *Administrative Patent Judge*.

JUDGMENT

Final Written Decision

Determining All Challenged Claims Unpatentable

Denying Patent Owner's Motion to Amend

Dismissing Petitioner's Motion to Exclude

35 U.S.C. § 318(a)

On September 27, 2021, we instituted an *inter partes* review of claims 1–25 of U.S. Patent No. 8,189,611 B2 (Ex. 1001, “the ’611 patent”). Paper 19 (“Inst. Dec.”). We have considered the full record at trial, and for the reasons explained below: we determine claims 1–25 of the ’611 patent are unpatentable; we deny Patent Owner’s Motion to Amend (Paper 31); and we dismiss Petitioner’s Motion to Exclude (Paper 45) as moot.

I. BACKGROUND

A. History of this Proceeding

On March 18, 2021, Cradlepoint, Inc., Honeywell International, Inc., Sierra Wireless, Inc., TCL Communication Technology Holdings Limited, TCT Mobile International Limited, TCT Mobile, Inc., TCT Mobile (US) Inc., TCT Mobile (US) Holdings, Inc., and Thales DIS AIS Deutschland GmbH (collectively, “Petitioner”)¹ filed a Petition requesting *inter partes* review of claims 1–25 of the ’611 patent. Paper 8 (“Pet.”). Petitioner submitted a declaration from R. Michael Buehrer, Ph.D. in support. *See* Ex. 1005. 3G Licensing S.A. (“Patent Owner”) filed a Preliminary Response (Paper 14) and relied on the testimony of Regis J. Bates, Jr. in support (*see* Ex. 2001). After reviewing the preliminary record, we determined that Petitioner had demonstrated a reasonable likelihood that it would prevail in establishing the unpatentability of at least one challenged

¹ The Petition was also filed by Dell Inc., ZTE Corporation, and ZTE (USA) Inc. (Pet. 1), but these companies were subsequently terminated due to settlement (Papers 18, 30). Petitioner also identifies the following entities as real parties in interest: Sierra Wireless America, Inc., Thales DIS AIS USA, LLC, Telefonaktiebolaget LM Ericsson, and Ericsson Inc. Paper 33 (Petitioner’s Updated Mandatory Notices).

claim, and we instituted an *inter partes* review of all challenged claims on all grounds asserted in the Petition. Inst. Dec. 40–41, 62–63.

During trial, Patent Owner filed a Response (Paper 32, “PO Resp.”), which relied on additional testimony from Mr. Bates (*see* Ex. 2007). Petitioner then filed a Reply (Paper 37, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 40, “PO Sur-reply”).

In addition, Patent Owner filed a contingent Motion to Amend proposing to substitute claims 26–50 for claims 1–25, respectively, if we find any of the original claims unpatentable. Paper 31 (“MTA”). Petitioner filed an Opposition to the Motion to Amend. Paper 36 (“MTA Opp.”). We then issued Preliminary Guidance on Patent Owner’s Motion to Amend (Paper 38, “PG”), pursuant to Patent Owner’s request (*see* MTA 1). After receiving our Preliminary Guidance, Patent Owner filed a reply in support of its Motion to Amend (Paper 39, “MTA Reply”), and Petitioner filed a sur-reply (Paper 44, “MTA Sur-reply”).

Petitioner also filed a Motion to Exclude (Paper 45), Patent Owner opposed (Paper 46), and Petitioner replied (Paper 51).

An oral hearing in this proceeding was held on June 23, 2022, and a transcript of the hearing is included in the record. Paper 57 (“Tr.”).

B. Related Matters

The parties identify twelve district court litigations that involve (or involved) the ’611 patent:

- *Sisvel Int’l S.A. v. ZTE (USA), Inc.*, 3:20-cv-01289-S (N.D. Tex.);
- *Sisvel Int’l S.A. v. CradleFSDhamoint, Inc.*, 1:20-cv-00649 (D. Del.);
- *Sisvel Int’l S.A. v. Dell Inc.*, 1:20-cv-00651 (D. Del.);
- *Sisvel Int’l S.A. v. Honeywell Int’l, Inc.*, 1:20-cv-00652 (D. Del.);

- *Sisvel Int'l S.A. v. OnePlus Tech. (Shenzhen) Co.*, 1:20-cv-00653 (D. Del.);
- *3G Licensing S.A. v. TCL Comm'n Tech. Holdings Ltd.*, 1:20-cv-00654 (D. Del.);
- *Sisvel Int'l S.A. v. Tesla, Inc.*, 1:20-cv-00655 (D. Del.);
- *Sisvel Int'l S.A. v. VeriFone, Inc.*, 1:20-cv-00656 (D. Del.);
- *Sisvel Int'l S.A. v. Wiko SAS*, 1:20-cv-00658 (D. Del.);
- *Sisvel Int'l S.A. v. Xirgo Techs., LLC*, 1:20-cv-00659 (D. Del.);
- *Sisvel Int'l S.A. v. HMD Am., Inc.*, 1:20-cv-22051 (S.D. Fla.); and
- *Sisvel Int'l S.A. v. Noetic, Inc.*, 1:20-cv-22054 (S.D. Fla.).

Pet. 1–2; Paper 10 (Patent Owner's Mandatory Notices), 1. The parties do not identify any related Board proceedings.

C. The Grounds

We instituted trial on the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. §²	Reference(s)/Basis
1–5, 7–11, 14–21, 23–25	102	Oksala ³
1–5, 7–11, 14–21, 23–25	103	Oksala
3, 6, 12, 13, 22	103	Oksala, Yoshioka ⁴
1–5, 7–9, 18–21, 23–25	103	Oksala, TS24.008 ⁵
3, 6, 22	103	Oksala, TS24.008, Yoshioka

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102, 103, 112 effective March 16, 2013. Because the challenged patent was filed before March 16, 2013, we refer to the pre-AIA versions of §§ 102, 103, and 112.

³ WO 2005/099294 A1, filed April 8, 2004, published October 20, 2005 (Ex. 1006).

⁴ US 7,376,442 B2, filed April 13, 2005, issued May 20, 2008 (Ex. 1007).

⁵ 3rd Generation Partnership Project (3GPP) TS 24.008 V6.6.0, published September 2004 (Ex. 1009).

Claim(s) Challenged	35 U.S.C. § ²	Reference(s)/Basis
4, 20	103	Oksala, Matsumoto ⁶
4, 20	103	Oksala, TS24.008, Matsumoto
1–3, 5, 7, 8, 10–12, 14, 15, 17–21, 23, 24	103	Baggstrom, ⁷ TS23.107 ⁸

D. Summary of the '611 Patent

The '611 patent is titled “System and Method for Resolving Contention Among Applications Requiring Data Connections Between a Mobile Communications Device and a Wireless Network.” Ex. 1001, Title. The application that led to the '611 patent was filed on December 2, 2008, claiming priority to an application filed November 4, 2005. *Id.* at codes (22), (63).

The '611 patent is directed to resolving contention between applications (running on a mobile communications device (MCD)) that require data connections between the MCD and a wireless packet data service network. Ex. 1001, 1:17–23, 4:13. In particular, when an application requests a data session, the MCD may release one of the existing data sessions. *Id.* at 2:11–16. The MCD may use “one or more contention parameters associated with either the connected applications . . . or the data connections associated with the connected applications to determine which data connection to release.” *Id.* at 6:35–40. The contention parameter(s)

⁶ US 2004/0098526 A1, published May 20, 2004 (Ex. 1008).

⁷ US 2005/0070290 A1, filed September 26, 2003, published March 31, 2005 (Ex. 1010).

⁸ 3GPP TS 23.107 V6.3.0, published June 2005 (Ex. 1011).

may include “application priority,” “data traffic,” and/or “duration of data connection.” *Id.* at 6:40–42, 6:64–67.

Figure 1 (below) depicts a network environment where the method described in the '611 patent may be practiced. Ex. 1001, 1:46–48.

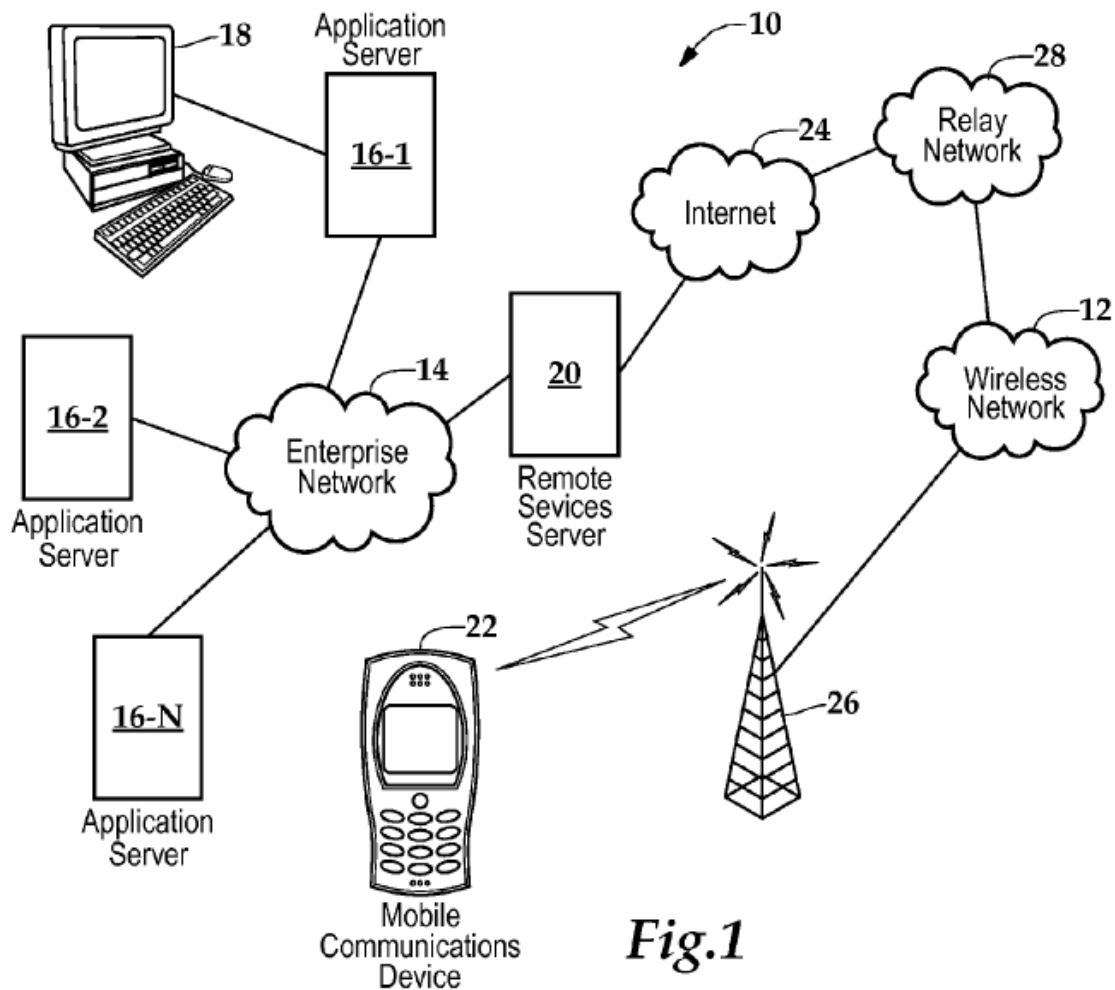


Fig.1

As shown above, Figure 1 depicts an exemplary network environment 10 that includes wireless packet data service network 12, MCD 22, and application servers 16 indirectly connected to MCD 22 via wireless packet data service network 12 and enterprise network 14. *Id.* at 3:58–4:13.

Wireless packet data service network 12 may, as one example, be comprised of a General Packet Radio Service (GPRS) network (*id.* at 4:31–36), and

“MCD 22 may be a data-enabled handheld device capable of receiving and sending messages, web browsing, interfacing with corporate application servers and the like” (*id.* at 4:22–25). Application servers 16 are part of enterprise network 12 and provide services (e.g., email, messaging, scheduling, and corporate data access) that may be accessed by a corporate user from a remote location using MCD 22. *Id.* at 3:65–4:13.

Figure 5, reproduced below, provides a flowchart for an embodiment of the method described in the ’611 patent. Ex. 1001, 1:59–62.

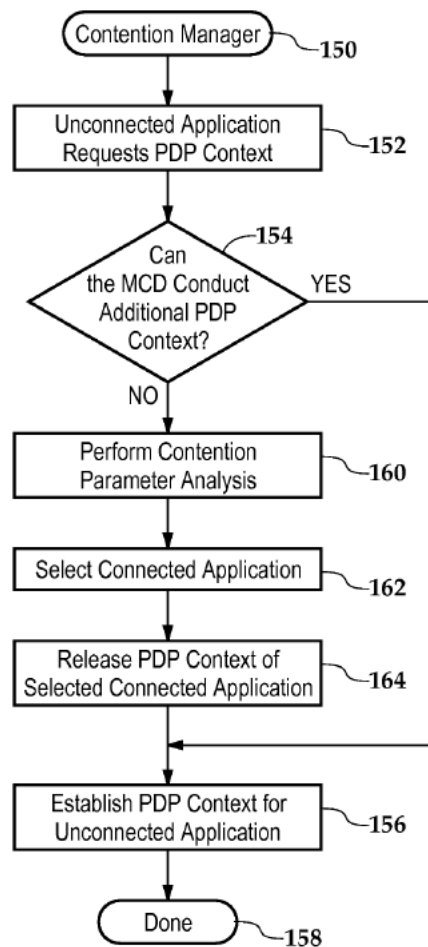


Fig.5

As shown above, Figure 5 depicts a routine (referred to as “Contention Manager,” block 150) that is “called when an unconnected data application operable on the MCD is opened and requests a [Packet Data Protocol (PDP)] context (block 152).”⁹ *Id.* at 8:31–37. The Specification states:

Upon the request [for a PDP context], it is determined whether the MCD is capable of conducting an additional PDP context associated with the unconnected data application (decision 154). If the MCD is capable of conducting an additional PDP context associated with the unconnected data application, then a PDP context is established for the unconnected data application between the MCD and the wireless network (block 156) and the routine [is] complete (end block 158). If at decision 154 the MCD is not capable of conducting an additional PDP context associated with the unconnected data application, then the contention manager performs analysis of the contention parameter associate[d] with the connected applications, the PDP contexts associated with the connected applications or both (block 160). Based upon the results of the contention parameter analysis, the contention manager selects the connected application that should have its PDP context released (block 162). The PDP context of the selected connected application is released (block 164). A PDP context is then established between the MCD and the wireless network for the unconnected data application (block 156) and the routine i[s] complete (end block 158).

Id. at 8:38–58.

⁹ A PDP context allows data to be transferred between an MCD and a wireless network. Ex. 1001, 8:24–30. The ’611 patent indicates that a PDP context can be used in a GPRS network (*id.*), but does not describe GPRS networks or PDP contexts in any detail.

E. Challenged Claims

The Petition challenges all claims of the '611 patent. Claims 1, 10, and 18 are independent.

Claim 1 is illustrative and is reproduced below, with bracketed lettering added to correspond to Petitioner's labeling of claim elements (*see* Pet. 87):

1. [A] A method of managing contention on a mobile communications device when a new wireless data connection between the mobile communications device and a wireless network is requested, the method comprising:
 - [B] determining if a further wireless data connection can be effected between the mobile communications device and a wireless network; and
 - [C] selecting an application to release its existing data connection if a further wireless data connection cannot be effected between the mobile communications device and a wireless network,
 - [D] wherein selecting the application to release its existing data connection comprises prioritizing the existing wireless data connections.

Ex. 1001, 9:5–17.

II. ANALYSIS OF PATENTABILITY

A. Legal Standards

In an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). That burden never shifts to the patentee. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

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 legal 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) when in evidence, objective evidence of obviousness or nonobviousness.¹⁰ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. See *KSR*, 550 U.S. at 418.

B. The Level of Ordinary Skill in the Art

Our reviewing court has explained that “the level of skill in the art is a prism or lens through which a judge, jury, or the Board views the prior art and the claimed invention.” *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (citing *Al-Site Corp. v. VSI International, Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999)). “This reference point prevents these factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.*

Petitioner asserts that the level of ordinary skill in the art corresponds to a bachelor’s degree in electrical engineering, computer engineering, or a similar discipline, plus three years of relevant experience, such as experience

¹⁰ The record does not include allegations or evidence of objective indicia of obviousness or nonobviousness.

with “cellular telecommunication systems, including designing or implementing user or network equipment or communication protocols therefor.” Pet. 20 (citing Ex. 1005 ¶¶ 20–24).

In the Institution Decision, we adopted this articulation of the level of ordinary skill in the art. Inst. Dec. 11–12. We stated that it was supported by both parties’ declarants and consistent with the Specification and the asserted prior art. *Id.* In addition, we stated that, although Patent Owner had proposed a slightly different articulation of the level of ordinary skill, it had not identified any “material differences” between the parties’ proposals. *Id.* at 11. We instructed the parties to “brief their respective positions” if they disputed the level of ordinary skill in the art or believed it would “make a material difference in the obviousness analysis.” *Id.* at 12.

At trial, Patent Owner contends that an ordinary artisan would have “a bachelor’s degree in electrical engineering, computer sciences, telecommunications and wireless communications, along with three or more years of practical experience in the field.” PO Resp. 13–14 (citing Ex. 2001 ¶ 27; Prelim. Resp. 12). Patent Owner adds that “[a] combination of more experience in the field and less education or more education and less experience in the field would also suffice.” *Id.* at 14 (citing Ex. 2001 ¶ 27; Ex. 2007 ¶ 22). Patent Owner states that its proposal “is similar to Petitioner’s proposal,” but includes this additional clarification. *Id.*

In its Reply, Petitioner argues that both parties “require a Bachelor’s Degree in electrical engineering or a similar discipline.” Pet. Reply 5. Petitioner further argues that Patent Owner failed to follow the Board’s instruction to explain the “material differences” between its proposal and the language adopted in the Institution Decision. *Id.* at 6. Petitioner contends

that, as a result, “the Board’s adoption of Petitioner’s definition of a [person of ordinary skill in the art] must stand in this proceeding.” *Id.*

Having considered the parties’ arguments and evidence, we adopt the Institution Decision’s articulation of the level of ordinary skill in the art, and we also add clarifying language, as proposed by Patent Owner.

In particular, we find that “the level of ordinary skill in the art corresponds to a bachelor’s degree in electrical engineering, computer engineering, or a similar discipline, plus three years of relevant experience, such as experience with ‘cellular telecommunication systems, including designing or implementing user or network equipment or communication protocols therefor.’” Inst. Dec. 11 (quoting Pet. 20). Neither party contends that this finding is in error (*see* PO Resp. 13–14; Pet. Reply 3–7), and it remains supported by the testimony of the parties’ declarants (Dr. Buehrer and Mr. Bates) and consistent with the Specification of the ’611 patent and the asserted prior art. *See* Ex. 1005 ¶ 23; Ex. 2001 ¶ 27.

We further find that an individual may qualify as a person of ordinary skill in the art by possessing less education, but more experience in the field (or less experience in the field, but more education) than our definition requires. In particular, a person need not have a formal bachelor’s degree in order to possess the background knowledge required of an ordinary artisan because such knowledge may be provided by on-the-job training, such as that provided by the United States military. *Cf.* Ex. 2001 ¶ 14 (Mr. Bates testifying that he received significant training in telecommunications technology from the United States Army Signal Corps). Thus, we determine that an individual qualifies as a person of ordinary skill in the art if he lacks

the identified technical degree but possesses sufficient experience with cellular telecommunication systems.

We disagree with Petitioner’s argument that “[b]oth [parties’] skill levels require a Bachelor’s Degree in electrical engineering or a similar discipline (computer science and telecommunications).” Pet. Reply 5.¹¹ Patent Owner’s proposal does not require ordinary artisans to always possess such a degree. Instead, it states that a person may have “less education” (than the identified technical degree) yet still qualify as an ordinary artisan with “more experience in the field.” See PO Resp. 14.

We also disagree that Patent Owner’s Response insufficiently explains its proposal, given the circumstances. See Pet. Reply 6. Before institution, Patent Owner submitted a declaration in which Mr. Bates provided expert testimony (see Ex. 2001), and Petitioner did not object.¹² See 37 C.F.R. § 42.64(b)(1) (requiring objection to be filed within ten business days of

¹¹ At the oral hearing, Petitioner also argued that Patent Owner’s proposed clarification only allows for education that is less *relevant to the field* and, thus, does not eliminate the need for a technical degree. See, e.g., Tr. 8:16–9:15 (providing example of degree in physics). This is a new argument that was not included in the briefing (see Pet. Reply 5–7; see also Tr. 59:25–61:9), and thus, it is untimely and improper. But, even if it had been timely raised, it would not have been persuasive because it misunderstands Patent Owner’s proposal. Patent Owner asserts that an ordinary artisan could have “less education”—not “less *relevant* education” or “less education *in the field*”—and this does not require a technical degree.

¹² We disagree with Petitioner that it was “impossible” to file an objection to Exhibit 2001 “in good faith” before it received Patent Owner’s Response. Tr. 58:9–21. Petitioner objected to Mr. Bates’ second declaration (Exhibit 2007) based on the Institution Decision’s articulation of a person of ordinary skill in the art (Paper 34, 1–3), and the same objection could have been made in a timely objection to Exhibit 2001.

institution). After institution, concurrently with the Patent Owner Response, Patent Owner submitted a second declaration in which Mr. Bates provided additional expert testimony (*see* Ex. 2007), and Petitioner then objected to Mr. Bates' testimony on the grounds that he fails to qualify as a person of ordinary skill in the art because he lacks the required technical degree. *See* Paper 34, 1–3 (objecting to Exhibit 2007); *see also* Pet. Reply 3–7; Paper 45, 1–6 (moving to exclude Exhibits 2001 and 2007). Given this sequence of events, we do not fault Patent Owner for not squarely addressing this issue in its Response because, at that time, Petitioner had not objected to Mr. Bates' testimony. It was Petitioner's subsequent objection to the admissibility of Mr. Bates' post-institution testimony that brought this dispute into focus.

In conclusion, we find that a person of ordinary skill in the art would have had a bachelor's degree in electrical engineering, computer engineering, or a similar discipline, plus three years of relevant experience, such as experience with “cellular telecommunication systems, including designing or implementing user or network equipment or communication protocols therefor.” We further find that an individual may alternatively qualify as ordinary artisan with less education, but more experience in the field (or with less experience in the field, but more education).

We address Petitioner's Motion to Exclude Mr. Bates' testimony in Section IV.A, *infra*. Our findings and conclusions in all other portions of this Decision would not change if we instead had wholesale adopted either party's articulation of the level of ordinary skill in the art.

C. Claim Construction

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

In the Institution Decision, we provided preliminary conclusions regarding claim construction disputes that were apparent from the parties’ pre-institution arguments. *See* Inst. Dec. 12–16. In particular, we determined that elements 1[C] and 1[D] were not optional limitations (*id.* at 13–14), we addressed the scope of claims 5, 15, and 21 (*id.* at 14–15), and we addressed the scope of claim 20 (*id.* at 15–16).

At trial, neither party disputed our preliminary conclusions regarding the scope of claims 5, 15, 20 and 21. *See* PO Resp. 14; Pet. Reply 10. We adopt those conclusions in this Decision because they remain supported by the intrinsic record for the reasons explained in the Institution Decision. *See* Inst. Dec. 14–16. Specifically, we conclude:

[The] claim language [in claims 5, 15, and 21] may be satisfied by a disclosure of “comparing . . . data traffic on each data connection associated with a corresponding application,” “comparing . . . a duration of each data connection,” or “comparing . . . a priority of the corresponding application associated with each data connection.”

* * *

[C]laim [20] identifies two alternatives and can be satisfied by a disclosure of “contention parameter analysis [that] comprises . . . analyzing a plurality of contention parameters” or “contention parameter analysis [that] comprises . . . analyzing a hierarchy of contention parameters.”

Id. at 15–16 (fifth and sixth alterations in original).

However, the parties disputed whether elements 1[C] and 1[D] are optional limitations. *See* PO Resp. 14; Pet. Reply 7–9; PO Sur-reply 8–12. Having considered the parties’ arguments at trial, we conclude that these elements are not optional limitations, for the reasons explained below.

In the Petition, Petitioner argues that elements 1[C] and 1[D] are optional because they are “not required if a further wireless data connection *can* be effected.” Pet. 27 & n.5 (citing *Ex parte Schulhauser*, Appeal No. 2013-007847 (PTAB April 28, 2016) (precedential)). However, the Petition does not explain why claim 1 “could properly be construed to encompass two methods—one that includes elements 1[C] and 1[D], and one that does not.” Inst. Dec. 14. As the Institution Decision explains, Petitioner’s argument appeared to be premised on a misreading of *Schulhauser*:

In *Schulhauser*, cited by Petitioner, the claim at issue included a triggering step and a determining step, each premised on a respective condition, and the triggering and determining steps were “mutually exclusive.” *Schulhauser*, slip op. at *6. Given the claim language, the Board determined that the broadest reasonable interpretation of this claim “cover[ed] at least two methods, one in which the prerequisite condition for the triggering step is met and one in which the prerequisite condition for the determining step is met.” *Schulhauser*, slip op. at *6, *8; *accord Hytera*, 841 F. Appx. at 217. Contrary to Petitioner’s assumption, *Schulhauser* did not hold that *all* conditional limitations in *all* claims are optional.

Id. (alteration in original)

In its Reply, Petitioner responds by arguing that claim 1 encompasses two mutually-exclusive methods. Pet. Reply 7–9. According to Petitioner, “[e]lement 1[B] only occurs if there [is] a connection [that] can be set up and there are no resource contentions,” and “[e]lements 1[C] and 1[D] only happen when a connection occurs and there is resource contention.” *Id.* at 9. Moreover, Petitioner further contends that “[i]f element 1[B] occurs when setting up a connection, then elements **1[C] and 1[D] never occur**” and “if elements 1[C] and 1[D] occur setting up a connection, then element **1[B] never occurs.**” *Id.*; see Tr. 13:20–23 (arguing that element 1[B] is only satisfied when a wireless data connection *can* be effected). Petitioner also argues that the claim requires “setting up the requested wireless data connection,” even though this step is not “explicitly” identified. Pet. Reply 8–9.

Patent Owner argues that Petitioner’s arguments are untimely. PO Sur-reply 8–11. Patent Owner submits that the Petition includes only three conclusory sentences in a footnote (*id.* at 9), which were rejected by the Institution Decision (*id.* at 10). Patent Owner also submits that the Reply adds two new arguments: element 1[B] is optional, and the claim includes the step of “setting up the requested wireless data connection.” *Id.* at 10–11. Regarding the second new argument, Patent Owner contends that it also contradicts the doctrine of claim differentiation. *Id.* at 11–12.

Having considered the parties’ arguments, we conclude that elements 1[C] and 1[D] are not optional limitations. Petitioner contends that claim 1 “encompasses two methods”: (1) a method with elements 1[C] and 1[D], but not element 1[B], and (2) a method with element 1[B], but not elements

1[C] and 1[D].¹³ Pet. Reply 7–9. We disagree. Petitioner’s argument is premised on an assumption that element 1[B] “only occurs” if a connection can be effected (*id.* at 9), but element 1[B] encompasses both a determination that the connection *can* be effected as well as a determination that it *cannot* be effected. Indeed, it recites “determining *if* a further wireless data connection can be effected,” not determining *that* a further wireless data connection can be effected. Ex. 1001, 9:9–11 (emphasis added). Thus, we conclude that element 1[B] is satisfied by a determination of *whether* a further wireless data connection can be effected.

Our understanding of this language is confirmed by considering the context in which it appears. Element 1[A] is the claim’s preamble, which recites a method. Element 1[B] requires “determining if a further wireless data connection can be effected between the mobile communications device and a wireless network.” Ex. 1001, 9:9–11. Element 1[C] requires “selecting an application to release its existing data connection if a further wireless data connection cannot be effected between the mobile communications device and a wireless network,” and element 1[D] provides additional details regarding that selection. *Id.* at 9:12–17. In other words,

¹³ This argument fairly responds to the Board’s preliminary construction in the Institution Decision. *See* Patent Trial and Appeal Board Consolidated Trial Practice Guide 49 (Nov. 2019), *available at* <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf> (stating that the parties will have the opportunity at trial “to submit additional arguments and evidence, addressing the Board’s initial claim construction determination”). However, the Petition did not contend that element 1[B] is optional or that the claim implicitly requires “setting up the requested wireless data connection,” and the Reply cannot raise new proposed constructions. *See* Pet. 44–45. As a result, we do not evaluate those arguments separately.

element 1[B] evaluates a condition (i.e., “if a further wireless data connection can be effected”), and element 1[C] “select[s] an application” if that condition is not met. Thus, element 1[B] is a natural precursor to element 1[C]. Consequently, we disagree with Petitioner’s contention that element 1[B] “never occurs” when element 1[C] occurs. Pet. Reply 9. Although Petitioner contends that the claim implicitly requires “setting up the requested wireless data connection,” it fails to persuasively explain why the inclusion of this language would make some claim limitations optional. Ultimately, there is nothing in the language of claim 1 to support Petitioner’s contention that claim 1 recites two mutually exclusive methods—one that includes element 1[B] and another that includes elements 1[C] and 1[D].

Our understanding of the claim language is further confirmed by the Specification, which describes embodiments that include elements 1[B], 1[C] and 1[D]. *E.g.*, Ex. 1001, 2:33–43, 8:31–58, Fig. 5; *see also id.* at 8:38–40 (stating that step 154 “determine[s]” whether an additional connection can be established). We perceive (and Petitioner identifies) no embodiments that include elements 1[C] and 1[D] but not element 1[B].

Given the issues presented in this proceeding, we need not expressly construe any other claim terms or phrases. *See, e.g., Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Summary of Prior Art

1. Oksala (Ex. 1006)¹⁴

Oksala describes a technique for controlling transmission between a first entity, which may be in a mobile station, and a second entity, which may be in a mobile radio network operating according to the General Packet Radio Service (GPRS) standard. Ex. 1006, Abstr., 2:9–19, 15:13–28.

Oksala explains that multiple, parallel connections between the first and second entities share transmission resources, and each connection may have Quality of Service (QoS) requirements, such as a guaranteed bit rate for the connection. Ex. 1006, Abstr., 2:9–19. According to Oksala, in the prior art, a new connection was established when requested, which could cause the QoS of an existing connection to fall below its requirements (e.g., below the guaranteed bit rate) and an application running on top of the existing connection may no longer function properly. *Id.* at 3:18–28, 7:8–14.

Oksala seeks to solve this problem. Ex. 1006, 4:4–9, 7:8–20. When a second (new) connection is requested, Oksala determines whether the QoS requirements of a first (existing) connection could still be guaranteed if the second connection were established. *Id.* at 4:10–20. If so, the first and second connections share the transmission resources. *Id.* at 5:23–30. Otherwise, Oksala: (1) decreases the transmission resources assigned to the first connection (e.g., when the first connection will still function properly

¹⁴ The copy of Oksala submitted by Petitioner includes two sets of page numbering: one at the top of the page, and another at the bottom. Ex. 1006. We cite to the page numbering appearing at the bottom of Oksala's pages. *Accord* Inst. Dec. 17 n.11.

with reduced QoS guarantees),¹⁵ (2) pauses or releases the first connection (e.g., when the second connection has higher priority), or (3) blocks the second connection (e.g., when the second connection is low priority). *Id.* at 6:26–7:7, 8:18–24, 9:4–11, 9:23–10:4. Oksala explains that the first connection may be released because “the application running on top of said first connection, for instance a streaming application,” would not continue to work properly if resources were shared with the second connection. *Id.* at 8:8–14; *see id.* at 30:3–9 (“[I]t is decided at the client side 200 that the [existing] PS connection can not [sic] be maintained with a QoS that allows the application that uses said PS connection to function properly, so that the PS connection and the application running on top of it have to be paused.”).

Figure 8, reproduced below, includes an example of Oksala’s method:

¹⁵ Oksala explains that the first connection may have been originally assigned more resources than it requires. Ex. 1006, 10:15–25.

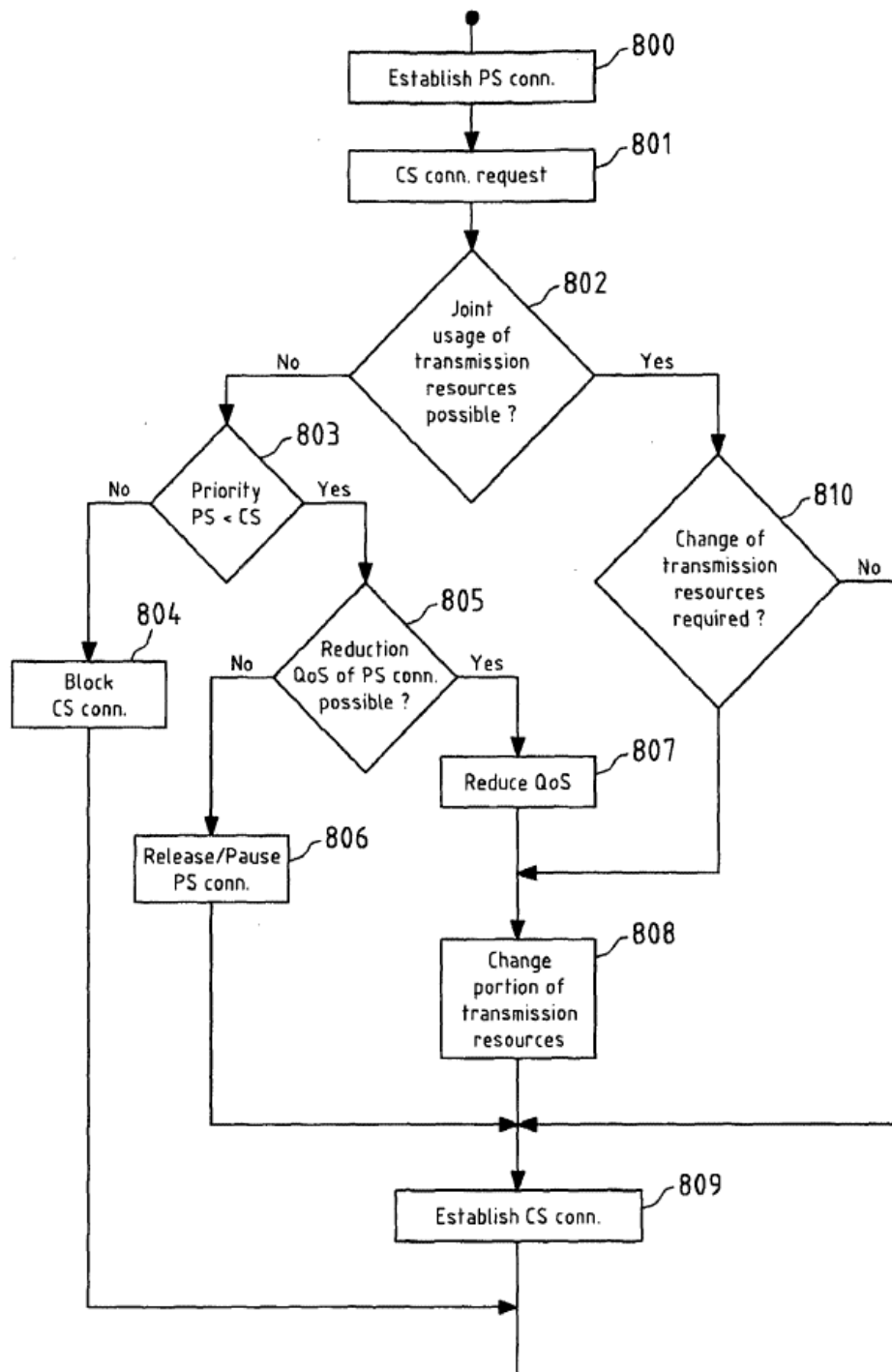


Fig.8

Figure 8, shown above, depicts a flowchart of an embodiment of Oksala's method where a first, packet-switched (PS) connection has already been

established (step 800) and a second, circuit-switched (CS) connection is requested (step 801). Ex. 1006, 35:4–9. In step 802, it is determined “whether joint usage of the transmission resources by said PS connection and said CS connection is possible.” *Id.* at 35:10–12. If not, the method proceeds to step 803, where “it is checked if the priority of the PS connection is lower than the priority of the CS connection.” *Id.* at 35:12–15. If the CS connection does not have a higher priority, then it is blocked in step 804. *Id.* at 35:15–16. Otherwise, in step 805, it is determined if the QoS requirements of the PS connection can be reduced to facilitate joint usage of the transmission resources, but, if not, “the PS connection is released or paused in a step 806, and the CS connection is established” in step 809. *Id.* at 35:16–23; *see also id.* at 31:3–31 (describing releasing a PS connection and deactivating its corresponding application).

In addition, Oksala states that the transmission resources may be used by “more than two connections” that may be “of the same or different types,” including PS and/or CS connections. Ex. 1006, 4:28–5:6. “If more than two connections are involved, it has to be checked whether said transmission resources can be jointly used by all of said connections, correspondingly.” *Id.* at 6:10–13. Oksala also states:

Joint usage of the transmission resources by PS connections only, or by CS connection only, or by a mixture of PS and CS connections is possible, and there may be more than two connections jointly using the transmission resources or at least requesting for them. *For instance, two PS connections already may have been established, and their usage of transmission resources may be jointly or separately re-negotiated when a further PS or CS connection is to be established. According to the present invention, it may be preferred that the QoS requirements of the connection that has the lower priority are*

observed in said step of checking, for instance the QoS requirements of a PS connection are observed when checking whether a PS and a CS connection may use the transmission resources jointly. However, also the QoS requirements or demands for transmission resources of the connection with the higher priority may be observed, or QoS requirements of both connections may be observed in said step of checking, in particular if no priorities are defined or if the connections are of the same type, for instance two or more PS connections. It may alternatively be preferred that the QoS requirements of the connection that was established first are considered, which may be either the first or the second connection.

Id. at 36:9–37:7 (emphasis added).

2. *Yoshioka (Ex. 1007)*

Yoshioka describes a technique for managing applications running on a mobile phone. Ex. 1007, 2:48–57, 4:6–17. When a user tries to start a new application, Yoshioka’s mobile phone determines whether the new application “is allowed to start” given the applications that are already running on the phone (the “started applications”). *Id.* at 4:24–36, 5:1–26. There may be, for example, a maximum number of applications allowed to run simultaneously “to prevent the trouble of a system due to the shortage of memory.” *Id.* at 4:52–60. If the new application would exceed this maximum, then Yoshioka’s mobile phone selects one of the started applications for termination. *Id.* at 3:28–34, 7:6–13. The started applications’ priorities are calculated using a weighted average of certain attributes, and the application that is the least significant will be the first one selected for termination. *Id.* at 8:35–9:31. In addition, Yoshioka prompts the user for confirmation before it terminates the selected application. *Id.* at 10:45–11:21, Figs. 10, 11.

E. Obviousness Ground Based on Oksala Alone

Petitioner contends that the subject matter of claims 1–5, 7–11, 14–21, and 23–25 would have been obvious over Oksala. Pet. 17, 21–51. Patent Owner contends that Oksala fails to teach or suggest several limitations of independent claim 1 (PO Resp. 23–41), and Patent Owner submits that all other challenged claims include “substantially identical elements” (*id.* at 23). In addition, Patent Owner separately argues dependent claims 8 and 17 as a group (*id.* at 41) as well as dependent claim 14 (*id.* at 42–43).¹⁶

¹⁶ At institution, we cautioned Patent Owner that “any arguments not raised in the response may be deemed waived.” Paper 20 (Scheduling Order), 8; *see also In re NuVasive, Inc.*, 842 F.3d 1376, 1379–82 (Fed. Cir. 2016) (holding patent owner waived an argument addressed in the preliminary response by not raising it in the patent owner response). We determine that Patent Owner has waived all arguments for patentability not raised in the Patent Owner Response (Paper 32), even if an argument was raised in the Preliminary Response (Paper 14). *See* Pet. Reply 1 n.1 (arguing that such arguments are waived). Relatedly, Patent Owner’s various attempts to incorporate by reference its prior arguments (*see, e.g.*, PO Resp. 23 (citing Prelim. Resp. 27–49)) are ineffective because this practice is expressly prohibited by our rules. *See* 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another document.”). To the extent we address the merits of any of these arguments, we do so to explain why those arguments would not have been persuasive even if they had been timely raised.

1. Claim 1

- a. Element 1[A]: “A method of managing contention on a mobile communications device when a new wireless data connection between the mobile communications device and a wireless network is requested, the method comprising”*

Petitioner contends that Oksala teaches element 1[A] (the preamble of the claim). Pet. 23–24. Petitioner identifies Oksala’s mobile station as the claimed mobile communications device, and asserts that Oksala’s mobile station “manages the joint use of available transmission resources by multiple data connections in a wireless communication system (‘wireless network’).” *Id.* at 23 (citing Ex. 1006, Abstr., 13:15–14:7, 15:13–16:4, 20:17–21:3, 31:3–31, 35:4–37:7, 38:4–45:30, Figs. 2, 5, 7, 8). According to Petitioner, when Oksala’s mobile station receives a request for a new data connection, it “checks whether sufficient resources exist to support joint usage by the existing connections and the requested connection.” *Id.* at 23–24 (citing Ex. 1006, 4:10–20, 6:10–13, 7:8–30, 8:27–10:4, 10:26–11:30, 15:29–16:4, 18:26–21:3, 24:19–26:12, 26:29–27:30, 29:20–32:4, 33:10–16, 34:19–37:7, Figs. 2, 4, 5, 7, 8).

Patent Owner does not dispute these contentions. *See* PO Resp.

We are persuaded that Oksala teaches element 1[A].¹⁷ Oksala describes “a method for controlling the use of transmission resources” on a link between a mobile station and a wireless network. *E.g.*, Ex. 1006, Abstr., 4:10–20, 15:13–22. When Oksala’s mobile station receives a new

¹⁷ Because Petitioner has shown that the recitations in the preamble are satisfied by Oksala, we need not determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

connection request, it determines whether the QoS requirements of the existing connections could still be guaranteed if the new connection were established. *Id.* at Abstr., 4:10–20, 6:10–13. If not, Oksala’s mobile device may release an existing connection. *Id.* at 6:26–7:7, 8:18–24; *see also id.* at 7:11–17 (“[A]ccording to the present invention, it is first checked if joint usage of the transmission resources under observation of the QoS requirements of said first connection is possible, and, depending on the outcome of this determination, the use of said transmission resources by said first and/or second connection is controlled.”).

b. Element 1[B]: “determining if a further wireless data connection can be effected between the mobile communications device and a wireless network”

Petitioner contends that Oksala teaches or renders obvious element 1[B]. Pet. 24–27. Patent Owner disagrees. PO Resp. 23–35.

i. Petitioner’s Contentions

Petitioner contends that Oksala’s “mobile station checks whether joint transmission resource usage by the existing connections and [a] requested connection is possible prior to establishing the new connection.” Pet. 24 (citing Ex. 1006, 27:1–30, 36:16–24); *see id.* (referencing discussion of element 1[A]). Petitioner points to the example in Figure 8 of Oksala, which shows an existing PS connection, a requested CS connection, and a determination of “whether joint usage of the transmission resources by said PS connection and said CS connection is possible.” *Id.* (quoting Ex. 1006, 35:10–12; citing *id.* at 4:10–20, 6:10–13, 7:8–30, 8:27–10:4, 15:29–16:4, 18:26–21:3, 24:19–26:12, 26:29–27:30, 29:20–32:4, 33:10–16, 35:4–27,

Figs. 4, 5, 7, 8). Petitioner also annotates Oksala's Figure 8 (*id.* at 26), as shown below:

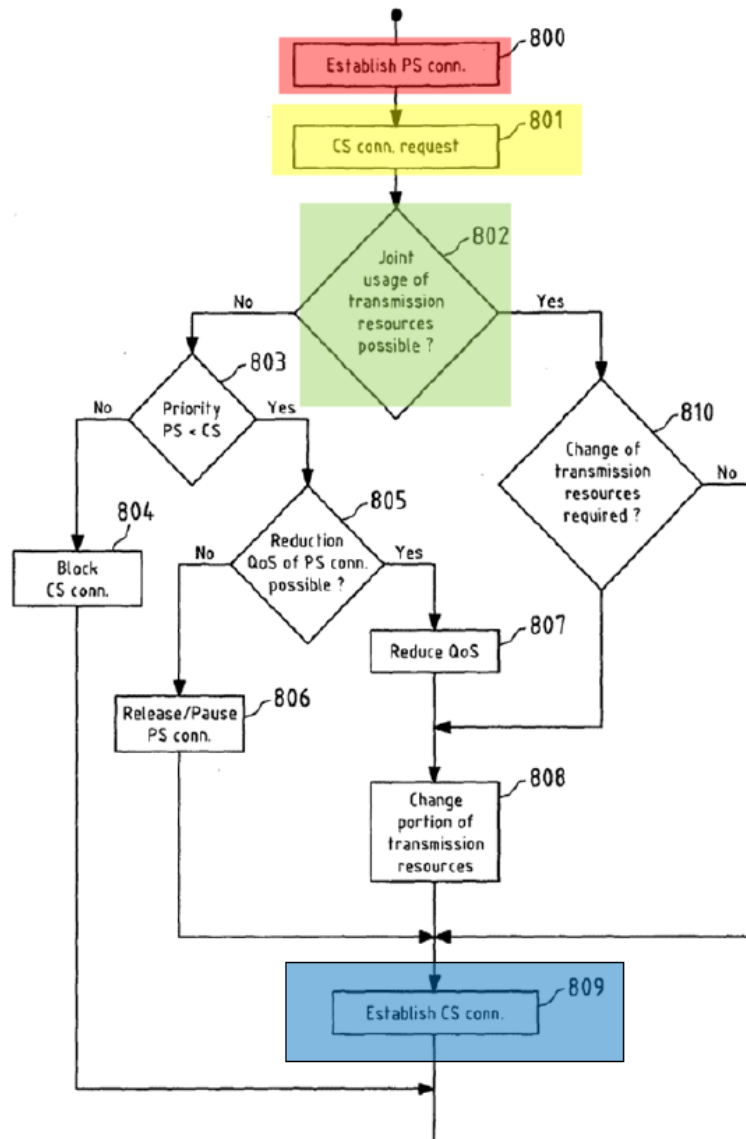


Fig.8

Petitioner's annotated version of Figure 8, reproduced above, shows an established PS connection in step 800 (red), a requested CS connection in step 801 (yellow), a determination of whether joint usage of resources is possible in step 802 (green), and ultimately establishing the CS connection in step 809 (blue). *Id.* at 24, 26.

According to Petitioner, “Oksala’s connection request may be for a PS or CS connection,” which each teach a data connection, and Oksala “renders obvious[] that the same processes would apply for either.” Pet. 25 (citing Ex. 1006, 3:29–4:3, 36:9–37:7; Ex. 1005 ¶ 121). In addition, Petitioner points to Oksala’s disclosure that when “more than two connections are involved, it has to be checked whether said transmission resources can be jointly used by all of said connections.” *Id.* at 25 (quoting Ex. 1006, 6:10–13; citing *id.* at 8:8–26; Ex. 1005 ¶¶ 118–120).

ii. Patent Owner’s Contentions

Patent Owner contends that the “data connection” recited in the claim “means a PS data connection.” PO Resp. 24. In support, Patent Owner asserts that “[t]he ’611 patent is practiced in a wireless packet data service network, like GPRS,” and “[a] wireless data connection in a wireless packet data service network means a PS data connection.” *Id.* (citing Ex. 1001, 3:57–59, 4:26–33; Ex. 2007 ¶ 51). From this, Patent Owner argues that “the CS connection in Figure 8 of Oksala is not a wireless data connection as required by element 1[B].” *Id.* at 25; *see also id.* at 25–26 (asserting that “the CS connection . . . is for voice” (citing Ex. 2011, 5–6; Ex. 2007 ¶ 54; Ex. 2014, 32:4–6)).

In addition, Patent Owner contends that Oksala fails to teach or suggest this limitation because Oksala is “unworkable.” PO Resp. 23–33. According to Patent Owner, “Oksala is directed to Dual Transfer Mode (‘DTM’),” which “requires a CS connection” and “allows only one CS connection . . . and up to four PS . . . connections.” *Id.* at 24–25 (citing Ex. 1006, 23:27–24:5, 16:14–26, 20:17–21:3, 28:7–11, Figs. 1, 3; Ex. 2007

¶¶ 51–52). Patent Owner argues that “[d]etermining whether two CS connections can share resources in DTM [was] a practical impossibility” (*id.* at 25, 29 n.4), contrary to one of Oksala’s statements (*see* Tr. 46:20–47:19).

Relatedly, Patent Owner also contends that a CS connection “has a dedicated timeslot,” so “comparing DTM’s CS connections to multislots PS connections is meaningless.” PO Resp. 25–26 (citing Ex. 2007 ¶ 54); *see also id.* at 26–29 (arguing that “CS networks and PS networks” diverge after the base station controller (citing Ex. 2007 ¶¶ 56–58)), 29–30 (arguing that CS and PS connections have separate timeslots and thus “do[] not share the relevant resources” (citing Ex. 2007 ¶¶ 61, 63; Ex. 2011, 6)). Patent Owner further contends that “Oksala is unworkable because the relevant standards dictate that the existing PS connection is paused after a new CS request in DTM.” *Id.* at 31 (emphasis omitted) (citing Ex. 2007 ¶ 67). In support, Patent Owner points to a paper by Agilent Technologies, which states that “the test set aborts the PS session before initiating the CS connection” when a new CS connection is requested. *Id.* at 31–32 (emphasis omitted) (quoting Ex. 2013, 2).

Also, Patent Owner briefly addresses Petitioner’s alternative argument (i.e., that Oksala’s connection request may instead be for a PS connection), arguing this does not teach or suggest the limitation because “[t]he DTM configuration requires that one of the connections be a CS connection.” PO Resp. 31 (citing Ex. 2007 ¶ 64). Patent Owner further argues that, if a CS connection were not required, “it would just be a GPRS (PS) network.” *Id.*

Finally, Patent Owner contends that the deposition of Dr. Buehrer (Petitioner’s declarant) “shows that he does not understand the most basic DTM principles” because he could not recall (or incorrectly identified) the

maximum number of CS connections and PS connections allowed by the relevant standard at the time. PO Resp. 33 (citing Ex. 2014, 27:20–28:2, 28:7–9, 31:10–20, 32:4–6, 34:19–23; Ex. 2007 ¶ 68). Patent Owner also alleges other errors in Dr. Buehrer’s testimony that allegedly “raise broad concerns about his understanding” and his conclusions. *Id.* at 34–35 (citing Ex. 2014, 24:8–18, 35:6–12, 35:18–21; Ex. 2007 ¶¶ 70, 71). From this, Patent Owner argues that “Dr. Buehrer overlooked Oksala’s glaring flaws that made it unworkable” and his errors “show lack of knowledge.” *Id.* at 33, 35.

iii. Analysis

Having considered the parties’ arguments and evidence, we are persuaded that Oksala suggests “determining if a further wireless data connection can be effected between the mobile communications device and a wireless network,” as required by element 1[B].

When Oksala’s mobile station receives a new connection request, it determines whether the QoS requirements of the existing connection(s) could still be guaranteed if the requested connection were established. *E.g.*, Ex. 1006, Abstr., 4:10–20, 6:10–13. Oksala provides an example of this determination in Figure 8:

Fig. 8 is a flowchart of a possible embodiment of a method according to the present invention. The flowchart relates to a scenario wherein a PS connection already has been established and uses a certain portion of the available transmission resources (step 800). In step 801, a CS connection request is received. According to the invention, it is then determined in step 802 whether joint usage of the transmission resources by said PS connection and said CS connection is possible.

Id. at 35:4–12, Fig. 8. This passage specifically teaches determining if a further CS connection can be effected between the mobile station and the wireless network when there is an existing PS connection.

In its final paragraph, Oksala teaches that the requested connection may instead be a PS connection. *See* Ex. 1006, 36:16–24 (“Joint usage of the transmission resources by PS connections only . . . is possible For instance, two PS connections already may have been established, and their usage of transmission resources may be jointly or separately re-negotiated *when a further PS or CS connection is to be established.*” (emphasis added)).

From this, we find that Oksala suggests determining if a further PS connection can be effected between the mobile station and the wireless network when there are existing connections. In fact, Oksala states that its concluding paragraph (which states that a PS connection may be requested) describes “alternative ways and variations which are obvious to a skilled person in the art and can be implemented without deviating from the scope and spirit of the appended claims.” Ex. 1006, 36:10–14. Dr. Buehrer testifies that an ordinary artisan “would have understood that Oksala describes that [its] checking process is performed . . . when either a new PS or CS connection request is received.” Ex. 1005 ¶ 119; *see also id.* ¶¶ 117–118 (clarifying that the “checking process” refers to Oksala’s determination of whether the requested connection can be effected while maintaining the existing connections’ QoS requirements). We credit this testimony because Dr. Buehrer provides a logical explanation that is supported by evidence. *See id.* ¶¶ 117–121 (citing various passages of Exhibit 1006 in support). Further, Oksala consistently refers to a “first connection” and a “second

connection” in its summaries of the invention, rather than specifying that a connection must be PS or CS. *E.g.*, Ex. 1006, Abstr., 4:10–20, 38:4–16.

Patent Owner’s arguments regarding element 1[B] are unavailing. We address each in turn.

First, we disagree with Patent Owner’s contention that Oksala is limited to DTM. *See* PO Resp. 31. Patent Owner identifies (and we perceive) no portion of Oksala that requires a mobile station to operate in DTM. *See id.* at 24–25, 31; *see also* Ex. 2001 ¶ 78 (testifying that “DTM is one of the primary modes in *Oksala*”). Instead, Patent Owner simply observes that Oksala’s primary embodiment describes a mobile station operating in DTM; however, Oksala is not limited to that particular mode. *See, e.g.*, Ex. 1006, 16:14–16 (“[I]t may be preferred that said wireless communication system is *capable of* operating a Dual Transfer Mode (DTM).” (emphasis added)), 23:27–24:1 (explaining that DTM capability “is exemplarily considered here”), 36:16–24 (contemplating joint usage of resources “by PS connections only”). Oksala may be relied upon for all that it teaches and is not limited to its primary embodiment. *See In re Kahn*, 441 F.3d 977, 990 (Fed. Cir. 2006) (“[T]he teaching of [a] reference is not limited to the specific invention disclosed.”).

Moreover, even if we assumed *arguendo* that Patent Owner were correct (i.e., assuming that Oksala is limited to DTM and, thus, requires a CS connection between the mobile station and the network (*see* PO Resp. 31)), we would still find that Oksala suggests element 1[B] for the reasons articulated above. Specifically, the required CS connection would not be germane to our analysis because the limitations of the claim would be satisfied by the multiple PS connections suggested by Oksala (as described

above). *See* Ex. 1006, 36:10–24. Neither element 1[B] nor the remainder of claim 1 preclude the existence of an additional, unclaimed CS connection (*see* Ex. 1001, 9:5–17), and an additional CS connection would not negate one of the PS connections. As a result, it would not matter if a CS connection were added, just as it would not matter if an additional, unclaimed mobile device were added to Oksala’s system.

Second, we need not address Patent Owner’s argument that Oksala’s CS connection fails to teach the claimed “data connection” (*see* PO Resp. 24–26) because we rely on Oksala’s PS connection to teach that limitation. Relatedly, Patent Owner’s argument that Oksala’s Figure 8 alone fails to teach or suggest element 1[B] (*id.* at 23–24) is inapposite because we also rely on other aspects of Oksala’s disclosure, as explained above, to reach our determination as to element 1[B].

Third, we disagree with Patent Owner’s argument that Oksala is “unworkable” (*see* PO Resp. 23–33). *See also infra* § II.E.1.d (addressing Patent Owner’s unworkability arguments). These arguments are not responsive to element 1[B] because they fail to indicate that a person of ordinary skill in the art would not have understood Oksala to teach or suggest determining if a further PS connection could be effected, as required by this limitation. Rather, at best, Patent Owner argues that a person of ordinary skill in the art would have been suspicious of *other* aspects of Oksala’s teaching (e.g., allowing multiple CS connections, or blocking a requested CS connection in favor of a PS connection) that are not germane to our analysis of this element.

In addition, although Patent Owner relies on Mr. Bates’ testimony to support its arguments (*see* PO Resp. 24–31, 33 (citing Ex. 2007 ¶¶ 49, 51–

52, 54–61, 63–64, 67)), the cited testimony simply mirrors the Response and suffers from the same deficiencies identified above.

Finally, we disagree with Patent Owner that Dr. Buehrer’s testimony should be given little weight. *See* PO Resp. 33–35. Although Patent Owner claims that “Dr. Buehrer’s deposition shows that he does not understand the most basic DTM principles” (*id.* at 33), Patent Owner fails to support this allegation. For example, Patent Owner contends that Dr. Buehrer “incorrectly stated that DTM could be used on IS-54, CDMA2000 and CDMA One,” where “DTM could not have been used on” any of these three networks. *Id.* at 34 (citing Ex. 2007 ¶ 70; Ex. 2014, 24:8–18). This argument is not persuasive for three reasons. First, Dr. Buehrer did not actually testify that DTM was used in any of these networks; rather, he testified that the *concept* behind it “*may* have also been used” in these networks. Ex. 2014, 24:8–25:3 (emphasis added). Second, none of these networks have any apparent relevance to this proceeding. Third, we are not persuaded that Dr. Buehrer’s testimony is inaccurate because Patent Owner relies only on Mr. Bates’ conclusory testimony that is unsupported by documentary evidence. *See* PO Resp. 35; Ex. 2007 ¶ 70. Patent Owner faults other portions of Dr. Buehrer’s testimony, but those arguments are not persuasive for the same three reasons. *See* PO Resp. 33 (citing Ex. 2014, 27:20–28:2, 28:7–9, 31:10–20, 32:4–6, 34:19–23; Ex. 2007 ¶ 68), 34–35 (citing Ex. 2014, 35:6–12, 35:18–21; Ex. 2007 ¶ 71); *see also* Ex. 2014, 27:20–29:3 (context for cited testimony), 34:19–35:21 (same).

Accordingly, Petitioner has demonstrated that Oksala suggests element 1[B].

c. Element 1[C]: “selecting an application to release its existing data connection if a further wireless data connection cannot be effected between the mobile communications device and a wireless network”

Petitioner contends that Oksala discloses element 1[C]. Pet. 27–30. Patent Owner disagrees. PO Resp. 35–38.

i. Petitioner’s Contentions

Petitioner contends that, as discussed above, Oksala determines whether a requested connection and the existing connections can jointly use the transmission resources. Pet. 27. If the resources cannot be shared, then “Oksala teaches identifying an existing connection and determining if the QoS requirements of that connection can be reduced,” and “[i]f not, the existing connection, and the application running thereon, are released to allow establishment of the requested connection.” *Id.* at 27–28 (citing Ex. 1006, 4:10–20, 7:8–8:26, 12:3–21, 27:1–30, 31:8–24, 35:5–27, 36:10–20, Figs. 2, 5 (step 504), 8 (steps 806, 809); Ex. 1005 ¶¶ 124–127). Petitioner contends that Figure 8 illustrates an example of these steps. *Id.* at 28–29 (citing Ex. 1006, Fig. 8 (steps 803, 805)). Petitioner further contends that Oksala “selects from among multiple existing connections when a new connection is requested,” as discussed below in element 1[D], and “Oksala’s identification of the existing data connection, along with the application using that connection, for release teaches the recited ‘selecting an application to release its existing data connection.’” *Id.* at 29–30 (citing Ex. 1006, 6:10–13, 35:5–37:7; Ex. 1005 ¶¶ 125–128).

ii. *Patent Owner's Contentions*

Patent Owner begins by noting that it “previously argued” that Oksala “is directed to connections and does not equate connections with applications running on top of those connections.” PO Resp. 35. Patent Owner also contends that Oksala’s Figure 5 “does not show *selecting* an application,” but instead shows “deactivating a connection and its corresponding application.” *Id.* at 35–36 (citing Inst. Dec. 26; Ex. 1006, 23:3–8, 31:8–24). In addition, Patent Owner argues that “[e]lement 1[C] requires that the application releases its existing *data* connection when a new *data* request comes in,” and “Figure 8 does not teach or suggest *selecting* among existing applications because it shows only one PS (data) connection.” *Id.* at 36.

Also, Patent Owner argues that “the ’611 patent specifies which application is released (mail, messenger, etc.),” where Oksala considers “the use of the bandwidth to satisfy and continue to operate the connection” rather than “whether the application was streaming or real time.” PO Resp. 36–37 (citing Ex. 2007 ¶ 76; Ex. 1001, 6:23–26). Also, according to Patent Owner, element 1[C] requires that “the established application *must* release it[s] data connection if it is determined that a new data connection cannot be affected at step 1[B],” and Oksala’s method may instead block the new connection or reduce the quality of service of the existing connection. *Id.* at 37–38 (citing Ex. 1006, Fig. 8 (step 804, “yes” from step 805)). Finally, Patent Owner argues that “Oksala cannot deal with more than one established connection” so “there can be no *selecting* as recited in element 1[C].” *Id.* at 38 (citing Ex. 2007 ¶ 79).

iii. Analysis

Having considered the parties' arguments and evidence, we are persuaded that Oksala teaches "selecting an application to release its existing data connection if a further wireless data connection cannot be effected between the mobile communications device and a wireless network," as required by element 1[C].

We find that Oksala teaches releasing an existing data connection if a further wireless data connection cannot be effected between the mobile station and a wireless network. In particular, Oksala describes a method that releases an existing connection if the existing and requested connections cannot jointly use transmission resources. Ex. 1006, 7:8–8:26; *see also id.* at 31:8–19 (describing steps 405 and 500–504 of Figure 5), 35:9–23 (describing steps 802 and 806 of Figure 8). Also, as explained in more detail in connection with elements 1[B] and 1[D] (*infra* § II.E.1.b; *supra* § II.E.1.d), we find that Oksala also teaches that the existing and requested connections may be PS connections. *See* Ex. 1006, 6:6–30, 15:29–16:4, 36:9–37:7.

In addition, we find that Oksala teaches that the released data connection has a corresponding application, which is also released. Oksala states:

If it is determined in said step of checking that said at least first and second connections can not [sic] jointly use said transmission resources, it may be advantageous to pause or release said first connection [(i.e., the existing connection)], *in order to avoid that the application running on top of said first connection, for instance a streaming application, does no longer properly work.*

Ex. 1006, 8:8–14 (emphasis added). In addition, Oksala’s Figure 5 specifically shows deactivating an existing connection and its corresponding application in response to determining that the resources cannot be shared. *Id.* at Fig. 5 (steps 405 and 500–504); *see also id.* at 30:3–9 (In Figure 4, “in step 405, it is decided at the client side 200 that the PS connection can not [sic] be maintained with a QoS that allows the application that uses said PS connection to function properly, so that the PS connection and the application running on top of it have to be paused.”), 31:13–19 (stating that, unlike Figure 4, Figure 5 shows deactivating, rather than pausing, the connection and application). Moreover, Dr. Buehrer testifies that Oksala “explains that data connections are associated with respective applications.” Ex. 1005 ¶ 125 (citing various passages in Exhibit 1006 in support). We credit this testimony because it is logical and supported by the evidence.

Further, we find that Oksala teaches selecting¹⁸ that corresponding application, as required by element 1[C]. Dr. Buehrer testifies that “Oksala’s selection of a data connection to be released is also a selection of the application using that data connection because as taught in Oksala, applications are what initiate the data connections and an application is associated with each connection, and, moreover, Oksala explicitly discloses that selecting a connection to release also deactivates the corresponding application.” Ex. 1005 ¶ 127 (citing passages in Exhibit 1006). We credit this testimony because it is consistent with and supported by Oksala’s

¹⁸ We need not decide whether “selecting” requires choosing between two or more existing data connections (*see* PO Resp. 36, 38) because this is clearly required by element 1[D]. *See* Pet. 29 (referencing discussion of element 1[D] for this point); *accord* Inst. Dec. 28. So, for clarity and brevity, we analyze that requirement below, in the context of element 1[D].

disclosure and because Patent Owner does not identify any contrary evidence.¹⁹

Patent Owner’s arguments regarding element 1[C] are unavailing. We address each in turn.

First, although we agree with Patent Owner that an application and a connection are not equivalent (*see* PO Resp. 35), the Petition is not to the contrary (*see* Pet. 30 (contending that “Oksala’s identification of the existing data connection, *along with the application using that connection*, for release teaches the recited ‘selecting an application’” (emphasis added))). *Accord* Inst. Dec. 27.

Second, Patent Owner’s assertion that “*deactivating* a connection and its corresponding application” is different than “*selecting* an application” (PO Resp. 36 (emphasis added)) is not persuasive. Although we agree that selection and deactivation have different meanings (*see* PO Sur-reply 14–15), “[s]imple logic requires a selection to occur before a selected item is deactivated” (Pet. Reply 15). Moreover, as explained above, we find that a person of ordinary skill in the art would understand Oksala to teach selecting a connection and its corresponding application.

Third, Patent Owner’s arguments regarding *how* an application is selected (*see* PO Resp. 36–37) are inapposite. Specifically, Patent Owner

¹⁹ In the Institution Decision, we credited this testimony and invited Patent Owner to provide contrary argument and evidence “if Patent Owner does not agree that ‘selection of a data connection to be released is also a selection of the application using that data connection.’” Inst. Dec. 27 n.15 (quoting Ex. 1005 ¶ 127); *see also id.* at 27–28 (explaining why the cited testimony from Patent Owner’s declarant did not undercut this finding). Patent Owner did not provide contrary argument or evidence. *See* PO Resp.

argues that Oksala does not base its determinations on “whether a voice or a web browsing call could be supported” or “whether the application was streaming or real time” (*id.*), but the claim includes no such requirements. As such, Patent Owner’s argument that Oksala lacks such disclosure is unavailing.

Finally, we disagree with Patent Owner’s arguments regarding the scope of element 1[C]. *See* PO Resp. 37–38. Patent Owner contends that “the established application *must* release it[s] data connection if it is determined that a new data connection cannot be affected [sic]” (*id.* at 37), and, from this, Patent Owner contends that Oksala is deficient because its method provides *alternatives* to releasing an existing connection (i.e., the new connection may be blocked, or the existing connection’s QoS may be reduced) (*id.* at 37–38). However, Patent Owner’s argument is premised on a construction of the claim that is not justified.²⁰ Claim 1 does not require a mobile device to *always* perform the claimed method, and it does not preclude the addition of other conditions to element 1[C]. As a result, Oksala teaches this limitation because it discloses that this limitation is performed, even though Oksala’s preferred embodiment does so when other conditions are also satisfied (i.e., the new connection is higher priority and should not be blocked, and the existing connection’s QoS may not be reduced). *See, e.g.*, Ex. 1006, 6:26–7:7, Fig. 8; *see also Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003) (“Just as an accused product that sometimes, but not always, embodies a claimed method

²⁰ Patent Owner also fails to expressly articulate or provide any support for its proposed construction of this claim language. *See* Tr. 36:8–13 (stating that Patent Owner does not propose any constructions); *cf.* PO Resp. 14.

nonetheless infringes, a prior art product that sometimes, but not always, embodies a claimed method nonetheless teaches that aspect of the invention.” (citation and quotation marks omitted)). In addition, Oksala’s disclosure is broader than the method described in Figure 8. For example, Oksala states that “it may be advantageous to pause or release said first connection” “[i]f it is determined in said step of checking that said at least first and second connections can not [sic] jointly use said transmission resources.” *Id.* at 8:8–18.

Accordingly, Petitioner has demonstrated that Oksala teaches element 1[C].

d. Element 1[D]: “wherein selecting the application to release its existing data connection comprises prioritizing the existing wireless data connections”

Petitioner contends that Oksala teaches or renders obvious element 1[D]. Pet. 30–31. Patent Owner responds that Oksala does not teach or suggest this element. PO Resp. 38–41.

i. Petitioner’s Contentions

Specifically, Petitioner contends that Oksala teaches “prioritizing the existing wireless data connections,” as required by the claim. Pet. 30. First, Petitioner contends that Oksala teaches “selecting the lowest or highest priority connection,” which teaches the claimed prioritizing. *Id.* (citing Ex. 1006, 6:6–13, 15:29–16:4, 35:5–37:7; Ex. 1005 ¶ 131). In support, Petitioner quotes Oksala’s statement that “it may be preferred that the QoS requirements of the connection that has the lower priority are observed.” *Id.* at 31 (quoting Ex. 1006, 36:16–30, Fig. 8 (step 803); citing Ex. 1005 ¶¶ 133–134). Second, Petitioner contends that Oksala teaches “selecting the

earliest-established connection,” which also teaches prioritizing existing connections. *Id.* at 30 (citing Ex. 1006, 6:6–13, 15:29–16:4, 35:5–37:7; Ex. 1005 ¶ 131). In support, Petitioner quotes Oksala’s statements that “there may be more than two connections jointly using the transmission resources” and “the QoS requirements of the connection that was established first are considered.” *Id.* at 30–31 (quoting Ex. 1006, 36:16–20, 37:2–7; citing Ex. 1005 ¶ 132).

In addition, Petitioner contends that, in light of Oksala, it would have been obvious to compare priority amongst existing connections. Pet. 31. In support of this contention, Petitioner states:

As discussed, Oksala teaches that “there may be more than two connections jointly using the transmission resources . . . when a further PS or CS connection is to be established.” A POSITA would have found it obvious that the lowest priority existing connection should be re-negotiated and possibly released since that is the purpose of a priority indicator (*i.e.*, to indicate a relative level of importance). Doing otherwise would render Oksala’s priority meaningless.

Id. (alteration in original) (quoting Ex. 1006, 36:18–24; citing *id.* at 6:6–13, 15:29–16:4, 35:12–21, 36:16–24; Ex. 1005 ¶¶ 135–136).

ii. Patent Owner’s Contentions

Patent Owner begins by stating:

The Board agreed with Patent Owner that “‘prioritizing the existing wireless data connections,’ as recited in claim 1, requires a comparison of two or more existing connections.” The Board also agreed with Patent Owner that “element 1[D] requires prioritizing the existing connections as part of the selecting the application to release” and that that [sic] “Oksala primarily describes examples with one existing connection and one requested connection.”

However, based on a “*single*” passage that expressly contemplates multiple existing connections,” the Board preliminarily concluded that element 1[D] would have been obvious over Oksala. In relevant part that passage in question states: “For instance, two PS connections already may have been established, and their usage of transmission resources may be jointly or separately re-negotiated when a further PS or CS connection is to be established.”

PO Resp. 38–39 (citing Inst. Dec. 31–32; Ex. 1006, 36:21–37:7). Patent Owner then submits that the “Preliminary Response explained in detail” that this passage “concerns *renegotiation* of connections’ QoS instead of *releasing* connections.” *Id.* at 39 (citing Prelim. Resp. 34). The Response, however, fails to explain this contention.²¹

Next, Patent Owner argues that “the scenario on which the Board based its preliminary conclusions would have been unworkable.” PO Resp. 39. According to Patent Owner, only one timeslot is allocated to a CS connection “in the DTM mode of the relevant standards”; “[t]he CS portion of the network is separate from the PS portion”; and “DTM necessarily includes a CS connection.” *Id.* at 39–40 (citing Ex. 2007 ¶ 84; PO Resp. 23–31). Moreover, Patent Owner submits that “Oksala suggests that a PS connection can have a higher priority than real time voice, and that a CS call of a lower priority tha[n] a PS connection will be blocked”; however, “[t]he standards of the time . . . show that real time voice would have

²¹ Patent Owner indicates that background information regarding GPRS networks, PDP contexts, and QoS (*see* PO Resp. 14–22) may be relevant, but Patent Owner identifies (and we perceive) no connection between that information and this issue. *See id.* at 14, 22 (citing Inst. Dec. 34 (addressing this issue)). Moreover, we have considered the background information provided by Patent Owner, and we find that it is not germane to how an ordinary artisan would have understood the relevant passage of Oksala.

priority over a packet data call.” *Id.* at 40 (citing Ex. 1005, Fig. 8 (steps 803, 804); Ex. 2010, 15). Patent Owner also argues that a device would not have released a CS call or permitted two CS calls. *Id.* (citing Ex. 2007 ¶ 86; Ex. 2011, 6). Finally, Patent Owner contends that Dr. Buehrer’s declaration “should be disregarded” because “he misunderstands how prioritization was utilized at the relevant times.” *Id.* at 41 (citing Ex. 2014, 60:23–61:24, 64:13–65:13, 66:20–68:5).

iii. Analysis

Having considered the parties’ arguments and evidence, we are persuaded that Oksala suggests “wherein selecting the application to release its existing data connection comprises prioritizing the existing wireless data connections,” as required by element 1[D].

We find that Oksala expressly suggests use of its method when there are multiple existing PS connections and a requested PS connection. In particular, Oksala primarily describes its invention using examples that have one existing PS connection and one requested CS connection (Ex. 1006, 31:3–29, 35:4–23, Figs. 5, 8), but Oksala’s concluding paragraph expressly states that its invention can be used with multiple existing connections and/or with PS connections only:

The invention has been described above by means of preferred embodiments. It should be noted that there are alternative ways and variations which are obvious to a skilled person in the art and can be implemented without deviating from the scope and spirit of the appended claims. In particular, the step of checking can be initiated by instances in the mobile station or in the network. *Joint usage of the transmission resources by PS connections only*, or by CS connection only, or by a mixture of PS and CS connections *is possible, and there may be more than*

two connections jointly using the transmission resources or at least requesting for them. For instance, two PS connections already may have been established, and their usage of transmission resources may be jointly or separately renegotiated when a further PS or CS connection is to be established.

Ex. 1006, 36:9–24 (emphases added); *see also supra* § II.E.1.b (addressing element 1[B]).

We further find that Oksala suggests selecting one of the existing PS connections (and its associated application) to release its existing data connection if a requested PS connection cannot be established. Oksala’s method includes selecting an existing connection (and its associated application) for release (*supra* § II.E.1.c (addressing element 1[C])), and, given the context of Oksala, we are persuaded that an ordinary artisan would have understood Oksala’s concluding paragraph to suggest applying this and other aspects of Oksala’s method to the situation where “two PS connections already . . . have been established” and “a further PS . . . connection” is to be established. Ex. 1006, 36:21–24; *see also* Inst. Dec. 34 (providing additional explanation).

In addition, we find that Oksala’s disclosure would have motivated a person of ordinary skill in the art to use the existing connections’ priorities to select one of the existing connections for release. Oksala expressly teaches that the connections’ priorities are used to select between an existing and a requested connection. Ex. 1006, 8:18–24, 9:4–11, Fig. 8 (steps 803–805). Oksala also indicates that the connections’ priorities or durations may be used to select between existing connections. *Id.* at 35:12–23; *see also* Ex. 1005 ¶¶ 131–134 (testifying that Oksala also teaches prioritizing connections based on “designated connection priority and the establishment

time of the connection”). Dr. Buehrer testifies that an ordinary artisan would have understood Oksala’s disclosure “to indicate that not only would Oksala’s system arbitrate between a new connection and sole existing connection, but also between multiple existing connections to determine which existing connection should be re-negotiated or released in favor of the new connection.” Ex. 1005 ¶ 135. Dr. Buehrer further testifies that:

[A person of ordinary skill in the art] would have been motivated to include a prioritization mechanism between the existing connections so as to avoid arbitrarily selecting a connection for potential QoS re-negotiation and release. . . . Without comparing priorities among existing connections, an existing connection may be selected for QoS re-negotiation and release without regard for the priorities specified by the system, which defeats the purpose of Oksala’s prioritization.

Id. ¶ 136. We credit this testimony because it is logical and supported by the Oksala’s disclosure. *Accord* Inst. Dec. 33. As a result, we are persuaded that, given Oksala’s disclosure, a person of ordinary skill in the art would have been motivated to prioritize the existing PS connections as part of selecting an existing PS connection (and its associated application) for release.

We disagree with Patent Owner’s assertion that Oksala’s concluding paragraph only refers to renegotiating a connection’s QoS, not releasing a connection. *See* PO Resp. 39 (referencing Ex. 1006, 36:21–37:7). Patent Owner fails to support its conclusory assertion with sufficient argument or evidence (*id.*), and Patent Owner cannot rely on the arguments previously presented in its Preliminary Response. *See* 37 C.F.R. § 42.6(3) (“Arguments must not be incorporated by reference from one document into another document.”); *see also* Paper 20, 8 (“[A]ny arguments not raised in the response may be deemed waived.”). Further, even if those earlier arguments

had not been waived, they would not have been persuasive because we would find that an ordinary artisan would have understood Oksala’s final paragraph to have the meaning advanced by Petitioner for the reasons explained in the Institution Decision. *See* Inst. Dec. 31–34. In particular, Petitioner’s understanding of the relevant passage is “more consistent with Oksala’s disclosure as a whole,” and Patent Owner’s interpretation “would limit Oksala’s concluding statements to only one of its techniques (i.e., reducing a connection’s QoS), even though there is no apparent reason for Oksala to have singled-out that technique and divorced it from the remainder of Oksala’s invention.” *Id.* at 34.

Patent Owner’s other arguments (*see* PO Resp. 39–40) are also unavailing. To the extent Patent Owner contends that an ordinary artisan would not have been motivated to implement the disclosure of Oksala (*see id.* at 23–33, 39–40), this argument misses the mark. Such an argument attacks Oksala itself, rather than Petitioner’s allegation that claim 1 would have been obvious in light of it, and we discern no basis for ignoring Oksala’s express statements.²²

In addition, we disagree with Patent Owner’s arguments that Oksala is “unworkable.” *See* PO Resp. 23–33, 39–40. Patent Owner contends that

²² Patent Owner does not contend that Oksala fails to provide an enabling disclosure, so we presume Oksala is enabled. *See Impax Lab’ys, Inc. v. Aventis Pharms. Inc.*, 468 F.3d 1366, 1382 (Fed. Cir. 2006) (holding that a patent challenger “is entitled to a presumption that the allegedly anticipating material is enabled”); *see also Raytheon Techs. Corp. v. Gen. Elec. Co.*, 993 F.3d 1374, 1381 (Fed. Cir. 2021) (applying enablement “standard applied to anticipatory references” to “a standalone § 103 reference”). We also discern no basis for doubting Oksala’s enablement.

Oksala differs from the prevailing industry guidance²³ because: (1) it allows an existing PS connection to continue when a CS connection is requested (*see* PO Resp. 31–33, 40) and (2) it contemplates multiple simultaneous CS connections (*see id.* at 25, 29 n.4, 40). But, even assuming *arguendo* that these differences existed, neither difference is relevant to our inquiry. As for the first difference, Oksala expressly recognizes the industry’s current approach and identifies a problem associated with it. *See* Ex. 1006, 3:18–24 (“According to 3GPP standards, currently CS connections are prioritised over PS connections,” which “means also that the applications operating on PS connections and relying on previously negotiated QoS for said PS connections can suffer dramatically from parallel CS connections . . .”). This problem provides background for Oksala’s invention, and thus, an ordinary artisan would have understood Oksala to propose a *change* to the industry’s approach. Regarding the second difference, Oksala’s passing statement that multiple CS connections could use its method (*id.* at 36:16–20), whether or not feasible at the time, does not show that Oksala’s primary method was unworkable. Moreover, as particularly relevant here, we discern no basis for finding that either difference would have diminished an ordinary artisan’s motivation to modify Oksala’s method as Petitioner proposes. Also, to the extent Patent Owner contends that Petitioner’s

²³ To the extent Patent Owner argues that Oksala conflicts with a *requirement* of an industry standard, such as 3GPP (*see* PO Resp. 31, 40) this contention is not supported by the evidence. *See* Ex. 2010 § 6.3.1 (*cited by* PO Resp. 40); Ex. 2013, 2 (*cited by* PO Resp. 31–33) (stating that a particular company’s “test set” operates in this manner). To the extent Patent Owner relies on Mr. Bates’ testimony (*see* Ex. 2007 ¶ 85), we understand Mr. Bates to use the term “standard” to refer to the prevailing industry practice, as he fails to identify any specific industry standard.

proposed modification of Oksala would have been unworkable (*see* PO Resp. 39 (arguing that “the scenario on which the Board based its preliminary conclusions would have been unworkable”)), Patent Owner fails to sufficiently explain this contention.

We also disagree with Patent Owner’s argument that an ordinary artisan would not have managed contention of both PS and CS connections, as taught by Oksala. *See* PO Resp. 25–30, 39–40. Patent Owner contends that an ordinary artisan would not have implemented Oksala’s method because the “CS portion of the network is separate from the PS portion” and, thus, the former “does not affect” the latter. *Id.* at 39 (citing Ex. 2007 ¶¶ 84); *see also id.* at 26–29 (arguing that the CS network and the PS network diverge after the base station controller (citing Ex. 2007 ¶¶ 56–58)).

However, Patent Owner’s evidence shows that, even though PS and CS connections pass through some different components, both are exchanged over the *same components in the wireless network* (i.e., the wireless device, the base transceiver station (BTS), and the base station controller (BSC)).

See Ex. 2007 ¶¶ 56–58. Also, according to Patent Owner, it was “meaningless” to compare CS connections with PS connections because these connections have separate timeslots. *Id.* at 29–30 (citing Ex. 2007 ¶¶ 61, 63; Ex. 2011, 6). However, Patent Owner’s evidence cuts against that argument. *See* Ex. 2011, 5–6; Ex. 2012, 6; Ex. 2013, 9. There are a limited number of timeslots that are allocated to PS and CS connections. *E.g.*, Ex. 2011, 6. If a CS connection were released, an additional timeslot would presumably be available for a new PS connection. *Cf.* Ex. 2013, 2 (stating that the test set aborts the PS connection when a CS connection is requested). In addition, the documents indicate that the CS timeslot can be

used for PS data. *See* Ex. 2011, 5 (stating that “PS data” can be sent “on the timeslot use [sic] by the CS connection”), 9 (“It is possible to reuse the [single CS] timeslot for the transmission of GPRS signalling and user data.”). Thus, we disagree with Patent Owner that PS and CS connections do not share the relevant resources, and consequently, we disagree that an ordinary artisan would have perceived Oksala’s disclosure to be unworkable.

In reaching our Decision, we considered the cited testimony of Mr. Bates, Patent Owner’s declarant. However, the cited testimony simply mirrors the Response and thus suffers from the deficiencies identified above. We also find Mr. Bates’ testimony to be outweighed by the documentary evidence identified above. In addition, several of Mr. Bates’ conclusions are insufficiently supported by his analysis and contradicted by evidence, as explained above, so we assign little weight to these conclusions. Specifically, we assign little weight to his conclusions that Oksala is “unworkable” (Ex. 2007 ¶¶ 51, 84), Oksala’s evaluation of both CS and PS connections “is meaningless” (*id.* ¶¶ 54, 63), “a CS connection does not share the relevant resources with PS data connections” (*id.* ¶ 63), and Oksala’s method is “not possible” in DTM (*id.* ¶ 67; *see also id.* ¶ 65).

Finally, we disagree with Patent Owner that Dr. Buehrer’s testimony should be disregarded. *See* PO Resp. 41. Patent Owner’s contention that Dr. Buehrer “misunderstands how prioritization was utilized” is not supported by a citation to any evidence that conflicts with his testimony. *Id.* We have reviewed the cited portions of Dr. Buehrer’s testimony (*see* Ex. 2014, 60:23–68:5), and we find that Dr. Buehrer’s testimony is credible and demonstrates a reliable understanding of the technology relevant to this proceeding.

Accordingly, Petitioner has demonstrated that Oksala suggests element 1[D].

e. Conclusion

For the reasons provided above, we are persuaded that each limitation of independent claim 1 is either taught or suggested by Oksala. We are also persuaded that Oksala's disclosure would have motivated a person of ordinary skill in the art to modify Oksala, as Petitioner contends, to yield the subject matter of claim 1. Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 1 would have been obvious over Oksala.

2. Claims 10 and 18

Claim 10 recites a “mobile communications device” comprising a wireless transceiver, a processor, and a contention manager for selecting an existing data connection to be released. Ex. 1001, 9:48–62. Claim 18 recites a computer program product comprising computer instructions operable to perform steps substantially similar to those recited in claim 1. *Id.* at 10:31–52; *see also* Ex. 1005 ¶ 208.

Petitioner contends that the subject matter of claims 10 and 18 would have been obvious over Oksala. Pet. 38–41, 45–48. On this record, Petitioner's contentions are persuasive. Petitioner shows that each limitation of claims 10 and 18 is taught or suggested by Oksala. In particular, we are persuaded that an ordinary artisan would have recognized that Oksala's mobile station includes a wireless transceiver and a processor operable to perform the operations recited by these claims. *See, e.g.*, Ex. 1006, 18:1–7, 41:4–6; Ex. 1005 ¶ 165; *supra* § II.E.1.b–d (addressing elements 1[B], 1[C],

and 1[D])). We are also persuaded that an ordinary artisan would have understood Oksala to disclose a “contention manager” for selecting an existing data connection to be released, as required by claim 10, because Oksala discloses software operable to perform its method. *See* Ex. 1005 ¶¶ 173–176; *supra* § II.E.1.c–d (addressing elements 1[C] and 1[D])).

Patent Owner does not dispute these contentions, other than to the extent these claims include “substantially identical elements” to those discussed above with respect to claim 1. *See* PO Resp 23.²⁴ However, Patent Owner’s arguments regarding the limitations of claim 1 are unavailing for the reasons explained above.

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 10 and 18 would have been obvious over Oksala.

3. *Claims 8 and 17*

Claim 8 depends from claim 1 and further recites that “each data connection comprises a packet data protocol context.” Ex. 1001, 9:42–43. Claim 17 depends from claim 10 and recites a commensurate limitation. *Id.* at 10:27–29.

Petitioner contends that Oksala discloses this limitation. Pet. 37–38, 45. In particular, Petitioner asserts that Oksala discloses that “the data

²⁴ Although Patent Owner later identifies independent claim 10, it provides no separate arguments directed to this claim. *See* PO Resp. 41–42 (stating only that Patent Owner had previously argued that Oksala lacks the claimed “contention manager,” but the Board determined that these arguments simply restate the arguments provided for claim 1); *see also* Pet. Reply 20 (contending that “[n]o additional arguments were made concerning claim[] 10”); PO Sur-reply 17–18 (providing no response).

connection requests and existing data connections may include packet data protocol (PDP) contexts.” *Id.* at 37–38 (citing Ex. 1006, 3:5–17, 24:12–18, 32:1–34:25, 36:10–30; Ex. 1005 ¶¶ 157–158), 56 (citing Ex. 1005 ¶¶ 204–207).

Patent Owner argues that “Oksala deals both with PS and CS connections unlike the ’611 patent that focuses strictly on PS connections.” PO Resp. 41. Patent Owner submits that “only PS connections use packet data protocol context.” *Id.*

Having considered the parties’ arguments, we are persuaded that Oksala teaches the additionally-recited limitations of these claims. As explained above in connection with independent claim 1 (*supra* § II.E.1), we find that Oksala expressly suggests applying its method to a situation involving two existing PS connections and a requested PS connection. *See* Ex. 1006, 36:21–24 (“[T]wo PS connections already may have been established . . . when a further PS . . . connection is to be established.”). Moreover, Oksala’s PS connection comprises a packet data protocol context. *E.g., id.* at 3:5–17, 24:12–18, 32:10–11; Ex. 1005 ¶ 158.

Patent Owner’s argument to the contrary appears to be premised on its erroneous assumption that Oksala fails to teach or suggest multiple PS connections, which we discussed in connection with independent claim 1. In addition, although Oksala describes other embodiments with both PS and CS connections, those other embodiments do not negate the relevant disclosure of Oksala. *See* Pet. Reply 20 (“One passage in Oksala is all that is needed for Oksala to teach claims 8 and 17.”).

Accordingly, Petitioner has shown by a preponderance of the evidence that the subject matter of claims 8 and 17 would have been obvious over Oksala.

4. Claim 14

Claim 14 depends from independent claim 10 and further recites that “the contention manager is operable to automatically release a selected application’s existing data connection and to establish a new data connection associated with another application.” Ex. 1001, 10:11–15.

According to Petitioner, “Oksala teaches releasing the selected existing data connection and its corresponding application and establishing the requested new data connection in conjunction with the release,” and “[t]he releasing and establishing are performed automatically (*e.g.*, without user input) in response to determining that QoS re-negotiation is not possible.” Pet. 43–44 (citing *id.* at 36–37; Ex. 1006, 31:8–24, 35:5–37:7, Fig. 8; Ex. 1005 ¶¶ 191–194).

Patent Owner disputes Petitioner’s showing for this claim. PO Resp. 42–43. Patent Owner contends that the record does not support Dr. Buehrer’s testimony, which it contends “the Board credited.” *Id.* at 42 (citing Inst. Dec. 39). Patent Owner further contends that Oksala’s Figure 8 shows alternatives, such as establishing the CS connection without releasing an existing connection and blocking the CS connection. *Id.* at 42–43 (citing Ex. 1006, Fig. 8).

Having considered the parties’ arguments, we are persuaded that Petitioner has shown that Oksala teaches the additionally-recited limitations of this claim. Oksala indicates that an existing data connection and its

corresponding application are released and the requested connection is established without user input. *See, e.g.*, Ex. 1006, 31:8–24, Fig. 5 (steps 500–504 and 507); *accord* Inst. Dec. 40 (observing that the Specification of the ’611 patent “indicates that the claim term ‘automatically’ means proceeding without user intervention or prompt” (citing Ex. 1001, 7:34–41)). In addition, Oksala’s Figure 8 shows releasing an existing PS connection (step 806) and establishing a requested CS connection (step 809). Ex. 1006, Fig. 8. As explained above in connection with claim 1, we are persuaded that Oksala suggests performing substantially the same method when a new PS connection is requested.

Patent Owner’s argument that Oksala’s releasing does not occur “in conjunction” with establishing the new connection (*see* PO Resp. 42) is inapposite. *See also* Tr. 51:10–19 (failing to explain relevance of argument). Claim 14 does not include this requirement (Ex. 1001, 10:11–15), and, contrary to Patent Owner’s assertion (*see* PO Resp. 42; PO Sur-reply 17–18), Dr. Buehrer did not testify that releasing occurs “in conjunction” with establishing a connection (*see* Ex. 1005 ¶¶ 191–194; *see also* Pet. Reply 21). Moreover, we disagree with Patent Owner’s understanding of Oksala because Figure 8 shows that establishing the requested connection (step 809) immediately follows releasing an existing connection (step 806). *See* Ex. 1006, Fig. 8.

In addition, Patent Owner’s conclusory assertion that Oksala does not “expressly refer to a contention manager” (PO Resp. 42 (citing Ex. 2007 ¶ 91)) is not persuasive because a reference need not use the same terminology as the challenged claims. We are persuaded that Oksala

discloses a contention manager for the reasons explained by Petitioner. *See* Pet. 40–41, 43–44; *see also supra* § II.E.2 (addressing claim 10).

Finally, it matters not that Oksala’s flowchart includes other paths. *See* PO Resp. 42–43. Oksala may establish the requested connection without comparing priorities (traversing steps 800, 801, 802, 810, and 809 to the end), and it may block the requested connection (traversing steps 800, 801, 802, 803, and 804 to the end). *See* Ex. 1006, Fig. 8. But this disclosure is not germane to our inquiry because it does not diminish the salient portion of Oksala’s disclosure (i.e., traversing from step 806 to step 809). *See id.* To the degree Patent Owner’s argument is premised on an assumption that the term “automatically” means that alternative methods cannot be used to control existing connections, Patent Owner identifies (and we perceive) no support for such an assumption. *Accord* Inst. Dec. 40 (providing same explanation).

Accordingly, Petitioner has shown by a preponderance of the evidence that the subject matter of claim 14 would have been obvious over Oksala.

5. Claims 2–5, 7, 9, 11, 15, 16, 19–21, and 23–25

Claims 2–5, 7, and 9 depend from independent claim 1. Ex. 1001, 9:18–33, 9:37–47. Claims 11, 15, and 16 depend from independent claim 10. *Id.* at 9:63–67, 10:16–30. Claims 19–21 and 23–25 depend from independent claim 18. *Id.* at 10:53–67, 11:5–12:8.

Petitioner contends that the subject matter of each these claims is rendered obvious by Oksala because Oksala teaches or suggests each claim’s additionally-recited limitations. Pet. 32–38, 42–45, 48–51. Patent Owner

does not dispute these contentions.²⁵ *See* PO Resp. Having considered the record, we are persuaded that Petitioner has shown that each limitation of claims 2–5, 7, 9, 11, 15, 16, 19–21, and 23–25 is taught or suggested by Oksala.

As for claims 2 and 19, we are persuaded by Petitioner’s undisputed arguments that Oksala teaches “contention parameter analysis,” as required, because Oksala states that priority or duration may be used to select an existing connection. *See* Pet. 32–33, 48; *see also* Ex. 1006, 35:5–37:7 (“QoS requirements . . . of the connection with the higher priority may be observed” and “QoS requirements of the connection that was established first are considered”); Ex. 1005 ¶¶ 138–141; *accord* Inst. Dec. 36–37 (explaining that “[t]he parties agree that priority and duration are contention parameters”).

As for claims 3, 4, and 20, we are persuaded by Petitioner’s undisputed arguments that Oksala analyzes connections’ priority or duration and then analyzes an existing connection’s QoS parameters to determine whether an existing connection (and its associated application) will be released. *See* Pet. 33–35, 49; *see also* Ex. 1006, 35:12–23, 36:21–37:7; Ex. 1005 ¶¶ 142–146, 148–149; *accord supra* § II.C (construing claim 20).

As for claims 5, 9, 15, 16, 21, and 25, we are persuaded by Petitioner’s undisputed arguments that Oksala teaches comparing the durations of the existing connections in order to select a connection (and its

²⁵ Patent Owner has waived any arguments related to these claims. *See* Paper 20, 8 (“Patent Owner is cautioned that any arguments not raised in the response may be deemed waived.”); *see also In re NuVasive, Inc.*, 842 F.3d 1376, 1381 (Fed. Cir. 2016).

corresponding application) for QoS renegotiation and potential release. *See* Pet. 35–36, 38, 44–46, 50–51; *see also* Ex. 1006, 37:3–7; Ex. 1005 ¶¶ 152, 160; *accord supra* § II.C (construing claims 5, 15, and 21).

As for claims 7 and 23, we are persuaded by Petitioner’s undisputed arguments that Oksala releases an existing data connection and its corresponding application and establishes the requested connection that corresponds to another application. *See* Pet. 36–37, 50; *see also* Ex. 1006, 31:8–24, Fig. 5 (steps 500–504 and 507); *supra* § II.E.4 (addressing substantially similar limitations in claim 14).

As for claim 11, we are persuaded by Petitioner’s undisputed arguments that an ordinary artisan would have understood Oksala to teach that the software implementing its method (the “contention manager”) is in operable connection with a radio layer, an operating system, and a protocol stack. *See* Pet. 42–43; *see also* Ex. 1005 ¶¶ 183–189.

As for claim 24, we are persuaded by Petitioner’s undisputed arguments for the reasons provided above for dependent claims 8 and 17. *See* Pet. 51; *supra* § II.E.3 (addressing substantially similar limitation).

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 2–5, 7, 9, 11, 15, 16, 19–21, and 23–25 would have been obvious over Oksala.

F. Obviousness Ground Based on Oksala and Yoshioka

Petitioner contends that the subject matter of dependent claims 3, 6, 12, 13, and 22 would have been obvious over Oksala and Yoshioka. Pet. 51–58. Patent Owner does not address any of these claims individually,

but disputes the combination of Oksala and Yoshioka generally. PO Resp. 44–46.²⁶

Having considered the parties arguments, for the reasons below, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 3, 6, 12, 13, and 22 would have been obvious over Oksala and Yoshioka.

1. Claim 3

Claim 3 depends from claim 2, which depends from independent claim 1. Claim 2 recites that the claimed selecting “comprises performing contention parameter analysis,” and claim 3 additionally recites that “performing contention parameter analysis comprises analyzing a plurality of contention parameters.” Ex. 1001, 9:22–24.

Petitioner relies on Oksala to teach the limitations of claims 1 and 2 (Pet. 51), and Petitioner contends that Yoshioka teaches the additionally-recited limitations of claim 3 (*id.* at 52). Patent Owner does not dispute Petitioner’s contentions regarding Yoshioka’s disclosure. *See* PO Resp. 44–46.

We are persuaded by Petitioner’s undisputed arguments that Yoshioka teaches the additionally-recited limitations of claim 3. *See* Pet. 52. In particular, Yoshioka describes a mobile phone that prioritizes applications by calculating a weighted average of several attributes, and Yoshioka’s mobile phone uses this prioritization to select an application for termination

²⁶ Patent Owner also contends that Yoshioka does not cure Oksala’s alleged shortcomings regarding the independent claims. PO Resp. 44. But, as explained in connection with claim 1, we disagree with Patent Owner’s arguments regarding the independent claims.

when too many applications are competing for the same resources. *See, e.g.*, Ex. 1007, 3:28–34, 4:52–62, 8:35–9:31; *see also* Ex. 1005 ¶¶ 258–259.

Yoshioka describes three attributes: “the total display time after starting the application, the number of switching times of the display operation, and the last display time.” Ex. 1007, 8:36–38.

Next, Petitioner contends that it would have been obvious to combine Oksala and Yoshioka to yield the subject matter of claim 3. Pet. 52–53.

According to Petitioner, “the combined Oksala and Yoshioka system would simply have prioritized connections based on combining [Oksala’s contention] parameters [such as priority and establishment time] and/or the parameters described in Yoshioka.” *Id.* at 52 (citing Ex. 1005 ¶¶ 256, 261–262). Petitioner submits that an ordinary artisan “would have recognized that considering a combination of parameters (*e.g.*, priority and duration) in Oksala would reduce the possibility of ties.” *Id.* at 53 (citing Ex. 1005 ¶¶ 260–262). Petitioner also submits that such a combination would have been within an ordinary artisan’s skill and yielded predictable results. *Id.*

Patent Owner contends that “Petitioner[] failed to show either a motivation to combine Oksala and Yoshioka or that Yoshioka teaches or suggests the same prioritization approach as the ’611 patent.” *See* PO Resp. 44–46. In support, Patent Owner asserts that Yoshioka contains little discussion of wireless data communications, has different goals than Oksala and the ’611 patent, and fails to treat applications that use wireless data connections differently. *Id.*

Having considered the parties’ arguments, we are persuaded that it would have been obvious to implement Oksala’s prioritization of existing connections by analyzing multiple contention parameters, as Yoshioka

discloses. *See* Pet. 52–53. We find that a person of ordinary skill in the art would have been motivated to consider a plurality of contention parameters because this would have decreased the likelihood of ties in the selection process. *See* Ex. 1005 ¶ 261. We also find that this implementation was within the skill of a person of ordinary skill in the art. *See id.* ¶¶ 260, 262. Further, we find that the use of multiple contention parameters (including the attributes described by Yoshioka) would have yielded predictable results. *See id.* ¶ 261. We credit Dr. Buehrer’s testimony on these issues because it is logical and because the record includes no contradictory evidence.

Patent Owner’s arguments are unavailing. In particular, Patent Owner’s arguments regarding whether Yoshioka discusses wireless data communications, how Yoshioka makes its decisions, or the effects of Yoshioka’s decisions (*see* PO Resp. 44–46) fail to respond to Petitioner’s contentions, which rely on Oksala, not Yoshioka, for the corresponding claim limitations (*cf.* PO Sur-reply 18).²⁷

We have considered the differences between Yoshioka and Oksala identified by Patent Owner (*see* PO Resp. 44), and we find that none of these alleged differences indicate that a person of ordinary skill in the art would not have combined Oksala and Yoshioka as Petitioner proposes. In particular, although Yoshioka was concerned with the management of memory and power, where Oksala was concerned with managing transmission resources, both Oksala and Yoshioka describe techniques for

²⁷ Patent Owner fails to identify any claim limitations relevant to its alleged differences (*see* PO Resp. 44–46); however, we understand Patent Owner’s arguments to refer to limitations recited in the independent claims, as dependent claims 3, 6, 12, 13, and 22 do not add any limitations that are relevant to these arguments.

managing applications that compete for the limited resources of a mobile device. *E.g.*, Ex. 1006, 4:10–20; Ex. 1007, 1:11–34.

Further, Patent Owner has not explained the relevance of any alleged differences between Yoshioka and the '611 patent. *See* PO Resp. 44–46; *see also In re Heck*, 699 F.2d 1331, 1332–33 (Fed. Cir. 1983) (references can be used for more than what the patentee described as its invention); *see also KSR*, 550 U.S. at 420 (a reference need not address the same problem as the invention).

Moreover, we have considered Mr. Bates' testimony (Ex. 2007 ¶¶ 97, 99–100 (*cited by* PO Resp. 44–46)), but it suffers from the same deficiencies as Patent Owner's arguments.

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 3 would have been obvious over Oksala and Yoshioka.

2. Claims 6, 13, and 22

Claim 6 depends from independent claim 1 and additionally recites: “prompting the user to confirm a selected application prior to releasing its existing data connection.” Ex. 1001, 9:34–36. Claim 13 (which depends from independent claim 10) and claim 22 (which depends from independent claim 18) recite substantially similar limitations. *Id.* at 10:5–9, 11:1–4.

Petitioner contends that Yoshioka teaches providing a prompt that asks the user to confirm whether a selected application may be terminated. Pet. 53–55 (citing Ex. 1007, 10:50–52, 10:62–67, Fig. 10 (S302), Fig. 11; Ex. 1005 ¶¶ 266–267). Petitioner further contends that it would have been obvious to add Yoshioka's confirmation prompt before Oksala's termination

of the selected data connection. *Id.* at 55–56. In support, Petitioner asserts that the combination would have been an obvious use of a known technique to improve similar devices in the same way, and an ordinary artisan would have been motivated to add this prompt in order to make the software more user-friendly. *Id.* (citing Ex. 1005 ¶¶ 264–265, 269–270). Petitioner also contends that the proposed modification would have been within the skill of an ordinary artisan. *Id.* at 57 (citing Ex. 1005 ¶ 271).

Patent Owner does not dispute Petitioner’s contentions regarding Yoshioka’s disclosure; instead, as discussed above, Patent Owner generally attacks Petitioner’s rationale to combine Oksala and Yoshioka. *See* PO Resp. 44–46; *supra* § II.F.1 (addressing claim 3).

We are persuaded by Petitioner’s undisputed arguments that Yoshioka teaches prompting a user to pre-authorize the termination of an application. *See* Pet. 54–55. In particular, Yoshioka describes a “checking screen” that asks the user to confirm termination of a selected application. Ex. 1007, 10:50–52, 10:62–67, Fig. 10 (S302), Fig. 11.

Having considered the parties arguments, we are persuaded that it would have been obvious to combine Oksala and Yoshioka to yield the subject matter of these claims. In particular, we find that a person of ordinary skill in the art would have been motivated to add a prompt (such as that disclosed by Yoshioka) to Oksala before it terminates the selected data connection (and its associated application) in order to make the software more user friendly. Ex. 1005 ¶ 270. As Dr. Buehrer explains, “without such confirmation, data connections would be released and applications terminated without warning, even in instances where the user has unsaved data or other work or is in the process of actively using the data connection

and application.” *Id.* We also find that Petitioner’s proposed combination was within the skill of a person of ordinary skill in the art. *Id.* ¶ 271. We further find that adding Yoshioka’s confirmation prompt to Oksala, as Petitioner proposes, is use of a known technique to improve a similar device in the same way. *Id.* ¶ 269; *see 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.”). We credit Dr. Buehrer’s testimony on these issues because it is logical and because the record includes no contradictory evidence.

Patent Owner’s contrary arguments are unavailing for the reasons discussed above. *See supra* § II.F.1 (addressing claim 3).

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 6, 13, and 22 would have been obvious over Oksala and Yoshioka.

3. Claim 12

Claim 12 depends from independent claim 10 and additionally recites: “the plurality of applications comprises at least one of email, video mail, a messenger service, a browser, a calendar and a scheduling application.” Ex. 1001, 10:1–4.

Petitioner contends that claim 12 is satisfied so long as the recited applications include one of the listed types. Pet. 56 (citing Ex. 1001, 6:23–7:19). According to Petitioner, Oksala describes “streaming or downloading applications,” and email and browser applications are both downloading applications. Pet. 56–57 (citing Ex. 1005 ¶ 274 (citing Ex. 1006, 16:5–13)).

Petitioner further contends that Yoshioka discloses that a mobile phone's email and browser applications are involved in its content arbitration process. *Id.* at 57 (citing Ex. 1007, 5:1–9). Petitioner also contends that “the ’611 patent itself recognized the ubiquity of [email and browser] applications on mobile devices.” *Id.* (citing Ex. 1001, 1:26–39). From this, Petitioner contends that it would have been obvious to combine Oksala's contention management process with email and browser applications, as the combination was predictable, straightforward, and “well within the skill of a POSITA.” *Id.* at 57–58 (citing Ex. 1005 ¶¶ 276–278).

Patent Owner does not dispute Petitioner's contentions regarding Yoshioka's disclosure; instead, as discussed above, Patent Owner generally attacks Petitioner's rationale to combine Oksala and Yoshioka. *See* PO Resp. 44–46; *supra* § II.F.1 (addressing claim 3).

We are persuaded by Petitioner's undisputed arguments that Yoshioka teaches that the applications include an email application and a browser application. *See* Pet. 57; Ex. 1007, 5:7–9; *see also* Ex. 1007, 1:21–34, 9:14–31, Fig. 3. On this record, we agree with Petitioner's undisputed understanding of the scope of claim 12 (*see* Pet. 56), as it is consistent with the claim language and the Specification of the ’611 patent (*see also* Ex. 1005 ¶ 273 (providing additional explanation)). Accordingly, because Yoshioka teaches an email application and a browser application, we find that it teaches the additionally-recited limitation of claim 12.

Having considered the parties' arguments, we are also persuaded that it would have been obvious to combine Oksala and Yoshioka to yield the subject matter of claim 12. In particular, we find that a person of ordinary skill in the art would have been motivated to implement Oksala's method

with an email and a browser application based on the disclosures of Oksala and Yoshioka. Specifically, Yoshioka teaches that mobile phones include email and browser applications (Ex. 1007, 1:17–23); an ordinary artisan would have understood these to be downloading applications (Ex. 1005 ¶¶ 274, 276); and Oksala teaches that its method can be used with “downloading application[s]” (Ex. 1006, 16:5–13). We also find that the combination would have been predictable, as “the same resource contention management processes [would be applied] to any application that required a data connection” (Ex. 1005 ¶ 278), and we find that the combination would have been within the skill of an ordinary artisan (*id.* ¶ 277). We credit Dr. Buehrer’s testimony on these issues because it is logical and because the record includes no contradictory evidence.

Patent Owner’s contrary arguments are unavailing for the reasons discussed above. *See supra* § II.F.1 (addressing claim 3).

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 12 would have been obvious over Oksala and Yoshioka.

G. Other Grounds

In addition, Petitioner contends that claims 1–5, 7–11, 14–21, and 23–25 are anticipated by Oksala. Pet. 17, 21–51. Petitioner also contends that the subject matter of claims 1–5, 7–9, 18–21, and 23–25 would have been obvious over Oksala and TS24.008. *Id.* at 58–63. Petitioner further contends that the subject matter of claims 3, 6, and 22 would have been obvious over Oksala, TS24.008, and Yoshioka. *Id.* at 63. Also, Petitioner contends that the subject matter of dependent claims 4 and 20 would have

been obvious over the combination of Oksala and Matsumoto or over the combination of Oksala, TS24.008, and Matsumoto. *Id.* at 63–65. Finally, Petitioner contends that the subject matter of claims 1–3, 5, 7, 8, 10–12, 14, 15, 17–21, 23, and 24 would have been obvious over Baggstrom and TS23.107. *Id.* at 65–83.

We already have found each of claims 1–25 to be unpatentable, so we do not reach any of these grounds. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, agreeing that the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

III. MOTION TO AMEND

Pursuant to 35 U.S.C. § 316(d)(1) and 37 C.F.R. § 42.121(a), Patent Owner filed a contingent Motion to Amend seeking to replace claims 1–25 of the ’611 patent with proposed substitute claims 26–50, respectively, if any of the original claims are found unpatentable. MTA 1. Because we have determined that all challenged claims are unpatentable (*see supra* §§ II.E–F), we proceed to address all proposed substitute claims in Patent Owner’s Motion to Amend.

A. Proposed Substitute Claims

In the Motion to Amend, Patent Owner proposes substitute independent claims 26, 35, and 43 as replacements for original independent

claims 1, 10, and 18, respectively. MTA 25–27, 29–30. Substitute claim 26 is representative, and it is reproduced below, with underlining to indicate added text:

26. A method of managing contention on a mobile communications device when a new wireless data connection between the mobile communications device and a wireless network is requested, the method comprising:

determining if a further wireless data connection can be effected between the mobile communications device and a wireless network; and

selecting an application to release its existing data connection if a further wireless data connection cannot be effected between the mobile communications device and a wireless network,

wherein selecting the application to release its existing data connection comprises prioritizing the existing wireless data connections;

wherein each established data connection is a packet-switched connection; and

wherein each requested data connection is a packet-switched connection.

MTA 25. Substitute claims 35 and 43 have also been amended to include the same new limitations, but are otherwise identical to the independent claim they would replace. *Id.* at 26–27, 29–30.

In addition, Patent Owner proposes substitute claims 27–34, 36–42, and 44–50 to replace dependent claims 2–9, 11–17, and 19–25. MTA 25–26, 28–31.²⁸ Each of these proposed substitute claims are identical to the

²⁸ The Claims Appendix lists proposed substitute claims 34 and 35 twice. *See* MTA 27–29. Also, although the Motion proposes substitute claims 41 and 42 for original claims 16 and 17, the Claims Appendix does not show

dependent claims they would replace, except for a revision to depend from the corresponding substitute independent claim. *Id.*

B. Claim Construction

Neither party contends that any terms or phrases in the proposed substitute claims require construction. *See* MTA; MTA Opp.

In the Preliminary Guidance, we provided a construction for the newly-added limitations. PG 8–9. Specifically, “we conclude[d] that the newly-recited ‘each established data connection’ refers to the previously-recited ‘existing wireless data connections,’” and “we also conclude[d] that the newly-recited ‘each requested data connection’ refers to the previously-recited ‘new wireless data connection’ or the ‘further wireless data connection.’” *Id.* at 8. We stated that the parties appeared to have the same understanding, but instructed the parties to “expressly propose an alternative construction” if either disagreed with these constructions. *Id.* at 8–9. Neither Patent Owner nor Petitioner did so. *See* MTA Reply; MTA Sur-reply. We adopt these conclusions in this Decision.

We determine we need not expressly construe any other claim terms or phrases in this Decision for purposes of evaluating the proposed substitute claims. *See Nidec Motor*, 868 F.3d at 1017.

C. Statutory and Regulatory Requirements

“Before considering the patentability of any substitute claims, . . . the Board first must determine whether the Motion to Amend meets the

the amendments to either of these claims. *See id.* at 29. We consider these to be harmless typographical errors. *See id.* at 8–10 (substitute claims 34 and 35), 12 (identifying the substance of substitute claims 41 and 42).

statutory and regulatory requirements set forth in 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121.” *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15, 4–8 (PTAB Feb. 25, 2019) (precedential). Specifically, Patent Owner must demonstrate that: (1) the amendment proposes a reasonable number of substitute claims; (2) the amendment responds to a ground of unpatentability involved in the trial; (3) the amendment does not seek to enlarge the scope of the claims of the patent or introduce new subject matter; and (4) the proposed claims are supported in the original disclosure. *See* 35 U.S.C. § 316(d); 37 C.F.R. § 42.121.

We are persuaded that Patent Owner has satisfied these requirements.

1. Reasonable Number of Substitute Claims

Patent Owner contends that its motion proposes a reasonable number of substitute claims because it proposes one substitute claim for each challenged claim. MTA 4. Petitioner does not dispute Patent Owner’s contention. *See* MTA Opp.

We are persuaded that Patent Owner proposes a reasonable number of substitute claims because it proposes one substitute claim for each challenged claim. *See Lectrosonics*, Paper 15 at 4 (“There is a rebuttable presumption that a reasonable number of substitute claims per challenged claim is one (1) substitute claim.”); *see also* 37 C.F.R. § 42.121(a)(3).

2. Respond to a Ground of Unpatentability

Patent Owner contends that its motion responds to a ground of unpatentability. MTA 4; *see also* MTA 17–24 (alleging that added limitations distinguish over cited references). Petitioner does not dispute that the motion responds to a ground of unpatentability. *See* MTA Opp.

We determine that the proposed amendments are responsive to a ground of unpatentability involved in this trial because the amendments specify that the “data connections” recited in the claim are each “packet-switched connections,” which Patent Owner alleges distinguish the claims over Oksala and Yoshioka.

3. Scope of the Claims

Patent Owner asserts that the proposed substitute claims are narrower than the corresponding original claims because the amendments add limitations to the independent claims. MTA 4–5. Petitioner does not dispute Patent Owner’s contention. *See* MTA Opp.

The amendments add limitations to each independent claim. Accordingly, we are persuaded that the proposed substitute claims do not enlarge the scope of the claims.

4. Support in the Original Disclosure

A motion to amend may not introduce new matter. 35 U.S.C. § 316(d); 37 C.F.R. § 41.121(a)(2)(ii). “New matter is any addition to the claims without support in the original disclosure.” *Lectrosonics*, Paper 15 at 7 (citing *TurboCare Div. of Demag Delaval Turbomach. v. Gen. Elec. Co.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001)). To this end, the motion to amend must “set forth written description support in the originally filed disclosure of the subject patent for each proposed substitute claim, and also set forth support in an earlier filed disclosure for each claim for which benefit of the filing date of the earlier filed disclosure is sought.” *Id.* (citing 37 C.F.R. § 42.121(b)(1)–(2)).

Patent Owner contends that the proposed substitute claims are supported by the original disclosure of the application that issued as the '611 patent (U.S. App. No. 12/326,446) as well as the application to which it claims priority (U.S. App. No. 11/267,538). MTA 5. In support, Patent Owner provides a table identifying claim limitations and the corresponding support in both applications by paragraph. *Id.* at 5–16.

In the Opposition, Petitioner contends that the '611 patent²⁹ does not disclose a “packet-switched connection,” as newly recited by all proposed substitute claims. MTA Opp. 11–12. Specifically, Petitioner contends that the disclosure fails to teach that “the data connection requested by an application is a packet-switch[ed] connection.” *Id.* at 11; *see also id.* at 12 (further contending that there is no disclosure that “an application knows about a packet-switch network”). However, in the Preliminary Guidance, we stated that Petitioner’s contentions were not persuasive. PG 5. We explained that “Petitioner assumes that the proposed substitute claims require *an application* to specifically request that a connection be packet-switched; however, Petitioner does not identify (and we do not perceive) any such limitation in the proposed substitute claims.” *Id.* (citing MTA Opp. 11–12). In addition, we stated that “it appears that the '446 and '538 applications both disclose ‘packet-switched connection[s],’ as the proposed

²⁹ Although Petitioner refers and cites to the '611 patent itself, we have considered the corresponding disclosure of the '446 and '538 applications. *See Lectrosonics*, IPR2018-01129, Paper 15 at 7–8 (explaining that “citation should be made to the original disclosure of the application, as filed, rather than to the patent as issued”).

substitute claims actually recite.” *Id.* (citing Ex. 1002³⁰ ¶¶ 2, 8, 17–19, 23, 32, 34; *see also* Ex. 2005 ¶¶ 1, 7, 16–18, 22, 31, 33) (alteration in original). In subsequent briefing, Patent Owner agrees with our assessment (MTA Reply 1), and Petitioner does not respond to it (*see* MTA Sur-reply).

Accordingly, for the reasons previously explained, we are persuaded that Patent Owner has shown that the ’446 and ’538 applications each provide written description support for the proposed substitute claims.

D. Petitioner’s Challenges to the Proposed Substitute Claims

“A petitioner bears the burden of persuasion to show, by a preponderance of the evidence, that any proposed substitute claims are unpatentable.” 37 C.F.R. § 42.121(d)(2); *see also Lectrosonics*, Paper 15 at 4 (citing *Aqua Prods. Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017); *Bosch Auto. Serv. Sols. LLC v. Iancu*, 878 F.3d 1027 (Fed. Cir. 2017)). In determining whether a petitioner has proven unpatentability of the proposed substitute claims, the Board focuses on “arguments and theories raised by the petitioner in its petition or Opposition to the Motion to Amend.” *Nike, Inc. v. Adidas AG*, 955 F.3d 45, 51 (Fed. Cir. 2020).

We are persuaded that Petitioner has shown, by a preponderance of the evidence, that the subject matter of proposed substitute claims 26–50 would have been obvious; however, Petitioner has not shown that any of the proposed substitute claims are indefinite or unpatentable under 37 C.F.R. § 1.83.

³⁰ The ’446 application can be found on pages 10–48 of Exhibit 1002. For simplicity, we refer to the relevant paragraphs of the ’446 application, rather than the page numbers of the exhibit.

1. Anticipation and Obviousness

Petitioner asserts that the proposed substitute claims are unpatentable based on the following grounds (MTA Opp. 1–10; *see* PG 6–7):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
26–30, 32–36, 39–46, 48–50	102	Oksala
26–30, 32–36, 39–46, 48–50	103(a)	Oksala
28, 31, 37, 38, 47	103(a)	Oksala, Yoshioka
26–30, 32–34, 43–46, 48–50	103(a)	Oksala, TS24.008
28, 31, 47	103(a)	Oksala, TS24.008, Yoshioka
29, 45	103(a)	Oksala, Matsumoto
29, 45	103(a)	Oksala, TS24.008, Matsumoto
26–28, 30, 32, 33, 35–37, 39, 40, 42–46, 48, 49	103(a)	Baggstrom, TS23.107

For the reasons explained below, we are persuaded that Petitioner has shown that all of the proposed substitute claims are unpatentable as obvious over Oksala alone or with Yoshioka. As a result, we decline to address the other grounds identified in the table above.

a. Obviousness Based on Oksala Alone

i. Proposed Substitute Independent Claim 25

Petitioner contends that Oksala renders proposed substitute claim 25 obvious for the reasons discussed in connection with original claim 1. MTA Opp. 1; *see id.* at 3–7. Petitioner restates the Petition’s contentions regarding Oksala (*id.* at 5–7), and concludes that “the use of multiple packet-switch connections is taught in Oksala as acknowledged by the Board” (*id.* at 7 (citing Inst. Dec. 32–33)).

Patent Owner’s briefing also restates many of the arguments from the Patent Owner’s Response. *See* MTA 18–20; MTA Reply 1–4. Patent Owner contends that Oksala is “DTM-oriented” and “DTM configuration requires that one of the connections be a CS connection.” MTA 19–20 (citing Ex. 2007 ¶ 138). Patent Owner elaborates by arguing that Oksala “does not teach or suggest that *each* established and requested connection is a *packet-switched* connection” “because Oksala is directed to [DTM, which] . . . requires that at least one connection be a [CS] connection.” MTA Reply 1–2. According to Patent Owner, for this reason, “even Oksala’s scenarios that compare PS connections are outside the scope of the substitute claims.” *Id.* at 4 (citing Ex. 2007 ¶ 138). Patent Owner also contends that “adding CS connections will exceed the scope of the proposed substitute claim” because the claim requires “*each* established data connection and *each* requested data connection [to] be a PS connection.” *Id.* at 6–7; *see also id.* at 5–6.

Having considered the parties’ arguments, we are persuaded that Oksala suggests the newly-added limitations of claim 26. For the reasons explained in connection with original claim 1 (*supra* § II.E.1), we find that Oksala suggests applying its method to a situation involving two existing PS connections and a requested PS connection. *See* Ex. 1006, 6:6–25, 36:9–37:7. That same analysis also demonstrates that the newly-added limitations are suggested by Oksala.

Patent Owner’s contrary arguments are unavailing. Patent Owner contends that Oksala is limited to operation in the dual transfer mode, but we disagree with Patent Owner’s understanding of the reference, as we explained above. *Supra* § II.E.1.b.iii (explaining finding that Oksala is not limited to DTM). Moreover, even if Patent Owner’s understanding of the

claim were correct,³¹ we would still find the newly-added limitations to be suggested by Oksala because Oksala expressly suggests use of its method “by PS connections only.” Ex. 1006, 36:16–18. Patent Owner also repeats several other arguments that it makes with respect to the original claims, but we disagree for the reasons explained above. *See supra* § II.E.1 (addressing claim 1).

Finally, although Mr. Bates agrees with Patent Owner’s statements, this testimony is entitled to little weight because it includes no supporting explanation and does not address the relevant passages of Oksala. *See* Ex. 2007 ¶ 138; *see also* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”); *accord* PG 9 (providing same analysis).

The remaining limitations in proposed substitute claim 26 are the same as in original claim 1. We have discussed these limitations with respect to claim 1 of the Oksala obviousness ground above. *See supra* § II.E.1.

Having considered Petitioner’s contentions and evidence, and Patent Owner’s arguments, we find that Oksala teaches or suggests each limitation

³¹ Although not necessary for our Decision, we disagree with Patent Owner’s contention that proposed substitute claim 26 precludes the existence of any CS connection. *See* MTA Reply 6–7. This claim requires each recited “data connection” to be a packet-switched connection, but it does not preclude the existence of other connections. MTA 25. According to Patent Owner, a CS connection is *not* a “data connection.” *See, e.g.*, PO Resp. 24. And, even if we assumed that a CS connection qualifies as a “data connection,” the claim does not preclude the existence of a CS connection that is not either the “further wireless data connection” or one of the prioritized “existing wireless data connections.” *See supra* § III.B (addressing construction of newly-added claim language).

of proposed substitute claim 26. We determine that Petitioner has shown by a preponderance of the evidence that the subject matter of proposed substitute claim 26 would have been obvious over Oksala.

ii. Proposed Substitute Independent Claims 35 and 43

Petitioner's analysis of independent claims 35 and 43 relies on substantially the same analysis and contentions provided for proposed substitute claim 26 and the corresponding original independent claims. *See* MTA Opp. 2–7.

Patent Owner does not dispute these contentions, other than as noted for proposed substitute claim 26. *See* MTA Reply.

For the reasons explained above with respect to proposed substitute claim 26, we are persuaded that Oksala teaches or suggests the additionally-recited limitations of proposed substitute claims 35 and 43. *See supra* § III.D.1.a.i (addressing claim 26). For the reasons explained above with respect to original independent claims 10 and 18, we are persuaded that Oksala teaches or suggests the remaining limitations of these claims. *See supra* § II.E.2 (addressing claims 10 and 18).

Accordingly, we determine that Petitioner has shown, by a preponderance of the evidence, that the subject matter of proposed substitute claims 35 and 43 would have been obvious over Oksala.

iii. Proposed Substitute Dependent Claims 27–30, 32–34, 36, 39–42, 44–46, and 48–50

Petitioner contends that the subject matter of proposed substitute claims 27–30, 32–34, 36, 39–42, 44–46, and 48–50 would have been obvious over Oksala for the same reasons provided for the corresponding

original claims. MTA Opp. 1, 7. Patent Owner also relies on the arguments it presented in the Response. MTA Reply 7.

We have analyzed all limitations of proposed substitute claims 27–30, 32–34, 36, 39–42, 44–46, and 48–50 in the context of original claims 2–5, 7–9, 11, 14–17, 19–21, and 23–25 above. *See supra* §§ II.E.3–5. For the same reasons, we determine that Oksala teaches or suggests the additionally-recited limitations of proposed substitute claims 27–30, 32–34, 36, 39–42, 44–46, and 48–50.

Accordingly, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of proposed substitute claims 27–30, 32–34, 36, 39–42, 44–46, and 48–50 would have been obvious over Oksala.

b. Obviousness Based on Oksala and Yoshioka

Petitioner contends that the subject matter of proposed substitute dependent claims 28, 31, 37, 38, and 47 would have been obvious over Oksala and Yoshioka. MTA Opp. 7–8. In support, Petitioner relies on its analysis of proposed substitute independent claims 26, 35, and 43 (from which these claims depend), as well as its analysis of original claims 3, 6, 12, 13, and 22. *Id.* (citing Pet. 51–56).

Patent Owner contends that these proposed substitute claims are patentable for the same reasons as explained for proposed substitute independent claim 26 and the corresponding original claims. *See* MTA Reply 7–8. However, we do not agree with those arguments for the reasons previously explained. *See supra* §§ II.F (addressing original claims), III.D.1.a.i (addressing proposed substitute claim 26). Patent Owner

does not otherwise dispute Petitioner's contentions. *See* MTA Reply 7–8; *see also* MTA 20–21.

We have analyzed all limitations of proposed substitute claims 28, 31, 37, 38, and 47 in the context of original claims 3, 6, 12, 13, and 22 above. *See supra* § II.F. For the same reasons, we determine Petitioner has shown it would have been obvious to combine Oksala and Yoshioka, and that the Oksala-Yoshioka combination teaches or suggests the additionally-recited limitations of proposed substitute claims 28, 31, 37, 38, and 47.

Accordingly, we determine Petitioner has shown, by a preponderance of the evidence, that the subject matter of proposed substitute claims 28, 31, 37, 38, and 47 would have been obvious over Oksala and Yoshioka.

c. Other Grounds

Petitioner also contends that: proposed substitute claims 26–30, 32–36, 39–46, and 48–50 are anticipated by Oksala (MTA Opp. 1–7); the subject matter of proposed substitute claims 26–30, 32–34, 43–46, and 48–50 would have been obvious over Oksala and TS24.008 (*id.* at 1, 8); the subject matter of proposed substitute claims 28, 31, and 47 would have been obvious over Oksala, TS24.008, and Yoshioka (*id.* at 1, 8–9); the subject matter of proposed substitute claims 29 and 45 would have been obvious over the combination of Oksala and Matsumoto or over the combination of Oksala, TS24.008, and Matsumoto (*id.* at 1, 9); and the subject matter of proposed substitute claims 26–28, 30, 32, 33, 35–37, 39, 40, 42–46, 48, and 49 would have been obvious over Bagstrom and TS23.107 (*id.* at 1, 9–10).

We already have found the subject matter of proposed substitute claims 26–50 to be obvious over Oksala alone or with Yoshioka. *See supra* §§ III.D.1.a–b. As a result, we do not reach these other grounds.

2. Indefiniteness

In its Opposition, Petitioner contends the limitations “wherein each established data connection is ***a packet-switched connection***; and wherein each requested data connection is ***a packet-switched connection***,” as recited in substitute claim 26, and similarly recited in substitute claims 35 and 43, render the proposed substitute claims indefinite. MTA Opp. 12 (emphases added). First, according to Petitioner, the term “packet-switched connection” does not have a claim construction, which means that it can refer to two different types of packet-switched data (*i.e.*, Layer 1 and packet network). *Id.* at 12. Second, Petitioner contends that there are two recitations of “a packet-switched connection,” making it “unclear if they are the same packet-switched connection or a different one.” *Id.* at 12–13. Third, Petitioner contends that the claims include “another antecedent issue” because “a wireless network” appears twice in the claim. *Id.* at 13.

In the Preliminary Guidance, we found Petitioner’s contentions to be unpersuasive. PG 11–12. We explained that, “[e]ven if the term ‘packet-switched connection’ can refer to both a Layer 1 connection and a packet network connection, this breadth does not render the claim indefinite.” *Id.* at 12 (citing *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1367 (Fed. Cir. 2017) (“breadth is not indefiniteness” (quoting *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1341 (Fed. Cir. 2005)))). In addition, we explained that “the claim language specifies that ‘each established data

connection’ is packet-switched and that ‘each requested data connection’ is packet-switched.” *Id.* We further explained that “[g]iven the context of the proposed substitute claims, we understand each instance of ‘a wireless network’ to refer to the same wireless network.” *Id.* Finally, we stated that “Petitioner identifies (and we discern) no plausible alternative understanding of this claim language.” *Id.*

Patent Owner agrees with our assessment (MTA Reply 1), and Petitioner does not respond to it (*see* MTA Sur-reply).

Accordingly, we determine that Petitioner has not shown, by a preponderance of the evidence, that any of the proposed substitute claims are unpatentable as indefinite under 35 U.S.C. § 112 ¶ 2.

3. 35 C.F.R. § 1.83 – Content of Drawings

In its Opposition, Petitioner contends that the figures of the ’611 patent fail to show “a packet-switched connection” (as required by proposed substitute claims 26, 35, and 43) in violation of Rule 1.83(a). MTA Opp. 13.

In our Preliminary Guidance, we found Petitioner’s contention to be unpersuasive. PG 12–13. First, we stated that Rule 1.83 is not applicable to *inter partes* reviews. *Id.* at 12 (citing 37 C.F.R. § 42.1(a) as “listing certain rules that also apply to trial proceedings before the Board, but excluding Rule 1.83”). Moreover, we observed that “[e]ven if the rule was applicable, Petitioner does not show how applying Rule 1.83 would render a proposed substitute claim unpatentable.” *Id.* Second, we explained that, even if this Rule were applicable, we would still not be persuaded. *Id.* at 13. Patent Owner agrees with our findings. MTA Reply 12.

In response, Petitioner contends that Rule 1.83 applies to a motion to amend because “the Board and Petitioner are acting as Patent Examiners and all rules related to patent prosecution must be met by the proposed claims.” MTA Sur-reply 9. Petitioner further implies that Rule 1.83 applies to reexamination proceedings, but does not cite any authority in support. *Id.* Petitioner also contends that Figures 1 and 4, along with the passages cited by the Board, fail to show packet-switched data connections. *Id.* at 10.

We need not resolve whether Rule 1.83 applies to a motion to amend, because even if this rule were applicable, Petitioner’s arguments are not persuasive. As we explained in the Preliminary Guidance:

Figures 1 and 4 of the ’611 patent show connections to wireless network 12 and General Packet Radio Service (“GPRS”) network 130, respectively. Ex. 1001, Figs. 1, 4. The ’611 patent discloses that these networks are packet-switched networks (*see, e.g.*, Ex. 1001, 4:26–36, 7:43–61), so it appears that a person of ordinary skill in the art would understand the connections between the mobile device and networks 12 and 130 to be packet-switched connections. Accordingly, on this record, we perceive no deficiency in the drawings.

PG 13. Petitioner fails to address this analysis and does not dispute our findings. *See* MTA Sur-reply 10. Indeed, Petitioner makes no mention of wireless network 12 or GPRS network 130, but instead contends that neither network 28 nor enterprise network 14 shows the claimed packet-switched connections.³² *Id.* Petitioner also submits that “nothing in figure 4 is

³² Petitioner states that “Figure 1 . . . does not show ALL data connections being packet-switch connections.” MTA Sur-reply 10. This argument is apparently premised on an assumption that the proposed substitute claims require all data connections in the mobile device’s ecosystem to be packet-switched connections, but this assumption is not justified. *See supra* § III.B (providing constructions of newly-added limitations).

labeled a packet-switch network” (*id.*), but we do not agree with Petitioner’s apparent assumption that Rule 1.83 requires each claim term to appear in a drawing.

Accordingly, we determine that Petitioner has not shown, by a preponderance of the evidence, that any of the proposed substitute claims are unpatentable under 37 C.F.R. § 1.83.

IV. MOTION TO EXCLUDE

Petitioner filed a Motion to Exclude Exhibit 2013 as well as some of Mr. Bates’ testimony, found in Exhibits 2001 and 2007. Paper 45 (“Exclude Mot.”). Patent Owner opposed the Motion (Paper 46 (“Exclude Opp.”)), and Petitioner filed a reply (Paper 51 (“Exclude Reply”)). For the reasons provided below, we dismiss Petitioner’s Motion to Exclude as moot.

A. Mr. Bates’ Testimony (Portions of Exhibits 2001 and 2007)

Petitioner seeks to exclude the testimony of Patent Owner’s declarant, Mr. Bates, “because Mr. Bates is not a [person of ordinary skill in the art], much less an expert.” Exclude Mot. 1. Petitioner submits that Mr. Bates lacks a bachelor’s degree in electrical engineering, computer engineering, or a similar discipline, as required by the Board’s preliminary definition of an ordinary artisan. *Id.* at 3–5 (citing Inst. Dec. 11). On this basis, Petitioner seeks to exclude portions of Mr. Bates’ declarations (i.e., Exhibits 2001 and 2007). *Id.* at 5–6 (identifying specific portions to be excluded).³³

³³ Petitioner also seeks exclusion of Mr. Bates’ testimony regarding Exhibits 2008 and 2009, but Petitioner did not move to exclude those exhibits themselves. *See* Exclude Mot. 6; Tr. 29:10–11, 61:21–27.

Patent Owner responds that Mr. Bates’ extensive experience in the telecommunications field qualifies him to opine on what a person of ordinary skill in the art would know and understand. Exclude Opp. 2–4. According to Patent Owner, Mr. Bates’ technical training began in the military, and since then, he has taught telecommunications classes and authored numerous books on telecommunications technology. *Id.* at 2–3 (citing Ex. 2001 ¶¶ 9–11, 13–14, 22). Patent Owner submits that Petitioner ignores “Mr. Bates’s extensive practical experience and his contributions to development of telecommunications technologies.” *Id.* at 4.

Petitioner replies that “[t]he issue before the Board is whether Mr. Bates meets the requirements to be a [person of ordinary skill in the art], and if not, he cannot give opinions related to anticipation and obviousness.” Exclude Reply 1. Petitioner contends that Patent Owner “fails to explain why [Mr. Bates’] experience overcomes the failure to meet the education requirement set forth in the Board’s [preliminary] definition.” *Id.* at 2. But, instead of addressing the relevant experience identified by Patent Owner, Petitioner responds only to Mr. Bates’ recent involvement with an IEEE standards-setting group. *See id.* at 2–5.

Initially, we disagree with Petitioner’s premise, which contends that Mr. Bates does not have at least ordinary skill in the art.³⁴ Although he lacks “a bachelor’s degree in electrical engineering, computer engineering, or a similar discipline,” we find that Mr. Bates’ extensive experience with

³⁴ “To offer expert testimony from the perspective of a skilled artisan in a patent case—like for claim construction, validity, or infringement—a witness must at least have ordinary skill in the art.” *Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n*, 22 F.4th 1369, 1377–78 (Fed. Cir. 2022).

telecommunications (including cellular telecommunication systems) demonstrates that he received the equivalent of this formal education insofar as is relevant to our definition of a person of ordinary skill in the art. *See* Ex. 2001 ¶¶ 8–23 (describing experience); *see also supra* § II.B (providing definition of ordinary artisan). For example, Mr. Bates testifies that he authored “numerous books on telecommunications technology, many of which have been best sellers for publisher McGraw-Hill,” including a book regarding GPRS, and he “personally developed curricula and taught telecommunications classes on-site with many of the world’s leading manufacturers and providers of telecommunications equipment and services.” Ex. 2001 ¶¶ 9–10. This testimony is supported by evidence in the record (*see* Ex. 2008 (telecommunications technology textbook authored by Mr. Bates and published by McGraw-Hill)), and Petitioner does not identify any contradictory evidence. Thus, we credit this testimony. In addition, Mr. Bates testifies that he received his initial training in telecommunications technology as a Captain of the United States Army Signal Corps. *Id.* ¶ 14. Accordingly, we find that Mr. Bates qualifies as a person of ordinary skill in the art.

However, even considering the objected to portions of Exhibits 2001 and 2007 (as we have above), we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable. Accordingly, we dismiss Petitioner’s Motion to Exclude portions of Exhibits 2001 and 2007 as moot.

B. Exhibit 2013 (Agilent Document)

Petitioner seeks to exclude Exhibit 2013. Exclude Mot. 6–8.

According to Petitioner, “Exhibit 2013 apparently is [a] capture of a website, which [Patent Owner] alleges was provided by Agilent.” *Id.* at 6. Petitioner objects to this exhibit because: “(1) it was not a publicly available document; (2) the date of the document is undiscernible, and to the extent it is discernible demonstrates that the document is not relevant because it is after the critical date of the ’611 patent; (3) PO does not provide any authenticating details regarding Exhibit 2013, and (4) PO fails to establish what Exhibit 2013 is or why it is relevant to the issues in this proceeding.” *Id.*

However, even considering Exhibit 2013 (as we have above), we determine that Petitioner has shown by a preponderance of the evidence that the challenged claims are unpatentable. Accordingly, we dismiss Petitioner’s Motion to Exclude Exhibit 2013 as moot.

V. CONCLUSION³⁵

Based on the evidence presented with the Petition, the evidence introduced during the trial, and the parties’ respective arguments, Petitioner

³⁵ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*, 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

has shown by a preponderance of the evidence that claims 1–25 are unpatentable. In addition, Patent Owner’s Motion to Amend is denied because Petitioner has shown by a preponderance of the evidence that proposed substitute claims 26–50 would have been obvious over either Oksala or the Oksala-Yoshioka combination. Finally, we dismiss as moot Petitioner’s Motion to Exclude because, even considering the evidence at issue, we determine that the challenged claims are unpatentable.

In summary:

Claim(s)	35 U.S.C. §³⁶	References/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–5, 7–11, 14–21, 23–25	102	Oksala		
1–5, 7–11, 14–21, 23–25	103	Oksala	1–5, 7–11, 14– 21, 23–25	
3, 6, 12, 13, 22	103	Oksala, Yoshioka	3, 6, 12, 13, 22	
1–5, 7–9, 18– 21, 23–25	103	Oksala, TS24.008		
3, 6, 22	103	Oksala, TS24.008, Yoshioka		
4, 20	103	Oksala, Matsumoto		
4, 20	103	Oksala, TS24.008, Matsumoto		
1–3, 5, 7, 8, 10–12, 14, 15, 17–21, 23, 24	103	Baggstrom, TS23.107		
Overall Outcome			1–25	

³⁶ As explained above, because we determine that the challenged claims are unpatentable as obvious based on Oksala alone, or Oksala in combination with Yoshioka, we decline to address the other grounds.

Motion to Amend Outcome	Claim(s)
Original Claims Cancelled by Amendment	
Substitute Claims Proposed in the Amendment	26–50
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	26–50
Substitute Claims: Not Reached	

VI. ORDER

Accordingly, it is

ORDERED that claims 1–25 of U.S. Patent No. 8,189,611 B2 are determined to be unpatentable;

FURTHER ORDERED that Patent Owner’s Motion to Amend (Paper 31) is *denied*;

FURTHER ORDERED that Petitioner’s Motion to Exclude (Paper 45) is *dismissed* as moot; 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.

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