

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T SERVICES INC., T-MOBILE USA, INC., CELLCO
PARTNERSHIP D/B/A VERIZON WIRELESS, ERICSSON INC., and
NOKIA OF AMERICA CORP.,
Petitioner,

v.

INNOVATIVE SONIC LTD.,
Patent Owner.

IPR2024-00991
Patent 9,736,883 B2

Before ST. JOHN COURTENAY III, MICHAEL R. ZECHER, and
JULIET MITCHELL DIRBA, *Administrative Patent Judges*.

DIRBA, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

On May 31, 2024, AT&T Services Inc., T-Mobile USA, Inc., Cellco Partnership d/b/a Verizon Wireless, Ericsson Inc., and Nokia of America Corp. (collectively “Petitioner”)¹ filed a Petition requesting an *inter partes* review of claims 1–11 of U.S. Patent No. 9,736,883 B2 (Ex. 1001, “the ’883 patent”). Paper 1 (“Pet.”). Petitioner filed a Declaration of Mark Mahon, Ph.D (Ex. 1003) with its Petition. Innovative Sonic Ltd. (“Patent Owner”)² timely filed a Preliminary Response. Paper 10 (“Prelim. Resp.”).

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Having reviewed the parties’ papers and the evidence of record, we determine that Petitioner has not shown a reasonable likelihood it will prevail in establishing the unpatentability of any of the challenged claims. Accordingly, we do not institute an *inter partes* review.

I. BACKGROUND

A. Related Matters

The parties identify the following litigations as related matters: *ASUS Technology Licensing Inc. v. AT&T Inc.*, No. 2:23-cv-00486 (E.D. Tex.);

¹ Petitioner also identifies the following entities as “potential real parties in interest”: AT&T Enterprises, LLC, AT&T Mobility LLC, AT&T Mobility II LLC, Verizon Corporate Resources Group LLC, and Telefonaktiebolaget LM Ericsson. Pet. 2 & n.1–2.

² In its statement regarding real parties in interest, Patent Owner represents that it is the owner of the ’883 patent and that Celebrity IP, LLC “assists . . . in the licensing of the [’883] patent.” Paper 8 (Patent Owner Mandatory Notices), 2; Paper 11 (Patent Owner Updated Mandatory Notices), 2.

ASUS Technology Licensing Inc. v. T-Mobile USA, Inc., No. 2:23-cv-00487 (E.D. Tex.); *ASUS Technology Licensing Inc. v. Verizon Communications Inc.*, No. 2:23-cv-00488 (E.D. Tex.); *Innovative Sonic Limited v. AT&T Inc.*, No. 2:23-cv-00489 (E.D. Tex.); *Innovative Sonic Limited v. T-Mobile USA, Inc.*, No. 2:23-cv-00490 (E.D. Tex.); and *Innovative Sonic Limited v. Verizon Communications, Inc.*, No. 2:23-cv-00491 (E.D. Tex.). Pet. 3; Paper 8, 2–3; Paper 11, 2–3.³

B. The Petition’s Asserted Grounds

Petitioner asserts the following grounds of unpatentability (Pet. 5–6):

Claim(s) Challenged	35 U.S.C.⁴ §	Reference(s)/Basis
1–11	102	Centonza ⁵
1–11	103	Centonza

³ Patent Owner also identifies *Samsung Electronics Co. v. ASUS Technology Licensing Inc.*, IPR2024-00614 (filed March 13, 2024) (Paper 11, 3); however, we do not discern (and Patent Owner does not identify) any relation between that proceeding and this one.

⁴ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. §§ 102 and 103 effective March 16, 2013. Petitioner does not specify whether it relies upon the current statutes or the pre-AIA versions (*see* Pet. 5–6); however, our findings and analysis would be the same under either version of the statutes.

⁵ US 9,479,973 B3, issued Oct. 25, 2016 (Ex. 1005). Petitioner contends that Centonza is entitled to the benefit of a provisional application to which it claims priority: US Prov. Appl. 61/678,772, filed on Aug. 2, 2012. Pet. 13–16; *see* Ex. 1006 (“Centonza Provisional”). We do not evaluate this priority contention (or whether it is necessary to show that Centonza is prior art); however, we do discuss the Centonza Provisional in Section II.E, *infra*.

Claim(s) Challenged	35 U.S.C. ⁴ §	Reference(s)/Basis
1–11	102	Han ⁶
1–11	103	Han

C. The '883 Patent

The '883 patent is titled “Method and Apparatus for Handling Inter-Node Connectivity in a Wireless Communication System.” Ex. 1001, code (54). It was filed on January 29, 2014, claiming priority to provisional applications filed as early as January 30, 2013. *Id.* at codes (22), (60), (63).

The '883 patent contemplates connecting user equipment (“UE”) to a macro cell and a small cell controlled by different evolved node Bs (“eNBs”) using carrier aggregation (“CA”). *See* Ex. 1001, 5:12–20, 5:39–67. Figure 6 (reproduced below) depicts a message sequence in accordance with one embodiment. *Id.* at 2:30–31.

⁶ WO 2014/056130 A1, published Apr. 17, 2014 (Ex. 1007).

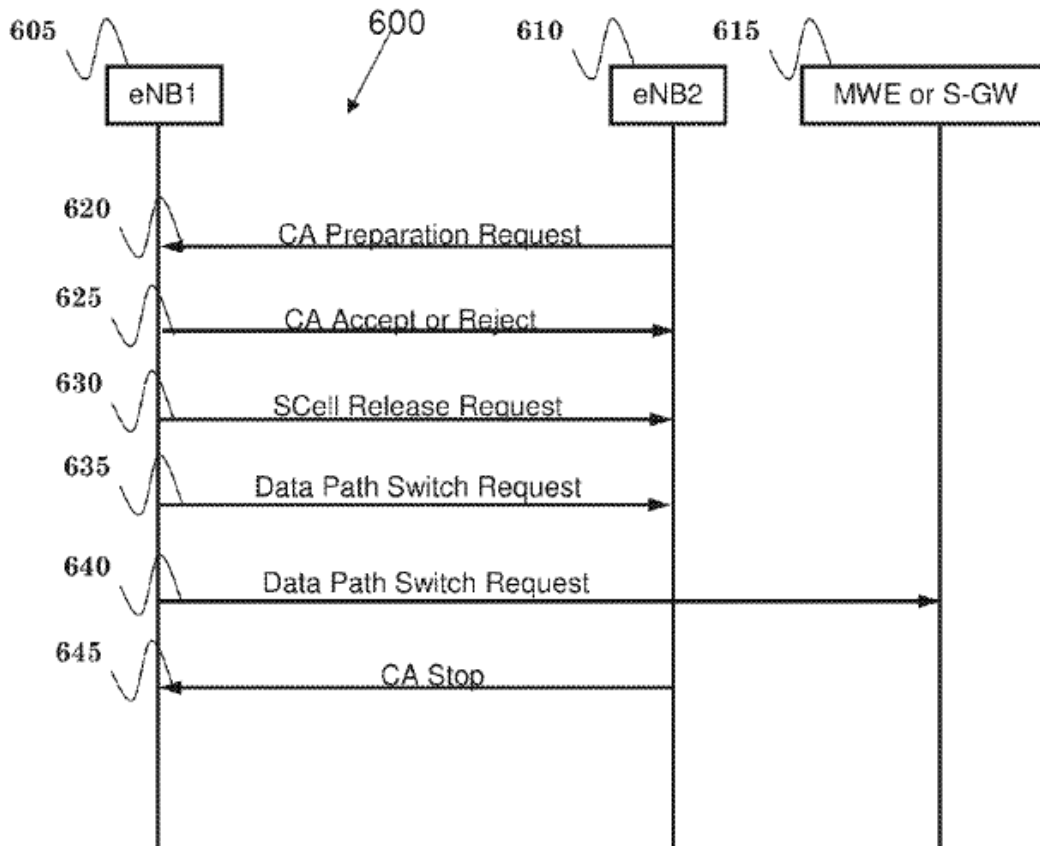


FIG. 6

Figure 6 shows various messages exchanged between a first eNB (“eNB1”) and either a second eNB (“eNB2”) or “MWE or S-GW”⁷ in steps 620–645. *Id.* at Fig. 6.

Of note, in step 620, eNB2 610 sends a “CA Preparation Request” to eNB1 605. Ex. 1001, 7:42–43. This may request the aggregation of a primary cell (“PCell”), which may be a macro cell, and a secondary cell (“SCell”), which may be a small cell. *See id.* at 5:59–67, 6:21–23. In step

⁷ A mobility management entity (“MME”) and serving gateway (“S-GW”) are part of the core network. *See* Ex. 1001, 7:19–25; *see also, e.g.*, Ex. 1005, 4:20–53; Ex. 2002, 64–65. “MWE” appears to be a typographical error intended to reference an “MME.”

625, eNB1 605 sends either a “CA Accept Message” or a “CA Reject Message” to eNB2 610. *Id.* at 6:23–26, 7:43–45.

In step 635, eNB1 605 sends to eNB2 610 a “Data Path Switch Request,” which seeks “to change a data path corresponding to a first type of transmission and/or reception of [the UE] from a first path to a different path.” Ex. 1001, 7:47–51, 8:23–27. The data path switch request may occur “after CA is complete.” *Id.* at 6:37–43. Also, in an embodiment, this request “does not indicate to change the data path corresponding to [a] third type of transmission and/or reception of the UE” that also uses the first path, and as a result, “the first path would still be used as the data path corresponding to the third type . . . after changing the data path corresponding to the first type . . . due to the request.” *Id.* at 8:44–55. The first and third types of transmission and/or reception of the UE “could be differentiated based on radio bearer.” *Id.* at 8:59–64.

D. Challenged Claims

Petitioner challenges claims 1–11 of the ’883 patent. Of these, claims 1 and 7 are independent. For purposes of this Decision, claim 1 is illustrative, and it recites:

1. A method for handling inter-node connectivity in a wireless communication system, comprising:

receiving, by a first evolved node B (eNB), a first request from a second eNB for aggregating a Secondary Cell (SCell) for a User Equipment (UE);

transmitting an accept message from the first eNB to the second eNB in response to the first request; and

transmitting a second request from the first eNB, which controls the SCell of the UE, to the second eNB, which controls a Primary Cell (PCell) of the UE, to change a data path for a

first radio bearer of the UE, wherein the second request does not indicate to change the data path for a third radio bearer of the UE;

wherein a first path is via the first eNB and used as the data path for the first radio bearer and the third radio bearer before changing the data path for the first radio bearer.

Ex. 1001, 11:47–63 (emphases added to dispositive “second request” limitation).

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion “never shifts to the [patent owner].” *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

“A single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375–76 (Fed. Cir. 2005). A “reference must describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art.” *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1120 (Fed. Cir. 2002). The reference does not need to use the same terminology (*Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed.

Cir. 2015)), but an ambiguous reference will not anticipate a claim (*Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017)).

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.⁸ *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). A petitioner seeking to combine or modify prior art references must identify a reason why a person of ordinary skill in the art would have made such a change. *See Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 886–87 (Fed. Cir. 2024) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.” (quoting *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015))).

B. Level of Ordinary Skill in the Art

Petitioner asserts that the level of ordinary skill in the art corresponds to “a [Bachelor of Science] in Electrical Engineering” and “three years of

⁸ The current record does not include allegations or evidence of objective indicia of obviousness or nonobviousness.

experience designing, developing, and/or testing telecommunications systems.” Pet. 10 (citing Ex. 1003 ¶ 27). According to Petitioner, an ordinarily skilled artisan “would also have [had] familiarity with the wireless standards and well-known protocols for accessing wireless networks.” *Id.*

Patent Owner responds that “a person with the 3-year experience proposed by Petitioner would not have the intimate knowledge of the existing standardized cellular system” required to understand “how a proposed change would impact the rest of the system.” Prelim. Resp. 7. But Patent Owner also states that engineers participating in the development of the relevant cellular specifications “would not be expected to be familiar with all relevant aspects of the specifications” given their length and complexity. *Id.* at 7–8.

For purposes of this Decision, we adopt Petitioner’s proposed level of skill, as articulated above, because we are satisfied that it generally comports with the level of skill necessary to understand and implement the teachings of the ’883 patent and the asserted prior art. To the extent Patent Owner disagrees (*see* Prelim. Resp. 6–8), it fails to sufficiently explain its contrary position by, for example, providing its own proposed level of skill.

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); *see Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) (articulating claim construction standard).

Petitioner states that “the Board does not need to expressly construe any terms” in this proceeding because “the prior art in this Petition discloses all limitations under any plausible construction.” Pet. 10–11. Patent Owner

similarly states that “all terms are entitled to their plain and ordinary meaning.” Prelim. Resp. 21.

We agree with the parties that it is not necessary to construe any claim terms or phrases in this Decision. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe only those terms that are in controversy, and only to the extent necessary to resolve the controversy.”) (cleaned up).

D. Grounds Based on Han

Petitioner contends that Han anticipates (Pet. 41–56) and renders obvious (*id.* at 57–60) all challenged claims. For the reasons explained below, we determine that that Petitioner fails to show a reasonable likelihood of prevailing on either of these grounds.

1. Summary of Han (Ex. 1007)

In Figure 4 (below), Han shows a signaling diagram illustrating a method for establishing a dual connection. Ex. 1007 ¶¶ 13, 35.

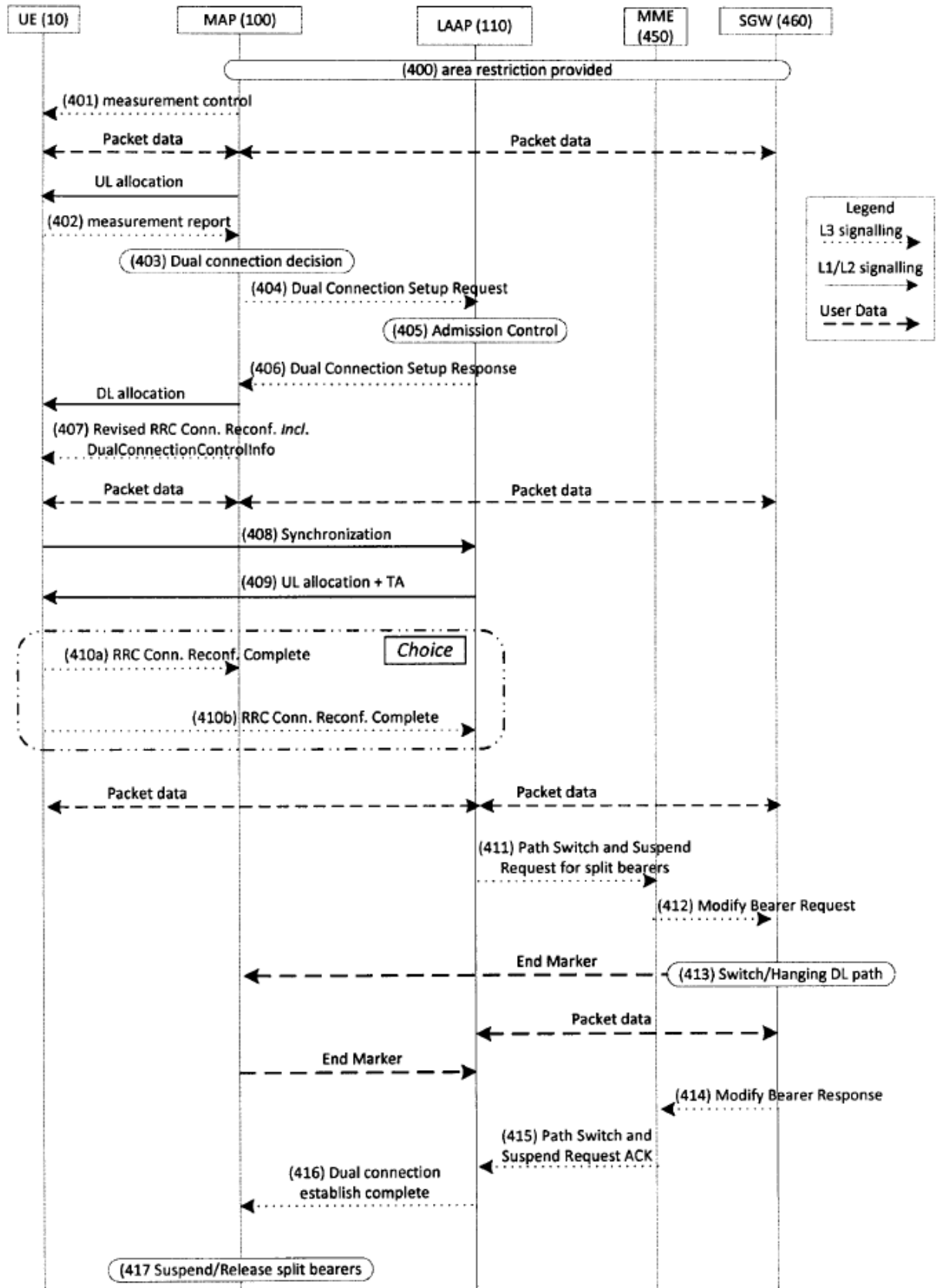


Figure 4 shows operations performed by and messages exchanged between UE 10, macro access point (“MAP”) 100, local area access point (“LAAP”) 110, MME 450, and serving gateway (“SGW”) 460. *Id.* ¶¶ 29–31. Han states that the MAP and LAAP may be eNBs. *Id.* ¶ 18.

In step 403, MAP 100 determines “whether to establish a dual connection for the UE 10.” Ex. 1007 ¶ 39. In step 404, MAP 100 transmits a “dual connection setup request” message to LAAP 110, which “may include bearer split information” such as an identification of “which bearer(s) are to be moved and/or created by the LAAP 110.” *Id.* ¶ 40. “By providing this bearer split information to the LAAP, the LAAP may setup appropriate data bearers for the UE so that, for example, data transmission may be offloaded from the MAP to the LA[A]P.” *Id.* In step 405, LAAP 110 performs admission control, and in step 406, LAAP 110 transmits a “‘dual connection setup request acknowledge (ACK)’ message to the MAP 100.” Ex. 1007 ¶¶ 41–42.

In steps 407–410, UE 10 is notified and appropriate changes are made. *See* Ex. 1007 ¶¶ 42–47, Fig. 4; *cf. id.* ¶ 34, Fig. 3 (step 340). Specifically, LAAP 110 generates a message for transmission to UE 10 (*id.* ¶¶ 42–43), and MAP 100 sends an appropriate version of that message to UE 10, along with a command for UE 10 to establish the dual connection (*id.* ¶ 43). UE 10 then performs synchronization to LAAP 110, receives uplink allocation and timing advance from LAAP 110, and transmits a completion message to either MAP 100 or LAAP 110. *Id.* ¶¶ 44–47.

Finally, in steps 411–417, MME 450 and SGW 460 are notified and appropriate changes are made. *See* Ex. 1007 ¶¶ 50–56, Fig. 4. Specifically, LAAP 110 sends a “‘path switch/suspend request’ message to an MME 450

to inform that the UE 10 has setup a dual connection” (step 411), and MME 450 sends a “modify bearer request” message to SGW 460 (step 412). *Id.* ¶¶ 50–51. Both of these messages may identify the bearers of UE 10 that moved to LAAP 110. *Id.* SGW 460 then “switch[es] the [downlink] data path for split bearers to the LA cell 110 side” and sends “‘end marker’ paths via the old path to the MAP” (step 413). *Id.* ¶ 52. Then SGW 460 sends a “modify bearer response” to MME 450 (step 414), and MME 450 sends a “‘path switch/suspend request ACK’ message to the LAAP 110” to confirm the completion of its path switch/suspend request (step 415). *Id.* ¶¶ 53–54. Finally, LAAP 110 transmits a “‘dual connection establishment complete’ message to the MAP 100, which informs the MAP 100 of the successful dual connection establishment” (step 416), and MAP 100 release or suspends any resources associated with the split bearers (step 417). *Id.* ¶¶ 55–56.

2. Alleged Anticipation by Han

Petitioner contends that Han anticipates independent claims 1 and 7 and dependent claims 2–6 and 8–11. Pet. 41–56. Patent Owner responds that Han fails to disclose the “second request” required by independent claims 1 and 7. Prelim. Resp. 45–56. For the reasons explained below, we agree that Petitioner fails to sufficiently show that Han discloses the claimed “second request.” We begin with our analysis of claim 1, and then we turn to the other challenged claims.

Claim 1 requires that a first eNB receive a first request from, and transmit an accept message to, a second eNB. Ex. 1001, 11:49–53. Petitioner points to Han’s LAAP 110 and MAP 100, respectively, as the claimed “first” and “second eNB[s].” Pet. 42. Petitioner contends that the

claimed “first request” is taught by Han’s dual connection setup request (shown in step 404 of Figure 4), and the claimed “accept message” is taught by Han’s dual connection setup response (shown in step 406). *Id.* at 42–44. Claim 1 further requires that the first eNB transmit a “second request” to the second eNB “to change a data path for a first radio bearer of the UE, wherein the second request does not indicate to change the data path for a third radio bearer of the UE.” Ex. 1001, 11:54–63. For this “second request” limitation, Petitioner provides three alternative contentions. Pet. 44–49.

First, Petitioner contends that Han’s dual connection setup response (step 406) discloses the claimed “second request” (Pet. 44–45),⁹ but Petitioner fails to show that this message discloses a *request*. *See* Prelim. Resp. 46–48. Han explains that the dual connection setup response in step 406 is a “dual connection setup request acknowledge (ACK)” message sent in response to “dual connection setup request” received in step 404. Ex. 1007 ¶¶ 40–42; *accord* Pet. 42–44. An acknowledgement is not a request, and Petitioner fails to sufficiently support its contention to the contrary (*see* Pet. 44–45). According to Petitioner, the acknowledgement message is “a request to change a data path” because the data path is “change[d] . . . based on this message” (*id.* at 45 (citing Ex. 1007 ¶¶ 42–47; Ex. 1003 ¶ 202)); however, this is faulty reasoning. At most, Petitioner’s argument shows that the acknowledgement is a *message* “to change a data

⁹ We note that this is the same message relied upon by Petitioner to teach the claimed “accept message” recited earlier in claim 1. *Compare* Pet. 44–45, with *id.* at 43–44. We need not (and do not) decide whether Petitioner has sufficiently shown that this message discloses two separate claim elements.

path,” not that it is a *request* to do so. In other words, even if Han’s acknowledgement message (in step 406) is a condition precedent to changing the data path, this does not make the message a “request.”

Although Dr. Mahon agrees with Petitioner, his analysis mirrors Petitioner’s arguments and suffers from the same deficiencies. *See* Ex. 1003 ¶¶ 202–203; *see also Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1473 (Fed. Cir. 1997) (“An expert’s conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.”).

Second, Petitioner contends that Han’s steps 411–417 disclose the claimed “second request” (Pet. 45–46), but Petitioner fails to identify a ***request from the first eNB to the second eNB***. For this “second request” limitation, Petitioner must show a request from LAAP 110 to MAP 100 (*see* Pet. 42 (mapping the first eNB to LAAP 110 and the second eNB to MAP 100)), but Han discloses no such request.

Han explains that, in step 411, LAAP 110 sends a request to MME 450 that identifies the bearers that moved to LAAP 110 from MAP 100. Ex. 1007 ¶ 50. In steps 412–414: MME 450 sends a “modify bearer request” to SGW 460; SGW 460 switches the data path for those bearers; and SGW 460 sends a response to MME 450 indicating “that the split bearer path has been changed.” *Id.* ¶¶ 51–53. In steps 415 and 416, MME 450 sends an acknowledgement to LAAP 110, which then transmits a confirmation to MAP 100. *Id.* ¶¶ 54–55.

These messages do not, individually or collectively, disclose the claimed “second request.” Even if we assume that steps 411 and 412 disclose a “request . . . to change a data path,” they fail to disclose a request

sent to MAP 100. Ex. 1007 ¶¶ 50–51, Fig. 4. Also, while a message is later sent from LAAP 110 to MAP 100 in step 416, that message is not *a request*; instead, it is ““a dual connection establishment complete message[,]’ . . . which informs the MAP 100 of the successful dual connection establishment” following receipt of MME 450’s acknowledgement (step 415). *Id.* ¶ 55. A notification of completion is not a request.

Although Petitioner appears to argue that this portion of Han discloses a request indirectly transmitted from LAAP 110 to MAP 100 through the core network, Petitioner fails to identify sufficient support for this interpretation. *See* Pet. 45–46 (alleging that these messages are “a request from the LAAP to the MAP that flows through the core network” and that “[t]he core network devices, such as the MME and SGW, act as a conduit for the message”) (citing Ex. 1003 ¶¶ 203–212). Petitioner points to Dr. Mahon, who testifies that Han discloses “a request to change the data path that propagates through the core network” and that the ultimate result of these steps is a message sent from LAAP 110 to MAP 100, which results in MAP 100 making changes. Ex. 1003 ¶¶ 205–207; *see also id.* ¶¶ 208–212. However, this testimony at most shows that (1) LAAP 110 sends a request to change a data path to the core network, (2) LAAP 110 receives an acknowledgement from the core network, (3) LAAP 110 sends a message to MAP 100 confirming that the core network completed the request, and (4) MAP 100 makes changes to a data path. *See id.* ¶¶ 204–212. However, even if true, this fails to show a request sent (directly or indirectly) from LAAP 110 to MAP 100.

Third, Petitioner contends that Han’s dual connection setup request (step 404) discloses the claimed “second request” (Pet. 47), but this request

is not sent *from the first eNB to the second eNB* (i.e., from LAAP 110 to MAP 100). Instead, Han’s dual connection setup request (step 404) is transmitted the opposite direction: from MAP 100 to LAAP 110. Ex. 1007 ¶ 40, Fig. 4; *see* Prelim. Resp. 51–52. Moreover, Petitioner relies on the same message to disclose both the claimed “first request” received by the first eNB and the claimed “second request” transmitted by the first eNB (Pet. 42, 47); however, it cannot simultaneously be both.

Recognizing this deficiency, Petitioner argues that, “[w]hile the request may be sent from the MAP to the LAAP, it may also be sent the other way” when the LAAP initiates a dual connection. Pet. 47 (citing Ex. 1007 ¶¶ 31, 34). We are not persuaded. For a prior art reference to anticipate a claim, it must disclose “all of the [claim] limitations arranged or combined in the same way as recited in the claim.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1371 (Fed. Cir. 2008). Anticipation requires more than a showing that the reference discloses multiple, distinct teachings that could theoretically be combined to yield the claimed invention. *See id.* Here, Petitioner improperly relies on separate and distinct embodiments in Han to support an anticipation ground. *See* Pet. 47. Petitioner cites Dr. Mahon’s testimony, but it is similarly defective. *See* Ex. 1003 ¶¶ 213–215.

In sum, Petitioner presents three alternative theories to support its contention that Han discloses the claimed “second request,” but we are not persuaded by any of them. As a result, we determine that Petitioner fails to show a reasonable likelihood of prevailing on its contention that Han anticipates claim 1.

We also determine that Petitioner fails to show a reasonable likelihood of prevailing on its contentions for the other challenged claims. Independent

claim 7 recites a “second request” that is substantially the same in relevant respects as the “second request” required by claim 1. *Compare* Ex. 1001, 12:21–23, *with id.* at 11:54–56.¹⁰ Also, for claim 7’s “second request,” Petitioner relies upon the analysis of this limitation in claim 1. *See* Pet. 54–55. Thus, Petitioner fails to make a sufficient showing for claim 7 for the same reasons provided above for claim 1. The other challenged claims (i.e., claims 2–6 and 8–11) depend from either independent claim 1 or independent claim 7, and Petitioner’s reliance on and application of Han to these dependent claims does not cure the above-noted deficiencies.

Accordingly, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in establishing that Han anticipates any of claims 1–11.

3. *Alleged Obviousness over Han*

Petitioner also contends that the subject matter of claims 1–11 would have been obvious over Han. Pet. 57–60. Of note, Petitioner contends that it would have been obvious to modify Han in multiple ways to yield the “second request” limitation required by claims 1 and 7. *Id.* at 60; *see id.* at 57–59. Patent Owner argues that an ordinarily skilled artisan would not have been motivated to make any of these changes. Prelim. Resp. 56–61. For the reasons explained below, we determine that each of Petitioner’s

¹⁰ The parties agree that claims 1 and 7 include substantially similar claimed subject matter. *See* Pet. 53 (“Claim 7 is similar to claim 1, but from the perspective of the second eNB . . .”); Prelim. Resp. 11 (“Independent claim 7 is similar for purposes of this [Preliminary Response], except it . . . is drafted from the point of view of the second eNB,” where “claim 1 is drafted from the point of view of the first eNB.”).

theories fail to sufficiently show that the claimed “second request” would have been obvious in view of Han.

First, Petitioner contends that “it would have been obvious to have the LAAP send the Path Switch and Suspend Request message to the MAAP over X2 instead of through the core network (over S1).” Pet. 60; *see id.* at 57–58. It appears that Petitioner proposes modifying Han’s steps 411 to 417 so that the path switch and suspend request (step 411) is sent to MAP 100 instead of MME 450.¹¹ *See* Prelim. Resp. 56–57 (articulating same understanding of Petitioner’s position). This argument is premised on the assumption that Han’s path switch and suspend request (step 411) is indirectly transmitted to MAP 100 through the core network (in steps 412 to 416); however, as explained above (*supra* § II.D.2), Petitioner fails to sufficiently support this understanding of Han, and we disagree with it. To the extent Petitioner’s obviousness contention is not premised on this flawed assumption, Petitioner fails to sufficiently explain the modification it proposes or the rationale in support. Dr. Mahon’s testimony mirrors the Petition and is similarly deficient. *See* Ex. 1003 ¶¶ 272–275. As a result, Petitioner’s first obviousness theory is not persuasive.

Moreover, we agree with Patent Owner that “Petitioner’s proposal makes no sense in the context of Han Figure 4.” Prelim. Resp. 57; *see id.* at 57–59 (providing explanation). In particular, we discern no reason for an ordinarily skilled artisan to modify Han to eliminate the sending of a message to the core network (MME and SGW), when these components

¹¹ In other words, Petitioner proposes a modification of the messages relied upon in its second anticipation theory. *Compare* Pet. 45–46 (articulating anticipation theory), *with id.* at 57–58 (articulating corresponding obviousness theory).

need to be notified of the dual connection. *See* Ex. 1007 ¶¶ 50–54; *see also*, *e.g.*, Ex. 1005, 13:48–53, 18:14–47; Ex. 2003, 20–22, 68–70.¹² We also discern no reason to instead send that message to the MAP.

Second, Petitioner contends that an ordinarily skilled artisan would have been motivated to modify “the Dual Connection Setup Response [step 406] and Dual Connection Setup Request [step 404] . . . to request to change the data path (and then change the data path based on these messages).” Pet. 58. In other words, Petitioner proposes modifying Han’s step 406 and/or step 404 so that the message transmitted by that step is a request to change a data path.¹³ Neither of these contentions are persuasive.

As for step 406, Petitioner fails to provide a sufficient rationale to support the proposed modification. In step 406, LAAP 110 transmits a dual connection setup response (i.e., a “dual connection setup request acknowledge (ACK)” message) in response to “dual connection setup request” received in step 404. Ex. 1007 ¶¶ 40–42; *accord* Pet. 42–44. According to Petitioner, an ordinarily skilled artisan would change this acknowledgement message into a request in order to “simplify the system and reduce the number of message exchanged” (Pet. 58), but this makes no sense. Petitioner fails to explain (and we do not discern) why changing an acknowledgement into a request would achieve either of these goals. Petitioner cites to Dr. Mahon’s testimony (*id.*), but he makes substantially

¹² Unless otherwise noted, when an exhibit includes two sets of page numbering, we cite to the numbering added by a party for this proceeding.

¹³ In other words, Petitioner proposes a modification of the messages relied upon in its first and third anticipation theories, respectively. *Compare* Pet. 44–45 (first anticipation theory), 47 (third anticipation theory), *with id.* at 58–59 (corresponding obviousness theory).

the same statements as the Petition (*see* Ex. 1003 ¶ 276). We assign no weight to his conclusory and unsupported testimony. *See* 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.”); *see also TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019) (“[C]onclusory expert testimony is inadequate to support an obviousness determination.”).

As for step 404, Petitioner’s proposed modification fares no better than its corresponding anticipation argument. *See supra* § II.D.2. As we previously explained, Han’s dual connection setup request (step 404) is transmitted from MAP 100 to LAAP 110, not from LAAP 110 to MAP 100, as required for the “second request” limitation (Ex. 1007 ¶ 40, Fig. 4), and Petitioner’s argument that an ordinarily skilled artisan would have modified this message “to request to change the data path” (Pet. 58) fails to address this problem. Petitioner does not articulate any other proposed modifications or implementations of Han with sufficient clarity. *See* Pet. 47, 58–59. For example, Petitioner does not propose adding a LAAP-to-MAP request message to Han’s Figure 4 embodiment, and it does not identify a reason why an ordinarily skilled artisan would have done so. *See id.* Han also does not suggest such a modification; instead, it indicates that *either* the MAP *or* the LAAP can transmit the dual connection setup request message. *See* Ex. 1007 ¶¶ 34–35; *see also* Prelim. Resp. 52 (“Every embodiment of Han discusses only one request from one entity to establish a dual connection setup.”).

In sum, Petitioner presents alternative theories to support its contention that the claimed “second request” would have been obvious in

view of Han, but we are not persuaded by any of them. As a result, we determine that Petitioner fails to show a reasonable likelihood of prevailing on its contention that claims 1 and 7 would have been obvious over Han. Petitioner’s reliance on and application of Han to the dependent claims does not cure the above-noted deficiencies.

Accordingly, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in establishing that the subject matter of any of claims 1–11 would have been obvious over Han.

E. Grounds Based on Centonza

Petitioner contends that Centonza anticipates (Pet. 12–36) and renders obvious (*id.* at 37–41) all challenged claims. For the reasons explained below, we determine that that Petitioner fails to show a reasonable likelihood of prevailing on either of these grounds.

1. Summary of Centonza (Ex. 1005)

Centonza is directed to a method for “providing a handover for a subset of bearers associated with a wireless terminal (101) being served by [a] source base station (401A), wherein at least one bearer of the wireless terminal remains connected to the source base station.” Ex. 1005, Abstr. Centonza’s “selective handover” reuses the principles of a “legacy handover” while modifying the content of some of the messages.¹⁴ *Id.* at 16:67–17:4; *see id.* at 13:59–14:25 (providing background explanation).

¹⁴ Centonza indicates that Figure 15 depicts a legacy handover (*see, e.g.*, Ex. 1005, 5:60–61, 13:59–60, 16:63–65, 21:56–62); however, this figure identifies messages and operations by number without providing an explanation of them (*see id.* at 13:24–54, Fig. 15).

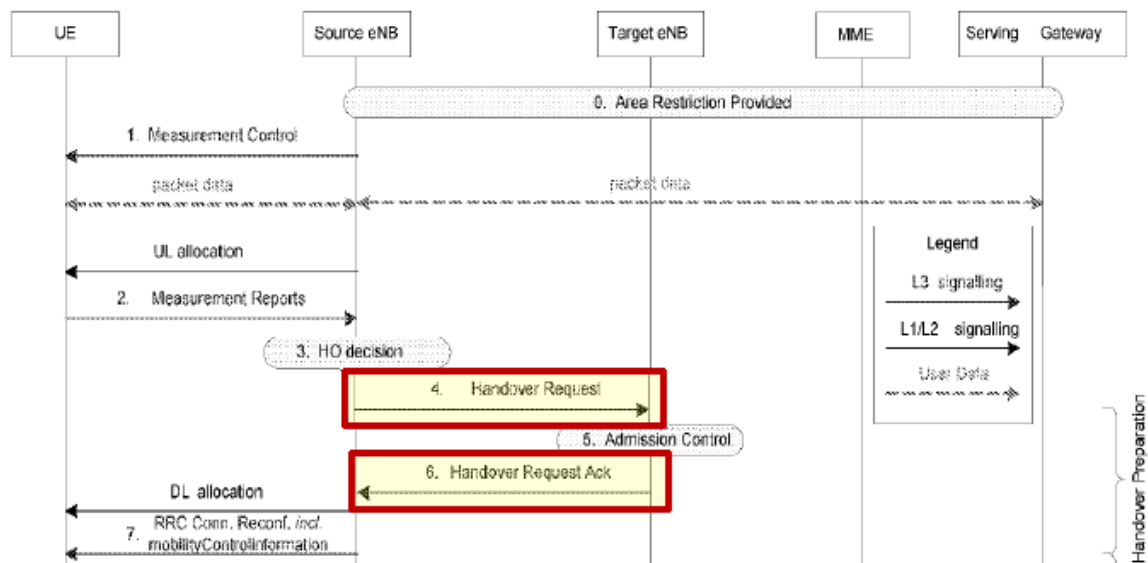
Centonza states that the “X2 HANDOVER REQUEST message” identifies “the data radio bearers that the anchor wants to handover to the assisting cell.” Ex. 1005, 18:9–14; *see also id.* at 13:29–34 (“[T]he source eNB decides whether to handover the connection to another eNB” and, if so, “sends a HANDOVER REQUEST message to the target eNB.”), 17:5–34 (Table 1 identifying contents of X2 HANDOVER REQUEST message). “[W]hen the target eNB receives a HANDOVER REQUEST message, . . . it sends a HANDOVER REQUEST ACKNOWLEDGE” that lists the admitted bearers as well as the bearers that are not admitted. *Id.* at 21:56–67; *see also id.* at 22:1–25 (Table 8 identifying contents of HANDOVER REQUEST ACKNOWLEDGE message). In one embodiment, if the target eNB did not admit some of the bearers, “the source eNB decides to keep those bearers with itself and hand over only the [admitted] ones.” *Id.* at 22:20–25. In addition, the target eNB sends a “PATH SWITCH REQUEST message to the MME indicating switching of bearers listed in X2: HANDOVER REQUEST message” that indicates that the handover is selective. *Id.* at 18:14–42; *see also id.* at 18:48–19:24 (Table 1a identifying contents of PATH SWITCH REQUEST message).

2. *Alleged Anticipation by Centonza*

Petitioner contends that Centonza anticipates independent claims 1 and 7 and dependent claims 2–6 and 8–11. Pet. 12–36. Patent Owner responds that Han fails to disclose the “second request” required by independent claims 1 and 7. Prelim. Resp. 45–56. For the reasons explained below, we agree that Petitioner fails to sufficiently show that Centonza

discloses the “second request” required by the claims.¹⁵ We begin with claim 1 before addressing the other challenged claims.

Claim 1 requires that a first eNB receive a first request from, and transmit an accept message to, a second eNB. Ex. 1001, 11:49–53. Petitioner points to Centonza’s target eNB and source eNB, respectively, as the claimed “first” and “second eNB[s].” Pet. 17. Petitioner contends that the claimed “first request” is taught by Centonza’s handover request (“X2 HANDOVER REQUEST”), and the claimed “accept message” is taught by Centonza’s handover acknowledgement message (“HANDOVER REQUEST ACKNOWLEDGE”). *Id.* at 17–21. Petitioner illustrates these contentions using excerpts of Figure 14 of the Centonza Provisional (*id.* at 20, 17; Ex. 1006, 46 (Fig. 14)), which we recreate below.



¹⁵ Petitioner’s contentions rely on both Centonza (Ex. 1005) and the Centonza Provisional (Ex. 1006). For purposes of this Decision, we have assumed (without deciding) that the relied-upon portions of the Centonza Provisional are also disclosed in Centonza. For example, we treat Figure 14 of the Centonza Provisional as if it were included in Centonza, even though the corresponding figure of Centonza (i.e., Figure 15) does not include all of the same details.

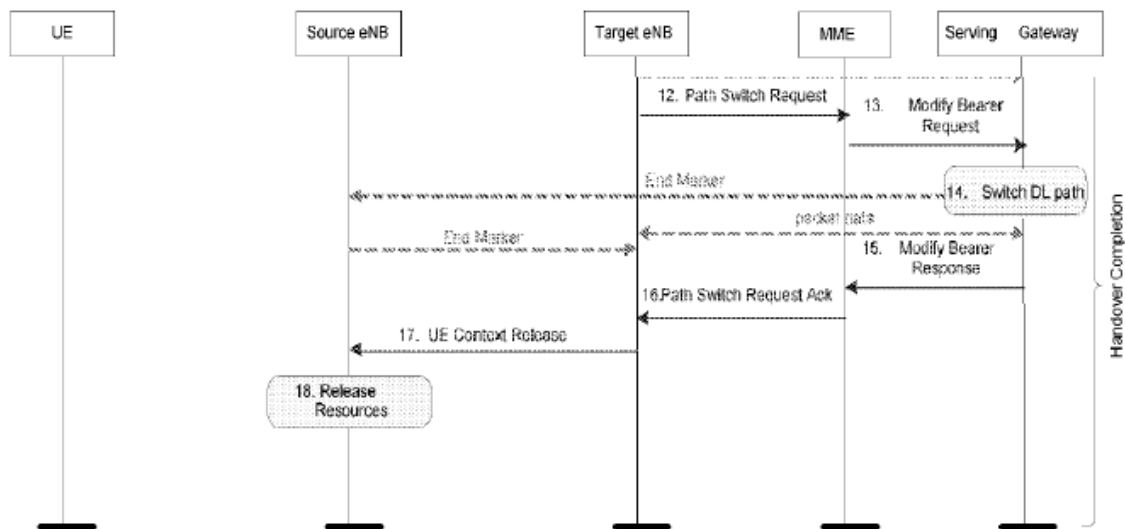
Pet. 20 (annotation added to show contention at Pet. 17). As shown above, the excerpt of Figure 14 depicts operations by and messages exchanged between a UE, Source eNB, and Target eNB, and Petitioner highlights “4. Handover Request” (sent from Source eNB to Target eNB) and “6. Handover Request Ack” (sent from Target eNB to Source eNB). Petitioner contends that the former (step 4) discloses the claimed “first request” and the latter (step 6) discloses the claimed “accept message.” *Id.* at 17, 20.

Claim 1 further requires that the first eNB transmit a “second request” to the second eNB “to change a data path for a first radio bearer of the UE, wherein the second request does not indicate to change the data path for a third radio bearer of the UE.” Ex. 1001, 11:54–63. For this “second request” limitation, Petitioner provides three alternative contentions (Pet. 21–27), but none are persuasive.

First, Petitioner contends that Centonza’s handover request acknowledge discloses the claimed “second request” (Pet. 21–23), but Petitioner fails to show that this message discloses a *request*. *See* Prelim. Resp. 22–24. Just like Han’s dual connection setup response (*see supra* § II.D.2), this message is not a request—rather, it is an acknowledgement of a request (*see* Ex. 1005, 21:55–62; *accord* Pet. 20–21). Petitioner argues this acknowledgement “includes” a request (Pet. 21), but Petitioner fails to sufficiently support this argument. According to Petitioner, the acknowledgement includes a request because it “contains an E-RAB Admitted List and an E-RAB Not Admitted List” and “[t]he Source eNB receives these lists and changes the data path of radio bearers based on the lists” (*id.* at 21–23 (citing Ex. 1005, 22:1–8, 22:19–25; Ex. 1003 ¶¶ 101–

108)); however, this is the same faulty reasoning as before. Even if Petitioner shows that the acknowledgement is a *message* “to change a data path,” it does not show that it is a *request* to do so. Petitioner’s reliance on Dr. Mahon is unavailing because his analysis suffers from the same deficiencies. *See* Ex. 1003 ¶¶ 101–108; *see also Motorola*, 121 F.3d at 1473 (“An expert’s conclusory testimony, unsupported by the documentary evidence, cannot supplant the requirement of anticipatory disclosure in the prior art reference itself.”).

Second, Petitioner contends that Centonza’s “Path Switch Request to UE Context Release” discloses the claimed “second request” (Pet. 23–26), but Petitioner fails to identify a ***request from the first eNB to the second eNB***. For the “second request” limitation, Petitioner must show a request from the Target eNB and to the Source eNB (*see id.* at 17 (mapping the “first eNB” to the Target eNB and the “second eNB” to the Source eNB)), but it fails to do so. Petitioner illustrates these messages using an excerpt from Figure 14 of the Centonza Provisional, which is shown below.



Id. at 24 (citing Ex. 1006, 46). The excerpt from Figure 14 of the Centonza Provisional shows: “12. Path Switch Request” (sent from the Target eNB to

the MME); “13. Modify Bearer Request” (sent from the MME to the Serving Gateway); “14. Switch DL path” (performed by the Serving Gateway); “15. Modify Bearer Response” (sent from the Serving Gateway to the MME); “16. Path Switch Request Ack” (sent from the MME to the Target eNB); “17. UE Context Release” (sent from the Target eNB to the Source eNB); and “18. Release Resources” (performed by the Source eNB).

Petitioner fails to show that these messages, individually or collectively, disclose the claimed “second request.” *See* Pet. 23–26. Even if we assume that steps 12 and 13 disclose a “request . . . to change a data path,” they fail to disclose a request *sent to the Source eNB*—they are instead sent to the MME and Serving Gateway, respectively. Ex. 1006, 46; *see also* Ex. 1005, 18:14–19:47 (stating that PATH SWITCH REQUEST is sent to the MME). Also, while a message is ultimately sent from the Target eNB to the Source eNB in step 17, Petitioner fails to show that this message is *a request*—it is instead a confirmation message. *See* Ex. 1006, 94 (*cited in* Pet. 25) (“17. By sending the UE CONTEXT RELEASE message, the target eNB informs success of [handover] to source eNB and triggers the release of resources by the source eNB.”).¹⁶ In other words, even if Petitioner shows that Centonza discloses a request to change a data path (which is sent from the Target eNB to the MME) and a message regarding a data path change (which is sent from the Target eNB to the Source eNB),

¹⁶ Petitioner identifies no passage of Centonza itself that describes this message. *Compare* Pet. 25 (citing Ex. 1005, 19:64–20:8, Fig. 15, Fig. 19), *with* Ex. 1005, 19:64–20:8 (describing the measurement of the UE’s time in a cell), Fig. 15 (including no label for allegedly corresponding message), Fig. 19 (including no corresponding component).

this is insufficient to disclose a “second request from the first eNB . . . to the second eNB . . . to change a data path,” as claim 1 requires.

Petitioner appears to contend that a request is indirectly transmitted from the Target eNB to the Source eNB through the core network (i.e., the MME and Serving Gateway) (*see* Pet. 23–24 (citing Ex. 1003 ¶¶ 109–119)), but Petitioner fails to sufficiently support this interpretation. Although Petitioner relies on Dr. Mahon, who testifies that “[t]he Source eNB . . . receives [the path switch request sent to the MME]” (Ex. 1003 ¶ 110), he provides insufficient support for this statement (*see id.* ¶¶ 109–119). Instead, his citations and explanation at most show that (1) the Target eNB sends a request to change a data path to the core network (e.g., MME), (2) the Target eNB receives an acknowledgement from the core network, (3) the Target eNB sends a message to the Source eNB confirming that the core network completed the request, and (4) the Source eNB makes changes to a data path. *See id.* ¶¶ 109–119. This fails to show a request sent (directly or indirectly) from the Target eNB to the Source eNB.

Third, Petitioner contends that Centonza describes a “Handover Request for subsequent selective handovers” that discloses the claimed “second request.” Pet. 26–27 (citing Ex. 1005, 17:5–18:24; Ex. 1003 ¶¶ 120–123). However, even if we assume that this is a request from the Target eNB to the Source eNB to change a data path, Petitioner fails to sufficiently show that it is “to change a data path for a first radio bearer” but not “for a third radio bearer,” as is also required by the claimed “second request.” *See* Prelim. Resp. 29. In the cited passage, Centonza discloses that an assisting node (after selectively receiving bearers from an anchor

node) may hand those bearers back over to the anchor node. Ex. 1005, 23:49–61. Specifically, Centonza states:

[T]he old assisting node may hand over the bearers back to the anchor, with an indication (e.g., via a new IE in the X2 HANDOVER REQUEST message) that recommends the selective handover of these bearers to the new assisting node. The anchor may use the recommendation and may handover the bearers to the new assisting node or decide to keep it with itself or drop them.

Id. at 23:54–61. This does not disclose a selective handover of **a subset** of the bearers by the assisting node. At best, Centonza is ambiguous as to whether the old assisting node hands over all (or just a subset) of the UE bearers managed by that node, and that ambiguity is fatal to Petitioner’s anticipation ground. *See Wasica Fin.*, 853 F.3d at 1284 (“Ambiguous references do not anticipate a claim.”). Moreover, in our view, Centonza suggests that the “old assisting node” hands over **all** of its bearers. *See* Ex. 1005, 23:54–61.

As a result, even assuming that Centonza discloses that the assisting node sends a handover request message to the target node identifying bearers to be handed over (and even assuming this discloses a “second request from the first eNB . . . to the second eNB . . . to change a data path for a first radio bearer”), Petitioner fails to sufficiently show that this request “does not indicate to change the data path for a third radio bearer of the UE,” as claim 1 also requires. Ex. 1001, 11:54–59; *see* Pet. 26–29; Ex. 1003 ¶¶ 120–128.

In sum, Petitioner presents three alternative theories to support its contention that Centonza discloses the claimed “second request,” but we are not persuaded by any of them. As a result, we determine that Petitioner

fails to show a reasonable likelihood of prevailing on its contention that Centonza anticipates claim 1.

We also determine that Petitioner fails to show a reasonable likelihood of prevailing on its contentions for the other challenged claims. Independent claim 7 recites a “second request” that is substantially the same in relevant respects as the “second request” required by claim 1. *Compare* Ex. 1001, 12:21–23, *with id.* at 11:54–56; *see also supra* n.10. Also, for claim 7’s “second request,” Petitioner relies upon the analysis of this limitation in claim 1. *See* Pet. 34–35. Thus, Petitioner fails to make a sufficient showing for claim 7 for the same reasons provided above for claim 1. The other challenged claims (i.e., claims 2–6 and 8–11) depend from either independent claim 1 or independent claim 7, and Petitioner’s reliance on and application of Centonza to these dependent claims does not cure the above-noted deficiencies.

Accordingly, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in establishing that Centonza anticipates any of claims 1–11.

3. *Alleged Obviousness over Centonza*

Petitioner also contends that the subject matter of claims 1–11 would have been obvious over Centonza. Pet. 37–41. Of note, Petitioner contends that it would have been obvious to modify Centonza in multiple ways to yield the “second request” required by claims 1 and 7. *Id.* at 40; *see id.* at 37–39. Patent Owner argues that an ordinarily skilled artisan would not have been motivated to make any of these changes. Prelim. Resp. 34–45. For the reasons explained below, we determine that each of Petitioner’s

theories fail to sufficiently show that the claimed “second request” would have been obvious in view of Centonza.

First, Petitioner contends that “it would have been obvious to have the Target eNB send the Path Switch to UE Context Release to the Source eNB exclusively over X2 and not over S1.” Pet. 40; *see id.* at 37–38. It appears that Petitioner proposes modifying Centonza so that the PATH SWITCH REQUEST (and/or step 12 of the Centonza Provisional’s Figure 14) is sent to the Source eNB instead of the MME.¹⁷ *See* Prelim. Resp. 35 (similarly summarizing Petitioner’s position as combining steps 11–17 of the Centonza Provisional into one message transmitted from the Target eNB to the Source eNB). However, this argument suffers the same deficiencies as Petitioner’s first obviousness theory for Han. *See supra* § II.D.3. In particular, Petitioner’s argument is premised on the assumption that Centonza’s PATH SWITCH REQUEST is indirectly transmitted to the Source eNB through the core network (e.g., the MME), but as explained above (*supra* § II.E.2 (discussing alleged anticipation by Centonza)), Petitioner fails to sufficiently support this understanding of Centonza, and we disagree with it. To the extent Petitioner’s obviousness contention is not premised on this flawed assumption, Petitioner fails to sufficiently explain the modification it proposes or the rationale in support. Dr. Mahon’s testimony mirrors the Petition and is similarly deficient. *See* Ex. 1003 ¶¶ 173–175. As a result, Petitioner’s first obviousness theory is not persuasive.

¹⁷ In other words, Petitioner proposes a modification of the messages relied upon in its second anticipation theory. *Compare* Pet. 23–26 (articulating anticipation theory), *with id.* at 37–38 (articulating corresponding obviousness theory).

Moreover, we agree with Patent Owner that “Petitioner’s proposal makes no sense in the context of Centonza Provisional Figure 14.” Prelim. Resp. 35; *see id.* at 35–39 (providing explanation). In particular, we discern no reason for an ordinarily skilled artisan to modify this figure to eliminate the sending of a message to the core network (MME), when the core network needs to be notified of the dual connection. *See, e.g.*, Ex. 1005, 13:48–53 (indicating that “a proper setup of the connection with the target eNB . . . comprises the switching of the DL path in the serving gateway”), 18:14–47 (indicating that purpose of PATH SWITCH REQUEST is to notify the MME of the changes); Ex. 1006, 92–94, 96 (describing purpose of commensurate steps in similar figure). We also discern no reason to instead send that message to the Source eNB.

Second, Petitioner contends that an ordinarily skilled artisan would have been motivated to modify “the Handover Request Acknowledge and Handover Request . . . to request to change the data path (and then change the data path based on these messages).” Pet. 38.¹⁸ Neither of these contentions are persuasive for the reasons explained in connection with Petitioner’s second obviousness theory for Han. *See supra* § II.D.3.

In particular, for the “Handover Request Acknowledge,” like Han’s Dual Connection Setup Response (step 406), Petitioner fails to provide a sufficient rationale to support the proposed modification. According to Petitioner, an ordinarily skilled artisan would change an acknowledgement into a request “to simplify the system and reduce the number of message

¹⁸ We understand Petitioner to propose a modification of the messages relied upon in its first and third anticipation theories, respectively. *Compare* Pet. 21–23 (first anticipation theory), 26–27 (third anticipation theory), *with id.* at 38–39 (corresponding obviousness theory).

exchanged” (Pet. 39), but this makes no sense. Petitioner fails to explain (and we do not discern) why changing an acknowledgement into a request would achieve either of these goals. Petitioner cites to Dr. Mahon’s testimony (*id.*), but he makes substantially the same statements as the Petition (*see* Ex. 1003 ¶ 177). We assign no weight to his conclusory and unsupported testimony. *See* 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.”); *see also TQ Delta*, 942 F.3d at 1359 (“[C]onclusory expert testimony is inadequate to support an obviousness determination.”).

Also, Petitioner’s proposed modification of the “Handover Request” fares no better than its corresponding anticipation argument. *See supra* § II.E.2. Petitioner argues that an ordinarily skilled artisan would have modified this message “to request to change the data path” (Pet. 38), but this fails to remedy the deficiency we identified above. Also, Petitioner does not articulate any other proposed modifications of the corresponding portion of Centonza with sufficient clarity. *See* Pet. 26–27, 38–39.

In sum, although Petitioner presents alternative theories to support its contention that the claimed “second request” would have been obvious in view of Centonza, we are not persuaded by any of them. As a result, we determine that Petitioner fails to show a reasonable likelihood of prevailing on its contention that claims 1 and 7 would have been obvious over Centonza. Petitioner’s reliance on and application of Centonza to the dependent claims does not cure the above-noted deficiencies.

Accordingly, we are not persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in establishing that the subject matter of any of claims 1–11 would have been obvious over Centonza.

III. CONCLUSION

As explained above, Petitioner has not shown a reasonable likelihood that it will prevail on any of the grounds or any of the claims challenged in the Petition. Accordingly, we do not institute an *inter partes* review. We need not (and do not) reach Patent Owner’s argument that the Petition should be discretionarily denied given the status of the co-pending district court litigation. *See* Prelim. Resp. 61–74.

IV. ORDER

It is ORDERED that the Petition is denied and no *inter partes* review is instituted.

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