

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

TELEFONAKTIEBOLAGET LM ERICSSON,
Patent Owner.

IPR2022-00607
Patent 10,517,133 B2

Before GEORGIANNA W. BRADEN, SHARON FENICK, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

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

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–20 (“Challenged Claims”) of U.S. Patent No. 10,517,133 B2 (Ex. 1001, “the ’133 patent”). Petitioner identifies itself as a real party in interest. Pet. 57. Telefonaktiebolaget LM Ericsson (“Patent Owner”) identifies itself and Ericsson Inc. as real parties in interest (Paper 3, 2), and timely filed a Preliminary Response to the Petition (Paper 6, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2022). We may not institute an *inter partes* review “unless . . . 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). The “reasonable likelihood” standard is “a higher standard than mere notice pleading” but “lower than the ‘preponderance’ standard to prevail in a final written decision.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential).

Applying those standards, and upon consideration of the information presented in the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of challenged claims 1–20 of the ’133 patent. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Accordingly, constrained by the record before us, we deny institution of an *inter partes* review of the ’133 patent.

II. BACKGROUND

A. Related Matters

Petitioner indicates that “[t]he ’133 patent was the subject of an IPR petition filed by Samsung Electronics Co., LTD. (“Samsung”) in IPR2021-00643,” and “Samsung’s petition was dismissed prior to institution.” Pet. 57–58 (citing *Samsung Elecs. Co. v. Telefonaktiebolaget LM Ericsson*, IPR2021-00643).

Petitioner also indicates that “[t]he ’133 patent is in the same family as pending U.S. [Patent] Application Serial No. 16/720,733” (Pet. 58), which we note is a continuation of the ’133 patent and issued as U.S. Patent No. 11,445,565 B2 on September 13, 2022 (“the ’565 patent”).

Notwithstanding the recently issued ’565 patent, Patent Owner has indicated, without update, that “[t]here are no judicial or administrative matters that would affect, or be affected by, a decision in this proceeding.” Paper 3, 2.¹

B. The ’133 Patent

The ’133 patent is titled “Methods and UE For Resuming a Connection With Full Configuration,” and issued December 24, 2019, from U.S. Patent Application No. 16/380,844, filed April 10, 2019, and claims priority through a PCT application to U.S. Provisional Patent Application No. 62/631,467, filed February 15, 2018. Ex. 1001, codes (10), (21), (22), (45), (54), (60), (63). The ’133 patent generally relates to “wireless

¹ See Consolidated Trial Practice Guide at 18 (Nov. 21, 2019) (“Administrative matters include every application and patent claiming, or which may claim, the benefit of the priority of the filing date of the party’s involved patent or application . . .”).

communications and, more particularly, to resum[ing] a connection for a wireless device.” *Id.* at 1:19–21.

The ’133 patent explains that, in Long Term Evolution (LTE) wireless communications, “during a Handover (HO) or re-establishment, the [User Equipment (UE)] context is passed from the source to the target [network node (e.g., Evolved Node B, known as ‘eNodeB’ or ‘eNB’)],” and “[i]f the target eNB does not understand any part of the UE configuration, then it triggers *full configuration*.” Ex. 1001, 6:48–54 (emphasis added), 1:27–30. The “full configuration” procedure is specified in Third Generation Partnership Project Technical Specification (3GPP TS) 36.331 section 5.3.5.8,” which is reproduced at least in part in the ’133 patent. *Id.* at 6:55–7:45. According to the ’133 patent, “[t]he full configuration procedure . . . is performed by sending an RRCConnectionReconfiguration [sic] message with the fullConfig flag set and *it is not available for other radio reconfiguration messages such as re-establishment and resume*.” *Id.* at 8:11–15 (emphasis added). The ’133 patent explains that “one of the main aims of the resume procedure is to transit the UE to connected mode as fast as possible (with as little signaling as possible), reusing the saved configuration of the UE when it got suspended, and thus an additional RRCConnectionReconfiguration [sic] is not needed.” *Id.* at 8:18–23. But, “there are scenarios where, during resuming after suspending, the target node doesn’t understand the radio configuration of the UE, and since full configuration is not supported, the only viable option for the UE to resume will be via IDLE mode . . . , which incurs further delays in the service continuity at the UE.” *Id.* at 8:25–31.

The '133 patent states that it provides solutions to such problematic scenarios, and in particular, discloses that a “*resume* procedure is enhanced to support a full configuration (or reconfiguration).” Ex. 1001, 13:59–60 (emphasis added). According to the '133 patent, this enhanced resume procedure includes:

send[ing] to a network node a request to resume a connection in a communication network; receiv[ing] a resume response message from the network node, the message comprising an indication to perform a full configuration; and apply[ing] the full configuration.

Id. at code (57). This procedure is depicted generally, for example, in Figure 7, reproduced below.

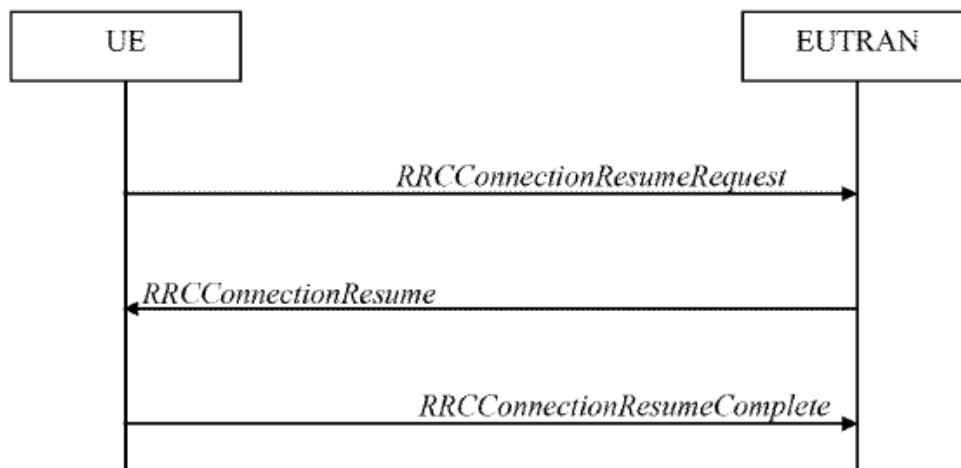


Figure 7

Figure 7 depicts a signal diagram of a successful Radio Resource Control (RRC) connection resume procedure.

Ex. 1001, 10:51–52, Fig. 7. In this case, the network node (or eNB or Evolved Universal Mobile Telecommunications System (UMTS) Terrestrial Radio Access Network (EUTRAN)), “sets a flag to the full configuration in the RRC [Connection] Resume message,” which “flag” may be referred to

as “the fullConfig flag,” and then “sends the RRC [Connection] Resume message to the UE with the flag.” *Id.* at 14:30–37. According to the ’133 patent, discussing the state of the art at the time of the patent, “[i]n the current systems, *there is no such flag in the Resume message.*” *Id.* at 14:35–36 (emphasis added). The ’133 patent further describes that in response to receiving the RRC Connection Resume (or *RRCCConnectionResume*) message that contains the fullConfig flag,

the UE will discard the old bearer configuration and other old radio parameters Then, it will only apply the (new) configuration it received in the RRC Resume message. In this way, the UE could switch to a new configuration from a network node which cannot understand the old configuration. It should be noted that some parameters, such as the security keys, will be kept in the UE even after receiving the fullConfig flag since the encryption and integrity protection is already up and running when the network node . . . sends the RRC Resume message.

Id. at 14:38–49. By structuring the system and messaging in this way, according to the ’133 patent, an additional RRC Connection Reconfiguration (or *RRCCConnectionReconfiguration*) message is not needed. *Id.* at 8:11–24.

C. Illustrative Claim

The ’133 patent includes twenty claims, all of which are challenged. Claims 1, 6, and 11 are the challenged independent claims. Claim 1 is representative and reproduced below.

1. A method in a wireless device, the method comprising:
sending to a network node a request to resume a connection in a communication network;
receiving a resume message from the network node, the message comprising an indication to perform a full configuration; and
applying the full configuration, without receiving a reconfiguration message.

Ex. 1001, 21:65–22:5.

D. Evidence of Record

Petitioner relies on the following patent evidence.

Name	Patent Document	Exhibit
Van Lieshout	US 2012/0202478 A1	1005
Schliwa-Bertling	US 2016/0278160 A1	1006

Petitioner also relies on the following non-patent literature evidence.

Name	Non-Patent Literature Title	Author	Exhibit
3GPP '208	<i>OFFLINE#22 LTE re-establishment and resume while using NR PDCP</i> , Doc. No. R2-1714208, 3GPP TSG-RAN WG2 Meeting #100, Nov. 27 – Dec. 1, 2017	3rd Generation Partnership Project (3GPP)	1004
3GPP '279	<i>RRC connection re-establishment and resume procedures in NR</i> , Doc. No. R2-1710279, 3GPP TSG-RAN WG2 #99bis, Oct. 9–13, 2017	3rd Generation Partnership Project (3GPP)	1007

Pet. 1–2. Petitioner also relies upon the Declaration of Robert Akl, D.Sc. (Ex. 1003) and the Declaration of Friedhelm Rodermund (Ex. 1010).

E. Asserted Challenges to Patentability

Petitioner challenges the patentability of claims 1–20 of the '133 patent on the following bases.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	103 ²	Schliwa-Bertling, 3GPP '279

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103. Because

1–5	102 ³	3GPP '208
1–5	103	3GPP '208
6–20	103	3GPP '208, Van Lieshout

Pet. 1.

III.ANALYSIS

A. Applicable Law

Petitioner challenges the patentability of claims 1–20 of the '133 patent on grounds that the claims would have been anticipated under 35 U.S.C. § 102 or obvious under 35 U.S.C. § 103 in light of various references, namely Schliwa-Bertling, 3GPP '279, 3GPP '208, and Van Lieshout. “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”)) (emphasis added). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing*

the '133 patent was effectively filed after March 16, 2013, the effective date of the relevant amendment, the AIA versions of §§ 102 and 103 apply.

³ Although Petitioner identifies its challenges to patentability as based only on obviousness (Pet. 1 (Grounds 1, 2A, and 2B: “§103 Basis”)), Petitioner also refers to *anticipation* by 3GPP '208 of claims 1–5 elsewhere in the Petition (*see* Pet. 28 (“3GPP '208 anticipated and rendered obvious Claims 1–5”), 33–34).

Corp. v. Videotek, Inc., 545 F.3d 1316, 1326–27 (Fed. Cir. 2008))
(discussing the burden of proof in *inter partes* review).

To serve as an anticipatory reference under 35 U.S.C. § 102, “the reference must disclose each and every element of the claimed invention, whether it does so explicitly or inherently.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009). “The identical invention must be shown in as complete detail *as is contained in the . . . claim.*” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989) (emphasis added). The elements must be arranged as required by the claim, “but this is not an ‘*ipsissimis verbis*’ test,” i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 832–33 (Fed. Cir. 1990) (citing *Akzo N.V. v. United States Int’l Trade Comm’n*, 808 F.2d 1471, 1479 & n.11 (Fed. Cir. 1986)).

A claim is unpatentable under 35 U.S.C. § 103 “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103; *see KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when of record, objective evidence of obviousness or non-obviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Objective indicia of non-obviousness may include the following:

“commercial success, long felt but unsolved needs, failure of others, etc.”⁴

Id. The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art, at the time of the earliest effective filing date of the ’133 patent:

would have had a Bachelor’s degree in electrical engineering, computer engineering, computer science, or a related field, and 2-3 years of experience in the design or development of wireless communication systems, or the equivalent.

Pet. 4 (citing Ex. 1003 ¶¶ 18–20).

Patent Owner does not present an alternative definition at this stage of the proceeding. *See generally* Prelim. Resp.

We regard Petitioner’s proposed definition as reasonable, and consistent with the prior art before us. *See In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (determining that the Board of Patent Appeals and Interferences did not err in concluding that the level of ordinary skill in the

⁴ At this stage of the proceeding, Patent Owner has not presented objective evidence of non-obviousness.

art was best determined by the references of record). Accordingly, we apply the level of skill set forth above, which also is consistent with the testimony of Dr. Akl (Ex. 1003 ¶¶ 18–20).

We note Petitioner adds to its proposed definition that “[a]dditional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education” (Pet. 4 (citing Ex. 1003 ¶¶ 18–20)), but we find this too vague to reliably implement in analyzing patentability, and thus, do not rely herein on this additional characterization of the skilled artisan.

C. Claim Construction

We construe claims “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), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *see CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (There is “a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.”). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic*

Sofamor Danek, Inc., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we 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))).

Petitioner submits that, “[u]nless otherwise noted, terms should be given their plain meaning.” Pet. 4. At this stage of the proceeding, Patent Owner does not address claim construction. *See generally* Prelim. Resp. In determining whether Petitioner has demonstrated a reasonable likelihood of establishing unpatentability of at least one challenged claim in this case, we need not and do not construe expressly any claim terms. *See Nidec*, 868 F.3d at 1017.

D. Alleged Obviousness of Claims 1–20 over the Combination of Schliwa-Bertling and 3GPP ’279

Petitioner contends claims 1–20 are unpatentable under 35 U.S.C. § 103 as obvious over the combined teachings of Schliwa-Bertling (Ex. 1006) and 3GPP ’279 (Ex. 1007). Pet. 5–28. Patent Owner opposes Petitioner’s contentions. Prelim. Resp. 2–17. Based on our review of the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that

any of claims 1–20 is unpatentable as obvious over the combination of Schliwa-Bertling and 3GPP '279, as discussed below. We begin with an overview of Schliwa-Bertling and 3GPP '279.

1. Overview of Schliwa-Bertling (Ex. 1006)

Schliwa-Bertling relates generally to “handling suspension of a connection between the wireless device and a wireless communications network.” Ex. 1006, code (57). Schliwa-Bertling discloses that network node 211 can command wireless device 240 “to transition into a suspended idle mode,” during which the wireless device “behave[s] as in ‘idle mode’, but caches a context related to the last connection, for example data related to security, such as keys, sequence number etc[.], and data related to bearers, such as signaling and data bearers.” *Id.* ¶ 121; *see id.* ¶ 125. “When the wireless device 240 wants to resume its connection 251 for some reason, e.g. due to paging of the wireless device 240, wanting to send data, etc[.], it [m]akes contact with the network, i.e. with the first network node 211” (see transmission 401 in Figure 4*a* below). *Id.* ¶¶ 126–127. “[W]ireless device 240 initiates the resumption by transmitting . . . [a] RRC Connection Resume Request” (i.e., sending a request to resume a connection) to network node 211 (see transmission 403 in Figure 4*a* below). *Id.* ¶ 127. If certain conditions are met, such as “the stored UE context has not been deleted or become too old,” then network node 211 responds to wireless device 240 by sending “a control message such as RRC Connection Resume Pending or RRC Connection Resume Complete” (see transmissions 404 and 405 in Figure 4*a* below). *Id.* ¶ 129. Schliwa-Bertling’s Figure 4*a*, a portion of which is reproduced below, depicts this signaling or messaging used in resuming a connection.

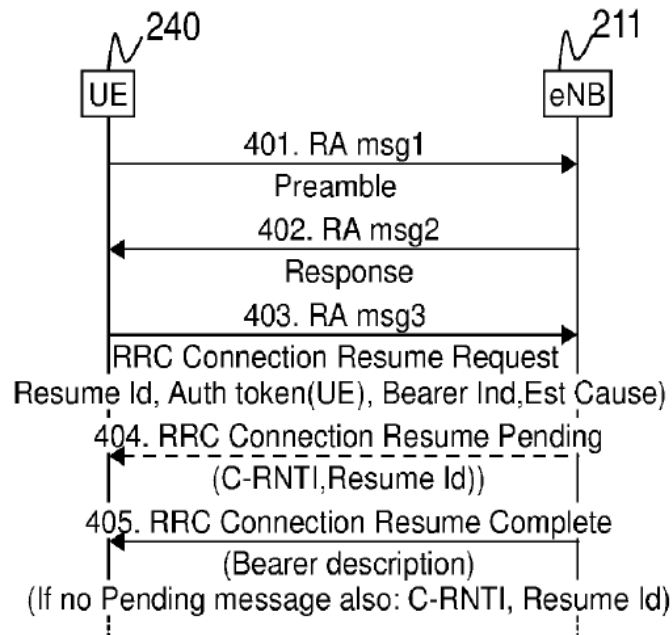


Figure 4a depicts a signaling diagram of a method performed in a wireless communications network.

Id. ¶ 55, Fig. 4a.

We further discuss below the disclosure of Schliwa-Bertling in connection with the parties' arguments.

2. Overview of 3GPP '279 (Ex. 1007)

3GPP '279 relates generally to RRC connection re-establishment and resume procedures in new radio (NR). Ex. 1007, 1. 3GPP '279 discloses, in the context of LTE, a procedure for resuming a RRC connection, as depicted in Figure 3, reproduced below.

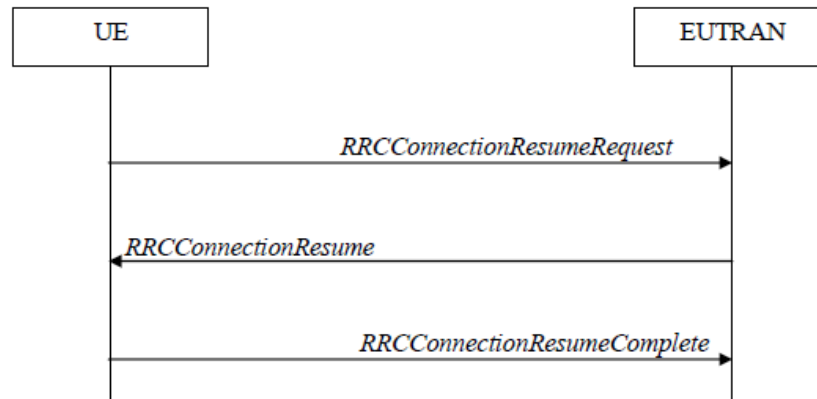


Figure 3 RRC connection resume, successful

Figure 3 depicts a successful RRC connection resume signaling.

Id. at 2, Fig. 3. As shown in Figure 3 above, the UE transmits to the network node (e.g., EUTRAN) a *RRCConnectionResumeRequest* message, which in turn transmits to the UE a *RRCConnectionResume* message, which in turn transmits to the network node a *RRCConnectionResumeComplete* message. *Id.*, Fig. 3. 3GPP '279 discloses that the “RRC Connection Resume kind of message can optionally include the dedicated radio resource configuration.” *Id.* at 3.

We further discuss below the disclosure of 3GPP '279 in connection with the parties' arguments.

3. Independent Claim 1: “the [resume] message comprising an indication to perform a full configuration”

Independent claim 1 requires, in relevant part, “the [resume] message comprising an *indication* to perform a *full configuration*.” Ex. 1001, 22:1–3 (emphases added). The parties dispute, *inter alia*, whether Petitioner's cited evidence adequately supports Petitioner's contention that the combination of

Schliwa-Bertling and 3GPP '279 teaches or suggests this limitation. *See, e.g.,* Prelim. Resp. 9–13; Pet. 13–14.

Petitioner asserts that “3GPP '279 describes that the ‘RRC Connection Resume...message can *optionally include the dedicated radio resource configuration.*” Pet. 13 (quoting Ex. 1007, 3). Before continuing, we note that this is the only and entire disclosure in 3GPP '279 that Petitioner relies on for allegedly disclosing or teaching that the resume message comprises an indication to perform a full configuration. Petitioner argues, “[b]ecause the inclusion of dedicated radio resource configuration information in the RRC Connection Resume message is optional, the presence of this configuration information is an indication to the UE to perform a configuration,” and “[l]ikewise, the absence of this configuration information is an indication to the UE not to perform a configuration.” Pet. 13 (citing Ex. 1003 ¶ 59). Petitioner also argues that “the LTE ‘full configuration’ procedure described in the '133 patent ‘includes an initialization of the radio configuration’ of the wireless device.” Pet. 13 (citing Ex. 1001, 7:46–47). Petitioner then concludes, based only on the foregoing, “[i]t would have been obvious to [the skilled artisan] to reinitialize the radio configuration of the wireless device in response to receiving the ‘dedicated radio resource configuration’ included in the RRC Connection Resume message in 3GPP '279.” Pet. 13–14 (citing Ex. 1003 ¶ 59; Ex. 1007, 3). Petitioner’s declarant makes these same (conclusory) statements verbatim, without more, and with no further explanation or additional citations to evidence. *See* Ex. 1003 ¶ 59; Prelim. Resp. 9 (“Petitioner’s declarant, Dr. Akl, parrots the Petition and offers nothing

more, and his opinion is entitled to no weight.”). We find Petitioner’s arguments unpersuasive, as discussed below.

We give such conclusory, unsupported assertions by Petitioner’s expert little or no weight. *See In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) (“[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations.”); *Rohm and Haas Co. v. Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997) (noting that a fact finder is not required to “credit the unsupported assertions of an expert witness”); 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.”).

Patent Owner argues that Petitioner’s only cited disclosure in 3GPP ’279, namely, that the “RRC Connection Resume . . . message can optionally include the dedicated radio resource configuration” (Ex. 1007, 3 (cited at Pet. 13)), “says nothing about *indicating* the need for a *full* configuration” via a resume message, as recited in independent claim 1. Prelim. Resp. 9–10 (emphases added). Patent Owner asserts that Petitioner’s contention that the *presence* or *absence* of dedicated radio resource configuration information is an “indication” to the UE whether to perform a “*configuration*” (as opposed to “full” configuration) (Pet. 13 (emphasis added)) is conclusory and unsupported by any evidence of record. Prelim. Resp. 10 (“Nothing in the record supports these conclusions.”; “Petitioner’s conclusions are pure speculation motivated by hindsight.”). Patent Owner then argues that the subject one-sentence disclosure in 3GPP ’279 “says *nothing* about what the dedicated radio resource configuration would

indicate—if anything—to a UE,” and “[does not] disclose what a UE would understand by *not* including the dedicated radio resource configuration.”

Prelim. Resp. 10.

Patent Owner further argues that “Petitioner uses a conclusory obviousness argument in an attempt to bridge the gap between a ‘configuration’ and the ‘full configuration’ recited in Claim 1.” Prelim. Resp. 11. In particular, Patent Owner argues Petitioner leaps silently, “with no support or explanation,” from a disclosure of a resume message optionally including a “configuration,” to an alleged disclosure of a resume message including an “indication” to perform a “*full* configuration.” Prelim. Resp. 10–12 (citing Pet. 13–14). Patent Owner calls out Petitioner’s apparent, but unstated and unsupported, claim construction position that “a ‘full configuration’ can mean [only] ‘an initialization of the radio configuration’ without requiring anything more” (Prelim. Resp. 11), which appears where Petitioner identifies that “the LTE ‘*full* configuration’ procedure . . . ‘*includes* an initialization of the radio *configuration*’ of the wireless device,” and Petitioner then uses that “inclusion” to argue that the disclosure of an optional dedicated radio resource “configuration” in 3GPP ’279 somehow teaches a “*full* configuration” (Pet. 13 (emphases added)). Patent Owner argues that the ’133 patent’s summary description of a “full configuration” “includ[ing] an initialization of the radio configuration” “does not suggest, let alone mandate, that *initialization of the radio configuration* is sufficient for a *full configuration*.” Prelim. Resp. 11–12; *see also id.* at 13.

Patent Owner concludes, and we agree for the same reasons discussed above, that Petitioner does not explain sufficiently, let alone with

particularity, how or why the skilled artisan would have understood (a) the disclosure in 3GPP '279 of a RRC Connection Resume message optionally including a dedicated radio resource configuration, to teach or suggest (b) a resume message including an *indication* to perform a *full* configuration, given the description of “full configuration” in the '133 patent. *See* Prelim. Resp. 9–13. Petitioner simply does not explain sufficiently the necessary inferences and logical steps necessary to traverse from the cited 3GPP '279 sentence (Pet. 13) to the subject limitation in independent claim 1.

In addition, Patent Owner argues Petitioner’s reading of the cited 3GPP '279 sentence (Pet. 13) onto the subject limitation in independent claim 1 is fraught with hindsight bias. Prelim. Resp. 9 (“Petitioner’s analysis rests on hindsight conclusions made without any support in the record.”), 10 (“Petitioner’s conclusions are pure speculation motivated by hindsight.”), 12–13 (“Lacking any justification, and based solely on the hindsight reconstruction of Claim 1, Petitioner’s unsupported arguments and apparent attempt to construe ‘initialization of the radio configuration’ to constitute the claimed ‘full configuration’ should be rejected.”). We agree with Patent Owner that, but for hindsight, neither Petitioner nor its expert explains sufficiently, let alone with particularity, why the skilled artisan would have understood the cited 3GPP '279 sentence (Pet. 13), which itself does not describe, at least on its face, a resume message including any “indication” or performance of a “full” configuration, to teach or suggest a resume message including an *indication* to perform a *full* configuration. *See InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014) (“It appears that [the expert] relied on the [] patent itself as her roadmap for putting what she referred to as pieces

of a ‘jigsaw puzzle’ together.”); *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996) (citing *W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)) (“To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction—an illogical and inappropriate process by which to determine patentability.”). Although “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton” (*KSR*, 550 U.S. at 421), the Federal Circuit has observed that “‘the prejudice of hindsight bias’ often overlooks that the ‘genius of invention is often a combination of known elements which in hindsight seems preordained.’” *Polaris Industries, Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1068 (Fed. Cir. 2018).

For the foregoing reasons, and constrained by the Petition, we are not persuaded that the cited evidence adequately supports Petitioner’s contention that the combination of Schliwa-Bertling and 3GPP ’279 teaches or suggests “the [resume] message comprising an indication to perform a full configuration” limitation, as recited in independent claim 1.

4. Independent Claims 6 and 11 and Dependent Claims 2–5, 7–10, and 12–20

Independent claims 6 and 11 recite the same limitation as at issue with independent claim 1, discussed above in Section III.D.3. *See* Ex. 1001, 22:22–24 (claim 6: “receive a resume response message from the network node, the message comprising an indication to perform a full configuration”), 22:46–49 (claim 11: “send a resume response message to the wireless device, the message comprising an indication to perform a full configuration”). Petitioner submits the same arguments for unpatentability

against these limitations in claims 6 and 11 as for claim 1. *See* Pet. 18–19, 24. Patent Owner likewise submits the same arguments for independent claims 1, 6, and 11. *See* Prelim. Resp. 15–17. Claims 2–5, 7–10, and 12–20 depend, directly or indirectly, from one of independent claim 1, 6, and 11. Accordingly, for the same reasons set forth above in Section III.D.3 for claim 1, we are not persuaded that the cited evidence adequately supports Petitioner’s contention that the combination of Schliwa-Bertling and 3GPP ’279 teaches or suggests the subject limitations in any of claims 2–20.

5. *Summary*

For the foregoing reasons, we determine that Petitioner has not demonstrated a reasonable likelihood of success in establishing the unpatentability of any of claims 1–20 as obvious over the combination of Schliwa-Bertling and 3GPP ’279.

E. Alleged Anticipation and Obviousness of Claims 1–5 over 3GPP ’208

Petitioner contends claims 1–5 are unpatentable under 35 U.S.C. § 102 as anticipated by 3GPP ’208 (Ex. 1004) or under 35 U.S.C. § 103 as obvious over 3GPP ’208 and “the general knowledge of a POSITA.” Pet. 33–34; *see* Pet. 28–44. Patent Owner opposes Petitioner’s contentions. Prelim. Resp. 18–24. Based on our review of the Petition and Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that any of claims 1–5 is unpatentable as anticipated by or obvious over 3GPP ’208, as discussed below. We begin with an overview of 3GPP ’208.

1. Overview of 3GPP '208 (Ex. 1004)

3GPP '208 relates generally, in part, to a method in a Long Term Evolution (LTE) wireless network for managing a connection between user equipment (UE, e.g., a wireless device) and a network node (e.g., Enhanced Node B (eNB)). Ex. 1004, 3–4. 3GPP '208 describes a “suspend/resume” procedure as follows:

When a decision is made by the network to move the UE to suspended state, the eNB sends the UE an *RRCConnectionRelease* message with the release cause value of *rrc-suspend* and it is also provided with a *Resume ID*. The UE stores the ID and UE AS context (including the current RRC configuration, the current security context, the PDCP state including ROHC state, C-RNTI used in the source PCell, the cellIdentity and the physical cell identity of the source PCell); re-establishes all RLC entities (both for SRBs and DRBs); and suspends all DRBs and SRBs except SRB0.

When the UE later on wants to resume the connection . . . , it sends an *RRCConnectionResumeRequest* message with the saved *Resume ID*. If the resume operation is performed in an eNB other than the eNB that was serving the UE when the UE was suspended, the new eNB can perform a context fetch by using the *Retrieve UE Context* X2 procedure from the old eNB (as the Resume ID includes information about the old eNB/cell). Upon getting the context (if resuming on a new eNB) or if the resumption was in the same eNB, the target eNB responds with an *RRCConnectionResume* message, and both the UE and eNB restore the saved UE context, and data transmission/reception from/to the UE can be resumed.

Id. at 3. This RRC connection resume procedure is shown in Figure 3, reproduced below.

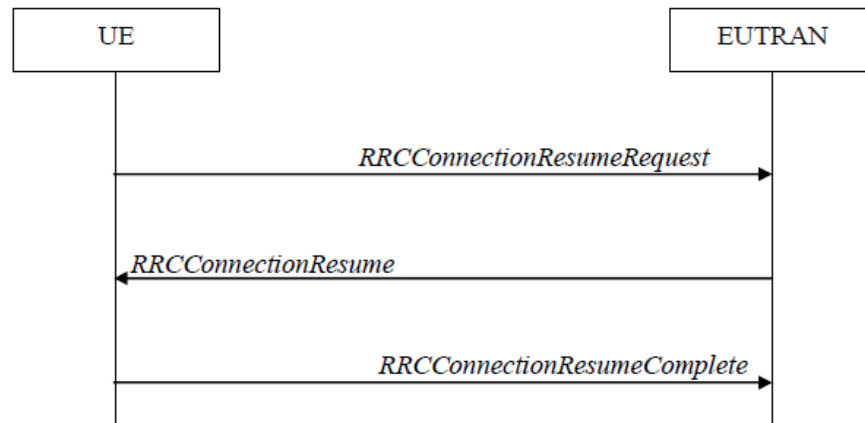


Figure 3: RRC connection resume, successful

Figure 3 depicts a successful RRC connection resume signaling.

Id. at 3, Fig. 3. 3GPP '208 also states that “[a] *RRCConnectionResume* message, unlike the *RRCConnectionReestablishment* [sic] message, can contain the SRB2/DRB configuration, and thus *RRCConnectionReconfiguration* is not needed after resume (while it is necessary in the re-establishment case to reconfigure SRB2/DRBs).” *Id.* at 4.

We further discuss below the disclosure of 3GPP '208 in connection with the parties' arguments.

2. Independent Claim 1: “the [resume] message comprising an indication to perform a full configuration”

Independent claim 1 requires, in relevant part, “the [resume] message comprising an *indication* to perform a *full configuration*.” Ex. 1001, 22:1–3 (emphases added). The parties dispute, *inter alia*, whether Petitioner's cited evidence adequately supports Petitioner's contention that 3GPP '208 teaches or suggests this limitation. *See, e.g.*, Prelim. Resp. 18–24; Pet. 39–40.

Petitioner's entire argument and cited evidence directed to this limitation follows:

3GPP '208 describes aligning the "resume message" with the "*RRCConnectionReconfiguration* message," which enables the eNB to instruct the UE to perform a "full configuration" using the resume message. APPLE-1004, 6, 7, 10; APPLE-1003, [110]. To this end, 3GPP '208 describes that the resume message includes a "***full configuration flag***" that indicates to the UE to perform a "full configuration." APPLE-1004, 6, 7, 10; APPLE-1003, [110].

Pet. 39–40. Petitioner's declarant makes these same (conclusory) statements verbatim, without more, and with no further explanation or additional citations to evidence. *See* Ex. 1003 ¶ 110; Prelim. Resp. 20–21 (Petitioner's declarant, Dr. Akl, "does nothing more than repeat—*verbatim*—Petitioner's mischaracterizations."); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d at 1368 ("[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations."); *Rohm and Haas*, 127 F.3d at 1092 (noting that a fact finder is not required to "credit the unsupported assertions of an expert witness"); 37 C.F.R. § 42.65(a). We find Petitioner's arguments unpersuasive, as discussed below.

Patent Owner argues Petitioner "mischaracterizes" 3GPP '208 in stating that it "*describes* that the *resume message* includes a '*full configuration flag*' that *indicates* to the UE to *perform* a '*full configuration*.'" Prelim. Resp. 18; Pet. 39 (emphases altered). "Although 3GPP '208 mentions a '*full configuration flag*,' it ***does not*** describe[] that flag as being included in the *RRCConnectionResume* message [] which Petitioner cites as the alleged '*resume message*' recited in Claim 1."

Prelim. Resp. 18. Patent Owner argues that “[t]he only disclosure about a ‘full configuration flag’ in 3GPP ’208 merely discusses what ‘PDCP version for SRB2/DRB’—LTE PDCP or NR PDCP—should be used for different scenarios.” *Id.* at 18–19 (citing Ex. 1004, 10). Patent Owner argues “[n]othing in this disclosure teaches or suggests that the UE receives a full configuration flag *in the resume message (i.e., the RRCConnectionResume message)* as recited in Claim 1.” *Id.* at 19.

Patent Owner argues Petitioner also “mischaracterizes” 3GPP ’208 in stating that it “describes aligning the ‘resume message’ with the ‘*RRCConnectionReconfiguration* message,’ which enables the eNB to instruct the UE to perform a ‘full configuration’ using the resume message.” Prelim. Resp. 19 (citing Pet. 39). Patent Owner argues “Petitioner appears to cobble together disclosures from three separate pages of 3GPP ’208 in its [one-sentence] argument” (*id.* at 19 (citing Pet. 39, which in turn cites Ex. 1004, 6, 7, 10)), “[b]ut nothing in these disclosures constitutes a disclosure or suggestion that the *RRCConnectionResume* message comprises an indication to perform a full configuration.” *Id.* Patent Owner demonstrates this as follows:

First, although the top of page 6 of 3GPP ’208 does refer to a “full configuration,” Patent Owner argues this “relates to connection *re-establishment* and not to the *resume* functionality on which Petitioner relies.” Prelim. Resp. 19 (citing Ex. 1004, 6)

Second, although a “full configuration” is mentioned on page 6 of 3GPP ’208 in the context of “Solution 4,” Patent Owner argues that, in the first instance, “the eNB ‘does not perform a full configuration,’” and in the second instance, “the eNB ‘will perform RRC Resume with Full

configuration over SRB1 with LTE PDCP.” Prelim. Resp. 19–20 (citing Ex. 1004, 6). Patent Owner argues, “[n]otably, neither Petitioner nor its declarant cite to this specific disclosure, which is not surprising because it does not teach or suggest that the *RRConnectionResume* message—which is sent from the eNB to the UE—includes an ‘indication to perform a full configuration’ as required by Claim 1,” instead it “merely states that the eNB will perform a full configuration, but does not disclose any indication of performing a full configuration in an *RRConnectionResume* message.” *Id.* at 20.

Third, although pages 7 and 10 of 3GPP ’208 disclose a “Proposal 2: The resume message to be aligned with *RRConnectionReconfiguration* message to enable configuration of bearers with NR PDCP,” Patent Owner argues that “this proposal does not suggest a ‘full configuration.’” Prelim. Resp. 20 (citing Ex. 1004, 7, 10). Patent Owner argues that “in the discussion on page 10, 3GPP ’208 discloses that this question relates to the fact that ‘the resume message contains radio bearer configurations,’” and “[n]owhere does 3GPP ’208 teach or suggest that the resume message contains a full configuration flag.” *Id.* (citing Ex. 1004, 10). Patent Owner reiterates that, “notably, neither Petitioner nor its declarant cite to or explain any of the foregoing passages.”

Patent Owner concludes, and we agree for the same reasons discussed above, that Petitioner does not explain sufficiently, let alone with particularity, how or why the skilled artisan would have understood (a) the disclosures spread across pages 6, 7, and 10 in 3GPP ’208, which Petitioner does not even identify specifically, to teach or suggest (b) a resume message

including an *indication* to perform a *full* configuration, given the description of “full configuration” in the ’133 patent. *See* Prelim. Resp. 18–21.

For the foregoing reasons, and constrained by the Petition, we are not persuaded that the cited evidence adequately supports Petitioner’s contention that 3GPP ’208 teaches or suggests “the [resume] message comprising an indication to perform a full configuration” limitation, as recited in independent claim 1.

3. Dependent Claims 2–5

Claims 2–5 depend, directly or indirectly, from independent claim 1. Accordingly, for the same reasons set forth above in Section III.E.2 for claim 1, we are not persuaded that the cited evidence adequately supports Petitioner’s contention that 3GPP ’208 teaches or suggests the subject limitations in any of claims 2–5.

4. Summary

For the foregoing reasons, we determine that Petitioner has not demonstrated a reasonable likelihood of success in establishing the unpatentability of any of claims 1–5 as anticipated by 3GPP ’208 or obvious over 3GPP ’208 and “the general knowledge of a POSITA.”

F. Alleged Obviousness of Claims 6–20 over the Combination of 3GPP ’208 and Van Lieshout

Petitioner contends claims 6–20 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of 3GPP ’208 (Ex. 1004) and Van Lieshout (Ex. 1005). Pet. 44–57. Patent Owner opposes Petitioner’s contentions. Prelim. Resp. 24–27.

Petitioner does not argue Van Lieshout cures any deficiencies discussed above concerning 3GPP '208 (*see supra* Section III.E) in connection with “the [resume] message comprising an indication to perform a full configuration” limitation, as recited in independent claim 1. *See* Pet. 44–57; Prelim. Resp. 25 (“Petitioner adds [Van] Leishout solely to address the device components in Claim 6 [and 11]—*i.e.*, the communication interface, the processing circuits, etc.”). Therefore, for the same reasons discussed above in Section III.E, we determine that Petitioner has not demonstrated a reasonable likelihood of success in establishing the unpatentability of any of claims 6–20 as obvious over the combination of 3GPP '208 and Van Lieshout.

IV. CONCLUSION

Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of claims 1–20 of the '133 patent under any of its proffered challenges (*i.e.*, Grounds 1, 2A, and 2B (Pet. 1)).

V. ORDER

For the reasons given, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is not instituted for claims 1–20 of U.S. Patent No. 10,517,133 B2.

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Patent 10,517,133 B2

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