

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HTC CORPORATION and HTC AMERICA, INC.,  
Petitioner,

v.

CELLULAR COMMUNICATIONS EQUIPMENT LLC,  
Patent Owner.

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Case IPR2016-01504  
Patent 8,867,472 B2

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Before JUSTIN T. ARBES, BRYAN F. MOORE, and  
GREGG I. ANDERSON, *Administrative Patent Judges*.

ANDERSON, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
37 C.F.R. § 42.108

## I. INTRODUCTION

HTC Corporation and HTC America, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) pursuant to 35 U.S.C. §§ 311–19 to institute an *inter partes* review of claims 1, 10, 11, 14, 28, and 41 (“the challenged claims”) of U.S. Patent No. 8,867,472 (“the ’472 patent,” Ex. 1001), filed March 25, 2010. The Petition is supported by the Declaration of Tim A. Williams, Ph.D. (“Williams Declaration,” “Williams Dec.,” Ex. 1003). Cellular Communications Equipment LLC (“Patent Owner”) filed a Preliminary Response (“Prelim. Resp.,” Paper 6).

Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the petition and preliminary response shows a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim. Upon consideration of the Petition, we determine that Petitioner does not demonstrate a reasonable likelihood of prevailing in showing the unpatentability of claims 1, 10, 11, 14, 28, and 41 of the ’472 patent. Accordingly, we deny institution of *inter partes* review.

### A. *Related Proceedings*

Petitioner advises us that the following District Court lawsuits may be affected by this proceeding: *Cellular Communications Equipment LLC v. AT&T Inc., et al.*, 2:15-cv-00576 (E.D. Tex.); *Cellular Commc’ns Equipment LLC v. Sprint Corp. et al.*, 2:15-cv-00579 (E.D. Tex.); *Cellular Commc’ns Equipment LLC v. T-Mobile USA, Inc. et al.*, 2:15-cv-00580 (E.D. Tex.); and *Cellular Commc’ns Equipment LLC v. Verizon Commc’ns, Inc. et al.*, 2:15-cv-00581 (E.D.

Tex.). Pet. 1. In addition, there are two *inter partes* review proceedings asserting unpatentability of the '472 patent: *Apple Inc. v. Cellular Communications Equipment LLC*, Case IPR2016-01480 ("1480 IPR") and *Telefonaktiebolaget LM Ericsson and Ericsson Inc. v. Cellular Communications Equipment LLC*, Case IPR2016-01485 ("1485 IPR").<sup>1</sup> Paper 3, 2.

*B. The '472 Patent (Ex. 1001)*

The '472 patent describes an apparatus and method for sending and receiving aperiodic channel information for a selected downlink component carrier of a plurality of component carriers ("CC"). Ex. 1001, Abstract, 1:15. More specifically, the invention relates to the 3rd Generation Partnership Project (3GPP) LTE ("Long term evolution") wireless communication systems. *Id.* at 1:26, 1:42–47; *see* Ex. 1003 ¶ 20. A base station sends user equipment ("UE") a request to "force the UE to send an aperiodic CSI [channel state information] report." *Id.* at 1:40, 3:4–11. The CSI can include channel quality indicators ("CQI"), precoding matrix indicators ("PMI"), rank indicators, channel frequency, impulse response, and/or channel covariance matrix. *Id.* at 2:1–10. CSI reports may also include identification information concerning the component carrier or sub-band to which the CSI report relates. *Id.*

The UE of the '472 patent provides feedback on CSI using carrier aggregation. Ex. 1001, 1:41–47. Generally, carrier aggregation groups are multiple component carriers used to increase

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<sup>1</sup> Terminated by settlement. 1485 IPR, Paper 13.

the overall system bandwidth available to a UE. *Id.* at 1:54–61.

Figure 3 from the '472 patent is reproduced below.

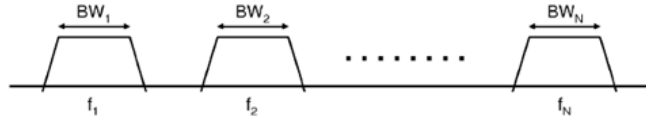


Fig. 3

Figure 3 shows an example of carrier aggregation. *Id.* at 2:57. Figure 3 further illustrates “component carrier aggregation (or channel bonding), where the total system bandwidth consists of [a] set of component carriers.” *Id.* at 1:56–57. In the example of Figure 3, carrier aggregation occurs with non-contiguous bands, in which “the total system bandwidth contains a set of component carriers  $BW_1$ ,  $BW_2$ , . . . ,  $BW_N$ , having carrier frequencies  $f_1$ ,  $f_2$ , . . . ,  $f_N$ .” *Id.* at 1:58–61.

The “ongoing standardization of LTE-Advanced in 3GPP” uses carrier aggregation to form bandwidths of up to 100MHz by aggregating up to five component carriers of 20 MHz each. Ex. 1001, 1:62–65. Using multiple component carriers leads to large CSI reports, resulting in high overhead which in turn limits uplink capacity. *Id.* at 2:20–22, 3:20–29. The '472 patent describes a solution where a request is made for an aperiodic channel information (e.g., CSI) report for a specific downlink (“DL”) component carrier, which may include “some coarse wideband CSI for other CCs.” *Id.* at 3:35–40. The UE sends CSI reports to the BS upon a request from the BS for a particular channel, thus greatly reducing the costs of reporting within the UE and BS system. *Id.* at 2:66–3:3, 3:30–34.

*C. Illustrative Claims*

Of the challenged claims, claims 1 and 28 are independent apparatus and method claims respectively. Claims 10, 11, and 14 depend directly or indirectly from claim 1 and claim 41 depends from claim 28. Claims 1 and 28 are reproduced below:

1. An apparatus comprising:

a receiver configured to receive a request for providing aperiodic channel information with respect to a selected downlink component carrier of a plurality of component carriers;

a processor configured to:

determine the selected downlink component carrier based on which component carrier of the plurality of component carriers carried the request for providing the aperiodic channel information; and

establish channel information with respect to the selected downlink component carrier; and

a sender configured to send the channel information with respect to the selected downlink component carrier.

Ex. 1001, 13:2–15.

28. A method comprising:

receiving a request for providing aperiodic channel information with respect to a selected downlink component carrier of a plurality of component carriers;

determining the selected downlink component carrier<sup>2</sup> based on which component carrier of the plurality of component carriers carried the request for providing the aperiodic channel information;

establishing channel information with respect to the selected downlink component carrier; and

sending the channel information with respect to the selected downlink component carrier.

*Id.* at 15:1–12.

#### *D. Asserted Ground of Unpatentability*

Petitioner challenges claims 1, 10, 11, 14, 28, and 41 of the '472 patent as obvious over Seo.<sup>3</sup> Pet. 4, 13–18, 18–39 (claim charts).

## II. ANALYSIS

### *A. Claim Construction*

In *inter partes* review, claim terms are given their broadest reasonable interpretation in light of the specification in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142 (2016). We presume that claim terms have their ordinary and customary meaning. *See Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1061–62 (Fed. Cir. 2016) (“Under a broadest

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<sup>2</sup> As issued, claim 1 contained a typographical error, where “component earner” should be “component carrier.” This error was corrected by Certificate of Correction. *See* Prelim. Resp. 11 (citing the file history of the '472 patent, Ex. 1002, 5).

<sup>3</sup> U.S. Patent No. 8,625,513 B2, to Dong Youn Seo, et al., PCT application filed Dec. 29, 2009 (“Seo,” Ex. 1004).

reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.”); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the Specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a special definition or other consideration, “limitations are not to be read into the claims from the specification.” *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). We need construe only those terms that are in dispute and require construction because their interpretation is at issue. *Vivid Techs. Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner argues constructions for various claim terms. Pet. 8–11. Patent Owner responds in its Preliminary Response but does not argue patentability of the ’472 patent based on the construction of any term identified by Petitioner. Prelim. Resp. 11–14; *see Vivid Techs. Inc.*, 200 F.3d at 803. Further, as discussed in detail below, we decline to institute trial on this Petition for reasons unrelated to claim construction. Accordingly, claim construction is not required to resolve this Petition.

*B. Obviousness Based on Seo*

*1. Non-Compliance with 37 C.F.R. §§ 42.22(a)(2) and 42.104(b)(4)–(5)*

Under 35 U.S.C. § 312(a)(3), a petition for *inter partes* review “may be considered only if . . . *the petition identifies*, in writing and

*with particularity*, each claim challenged, the grounds on which the challenge to each claim is based, and *the evidence that supports the grounds for the challenge to each claim*” (emphases added).

Additional Board rules further address the showing required in a petition. In particular, 37 C.F.R. § 42.104(b)(4) provides that “[t]he petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon” (emphasis added), and 37 C.F.R. § 42.104(b)(5) adds that a petition must “*identify[] specific portions of the evidence* that support the challenge” (emphasis added). “The Board may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions of the evidence that support the challenge.” 37 C.F.R. § 42.104(b)(5). Similarly, 37 C.F.R. § 42.22(a)(2) states that a petition “*must include . . . [a] full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence*” (emphases added).

The arguments in the Petition begin with an “Overview.” Pet. 13–18. The Overview section includes a discussion of Seo,<sup>4</sup> drawing broad comparisons between Seo and the ’472 patent. *Id.* For example, the Petition describes Seo as “like the ’472 patent.” *Id.* at

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<sup>4</sup> Petitioner cites Seo (Exhibit 1004), the published PCT application to which Seo claims priority (PCT/KR2009/007858, filed December 29, 2009, Exhibit 1005), and the English translation of the Seo Provisional (Provisional Application No. 61/141,211, filed December 29, 2008, Exhibit 1007). *See* Pet. 3–4 (regarding Petitioner’s allegation that Seo is prior art to the ’472 patent). Unless otherwise stated, for purposes of this Decision, we will refer to Seo only.



13. Similarly, Petitioner asserts Seo “identifies a similar problem as the ’472 patent” and “adopts a similar solution to this problem as the ’472 patent.” *Id.* at 14. No claim language is cited in the Overview section. Thus, the Overview section of the Petition does not “specify where each element of the claim is found in the prior art patents or printed publications relied upon.” 37 C.F.R. § 42.104(b)(4). Indeed, the Overview section does not include any claim language.

“Claim Charts” are the next, and last, section of the Petition upon which Petitioner’s case is based. Pet. 18–39. The format of the claim chart includes two columns, with the first column reproducing the limitations of the challenged claims and the second column including citations to Seo. *See, e.g., id.* at 18. For each limitation, the second column starts with “Seo discloses” followed by a summary or restatement of the limitation. *Id.* (“Seo discloses a user equipment (UE)”). Below the “Seo discloses” statement, the claim chart includes block quotes from Seo followed by a citation to Seo. *Id.* Sometimes the quotations from Seo include italicized language for emphasis. *See, e.g., id.* at 26–27.

There is no argument presented with the claim charts. The only reference made to them in the Petition is the statement that “[a]s further demonstrated in the claim charts that follow, Seo discloses each of the limitations of claims 1, 10, 11, 14, 28, and 41 of the ’472 patent.” *Id.* at 18. Thus, although claim charts are often a useful method of presenting evidence, Petitioner’s claim charts—without any accompanying argument or explanation—do not satisfy the requirement that a petition “must include . . . [a] full statement of the

reasons for the relief requested, *including a detailed explanation of the significance of the evidence.*” 37 C.F.R. § 42.22(a)(2) (emphasis added). The Petition does not explain in any detail *how* the claim limitations allegedly are disclosed by the block-quoted portions of Seo.

Petitioner’s evidence includes the Williams Declaration (Exhibit 1003), which Petitioner alleges “describes the scope and content of the prior art at the time of the alleged invention of the ’472 patent.” Pet. 12. However, the Williams Declaration does not help Petitioner meet its burden. Apart from case law citations, the Overview section of the Petition is replicated word for word in the Williams Declaration. *Compare* Pet. 13–18 *with* Williams Dec., 38–42. Likewise, the claim charts are reproduced identically. *Compare* Pet. 18–39 *with* Williams Dec., 42–63. Beyond what is discussed above, the Williams Declaration is not cited in the Petition nor does it include any explanation of the relevance of Seo to the claims. *See* 37 C.F.R. §§ 42.22(a)(2), 42.104(b)(4)–(5).

## *2. Insufficient Graham Analysis*

The Petition’s analysis of the alleged obviousness of claims 1, 10, 11, 14, 28, and 41 of the ’472 patent over Seo suffers from an additional legal deficiency. A patent claim is unpatentable as obvious under section 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.” 35 U.S.C. § 103(a);<sup>5</sup> *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The legal conclusion of obviousness is resolved on the basis of the following underlying factual determinations: (1) “the scope and content of the prior art,” (2) “differences between the prior art and the claims at issue,” (3) “the level of ordinary skill in the pertinent art,” and (4) any “secondary considerations,” or objective indicia, of nonobviousness. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966). These underlying factual determinations “must be considered by the trier of fact” in an obviousness analysis. *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998).

Petitioner’s position is that the challenged claims would have been obvious over Seo combined with the knowledge of a person of ordinary skill in the art. Pet. 16–18. More specifically, Petitioner alleges

to the extent that Seo does not explicitly disclose certain features of aperiodic channel quality indication for carrier aggregated networks together in a single embodiment (as may be required to find anticipation), *it would have been obvious to one of ordinary skill in the art to combine or substitute those known features and techniques with one another*, according to their known methods and functions, to yield the predictable result of establishing and sending channel information with respect to the determined selected downlink component carrier. (Williams Decl.

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<sup>5</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’472 patent has an effective filing date before the effective date of the applicable AIA amendment, we refer to the pre-AIA version of 35 U.S.C. § 103.

¶¶ 54–57 and 69.) The addition of the various disclosed techniques and options, often presented as examples and alternatives in the system for aperiodic channel quality indication, would have taken no more than ordinary skill to implement. (*Id.* ¶¶ 54–57 and 69.)<sup>6</sup>

*Id.* at 17 (emphasis added). The above quote is the only discussion of obviousness in the Petition and fails to identify specifically *any* differences between any claim of the '472 patent and Seo. The analysis does not explain with requisite particularity which claim limitations are absent from Seo and why those claim limitations would have been obvious. Therefore, the Petition fails to perform an adequate *Graham* analysis.

There is additional discussion in the Williams Declaration about obviousness, as cited in the above quotation. *See* Ex. 1003 ¶¶ 54–57, 69. However, the Williams Declaration suffers from the same failure to identify specific differences between the claims and Seo. For example, Dr. Williams testifies

each of the challenged claims of the '472 Patent would have been obvious to a person of ordinary skill in the art based on combinations of (a) the teachings of Seo, and (b) the knowledge of a person of ordinary skill in the art at the time of the alleged invention of the '472 patent. A person skilled in the art would combine these teachings of each embodiment in Seo because the embodiments all relate to aperiodic channel quality indication for carrier aggregated

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<sup>6</sup> Petitioner also cites *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 554 F.3d 982, 991 (Fed. Cir. 2009) and *Global Tel\*Link Corp. v. Securus Techs., Inc.*, IPR2014-00824, Paper 36 at 39 (Dec. 2, 2015) regarding combining two embodiments in a prior art patent. Pet. 17–18. How this principle relates to obviousness of the challenged claims is not explained nor does it remedy the noted deficiencies.

networks. That is, a person of ordinary skill in the art seeking to solve the problems identified in the '472 patent would, in my opinion, look to the embodiments described in Seo for teaching. The combination of the prior art elements in the embodiments of Seo, or substitution of one element for another, would require nothing more than the knowledge or common sense of a skilled artisan using known methods to yield predictable results in this field of technology.

Ex. 1003 ¶ 54. There is no discussion or analysis beyond the conclusory statement above as to what the difference is between Seo and the claims that would have been within the knowledge of the person of ordinary skill. As such, the testimony is conclusory without underlying facts or data about any difference between the claims and Seo. Thus, we decline to give the testimony any weight. *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.”)

Accordingly, for these additional reasons, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail in showing that claims 1, 10, 11, 14, 28, and 41 of the '472 patent would have been obvious over Seo. *See Apple Inc. v. SmartFlash LLC*, Case CBM2015-00029, slip op. at 16–18 (PTAB May 28, 2015) (Paper 11) (denying institution of an asserted obviousness ground based on Petitioner’s failure to explain adequately any differences between the asserted prior art and the claimed invention); *Liberty Mut. Ins. Co. v. Progressive Casualty Ins. Co.*, Case CBM2012-00003, slip op. at 3 (PTAB Oct. 25, 2012) (Paper 7)

(representative) (“A petitioner who does not state the differences between a challenged claim and the prior art, and relies instead on the Patent Owner and the Board to determine those differences . . . risks having the corresponding ground of obviousness not included for trial for failing to adequately state a claim for relief.”).<sup>7</sup>

### III. CONCLUSION

For all the reasons discussed above, the Petition fails to show there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. *See* 35 U.S.C. § 314(a).

### IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that institution of *inter partes* review is denied as to the challenged claims of U.S. Patent No. 8,867,472 B2.

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<sup>7</sup> We recognize that an *inter partes* review of the challenged claims of the '472 patent based on Seo was instituted in the 1480 IPR. 1480 IPR, Paper 7. The arguments and evidence presented in that proceeding were substantially different than this proceeding, however, such that the petitioner met its burden of demonstrating a reasonable likelihood of prevailing.

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