

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SERCOMM CORP.,
Petitioner,

v.

ATLAS GLOBAL TECHNOLOGIES, LLC,
Patent Owner.

IPR2022-01519
Patent 9,912,513 B2

Before JOSIAH C. COCKS, DAVID C. McKONE, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

COCKS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner, Sercomm Corp., filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–19 of U.S. Patent No. 9,912,513 (“the ’513 patent”). Patent Owner, Atlas Global Technologies, LLC, filed a Preliminary Response (Paper 16, “Prelim. Resp.”). As was authorized by the panel (Paper 19), Petitioner filed a Preliminary Reply (Paper 21, “Prelim. Reply”) to the Preliminary Response, and Patent Owner filed a Preliminary Sur-reply (Paper 22, “Prelim. Sur-reply”). We have authority under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition 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); *see also* 37 C.F.R. § 42.4(a) (“The Board institutes the trial on behalf of the Director.”).

Having considered the arguments and evidence presented in the Petition, for the reasons described below, we do not institute *inter partes* review.

A. Related Matters

Petitioner states that the ’513 patent is the subject of *Atlas Global Techs. LLC v. Sercomm Corp.*, Case No. 6:21-cv-00818-ADA (W.D. Tex.). Pet. 3. In addition to that case, Patent Owner identifies an additional nine district court actions arising in either the Eastern District or Western District of Texas as being related matters. Paper 4, 2.

B. The '513 Patent

The '513 patent is titled “System and Method for Synchronization for OFDMA Transmission.” Ex. 1001, code (54). The Abstract of the '513 patent reads in part as follows:

In an example of wireless communications, an access point may send a downlink frame to multiple stations. The downlink frame may include information of a cyclic prefix length to be utilized by the stations. In response, some or all of the stations may transmit their respective uplink frames to the access point. A cyclic prefix for a portion of each respective uplink frame may have a cyclic prefix length corresponding to the information included in the downlink frame. The downlink frame may be, for example, a beacon frame or a trigger frame. A trigger frame may allocate resources for uplink orthogonal frequency division multiple access (OFDMA) transmission.

Id. at code (57).¹

The '513 patent explains that as a part of a “Multi-user (MU) transmission in next generation WLAN” systems” “OFDMA technology is introduced to provide a multiple access scheme to improve network efficiency” and that such technology “allows multiple stations (STAs) to transmit frames simultaneously using non-overlapping frequency-time resources.” *Id.* at 2:29–39. The '513 patent also describes that such “resource[s]” may include “bandwidth, time/duration that the STAs expect to occupy a transmission medium, and/or possibly a number of spatial streams that the STAs may use.” *Id.* at 2:58–61. A “trigger frame may be utilized to facilitate maintaining of synchronization among the participating

¹ Petitioner’s declarant, Dr. Sumit Roy, testifies that a “cyclic prefix” constitutes copies of the tail end of an OFDM symbol for the purpose of preventing mutual interference between successive OFDM symbols. *See* Ex. 1003 ¶ 90.

stations for MU simultaneous transmission in OFDMS.” *Id.* at 2:43–46. A “trigger frame may include information for a guard interval (GI) duration and/or the fast Fourier transform (FFT) size to be used for at least some symbols of an UL frame.” *Id.* at 2:61–65.

C. Challenged Claims

Petitioner challenges claims 1–19 of the ’513 patent. Claims 1, 9, and 15 are independent claims. Claim 1 is representative and is reproduced below:

1. An apparatus for facilitating wireless communication, the apparatus comprising:
 - one or more memories; and
 - one or more processors coupled to the one or more memories, the one or more processors configured to cause:
 - receiving, in a trigger frame transmitted by an access point, an indication of a first guard interval length, wherein the trigger frame allocates one or more resources for an uplink (UL) multi-user (MU) transmission and solicits the UL MU transmission, wherein a value of the first guard interval length is to be used by each of a plurality of stations, including the apparatus, associated with the UL MU transmission,
 - generating an uplink frame for the UL MU transmission solicited by the trigger frame, wherein the uplink frame comprises a payload and a physical layer (PHY) header, and
 - transmitting the uplink frame using a resource allocated by the trigger frame to the apparatus,
 - wherein at least a portion of the payload of the uplink frame is associated with the first guard interval length.

Ex. 1001, 21:21–44.

D. Alleged Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–19	103	Chun, ² Lou, ³
1–19	103	Rong, ⁴ Chun

Pet. 7.

E. Testimonial Evidence

In support of its proposed grounds of unpatentability, Petitioner relies on the Declaration of Dr. Sumit Roy (Ex. 1003). In challenging those grounds, Patent Owner relies on the Declaration of Dr. Konstantinos Psounis (Ex. 2002).

II. ANALYSIS

A. Principles of Law

A petition must show how the construed claims are unpatentable under the statutory grounds it identifies. 37 C.F.R. § 42.104(b)(4). Petitioner bears the burden of demonstrating a reasonable likelihood that it would prevail with respect to at least one challenged claim for a petition to be granted. 35 U.S.C. § 314(a). Petitioner’s burden includes demonstrating that the evidence on which it relies constitutes prior art to the subject patent

² US Patent No. 10,034,288 B2 issued July 24, 2018 (“Chun,” Ex. 1004).

³ US Patent Application Publication No. 2013/0286959 A1 published Oct. 31, 2013 (“Lou,” Ex. 1006).

⁴ US Patent No. 10,135,652 B2 issued Nov. 20, 2018 (“Rong,” Ex. 1005).

that it challenges. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378–80 (Fed. Cir. 2015).

B. Level of Ordinary Skill in the Art

Petitioner presents the following assessment as to the level of skill in the art:

A person of ordinary skill in the art (“POSA”) at the time of the alleged invention would have a bachelor’s degree in electrical engineering, computer science, computer engineering, or a similar discipline, and either a master’s degree in one of these fields of study or a minimum of two years of experience working in the wireless communications industry. An individual with an advanced degree in a relevant field would require less experience in the design of wireless communication systems and methods.

Pet. 7–8 (citing Ex. 1003 ¶¶ 39–42).

Patent Owner provides the following assessment:

A person of ordinary skill in the art would have had: (a) at least an undergraduate degree in electrical engineering, computer science, or computer engineering, or an equivalent field; (b) knowledge of the IEEE 802.11 standard including its MAC and PHY protocols; and (c) at least two years’ experience in the development of wireless local area networks (WLANs). This description is approximate, and a higher level of education or skill might make up for less experience, and vice-versa.

Prelim. Resp. 4–5.

Although Patent Owner characterizes its assessment as “slightly different,” we do not discern that any differences are material. We also determine that this Decision on Institution resolves the same way under either assessment. Nevertheless, for completeness we adopt the level of ordinary skill in the art presented by Petitioner.

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) (2020); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

Neither party offers any specific construction for any claim term. *See* Pet. 7; Prelim. Resp. 11. For purposes of this Decision on Institution, we have given all claim terms their ordinary and customary meaning and determine that it is not necessary to make that meaning explicit for any term.

D. Whether Chun Qualifies as Prior Art to the ’513 Patent

Both of the grounds on which Petitioner relies include Chun as a basis for challenging the patentability of all nineteen claims of the ’513 patent. It is clear from the record that Chun’s status as prior art is in question. If Chun is not prior art then we conclude that Petitioner will not prevail on either of those grounds. Therefore, we turn first to the question of whether Petitioner has shown sufficiently that Chun is properly relied upon as prior art to the ’513 patent.

1. Summary of Chun’s Priority Claims and the Parties’ Positions

Chun issued as a patent on July 24, 2018 (Ex. 1004, code (45)), based on a PCT application filed on February 16, 2015 (*id.* at code (22)). There is no apparent dispute that the ’513 patent is entitled to a priority date in October 2014, which is well before the filing date of the above-noted PCT

application.⁵ Petitioner, however, seeks to rely on Chun on a theory that the reference is entitled to “a priority date of July 21, 2014,” based on the filing of two Korean provisional applications.⁶ In Petitioner’s view “all disclosures from Chun relied on in [the] petition are supported in those provisional applications.” Pet. 8. In apparent support of that view, Petitioner includes a table including content of Chun on which it relies and “corresponding provisional citation” to each of Exhibits 1011 and 1012. *Id.* at 9–10. Thus, Petitioner contends that Chun is prior art to the ’513 patent. *Id.* at 8; Prelim. Reply 5.

Patent Owner disagrees that Chun is prior art to the ’513 patent. Citing to *Dynamic Drinkware*, Patent Owner contends that “Chun is only prior art if, *inter alia*, all of the disclosures relied upon in the Petition are

⁵ For purposes of this proceeding, Petitioner identifies a priority date for the ’513 patent as “October 8, 2014.” Pet. 5–6. Patent Owner characterizes the priority date as “October 22, 2014.” Prelim. Resp. 11. Although there is some disparity between the parties as to the actual priority date in October 2014 (i.e., “8” versus “22”), the parties appear to be in accord that the date is sometime in October 2014. Based on our review, we discern that the ’513 patent claims priority to a provisional application filed on October 8, 2014. *See* Ex. 1001, code (60). Nevertheless, the actual date in October 2014 is immaterial to our inquiry as to whether Chun is properly regarded as prior art to the ’513 patent.

⁶ Petitioner notes that the two provisional applications “were originally written in Korean.” Pet. 8 (citing Exs. 1009, 1010). Petitioner, however, contends that it provides “English translations along with certifying affidavits pursuant to 37 C.F.R. § 42.63(b).” *Id.* (citing Exs. 1011–1014). Exhibit 1011 is an English translation of one Korean provisional application with a filing date of July 21, 2014. Exhibit 1012 is an English translation of another Korean provisional application with a filing date of March 3, 2014. As do the parties, in this Decision, we focus on Exhibits 1011 and 1012 and, at times, refer to them collectively as “the Korean provisionals.”

supported by Chun’s provisional applications.” Prelim. Resp. 11. Patent Owner focuses its challenge on content of Chun at column 12, lines 45–57, on which the Petition is said to rely “heavily.” *Id.* at 12. Patent Owner notes that Petitioner identifies certain support in the Korean provisionals for that content in Chun at column 12. Prelim. Resp. 12 (noting the Petition’s reference at page 10 of the Petition to Exhibit 1011, pages 10–12, and Exhibit 1012, pages 10–11). In particular, Patent Owner contends that Petitioner relies extensively on the pertinent passage of claim 12 for the proposition that “Chun’s AP [access point] transmits an uplink indication frame containing the guard interval to be used by the STAs for subsequent uplink multi-user transmissions,” but that “nothing in Chun’s provisional applications comes close to supporting that.” Prelim. Resp. 12. Reasoning that “[n]either provisional application supports the disclosure at Chun 12:45–57” (Prelim. Resp. at 13, citing Ex. 2001 ¶¶ 53–55), Patent Owner concludes the following:

Thus, Petitioner has not met its burden to prove that Chun is prior art. *See Intex Recreation Corp. Team Worldwide Corp.*, IPR2018-00859, Paper 128 at 26 (P.T.A.B Oct. 12, 2019) (“Petitioner must demonstrate that the subject matter in Chaffee relied upon by Petitioner in its unpatentability contention is sufficiently supported in the Chaffee ’836 provisional, this test being in addition to the comparison of claimed subject matter required by *Dynamic Drinkware*.”) (citing *In re Giacomini*, 612 F.3d 1380, 1383 (Fed. Cir. 2010)).

Id.; *see also* Prelim. Sur-Reply 5 (“Petitioner has the initial burden of producing evidence supporting its claim that Chun ’288 is prior art . . . Petition has not satisfied that initial burden[.]”).

2. Discussion

At the outset, we note that the issue of whether Chun is properly regarded as prior art to the '513 patent has now been assessed by the parties as a part of each of the Petition, Patent Owner's Preliminary Response, Petitioner's Reply, and Patent Owner's Sur-Reply. We further note that Petitioner's Reply was authorized primarily under the representation from Petitioner during a February 2, 2023, conference call that "translation" issues were the culprit underlying Patent Owner's challenge to Chun as prior art. *See* Paper 19, 2. In reviewing Petitioner's Reply, however, we do not discern that any matters pertaining to inadequate or inaccurate translation of the Korean provisionals emerge. Rather, Petitioner uses its Reply in an attempt to bolster the positions taken in the Petition as to Chun's prior art status and also to respond on the merits to arguments offered by Patent Owner on the matter in its Preliminary Response. Petitioner, thus, has had ample opportunity to make its case, and we view this matter as ripe for determination based on the record currently before us.⁷

Chun is titled "Method and Apparatus for Transmitting Frame in Wireless Lan." Ex. 1004, code (54). Column 12, lines 45–57 of Chun is reproduced below:

In the non-legacy PPDU^[8] disclosed in FIG. 6, the total symbol duration (T_{SYML_HE}) or the duration of the guard interval

⁷ To the extent that Petitioner's contention that "[e]ven if [Patent Owner's] argument" on the issue of Chun's prior art status "has any merit . . . [Petitioner's] showing is sufficient at this stage" (*see* Prelim. Reply, 5) constitutes an assertion that the matter is not ready for resolution at this time, we disagree.

⁸ "PPDU" stands for "physical layer protocol data unit." *See* Ex. 1004, 20:10–11.

(GI) ($T_{GIS\ HE}$ or $T_{GI\ HE}$) may be changed, and such information may be transmitted by the AP. For example, the AP may transmit the information on the total symbol duration or the guard interval as the system information to the STA through a beacon frame or probe response frame, and so on. The STA may perform decoding on the PPDU based on the received information on the total symbol duration and/or the information on the duration of the guard interval. The AP or STA may vary the total symbol duration and/or guard interval duration that is used in the PPDU. More specifically, the PPDU is configurable.

Ex. 1004, 12:45–57.

The above-reproduced passage describes, in-part, that an access point (AP) may transmit information pertaining to a guard interval⁹ to a station (STA) through a beacon or probe response frame, and that the station may then vary the guard interval duration. Both parties express that the above-noted disclosure in Chun forms a substantial and integral basis of Petitioner’s unpatentability challenges. *See, e.g.*, Prelim. Reply 3; Prelim. Sur-Reply 2. Indeed, in reviewing the Petition, we discern that the noted passage is cited or relied on upon numerous times (at least twelve, by our count) in the Petition as a part of Petitioner’s unpatentability assertion of each of independent claims 1, 9, and 15 in connection with both proposed grounds.

Petitioner contends that the Korean provisionals provide support for the above-noted passage through the combination of three pages of one of those provisional applications (Exhibit 1011, 10–12) taken with two pages of

⁹ Petitioner’s declarant, Dr. Roy, testifies that a “guard interval represents a duration of time that is used to ensure that distinct symbol transmissions do not interfere with each other or cause overlapping transmissions.” *See* Ex. 1003 ¶ 90; *see also* Prelim. Sur-Reply, 2 (“a guard interval” is “the interval between symbols within the same frame”) (emphasis omitted).

the other (Exhibit 1012, 10–11). *See* Pet. 10. More specifically, according to Petitioner, the Korean provisionals describe the following:

PPDUs “**could use different [cyclic prefixes],**” that the “frame structure” could “follow . . . **a new configuration,**” and that the “length of the **UL MU frame transmitted by each STA may vary**” and “their length **may be adjusted with zero padding, etc.**”

Prelim. Reply 4–5 (citing Ex. 1011, 10, 11; Ex. 1012, 10).

Petitioner goes on to argue the following:

The record support that the concepts of using different cyclic prefixes or adjusting “zero padding” lengths would be understood by the POSA¹⁰ as ways to adjust the duration of length of a “guard interval.” *See, e.g.,* SER-1003 ¶ 90 (“A POSA would have recognized that the size of the CP and FFT length directly relates to the guard interval.”), ¶ 133 (discussing “CP length” and the use of “padding bits” in relation to guard interval duration; *see also id.* ¶¶ 115, 118, 126, 160, 183, 232. Even though the translations do not use the phrase “guard interval,” the law is clear that “[t]he claimed subject matter need not be described ‘*in haec verba*’ in the original disclosure to satisfy the written description requirement,” and the analysis must be from the perspective of the POSA. *Unified Patents, Inc. v. Longhorn HD LLC*, IPR2020-00879, Paper 10, at 17–18 (P.T.A.B. Nov. 12, 2020 (citing *In re Wright*, 866 F.2d 422, 425 (Fed. Circ. 1989)).

Id. at 5.

Thus, we understand that Petitioner’s argument, in-part, is that a person of ordinary skill in the art would have recognized that the disclosure in the Korean provisionals as to “cyclic prefixes” “directly relates” to “guard intervals,” even though the Korean provisionals do not refer to “guard intervals.” We note, however, that Petitioner does not appear to assert that “cyclic prefixes” are synonymous with “guard intervals.” Indeed, testimony

¹⁰ We understand “POSA” to refer to a “person of ordinary skill in the art.”

of Petitioner's declarant, Dr. Roy, that is referenced above by Petitioner conveys particularly that "[t]here is a difference between a guard interval and a cyclic prefix." *See* Ex. 1003 ¶ 90. In our view, the record does not support an argument that "cyclic prefixes" and "guard intervals" are co-extensive.

Nevertheless, even were we to accept Petitioner's arguments that "cyclic prefixes" are understood to directly relate to "guard intervals," we note that Petitioner does not appear to fully address Patent Owner's arguments as to proposed deficiencies in the Korean provisionals in supporting the disclosure of Chun's column 12, lines 45–57. In particular, Patent Owner focuses on a lack of support in the Korean provisionals for disclosure as to the transmission of a guard interval by an access point to multiple stations, which then use that guard interval duration for subsequent transmissions. *See, e.g.*, Prelim. Resp. 12–13; *see also* Sur-Reply 2 ("the concept of the AP transmitting a guard interval in a frame to the STAs is only disclosed in Chun '288 at 12:45–57, and the complete lack of provisional support disqualifies Chun as prior art."); *id.* ("Petitioner cites nothing else which could teach an AP configuring guard intervals for STAs."); *id.* at 3 ("the Chun provisionals never address the AP identifying guard intervals and transmitting them to the STAs (or anything resembling the concept).").

Patent Owner explains that the portions of the Korean provisionals to which Petitioner directs attention are only general in nature, lacking necessary specificity or description of the disclosure that ultimately appears in the relevant passage of column 12 in Chun. *See, e.g.*, Prelim. Resp. 11–13; Sur-Reply 3–4. In that regard, Patent Owner presents credible argument

that the descriptions in the Korean provisionals referenced by Petitioner, provide only general references to different cyclic prefix (CP) lengths, and general description that the entirety of an “ML MU frame” may be varied. Prelim. Sur-Reply 3–4. Patent Owner explains that such general description is lacking in providing support for the critical content of Chun’s column 12 on which Petitioner relies. More specifically, Patent Owner sets forth the following:

As Dr. Psounis explained, SER-1011 and SER-1012 never discuss how any different CP values would be structured or communicated. *See* ATL-2002 ¶¶53–55. Suggesting that the length of the UL MU frame may vary would provide no suggestion that the guard interval specifically should be varied (let alone how it should be varied). These disclosures also do not support, *inter alia*, (1) “the AP [] transmit[ting] the information on the total symbol duration or the guard interval as the system information to the STA through a beacon frame or probe response frame”; (2) “decoding on the PPDU based on the received information on the total symbol duration and/or the information on the duration of the guard interval”; or (3) “vary[ing] the total symbol duration and/or guard interval duration that is used in the PPDU.” *See* SER-1004 at 12:45–57.

Id.

We find the above-noted arguments persuasive. They account for what is actually set forth in the Korean provisionals, are supported by the testimony of Dr. Psounis, and are unaddressed by Petitioner.

Patent Owner also notes that Petitioner, in its Preliminary Reply at page 5, advances an “alternate theory” that “the concepts of using different cyclic prefixes or adjusting ‘zero padding’ lengths would both be understood by the POSA as ways to adjust the duration or length of a ‘guard interval.’” Prelim. Sur-reply 5 (quoting Reply 5). Patent Owner, however characterizes that theory as merely “conclusory” and lacking “evidentiary support.” *Id.*

On this record, we agree. In so agreeing, we note that the purported supporting evidence offered by Petitioner is eight disparate paragraphs of Dr. Roy's testimony for which Petitioner does not provide adequate explanation as to their particular relevance for the theory that Petitioner proposes. *See* Reply 5 (citing Ex. 1003 ¶¶ 90, 133, 115, 118, 126, 160, 183, 232).

We note that in arguing for Chun as prior art, Petitioner also references additional disclosures of Chun (6:21–24, 8:1–11, 8:22–45, and 10:52–54) that are cited in the Petition at pages 21–22, which Petitioner contends were further offered to meet some “claim requirement.” Prelim. Sur-reply 3. Petitioner, however, does not provide any adequate or meaningfully explanation as to why that additional content is relevant or somehow operates as a substitute for the disclosure of Chun at column 12, lines 45–57. In particular, Petitioner does not state, or even imply, that any additional disclosure of Chun means that the Petition does not critically rely on Chun's disclosure at column 12 lines 45–57, to account for numerous aspects of the claims of the '513 patent. We also note Patent Owner's observation that “Petitioner makes no attempt to explain how those cited sections relate to transmitting *guard intervals*.” Prelim. Sur-reply 2. That observation, in our view, is accurate.

Lastly, we note that Petitioner, in its Preliminary Reply, draws parallels between Figure 6 of Chun illustrating a PPDU and a similar figure within one of the Korean provisionals (Ex. 1011). Prelim. Reply 3–4. According to Petitioner, because of those similarities, and description in Chun “surrounding this figure,” Chun's disclosure at column 12, lines 45–57 is adequately supported in the Korean provisionals. *Id.* at 4–5. As Patent

Owner notes, however, neither figure shows a guard interval. Prelim. Sur-reply 2–3. We also agree with Patent Owner that Petitioner does not adequately explain why the similarity of the figures and any accompanying description “surrounding” the figure in Chun addresses the deficiencies raised by Patent Owner (and discussed above), as to any support in the Korean provisionals for the disclosure in Chun at column 12, lines 45–57. *See id.*

3. Determination

We have considered the parties respective positions on the matter of Chun’s prior art status, including the parties’ briefings as a part of each of the Petition, Patent Owner’s Preliminary Response, Petitioner’s Preliminary Reply, and Patent Owner’s Preliminary Sur-Reply. For the reasons discussed above, we agree with Patent Owner that, because Petitioner has not shown that the critical disclosure of Chun at column 12, lines 45–57 finds support in the Korean provisionals, “Petitioner has not met its burden to prove that Chun is prior art” to the ’513 patent as is required by the law. *See* Prelim. Resp. 13.

III. CONCLUSION

Because Chun is required by both grounds of unpatentability proposed by Petitioner, but has not been shown by Petitioner to be prior art, we determine that Petitioner has not shown a reasonable likelihood of success that it will prevail with respect to at least 1 of the claims challenged in the petition.

IV. ORDER

In consideration of the foregoing, it is

ORDERED that Petitioner's request for an *inter partes* review of claims 1–19 of the '513 patent is *denied* and no trial is instituted.

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