Trials@uspto.gov
571-272-7822

Paper 16
Entered: October 8, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC, LG ELECTRONICS, INC., AND
LG ELECTRONICS U.S.A., INC.,
Petitioner,

v.

JENAM TECH, LLC,
Patent Owner.

IPR2020-00845
Patent 9,923,995 B1

Before DANIEL J. GALLIGAN, SCOTT B. HOWARD, and JASON M. REPKO, *Administrative Patent Judges.*

GALLIGAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Google LLC, LG Electronics, Inc., and LG Electronics U.S.A., Inc. ("Petitioner") filed a Petition requesting *inter partes* review of claims 1–24 of U.S. Patent No. 9,923,995 B1 ("the '995 patent," Ex. 1001). Paper 3 ("Pet."). Jenam Tech, LLC ("Patent Owner") filed a Preliminary Response. Paper 8 ("Prelim. Resp."). With our authorization, Petitioner filed a Reply addressing 35 U.S.C. § 325(d). Paper 13 ("Reply").

Under 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review. The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless the information presented in the Petition and the Preliminary Response shows "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

For the reasons explained below, we institute an *inter partes* review as to all challenged claims and on all grounds raised in the Petition.

B. Related Matters

As required by 37 C.F.R. § 42.8(b)(2), the parties identify various related matters. Pet. 77; Paper 5, 1. A different petitioner (Unified Patents, LLC) has challenged claims of the '995 patent in IPR2020-00742.

C. Real Parties in Interest

Petitioner identifies the following real parties in interest: LG Electronics, Inc., LG Electronics U.S.A., Google LLC, Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc. Pet. 76. Patent Owner identifies itself as the real party in interest. Paper 5, 1.

D. The '995 Patent and Illustrative Claim

The '995 patent states that some transmission control protocol (TCP) implementations support a keep-alive option, but the '995 patent states that "[e]ach node supports or does not support keep-alive for a TCP connection based on each node's requirements without consideration for the other node in the TCP connection." Ex. 1001, 1:43–45, 1:53–56. According to the '995 patent, "[t]o date no mechanism to allow two TCP connection endpoints to cooperate in supporting the keep-alive option has been proposed or implemented." Ex. 1001, 2:14–17. Thus, the '995 patent states that "there exists a need for methods, systems, and computer program products for sharing information for detecting an idle TCP connection." Ex. 1001, 2:21–23.

Claim 1 is illustrative and is reproduced below.

> 1. An apparatus comprising:
> a non-transitory memory storing instructions; and
> one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions for:
> receiving, by a second node from a first node, a transmission control protocol (TCP)-variant packet in advance of a TCP-variant connection being established;
> detecting an idle time period parameter field in the TCP-variant packet;
> identifying metadata in the idle time period parameter field for an idle time period and, during which, no packet is communicated in the TCP-variant connection to keep the TCP-variant connection active; and
> modifying, by the second node and based on the metadata, a timeout attribute associated with the TCP-variant connection.

E. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–24 of the '995 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. §[1]	Reference(s)/Basis
1–24	103	Eggert[2]
1–24	103	Eggert, Hankinson[3]
16	103	Eggert, Hankinson, RFC 1122[4]

II. ANALYSIS

A. Discretionary Denial

1. 35 U.S.C. § 314(a)

Patent Owner argues that, in view of the petition in IPR2020-00742, the factors set forth in the Board's precedential decision in *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (designated precedential in relevant part) favor denying institution in this proceeding. Prelim. Resp. 16–28. *General Plastic* sets forth a series of factors to be considered by the Board in

[1] The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. §§ 102 and 103 that became effective March 16, 2013. The application for the '995 patent was filed on September 3, 2017. Although the '995 patent claims priority to applications filed before March 16, 2013, Patent Owner has not shown that the written description of the earlier applications supports the challenged claims. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378–79 (Fed. Cir. 2015); *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008). Therefore, we apply the post-AIA versions of 35 U.S.C. §§ 102 and 103.
[2] L. Eggert, "TCP Abort Timeout Option," Apr. 14, 2004 (Ex. 1004).
[3] Hankinson, EP 1 242 882 B1, published Apr. 20, 2005 (Ex. 1005).
[4] RFC 1122, "Requirements for Internet Hosts - - Communication Layers," Oct. 1989 (Ex. 1007).

evaluating whether to exercise discretion under 35 U.S.C. § 314(a) to deny a petition that challenges a patent that was previously challenged before the Board. *General Plastic*, Paper 19 at 15–16. These factors are as follows:

> 1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
>
> 2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
>
> 3. whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
>
> 4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
>
> 5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
>
> 6. the finite resources of the Board; and
>
> 7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

Id. at 16. These factors are "a non-exhaustive list," and "additional factors may arise in other cases for consideration, where appropriate." *Id.* at 16, 18.

General Plastic addressed the situation where the same petitioner filed "follow-on petitions" against the same patents, after a first set of petitions was denied on the merits. *General Plastic*, Paper 19 at 2–3. There was no prior petition challenging the '995 patent filed by Petitioner Google LLC, LG Electronics, Inc., and LG Electronics U.S.A. The petition in IPR2020-00742 was filed by Unified Patents, LLC. We recognize, however, that *General Plastic* has not been limited to instances where multiple

petitions are filed by the same petitioner. *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 (PTAB Apr. 2, 2019) (precedential). Thus, we consider the petition in IPR2020-00742 in determining whether to exercise discretion to deny in this proceeding.

In *Valve Corporation*, the Board, evaluating the first *General Plastic* factor, considered the "significant relationship" between the two different parties filing the petitions, among other factors. *Valve*, Paper 11 at 10. In particular, the Board noted that "Valve and HTC were co-defendants in the District Court litigation and were accused of infringing the [challenged] patent based on HTC's VIVE devices that incorporate technology licensed from Valve." *Id.* The Board determined that "[t]he complete overlap in the challenged claims and the significant relationship between Valve and HTC favor denying institution." *Id.*

Patent Owner argues that Petitioner "Google is a member of Unified's membership program," which, according to Patent Owner, means that Google and Unified "have a preexisting, 'significant relationship'" that favors denial. Prelim. Resp. 20; *see* Prelim. Resp. 18–20 (discussing Unified's membership program and *Valve*). Although Google is a member of Unified's membership program (*see* Ex. 2006, 2), under the particular circumstances of this case, we do not find discretionary denial is warranted in light of the *General Plastic* factors.

General Plastic's first factor is concerned with a "petition directed to the *same claims* of the same patent" as a previously-filed petition. *General Plastic*, Paper 19 at 16 (emphasis added). In this case, Petitioner challenges claims that are not challenged in the petition in IPR2020-00742, namely

claims 8, 9, 11, 13, 21, 23, and 24.[5] Thus, this case is unlike *Valve*, in which there was a "complete overlap in the challenged claims." *Valve*, Paper 11 at 10.

Under the second *General Plastic* factor, we consider "whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it." *General Plastic*, Paper 19 at 16. Patent Owner argues that Google knew or should have known of Eggert before the petition in IPR2020-00742 was filed. Prelim. Resp. 20–23. We do not see any such prior knowledge of Eggert as favoring denial in this case. Petitioner filed this Petition on April 17, 2020, only 16 days after the petition in IPR2020-00742 was filed. Paper 4 (Notice of Filing Date Accorded); IPR2020-00742, Paper 3 (Notice of Filing Date Accorded). Thus, it is likely that Petitioner did know of Eggert prior to the filing of the petition in IPR2020-00742, but this highlights the difference between the case here and that in *General Plastic*. This is not a situation where Petitioner waited to gain a tactical advantage by, for example, filing the Petition after Patent Owner filed a preliminary response in IPR2020-00742. *See General Plastic*, Paper 19 at 16 (third factor ("whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition")).

As to the fourth and fifth *General Plastic* factors—"the length of time that elapsed between the time the petitioner learned of the prior art asserted

[5] We note that in the district court proceeding, Patent Owner has not yet limited the claims that it will be asserting. *Jenam Tech, LLC v. Google LLC*, Civ. Action No. 6:20-cv-00453-ADA, Dkt. Entry 35 (W.D. Tex. Aug 28, 2020) (extending time for Patent Owner to limit the asserted claims).

in the second petition and the filing of the second petition" and "whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent"—Patent Owner argues that, based on Google's membership in the Internet Engineering Task Force (IETF) and based on other evidence, Google "would have been aware of *Eggert*, or should have been, for at least 10 years before filing this Petition—a significant period of time." Prelim. Resp. 25. Patent Owner also argues that "the time between the respective filing dates of the '742 petition and this Petition does not offset the decade-plus period of time between the filing of the Petition and when Google first learned of the alleged prior art" nor the time between the filing of the infringement lawsuit against LG—April 2019—and the filing date of the Petition. Prelim. Resp. 25.

As to Google's alleged ten years of knowledge of Eggert, the '995 patent issued March 20, 2018, and an *inter partes* review petition challenging it only could have been filed after "the date that is 9 months after the grant of a patent," which would have been December 21, 2018. 35 U.S.C. § 311(c)(1). Thus, we do not agree that Petitioner needed to account for a "decade-plus period of time." *See* Prelim. Resp. 25. As to the filing of the litigation involving the '995 patent, Petitioner speaks directly to this and states the following:

> Jenam filed the related litigations against Samsung and LG on April 3, 2019. E[x.]1008. Jenam asserted two patents, each containing 30 claims, but only identified one claim from each respective patent as infringed in its complaint. Eight months passed after the filing of the complaint before Jenam identified its asserted claims (nearly every claim in each patent), served infringement contentions, and revealed its infringement theory. E[x.]1049. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11,

> 11 (Mar. 20, 2020) (noting that "it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it in the parallel proceeding"). On February 12, Defendants sought agreement from Jenam to an early claim narrowing. Jenam refused to agree to narrow its asserted claims until July, at the earliest.

Pet. 74. Patent Owner does not dispute Petitioner's characterization of the events in the related litigation. *See generally* Prelim. Resp. Under the circumstances here, particularly the lapse in time between Patent Owner's filing of the complaint for infringement and its identification of asserted claims, we do not view Petitioner's filing of the Petition as unduly belated in general, and as related to the fourth and fifth *General Plastic* factors, we do not see 16 days between petitions as warranting denial.

Finally, we do not see the sixth *General Plastic* factor ("the finite resources of the Board") or the seventh *General Plastic* factor ("the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review") as weighing against institution here.

Patent Owner also argues that "the November 2019 Consolidated Trial Practice Guide states that petitioners that file multiple petitions against the same patent must submit" a ranking of the petitions and an explanation of the differences. Prelim. Resp. 27–28 (citing Consolidated Trial Practice Guide (Nov. 2019), 59–60). Patent Owner argues that this is a "procedural defect" that supports denial. Prelim. Resp. 28. Patent Owner misreads the Consolidated Trial Practice Guide, which states that, "if a petitioner files two or more petitions challenging the same patent, then the petitioner should" provide the ranking and explanation to which Patent Owner refers. Consolidated Trial Practice Guide (Nov. 2019), 59–60. Thus, this is

guidance for a party that files two petitions. Petitioner did not file the earlier petition and, therefore, was not required to provide this information.

Therefore, weighing all of the *General Plastic* factors and considering the relationship of Petitioner to Unified, as required by *Valve*, we decline to exercise discretion to deny the petition.

2. 35 U.S.C. § 325(d)

Section 325(d) provides that the Director may elect not to institute[6] a proceeding if the challenge to the patent is based on matters previously presented to the Office. 35 U.S.C. § 325(d) states, in pertinent part, "[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31, the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office." We use the following two-part framework in determining whether to exercise our discretion under § 325(d):

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6, 8 (PTAB Feb. 13, 2020) (precedential).

In applying the two-part framework, we consider the following non-exclusive factors:

> (a) the similarities and material differences between the asserted art and the prior art involved during examination;

[6] The Board institutes trial on behalf of the Director. 37 C.F.R. § 42.4(a).

> (b) the cumulative nature of the asserted art and the prior art evaluated during examination;
>
> (c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;
>
> (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;
>
> (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and
>
> (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8, 17–18 (Dec. 15, 2017) (precedential as to § III.C.5, first paragraph) ("*Becton*, *Dickinson*"). If, after review of factors (a), (b), and (d), we determine that the same or substantially the same art or arguments previously were presented to the Office, then we consider factors (c), (e), and (f), which relate to whether the petitioner demonstrates that the Office erred in a manner material to the patentability of the challenged claims. *Advanced Bionics*, Paper 6 at 10.

Patent Owner argues that the Petition should be denied under § 325(d) based on the disclosure of a reference (RFC 5482[7]) in an Information Disclosure Statement (IDS) during prosecution (Prelim. Resp. 29–34) and based on the art and arguments submitted in IPR2020-00742 (Prelim. Resp. 34–38). We address the latter issue first.

a) IPR2020-00742

Patent Owner argues that Petitioner fails to show that its "prior art and arguments in this proceeding are not cumulative of prior art or arguments

[7] RFC 5482, "TCP User Timeout Option," Mar. 2009 (Ex. 1014).

previously presented to the Office" in IPR2020-00742 and that any "error occurred on the consideration of any of these references." Prelim. Resp. 36, 38. We agree with Patent Owner that art and arguments presented in previous *inter partes* reviews can be the basis for denial under § 325(d). *See* Prelim. Resp. 34; *see also Advanced Bionics*, Paper 6 at 8 ("The proceedings in which the art was previously presented include, for example. . . AIA post-grant proceedings involving the challenged patent."). We do not agree, however, that denial under § 325(d) is warranted based on the petition in IPR2020-00742 because that petition was filed only 16 days before the present Petition (*see* above § II.A.1), and, therefore, the Office is considering these petitions effectively simultaneously. Indeed, we are issuing an institution decision in that proceeding concurrently with this Decision. Thus, because we have not previously set forth any evaluation of the art and arguments presented in IPR2020-00742, Petitioner has no way to "show[] that the Office erred in evaluating the art or arguments." *See Advanced Bionics*, Paper 6 at 8.

For the foregoing reasons, we decline to deny under § 325(d) based on the petition in IPR2020-00742.

b) RFC 5482

Patent Owner argues that Petitioner's prior art, specifically Eggert, and arguments are substantially similar to what the Office previously considered during prosecution based on the identification of RFC 5482 in an IDS. Prelim. Resp. 29–32. Patent Owner argues that Petitioner has not shown a material error by the Office in considering RFC 5482. Prelim. Resp. 32–34.

RFC 5482 qualifies as art previously presented to the Office because it was identified by the applicant for the '995 patent in an IDS. Ex. 1002,

247; *see also* Pet. 69 (acknowledging that RFC 5482 was cited in an IDS); *Advanced Bionics*, Paper 6 at 7–8 ("Previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS), in the prosecution history of the challenged patent.").

As *Advanced Bionics* explains, 35 U.S.C. § 325(d) presents two separate issues to consider in exercising discretion to deny institution: "whether the petition presents to the Office the same or substantially the same art previously presented to the Office, or whether the petition presents to the Office the same or substantially the same arguments previously presented to the Office." *Advanced Bionics*, Paper 6 at 7. Although Patent Owner asserts that Petitioner's arguments *and* art are substantially similar to those previously considered (*see* Prelim. Resp. 29 (Title of § VII.B.1.a)), Patent Owner's arguments are directed to the question of whether the same or substantially the same art was previously presented to the Office (*see* Prelim. Resp. 29–32). The applicant cited RFC 5482 along with a number of other references in an IDS during prosecution, but we see no argument presented to the Office during prosecution based on RFC 5482. Ex. 1002, 245–248. Thus, we focus on the question of whether Eggert is the same or substantially the same art as RFC 5482.

As *Advanced Bionics* explains, we evaluate *Becton, Dickinson* factors (a), (b), and (d) to determine whether the same or substantially the same art previously was presented to the Office. *Advanced Bionics*, Paper 6 at 10. We focus on factors (a) and (b) because, as noted above, there was no argument presented to the Office based on RFC 5482. *See Becton, Dickinson*, Paper 8 at 17–18 (setting forth factor "(d) the extent of the overlap between the arguments made during examination and the manner in

which Petitioner relies on the prior art or Patent Owner distinguishes the prior art"). Thus, we evaluate "(a) the similarities and material differences between the asserted art and the prior art involved during examination" and "(b) the cumulative nature of the asserted art and the prior art evaluated during examination." *Becton, Dickinson*, Paper 8 at 17.

There is no dispute that there are similarities between the disclosures of RFC 5482 and Eggert. Indeed, both documents disclose timeout options for TCP. RFC 5482 "specifies a new TCP option -- the TCP User Timeout Option [(UTO)] -- that allows one end of a TCP connection to advertise its current user timeout value. This information provides advice to the other end of the TCP connection to adapt its user timeout accordingly." Ex. 1014, 1 (Abstract). Eggert "specifies a new TCP option - the Abort Timeout Option - that allows conforming hosts to negotiate per-connection abort timeouts. This allows mobile hosts to maintain TCP connections across disconnected periods that are longer than their system's default abort timeout." Ex. 1004, 3.

To distinguish Eggert and RFC 5482, Petitioner cites RFC 5482's disclosure that "an exchange of UTO options between both ends of a connection is not a binding negotiation" (Ex. 1014, 4), and Petitioner argues that "Eggert's protocol is fundamentally different from RFC 5482 because, in contrast with RFC 5482, Eggert's protocol calls for a common negotiated value for the timeout." Pet. 70. Patent Owner argues, however, that this is not a meaningful distinction because the claims do not require a binding negotiation. Prelim. Resp. 30.

We find this to be a material difference between the references given the subject matter to which the '995 patent is directed. According to Patent Owner, "[t]he '995 patent describes that, at the time of invention, a problem

existed in related information-sharing technologies; there was no mechanism to allow two TCP connection endpoints or nodes to cooperate in supporting the keep-alive option." Prelim. Resp. 6 (citing Ex. 1001, 2:14–16). The '995 patent states the following: "To date no mechanism to allow two TCP connection endpoints to cooperate in supporting the keep-alive option has been proposed or implemented. The broader issue of enabling cooperation and negotiation between nodes in a TCP connection in detecting and managing idle, underactive, and/or dead TCP connections remains unaddressed." Ex. 1001, 2:14–20. Thus, the '995 patent represents that a problem in the prior art was a lack of cooperation *and* negotiation. Certain of the challenged claims expressly require "negotiation" between nodes. *See* Ex. 1001, claims 10, 13, 20, and 23.

Both RFC 5482 and Eggert disclose the sharing of timeout information during connection setup. Ex. 1004, 3; Ex. 1014, 5. Importantly, Eggert discloses a timeout negotiation between nodes: "This specification allows both the initiator of a TCP connection (i.e., the node sending the SYN) as well as the responder of a TCP connection (i.e., the node receiving the SYN) to initiate an abort timeout negotiation during the connection's three-way handshake. Figure 2 illustrates the two allowed exchanges." Ex. 1004, 5; *see also* Ex. 1004, 5–7 (§ 2.1) (discussing the abort timeout negotiation). Petitioner argues that Eggert's section 2.1, which discloses the abort timeout negotiation," is a "meaningful disclosure[] that do[es] not appear in RFC 5482." Pet. 70. Patent Owner argues that RFC 5482 "disclose[s] transmission of timeout-related values 'during the SYN and SYN-ACK handshake (the first 2 signals in the three-way handshake[])].'" Prelim. Resp. 30 (quoting Ex. 1014, 5).

We agree with Patent Owner that RFC 5482 discloses the pre-connection transmission of this information in the handshake, a point not disputed by Petitioner. *See* Reply 1–2 (citing Ex. 1014, 5) (Petitioner acknowledging that "RFC 5482 discloses, at a high level, exchange of UTO-related information during the three-way handshake" to set up a connection). We find the meaningful distinction to be that RFC 5482 states that user timeout options do not need to be exchanged reliably, and, after identifying certain mechanisms to improve transmission reliability, RFC 5482 states that "[i]t is important to note that although these mechanisms can improve transmission reliability for the UTO option, they do not guarantee delivery *(a three-way handshake would be required for this)*." Ex. 1014, 8 (emphasis added). Eggert, therefore, provides the very disclosure that RFC 5482 acknowledges is lacking – a three-way handshake to negotiate, and thereby confirm delivery of, the timeout options. *See* Ex. 1004, 5–7 (§ 2.1).

The negotiation protocol described in Eggert's § 2.1 forms the basis for Petitioner's assertion of obviousness and is particularly relevant to the limitation in claim 1 reciting "modifying, by the second node and based on the metadata, a timeout attribute associated with the TCP-variant connection." *See* Pet. 32–35. Petitioner explains how Eggert's negotiation protocol disclosed with reference to Figure 2 discloses modifying the proposed timeout by shortening it and responding with the shortened value. Pet. 33 (citing Ex. 1004, 7, 11[8]); *see also* Ex. 1004, 7 (disclosing that the responding node can accept, shorten, or reject the proposed timeout value). RFC 5482 discloses transmitting a "suggestion" of a proposed timeout, not a

[8] Petitioner cites the pages of the reference, which differ from the exhibit page numbers assigned by Petitioner. We cite the exhibit page numbers assigned by Petitioner, and we request that the parties do the same.

negotiation that allows the other side to modify the proposed timeout and respond with the modified timeout.

Based on the foregoing, we determine that Eggert's disclosure differs materially in pertinent respects from the disclosure of RFC 5482, and, therefore, we determine that the identification of RFC 5482 during prosecution did not present the same or substantially the same art as Petitioner presents in the Petition. Consequently, we decline to deny under § 325(d).

B. 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) (2019).

Independent claims 1 and 15 recite "TCP-variant packet" and "TCP-variant connection." Petitioner argues that "TCP-variant" encompasses slight variations from TCP. Pet. 11 (citing Ex. 1008, 60 (Patent Owner's district court complaint for patent infringement)). Patent Owner argues that "TCP-variant connection" means "a protocol connection where the protocol of the connection varies from TCP." Prelim. Resp. 11. Citing the '995 patent's disclosure that "[a]n equivalent or analog of an [idle time period (ITP)] header may be included in a footer of a protocol packet in an extension and/or variant of the current TCP" (Ex. 1001, 14:55–58), Patent Owner asserts that "Patent Owner specifically disclaimed any interpretation of 'TCP-variant' that would include the current 'TCP.'" Prelim. Resp. 11–12.

Claims 1 and 15 do not define the term "TCP-variant connection," and the Specification of the '995 patent provides little guidance as to its meaning. The term appears only in the "Summary" section, which the '995

patent explains is "a simplified summary of the disclosure in order to provide a basic understanding to the reader. This summary is not an extensive overview of the disclosure and it does not identify key/critical elements of the invention or delineate the scope of the invention." Ex. 1001, 2:27–31. In the "Summary" section, the '995 patent uses the term "TCP-variant connection" in reciting what is recited in the claims, thereby providing no more guidance than the claims themselves. *See* Ex. 1001, 2:35–49 (reciting subject matter similar to claim 1), 2:50–65 (reciting subject matter similar to claim 15).

As noted above, the Specification of the '995 patent mentions "an extension and/or variant of the current TCP." Ex. 1001, 14:55–58, *quoted in* Prelim. Resp. 45. It is not entirely clear from the record before us, however, what the "current" version of TCP was as of the filing of the application for the '995 patent. The '995 patent incorporates by reference "Transmission Control Protocol, DARPA Internet Program Internet Protocol Specification" (Ex. 1006 (RFC 793)), which is dated September 1981. Ex. 1001, 1:45–51. The '995 patent relies on RFC 793 for information on the operation of TCP. *See* Ex. 1001, 10:27–28 ("Detailed information on the operation of TCP is included in RFC 793."). But given that RFC 793 predated the application for the '995 patent by 36 years, it is not clear that RFC 793 represents the "current" version of TCP. Thus, on this record, we do not see how defining "TCP-variant" with reference to "the current 'TCP'" is particularly informative.

In our analysis below, we apply the plain and ordinary meaning of "TCP-variant connection," i.e., a connection that varies from TCP.

For purposes of this Decision, we need not construe expressly any other claim terms. *See, e.g.*, *Nidec Motor Corp. v. Zhongshan Broad Ocean*

Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy' . . . ." (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. Principles of Law

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 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) any secondary considerations, if in evidence.[9] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

D. Alleged Obviousness over Eggert (Claims 1–24)

Petitioner asserts that claims 1–24 of the '995 patent are unpatentable under 35 U.S.C. § 103(a) as obvious over the teachings of Eggert. Pet. 18–61. Patent Owner opposes. Prelim. Resp. 39–54.

1. Eggert

Eggert "specifies a new TCP option - the Abort Timeout Option - that allows conforming hosts to negotiate per-connection abort timeouts. This allows mobile hosts to maintain TCP connections across disconnected

[9] Patent Owner does not present any objective evidence of nonobviousness (i.e., secondary considerations) as to any of the challenged claims.

periods that are longer than their system's default abort timeout." Ex. 1004, 3.

2. Independent Claim 1

Independent claim 1 is directed to "[a]n apparatus comprising: a non-transitory memory storing instructions; and one or more processors in communication with the non-transitory memory, wherein the one or more processors execute the instructions for" performing four operations listed in claim 1. Petitioner contends Eggert discloses a computer that has a memory and processors for executing instructions, thereby teaching this subject matter. Pet. 18–20 (citing Ex. 1004, 3, 5–8 (§ 2.1); Ex. 1003 ¶¶ 163–189). Patent Owner does not dispute these contentions. *See generally* Prelim. Resp. We are persuaded that Petitioner has shown sufficiently how Eggert teaches this subject matter.

a) Receiving a TCP-variant packet

The first operation recited in claim 1 is "receiving, by a second node from a first node, a transmission control protocol (TCP)-variant packet in advance of a TCP-variant connection being established." Petitioner argues that Eggert discloses that a responder ("second node") receives a synchronization (SYN) packet that contains an abort timeout option (ATO) during a three-way handshake (i.e., before a connection is established), and Petitioner argues that "a modified TCP SYN segment (SYN+ATO) that contains an ATO field is a TCP-variant packet, since it uses the same format as set forth in the TCP standard but adds the ATO field." Pet. 24 (citing Ex. 1004, 5; Ex. 1003 ¶¶ 190–223, 451) (footnote omitted); *see also* Pet. 22 (arguing that Eggert's disclosure that the initiator can receive a packet containing the ATO from the responder also teaches "receiving, by a second node from a first node, a transmission control protocol (TCP)-variant

packet" before a connection is established). Petitioner also argues that "[c]onnections established by exchanging ATOs are TCP-variant connections because they are established in accordance with a TCP-variant protocol by exchanging TCP-variant packets (SYN+ATO, SYN/ACK+ATO) during the three-way handshake." Pet. 26 (citing Ex. 1003 ¶¶ 217–223).

Patent Owner argues that Eggert's ATO negotiation occurs before the connection is established and, therefore, that any variation on TCP that Eggert presents is not a TCP-variant connection. Prelim. Resp. 39–44. In particular, Patent Owner asserts that, "[a]s described in the Petition, in *Eggert*, ***before*** a connection is established, an initiator may transmit a segment that contains and ATO 'during a standard TCP three-way handshake, which precedes ***the establishment of the standard TCP connection***.'" Prelim. Resp. 39 (quoting Pet. 20).

Based on the current record, we do not agree with Patent Owner. As Petitioner explains, "Eggert discloses adding a new TCP option to the traditional TCP implementation." Pet. 23 (citing Ex. 1003 ¶¶ 193–195, 214–223). Thus, Petitioner's contention is that the implementation of Eggert's ATO varies from a traditional TCP connection. Eggert states that "[a] TCP implementation that does not support the TCP Abort Timeout Option SHOULD silently ignore it." Ex. 1004, 7. Thus, Eggert discloses a variant to a TCP connection that does not support its negotiated ATO.

Patent Owner asserts that "there is no standard user timeout value attributed to a TCP connection; it is variable and may change on a per-connection basis as defined by the standard" and, therefore, that, because "the TCP standard always anticipates a TCP connection with altered timeouts, changing this variable value (per *Eggert*) does not create a

TCP-variant connection." Prelim. Resp. 43 (citing Ex. 1006, 46, 51–77).

Based on the current record, we do not agree with Patent Owner. Eggert acknowledges that RFC 793 specifies a user timeout, but Eggert distinguishes its disclosure from RFC 793 by "specif[ying] a new TCP option" that "allows mobile hosts to maintain TCP connections across disconnected periods that are longer than their system's default abort timeout." Ex. 1004, 3. Thus, Eggert's connection uses a negotiated timeout as opposed to a default system timeout, resulting in a connection that varies at least from the connection disclosed in RFC 793.

Patent Owner also argues that "the later version of *Eggert* . . . notes that '***[i]t is important to note that TCP Abort Timeout Options do not change the semantics of the TCP protocol***.'" Prelim. Resp. 42 (quoting Ex. 2002,[10] 9). According to Patent Owner, this shows that Eggert's ATO does not result in a TCP-variant connection. Prelim. Resp. 42.

Based on the current record, we disagree with Patent Owner's argument because Eggert has a different disclosure, and Eggert is the reference relied on by Petitioner. More particularly, the next sentence of the document cited by Patent Owner states the following: "Hosts remain free to abort connections at any time for any reason, whether or not they use custom abort timeouts or have requested the peer to use them." Ex. 2002, 9. Eggert, in discussing the advantages and disadvantages of short and long ATOs, states the following: "Long abort timeout values allow hosts to tolerate extended periods of disconnection. However, they also require hosts to maintain the TCP state associated with connections for long periods of time." Ex. 1004, 9. Thus, Eggert's disclosure *requires* hosts to maintain the

[10] L. Eggert, "TCP Abort Timeout Option," July 12, 2004.

connection for the negotiated timeout and does not appear to allow hosts to abort connections at any time. Therefore, Eggert's disclosure constrains the TCP connection in a way that the document cited by Patent Owner does not appear to do.

On this record, we are persuaded that Eggert's disclosure of a TCP connection using a negotiated timeout value teaches a TCP-variant connection because the variance from TCP is in the use of the negotiated timeout value during the connection. Patent Owner does not dispute the remainder of Petitioner's contentions for this limitation, including Petitioner's contention that Eggert teaches a "TCP-variant packet." *See* Prelim. Resp. 41 (stating that "Patent Owner does not address here" the contentions for "TCP-variant packet").

For the reasons discussed above and given in the Petition, we are persuaded that Petitioner has shown sufficiently that Eggert teaches "receiving, by a second node from a first node, a transmission control protocol (TCP)-variant packet in advance of a TCP-variant connection being established."

b) Detecting an idle time period parameter and identifying metadata

The second and third operations recited in claim 1 are "detecting an idle time period parameter field in the TCP-variant packet" and "identifying metadata in the idle time period parameter field for an idle time period and, during which, no packet is communicated in the TCP-variant connection to keep the TCP-variant connection active."

Petitioner argues that the abort timeout value contained in the ATO field that is exchanged during Eggert's three-way handshake teaches "an idle time period parameter field," as recited in claim 1. Pet. 26–29 (citing Ex. 1004, 3, 5, Fig. 2; Ex. 1003 ¶¶ 224–232). Petitioner argues that

"Eggert's description of the abort timeout as the duration of time during which a node can wait to receive an ACK is a period 'during which no packet is communicated in the TCP-variant connection to keep the TCP-variant connection active.'" Pet. 30–31 (citing Ex. 1003 ¶¶ 247–256). Petitioner argues that Eggert discloses detecting the abort timeout field and identifying metadata in that field (the value of the timeout) in the three-way handshake of Figure 2. Pet. 26–30 (discussing exchange of ATO values in Eggert's Figure 2).

Patent Owner argues that the abort timeout "value only represents the amount of time after which a connection will end if there is no ACK message received" but "does not teach or suggest that ***no activity*** is occurring, or that the connection is 'idle' with '***no packet***' being communicated (in the context claimed), as other packets or activities may well occur on the connection even though an ACK may be delayed." Prelim. Resp. 50.

Contrary to Patent Owner's arguments, claim 1 does not prohibit activity in the connection during the "idle time period." *See* Prelim. Resp. 13–14, 48–51. Rather, claim 1 recites that the idle time period is a period "during which[] no packet is communicated in the TCP-variant connection *to keep the TCP-variant connection active*" (emphasis added). As Patent Owner's argument acknowledges, Eggert's connection will end if a certain amount of time passes with no ACK message. *See* Prelim. Resp. 50. Thus, in Eggert, the ACK messages "keep the TCP-variant connection active" and their absence from the connection represents an "idle time period," as recited in claim 1.

For the reasons discussed above and given in the Petition, we are persuaded that Petitioner has shown sufficiently that Eggert teaches

"detecting an idle time period parameter field in the TCP-variant packet" and "identifying metadata in the idle time period parameter field for an idle time period and, during which, no packet is communicated in the TCP-variant connection to keep the TCP-variant connection active."

c) Modifying a timeout attribute

The fourth operation recited in claim 1 is "modifying, by the second node and based on the metadata, a timeout attribute associated with the TCP-variant connection." Petitioner argues that Eggert's disclosure of shortening the proposed abort timeout value during the three-way handshake negotiation teaches this subject matter. Pet. 32–35 (citing Ex. 1004, 5–7 (§ 2.1); Ex. 1003 ¶¶ 258–269). Eggert discloses that, "[u]pon receipt of a segment with the Abort Timeout Option, the receiving host decides whether to accept, shorten, or reject its peer's proposed abort timeout." Ex. 1004, 5.

Patent Owner does not dispute these contentions. *See generally* Prelim. Resp. We are persuaded that Petitioner has shown sufficiently how Eggert teaches this subject matter.

d) Threshold determination for claim 1

On this record, we are persuaded that Petitioner has shown sufficiently how Eggert teaches the subject matter recited in claim 1. Therefore, Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that the subject matter of claim 1 would have been obvious over the teachings of Eggert.

3. Claims 2–24

Claims 2–14 depend directly or indirectly from claim 1, and claims 16–24 depend from independent claim 15. We have reviewed Petitioner's obviousness contentions as to claims 2–24 in this ground of unpatentability. *See* Pet. 35–61. Patent Owner argues Petitioner has not

shown Eggert teaches the subject matter of claim 15 for reasons similar to those discussed for claim 1 and does not present separate arguments for any dependent claim. *See* Prelim. Resp. 51–54 (arguing "idle time period" of claim 15), 54 (referring to independent claim arguments for dependent claims). On this record, we are persuaded that Petitioner's arguments and evidence are sufficient to show a reasonable likelihood that Petitioner would prevail in proving unpatentability of these claims.

E. Remaining Grounds

Petitioner also asserts that claims 1–24 are unpatentable as obvious over the combined teachings of Eggert and Hankinson and that claim 16 is unpatentable as obvious over the combined teachings of Eggert, Hankinson, and RFC 1122. *See* Pet. 62–69. Patent Owner does not separately dispute these grounds but, rather, refers to its arguments as to Petitioner's ground based on Eggert alone. *See* Prelim. Resp. 54–58. We are persuaded that Petitioner's arguments and evidence are sufficient to show a reasonable likelihood that Petitioner would prevail in proving unpatentability of the claims challenged on these grounds.

III. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging at least one claim of the '995 patent, and we institute *inter partes* review on all claims and all grounds raised in the Petition. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018) (holding that a decision to institute under 35 U.S.C. § 314 may not institute on fewer than all claims challenged in the petition); *see also* Consolidated

Trial Practice Guide[11] at 5 ("In instituting a trial, the Board will either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution. The Board will not institute on fewer than all claims or all challenges in a petition."). At this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims or the construction of any claim term.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, an *inter partes* review is hereby instituted as to all claims challenged (claims 1–24 of the '995 patent) and on all challenges raised in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which will commence on the entry date of this decision.

[11] Available at https://www.uspto.gov/TrialPracticeGuideConsolidated.

FOR PETITIONER:

Naveen Modi
Joseph E. Palys
Quadeer A. Ahmed
Jason Heidemann
PAUL HASTINGS LLP
naveenmodi@paulhastings.com
josephpalys@paulhastings.com
quadeerahmed@paulhastings.com
jasonheidemann@paulhastings.com

FOR PATENT OWNER:

Timothy Devlin
Derek Dahlgren
DEVLIN LAW FIRM LLC
td-ptab@devlinlawfirm.com
ddahlgren@devlinlawfirm.com