

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

JENAM TECH, LLC,
Patent Owner.

IPR2023-00925
Patent 11,050,855 B1

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

Opinion for the Board filed by *Administrative Patent Judge* REPKO.

Opinion Dissenting filed by *Administrative Patent Judge* GALLIGAN.

REPKO, *Administrative Patent Judge*.

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

I. INTRODUCTION

Google LLC (“Petitioner”) filed a petition requesting *inter partes* review of claims 1 and 16 of U.S. Patent No. 11,050,855 B1 (Ex. 1001, “the ’855 patent”). Paper 1 (“Pet.”). Jenam Tech, LLC (“Patent Owner”) filed a Preliminary Response. Paper 10 (“Prelim. Resp.”).

To institute an *inter partes* review, we must determine “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). For the reasons discussed below, Petitioner has not shown a reasonable likelihood that it would prevail with respect to any claims challenged in the Petition. Thus, we deny institution of *inter partes* review.

A. Related Matters

According to the parties’ representations, the ’855 patent is asserted in *Jenam Tech, LLC v. Google, LLC*, Case No. 4:22-cv-02838-JST (N.D. Cal.) (“the 838 action”). Pet. 1; *see also* Paper 5 (Patent Owner’s Mandatory Notices) (listing the case as a related matter). According to Petitioner, the 838 action is related to *Jenam Tech, LLC v. Google, LLC*, Case No. 4:22-cv-07994-JST (N.D. Cal.). Pet. 1. According to Patent Owner, there are nineteen other matters that “may affect, or may be affected by” institution of *inter partes* review here:

- *Jenam Tech, LLC v. Google, LLC*, Case No. 4:22-cv-02836-JST (N.D. Cal.)
- *Jenam Tech, LLC v. Google, LLC*, Case No. 4:21-cv-02837-JST (N.D. Cal.)
- *Jenam Tech, LLC v. Google, LLC*, Case No. 4:21-cv-02839-JST (N.D. Cal.)

- *Google LLC v. Jenam Tech, LLC*, IPR2020-00627 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00628 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00629 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00630 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00867 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00868 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00869 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00870 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2020-00845 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00926 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00927 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00928 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00929 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00930 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00931 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00932 (PTAB)

Paper 5, 1–2.

B. The '855 Patent

The '855 patent is directed to detecting an idle Transmission Control Protocol (TCP) connection. Ex. 1001, 2:48–50. Some TCP implementations support a keep-alive option. *Id.* at 2:2–11. This option is not part of the TCP specification described in Request for Comments (RFC) 793, for example. *Id.*

TCP keep-alive and the debate over its benefits and faults have been around for decades. *Id.* at 2:40–41. Critics of the keep-alive option argue that it wastes network bandwidth. *Id.* at 2:17–18. Critics also argue that, because

the TCP-connection endpoints do not cooperate in supporting the keep-alive option, the nodes oppose one another or waste resources by duplicating function. *Id.* at 2:20–25. The option’s proponents, though, argue that there are benefits to keeping an inactive TCP connection open. *Id.* at 2:31–39. For example, the keep-alive option prevents firewalls from closing idle or inactive TCP connections to recover resources. *Id.* at 2:32–39. Keep-alive packets might cause the firewall to waste resources and possibly block or terminate TCP connection with other nodes. *Id.*

According to the ’855 patent, there is no mechanism that allows two TCP-connection endpoints to cooperate in supporting the keep-alive option. *Id.* at 2:41–44. The method in the ’855 patent purportedly addresses the need to share information for detecting an idle TCP connection. *Id.* at 2:48–50.

C. Claims

Claims 1 and 16 are challenged and 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 to:
 - identify first information;
 - generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP);
 - set up a connection, by sending, from the apparatus to a node, the set up packet to provide the first metadata to the node, for use by the node in determining a timeout attribute associated with the connection;

detect, by the apparatus, a time period during which no packet is received in the connection and processed to keep the connection active; and

in response to detecting the time period, at least partially deactivate, by the apparatus, the connection.

Ex. 1001, 21:31–49.

16. The apparatus of claim 1, wherein the time period includes a second time period that is of a first type of time period and that is detected based on a second duration, where the apparatus is configured to:

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection;

in response to detecting, based on the second duration and by the apparatus after the connection set up, the second time period of the first type of time period, at least partially deactivate, by the apparatus, the connection; and

in response to detecting, based on a third duration, a third time period of a second type of time period, perform at least one action, where the third time period is detected based on the third duration, by being detected when no acknowledgement packet is received by the apparatus in the connection and processed as an acknowledgement, during the third duration, for a sent packet sent by the apparatus in the connection;

wherein the apparatus is configured such that: during the second time period of the first type of time period, an empty packet is sent without causing a timer utilized to detect the second time period to be reset;

wherein the apparatus is configured such that: the protocol is not a TCP-extension; the first duration is not capable

of being negotiated between the apparatus and the node for the connection during the connection set up, at least one aspect of the second duration is capable of being negotiated between the apparatus and the node for the connection, and at least one aspect of the third duration of the third time period is capable of being negotiated between the apparatus and the node for the connection; the set up packet is not a synchronize (SYN) packet; and

the first time period and the second time period are started in response to at least one of a received packet or a transmitted packet, wherein the apparatus is configured such that the connection set up further includes, in addition to (a-1) sending the set up packet:

(a-2) after sending the set up packet and without any other communication between the apparatus and the node after (a-1) and before (a-2), receiving, at the apparatus from the node, another set up packet, and

(a-3) after receiving the another set up packet and without any other communication between the apparatus and the node after (a-2) and before (a-3), sending, from the apparatus to the node, yet another set up packet.

Id. at 22:49–23:36.

D. Evidence¹

Name	Reference	Exhibit No.
Morris	U.S. Patent Application Publication No. 2011/0213820	1005
SIP	IETF RFC 3261 “SIP: Session Initial Protocol”	1006

¹ In support of the Petition, Petitioner also submitted the Declaration of Dr. Bill Lin. Ex. 1002.

E. Asserted Ground

Petitioner asserts that claims 1 and 16 are unpatentable on the following ground. Pet. 8.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1, 16	103 ²	Morris, SIP

II. ANALYSIS

A. Morris

The sole ground in the Petition relies on Morris. *Id.* Morris is the publication of United States Patent Application 12/714,454 (“the ’454 application”). Ex. 1005, code (21). The ’454 application is the oldest application in the challenged patent’s chain of continuity, filed February 27, 2010. *See* Ex. 1001, code (63). Petitioner argues that the challenged claims are not entitled to that filing date. Pet. 8. Rather, according to Petitioner, the earliest possible filing date of the challenged claims is January 13, 2021—the actual filing date of the application that issued as the ’855 patent. *Id.* Petitioner argues that, because the ’454 application was published on September 1, 2011, the publication (Morris) qualifies as prior art under 35 U.S.C. § 102(a)(1). *Id.*

We disagree that the challenged claims are not entitled to February 27, 2010. Thus, Morris is not prior art, and Petitioner has not shown a reasonable likelihood of prevailing on any ground. Our analysis follows.

² Congress amended section 103 when it passed the Leahy-Smith America Invents Act (AIA). Pub. L. No. 112–29, § 3(c), 125 Stat. 284, 287 (2011). Petitioner argues that amended section 103 applies here. *See* Pet. 8. Petitioner’s arguments about the challenged patent’s priority claims are analyzed in section 0 of this decision, *infra*.

B. Claim 1

1. Not TCP

Claim 1 recites, in part,

generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is *not transmission control protocol (TCP)*;

Ex. 1001, 21:37–40 (emphasis added).

2. The Petition

Petitioner refers to the features recited in the limitation quoted above as the “non-TCP features.” Pet. 62. According to the Petition, a person of ordinary skill in the art would not have understood that the inventor of the challenged patent had possession of the claimed invention, including the non-TCP features in claim 1. *Id.* at 63. Petitioner argues that neither the application that issued as the ’855 patent nor the as-filed specifications of its priority applications (Exs. 1004, 1038, 1039, 1044-1048) support the non-TCP features. *Id.* (citing Ex. 1002 ¶¶ 163–164). In Petitioner’s view, these disclosures only describe embodiments based on TCP. *Id.* at 64 (citing Ex. 1002 ¶ 166).

3. Preliminary Response

Patent Owner refers to the limitation reciting the non-TCP features as the “disputed TCP phrase.” *See, e.g.*, Prelim. Resp. 10–11. Patent Owner argues that the language of the dependent claims ties the disputed TCP phrase to support from the specification of the ’454 Application.³ *Id.* at 11. Patent Owner summarizes this position in a table, reproduced below. *Id.*

³ Citations to the ’454 application refer to the paragraphs as numbered in the as-filed specification starting on page 120 of Exhibit 1038 (“Appl. ’454”).

<u>Disputed TCP Phrase</u> (emphasis added)	<u>Dependent Claims in Challenged Patent that Tie Disputed TCP Phrase to Specification Support</u> (emphasis added)	<u>Excerpts of Original ‘454 Application that Support Disputed TCP Phrase & Dependent Claims</u> (emphasis added)
“ <i>protocol that is not</i> Transmission Control Protocol (<i>TCP</i>)”	211. The method of claim 210, wherein at least one of: ... the <i>protocol that is not TCP</i> is a <u><i>TCP</i></u> [<i>] variant</i> ... the connection includes <i>one or more features of TCP</i> , and <i>one or more features not of TCP</i> ; the set up packet includes <i>one or more features of a TCP</i> packet, and <i>one or more features not of a TCP</i> packet; ...	“[a]n equivalent or analog of an ITP header may be included in a footer of a <i>protocol</i> packet in an extension and/or <i>variant</i> of the current <i>TCP</i> ” – Paragraph [0080]
	147. The apparatus of claim 17, wherein the apparatus is configured such that the <i>protocol</i> does <i>not</i> require use of a <i>TCP_OPT header</i> .	“[a]n equivalent or analog of an ITP header may be included in a <i>footer</i> of a <i>protocol</i> packet in an extension and/or <i>variant</i> of the current <i>TCP</i> ” – Paragraph [0080]

In the table, Patent Owner links limitations of claims 211 and 147 to paragraph 80 of the ‘454 application. *Id.* In Patent Owner’s view, Petitioner admits that dependent claim 211 recites a protocol that is not TCP, which is described in paragraph 80 of the ‘454 application. *Id.* at 10–11 (citing Pet. 34). Patent Owner argues that several parts of the ‘454 application support the non-TCP features. *Id.* at 16 (citing Appl. ‘454 ¶¶ 2–6, 7–11, 49, 54, 55, 57, 69, 70, 76, 80, 87, 88, 94, 108, 123). Patent Owner argues that non-TCP

embodiments follow a theme that is present throughout the disclosure. *Id.* (citing Appl. '454 ¶ 115).⁴

4. *Analysis*

We agree with Patent Owner that the '454 application provides sufficient written-description support for the non-TCP features recited in claim 1. *See id.*

Although Petitioner has the ultimate burden of persuasion to prove unpatentability, Patent Owner must show that the claims are entitled to a priority date when relying on that date to overcome an anticipation or obviousness challenge. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1379–80 (Fed. Cir. 2015) (discussing burdens for showing entitlement to provisional filing dates). “[A] patent’s claims are not entitled to an earlier priority date merely because the patentee claims priority Rather, for a patent’s claims to be entitled to an earlier priority date, the patentee must demonstrate that the claims meet the requirements of 35 U.S.C. § 120.” *In re NTP, Inc.*, 654 F.3d 1268, 1276–77 (Fed. Cir. 2011) (citations omitted). Those requirements include the written-description requirement of Section 112. *See* 35 U.S.C. § 120.

The test for written description “requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The specification must clearly allow persons of ordinary skill in the art to recognize that the inventor invented what is claimed and “reasonably” convey to those skilled in the art “that the inventor

⁴ Patent Owner also quotes paragraph 114 of the '454 application but cites it as paragraph 115. *Compare* Prelim. Resp. 16, *with* Appl. '454 ¶ 114.

had possession of the claimed subject matter as of the filing date.” *Id.* The “level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Id.*

In the prior art challenge, Petitioner takes the position that the TCP-variant protocols fall within the scope of the non-TCP feature. Pet. 34. Like Patent Owner, Petitioner relies on claim 211 to support its position. *Compare* Prelim. Resp. 11 (Table 1), *with* Pet. 34 (citing Ex. 1001, 48:13). According to claim 211, a protocol that is not TCP is a TCP variant. Ex. 1001, 48:13.

Specific features of these variants are described in the ’454 application. Appl. ’454 ¶ 80, *discussed in in* Prelim. Resp. 23. For example, a TCP packet’s header may contain the idle-time-period (ITP) information. Appl. ’454 ¶ 79. But, in a variant or extension of TCP, the information may be found in other locations. *Id.* ¶ 80. For example, an analog or equivalent of the ITP information “may be included in a *footer* of a protocol packet in an *extension* and/or *variant* of the current TCP.” *Id.* (emphasis added).

Petitioner argues that the extensions or variants are mentioned solely within the context of a TCP packet. Pet. 67 (citing Appl. ’454 ¶ 80; Ex. 1002 ¶ 175). According to Petitioner, even if the TCP extension or variant encompasses the non-TCP features, the claim encompasses protocols that do not use TCP at all. *Id.* at 68. Petitioner argues that the descriptions of these variants or extensions are insufficient to satisfy the written-description requirement because the claim’s full scope is unsupported. *Id.*

We disagree for two principal reasons. First, the ’454 application explicitly describes a particular feature that is different from TCP: the ITP

information may be in locations other than those specified by a particular version of TCP. Appl. '454 ¶ 80. Second, Petitioner's argument about the non-TCP features is based on a narrow reading of that limitation and is divorced from the rest of the specification describing the invention's purpose and scope: communication and cooperation between nodes. *See* Pet. 70–71.

The nodes must communicate and cooperate because TCP has various implementations that support different features. Appl. '454 ¶ 2. One specification for the protocol is found in Request for Comments document 793, titled “Transmission Control Protocol, DARPA Internet Program Internet Protocol Specification,” dated September 1981 (“RFC 793”). *Id.* A TCP keep-alive option is supported in some implementations of TCP, but it is not supported in RFC 793. *Id.* So some nodes, e.g., TCP endpoints, may support a keep-alive option but others may not. *Id.* Several problems can arise when the nodes do not cooperate in supporting the keep-alive option: a keep-alive packet can bring down the TCP connection, the nodes may end up opposing each other, or the nodes may waste resources duplicating functions. *Id.* ¶ 3.

The '454 application and its progeny focus on ways that nodes can cooperate so that idle, underactive, or dead connections can be properly detected and managed. *Id.* ¶ 5. In particular, the disclosed solutions relate to a protocol for sharing information so that two TCP connection endpoints can both support the keep-alive option. *Id.* ¶¶ 5, 6.

To support the goals discussed in the background, one embodiment includes ITP information in a packet exchanged during the TCP setup. *Id.* ¶ 76. The information can be included in a header or other locations specified by RFC 793. *Id.* ¶¶ 76, 80. Petitioner argues that the '454

application does not describe setting up a connection using a packet that is for use in a protocol that is not TCP. Pet. 65 (citing Appl. '454 ¶ 76; Ex. 1002 ¶¶ 170–171). But the ITP information can be located in other parts of the packet not specified by the RFC. *See* Appl. '454 ¶ 80. Also, RFC 793 describes a three-way handshake for establishing a TCP connection. *Id.* ¶ 76. But that too is not required by the disclosed method. *Id.* Rather, the connection can be set up using “[o]ther message exchanges.” *Id.* Read in context with the rest of the specification, it is clear that the ITP information can be shared in various ways. *Id.* ¶¶ 76, 80. That is, the disclosed system’s purpose is to avoid the problems that can arise when the nodes do not cooperate or share information. *See, e.g., id.* ¶ 3. The '454 application makes clear that, as long as the information is properly communicated, the particular messages exchanged (*id.* ¶ 76) or the location of the ITP information in a packet (*id.* ¶ 80) can vary from the TCP specification.

We agree with Patent Owner that these parts of the specification—when read in the context of the entire disclosure—would have convinced a person of ordinary skill in the art that the inventor possessed a protocol that is not TCP, as recited in claim 1, that at least encompasses these variations. Prelim. Resp. 16 (citing Appl. '454 ¶¶ 2–6, 7–11, 49, 54, 55, 57, 69, 70, 76, 80, 87, 88, 94, 108–123).

Petitioner argues that the '454 application does not refer to a protocol that is not TCP or a non-TCP packet. Pet. 64 (citing Ex. 1002 ¶¶ 167–168). Petitioner argues that the embodiments use a conventional TCP packet structure in RFC 793. *Id.* at 68–69 (App. '454 ¶¶ 76–79, Fig. 8; Ex. 1002 ¶ 177; Ex. 1008, Fig. 3).

We disagree because the '454 application the ITP information can be included in a header, other locations identified in the TCP specification, or in other parts of the packet. Appl. '454 ¶¶ 76, 80. That is, although the '454 application does not list every way to set up a connection, it is sufficient that it describes with specificity how the connection can vary from TCP. *Id.* In this way, the '454 application provides literal support for a protocol that is not TCP—i.e., a protocol with at least the described differences with respect to TCP. *See id.*

Petitioner argues that the other applications in the challenged patent's chain of continuity have the same deficiencies as the '454 application because they are substantially similar. Pet. 70–76. Petitioner argues that the materials incorporated by reference also do not provide written description support for claim 1. *Id.* at 69–70. We, however, need not reach these issues to determine whether to institute this petition because the '454 application provides adequate support for the reasons discussed above and has the earliest filing date in the chain of priority.

Petitioner argues that the non-TCP features cover protocols based on XTP⁵ or IPX/SPX along with UDP-based protocols. *See* Pet. 68 n. 17. To be sure, the '454 application's specification lacks examples following these protocols. *See* Ex. 1038. Even so, a claim does not lack written-description support “simply because the embodiments of the specification do not contain examples explicitly covering the full scope of the claim language.”

LizardTech, Inc., v. Earth Res. Mapping, Inc., 424 F.3d 1336, 1345 (Fed. Cir. 2005) (citing *Union Oil Co. v. Atl. Richfield Co.*, 208 F.3d 989, 997

⁵ XTP stands for Xpress Transfer Protocol. Ex. 1016. IPX/SPX stands for Internetwork Packet Exchange/Sequenced Packet Exchange. Ex. 1002 ¶ 22.

(Fed. Cir. 2000)). Because patents are written for a person of skill in the art, “it is unnecessary to spell out every detail of the invention in the specification; only enough must be included to convince a person of skill in the art that the inventor possessed the invention and to enable such a person to make and use the invention without undue experimentation.” *Id.* Here, the paragraphs discussed above are sufficient to convince a person of skill in the art that the inventor possessed the invention.

5. *Gentry Gallery*

Petitioner argues that the full-scope of the non-TCP features is not supported by the written description under the reasoning set forth in *LizardTech* and similar cases. Pet. 68 (citing *PowerOasis, Inc., v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306–11 (Fed. Cir. 2008); *LizardTech*, 424 F.3d at 1343–45); *see also id.* at 74–75.

Patent Owner argues that, even if the line of cases that Petitioner cites applies, the claim falls within an exception of *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998). *See* Prelim. Resp. 20.⁶

We need not reach the applicability of *Gentry Gallery* for at least the reason that Patent Owner has shown that claim 1 is entitled to the earliest priority date for all the reasons discussed above. Also, the facts of this case

⁶ In an email to the Board on September 25, 2023, Petitioner requested authorization to file a four-page reply to Patent Owner’s Preliminary Response to address whether the claims fall within an exception of *Gentry Gallery*. Ex. 3001. Petitioner’s request was denied. *Id.* It may always be the case that a Petitioner disagrees with how Patent Owner characterizes the facts and law presented in the Petition. Our rules, however, provide for a Petitioner’s Reply only when good cause exists. 37 C.F.R. § 42.108(c). Petitioner failed to show good cause because the issues that Petitioner identified in its request could have been, but were not, addressed in the petition. *See id.*

differ from those in *LizardTech*. In *LizardTech*, the claims recited compression based on discrete wavelet transform (DWT). *Id.* The specification provided only one way for creating a seamless DWT, but the claims broadly encompassed all ways. *Id.* Unlike seamless DWT, the '454 application indicates that establishing connections, via TCP or otherwise, is well known and conventional in the art, and the '454 application expressly discloses several ways that a connection could be made. *See* Appl. '454 ¶¶ 3, 76, 80, 114. According to Dr. Lin, “Many different communication protocol standards were known and used at that time to facilitate communications in such computer networks.” Ex. 1002 ¶ 22 (citing Ex. 1021, 1:20–33). The recited connection need not be disclosed in detail because TCP and its variations and extensions were well-known and described in many technical specifications over the years. *See* Appl. '454 ¶¶ 3, 76, 80, 114; Ex. 1002 ¶ 22. Thus, we see little similarity between the facts here and those in *LizardTech*, to the extent that the Petition relies on the reasoning from that case. *See, e.g.*, Pet. 68.

Thus, the '855 patent and its priority applications provide adequate written-description support for non-TCP features encompassed by the claimed “first connection.”

6. Conclusion

Patent Owner has shown that claim 1 is entitled to the earliest priority date—the date of the '454 application. Thus, Morris is not prior art, and Petitioner has not shown a reasonable likelihood of prevailing in showing that claim 1 is unpatentable.

C. *Claim 16*

1. *Connection Set Up*

Claim 16 recites, in part,

in response to detecting, based on a first duration and by the apparatus during at least a portion of the connection including at least a portion of the connection set up, a first time period of the first type of time period, at least partially deactivate, by the apparatus, the connection

Ex. 1001, 22:53–58 (emphasis added).

2. *The Petition*

Petitioner refers to this limitation as the time-period-detection-during-connection-setup feature. Pet. 77.⁷ According to Petitioner, this feature is not supported by the '855 patent's written description or its priority applications. *Id.* at 77–82. Petitioner argues that the time-period-detection-during-connection-setup feature encompasses scenarios in which the time period is detected, such as a timeout, and the connection is partially closed during the connection setup time. *Id.* at 80 (citing Ex. 1002 ¶ 204). Petitioner argues that the written description discloses detecting such time periods after, not during, the setup of a TCP connection. *Id.* at 79–80. According to Petitioner, the background describes detecting an idle TCP connection and establishing a TCP connection only after two nodes exchange initial messages to set up the connection. *Id.*

3. *Preliminary Response*

Patent Owner disagrees with Petitioner's reading of the term "connection." Prelim. Resp. 29. It is undisputed that there is written-

⁷ Petitioner also cites a part of claim 89 with a similar limitation. Pet. 76 (citing Ex. 1001, 29:25–29). In this decision, we do not treat claim 89 as challenged, as there is no substantive analysis of this claim. *See id.*

description support for detecting a time period during a connection. *See id.*; Pet. 79–82. But, in Patent Owner’s view, a connection includes the setup—at least in the context of the ’855 patent. Prelim. Resp. 30–31 (citing Appl. ’454 ¶¶ 52, 76, 92, 100⁸).

4. *Analysis*

We agree with Patent Owner that the cited parts of the ’454 application show that the challenged patent (1) describes connections as including the setup and (2) discloses detecting a time period “in” and “via” such a connection. *Id.*

As for defining connections as including the setup, the ’454 application explains that the packets for setting up a connection are considered to be in the TCP connection:

The specified “three-way handshake” and other patterns of message exchange for setting up a TCP connection include packets that are considered to be *in the TCP connection* for purposes of this disclosure.

Appl. ’454 ¶ 76 (emphasis added), *quoted in* Prelim. Resp. 31. We agree with Patent Owner that the rest of the written description should be read in light of this definition of a connection. Prelim. Resp. 31.

Petitioner’s arguments based on RFC 793 are unpersuasive because they do not account for what the term “connection” means in the context of the challenged patent. *See* Pet. 80–81 (citing Ex. 1002 ¶¶ 206–208; Ex. 1008, 9, 44). That is, even if RFC 793 explains that, once the connection is established, data is communicated (*see* Ex. 1008, 9, 44; Pet. 80–81), ’454 application explains that patterns of message exchange for setting up a TCP

⁸ Patent Owner quotes paragraph 100 from the ’454 application but cites it as paragraph 101. Prelim. Resp. 30.

connection include packets that are considered to be in the connection for the purpose of describing the invention (Appl. '454 ¶ 76).

As for the time-period detection, Petitioner argues that there is no disclosure of when the timeouts are detected. Pet. 80 (citing Ex. 1004, 308–309 (Appl. '454 ¶ 82); Ex. 1002 ¶ 204). We disagree. Patent Owner identifies several places where the '454 application discloses detecting a time out. *See* Prelim. Resp. 30–31 (quoting Appl. '454 ¶¶ 52, 92, 100). For instance, the '454 application explains that the ITP is detected during a time when there are no packets in the TCP connection:

With reference to the method illustrated in Fig. 2, block 202 illustrates the method includes receiving, by a first node, first idle information for detecting a first idle time period during which no TCP packet including data in a first data stream sent *in the TCP connection* by a second node is received by the first node.

Appl. '454 ¶ 52 (emphasis added). The '454 application explains that the time period is detected “in the idle time period during which first node 602 has received acknowledgment for all data sent *via the TCP connection* in the TCP data stream by first node 602 to second node 604.” *Id.* ¶ 92 (emphasis added). The packet in the TCP connection from the second node indicates the beginning of a potential ITP:

Receiving a packet from second node 604 included *in the TCP connection* is an event that, in various aspects, may directly and/or indirectly indicate the beginning of a potential idle time period.

Id. ¶ 100 (emphasis added). And, as noted above, the packets for setting up a TCP connection are considered to be “in the TCP connection.” *Id.* ¶ 76.

In sum, these parts of the '454 application together provide sufficient written description support for the time-period-detection-during-connection-setup feature because they (1) describe connections including the setup of

the connection and (2) disclose detecting a time period “in” and “via” such a connection. *See id.* ¶¶ 52, 92, 100, *cited in* Prelim. Resp. 30–31.

5. *Conclusion*

Patent Owner has shown that claim 16 is entitled to the earliest priority date—the date of the ’454 application. Thus, Morris is not prior art, and Petitioner has not shown a reasonable likelihood of prevailing in showing that claim 16 is unpatentable.

IV. CONCLUSION

Petitioner has not shown a reasonable likelihood of prevailing on the obviousness ground for any challenged claim. Thus, we do not institute an *inter partes* review. *See* 35 U.S.C. § 314(a).

V. ORDER

It is

ORDERED that the Petition is *denied*.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

JENAM TECH, LLC,
Patent Owner.

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GALLIGAN, *Administrative Patent Judge*, dissenting.

I believe Petitioner has demonstrated a reasonable likelihood of prevailing on its challenges for at least one claim, and I would institute an *inter partes* review. Therefore, I respectfully dissent.

The application for U.S. Patent 11,050,855 (“’855 patent”) was filed on January 13, 2021. Ex. 1001, code (22). The ’855 patent claims priority through a series of continuation and continuation-in-part applications to U.S. Patent Application Number 12/714,454 (“’454 application”), which was filed on February 27, 2010. Ex. 1001, code (63).

The central issue at this stage is whether Morris (U.S. Patent Publication Number 2011/0213820 A1 (Ex. 1005)), which is the

September 1, 2011, publication of the '454 application, is prior art to the '855 patent.

Petitioner bears the burden of persuasion to prove unpatentability of the challenged claims, and this burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Petitioner also has the initial burden of production, which it satisfied by relying on prior art references (Morris and SIP) that predate the filing of the application for the '855 patent. *See* Pet. 8 (asserting that “both Morris and SIP qualify as prior art at least under 35 U.S.C. § 102(a)(1)”; *see also* *Dynamic Drinkware*, 800 F.3d at 1379 (“Dynamic also had the initial burden of production, and it satisfied that burden by arguing that Raymond anticipated the asserted claims of the '196 patent under § 102(e)(2).”).

The burden of production has shifted to Patent Owner to argue or produce evidence that either the asserted references do not render the challenged claims obvious or that the references are “not prior art because the [challenged] claims in the '[855] patent are entitled to the benefit of a filing date (constructive or otherwise) prior to” the dates of the references. *See Dynamic Drinkware*, 800 F.3d at 1380. Patent Owner has chosen, at this stage, to argue that Morris is not prior art to the challenged claims of the '855 patent. Prelim. Resp. 9–40. “This requires [Patent Owner] to show not only the existence of the earlier application, but why the written description in the earlier application supports the claim,” which “means producing sufficient evidence and argument to show that an ancestor to the '[855] patent, with a filing date prior to the [prior art] date, contains a written

description that supports all the limitations of” the challenged claims. *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1327 (Fed. Cir. 2008).

I do not believe that Patent Owner has met its burden of production to establish that the challenged claims are entitled to the filing date of the ’454 application. As an initial matter, Patent Owner does not attempt to show written description support in the ’454 application for *all* limitations of the challenged claims. Rather, Patent Owner only addresses Petitioner’s arguments as to why the challenged claims of the ’855 patent cannot have the benefit of the filing date of the ’454 application. *See* Prelim. Resp. 9–40. Below I note at least one limitation that Patent Owner does not address that that appears to lack written description in the ’454 application.

I disagree, on this record, with Patent Owner’s arguments in support of the limitation of claim 1 reciting “generate, based on first information, a set up packet including a time period parameter field identifying first metadata, the set up packet for use in a protocol that is not transmission control protocol (TCP).” Patent Owner takes the position that “the original ’454 application clearly evidenced that the inventor had possession of any ‘protocol,’ *regardless as to the amount of variation from TCP.*” Prelim. Resp. 17–18. Patent Owner contends that it “did not set forth a limit to the aforementioned amount of ‘varia[tion]’ from ‘TCP,’ and thus did not exclude large (or even complete) ‘varia[tions]’ from ‘TCP.’” Prelim. Resp. 18 (alterations in original).

On this record, I do not believe that the ’454 application provides adequate written description support for all protocols, as Patent Owner asserts. The background of the ’454 application describes keep-alive options for TCP and explains that, “[t]o 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. 1038, 120–21 (¶¶ 2–5). “Accordingly,” states the ’454 application, “there exists a need for methods, systems, and computer program products for sharing information for detecting an idle TCP connection.” Ex. 1038, 122 (¶ 6). The ’454 application then goes on to describe “[m]ethods and systems . . . for sharing information for detecting an idle TCP connection.” Ex. 1038, 122 (¶ 8). Thus, the ’454 application focuses on an alleged shortcoming of TCP and purports to provide a solution for TCP. I do not view the ’454 application as directed to sharing information in connections for all protocols.

Patent Owner argues that the ’454 application’s disclosure of a “variant” of TCP supports the breadth of claim 1. Prelim. Resp. 6, 10. In particular, the ’454 application states that “[a]n equivalent or analog of an ITP header may be included in a footer of a protocol packet in an extension and/or variant of the current TCP.” Ex. 1038, 147 (¶ 80), *quoted in* Prelim. Resp. 10; *see also* Prelim. Resp. 15–16 (“[A]s set forth above, the above-cited claim/specification citations make it clear that the disputed TCP phrase is intended to be supported by the ‘variant’ of ‘TCP’ disclosure (‘TCP-variant disclosure’) cited above.”). Patent Owner argues that “the specification includes an absolute myriad of other examples of features that vary from TCP, where such non-TCP features are not part of RFC 793 (TCP).” Prelim. Resp. 6 (emphasis omitted).

On this record, I do not agree with these arguments for two reasons. First, it is not entirely clear on this record what the “current” version of TCP was as of the filing of the ’454 application. The ’454 application incorporates by reference “Transmission Control Protocol, DARPA Internet Program Protocol Specification” (Ex. 1008 (RFC 793)), which is dated September 1981. Ex. 1038, 120 (¶ 2). The ’454 application relies on RFC 793 for information on the operation of TCP. *See* Ex. 1038, 137 (¶ 51) (“Detailed information on the operation of TCP is included in RFC 793.”). But given that RFC 793 predated the ’454 application by almost 30 years, it is not clear that RFC 793 represents the “current” version of TCP referenced in the ’454 application. Indeed, the ’454 application states that there were “[v]arious implementations of the transmission control protocol (TCP).” Ex. 1038, 120 (¶ 2). Without knowing what the “current TCP” was as of the filing of the ’454 application, it is not clear to me what would have been an extension or variant of that protocol.

Second, the ’454 application still focuses on TCP connections. *See* Ex. 1038, 122 (¶ 6) (“[T]here exists a need for methods, systems, and computer program products for sharing information for detecting an idle TCP connection.”), (¶ 8) (“Methods and systems are described for sharing information for detecting an idle TCP connection.”). Although Patent Owner argues that the specification includes “an absolute myriad of examples of features” that “are not part of RFC 793 (TCP)” (Prelim. Resp. 16 (emphasis omitted)), variance from RFC 793 in itself does not convey possession of protocols that are not TCP. Indeed, the ’454 application states that “the TCP keep-alive option is supported by a number of implementations of the TCP. It is not, however, part of the TCP

specification as described in . . . RFC 793.” Ex. 1038, 120 (¶ 2). Thus, the ’454 application still characterizes variances from RFC 793 as TCP implementations. It does not indicate that such variances are non-TCP implementations. *See Amgen Inc. v. Hoechst Marion Roussel Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003) (“The purpose of the written description requirement is to prevent an applicant from later asserting that he invented that which he did not; the applicant for a patent is therefore required to recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.”).

I also disagree with Patent Owner’s characterization of the Institution Decision in IPR2020-00845. *See* Prelim. Resp. 19. In that decision, we simply stated that the plain and ordinary meaning of a “TCP-variant connection” is “a connection that varies from TCP.” Ex. 2004, 18. That decision did not address whether any claims had written description support in an earlier application, and the main prior art reference, Eggert, was directed to a new option for negotiating abort timeouts in TCP. *See* Ex. 2004, 19–20 (explaining that Eggert “specifies a new TCP option - the Abort Timeout Option – that allows conforming hosts to negotiate per-connection abort timeouts”). Thus, I do not view anything in that decision as suggesting that this family of patents provides written description support for a boundless array of protocols, as Patent Owner suggests. *See* Prelim. Resp. 19–20.

As to the “connection set up” limitation of claim 16, Patent Owner appears to rely exclusively on disclosures of TCP connections for support even though claim 1 from which claim 16 depends is directed to non-TCP protocols. *See* Prelim. Resp. 29–40. Patent Owner argues that it was

“act[ing] as its own lexicographer” to define setup packets as part of the connection with the ’454 application’s disclosure that “[t]he specified ‘three-way handshake’ and other patterns of message exchange for setting up a TCP connection include packets that are considered to be in the TCP connection for purposes of this disclosure” (Ex. 1038, 145 (¶ 76)). Prelim. Resp. 34–35. Patent Owner also argues that the “notion []that connection ‘set up’ states are part of the connection[] is consistent with RFC 793.” Prelim. Resp. 33. On this record, it is not clear to me how Patent Owner’s reliance on allegedly lexicographic statements about TCP connections shows support for non-TCP protocols. *See* Pet. 82 (arguing that “there is no support for a time period detection during the connection setup in a non-TCP connection”).

I further note that Patent Owner does not attempt to show written description support in the ’454 application for the limitation of claim 16 reciting “the set up packet is not a synchronize (SYN) packet.” I do not believe the ’454 application provides written description support for this negative limitation because the ’454 application does not mention SYN packets at all. *See Novartis Pharmaceuticals Corporation v. Accord Healthcare, Inc.*, 38 F.4th 1013, 1017 (2022) (addressing written description support for a negative limitation and noting that “[s]ilence is generally not disclosure”). The disclosure of SYN packets appears to have been introduced in U.S. Patent Application Number 15/694,802, filed on September 3, 2017, which issued as U.S. Patent 9,923,995 B1 (Ex. 1010). The ’454 application does state that “RFC 793 describes a ‘three-way handshake’ for establishing a TCP connection,” and the ’454 application incorporates RFC 793 by reference. Ex. 1038, 120 (¶ 2), 145 (¶ 76).

RFC 793 mentions “SYN” segments that are used as part of a handshake to establish a TCP connection. Ex. 1008, 31–32. RFC 793’s disclosure, however, cannot provide written description support for the limitation reciting “the set up packet is not a synchronize (SYN) packet” because the Patent Rules provide that “[e]ssential material,” which “is material that is necessary to . . . [p]rovide a written description of the claimed invention,” may only be incorporated “by reference to a U.S. patent or U.S. patent application publication, which patent or patent application publication does not itself incorporate such essential material by reference.” 37 C.F.R. 1.57(d).

For all of these reasons, I do not believe Patent Owner has met its burden of producing evidence and argument to show that the ’454 application “contains a written description that supports all the limitations of” the challenged claims. *See Tech. Licensing*, 545 F.3d at 1327.

I have reviewed Petitioner’s obviousness challenges, and I believe they show a reasonable likelihood that the petitioner would prevail. I favor instituting a trial, during which Patent Owner would have the opportunity to produce evidence and argument to show that the ’454 application provides written description support for all limitations of the challenged claims.

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