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Paper 11
Entered: December 8, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,
Petitioner,

v.

JENAM TECH, LLC,
Patent Owner.

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IPR2023-00927
Patent 10,986,217 B1

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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, 6, 12, 14, 17, and 20 of U.S. Patent No. 10,986,217 B1 (Ex. 1001, "the '217 patent"). Paper 1 ("Pet."). Jenam Tech, LLC ("Patent Owner") filed a Preliminary Response. Paper 9 ("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 Petitioner, the '217 patent is asserted in *Jenam Tech, LLC v. Google, LLC*, Case No. 4:22-cv-02837-JST (N.D. Cal.). Pet. 1; *see also* Paper 5 (Patent Owner's Mandatory Notices) (listing the case as a related matter). According to Patent Owner, there are twenty other matters that "may affect, or may be affected by" institution of *inter partes* review here:

- *Jenam Tech, LLC v. Google, LLC*, Case No. 4:21-cv-07994-JST (N.D. Cal.)
- *Jenam Tech, LLC v. Google, LLC*, Case No. 4:22-cv-02836-JST (N.D. Cal.)
- *Jenam Tech, LLC v. Google, LLC*, Case No. 4:22-cv-02838-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*, IPR2023-00925 (PTAB)
- *Google LLC v. Jenam Tech, LLC*, IPR2023-00926 (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 '217 Patent*

The '217 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 2:3–11. 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 2:26–39. 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 '217 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 '217 patent purportedly addresses the need to share information for detecting an idle TCP connection. *Id.* at 2:48–50.

### *C. Claims*

Of the challenged claims, only claim 1 is independent.

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:

receive first information on which at least a first duration for detecting a first type of time period is based;

generate a first packet including a first parameter field identifying first metadata for use in determining a second duration for detecting the first type of time period;

set up a first connection, by sending, from a first node to a second node, the first packet to provide the first metadata to the second node, for use by the second node in determining the second duration for detecting the first type of time period;

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

in response to detecting, based on the second duration and by the first node after the first duration is changed to the second duration, a second time period of the first type of time period, at least partially close the first 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 first time period and the second time period are started in response to at least one of a received packet or a sent packet,

during the at least portion of the first connection including the at least portion of the first connection set up, the detection of the first time period of the first type of time period is based on the first duration, by being based on whether, during the first duration after the first time period is started, no packet is received and processed to keep the first connection active, and

after the first duration is changed to the second duration, the detection of the second time period of the first type of time period is based on the second duration, by being based on whether, during the second duration after the second time period is started, no packet is received and processed to keep the first connection active;

wherein the apparatus is configured such that the first connection set up further includes, in addition to

(a-1) sending the first packet:

(a-2) after sending the first packet and without any other communication between the first node and the second node after (a-1) and before (a-2), receiving, at the first node from the second node, a second packet, and

(a-3) after receiving the second packet and without any other communication between the first node and the second node after (a-2) and before (a-3), sending, from the first node to the second node, a third packet.

Ex. 1001, 21:29–22:25.

*D. Evidence*

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

Petitioner also relies on the Declaration of Dr. Bill Lin. Ex. 1002.

*E. Asserted Ground*

Petitioner asserts that claims 1, 6, 12, 14, 17, and 20 are unpatentable on the following ground. Pet. 8.

| Claim(s) Challenged | 35 U.S.C. § | Reference(s)/Basis |
|---|---|---|
| 1, 6, 12, 14, 17, 20 | 103[1] | Morris, SIP |

[1] 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 II, *infra*.

# 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 14, 2021—the actual filing date of the application that issued as '217 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.

## *B. Claim 1*

### *1. The First Connection*

Claim 1 recites, in part, "set up *a first connection*, by sending, from a first node to a second node, the first packet . . . ." Ex. 1001, 21:40–44 (emphasis added).

#### *a. The Petition*

Petitioner argues that the priority applications do not provide written-description support for the recited "first connection." Pet. 64–78. Petitioner argues that the first connection covers both TCP connections and connections that do not use TCP at all. *Id.* at 64–65. According to Petitioner, Patent Owner's infringement claim chart from the related district-court case

maps the first connection to a UDP-based QUIC connection.[2] *Id.* at 65 (citing Ex. 1032, 15–18; Ex. 1002 ¶¶ 159–161). Petitioner argues that UDP is a protocol that does not use TCP at all. *Id.* Petitioner adds that claim 20 depends from claim 1 and covers a TCP extension. *Id.* (citing Ex. 1001, 23:42–46).

*b. Preliminary Response*

Patent Owner disagrees that the claim encompasses connections that do not use TCP at all. *See, e.g.*, Prelim. Resp. 13. According to Patent Owner, claim 1 expressly recites features of TCP. *Id.* Even so, Patent Owner argues that the claimed connection is adequately supported because the '454 application discloses sending packets via a TCP or TCP-variant connection. *Id.* at 13, 16, 23 (citing Ex. 1038, 121, 145, 147, 160 (corresponding to ¶¶ 3, 76, 80, 114 of the '454 application)).[3]

For the reasons that follow, we agree with Patent Owner that the '454 application provides sufficient written-description support for the first connection recited in claim 1. *See id.*

*c. Analysis*

Although Petitioner has the ultimate burden of persuasion to prove unpatentability, Patent Owner must show that the claims are entitled to a

[2] UDP stands for User Datagram Protocol. Ex. 1002 ¶ 56.
[3] Patent Owner quotes what it believes is paragraph 76 of the '454 application, but the quoted paragraph is slightly different from paragraph 76 of the '454 application. *Compare* Prelim. Resp. 13, *with* Ex. 1038, 145 (¶ 76). Patent Owner also quotes paragraph 114 of the '454 application but cites it as paragraph 115. *Compare* Prelim. Resp. 16, *with* Ex. 1038, 41 (¶ 114). In the remainder of the decision, 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").

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 (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 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.*

Petitioner's arguments primarily focus on UDP, which is not expressly recited in the claims. *See* Pet. 65 (citing Ex. 1032, 15–18; Ex. 1002 ¶ 159). To be sure, the '454 application's specification lacks an example that uses a UDP-based QUIC connection. *See* Ex. 1038. But, even if such an embodiment falls within the scope of the challenged claim, 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 (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.*

Claim 1 only requires a "first connection." Ex. 1001, 21:40–44. But, to the extent that TCP variants and extensions fall within the scope of the claimed connection, the '454 application provides specific examples of what a TCP extension or variant is. For instance, 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 this example is insufficient to satisfy the written-description requirement. Pet. 70–71. We disagree for two principal reasons. First, the paragraph 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 is based on a narrow reading that 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. But, as discussed above, the information can be located in other parts of the packet not specified by the RFC. *See id.* ¶ 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 "first connection," as recited in claim 1, that at least encompasses these variations. *See* Prelim. Resp. 13, 16, 23 (citing Appl. '454 ¶¶ 3, 76, 80, 114).

We also disagree with Petitioner's characterization of the '454 application. For example, Petitioner argues that "[n]ot once does the '454 application refer to a protocol that is not TCP (e.g., non-TCP) or a non-TCP connection/packet." Pet. 67 (citing Ex. 1002 ¶ 165; Ex. 1038, 99–106, 111–118, 120–165). Petitioner argues that the '454 application is limited to TCP embodiments. *Id.* at 70 (citing Ex. 1002 ¶¶ 171–174; Ex. 1038, 147 (Appl. '454 ¶ 80)). According to Petitioner, "the '454 application only discloses setting up a TCP connection (i) using the three-way handshake described in RFC 793 or (ii) in other unspecified ways." *Id.* at 67–68 (citing Appl. '454 ¶ 76; Ex. 1002 ¶¶ 166–168).

But, as discussed above, 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. 67 (citing Ex. 1002 ¶ 164); *id.* at 72–77 (citing Ex. 1044 ¶¶ 8–17; Ex. 1045 ¶¶ 12–13; Ex. 1046 ¶¶ 10–13, Ex. 1047 ¶¶ 10–13; Ex. 1048 ¶¶ 10–13). Petitioner also argues that the materials incorporated by reference do not support the non-TCP features encompassed by the claim. *Id.* at 71–72. 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.

*d. Gentry Gallery*

The Petition cites *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005) in discussing the '802 application. *See, e.g.*, Pet. 74–75. In response, Patent Owner argues that the claim falls within an exception of *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473 (Fed. Cir. 1998). *See* Prelim. Resp. 20.[4]

[4] 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.*

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 in Section II.B.1.c. Also, the facts of this case differ from those in *LizardTech*, 424 F.3d at 1345–47. 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. 74–75.

Thus, the '217 patent and its priority applications provide adequate written-description support for non-TCP features encompassed by the claimed "first connection."

*2. Detecting a Time Period During Set-Up*

Claim 1 recites, in part, "in response to detecting, based on the first duration and by the first node during at least a portion of the first connection *including at least a portion of the first connection set up*, a first time period

of the first type of time period, at least partially close the first connection." Ex. 1001, 21:45–50 (emphasis added).

Petitioner refers to this limitation as the time-period-detection-during-connection-setup feature. Pet. 78. According to Petitioner, this feature is not supported by the '217 patent's written description or its priority applications. *Id.* at 78–79. 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 78 (citing Ex. 1002 ¶¶ 197–198). Petitioner argues that this is consistent with Patent Owner's infringement contentions. *Id.* at 78–79 (citing Ex. 1032, 10–11, 19–22).

Petitioner argues that the written description discloses detecting such time periods after, not during, the setup of a TCP connection. *Id.* at 82. 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.* at 82–83.

Patent Owner disagrees with Petitioner's reading of the term "connection." Prelim. Resp. 29. It is undisputed that there is written-description support for detecting a time period during a connection. *See id.*; Pet. 82. But, in Patent Owner's view, a connection includes the setup—at least in the context of the '217 patent. Prelim. Resp. 29–30 (citing Appl. '454 ¶¶ 52, 76, 92, 100[5]).

We agree with Patent Owner that the cited parts of the '454 application show that the challenged patent (1) describes connections as

[5] Patent Owner quotes paragraph 100 from the '454 application but cites it as paragraph 101. Prelim. Resp. 30.

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. 30. 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. 30.

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. 83–84 (citing Ex. 1002 ¶¶ 203–205; 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. 83–84), the '454 application explains that patterns of message exchange for setting up a TCP 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. 81 (citing Ex. 1004, 229 (Appl. '454 ¶ 81); Ex. 1002 ¶ 202). We disagree. Patent Owner identifies several places where the '454 application discloses detecting a time out. *See* Prelim. Resp. 29–30 (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. 29–30.

*3. 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. Claims 6, 12, 14, 17, and 20*

Claims 6, 12, 14, 17, and 20 depend from independent claim 1. Petitioner argues that these claims lack written description support for the reasons discussed in connection with claim 1. Pet. 85 (citing Ex. 1002 ¶ 209). For the reasons discussed in Section II.B, we disagree. Petitioner has not shown a reasonable likelihood of prevailing in showing that claims 6, 12, 14, 17, and 20 are unpatentable because Morris is not prior art.

## III. CONCLUSION

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

## IV. ORDER

It is

ORDERED that the Petition is *denied*.

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Paper 11
Entered: December 8, 2023

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Patent 10,986,217 B1

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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 10,986,217 ("'217 patent") was filed on January 14, 2021. Ex. 1001, code (22). The '217 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 '217 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 '217 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 '[217] 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 '217 patent. Prelim. Resp. 9–39. "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 '[217]

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. Patent Owner "disputes Petitioner's underlying assumption that the claim 'encompasses protocols that ***do not utilize*** TCP ***AT ALL***.'" Prelim. Resp. 13. Patent Owner argues that the "handshake" disclosure of the '454 application shows that claim 1 encompasses a feature of TCP. Prelim. Resp. 13.[6] Specifically, Patent Owner argues the following:

> Claim 1 (for example) encompasses (using broad claim elements) an apparatus to "set up a first connection, by sending, from a first node to a second node, the first packet." Thus, the claims include claim elements that do indeed encompass (albeit broadly) at least one or more features of TCP. Specifically, the claimed "packet" to "set up a first connection" are articulated broad enough to cover one or more features of the aforementioned "handshake" for "establishing a TCP connection" required by RFC 793 (TCP). In other words, even if the disputed TCP phrase alone, in a vacuum, has a breadth that "encompasses protocols that do not utilize TCP AT ALL" (emphasis added), Claim 1, in its entirety and inclusive of the other claim elements noted above, does not encompass "protocols that do not utilize TCP AT ALL" (emphasis added). Again, this is because such other claim elements indeed encompass, broadly at a high-level, at least one or more features of TCP.

Prelim. Resp. 14 (emphasis omitted).

[6] As the majority notes (Maj. Op. 8 n.3), Patent Owner misquotes paragraph 76 of the '454 application.

I agree with Patent Owner that the "first connection" of claim 1 encompasses protocols that have TCP features because the '454 application is directed to TCP. Ex. 1038, 122 (¶ 8) ("Methods and systems are described for sharing information for detecting an idle TCP connection."). Thus, I agree with Patent Owner's assertion that "the claimed 'packet' to 'set up a first connection' [is] articulated broad[ly] enough to cover one or more features of the aforementioned 'handshake' for 'establishing a TCP connection' required by RFC 793 (TCP)." *See* Prelim. Resp. 14. But the scope of claim 1 appears also to encompass a "packet" to "set up a first connection" that does not involve the RFC 793 handshake. This is because claim 15, which depends from claim 1, recites that "the first packet is not a synchronize (SYN) packet."

The '454 application does not mention a SYN packet at all, but the '217 patent discusses SYNs in the following passage:

> In an aspect, an ITP header may be included in a packet exchanged during setup of TCP connection. RFC 793 describes a "three-way handshake" for establishing a TCP connection. The synchronization requires each side to send it's own initial sequence number and to receive a confirmation of it in acknowledgment from the other side. Each side must also receive the other side's initial sequence number and send a confirming acknowledgment.
>
> 1) A→B SYN my sequence number is X
> 2) A←B ACK your sequence number is X
> 3) A←B SYN my sequence number is Y
> 4) A→B ACK your sequence number is Y
>
> Because steps 2 and 3 can be combined in a single message this is called the three way (or three message) handshake.

Ex. 1001, 12:4–18. This passage suggests that a SYN packet is necessary to establish a TCP connection, and the following passage from RFC 793 confirms this:

> For a connection to be established or initialized, the two TCPs must synchronize on each other's initial sequence numbers. This is done in an exchange of connection establishing segments carrying a control bit called "SYN" (for synchronize) and the initial sequence numbers. As a shorthand, segments carrying the SYN bit are also called "SYNs."

Ex. 1008, 31; *see also* Ex. 1008, 32 ("A three way handshake is necessary because sequence numbers are not tied to a global clock in the network, and TCPs may have different mechanisms for picking the ISN's.").

Thus, the record evidence shows that SYN packets are necessary to establish a TCP connection. The fact that a claim dependent from claim 1 prohibits the first packet from being a SYN packet suggests to me that claim 1 encompasses "a protocol that does not utilize TCP at all." *See* Pet. 65. On this record, I believe that claim 1, as drafted, is as broad as Petitioner asserts.

I do not believe the '454 application supports the breadth of this claim. The '454 application states that following:

> In an aspect, an ITP header may be included in a packet exchanged during setup of TCP connection. RFC 793 describes a "three-way handshake" for establishing a TCP connection. *Other message exchanges may be used in setting up a TCP connection as those skilled in the art will understand. Such other exchanges are not currently supported by the TCP as described in RFC 793*. 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. Including an ITP header may be restricted to packets exchanged in connection setup, excluded from packets exchanged during connection establishment, or

> allowed in one or more packets exchanged during connection establishments and in packets exchanged after connection setup.

Ex. 1038, 145 (¶ 76) (emphasis added). I do not view these unspecified message exchanges, which were not even supported at the time of the '454 application, to provide sufficient evidence, at this stage, to show that the inventor possessed all protocols. Indeed, it is not at all clear to me why a person of ordinary skill in the art would have understood that message exchanges other than the three way handshake "may be used in setting up a TCP connection" when RFC 793 expressly states that the three way handshake is required. *See* Ex. 1008, 31–32 (discussed above). Furthermore, to the extent this passage shows that the inventor possessed "[o]ther message exchanges," such exchanges would have been for "setting up a TCP connection," not for connections of any protocol. Ex. 1038, 145 (¶ 76).

Patent Owner also relies on the '454 application's disclosure 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 ("[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."). On this record, I do not think this disclosure supports the breadth of claim 1 as covering protocols that do not utilize TCP at all 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 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)), variance from RFC 793 in itself does not convey possession of protocols that do not utilize TCP at all. 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.

As the Federal Circuit has stated, "[t]he 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." *Amgen Inc. v. Hoechst Marion Roussel Inc.*, 314 F.3d 1313, 1330 (Fed. Cir. 2003). On this record, I do not believe Patent Owner has met its burden of producing evidence and argument to show written description support in the '454 application for claim 1.

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 "contains a written description that supports all the limitations of" the challenged claims. *See Tech. Licensing*, 545 F.3d at 1327.

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