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Paper 21
Date: September 10, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUNIPER NETWORKS, INC. and PALO ALTO NETWORKS, INC.,
Petitioner,

v.

PACKET INTELLIGENCE LLC,
Patent Owner.

IPR2020-00336
Patent 6,665,725 B1

Before STACEY G. WHITE, CHARLES J. BOUDREAU, and JOHN D. HAMANN, *Administrative Patent Judges.*

WHITE, *Administrative Patent Judge*.

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

I. INTRODUCTION

Juniper Networks, Inc. and Palo Alto Networks, Inc. (collectively "Petitioner") filed a Petition requesting an *inter partes* review of claims 10, 12, 13, 16, and 17 ("the challenged claims") of U.S. Patent No. 6,665,725 B1 (Ex. 1002, "the '725 patent"). Paper 3 ("Pet."). Packet Intelligence LLC and Packet Intelligence Holdings LLC (collectively "Patent Owner") filed a Preliminary Response.[1] Paper 7 ("Prelim. Resp."). With our authorization (Paper 8), Petitioner filed a Preliminary Reply. Paper 9 ("Prelim. Reply") and Patent Owner filed a Preliminary Sur-Reply. Paper 10 ("Prelim. Sur-Reply").

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a). An *inter partes* review may be instituted if "the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a).

The following findings of fact and conclusions of law are not final, but are made for the sole purpose of determining whether Petitioner meets the threshold for initiating review. Any final decision shall be based on the full trial record, including any response timely filed by Patent Owner. Any arguments not raised by Patent Owner in a timely filed response may be deemed waived, even if they were presented in the Preliminary Response.

[1] Patent Owner filed its Preliminary Response on June 12, 2020. We previously granted Patent Owner's unopposed request for an extension of time due to the COVID-19 pandemic in regards to the filing of its Preliminary Response thereby extending the due date for its Preliminary Response to June 12, 2020. Ex. 3001. Thus, Patent Owner's Preliminary Response is timely.

Upon consideration of the preliminary papers, for the reasons that follow and on this record, we are persuaded that Petitioner demonstrates a reasonable likelihood of prevailing in showing the unpatentability of at least one of the challenged claims. Accordingly, we institute an *inter partes* review on all challenged claims over all grounds asserted in the Petition.

A. Related Matters

The parties identify two district court litigations as related matters that involve the '725 patent: *Packet Intelligence LLC v. Juniper Networks, Inc.*, 3:19-cv-04741 (N.D. Cal.) and *Palo Alto Networks, Inc. v. Packet Intelligence LLC*, No. 3:19-cv-02471 (N.D. Cal). Pet. 1; Paper 6, 2. The parties also identify as related matters *Packet Intelligence LLC v. NetScout Systems, Inc.*, No. 2:16-cv-230-JRG (E.D. Tex.) and *Packet Intelligence LLC v. NetScout Systems, Inc.*, No. 19-2041 (Fed. Cir.).[2] Pet. 1; Paper 6, 2.

In addition, the parties identify the following matters pending before the Board, challenging claims of patents related to the '725 patent: IPR2020-00335, IPR2020-00337, IPR2020-00338, IPR2020-00339, IPR2020-00485, and IPR2020-00486.[3] Pet. 1; Paper 6, 2–3. Lastly, the parties collectively identify the following matters, no longer pending before the Board, as being

[2] A copy of the Final Judgment in Case No. 2:16-cv-00230, dated September 7, 2018, has been filed by Patent Owner in the record of this proceeding as Exhibit 2059, and a copy of the Decision of the U.S. Court of Appeals for the Federal Circuit in Appeal No. 19-2041, dated July 14, 2020, has been filed by Patent Owner in the record of this proceeding as Exhibit 2060.

[3] Decisions denying institution of *inter partes* review in IPR2020-00335 and IPR2020-00485 were entered on August 27, 2020, and a decision instituting *inter partes* review in IPR2020-00338 was entered on September 9, 2020. Decisions on the petitions in the other cited cases will be entered concurrently with the instant Decision.

related: (i) IPR2017-00862, IPR2017-00863, and IPR2019-01291, which challenged certain claims of the '725 patent; and (ii) IPR2017-00450, IPR2017-00451, IPR2017-00629, IPR2017-00630, IPR2017-00769, IPR2019-01289, IPR2019-01290, IPR2019-01292, and IPR2019-01293, which challenged claims of patents related to the '725 patent. Pet. 2; Paper 6, 3–5.

B. The '725 Patent

The '725 patent is titled "Processing Protocol Specific Information in Packets Specified by a Protocol Description Language." Ex. 1002, code (54). The '725 patent describes a method of performing protocol specific operations on a packet passing through a connection point on a computer network. *Id.* at 3:61–63. The method includes receiving the packet and receiving a set of protocol descriptions for protocols that may be used in the packet. *Id.* at 3:66–4:2. The method further includes performing the protocol specific operations on the packet specified by the set of protocol descriptions based on the base protocol of the packet and the children of the protocols used in the packet. *Id.* at 4:8–12. The protocol specific operations include parsing and extraction operations to extract identifying information, and state processing operations defined for a particular state of a conversational flow of the packet. *Id.* at 4:17–21.

Figure 1 of the '725 patent is reproduced below.

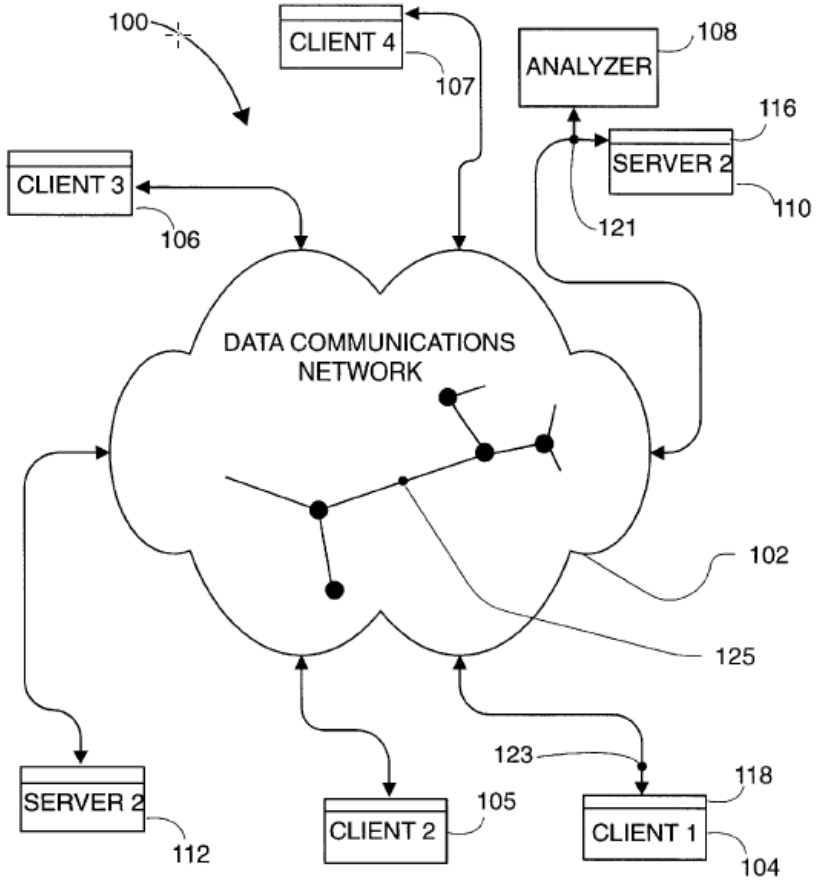

FIG. 1

Figure 1 illustrates a network in which a monitor is connected to analyze packets passing at a connection point. *Id.* at 4:30–32. System 100 illustrated in Figure 1 has includes computer network 102 that communicates packets between clients 104–107 and servers 110 and 112. *Id.* at 5:63–66. Monitor 108 examines the packets passing in either direction past its connection point 121 and can elucidate what application programs are associated with each packet. *Id.* at 6:1–5. Network activity (for example, an application program run by client 104 communicating with another running on server 110) will produce an exchange of a sequence of packets over network 102 that is characteristic of the respective programs and of the network protocols. *Id.* at 6:18–23. The packets are subsequently

parsed then analyzed in the context of various protocols, for example, the transport through the application session layer protocols for packets of a type conforming to an International Standardization Organization ("ISO") layered network model. *Id.* at 6:27–31.

Figure 3 of the '725 patent is reproduced below.

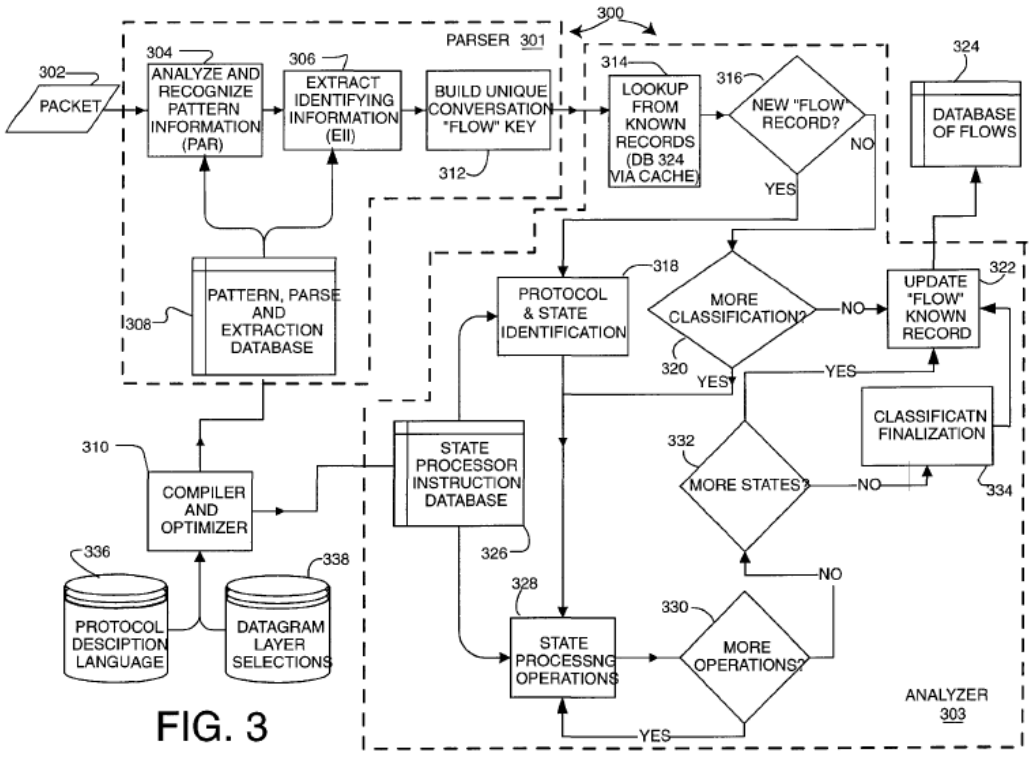

FIG. 3

Figure 3 is a functional block diagram of a process embodiment of the '725 patent's system, which utilizes the packet monitor shown in Figure 1. *Id.* at 4:45–48. More specifically, Figure 3 shows network packet monitor 300, similar to monitor 108 in Figure 1. *Id.* at 8:48–50. Packet 302 is examined, and the packet is evaluated, for example in an attempt to determine its characteristics, *e.g.*, all the protocol information in a multi-level model, including what server application produced the packet. *Id.* at 8:51–57. Monitor 300 further includes: (1) compiler and optimizer 310 that initializes monitor 300 to generate the operations necessary to occur on packets of

different types; (2) parser 301 that parses and extracts selected portions of packets to generate an identifying signature; and (3) analyzer 303 that analyzes the packets. *Id.* at 8:64–9:3.

The '725 patent explains that a flow is a stream of packets being exchanged between any two addresses in the network. *Id.* at 9:9–9:10. As described by the '725 patent, when compiler and optimizer 310 executes it generates two sets of internal data structures: parsing/extraction operations 308 and state patterns and processes 326. *Id.* at 9:42–44, 53–54. Parsing/extracting operations 308 includes information describing how to determine a set of protocol dependent extraction operations from data in the packet that indicate a protocol used in the packet. *Id.* at 9:48–52. State patterns and processes 326 include different states and state transitions that occur in different conversational flows, and describe the task of analyzing a conversational flow. *Id.* at 9:54–60.

The '725 patent further describes that packet 302 is input into a packet buffer, where pattern recognition process 304 analyzes and recognizes patterns in the packets. *Id.* at 10:3–7. Subsequently, extraction process 306 extracts selected parts of the packet, including identifying information from the packet as required for recognizing the packet as part of a flow. *Id.* at 10:19–25. The extracted information subsequently is processed in block 312 to build a unique flow signature (*i.e.*, "key") for the flow. *Id.* at 10:25–27. The extracted information from the packet (*i.e.*, "parser record") is subsequently passed onto lookup process 314 which looks in an internal data store of records of known flows that the system has already encountered. *Id.* at 10:58–60. At block 316, lookup process 314 decides whether the packet belongs to a known flow as indicated by the presence of a flow-entry matching the flow in a database of known flows 324. *Id.* at 10:60–65.

C. Illustrative Claims

Of the challenged claims, claims 10 and 17 are independent. Claims 12, 13, and 16 depend from claim 10. Claims 10 and 17 are illustrative of the claimed subject matter and are reproduced below:

> 10. A method of performing protocol specific operations on a packet passing through a connection point on a computer network, the method comprising:
>
> (a) receiving the packet;
>
> (b) receiving a set of protocol descriptions for a plurality of protocols that conform to a layered model, a protocol description for a particular protocol at a particular layer level including:
>
> (i) if there is at least one child protocol of the protocol at the particular layer level, the-one or more child protocols of the particular protocol at the particular layer level, the packet including for any particular child protocol of the particular protocol at the particular layer level information at one or more locations in the packet related to the particular child protocol,
>
> (ii) the one or more locations in the packet where information is stored related to any child protocol of the particular protocol, and
>
> (iii) if there is at least one protocol specific operation to be performed on the packet for the particular protocol at the particular layer level, the one or more protocol specific operations to be performed on the packet for the particular protocol at the particular layer level; and
>
> (c) performing the protocol specific operations on the packet specified by the set of protocol descriptions based on the base protocol of the packet and the children of the protocols used in the packet,
>
> wherein the protocol specific operations include one or more parsing and extraction operations on the packet to extract selected portions of the packet to form a function of the

selected portions for identifying the packet as belonging to a conversational flow.

Ex. 1002, 96:24–57.[4]

17. A method of performing protocol specific operations on a packet passing through a connection point on a computer network, the method comprising:

(a) receiving the packet;

(b) receiving a set of protocol descriptions for a plurality of protocols that conform to a layered model, a protocol description for a particular protocol at a particular layer level including:

(i) if there is at least one child protocol of the protocol at the particular layer level, the one or more child protocols of the particular protocol at the particular layer level, the packet including for any particular child protocol of the particular protocol at the particular layer level information at one or more locations in the packet related to the particular child protocol,

(ii) the one or more locations in the packet where information is stored related to any child protocol of the particular protocol, and

(iii) if there is at least one protocol specific operation to be performed on the packet for the particular protocol at the particular layer level, the one or more protocol specific operations to be performed on the packet for the particular protocol at the particular layer level; and

(c) performing the protocol specific operations on the packet specified by the set of protocol descriptions based on the base protocol of the packet and the children of the protocols used in the packet,

wherein the packet belongs to a conversational flow of packets having a set of one or more states, and wherein the protocol specific operations include one or more state

[4] In a Certificate of Correction, "In" was changed to "in" at column 96, line 38. Ex. 1002, Certificate of Correction.

> processing operations that are a function of the state of the conversational flow of the packet, the state of the conversational flow of the packet being indicative of the sequence of any previously encountered packets of the same conversational flow as the packet.

Id. at 98:1–37.

Much of the claim language of claims 10 and 17 is identical. However, while claim 10 recites "protocol specific operations . . . for identifying the packet as belonging to a conversational flow," claim 17 instead recites "one or more state processing operations that are a function of the state of the conversational flow of the packet, the state of the conversational flow of the packet being indicative of the sequence of any previously encountered packets of the same conversational flow."

D. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 10):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
10, 12, 13, 16, 17	103(a) [5]	Riddle,[6] Baker[7]
10, 12, 13, 16, 17	103(a)	Riddle, Baker, Yu[8]
10, 12, 13, 16, 17	103(a)	Riddle, Baker, RFC1945[9]

[5] The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the '725 patent issued from an application filed before March 16, 2013, we apply the pre-AIA version of the statutory basis for unpatentability.
[6] U.S. Patent No. 6,412,000 B1 (issued June 25, 2002) (Ex. 1008).
[7] PCT Published Application No. WO 97/23076 (published June 26, 1997) (Ex. 1013).
[8] U.S. Patent No. 6,625,150 B1 (issued Sept. 23, 2003) (Ex. 1011).
[9] T. Berners-Lee et al., *Hypertext Transfer Protocol -- HTTP/1.0*, Request for Comments 1945, Network Working Group (May 1996) ("RFC1945") (Ex. 1010).

Pet. 16–96. Petitioner submits the Declaration of Dr. Jon B. Weissman (Ex. 1006) in support of its arguments.

II. DISCUSSION

A. Discretionary Denial Under 35 U.S.C. § 314(a)

Institution of an *inter partes* review is discretionary. Section 314(a) of title 35 of the United States Code provides that "[t]he Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." The Supreme Court of the United States ("Supreme Court") has explained that, because § 314 includes no mandate to institute review, "the agency's decision to deny a petition is a matter committed to the Patent Office's discretion." *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016); *see also Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (explaining that under § 314(a), "the PTO is permitted, but never compelled, to institute an IPR proceeding"). The Director has delegated his authority under § 314(a) to the Board. 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director.").

As the November 2019 Consolidated Trial Practice Guide[10] ("CTPG") noted, the Leahy-Smith America Invents Act ("AIA") was "designed to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs." CTPG at 56 (quoting H.R. Rep. No. 112-98, pt. 1, at 40 (2011), 2011

[10] Available at https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf.

U.S.C.C.A.N. 67, 69 (stating that post grant reviews were meant to be "quick and cost effective alternatives to litigation")) (citing S. Rep. No. 110-259, at 20 (2008)). The Board has recognized these goals of the AIA, but also has "recognize[d] the potential for abuse of the review process by repeated attacks on patents." *Gen. Plastic Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16−17 (PTAB Sept. 6, 2017) (precedential as to § II.B.4.i) ("*General Plastic*").

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) to deny the Petition for two reasons: first, because there are two co-pending district-court litigations that "have advanced into the claim construction process and are into discovery regarding infringement and validity issues"; and second, because "the instant petition is a serial petition attacking the same patents and claims that have been challenged in prior petitions." Prelim. Resp. 27–38; Prelim. Sur-Reply 1. Petitioner disagrees. Pet. 5; Prelim. Reply 1–10.

1. Parallel District Court Proceedings

As noted above, there are two co-pending district-court litigations involving the '725 patent and the same parties: *Packet Intelligence LLC v. Juniper Networks, Inc.*, 3:19-cv-04741 (N.D. Cal.) and *Palo Alto Networks, Inc. v. Packet Intelligence LLC*, No. 3:19-cv-02471 (N.D. Cal) (collectively, "the co-pending litigations"). *See supra* § I.A. Pointing to these co-pending litigations, Patent Owner argues that institution in this proceeding would not be an effective alternative to those litigations, nor an efficient use of the Board's limited resources. Prelim. Resp. 1, 27–34.

In determining whether to exercise discretion to deny institution under § 314(a) on behalf of the Director for reason of parallel court proceeding(s), we are guided by the Board's precedential decisions in *NHK Spring Co. v.*

Intri-Plex Techs., Inc., IPR2018-00752, Paper 8 at 19–20 (PTAB Sept. 12, 2018) ("*NHK*") and *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 at 5 (PTAB Mar. 20, 2020) ("*Fintiv*"). In *NHK*, the Board found that the "advanced state of the district court proceeding" was a "factor that weighs in favor of denying" the petition under § 314(a). *NHK*, Paper 8 at 20. The Board determined that "[i]nstitution of an *inter partes* review under these circumstances would not be consistent with 'an objective of the AIA . . . to provide an effective and efficient alternative to district court litigation.'" *Id.* (citing *Gen. Plastic* at 16–17).

In *Fintiv*, the Board explained that "cases addressing earlier trial dates as a basis for denial under *NHK* have sought to balance considerations such as system efficiency, fairness, and patent quality." *Fintiv*, Paper 11 at 5. *Fintiv* sets forth six non-exclusive factors for determining "whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding." *Id.* at 6. These factors consider:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
>
> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
>
> 3. investment in the parallel proceeding by the court and the parties;
>
> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

Id. at 5–6. We discuss the parties' arguments in the context of considering the above factors. In evaluating the factors, we take a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review. *Id.* at 6.

a. Whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted

Patent Owner argues that "this factor strongly favors discretionary denial" because Petitioner has not moved for a stay of the co-pending litigations and because the District Court would be unlikely to grant a stay in any event. Prelim. Resp. 29–30. As to the latter, Patent Owner directs us to an exchange that occurred during a joint case-management conference between counsel for Petitioner and the District Court. *Id.* (citing Ex. 2005, 10–11). Patent Owner argues that the District Court's statement to the Petitioner to "[s]ave your money" shows that the district court would be unlikely to grant a stay should Petitioner move for one. *Id.* (emphasis omitted). Petitioner contends that Patent Owner mischaracterizes the exchange, and that the District Court simply advised Petitioner that it would not grant a motion to stay pre-institution. Prelim. Reply 4–5. On consideration of the parties' respective arguments and evidence, we find that Petitioner has the better position.

As Petitioner points out, the exchange between counsel for Petitioner and the District Court related to Petitioner's inquiry as to whether the District Court would be amenable to granting a motion to stay *pre-institution*. Prelim. Reply 4. Specifically, Petitioner asked about "fil[ing] a stay motion based on the filing of the IPRs not waiting until the petitions are ruled on." Ex. 2005, 10–11. The District Court indicated that, in the past, it "granted them sort of willy-nilly," but no longer does so. *Id.* We agree with

Petitioner that this exchange relates to the District Court's inclination to grant a stay based solely on filing a petition, not based on a decision whether or not to institute this proceeding. Prelim. Reply 4. Accordingly, we find that the cited exchange has little probative value with respect to the question of whether "evidence exists that [a stay] may be granted if a proceeding is instituted" under the first *Fintiv* factor.

Petitioner contends that the District Court would likely stay the co-pending litigations if this proceeding is instituted. Prelim. Reply 4–5. Petitioner contends that the district court "already stated in the prior [case-management conference] that institution of relevant IPRs[11] would result in a stay." *Id.* at 4 (citing Ex. 1084, 7–8 (case management conference of August 20, 2019)). Petitioner also contends that the District Court's inclination to grant stays is confirmed by two recent decisions granting motions to stay in *J&K IP Assets, LLC v. Armaspec, Inc.* (Case No. 17-cv-07308-WHO (N.D. Cal. Apr. 24, 2019)) and *Contour IP Holding, LLC v. GoPro* (2018 WL 6574188, *2–3 (N.D. Cal. Dec. 12, 2018)). *Id.* at 5 (citing Ex. 1098; Ex. 1099). Patent Owner argues that those decisions are inapt because the District Court's "recent activity concerning stays pending IPRs indicates that [it] will grant such a stay when agreed to by the parties." Prelim. Sur-Reply 3 (citing Ex. 2050). Patent Owner also argues that the District Court's statements during the case-management conference are not relevant because "that conference related to different IPRs that were filed less than two months after [Petitioner] filed its complaint in the co-pending

[11] During this case management conference, the district court was inquiring as to the status of IPR petitions filed by Nokia in July 2019 against some of the same patents being asserted in the parallel proceeding against petitioners here.

district court litigation." *Id.* at 2 (citing Ex. 2044; Ex. 2045; Ex. 2046; Ex. 2047; Ex. 2048; Ex. 2049). Here, however, the Petition was filed approximately nine months after the complaint was filed. *Id.*

We find that the record contains adequate evidence that the District Court may grant a stay upon institution. Specifically, after observing that "there are so many PTAB proceedings," the District Court stated that "if they are instituted . . . [t]his will cause a stay in the proceedings." Ex. 1084, 7:22–24, 8:12–14. We acknowledge that the District Court's statements are not specifically directed to this proceeding, because the case-management conference took place before the Petition was filed. *See id.* at 3:1 (setting forth a date of August 20, 2019). Even so, the District Court's statements provide some evidence that it *may* grant a stay upon institution considering all circumstances at the time the motion is filed. *Id.* at 8:15–18. This is all the first *Fintiv* factor asks.

For these reasons, we find that the first *Fintiv* factor does not support exercising our discretion to deny institution pursuant to § 314(a).

b. Proximity of the court's trial date to the Board's projected statutory deadline for a final written decision

A trial in *Palo Alto Networks, Inc. v. Packet Intelligence LLC* is currently scheduled to start on August 30, 2021. Ex. 2006, 3. A trial in *Packet Intelligence LLC v. Juniper Networks, Inc.* is currently scheduled to start on September 13, 2021. Ex. 2007, 2. The Board's projected statutory deadline for a final written decision is September 10, 2021. *See* 35 U.S.C. § 316(a)(11). Patent Owner argues that the second *Fintiv* factor "slightly favors discretionary denial" because "the first trial date is before the statutory deadline for a final written decision," and "the second only two days after the statutory deadline." Prelim. Resp. 31. In contrast, Petitioner

contends that this factor "weighs slightly against denial," because both trial dates are tentative due to the COVID-19 pandemic and because Patent Owner has previously expressed a "preference for a three-month gap" between the first trial in *Palo Alto Networks, Inc. v. Packet Intelligence LLC* and the second trial in *Packet Intelligence LLC v. Juniper Networks, Inc.* Prelim. Reply 5–6 (citing Ex. 2005, 4, 8). Patent Owner responds that it "currently does not intend to request an additional extension of the Juniper schedule." Prelim. Sur-Reply 4. Patent Owner also argues that "[t]o the extent the district court litigations incur additional delays due to COVID-19, it is likely that PTAB proceedings will incur similar delays." *Id.* at 4–5.

We determine that, on this record, the second *Fintiv* factor weighs against exercising our discretion to deny institution pursuant to § 314(a). Patent Owner's statement that it does not *currently intend* to seek an additional extension of time for the second trial is equivocal. And, although the first trial is currently scheduled to begin days before a final written decision is due, we find that it is more likely that the District Court will incur delays due to the COVID-19 pandemic than the Board. The Board has explained that, "barring exceptional circumstances, the Board adheres to a one-year statutory deadline prescribed by 35 U.S.C. § 316(a)(11) for entry of final decisions in instituted *inter partes* reviews." *Sand Revolution II, LLC v. Cont'l Intermodal Grp.-Trucking LLC*, IPR2019-01393, Paper 24 at 8–10 (PTAB June 16, 2020). And "even in the extraordinary circumstances under which the entire country is currently operating because of the COVID-19 pandemic, the Board continues to be fully operational" and meeting all statutory deadlines for final written decisions. *Id.* We note that during the same period, the District Court agreed to reschedule the first trial date, and,

unlike the Board, the District Court is not bound by a statutory deadline when considering further extensions or changed circumstances. Ex. 1093.

c. Investment in the parallel proceeding by the court and the parties

Patent Owner argues that the third *Fintiv* factor weighs in favor of discretionary denial because the parties have made "significant investments in discovery, contentions, and claim construction to date." Prelim. Resp. 33. Specifically, Patent Owner argues that the parties "have been engaged in extensive discovery and code review," "exchanged infringement and invalidity contentions," "exchanged claim construction positions and evidence," and filed "[o]pening claim construction briefs." *Id.* at 31–32. Petitioner contends that this factor does not weight in favor of discretionary denial because discovery "is far from complete." Prelim. Reply 7. For example, Petitioner contends, "[n]o fact witnesses or experts have been deposed" and "[t]here has been no expert discovery." *Id.*

We have reviewed the parties' respective arguments and evidence and determine that the third *Fintiv* factor weighs against exercising our discretion to deny institution pursuant to § 314(a). Although it is clear that the parties have invested significant effort in the discovery process, discovery is not yet complete. Prelim. Reply 7. We are also not aware of any decision by the District Court on claim construction. In light of these facts, the investment of time and effort that remains to bring the co-pending litigations to trial appears to far outweigh that which has already been invested.

d. Overlap between issues raised in the petition and in the parallel proceeding

Patent Owner argues that the fourth *Fintiv* factor "weighs strongly in favor of discretionary denial" because the co-pending litigations "will

address substantially the same invalidity theories." Prelim. Resp. 33. Patent Owner points out that Petitioner relies on the same prior-art references (i.e., Riddle, Baker, Yu, and RFC1945) in both this Petition and the co-pending litigations. *Id.* Petitioner contends that it is "premature to compare arguments, evidence, or issues" because Patent Owner has yet to respond to Petitioner's invalidity contentions in the co-pending litigations. Prelim. Reply 8. Petitioner also contends that it challenges claims in this Petition that it has yet to challenge in the co-pending litigations, and thus, "these IPRs will address the validity of claims, and likely whole patents, that the district court trials will not address." *Id.* Finally, Petitioner argues that this factor weighs against discretionary denial because Patent Owner has asserted its patents against network router sellers and manufacturers "and a public trial record of the important invalidity grounds in the Petition will reduce issues for the public." *Id.*

Upon consideration of the parties' respective arguments, as well as the possibilities that the district court may stay the related litigations or at least postpone the trial dates (*see supra* §§ II.A.1.a, II.A.1.b), we find that the fourth *Fintiv* factor weighs against exercising our discretion to deny institution pursuant to § 314(a). Specifically, we find there is a reasonable likelihood that the Board will address the overlapping validity issues prior to the district court reaching them at trial in either of the related litigations, thereby providing the possibility of simplifying issues for trial in those litigations. *See, e.g.*, *MED-EL Elektromedizinische Geraete G.m.b.H v. Sonova AG*, IPR2020-00176, Paper 13 at 15 (PTAB June 3, 2020) ("*MED-EL*") ("As to the fourth factor, the parties do not dispute that overlap exists between the invalidity issues in this case and in the district court. This overlap may inure to the district court's benefit, however, by simplifying

issues for trial should we reach our determination on the challenges raised in the Petition before trial.").

e. Whether the petitioner and the defendant in the parallel proceeding are the same party

There is no dispute that the Petitioner is the defendant in the co-pending litigations. Nonetheless, given the considerations discussed above with respect to factors one, two, and four, and the concomitant possibility that the Board will reach a decision on validity before the district court does so, thereby giving rise to potential estoppel against Petitioner, we regard this factor as neutral or weighing at most slightly in favor of denial. *See, e.g.*, *MED-EL* at 15 (concluding that factor 5 weighed slightly in favor of denial where the petitioner was also the defendant in the district court proceeding).

f. Other circumstances that impact the Board's exercise of discretion, including the merits

Patent Owner argues that the sixth *Fintiv* factor weighs in favor of discretionary denial because "none of Riddle, Yu, or RFC 1945 disclose the claimed 'conversational flows.'" Prelim. Resp. 34. For the reasons explained below, however, we preliminarily determine that the prior art teaches or suggests "conversational flows" as claimed. *See infra* §§ II.E, II.F. Thus, this factor does not support exercising our discretion to deny institution pursuant to § 314(a). *See also* Prelim. Reply 9.

g. Weighing the Factors

We agree with Petitioner that the factors on balance do not favor discretionary denial. Although no single factor is dispositive, the fact that the Board will issue its final written decision within one year of the date for institution under 35 U.S.C. § 316(a)(11)—whereas the trial dates for the co-pending litigations are currently set to occur around the same time as the due

date for the final written decision, and being so far distant from the date of this Decision, they are uncertain given the COVID-19 pandemic (factor two), and the fact that the District Court has indicated that institution of relevant IPRs may result in a stay (factor one) weigh heavily against discretionary denial. Of the remaining factors, we find only the fifth factor potentially to weigh slightly in favor of discretionary denial, and even then not sufficiently to tip the balance in our holistic review of all of the *Fintiv* factors. For these reasons, we decline to exercise our discretion to deny institution under § 314(a).

2. Serial Petitions

Patent Owner also argues that we should exercise discretion under 35 U.S.C. § 314(a) to deny the Petition because "the instant petition is a serial petition attacking the same patents and claims that have been challenged in prior petitions." Prelim. Resp. 28. In particular, Patent Owner argues that the Petition should be denied "because the Board has already considered prior petitions to the same patents and claims." *Id.* Petitioner contends that the Board should not deny institution, because this Petition is the first and only petition filed by Petitioner with respect to the '725 patent and because the Board has never issued a final written decision or addressed any of the grounds in this Petition. Pet. 5.

In *General Plastic*, the Board articulated a non-exhaustive list of factors to consider in evaluating whether to exercise discretion under § 314(a) to deny a petition that challenges a patent that was previously challenged before the Board. These factors are:

> 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.

Gen. Plastic at 9–10. These factors are "a non-exhaustive list" and "additional factors may arise in other cases for consideration, where appropriate." *Id.* at 16, 18; *see also* CTPG at 58 (stating that "[t]he *General Plastic* factors are also not exclusive" and that "[t]here may be other reasons" that "favor[] denying a petition").

a. Whether the same petitioner previously filed a petition directed to the same claims of the same patent

As Patent Owner points out, the challenged claims of the '725 patent were challenged previously in IPR2017-00862, filed by petitioner Sandvine Corp. and Sandvine Inc. ULC ("Sandvine"). Prelim. Resp. 35. The Board denied institution in that proceeding on July 26, 2017. IPR2017-00862 (Paper 8). Certain claims of the '725 patent were also challenged previously in IPR2019-01291 by petitioner Nokia Corp. and Nokia of America Corp. (collectively, "Nokia"). Before Patent Owner filed a preliminary response in

that proceeding, the Board granted the parties' joint motion to terminate. IPR2019-01291 (Paper 9).

Patent Owner acknowledges that the petitioners are not the same, but argues that "the claims challenged in the instant petition were already challenged in the prior petitions" and "the arguments Petitioner[] present[s] are substantially the same arguments the Board has already rejected numerous times." Prelim. Resp. 35.

We have considered Patent Owner's arguments but determine that the first *General Plastic* factor weighs against exercising our discretion to deny institution. Under this factor, we consider "whether the same petitioner previously filed a petition directed to the same claims of the same patent." *Gen. Plastic* at 16. Petitioner, as Patent Owner admits, has not previously filed any petition directed to the '725 patent. In addition, there is no evidence of record that Petitioner shares any relationship with Sandvine or Nokia. *See Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, -00063, -00084, Paper 11 at 9 (PTAB April 2, 2019) (precedential) (stating that "when different petitioners challenge the same patent, we consider any relationship between those petitioners when weighing the *General Plastic* factors").

b. 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

Patent Owner argues that the second *General Plastic* factor weighs in favor of denial because Petitioner knew of, or should have known of, prior-art references Riddle, Yu, and RFC1945 for many years before filing this Petition. Prelim. Resp. 36.

The second *General Plastic* factor relates to "whether a petitioner should have or could have raised the new challenges earlier." *Gen. Plastic*

at 18. Here, however, Patent Owner's arguments do not show any relationship between Petitioner and Sandvine or Nokia at the times Sandvine and Nokia filed their respective petitions. Thus, whether Petitioner knew of, or should have known of, the prior art relied upon in this Petition at the time Sandvine and/or Nokia filed their petitions is not relevant under this factor. For this reason, we determine that the second *General Plastic* factor does not weigh in favor of denial.

c. 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 third *General Plastic* factor, Patent Owner argues that Petitioner "had the benefit of the preliminary responses filed in the Sandvine IPRs (which were filed in the first half of 2017) as well as the Board's analysis in those same IPRs (which issued in July 2017)." Prelim. Resp. 37. Even so, we determine that Patent Owner has not shown persuasively that this factor weighs in favor of denial.

The third *General Plastic* factor is designed to prevent a challenger from using the Patent Owner's preliminary response as a guide for formulating a subsequent challenge. *See Toyota Motor Corp. v. Cellport Sys., Inc.*, IPR2015-01423, Paper 7 at 8 (PTAB Oct. 28, 2015) ("[T]he opportunity to read Patent Owner's Preliminary Response in IPR2015-00634, prior to filing the Petition here, is unjust."). Here, even though Patent Owner filed a preliminary response in IPR2017-00862, Patent Owner presents no analysis supporting a reasonable inference that Petitioner used that preliminary response as a guide for formulating the arguments in this Petition. Thus, we determine that the third *General Plastic* factor does not weigh in favor of denial.

d. 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; 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 the fourth and fifth *General Plastic* factors weigh in favor of denial, because Petitioner "knew of the primary art raised in this Petition for at least nine years" and fails to "explain the twelve months that lapsed between [Petitioner's] knowledge of the challenged patent . . . and the filing of the instant petition." Prelim. Resp. 37. Again, we determine these factors do not weigh in favor of exercising our discretion to deny institution. Even if Petitioner could have filed its Petition earlier, "we have no reason to believe, on this record, that Petitioner *delayed* by filing when it did, or that Petitioner gained any particular advantage by filing when it did." *Samsung Elecs. Co. v. Immersion Corp.*, IPR2018-01499, Paper 11 at 20–21 (PTAB Mar. 6, 2019). For example, Patent Owner has not pointed to any particular advantage enjoyed by Petitioner by its alleged delay.

e. The finite resources of the Board; 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

Patent Owner argues that the sixth and seventh *General Plastic* factors weigh in favor of denial given challenges related to the "ongoing COVID-19 pandemic" as well as "the ongoing investment in two district court litigations involving the same challenged patents and asserted art." Prelim. Resp. 37–38. Having considered Patent Owner's arguments, we determine that the sixth and seventh *General Plastic* factors do not weigh in favor of denying institution. "[T]he intent of the [sixth] factor . . . is to conserve *Board* resources from repeat or multiple staggered petitions challenging the

same claims of the same patent before the Board." *Samsung* at 17. And here, this proceeding is not part of a series of multiple, staggered proceedings, but rather is the only challenge to the '725 patent that Petitioner filed. Moreover, as explained above, we find that it is more likely that the District Court will incur delays due to the COVID-19 pandemic than the Board. *See supra* § II.A.1.b.

f. Weighing the Factors

For the reasons discussed above, we determine that all the factors in this particular case do not weigh in favor of exercising our discretion under 35 U.S.C. § 314(a). Therefore, we decline Patent Owner's request to deny the Petition under 35 U.S.C. § 314(a) for reason of serial petitions.

B. Principles of Law

A 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 of the invention to a person having ordinary skill in the art. *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) objective evidence of obviousness or non-obviousness, if present. *See Graham*, 383 U.S. at 17–18. When evaluating a claim for obviousness, we also must "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

C. Level of Ordinary Skill in the Art

To determine whether an invention would have been obvious at the

time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). In assessing the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (quoting *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). "[O]ne or more factors may predominate." *Id.*

Petitioner copies the Board's previous preliminary finding for the level of ordinary skill in the art for a related patent and argues that one of ordinary skill in the art at the time of the invention of the '725 patent would have "had a bachelor's degree in electrical engineering, computer engineering, computer science, or a related field (or its equivalent), and one to two years of experience working in networking environments, including at least some experience with network traffic monitors and/or analyzers." Pet. 11 (citing Ex. 1056 (IPR2017-00450 Institution Decision), 13–14; Ex. 1006 ¶¶ 195–201).

Patent Owner proposes a different definition for the level of ordinary skill in the art, but Patent Owner provides no reasoning to deviate from the Board's earlier preliminary finding. Prelim. Resp. 21–22. Based on this record, we adopt Petitioner's articulation of the level of skill in the art (i.e., the level determined in IPR2017-00450 Institution Decision), which is consistent with the '725 patent and the asserted prior art, and we apply it in our obviousness evaluations below.

D. Claim Construction

Because the Petition was filed after November 13, 2018, we construe the challenged claims by applying "the standard used in federal courts, in other words, the claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), which is articulated in *Phillips* [*v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc)]."[12] Under *Phillips*, the words of a claim are generally given their "ordinary and customary meaning," which is the meaning they would have to a person of ordinary skill in the art at the time of the invention, in light of the specification and prosecution history. *See Phillips*, 415 F.3d at 1312–13.

Petitioner submits the following claim terms for construction: (i) "conversational flow"; and (ii) "the flow." Pet. 11–16. As to the remaining claim terms, Petitioner argues that they should be afforded their plain and ordinary meaning. *Id.* at 16. Patent Owner disputes Petitioner's proposed construction for "conversational flow"/"conversational flow-sequence," while not submitting any other terms for construction. Prelim. Resp. 22–27.

2. "conversational flows"

In prior *inter partes* review proceedings involving the '725 patent and related patents, the Board preliminarily construed "conversational flow" as "the sequence of packets that are exchanged in any direction as a result of an activity (for instance, the running of an application on a server as requested by a client), where some conversational flows involve more than one

[12] Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340, 51,343–44 (Oct. 11, 2018) (codified at 37 C.F.R. pt. 42).

connection, and some even involve more than one exchange of packets between a client and a server." *See, e.g.*, IPR2017-00862, Paper 8 at 9–10 (PTAB July 26, 2017) (Ex. 1061).[13] The same construction—with only non-substantive punctuation changes—was also adopted by the district court in *Packet Intelligence LLC v. NetScout Sys., Inc.*, No. 2:16-cv-230 (E.D. Tex.) and *Packet Intelligence LLC v. Sandvine Corp.*, No. 2:16-cv-00147 (E.D. Tex.).[14]

While acknowledging the Board's prior construction, Petitioner contends that the Board nevertheless should apply a narrower construction in this proceeding than in the prior proceedings because this is the first time the Board will construe the claims under the *Phillips* standard, as opposed to the broadest reasonable interpretation standard. Pet. 11. Under the *Phillips* standard, Petitioner contends, "conversational flow" should be construed as "the sequence of packets that are exchanged in any direction as a result of specific software program activity, where such packets form multiple connection flows that are linked based on that activity." *Id.* at 11–12. In support of this construction, Petitioner asserts that Patent Owner has argued

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[13] The Board also preliminarily adopted the same construction in IPR2017-00450, Paper 8 at 9–10 (PTAB July 26, 2017) (Ex. 1056); IPR2017-00451, Paper 8 at 9–10 (PTAB July 26, 2017) (Ex. 1057); IPR2017-00629, Paper 8 at 9 (PTAB July 26, 2017) (Ex. 1058); IPR2017-00630, Paper 9 at 9 (PTAB July 26, 2017) (Ex. 1059); and IPR2017-00769, Paper 8 at 10 (PTAB July 26, 2017) (Ex. 1060).

[14] *See, e.g.*, *Packet Intelligence LLC v. NetScout Sys., Inc.*, No. 2:16-cv-230, Dkt. No. 66 at 6 (E.D. Tex. Mar. 15, 2017) (Ex. 1067) (construing "conversational flow" as "the sequence of packets that are exchanged in any direction as a result of an activity—for instance, the running of an application on a server as requested by a client—and where some conversational flows involve more than one connection, and some even involve more than one exchange of packets between a client and server").

in prior *inter partes* review proceedings and prior district court proceedings that a conversational flow is "based on specific software program activity." *Id.* at 12. Regardless of these contentions, however, Petitioner further contends that "[t]he prior art invalidates the Challenged Claims under [either] Petitioner's or Patent Owner's proposed construction." *Id.* at 15.

Patent Owner responds that "Petitioner[] present[s] no compelling reason to deviate from the previous constructions," which, Patent Owner contends, "stem from the specification's express definition of the term." Prelim. Resp. 23 (citing Ex. 1001, 2:37–45 ("A conversational flow, on the other hand, is the sequence of packets that are exchanged in any direction as a result of an activity—for instance, the running of an application on a server as requested by a client. . . . [And] some conversational flows involve more than one connection, and some even involve more than one exchange of packets between a client and server.")).[15] Patent Owner further contends Petitioner misinterprets statements made in previous proceedings and takes them out of context to advance an improper construction of "conversational flow." *Id.* at 23–24. As argued by Patent Owner, each of the statements highlighted by Petitioner, when viewed in context, follows the definition of "conversational flow" provided in the specification and adopted by both the Board and the district court in prior proceedings. *Id.* at 24; *see also id.* at 25–26.

[15] Notwithstanding Patent Owner's contention, the quoted "definition" does not appear in the specification of the '725 patent, but rather in related U.S. Patent No. 6,651,099 (Ex. 1001). We note, however, that U.S. Patent Application Serial No. 09/608,237, the application from which the '099 patent issued, is incorporated by reference in the '725 patent. *See* Ex. 1004, 1:17–21.

Having considered the parties' respective arguments, we are not persuaded at this stage of the proceeding by Petitioner's contentions that Patent Owner's statements in the prior Board proceedings or in the district court proceedings warrant limiting the term to sequences resulting from "specific software" activity. At the same time, however, we also do not see any reason to include the additional phrases of the prior Board and district court constructions—i.e., "(for instance, the running of an application on a server as requested by a client), where some conversational flows involve more than one connection, and some even involve more than one exchange of packets between a client and a server"—all of which we regard as merely exemplary and non-limiting. We do not understand the inclusion of those phrases to, for example, exclude from the construction flows involving only a single connection or flows that involve only a single exchange of packets. *See* Prelim. Resp. 24–25 ("[A]s the specification teaches, not all 'conversational flows' *necessarily* include multiple related connections—some conversations may entail only a single connection."). Accordingly, to the extent necessary for purposes of this Decision, we preliminarily construe "conversational flow," as "sequence of packets that are exchanged in any direction as a result of an activity."

3. Other claim terms

We conclude that no express claim construction is necessary for any other claim terms at this stage of the proceeding. *See, e.g.*, *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'").

E. Ground 1: Obviousness over Riddle and Baker

Petitioner argues that the combination of Riddle and Baker renders the challenged claims obvious under 35 U.S.C. § 103(a). Pet. 16–80.

1. Overview of Riddle

Riddle describes a method for automatically classifying packet flows for use in allocating bandwidth resources by a rule of assignment of a service level. Ex. 1008, 4:6–10. The method comprises applying individual instances of traffic classification paradigms to packet network flows based on selectable information obtaining from layers of a multi-layered communication protocol in order to define a characteristic class, then mapping the flow to the defined traffic class. *Id.* at 4:10–15. Figure 3 is reproduced below.

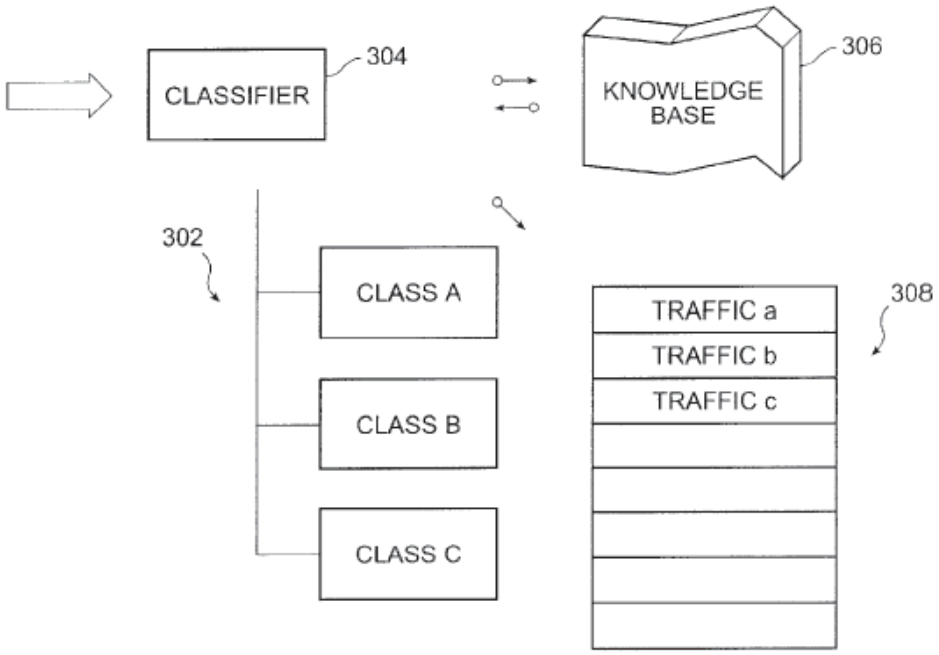

FIG. 3

Figure 3 illustrates a system for automatically classifying traffic. *Id.* at 12:27–28. Traffic tree 302 classifies new traffic under a particular member class node. *Id.* at 12:28–30. Traffic classifier 304 detects services

for incoming traffic. *Id.* at 12:30–31. Knowledge base 306 contains heuristics for determining traffic classes. *Id.* at 12:32–33. A plurality of saved lists 308 store classified traffic pending incorporation into traffic tree 302. *Id.* at 12:37–38.

Figure 4A is reproduced below.

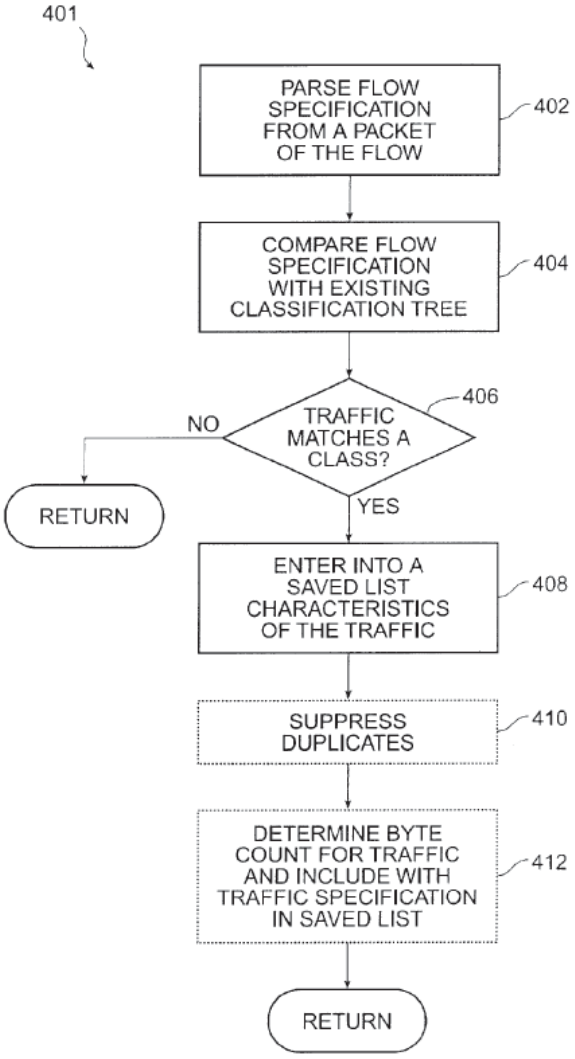

FIG. 4A

Figure 4A illustrates flowchart 401 depicting processing steps for automatically classifying traffic. *Id.* at 12:42–43. In step 402, a flow specification is parsed from the flow being classified. *Id.* at 12:43–44. Then in step 404, the flow specification parsed from the flow in step 402 is

compared with the traffic specifications in each node of the classification tree. *Id.* at 12:44–47. In decisional step 406, a determination is made of whether traffic matches one of the classes being classified. *Id.* at 12:48–50. If this is so, then in step 408, an entry is made in a list of identifying characteristics, such as protocol type, IP protocol number, server port, traffic type, MIME type, or time of occurrence of traffic. *Id.* at 12:50–53.

Figure 4B is reproduced below.

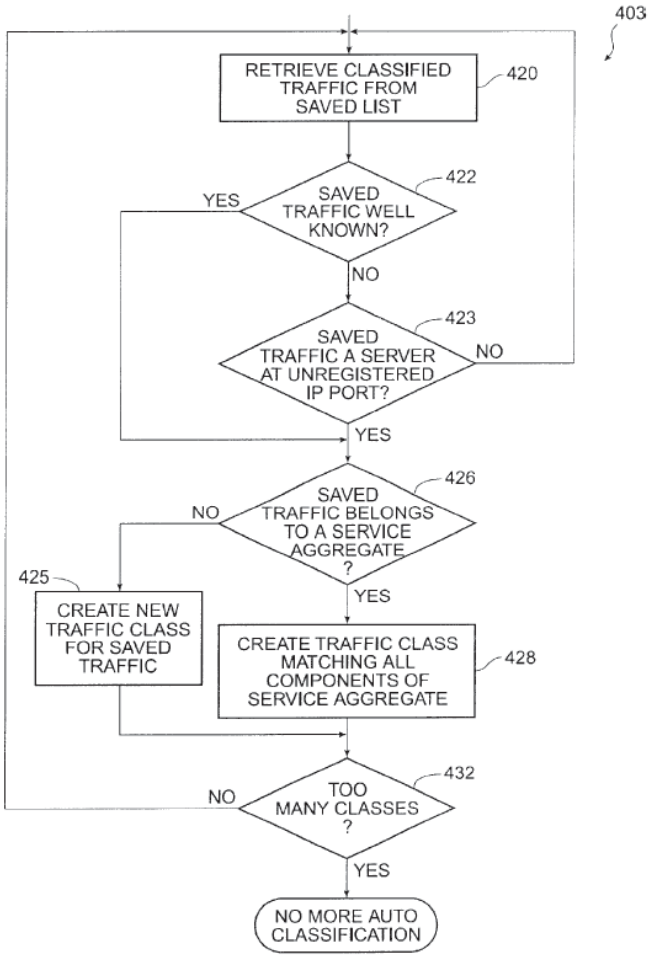

FIG. 4B

Figure 4B illustrates flowchart 403 depicting the processing steps for integrating traffic classes into a classification tree. *Id.* at 13:36–38. In step 420, an instance of saved traffic is received from saved traffic list 308. *Id.* at 13:40–42. Next, in decisional step 422, the instance of saved traffic is

examined to determine whether it is well-known and a name representing its type exists. *Id.* at 13:42–45. If this is so, processing continues with a test of whether the saved traffic belongs to a service aggregate in step 426. *Id.* at 13:45–47. Otherwise, in step 423, the instance of saved traffic is examined to determine whether it appears to be a server connection port of an unregistered IP port. *Id.* at 13:47–50. If this is not so, then processing continues with the next traffic class in the saved list in step 420. *Id.* at 13:51–52. In decisional step 426, the instance of saved traffic is examined to determine whether it belongs to a service aggregate. *Id.* at 13:52–54. If the traffic does belong to a service aggregate, then, in step 428, a traffic class is created that will match all components of the service aggregate. *Id.* at 13:57–59. In step 425, a new traffic class is created to match the instance of saved traffic. *Id.* at 13:59–62.

2. Overview of Baker

Baker describes systems and methods for parsing, filtering, generating and analyzing data (or frames of data) transmitted over a data communications network. Ex. 1013, 3:32–35. Figure 1 is reproduced below.

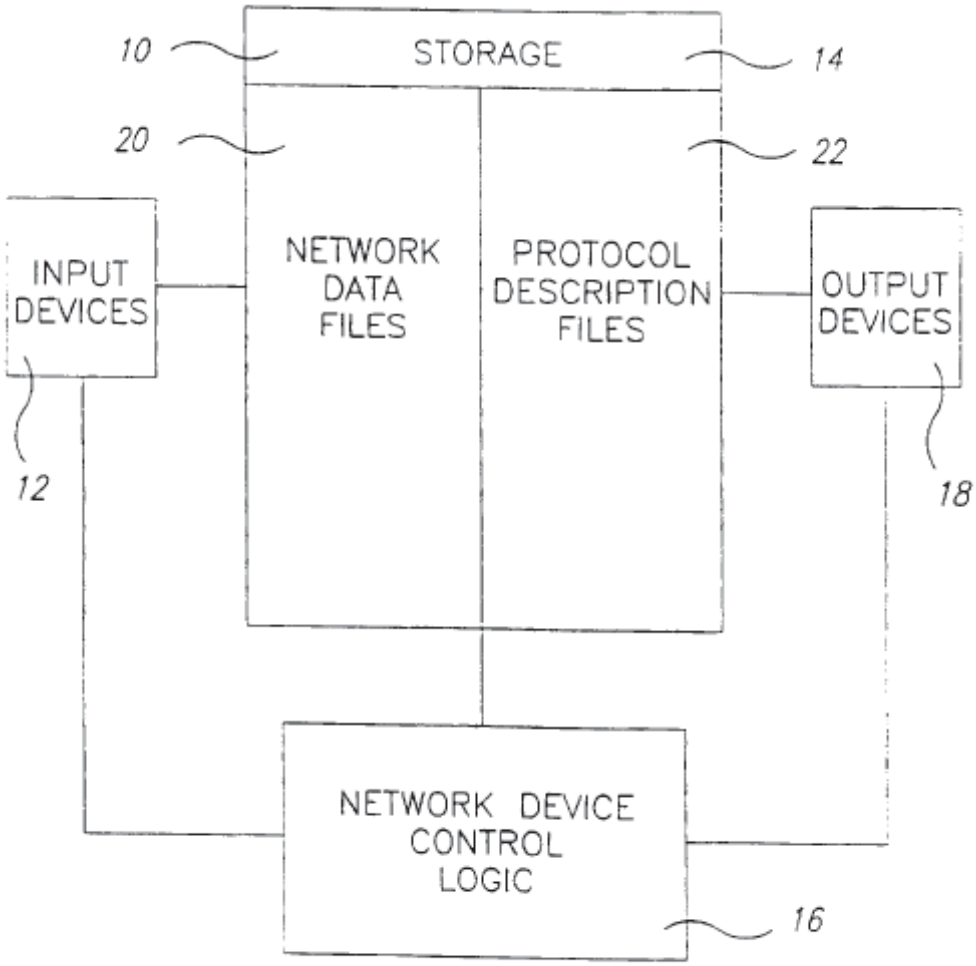

FIG. 1

Figure 1 illustrates a network interface system. *Id.* at 8:11–13. Baker describes network interface system 10 implemented in a network device including input devices 12, data storage devices 14, analysis control logic 16 for facilitating input, storage, retrieval and analysis of network frames, and output devices 18 for forwarding frames or displaying or orienting the results of frames. *Id.* at 10:10–17. Data storage device 14 includes data file 20 of network frames having *n* protocol data records. *Id.* at 10:17–19. Protocol description files 22 also are stored in data storage device 14, where protocol description files 22 describe a subset of a network protocol and include rules for analyzing that protocol. *Id.* at 10:21–25. Network device

control logic 16 retrieves a subset of network frames from input devices 12 or data files 20 that satisfy criteria based upon extracted field values and filtering criteria contained in protocol description files 22. *Id.* at 10:26–31. Network device control logic 16 also determines frames and protocol header lengths, gathers statistics, performs verifications and error checks, determines routes, varies values, and formats output. *Id.* at 10:31–35.

Baker further describes that the network interface system parses successive protocol headers and further parses remaining information as application data and a frame pad. *Id.* at 26:27–32. Baker also describes that the network interface system parses fixed and optional fields in a selected protocol. *Id.* at 26:32–35. Baker additionally describes that the network interface system performs operations on extracted field values. *Id.* at 26:35–27:3. Baker further describes that the network interface system makes branching, next protocol determination, and validity decisions based on the extracted field values. *Id.* at 27:3–7.

3. Independent Claim 10

The preamble of independent claim 10 recites "[a] method of performing protocol specific operations on a packet passing through a connection point on a computer network." Ex. 1002, 96:24–26. Petitioner contends that Riddle teaches the features recited in the preamble because it discloses applying individual instances of traffic classification paradigms to packet network flows based on selectable information obtained from a plurality of layers of a multi-layered communication protocol in order to define a characteristic class, then mapping the flow to the defined traffic class. Pet. 31–32 (citing Ex. 1008, Abstract, 4:10–15; Ex. 1006 ¶¶ 479–482). Petitioner further asserts that Riddle discloses network access through network routing means and/or routers, and that Riddle's disclosure of a

system connected to a network connection is consistent with the '725 Patent's disclosure related to the term "connection points." *Id.* at 32–33 (citing Ex. 1008, 5:53–67, 6:9–15, 7:10–34, claim 8, Figs. 1A, 1B, 1C, 3; Ex. 1002, 5:60–6:15, Fig. 1; Ex. 1006 ¶ 481).

The body of independent claim 10 begins with the step of "receiving the packet." Ex. 1002, 96:27. Petitioner asserts that Riddle's traffic classifier detects services for incoming traffic. Pet. 34 (citing Ex. 1008, 12:30–31, Fig. 3; Ex. 1006 ¶ 483). Relying on its declarant, Petitioner asserts that a person of ordinary skill in the art would have understood that traffic to teach the recited packets and that Riddle's monitor receives those packets. *Id.* (citing Ex. 1006 ¶ 483).

Independent claim 10 next recites "receiving a set of protocol descriptions for a plurality of protocols that conform to a layered model, a protocol description for a particular protocol at a particular layer level including." Ex. 1002, 96:28–31. Petitioner asserts that Riddle discloses management of network bandwidth by applying individual instances of traffic classification paradigms to packet network flows based on selectable information obtained from a plurality of layers of a multi-layered communication protocol in order to define a characteristic class, and then mapping the flow to the defined traffic class. Pet. 35–36 (citing Ex. 1008, Abstract, 4:10–15; Ex. 1006 ¶ 486). Relying on its declarant, Petitioner asserts that a person of ordinary skill in the art would have understood that Riddle defines traffic classes based on IP addresses, port numbers, and Universal Resource Identifier ("URI") patterns. *Id.* at 36 (citing Ex. 1008, Table 1; Ex. 1006 ¶ 487). Furthermore, relying on its declarant, Petitioner asserts that Riddle's traffic classes are protocol layer independent, and therefore, can include traffic specifications based on information from any

protocol layer or combination of layers. *Id.* at 37 (citing Ex. 1008, 10:59–62; Ex. 1006 ¶ 488).

Petitioner further asserts that Baker stores protocol descriptions as "protocol description files (PDF)," and that Baker's PDFs include a protocol control record and a plurality of field data records. *Id.* at 37–38 (citing Ex. 1013, 12:25–28, 19:6–10; Ex. 1006 ¶¶ 490, 492). According to Petitioner, relying on its declarant, a person of ordinary skill in the art would have been motivated to modify Riddle to include Baker's configurable PDFs to receive a set of protocol descriptions for a plurality of protocols conforming to a layered model. *Id.* at 43–44 (citing Ex. 1006 ¶ 499). With respect to reasons to combine the teachings of Riddle and Baker, Petitioner contends that "Riddle and Baker are in the same field of endeavor," "contain overlapping disclosures with similar purposes," and that a person of ordinary skill in the art would have understood the benefit to having Riddle's classification system allow for updating protocol descriptions. *Id.* at 28–29 (citing Ex. 1008, 1:54–57, 4:6–17; Figs. 1A, 1D; Ex. 1013, 1:2–2:10, 3:32–4:6; Ex. 1006 ¶¶ 403–404, 474, 472).

Independent claim 10 also recites "if there is at least one child protocol of the protocol at the particular layer level, the-one or more child protocols of the particular protocol at the particular layer level, the packet including for any particular child protocol of the particular protocol at the particular layer level information at one or more locations in the packet related to the particular child protocol." Ex. 1002, 96:32–39. Petitioner asserts that Riddle discloses parsing layered protocols, including identifying one or more child protocols at each of a plurality of layers in a packet of traffic classification, and that traffic classes may be defined at any level of the IP protocol as well as for any other non-IP protocols. Pet. 45 (citing

Ex. 1008, Abstract, Fig. 1D, 4:10–17; Ex. 1006 ¶ 502). Petitioner further asserts that Riddle discloses hierarchical traffic class membership such that a classification process checks at each level of a traffic class tree if the flow being classified matches the attributes of a given traffic class." *Id.* (citing Ex. 1008, 9:20–24, 9:34–36; Ex. 1006 ¶ 502). If it does, Petitioner points out, processing continues down to the links associated with that node in the tree. *Id.* (citing 9:37–39). Petitioner asserts that Riddle's examples of identifying child protocols include identifying the child protocol TCP in the IP protocol, and identifying the child protocols HTTP and FTP within the TCP protocol. *Id.* at 45–46 (citing Ex. 1008, 8:22–25, 8:38–42, 10:62–11:2, 11:48–63, 13:10–22; Figs 1D, 2A, 2B, Table 1; Ex. 1006 ¶¶ 503–506).

Petitioner further asserts that Baker teaches descriptions for layered protocols, including protocol descriptions identifying one or more child protocols at each of a plurality of layers in a packet. *Id.* at 47 (citing Ex. 1013, Abstract, 1:22–25, 2:1–7, 2:28–3:8; Ex. 1006 ¶ 510). According to Petitioner, Baker explains that "the protocol descriptions may take the form of one or more protocol description files for each supported network protocol and may include a protocol header record and plurality of field sub-records having data corresponding to an associated protocol and fields defined therein." *Id.* (citing Ex. 1013, 4:35–5:3; Ex. 1006 ¶ 510).

With respect to reasons to combine the teachings of Riddle and Baker, Petitioner contends that "Riddle and Baker are in the same field of endeavor," "contain overlapping disclosures with similar purposes," and that a person of ordinary skill in the art would have understood the benefit to having Riddle's classification system allow for updating protocol descriptions. *Id.* at 28–29 (citing Ex. 1008, 1:54–57, 4:6–17; Figs. 1A, 1D; Ex. 1013, 1:2–2:10, 3:32–4:6; Ex. 1006 ¶¶ 403–404, 474, 472).

Specifically, Petitioner asserts that "[a]n express advantage of Riddle's disclosure 'is that network managers need not know the technical aspects of each kind of traffic in order to configure traffic classes.'" *Id.* at 28 (citing Ex. 1008, 15:37–40; Ex. 1006 ¶¶ 401, 474). Thus, Petitioner asserts that one of ordinary skill in the art would have been motivated to use Baker's mechanism for parsing, filtering, generating and analyzing data using stored protocol description files in order to update the protocols used in Riddle's classifications. *Id.* at 29.

Independent claim 10 also recites "the one or more locations in the packet where information is stored related to any child protocol of the particular protocol." Ex. 1002, 96:40–42. Relying on its declarant, Petitioner asserts that Riddle discloses programming a system to look for information in a packet relating to the TCP child protocol of IP, and the FTP and HTTP child protocols of TCP, and that Riddle's classification extends to examination of the data contained in the flow's packets. Pet. 56 (citing Ex. 1008, 8:41–42, 11:4849; Ex. 1006 ¶¶ 526–572).

Independent claim 10 also recites "if there is at least one protocol specific operation to be performed on the packet for the particular protocol at the particular layer level, the one or more protocol specific operations to be performed on the packet for the particular protocol at the particular layer level." Ex. 1002, 96:43–48. Petitioner asserts that the '725 Patent acknowledges protocol specific operations may include parsing and extraction operations to extract identifying information. Pet. 57 (citing Ex. 1002, Abstract, 2:21–31; Ex. 1006 ¶ 529). Relying on its declarant, Petitioner asserts that Riddle discloses performing parsing and extraction operations to extract identifying information, and then checks at each level if the flow being classified matches the attributes of a given traffic class.

Pet. 58 (citing Ex. 1006 ¶ 530; Ex. 1008, Fig 4A, 9:28–40). More specifically, relying on its declarant, Petitioner asserts that a person of ordinary skill in the art would have understood that Riddle has extracted identifying characteristics to perform steps 404 ("compare flow specification with existing classification tree"), 406 ("traffic matches a class?"), and 408 ("enter into a saved list characteristics of the traffic"). *Id.* at 59 (citing Ex. 1006 ¶ 531).

Independent claim 10 also recites "performing the protocol specific operations on the packet specified by the set of protocol descriptions based on the base protocol of the packet and the children of the protocols used in the packet." Ex. 1002, 96:49–52. Petitioner asserts that Riddle discloses applying individual instances of traffic classification paradigms to packet network flows based on selectable information obtained from a plurality of layers of a multi-layered communication protocol in order to define a characteristic class, then mapping the flow to the defined traffic class. Pet. 61–62 (citing Ex. 1008, Abstract, 4:10–15; Ex. 1006 ¶ 543).

Lastly, independent claim 10 recites "wherein the protocol specific operations include one or more parsing and extraction operations on the packet to extract selected portions of the packet to form a function of the selected portions for identifying the packet as belonging to a conversational flow." Ex. 1002, 96:53–57. Relying on its declarant, Petitioner asserts that Riddle discloses its parser forms a function of packet portions to identify the packet is part of a "conversational flow" in at least two ways: (a) classifying based on service aggregates and (b) classifying based on PointCast. Pet. 64 (citing Ex. 1006 ¶ 548). Regarding the former, Petitioner contends that "Riddle teaches identifying whether packets are part of 'service aggregates,' traffic classes linking separate connection flows based on the associated

application," and that "these 'service aggregates' meet the claimed 'conversational flow.'" *Id.* (citing Ex. 1006 ¶¶ 549–552). Indeed, Petitioner contends, Riddle's claims 1 and 2 teach that the service aggregates are conversational flows. *Id.* at 64–65 (citing Ex. 1008, claim 1 (reciting "said network having any number of flows" and "parsing a packet into a first flow specification"), claim 2 (reciting "for at least a second flow having a second flow specification, recognizing said second flow specification and said first flow specification to comprise together a service aggregate" and "associating said first flow specification and said second flow specification with a newly-created classification tree node, said newly-created classification tree type node having a first traffic specification corresponding to said first flow specification and a second traffic specification corresponding to said second flow specification"); Ex. 1006 ¶ 313).

Regarding "PointCast Traffic," Petitioner contends that U.S. Provisional Application No. 60/141,903, from which the '725 patent claims priority and incorporates by reference, "specifies that identifying PointCast traffic is an example of identifying a conversational flow." Pet. 70 (citing Ex. 1016, 7:16–25; Ex. 1006 ¶ 553). Because Riddle "creates a single traffic class for disjointed PointCast connection flows by searching headers for URLs that begin with '/FIDO-1/,'" Petitioner contends, "Riddle thus teaches identifying a conversational flow." *Id.* at 70 (citing Ex. 1008, 11:57–12:9; Ex. 1006 ¶ 553). Indeed, Petitioner asserts, one of the inventors of the '725 patent previously testified that creating a single flow to describe such disjointed flows is a type of conversational flow. *Id.* at 70–71 (citing Ex. 1068, 55:11–57:15; Ex. 1071 ¶ 4; 1072, 3). Finally, Petitioner contends, "Riddle teaches that one of its autoclassification processes identifies PointCast traffic using the outside service field of the class, specifying that

"[c]ertain traffic may be distinguished by a signature," and accordingly, based on Riddle's teachings, a person of ordinary skill in the art "would have understood that Riddle extracts selected portions of a packet to form a signature" *Id.* (citing Ex. 1008, 11:50–53, 14:54–63, 15:28–31; Ex. 1006 ¶¶ 325, 547, 553–554).

Based on the current record, we discern no deficiency in Petitioner's characterizations of Riddle, Baker, and the knowledge in the art, or in Petitioner's reasoning as to why one of ordinary skill in the art would have been prompted to modify the teachings of Riddle based on Baker. In addition, for purposes of institution, we accept Dr. Weissman's testimony concerning the relevant teachings of Riddle and Baker. At this stage of the proceeding, the only limitation that Patent Owner disputes as to Ground 1 is the "conversational flow" recited in independent claims 10 and 17. *See* Prelim. Resp. 38–44.

a. "conversational flows"

In the Preliminary Response, Patent Owner contends that, under any of the proposed constructions for "conversational flow," Riddle's traffic classes fail to teach "conversational flows." Prelim. Resp. 38. Patent Owner asserts that all of the proposed constructions relate a "conversational flow" to an "activity," but, Riddle's traffic classes correlate traffic according to whether it matches a given traffic specification. *Id.* Therefore, according to Patent Owner, Riddle's traffic classes do not relate to an "activity" as required by the proposed claim constructions for "conversational flow," but instead, at best, relate to a multitude of activities. *Id.* (citing Ex. 2001 ¶ 67).

According to Patent Owner, the specification teaches that an "activity" is, "for instance, the running of an application on a server as requested by a client." *Id.* (citing Ex. 1001, 2:39–40). As an example,

Patent Owner asserts that "[a] client running Skype to conduct a call is an example of an 'activity.'" *Id.* at 39. Further, according to Patent Owner, among three simultaneous Skype calls "[e]ach call is a separate activity, but all the activities stem from the same application." *Id*. at 40. Patent Owner proceeds to extend its Skype example to the portions of Riddle discussed in the Petition relative to this element. *Id.* at 41–44.

Patent Owner contends that neither Riddle's "service aggregates" nor its recognition of "PointCast" traffic cited by Petitioner discloses the recited "conversational flow." Prelim. Resp. 40.

With respect to Riddle's service aggregates, Patent Owner asserts that "a service aggregate is essentially a 'set' of . . . traffic classes." *Id.* at 42. Patent Owner posits that a service aggregate could be created to match Skype traffic, but that such a service aggregate would not recognize the presence of three different conversational flows among three simultaneous Skype calls. *Id.* According to Patent Owner, the ''725 patent "distinguishes between the three different Skype conversations because each one is a different 'activity.'" *Id.*

Similarly, with respect to Riddle's disclosure of PointCast traffic, Patent Owner asserts that "Riddle's purported ability to recognize PointCast traffic as showing that Riddle recognizes 'conversational flows'" is "merely a specific example of using one of Riddle's traffic classes—namely one for PointCast." *Id.* at 43. Patent Owner asserts that under this teaching of Riddle, "[a]ll PointCast traffic activities would be lumped together, rather than recognizing that each different client using PointCast represents a different 'activity' as specified by the claims." *Id.* Patent Owner concludes that "the specification teaches that different activities of the same type, but by different clients, yield different conversational flows" and, therefore,

Riddle's PointCast traffic recognition fails to disclose the claimed "conversational flows." *Id.* at 43–44 (citing Ex. 1001 3:4–6).

We agree generally with Patent Owner's assertion that the claims tie "conversational flow" to an activity. *See supra* § II.D.1 (preliminarily construing "conversation flow" as "sequence of packets that are exchanged in any direction as a result of an *activity*" (emphasis added)). Patent Owner, however, does not persuade us, on this record, that the examples presented as a "multitude of activities," such as multiple activities of the same type, cannot also represent an "activity." That Patent Owner provides examples from the specification of an "activity" that suggest particularized sets of actions correspond to an activity does not exclude other larger sets of actions from also corresponding to an activity. We are persuaded that Petitioner presents sufficient evidence that would support a finding that either of Riddle's disclosures of service aggregates or PointCast traffic teaches or suggests an activity in the context of a conversational flow.

b. Summary

In summary, Petitioner has shown a reasonable likelihood that it would prevail on its assertions that the subject matter of independent claim 10 would have been obvious over the teachings of Riddle and Baker.

4. Dependent Claims 12, 13, and 16

Petitioner contends that dependent claims 12, 13, and 16 of the '725 patent are obvious over Riddle and Baker. Pet. 77–80. Claim 12 directly depends from independent claim 10 recites "protocol specific operations are performed is step (c) depends on the contents of the packet such that the method adapts to different protocols according to the contents of the packet." Ex. 1002, 96:61–65. Relying on its declarant, Petitioner asserts that Riddle discloses that the state operations depend on the contents of the

packet and therefore the method adapts to different protocols according to the contents of the packet. Pet. 77 (citing Ex. 1006 ¶¶ 583–584). According to Petitioner, examples of state processing operations disclosed by Riddle include searching for patterns/referencing strings, creating a new flow-entry for future packets to be identified with the flow, performing state operations related to "service aggregates," determining metrics, and updating flow entries. *Id.* (citing Ex. 1006 ¶¶ 583–584).

Claim 13 also directly depends from independent claim 10, and recites "wherein the protocol descriptions are provided in a protocol description language." Ex. 1002, 96:66–67. Petitioner asserts that Baker discloses that the protocol descriptions are contained in "protocol description files (PDF)" which include a protocol control record and a plurality of field data records. Pet. 79 (citing Ex. 1013, 19:6–10).

Claim 16 also directly depends from independent claim 10, and recites "wherein the protocol specific operations further include one or more state processing operations that are a function of the state of the flow of the packet." Ex. 1002, 97:37–39. Relying on its declarant, Petitioner contends that Riddle determines the state of the flow, at least, by determining metrics such as accounting for duplicates, most recent time encountering traffic with the same identifying characteristics, and byte count. Pet. 75, 80 (citing Ex. 1008, 12:53–13:8, 13:36–14:5, Figs. 4A; 4B, Ex. 1006 ¶¶ 568, 597, 598).

Based on the current record, Petitioner's explanations and supporting evidence with respect to dependent claims 12, 13, and 16 are sufficient for purposes of institution. At this stage of the proceeding, Patent Owner does not address separately Petitioner's explanations and supporting evidence as to how the teachings of Riddle and Baker account for the limitations of these dependent claims. *See generally* Prelim. Resp. When considering

Petitioner's explanations and supporting evidence, it has demonstrated a reasonable likelihood that it will prevail on its assertions that the subject matter of dependent claims 12, 13, and 16 would have been obvious over the teachings of Riddle and Baker.

5. Independent Claim 17

In addition to limitations identical to those of claim 10, discussed above in section II.E.3, claim 17 further recites "wherein the packet belongs to a conversational flow of packets having a set of one or more states, and wherein the protocol specific operations include one or more state processing operations that are a function of the state of the conversational flow of the packet, the state of the conversational flow of the packet being indicative of the sequence of any previously encountered packets of the same conversational flow as the packet."

Petitioner argues that Riddle teaches "that these conversational flows have one or more states . . . and that classification includes performing one or more state processing operations that are indicative of any previously encountered packets for the same conversational flow." Pet. 63–72. Petitioner cites multiple portions of Riddle in support of its arguments that Riddle teaches this limitation.

Having reviewed the record, we are not persuaded that Petitioner has shown that Riddle teaches this claim limitation. In particular, at this stage we are not persuaded that Petitioner has shown that Riddle teaches the state of the conversational flow of the packet being indicative of the sequence of any previously encountered packets of the same conversational flow as the packet. The language of this limitation is consistent with the Specification's disclosure that a current packet is "analyzed in the context of the sequence of previously encountered packets (the state)." Ex. 1002, 8:20–24. In contrast,

the portions of Riddle that Petitioner cites relate to classifying a flow based on an individual packet in the flow, rather than on a state indicative of a sequence of packets (i.e., across multiple packets) in the flow. *See* Pet. 63–75.

Petitioner's application of Baker does not cure the deficiencies of Riddle. Pet. 75–77. Petitioner argues that Baker performs protocol specific operations that include state operations such as frame parsing control logic and parsing the remaining information as application data and frame pad. Pet. 75 (citing Ex. 1013, 26:26–32, Fig 11; Ex. 1006 ¶ 571). At this stage, Petitioner has not shown that Baker teaches the state of the conversational flow of the packet being indicative of the sequence of any previously encountered packets of the same conversational flow, as in the claim.

F. Grounds 2 and 3: Obviousness over Riddle, Baker, and Yu and over Riddle, Baker, and RFC1945

Petitioner alleges that the challenged claims are also unpatentable as obvious over Riddle, Baker, and Yu and over Riddle, Baker, and RFC1945. Pet. 80–96.

Because Petitioner has shown a reasonable likelihood of prevailing with respect to claims 10, 12, 13, and 16 over Riddle and Baker alone, we will institute on all grounds raised in the Petition, including Grounds 2 and 3 additionally relying on Yu and RFC1945, respectively. *See SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018); *AC Techs. S.A. v. Amazon.com, Inc.*, 912 F.3d 1358, 1364 (Fed. Cir. 2019) ("[I]f the Board institutes an IPR, it must . . . address all grounds of unpatentability raised by the petitioner."). In addition, based on our view of the preliminary evidence, we consider Petitioner to be reasonably likely to prevail on at least claims 10, 12, 13, and 16 of the ground based on Riddle, Baker, and Yu.

1. Overview of Yu

Yu, titled "Policy Engine Architecture," provides "an architecture 100 for applying policies to network data traffic." Ex. 1011, code (54), 2:46–50. The architecture includes three components: an application "such as a firewall, virtual private network (VPN), or traffic management," "policy engine 106," and API 104 between these two components. *Id.* at 2:51–59.

Yu describes that "flow classification specification 203a provides the screening criteria for the flow classifier logic 204 to sort network traffic into flows," that "[a]ll packets that match the same flow classification specification 203a form a flow," that "a flow is a stream of correlated packets to which policy decisions apply," and that "a flow classifier 204 classifies the packet according to one or more classification specifications 203a and finds one or more corresponding action specifications 203b." Ex. 1011, 3:32–59. Yu further describes that a "stream is an 'instantiation' of a flow-packets that have the same source and destination address, source and destination port, and protocol type," and "[p]ackets may be sorted into streams, and a flow may include one or more streams," where "[a]ll packets belonging to the same stream are to be regulated by the same policy." *Id.* at 4:2–9.

In Yu, "the stream classifier 207 matches the packets to a particular stream specification 208 and then, using the corresponding action specifications 210, activates the proper action processors 206. Ex. 1011, 5:8–11.

2. Overview of RFC1945

RFC1945 describes version 1.0 of the Hypertext Transfer Protocol ("HTTP/1.0"). Ex. 1010, 1, 4. RFC1945 describes that HTTP/1.0 is an application level-protocol that is implemented for communications between

entities such as client servers. *Id.* at 4. HTTP/1.0 provides for HTTP messages, which consist of requests from a client to a server and responses from the server to the client. *Id.* at 21. Such messages may include headers. *Id.* Further, such headers may include one or more fields. *Id.* at 37. RFC1945 describes that one of the header fields is a "Referer" request-header field, which specifies an address ("URI") of a resource from which a URI of the underlying request message was obtained. *Id.* at 44–45.

3. Analysis

Petitioner's arguments regarding these grounds are similar to those presented for the grounds based on Riddle, and Baker alone, discussed in Section II.E above. In these grounds, Petitioner relies on Yu or RFC1945, rather than Riddle, for the teaching of conversational flows. *See* Pet. 83–84, 89–92. With respect to Yu, Petitioner contends that "Yu's flow classification specification provides screening criteria for flow classifier logic to sort network traffic into 'flows' (which include multiple streams, i.e., connection flows), such as defining a specific pair of hosts running a specific application," where "Yu defines a 'flow' as 'all packets that match the same flow classification specification' and specifically notes that 'a flow may include ***one or more*** streams." Pet. 83 (quoting Ex. 1011, 3:47–49, 4:7–8) (citing Ex. 1011, 3:32–36; Ex. 1006 ¶ 430, 601). Further, Petitioner contends, "Yu specifies 'the matching criteria used by a flow classifier to classify a flow may include a specific value, a range, or wildcard on interface port numbers, protocols, IP addresses, TCP ports, ***applications, application data***, or any user specifiable criteria.'" *Id.* (quoting Ex. 1011, 1:56–60). Thus, Petitioner argues, "Yu's flow classifier links multiple 'streams' into a 'flow' based on application or application data, thus identifying the '725 [p]atent's 'conversational flow.'" *Id.* With respect to

RFC1945, Petitioner notes that RFC1945 describes examining HTTP header fields, including a "referer" request header, and that contends Patent Owner's technical expert in prior district-court litigations "testified that information from HTTP referrers are used to create conversational flows" and that "HTTP Referrer fields may satisfy the requirements of a 'conversational flow' by correlating connection flows." *Id.* at 89–92 (citing Ex. 1010, 44–45; Ex. 1069, 25:18–26:7, 48:23–50:14; Ex. 1075 ¶ 3; Ex. 1076, 5). Relying on Dr. Weissman's testimony, Petitioner further contends that a person of ordinary skill in the art "would have recognized that HTTP Referrer fields were known in the art and used to relate traffic flows," and "Patentee's reliance on the HTTP Referrer field as linking connection flows into a conversational flow demonstrates the obviousness of the claimed invention, at least under Patentee's interpretation of 'conversational flow.'" *Id.* at 93 (citing Ex. 1006 ¶¶ 445-447, 606–607). Petitioner also presents reasons why a person of ordinary skill in the art would have been motivated to combine the teachings of Yu or RFC1945 with the teachings of Riddle and Baker in the manner asserted and why such a person would have had a reasonable expectation of success in doing so, supported by the testimony of Dr. Weissman and disclosure in the references themselves. *Id.* at 84–87, 93–95 (citing Ex. 1006 ¶¶ 433–438, 445, 452–460, 602–603, 606–609; Ex. 1008, 6:5–8, 8:41–45, 8:64–9:11, 9:24–27, 12:43–44, 13:63–64; Ex. 1009, 53:4–8; Ex. 1010, 37–46; Ex. 1011, 1:10–13, 1:22–26, 1:63–67, 2:26–28, 2:45–50, 3:34–36, 4:1–9, 4:57–62, 5:1, 6:19–21). With respect to claim 17, Petitioner does not address how Yu or RFC cures the deficiencies discussed above in section II.E.5 with respect to Riddle and Baker.

Patent Owner responds that Petitioner has failed to sufficiently show that one of skill in the art would have combined Yu with Riddle and that both Yu and RFC1945 also fail to disclose "conversational flows." Prelim. Resp. 44–48. According to Patent Owner, "Riddle focuses on a simple solution in which well-known protocols and services are automatically recognized based on port number or string matching without requiring complex configuration" while "Yu . . . touts a flexible solution in which developers can continually update the software configuration. Prelim. Resp. 45 (citing Ex. 1011, 5:47-50). Patent Owner asserts that "Riddle's simple solution would be thwarted by the complexities introduced by Yu's proposed system, which requires specialized hardware and regularly updated software modules." *Id.* At this stage, we are not persuaded this would be the case. "[F]amiliar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR*, 550 U.S. at 402. Whether or not the "simple solution" of Riddle is on some level at odds with the "flexible solution" of Yu, at this stage we find persuasive Petitioner's assertions that "like Riddle, Yu teaches using software to manage application policies to classify flows," and that a person of ordinary skill in the art "would have looked to Yu for its teachings of flexibility and efficiency in implementing Riddle's packet classifier." Pet. 85–87 (citing Ex. 1006 ¶¶ 434, 602; Ex. 1011, 2:45–50, 5:1, 6:19–21).

With respect to whether Yu discloses "conversational flows," Patent Owner asserts that "[j]ust as Riddle does not differentiate between different Skype calls, Yu's flow classification specification likewise does not differentiate between different Skype calls, which would be different conversational flows." Prelim Resp. 47. As discussed above in Section

II.F.1.a), Patent Owner does not persuade us, on this record, that the examples presented as multiple activities of the same type cannot also represent an "activity." Therefore, Patent Owner's argument that Skype calls would not be differentiated by Yu is unavailing.

With respect to RFC 1945, at this stage we are not persuaded based on any citation to the content of the reference itself that it discloses conversational flows. Moreover, we find persuasive Patent Owner's argument that the slides referenced at p.91 of the Petition (Ex. 1074, 27, Ex. 1076, 5) go beyond "the general description of the Hypertext Transfer Protocol version 1.0, which is what RFC 1945 details." Prelim Resp. 48.

Having considered Petitioner's contentions in the Petition, we are persuaded that Petitioner has made a sufficient showing at this stage with respect to the teachings of Yu to establish a reasonable likelihood of prevailing with respect to claims 10, 12, 13 and 16, on this ground based on the combination of Riddle, Baker, and Yu, including sufficiently "specific reasoning, based on evidence of record, to support the legal conclusion of obviousness" at this stage of the proceeding. *See In re Magnum Oil*, 829 F.3d 1364, 1380 (Fed. Cir. 2016); Pet. 77–83.

III. CONCLUSION

On this record, we are persuaded that Petitioner demonstrates a reasonable likelihood that it would prevail in showing the unpatentability of claims 1, 10, 12, 13, and 16 of the '725 patent on at least two of the grounds asserted in the Petition. We, accordingly, institute an *inter partes* review of the challenged claims.

Our determination in this Decision is not a final determination on either the patentability of any challenged claims or the construction of any claim term and, thus, leaves undecided any remaining fact issues necessary

to determine whether sufficient evidence supports Petitioner's contentions by a preponderance of the evidence in the final written decision. *See TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016) (noting that "there is a significant difference between a petitioner's burden to establish a 'reasonable likelihood of success' at institution, and actually proving invalidity by a preponderance of the evidence at trial") (quoting 35 U.S.C. § 314(a) and comparing *id.* § 316(e)).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is hereby instituted for the asserted grounds:

Claims Challenged	35 U.S.C. §	References
10, 12, 13, 16, 17	103(a)	Riddle Baker
10, 12, 13, 16, 17	103(a)	Riddle, Baker, Yu
10, 12, 13, 16, 17	103(a)	Riddle, Baker, RFC1945

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; the trial will commence on the entry date of this Decision.

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