UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

PACKET INTELLIGENCE LLC,
Patent Owner.

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IPR2020-00337
Patent 6,771,646 B1

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

BOUDREAU, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I.   INTRODUCTION

Juniper Networks, Inc. and Palo Alto Networks, Inc. (collectively "Petitioner") filed a Petition (Paper 3, "Pet.") requesting an *inter partes* review of claims 1–3, 7, 16, and 18 of U.S. Patent No. 6,771,646 B1 (Ex. 1003, "the '646 patent") pursuant to 35 U.S.C. § 311. Packet Intelligence LLC ("Patent Owner") filed a Patent Owner Preliminary Response (Paper 7, "Prelim. Resp.").[1] Petitioner filed a Preliminary Reply (Paper 9, "Prelim. Reply") and Patent Owner filed a Preliminary Sur-Reply (Paper 10, "Prelim. Sur-Reply") in accordance with our Order (Paper 8) allowing the parties to address the applicability of the Board's decision in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*").

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).

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

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[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 outbreak for filing its Preliminary Response, and we extended the due date for filing the Preliminary Response to June 12, 2020. Ex. 3001. Thus, we consider Patent Owner's filing of its Preliminary Response as timely.

one of the challenged claims. Accordingly, we institute an *inter partes* review.

A. Related Matters

The parties identify two district court litigations as related matters that involve the '646 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.*, 2:16-cv-230-JRG (E.D. Tex.) and *Packet Intelligence LLC v. NetScout Sys., Inc.*, 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 '646 patent: IPR2020-00335, IPR2020-00336, 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 related: (i) IPR2017-00450 and IPR2019-01292, which challenged certain claims of the '646 patent; and (ii) IPR2017-00451, IPR2017-00629, IPR2017-00630, IPR2017-00769, IPR2017-00862, IPR2017-00863,

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[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 are being entered concurrently with the instant Decision.

IPR2019-01289, IPR2019-01290, IPR2019-01291, and IPR2019-01293, which challenged claims of patents related to the '646 patent. Pet. 2; Paper 6, 3–5.

B. The '646 Patent

The '646 patent, titled "Associative Cache Structure for Lookups and Updates of Flow Records in a Network Monitor," discloses a network activity monitor with a cache subsystem. Ex. 1003, code (54), 1:42–3:14. The '646 patent explains that there was a need in the art for "a real-time network monitor that can provide details as to the application programs being used." *Id.* at 1:42–47. The disclosed monitor receives packets passing in either direction through its connection point on the network and "elucidate[s] what application programs are associated with each packet" by extracting information from the packet, using selected parts of the extracted information to "build[] a signature for identifying the conversational flow of the packet," and performing a lookup of "a database of flow records for previously encountered conversational flows to determine whether [the] signature is from an existing flow." *Id.* at 1:66–2:28, 4:61–5:8, Fig. 1. The '646 patent states that due to the high speed at which packets enter the system, it is advantageous to use a cache system for the memory containing the flow database. *Id.* at 2:37–62. "One desirable property of such a cache system is a least recently used (LRU) replacement policy that replaces the LRU flow-entry when a cache replacement is needed." *Id.* at 2:53–56. "Replacing least recently used flow-entries is preferred because it is likely that a packet following a recent packet will belong to the same flow." *Id.* at 2:56–58.

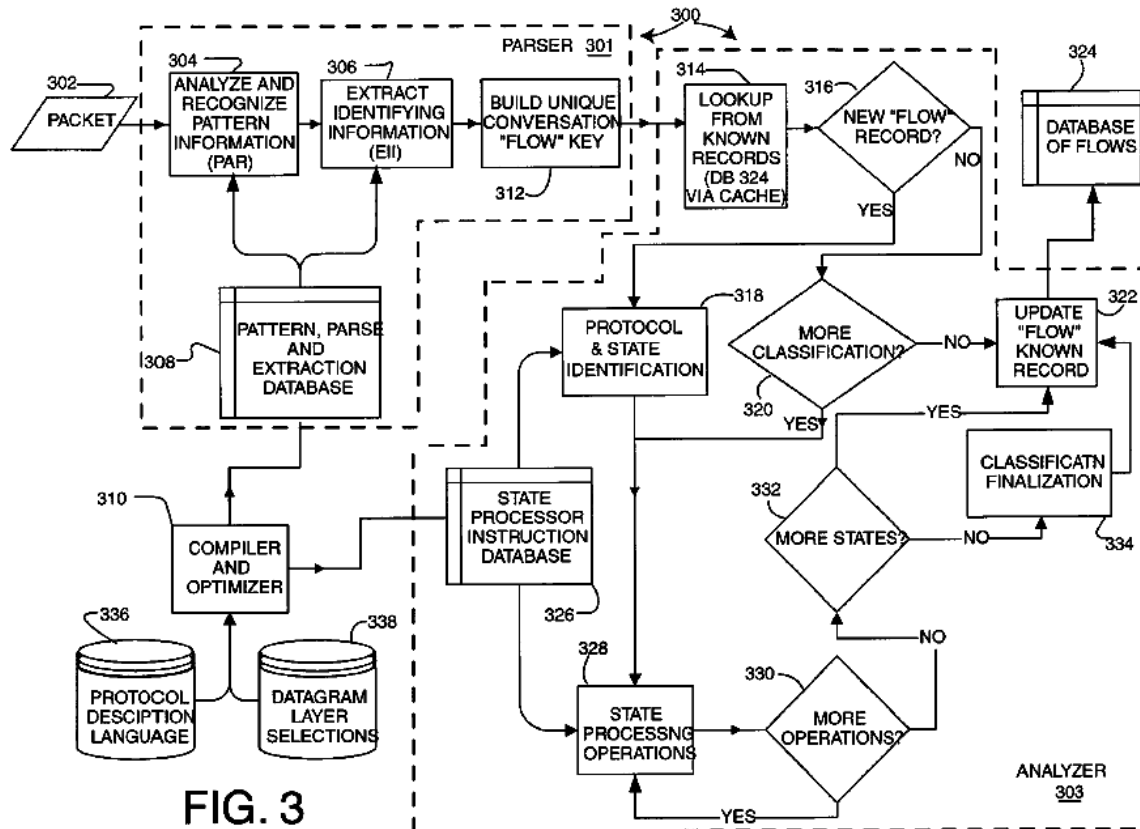Figure 3 of the '646 patent is reproduced below.

FIG. 3

Figure 3, above, depicts various components of network packet monitor 300, including parser subsystem 301, analyzer subsystem 303, and database of known flows 324. Ex. 1003, 7:36–58. Parser subsystem 301 "parses the packet and determines the protocol types and associated headers for each protocol layer that exists in the packet 302," "extracts characteristic portions (signature information) from the packet 302," and builds the "unique flow signature (also called a 'key') for this flow." *Id.* at 8:5–9:28, 27:66–29:61 (describing an example of how the disclosed monitor builds signatures and flow states in the context of a Sun Remote Procedure Call (RPC), where, after all of the required processing, "KEY-2 may . . . be used to recognize packets that are in any way associated with the application 'a²'"), Fig. 2.

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