

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*.

JUDGMENT  
Final Written Decision  
Determining Some Challenged Claims Unpatentable  
*35 U.S.C. § 318(a)*

## I. INTRODUCTION

This is a Final Written Decision in an *inter partes* review challenging the patentability of claims 1–3, 7, 16, and 18 (“the challenged claims”) of U.S. Patent No. 6,771,646 B1 (Ex. 1003, “the ’646 patent”). We have jurisdiction under 35 U.S.C. § 6 and enter this Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons set forth below, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1, 2, 7, 16, and 18 are unpatentable, but that Petitioner has not shown that claim 3 is unpatentable. *See* 35 U.S.C. § 316(e).

## II. BACKGROUND

### A. Procedural History

Juniper Networks, Inc. and Palo Alto Networks, Inc. (collectively “Petitioner”) filed a Petition (Paper 3, “Pet.”) requesting *inter partes* review of claims 1–3, 7, 16, and 18 of the ’646 patent pursuant to 35 U.S.C. § 311. Petitioner supported its Petition with the Declaration of Dr. Jon B. Weissman. Ex. 1006. Packet Intelligence LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).<sup>1</sup>

On September 10, 2020, pursuant to 35 U.S.C. § 314(a), we instituted trial to determine whether any challenged claim of the ’646 patent is unpatentable based on the grounds raised in the Petition:

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<sup>1</sup> On our authorization (Paper 8), Petitioner also filed a Preliminary Reply (Paper 9), and Patent Owner filed a Preliminary Sur-reply (Paper 10) related to discretionary denial of institution under 35 U.S.C. § 314(a).

Claims Challenged	35 U.S.C. § <sup>2</sup>	References
1–3, 7, 16, 18	103(a)	Riddle, <sup>3</sup> Ferdinand, <sup>4</sup> Wakeman <sup>5</sup>
1–3, 7, 16, 18	103(a)	Riddle, Ferdinand, Wakeman, Yu <sup>6</sup>
1–3, 7, 16, 18	103(a)	Riddle, Ferdinand, Wakeman, RFC1945 <sup>7</sup>

Paper 20, 8, 56 (“Institution Decision” or “Inst. Dec.”).<sup>8</sup>

Patent Owner filed a Response. Paper 26 (“PO Resp.”). Patent Owner supported its Response with the Declaration of Cathleen T. Quigley. Ex. 2061. Petitioner filed a Reply to Patent Owner’s Response. Paper 30 (“Reply”). Patent Owner filed a Sur-reply. Paper 32 (“Sur-reply”).

A combined oral hearing in this proceeding and IPR2020-00336, involving a related patent, was held on June 9, 2021. A transcript of the hearing is included in the record. Paper 47 (“Tr.”). The transcript of an oral hearing held the same day in cases IPR2020-00338, IPR2020-00339, and

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<sup>2</sup> The Leahy-Smith America Invents Act (“AIA”) included revisions to 35 U.S.C. § 103 that became effective on March 16, 2013. Because the ’646 patent issued from an application filed before March 16, 2013, we apply the pre-AIA version of the statutory basis for unpatentability.

<sup>3</sup> Riddle et al., US 6,412,000 B1 (issued June 25, 2002) (Ex. 1008).

<sup>4</sup> Ferdinand et al., WO 92/19054 (published Oct. 29, 1992) (Ex. 1009).

<sup>5</sup> Wakeman et al., US 5,740,175 (issued Apr. 14, 1998) (Ex. 1014).

<sup>6</sup> Yu, US 6,625,150 B1 (issued Sept. 23, 2003) (Ex. 1011).

<sup>7</sup> T. Berners-Lee et al., *Hypertext Transfer Protocol -- HTTP/1.0*, Request for Comments: 1945, Network Working Group (May 1996) (Ex. 1010).

<sup>8</sup> Patent Owner filed a Request for Rehearing of the Institution Decision (Paper 24), which we denied (Paper 27).

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IPR2020-00486, also involving patents related to the '646 patent, also is included in the record of this proceeding.<sup>9</sup> Paper 46.

Following oral hearing, we ordered the parties to provide additional briefing on the claim-construction arguments presented in the briefs and at oral hearing. Paper 41 (“Order”). Petitioner and Patent Owner each filed respective Opening Briefs on claim construction. *See* Paper 42 (“Petitioner’s Opening Brief” or “Pet. Br.”); Paper 43 (“Patent Owner’s Opening Brief” or “PO Br.”). Petitioner filed a Responsive Brief to Patent Owner’s Opening Brief, Paper 44 (“Petitioner’s Responsive Brief” or “Pet. Resp. Br.”), and Patent Owner filed a Responsive Brief to Petitioner’s Opening Brief, Paper 45 (“Patent Owner’s Responsive Brief” or “PO Resp. Br.”).

#### *B. Real Parties in Interest*

Petitioner identifies Juniper Networks, Inc. and Palo Alto Networks, Inc. as its real parties in interest. Pet. 1. Patent Owner identifies Packet Intelligence LLC and Packet Intelligence Holdings LLC as its real parties in interest. Paper 6, 2.

#### *C. 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 *Packet Intelligence LLC v. NetScout Systems, Inc.*, 2:16-

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<sup>9</sup> The parties had no objection to entering into this record the transcript from the oral hearing for IPR2020-00338, IPR2020-00339, and IPR2020-00486. Tr. 7:15–8:5; *see also* Paper 46, 5:22–6:10.

cv-230-JRG (E.D. Tex.) and *Packet Intelligence LLC v. NetScout Sys., Inc.*, No. 19-2041 (Fed. Cir.) as related matters. Pet. 1; Paper 6, 2.

The parties also identify as related matters IPR2017-00450 and IPR2019-01292, no longer pending before the Board, which challenged certain claims of the '646 patent, as well as certain other earlier proceedings that challenged claims of various related patents. Pet. 2; Paper 6, 3–5.

*D. The '646 Patent (Ex. 1003)*

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

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