

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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JUNIPER NETWORKS, INC.,  
Petitioner,

v.

IMPLICIT, LLC,  
Patent Owner.

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IPR2020-00587  
Patent 9,591,104 B2

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Before THOMAS L. GIANNETTI, SHEILA F. McSHANE, and  
NABEEL U. KHAN, *Administrative Patent Judges*.

GIANNETTI, *Administrative Patent Judge*.

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

## I. INTRODUCTION

### A. *Background*

Juniper Networks, Inc., (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–7, 10–13, 16, 19, and 20 (the “challenged claims”) of U.S. Patent No. 9,591,104 B2 (Ex. 1006, the “’104 patent”). Paper 2 (“Pet.”). Implicit, LLC, (“Patent Owner” or “Implicit”) filed a Preliminary Response. Paper 5 (“Prelim. Resp.”). With our authorization, Petitioner filed a Reply (Paper 11, “Reply”) and Patent Owner filed a Sur-reply (Paper 13, “Sur-reply”) addressing the issue of discretionary denial under 35 U.S.C. § 325(d).

For the reasons that follow, we institute *inter partes* review of all challenged claims on all grounds in the Petition.

## II. INSTITUTION OF INTER PARTES REVIEW

### A. *Standard for Institution*

The standard for institution is set forth in 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition and the Preliminary 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.” 35 U.S.C. § 314 (2018); *see also* 37 C.F.R § 42.4(a) (“The Board institutes the trial on behalf of the Director.”).

### B. *Related Proceedings*

The parties identify the following pending district court proceedings involving the ’104 patent: *Implicit, LLC v. Juniper Networks, Inc.*, Case No. 2:19-cv-00037-JRG-RSP (E.D. Tex.); *Implicit, LLC v. Fortinet, Inc.*, Case No. 2:19-cv-00039 (E.D. Tex.); *Implicit, LLC v. Imperva, Inc.*, Case No. 2:19-cv-00040 (E.D. Tex.); *Implicit, LLC v. Netscout Systems, Inc.*, Case

IPR2020-00587  
Patent 9,591,104 B2

No. 2:18-cv-00053 (E.D. Tex.); and *Implicit, LLC v. Sandvine Corporation*, Case No. 2:18-cv-00054 (E.D. Tex.). Pet. 70–71; Paper 4, 2.

Petitioner identifies the following completed district court proceedings involving the '104 patent: *Implicit, LLC v. F5 Networks, Inc.*, Case No. 3:14-cv-02856 (N.D. Cal.); *Implicit, LLC v. Ericsson, Inc.*, Case No. 6:16-cv-00075 (E.D. Tex.); *Implicit, LLC v. Huawei Technologies USA Inc.*, Case No. 6:16-cv-00076 (E.D. Tex.); *Implicit, LLC v. NEC Corporation of America*, Case No. 6:16-cv-00078 (E.D. Tex.); *Implicit, LLC v. Nokia Solutions and Networks US LLC*, Case No. 6-16-cv00079 (E.D. Tex.); *Implicit, LLC v. Trend Micro, Inc.*, Case No. 6:16-cv-00080 (E.D. Tex.); and *Implicit, LLC v. Palo Alto Networks, Inc.*, Case No. 6:17-cv-00336 (E.D. Tex.). Pet. 71.

Patents related to the '104 patent are challenged by Petitioner in IPR2020-00585, IPR2020-00586, IPR2020-00590, IPR2020-00591, and IPR2020-00592.

### C. *Real Parties-in-Interest*

Petitioner identifies “Juniper Networks, Inc.” as the real party-in-interest. Pet. 70. Patent Owner identifies “Implicit LLC and Edward Balassanian” as the real parties-in-interest. Paper 4, 2.

### D. *The '104 Patent*

The '104 patent is titled “Method and System for Data Demultiplexing.” Ex. 1006, (54). The '104 patent relates to a computer system for data demultiplexing. *Id.* at 1:22–23. According to the patent, interconnected computer systems, such as those on the Internet, “generate data in a wide variety of formats.” *Id.* at 1:28–30. For example, to send bitmap data from one computer system to another, the sending computer system may compress and encrypt the bitmap data, convert the data into a

TCP (Transmission Control Protocol) format<sup>1</sup> and then into an IP format, and finally, convert the data into an Ethernet format. *Id.* at 1:34–41. The receiving computer system performs each of these conversions in reverse order to recover the original bitmap data. *Id.* at 1:43–45.

In order to process data in such a wide variety of formats, both sending and receiving computer systems need to have many conversion routines available to support the various formats. *Id.* at 1:49–52. The '104 patent recognizes that it would be desirable to dynamically identify a series of conversion routines for processing data, where “the output format of one conversion routine can be identified as being compatible with the input format of another conversion routine” and “the series of conversion routines . . . can be quickly identified when data is received.” *Id.* at 2:8–16.

Accordingly, the conversion method and system of the '104 patent searches for and identifies a sequence of conversion routines for the received packets of a message, where a message may be a collection of related data, such as a video or audio stream, or an email. *Id.* at 2:49–56. The sequence is used to convert the packets of the message from a source format to a target format using various intermediate formats. *Id.* at 2:56–58. Because the conversion system receives multiples messages with different source and target formats, it “effectively ‘demultiplexes’” the messages by receiving each message, identifying the sequence of conversion routines, and controlling the processing of each message by the identified sequence. *Id.* at 2:66–3:6. Moreover, the conversion system retains state information for the

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<sup>1</sup> When computers communicate over the Internet, they typically use a suite of protocols referred to as TCP/IP. The protocols are often described as a layers in a “stack.” *See* Ex. 1030 (“TCP/IP Illustrated Volume I”), 23–24.

packets of a message by “rout[ing] all packets for a message through the same session of each conversion routine so that the same state or instance information can be used by all packets of the message.” *Id.* at 3:6–14. The sequence of conversion routine sessions for a given packet is called a “path.” *Id.* at 3:14–17.

Figure 4 of the '104 patent is reproduced below.

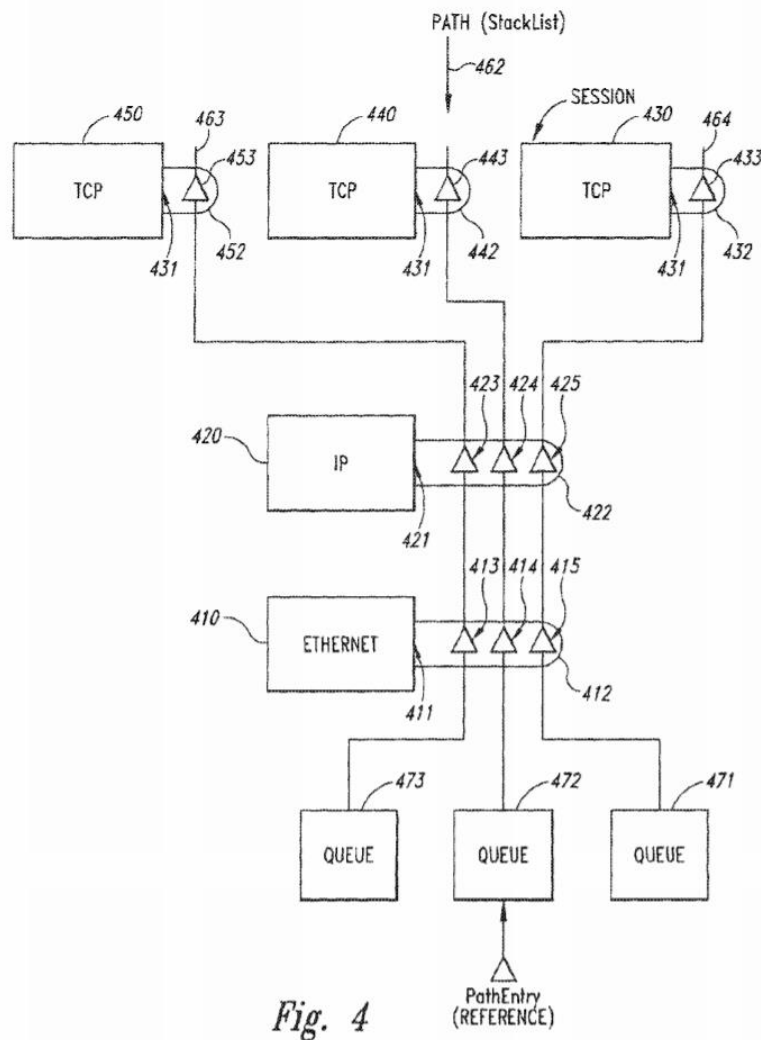


Figure 4 is a block diagram illustrating a path data structure having several paths. *Id.* at 5:41–42. Figure 4 shows data paths 461<sup>2</sup>, 462, and 463,

<sup>2</sup> Path 461 appears to be mislabeled in Figure 4 as “464.”

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