

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SANDVINE CORPORATION and SANDVINE INCORPORATED ULC,  
Petitioner,

v.

PACKET INTELLIGENCE, LLC,  
Patent Owner.

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Case IPR2017-00629  
Patent 6,954,789 B2

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Before ELENI MANTIS MERCADER, JUSTIN T. ARBES, and  
WILLIAM M. FINK, *Administrative Patent Judges*.

FINK, *Administrative Patent Judge*.

DECISION  
Denying Institution of *Inter Partes* Review  
37 C.F.R. § 42.108

Sandvine Corporation and Sandvine Incorporated ULC (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 19–43 of U.S. Patent No. 6,954,789 B2 (Ex. 1004, “the ’789 patent”) pursuant to 35 U.S.C. § 311(a). Patent Owner Packet Intelligence, LLC filed a Preliminary Response (Paper 6, “Prelim. Resp.”) pursuant to 35 U.S.C. § 313. Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the petition and 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.” For the reasons that follow, we have decided not to institute an *inter partes* review.

## I. BACKGROUND

### A. The ’789 Patent<sup>1</sup>

The ’789 patent discloses “[a] monitor for and a method of examining packets passing through a connection point on a computer network.” Ex. 1002, Abstract. The ’789 patent explains that there was a need in the art for “a real-time network monitor that can provide alarms notifying selected users of problems that may occur with the network or site.” *Id.* at col. 2, ll. 3–5. 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

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<sup>1</sup> Petitioner challenges different claims of the ’789 patent in Case IPR2017-00630. Petitioner also challenges patents related to the ’789 patent in Cases IPR2017-00450, IPR2017-00451, IPR2017-00769, IPR2017-00862, and IPR2017-00863.

information to identify this packet as part of a flow, “build[ing] a unique flow signature (also called a ‘key’) for this flow,” and “matching this flow in a database of known flows 324.” *Id.* at col. 9, ll. 6–9, col 13, ll. 21–28, col. 13, ll. 60–65.

Figure 3 of the '789 patent is reproduced below.

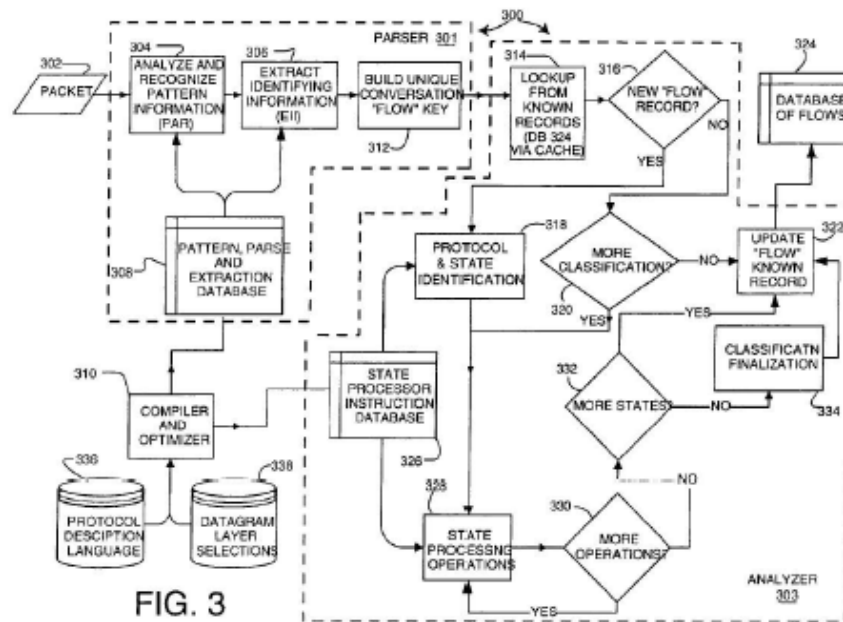


Figure 3 depicts various components of network packet monitor 300, including parser subsystem 301, analyzer subsystem 303, and database of known flows 324. *Id.* at col. 11, l. 50–col. 13, l. 65. Parser subsystem 300 “parses the packet and determines the protocol types and associated headers for each 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 col. 12, l. 19–col. 13, l. 28, col. 33, l. 30–col. 34, l. 33 (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 ‘a<sup>2</sup>’”), Fig. 2.

Analyzer system 303 then determines whether the packet has a matching flow-entry in database of flows 324, and processes the packet accordingly, including, for example, determining whether the packet belongs to an existing conversational flow or a new (i.e., not previously encountered) flow and, in the case of the latter, performing state processing to determine whether the conversational flow has been “fully characterized” and should be finalized. *Id.* at col. 13, l. 60–col. 16, l. 52. The ’789 patent discloses that

[f]uture packets that are part of the same conversational flow have their state analysis continued from a previously achieved state. When enough packets related to an application of interest have been processed, a final recognition state is ultimately reached, i.e., a set of states has been traversed by state analysis to completely characterize the conversational flow. The signature for that final state enables each new incoming packet of the same conversational flow to be individually recognized in real time.

In this manner, one of the great advantages of the present invention is realized. Once a particular set of state transitions has been traversed for the first time and ends in a final state, a short-cut recognition pattern—a signature—[c]an be generated that will key on every new incoming packet that relates to the conversational flow. Checking a signature involves a simple operation, allowing high packet rates to be successfully monitored on the network.

*Id.* at col. 16, ll. 17–34.

*B. Illustrative Claim*

Claim 19 of the '789 patent<sup>2</sup> recites:

1. A packet monitor for examining packets passing through a connection point on a computer network, each packets conforming to one or more protocols, the monitor comprising:

(a) a packet acquisition device coupled to the connection point and configured to receive packets passing through the connection point;

(b) an input buffer memory coupled to and configured to accept a packet from the packet acquisition device;

(c) a parser subsystem coupled to the input buffer memory and including a slicer, the parsing subsystem configured to extract selected portions of the accepted packet and to output a parser record containing the selected portions;

(d) a memory for storing a database comprising none or more flow-entries for previously encountered conversational flows, each flow-entry identified by identifying information stored in the flow-entry;

(e) a lookup engine coupled to the output of the parser subsystem and to the flow-entry memory and configured to lookup whether the particular packet whose parser record is output by the parser subsystem has a matching flow-entry, the looking up using at least some of the selected packet portions and determining if the packet is of an existing flow; and

(f) a flow insertion engine coupled to the flow-entry memory and to the lookup engine and configured to create a flow-entry in the flow-entry database, the flow-entry including identifying information for future packets to be identified with the new flow-entry, the lookup engine configured such that if the packet is of an existing flow, the monitor classifies the packet as belonging to the found existing flow; and if the packet is of a new flow, the flow insertion engine stores a new flow-

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<sup>2</sup> Claims 6, 7, 15, 23, 26, 27, and 29 of the '789 patent were corrected in Certificates of Correction dated March 7, 2006, and October 1, 2013.

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