Trials@uspto.gov
571-272-7822

Paper 8
Entered: July 26, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SANDVINE CORPORATION and SANDVINE INCORPORATED ULC,
Petitioner,

v.

PACKET INTELLIGENCE, LLC,
Patent Owner.

Case IPR2017-00769
Patent 6,651,099 B1

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

MANTIS MERCADER, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner filed a Petition for *inter partes* review of claims 1–10 of U.S. Patent No. 6,651,099 B1 (Ex. 1003, "the '099 patent"). Paper 1 ("Pet."). Patent Owner filed a Preliminary Response. Paper 6 ("Prelim. Resp."). By statute, institution of an *inter partes* review may not be authorized "unless . . . 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." 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.108.

Upon consideration of the Petition and the Preliminary Response, we are not persuaded Petitioner demonstrated a reasonable likelihood of prevailing in establishing unpatentability of at least one claim of the '099 patent. Accordingly, we do not institute an *inter partes* review.

A. Related Matters

Patent Owner submits that the '099 patent is the subject of a patent infringement lawsuit in the United States District Court for the Eastern District of Texas: (1) *Packet Intelligence, LLC v. Sandvine Corp.*, Case No. 2:16-cv-00147, which was consolidated for pretrial matters (except venue) with co-pending *Packet Intelligence, LLC v. NetScout Systems, Inc.*, Case No. 2:16-cv-00230. Paper 5. Petitioner also filed petitions for *inter partes* review of United States Patent Nos. 6,839,751 B1 (IPR2017-00451); 6,771,646 B1 (IPR2017-00450); 6,954,789 B2 (IPR2017-00629 and IPR2017-00630); and 6,665,725 B1 (IPR2017-00862 and IPR2017-00863). *Id.*

B. The '099 Patent

The '099 patent relates to examining packets passing through a connection point on a computer network to determine whether a packet is of an existing conversational flow. Ex. 1003, Abstract. Figure 3 of the '099 patent is reproduced below.

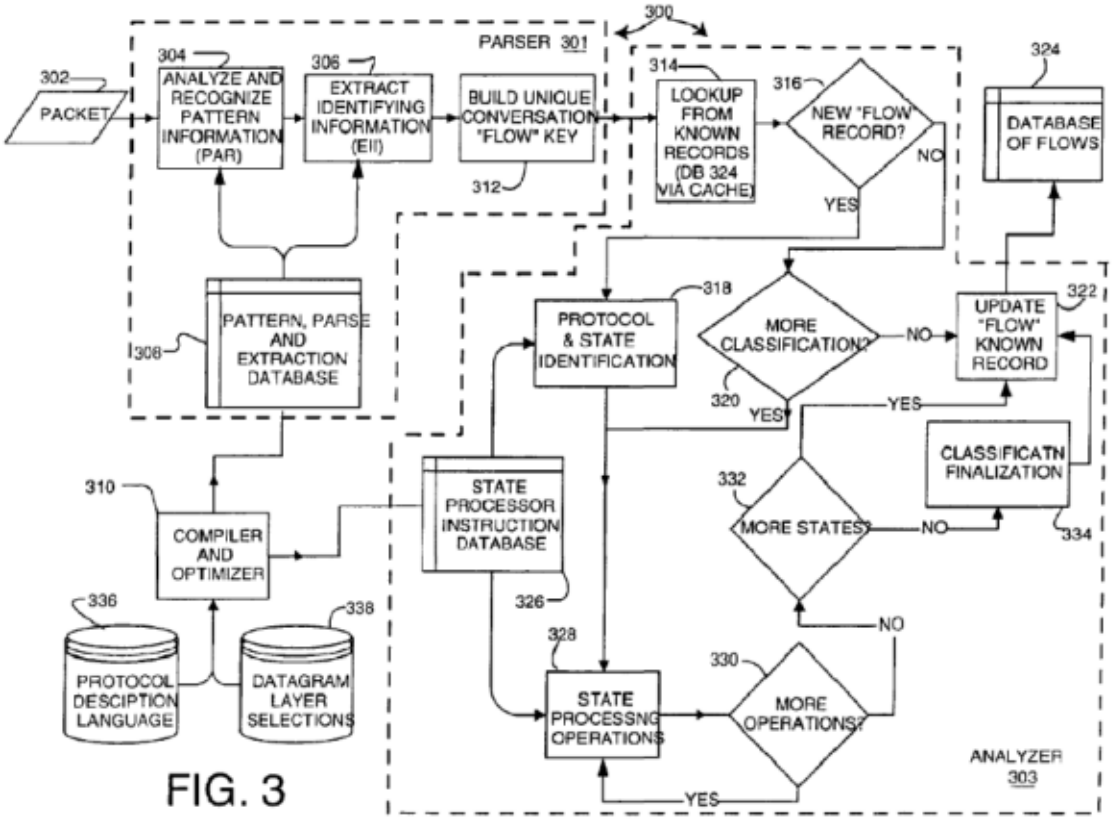

FIG. 3

Figure 3 above shows network packet monitor 300. *Id.* at 11:43–45.

Parser 301 parses and extracts selected portions of packet 302 to generate an identifying signature and analyzer 303 analyzes the packet. *See id.* at 11:59–65. Compiler 310 provides protocol specific information to parser 301 and analyzer 303. *Id.* at 11:66–12:1. For each protocol there are several fields that are known, such as the destination (recipient) and the source (sender). *Id.* at 12:5–8. These are used by monitor 300 to identify

the flow. *Id.* Parser 301 uses pattern recognition process 304 carried out by the pattern analysis and recognition (PAR) engine to parse packet 302 and determine the protocol types and associated headers for each protocol layer that exists in packet 302 by using parsing-pattern-structures supplied from parsing/extraction database 308. *Id.* at 12:12–22, 12:65–13:2.

Extraction process 306, implemented by an extracting and information identifying (EII) engine in parser 301, extracts characteristic portions (signature information) from packet 302 using extraction masks supplied from the extraction-operations database (e.g., parsing/extraction database 308) to identify information from the packet. *Id.* at 12:12–22, 13:14–25. This is required to recognize the packet as part of a flow. *Id.* at 13:14–25. The extracted information is put in a sequence that is processed in block 312 to build a unique flow signature (also called a "key") for the flow depending on the protocols used in the packet. *Id.* The flow signature depends on the protocols used in the packet and may include source and destination addresses. *Id.* at 13:23–29. Building a hash of the signature using a hash function allows for efficient searching. *Id.* at 13:30–36.

A parser record that includes the signature, the hash, and the packet itself, is passed on to lookup process 314 carried out by the lookup engine (LUE) to determine whether the particular 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 13:54–61, 14:3–13.

Flow-entry database 324 "stores flow-entries that include the unique flow-signature, state information, extracted information from the packet for updating flows," and statistics about the flow. *Id.* at 14:14–18. If there is no flow-entry matching the signature (e.g., the signature is for a new flow), then

protocol and state identification process 318 determines the state and protocol. *Id.* at 14:39–42. Process 318 determines the protocols and where in the state sequence for the protocol the packet belongs by making reference to database 326 of state patterns and processes. *Id*. at 14:41–46. If the packet is found to have matching flow-entry in database 324 (e.g., in the cache) then process 320 determines, from the looked-up flow entry, if more classification by state processing of the flow signature is necessary. *Id*. at 14:49–53. If no further processing is needed, then process 322 updates the flow entry in flow-entry database 324. *Id.* at 14:53–54. If state processing is required, then state processor 328 carries out any state operations according to state instructions from state pattern and processes database 326. *Id*. at 14:58–62.

State processor 328 analyzes both new and existing flows in order to analyze all levels of the protocol stack, ultimately classifying flows by application (level 7 in the ISO model). *Id.* at 14:63–66. This is done by processing from state-to-state based on predefined state transition rules and state operations specified in state processor instruction database 326. *Id*. at 14:66–15:1. By maintaining a state of flows, network traffic monitor 300 provides for a single packet protocol recognition of flows and multiple-packet recognition of flows. *Id.* at 15:18–22. Process 334 finalizes the classification of the conversational flow. *Id.* at 15:39–41.

C. Illustrative Claim

Claim 1 of the challenged claims of the ’099 patent is independent. Claim 1 is illustrative of the claimed subject matter:

> 1. A packet monitor for examining packets passing through a connection point on a computer network in real-time, the packets provided to the packet monitor via a packet

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