UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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UNIFIED PATENT INC.,
Petitioner

v.

PLECTRUM LLC,
Patent Owner

_____

IPR2017-01430
Patent 5,978,951

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Before KEN B. BARRETT, MIRIAM L. QUINN, and
SHEILA F. McSHANE, *Administrative Patent Judges.*

McSHANE, *Administrative Patent Judge.*

DECISION
Partial Institution of *Inter Partes* Review
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108

I. INTRODUCTION

A. *Background*

Unified Patents Inc. ("Petitioner") filed a Petition requesting *inter partes* review of claims 1–6, 8, 11–14, and 21–24 ("the challenged claims") of U.S. Patent No. 5,978,951 (Ex. 1001, "the '951 patent") pursuant to 35 U.S.C. §§ 311–319. Paper 3 ("Pet."). Plectrum LLC ("Patent Owner") filed a Preliminary Response to the Petition. Paper 7 ("Prelim. Resp.").

We have authority under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted "unless . . . the information presented in the petition . . . 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." *See* 37 C.F.R. § 42.4(a) ("The Board institutes the trial on behalf of the Director.").

We determine that Petitioner has demonstrated that there is a reasonable likelihood that it would prevail with respect to at least one challenged claim. For the reasons described below, we institute an *inter partes* review of claims 8 and 11 of the '951 patent.

B. *Related Proceedings*

Patent Owner indicates that related matters are these Eastern District of Texas district court cases: *Plectrum LLC v. Arista Networks, Inc.*, Case No. 4:17-cv-00076; *Plectrum LLC v. Brocade Communications Systems, Inc.*, Case No. 4:17-cv-00077; *Plectrum LLC v. Extreme Networks, Inc.*, Case No. 4:17-cv-00079; *Plectrum LLC v. Facebook, Inc.*, Case No. 4:17-cv-00081; *Plectrum LLC v. Fortinet, Inc.*, Case No. 4:17-cv-00082; *Plectrum LLC v. Huawei Technologies USA, Inc.*, Case No. 4:17-cv-00083; *Plectrum LLC v. Juniper Networks, Inc.*, Case No. 4:17-cv-00084; *Plectrum*

LLC v. AT&T, Inc., Case No. 4:17-cv-00120; *Plectrum LLC v. Broadcom Corporation*, Case No. 4:17-cv-00121; *Plectrum LLC v. Comcast Corporation*, Case No. 4:17-cv-00123; *Plectrum LLC v. F5 Networks, Inc.*, Case No. 4:17-cv-00124; *Plectrum LLC v. NEC Corporation of America*, Case No. 4:17-cv-00125; *Plectrum LLC v. Verizon Communications, Inc.*, Case No. 4:17-cv-00126; *Plectrum LLC v. Nokia USA, Inc.*, Case No. 4:17-cv-00140; and *Plectrum LLC v. Oracle Corporation*, Case No. 4:17-cv-00141. Paper 6, 2.

C. The '951 Patent

The '951 patent is titled "High Speed Cache Management Unit for Use in a Bridge/Router," and was filed as application No. 08/927,336 on September 11, 1997, and issued on November 2, 1999. Ex. 1001, [21], [22], [45], [54].

The '951 patent is directed to providing a network address cache. Ex. 1001, 1:23–31. The network address cache maintains hardware address and age tables, searches the address table for addresses received in network frames, and returns address search results, such as the destination port(s) for the received frame. *Id*. at 1:30–39. When a frame is received, the addresses in the frame are looked up, and the data associated with the cached addresses is returned in order to process the frame. *Id*. at 1:41–52.

Figure 2, reproduced below, depicts a block diagram illustrating a network interface module coupled to a motherboard via a backplane. Ex. 1001, 2:56–59.
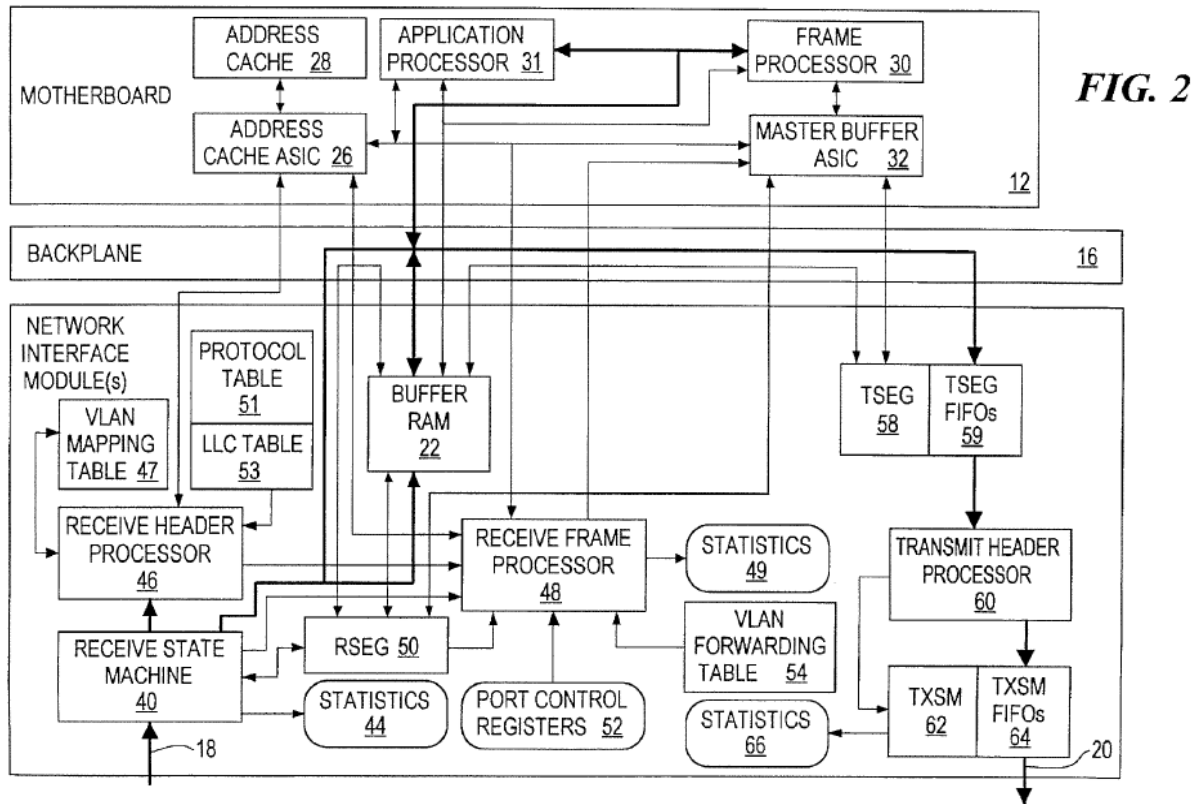
FIG. 2

Figure 2, above, illustrates that the network interface module receives and sends data via input port 18 and output port 20, and when a frame is received, it is sent to receive header processor 46. Ex. 1001, 3:31–35, 3:61–64. Motherboard 12 includes address cache ASIC ("ACA") 26, with associated cache 28, frame processor 30, application processor 31, and master buffer ASIC ("MBA") 32. *Id*. at 3:57–60. Receive header processor 46 derives information from the header and passes that information to the ACA. *Id*. at 7:53–59. ACA 26 looks up addresses cached in associated cache 28. *Id*. at 4:20–21.

In an embodiment of the '951 patent, cache 28 is a 4-way associative cache, where each row of cache is associated with one entry from each of the

four sets. Ex. 1001, 5:14–17. Figure 4A, reproduced below, depicts the arrangement of cache 28.
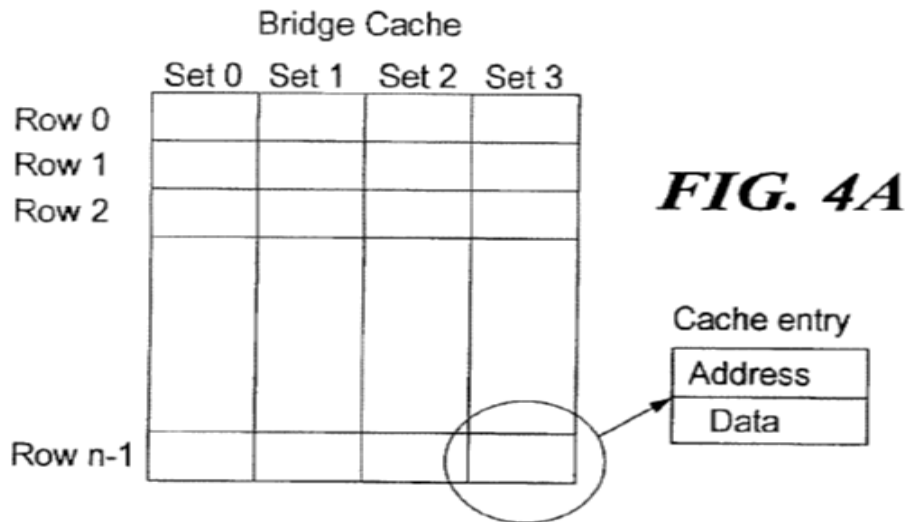
Bridge Cache

FIG. 4A

Figure 4A, above, illustrates the organization of a portion of cache 28. Ex. 1001, 2:64–65, 5:14–17. A cache lookup is started by the receipt of an address to be searched by the ACA. *Id*. at 5:25–27. A cyclic redundancy code ("CRC") process is performed by a CRC engine on the address to generate a code, and the code is then used to identify a cache row. *Id*. at 5:27–31. The ACA uses an algorithm to identify a set order for address comparison, and a valid table is used for reference to identify if any of the sets are invalid. *Id*. at 5:30–34. A most likely valid set in the identified row is chosen, and the stored value is compared against the address from which the CRC is generated. *Id*. at 5: 34–37. If a match occurs, the associated data is returned, and if no match occurs, the next valid set in the row is selected and compared to the received address. *Id*. at 5:37–41. Upon a match, the frame is forwarded. *Id*. at 4:60–5:1.

Illustrative independent claims 1 and 8 are reproduced below.

1. A method for selecting an output port eligible to be used for transmission of a frame received at a computer network device,

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