

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CISCO SYSTEMS, INC. and QUANTUM CORPORATION,  
Petitioners,

v.

CROSSROADS SYSTEMS, INC.,  
Patent Owner.

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Case IPR2014-01544  
Patent 7,051,147 B2

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Before KALYAN K. DESHPANDE, MATTHEW R. CLEMENTS, and  
J. JOHN LEE, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

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

CROSSROADS EXHIBIT 2124  
NetApp Inc. v. Crossroads Systems, Inc.

## INTRODUCTION

On September 25, 2014, Cisco Systems, Inc. (“Cisco”) and Quantum Corporation (“Quantum”) (collectively, “Petitioners”) filed a Petition (Paper 3, “Pet.”) requesting *inter partes* review of claims 1–39 of U.S. Patent No. 7,051,147 B2 (Ex. 1001, “the ’147 patent”). Crossroads Systems, Inc. (“Crossroads” or “Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”) on January 8, 2015. We have jurisdiction under 35 U.S.C. § 314 to determine whether to institute an *inter partes* review.

An *inter partes* review may be instituted only if the information presented 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.” 35 U.S.C. § 314(a). On the present record, the information presented shows there is a reasonable likelihood that Petitioners would prevail in establishing the unpatentability of each of the challenged claims. Accordingly, pursuant to § 314, we institute an *inter partes* review of claims 1–39 of the ’147 patent.

### A. *Related Proceedings*

The parties identify the following district court cases as proceedings involving the ’147 patent: *Crossroads Sys., Inc. v. Oracle Corp.*, No. 1:13-cv-00895-SS (W.D. Tex.); *Crossroads Sys., Inc. v. Huawei Techs. Co.*, No. 1:13-cv-01025-SS (W.D. Tex.); *Crossroads Sys., Inc. v. Cisco Sys., Inc.*, No. 1:14-cv-00148-SS (W.D. Tex.); *Crossroads Sys., Inc. v. NetApp, Inc.*, No. 1:14-cv-00149-SS (W.D. Tex.); and *Crossroads Sys., Inc. v. Quantum Corp.*, No. 1:14-cv-00150-SS (W.D. Tex.). Pet. 1; Paper 8, 3–4. According to the parties, the ’147 patent is also at issue in petitions seeking *inter partes* review in the following proceedings before the Board: *Oracle Corp. v.*

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*Crossroads Sys., Inc.*, Case IPR2014-01207; *Oracle Corp. v. Crossroads Sys., Inc.*, Case IPR2014-01209; *NetApp, Inc. v. Crossroads Sys., Inc.*, Case IPR2015-00773; and *Oracle Corp. v. Crossroads Sys., Inc.*, Case IPR2015-00852. Pet. 1; Paper 8, 4–5.

The parties also identify the following district court cases and proceedings before the Board as involving other patents related to the '147 patent: *Crossroads Sys., Inc. v. 3PAR, Inc.*, No. 1:10-cv-00652 (W.D. Tex.); *Oracle Corp. v. Crossroads Sys., Inc.*, Case IPR2014-01177; *Oracle Corp. v. Crossroads Sys., Inc.*, Case IPR2014-01197; *Cisco Sys., Inc. v. Crossroads Sys., Inc.*, Case IPR2014-01226; *NetApp, Inc. v. Crossroads Sys., Inc.*, Case IPR2014-01233; *Cisco Sys., Inc. v. Crossroads Sys., Inc.*, Case IPR2014-01463; *NetApp, Inc. v. Crossroads Sys., Inc.*, Case IPR2015-00772; *NetApp, Inc. v. Crossroads Sys., Inc.*, Case IPR2015-00776; *NetApp, Inc. v. Crossroads Sys., Inc.*, Case IPR2015-00777; *Dot Hill Sys. Corp. v. Crossroads Sys., Inc.*, Case IPR2015-00822; *Oracle Corp. v. Crossroads Sys., Inc.*, Case IPR2015-00825; and *Oracle Corp. v. Crossroads Sys., Inc.*, Case IPR2015-00854.<sup>1</sup> Pet. 1; Paper 8, 4–5.

#### B. *The '147 Patent*

The '147 patent relates to a storage router and network where devices (e.g., workstations) connected via a Fibre Channel (“FC”) transport medium are provided access to storage devices on a second FC transport medium. Ex. 1001, Abstract. The storage router interfaces with both FC media, mapping workstations on the first FC medium, for example, to the storage devices on the second FC medium. *Id.*

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<sup>1</sup> The Board has issued decisions denying the petitions in IPR2014-01177 and IPR2014-01233, and those proceedings are no longer pending.

The storage router of the '147 patent allows the workstations to communicate with the storage devices using “native low level, block protocol.” *Id.* For example, in describing a storage router connecting a workstation on an FC medium to a storage device on a SCSI medium in a manner consistent with the invention, the specification states that the storage router “enables the exchange of *SCSI command set information* between application clients on SCSI bus devices and the [FC] links.” *Id.* at 5:46–50 (emphasis added). One advantage of using such native low level block protocols is greater access speed when compared to network protocols that must first be translated to low level requests, and vice versa, which reduces access speed. *Id.* at 1:58–67.

### C. *Challenged Claims*

Petitioners challenge the patentability of claims 1–39 of the '147 patent, of which claims 1, 6, 10, 14, 21, 28, and 34 are independent. Claim 1 is illustrative of the challenged claims, and recites:

1. A storage router for providing virtual local storage on remote storage devices to a device, comprising:

a buffer providing memory work space for the storage router;

a first Fibre Channel controller operable to connect to and interface with a first Fibre Channel transport medium;

a second Fibre Channel controller operable to connect to and interface with a second Fibre Channel transport medium; and

a supervisor unit coupled to the first and second Fibre Channel controllers and the buffer, the supervisor unit operable:

to maintain a configuration for remote storage devices connected to the second Fibre Channel transport medium that maps between the device and the remote storage devices and that implements access controls for storage space on the remote storage devices; and

to process data in the buffer to interface between the first Fibre Channel controller and the second Fibre Channel controller to allow access from Fibre Channel initiator devices to the remote storage devices using native low level, block protocol in accordance with the configuration.

*D. Alleged Grounds of Unpatentability*

The sole ground of unpatentability advanced by Petitioners against the challenged claims of the '147 patent (i.e., claims 1–39) is that each claim is unpatentable under 35 U.S.C. § 103 over the CRD Manual<sup>2</sup> (Ex. 1004) and the HP Journal<sup>3</sup> (Ex. 1006).

ANALYSIS

In the analysis that follows, facts and arguments are discussed as they have been presented thus far in this proceeding. Any inferences or conclusions drawn from those facts are neither final nor dispositive of any issue related to any ground on which review is instituted.

*A. Claim Construction*

Petitioners propose constructions for several claim terms. Pet. 10–14. Patent Owner does not address any particular claim constructions in its Preliminary Response. At this stage of the proceeding and on the present record, we conclude that no claim terms require express construction for purposes of this Decision.

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<sup>2</sup> CMD TECHNOLOGY, INC., CRD-5500 SCSI RAID CONTROLLER USER'S MANUAL (Rev. 1.3, 1996) ("CRD Manual").

<sup>3</sup> HEWLETT-PACKARD JOURNAL, Oct. 1996 ("HP Journal").

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