UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC., QUANTUM CORPORATION,
and ORACLE CORPORATION,
Petitioners,

v.

CROSSROADS SYSTEMS, INC.,
Patent Owner.

Case IPR2014-01544[1]
Patent 7,051,147 B2

Before NEIL T. POWELL, KRISTINA M. KALAN, J. JOHN LEE, and KEVIN W. CHERRY, *Administrative Patent Judges*.

LEE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

[1] Case IPR2015-00852 has been joined with this proceeding.

INTRODUCTION

On September 25, 2014, Cisco Systems, Inc. and Quantum Corporation 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. timely filed a Preliminary Response (Paper 7). An *inter partes* review of all challenged claims was instituted on April 3, 2015. Paper 9 ("Inst. Dec."). Crossroads then filed a Patent Owner Response (Paper 20, "PO Resp."), and Cisco and Quantum filed a Petitioner Reply (Paper 33, "Pet. Reply").

Oracle Corporation filed a separate petition challenging the same claims of the '147 patent on March 6, 2015, in *Oracle Corporation v. Crossroads Systems, Inc.*, Case IPR2015-00852 ("852 IPR"). 852 IPR, Paper 1. The 852 IPR petition asserted the identical ground of unpatentability, and relied on the same evidence and arguments, as presented in this proceeding. *See id*. Concurrently with that petition, Oracle filed a Motion for Joinder requesting that the 852 IPR be joined with this proceeding. 852 IPR, Paper 3. Crossroads timely filed a preliminary response to Oracle's petition (852 IPR, Paper 12), but it did not oppose joinder. An *inter partes* review of all challenged claims was instituted on August 14, 2015, and Oracle's Motion for Joinder was granted. Paper 34 ("Joinder Inst. Dec."). Because Oracle requested in its Motion for Joinder, the schedule in this proceeding was unchanged by the joinder of the 852 IPR, and Oracle indicated it would not require briefing separate from that filed by Cisco and Quantum in this proceeding. *Id.* at 8–9.

An oral hearing was held on October 30, 2015. Paper 49 ("Tr.").[2]

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. As discussed below, Petitioners have shown by a preponderance of the evidence that claims 1–39 of the '147 patent are unpatentable.

A. Related Proceedings

The parties identify several of district court cases related to this proceeding, including the following in which Petitioners are named parties: (1) *Crossroads Systems, Inc. v. Oracle Corporation*, Case No. 1-13-cv-00895-SS (W.D. Tex.); (2) *Crossroads Systems, Inc. v. Cisco Systems, Inc.*, Case No. 1-14-cv-00148-SS (W.D. Tex.); and (3) *Crossroads Systems, Inc. v. Quantum Corporation*, Case No. 1-14-cv-00150-SS (W.D. Tex.). Pet. 1; Paper 15, 3–4.

In addition, the '147 patent is the subject of two other pending *inter partes* reviews: (1) *Oracle Corporation v. Crossroads Systems, Inc.*, Case IPR2014-01207 (PTAB); and (2) *Oracle Corporation v. Crossroads Systems, Inc.*, Case IPR2014-01209 (PTAB). Pet. 1; Paper 15, 4.

B. The '147 Patent

The '147 patent relates to a storage router and network where devices (e.g., workstations) connected to 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 transport medium, for example, to the storage devices on the second FC transport medium. *Id*. The storage router

[2] A combined oral hearing was held for this case as well as related *inter partes* reviews IPR2014-01226 (to which IPR2015-00825 was joined) and IPR2014-01463 (to which IPR2015-00854 was joined).

of the '147 patent allows access from the workstations to the storage devices using "native low level, block protocol." *Id*. 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. Instituted Ground of Unpatentability

This *inter partes* review was instituted on the alleged ground of unpatentability of all challenged claims in view of the combination of the CRD Manual[3] and the HP Journal[4] under 35 U.S.C. § 103. Inst. Dec. 16; Joinder Inst. Dec. 9.

ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are construed according to their broadest reasonable interpretation in light of the specification. 37 C.F.R. § 42.100(b); *see In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015). Only those terms in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

During trial, the parties disputed the claim construction of the term "maps between the device and the remote storage devices," which we address below. No other claim terms require express construction to resolve the issues raised in this *inter partes* review.

Claim 1 recites "a configuration for remote storage devices . . . that *maps between the device and the remote storage devices*" (emphasis added). Each independent claim recites a similar limitation. This term was not construed expressly in the Decision on Institution. Petitioners argue this

[3] CMD TECHNOLOGY, INC., CRD-5500 SCSI RAID CONTROLLER USER'S MANUAL (Rev. 1.3, 1996) (Ex. 1004, "CRD Manual").
[4] HEWLETT-PACKARD JOURNAL, Oct. 1996 (Ex. 1006, "HP Journal").

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