

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ORACLE CORPORATION, NETAPP INC., and HUAWEI  
TECHNOLOGIES CO., LTD.,  
Petitioners,

v.

CROSSROADS SYSTEMS, INC.,  
Patent Owner.

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Case IPR2014-01209  
Patent 7,051,147 B2

Before HYUN J. JUNG, NEIL T. POWELL, and  
KRISTINA M. KALAN, *Administrative Patent Judges*.

KALAN, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Petitioners Oracle Corporation, NetApp Inc., and Huawei Technologies Co., Ltd. filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 1–13 of U.S. Patent No. 7,051,147 B2 (Ex. 1001, “the ’147 patent”) pursuant to 35 U.S.C. §§ 311–319. Patent Owner Crossroads Systems, Inc. filed a Preliminary Response (Paper 11, “Prelim. Resp.”). We have jurisdiction under 35 U.S.C. § 314, which provides that *inter partes* review may not be instituted unless “the information presented in the petition . . . and any [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).

Petitioners challenge claims 1–13 as obvious under 35 U.S.C. § 103. We institute an *inter partes* review as to claims 1, 2, 4, 5, 10, 11, and 13 on certain grounds as discussed below.

## II. BACKGROUND

### A. Related Matters

The parties indicate that the ’147 patent is asserted in co-pending matters captioned *Crossroads Systems, Inc. v. Oracle Corp.*, Case No. 1-13-cv-00895-SS (W.D. Tex.), *Crossroads Systems, Inc. v. Huawei Technologies Co. Ltd.*, Case No. 1-13-cv-01025-SS (W.D. Tex.), and *Crossroads Systems, Inc. v. NetApp, Inc.*, Case No. 1-14-cv-00149-SS (W.D. Tex.). Pet. 2–3; Paper 9, 3. The ’147 Patent is also involved in Case IPR2014-01207, and belongs to a family of patents that are the subject of multiple petitions for *inter partes* review, including IPR2014-01177, IPR2014-01197, IPR2014-01226, IPR2014-01233, and IPR2014-01463.

*B. The '147 Patent (Ex. 1001)*

The '147 patent, titled “Storage Router and Method for Providing Virtual Local Storage,” issued on May 23, 2006. The '147 patent describes a storage router, storage network, and method that provide virtual local storage on remote Small Computer System Interface (SCSI) storage devices to Fibre Channel (FC) devices. Ex. 1001, Abstract; 1:23–26. “A plurality of Fibre Channel devices, such as workstations, are connected to a Fibre Channel transport medium, and a plurality of SCSI storage devices are connected to a SCSI bus transport medium.” *Id.* at 2:11–14. The storage router interfaces between the Fibre Channel transport medium and the SCSI bus transport medium, maps between the workstations and the SCSI storage devices, and implements access controls for storage space on the SCSI storage devices. *Id.* at 2:14–19. “The storage router then allows access from the workstations to the SCSI storage devices using native low level, block protocol in accordance with the mapping and the access controls.” *Id.* at 2:19–22.

*C. Illustrative Claim*

Claim 1 of the '147 patent is reproduced below:

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.

Ex. 1001, 9:24–47.

#### *D. The Prior Art*

Petitioners rely on the following prior art:

1. CRD-5500 SCSI RAID Controller User’s Manual (1996) (“CRD-5500 User’s Manual”) (Ex. 1003);
2. CRD-5500 SCSI RAID Controller Data Sheet (Dec. 4, 1996) (“CRD-5500 Data Sheet”) (Ex. 1004);
3. Smith *et al.*, *Tachyon: A Gigabit Fibre Channel Protocol Chip*, HEWLETT-PACKARD J. (Oct. 1996) (“Smith”) (Ex. 1005);
4. U.S. Patent No. 6,219,771, issued Apr. 17, 2001 (“Kikuchi”) (Ex. 1006);
5. U.S. Patent No. 6,073,209, issued June 6, 2000 (“Bergsten”) (Ex. 1007); and
6. JP Patent Application Pub. No. Hei 5[1993]-181609, published July 23, 1993 (“Hirai”) (Ex. 1008).

#### *E. The Asserted Grounds*

Petitioners challenge claims 1–13 of the ’147 patent on the following grounds:

<b>References</b>	<b>Basis</b>	<b>Claim(s) Challenged</b>
CRD-5500 User’s Manual, CRD-5500 Data Sheet, and Smith	§ 103	1–13
Kikuchi and Bergsten	§ 103	1–4 and 6–13
Kikuchi, Bergsten, and Smith	§ 103	5

Bergsten and Hirai	§ 103	1–4 and 6–13
Bergsten, Hirai, and Smith	§ 103	5

### *F. Claim Interpretation*

The Board interprets claim terms in an unexpired patent using the “broadest reasonable construction in light of the specification of the patent in which [they] appear[.]” 37 C.F.R. § 42.100(b); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Under the broadest reasonable interpretation standard, claim terms are given their ordinary and customary meaning in view of the specification, as would be understood by one of ordinary skill in the art at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). For purposes of this Decision, we find that no express claim construction is necessary.

### III. ANALYSIS

We turn now to Petitioners’ asserted grounds of unpatentability and Patent Owner’s arguments in the Preliminary Response to determine whether Petitioners have met the threshold standard of 35 U.S.C. § 314(a).

#### *A. Asserted Ground Based on CRD-5500 User’s Manual, CRD-5500 Data Sheet, and Smith*

Petitioners challenge claims 1–13 as obvious under 35 U.S.C. § 103 over CRD-5500 User’s Manual, CRD-5500 Data Sheet, and Smith. Pet. 12–29. To support this assertion, Petitioners rely on the Declaration of Professor Jeffrey S. Chase, Ph.D. (Ex. 1010, “Chase Declaration”).

The Petition states that “[t]he explanations set forth below summarize the grounds of unpatentability. . . . Pinpoint citations are provided to the declaration of Professor Chase (*Ex. 1010*) which describes in further detail the

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