

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ORACLE CORPORATION and NETAPP INC.,  
Petitioner,

v.

CROSSROADS SYSTEMS, INC.,  
Patent Owner.

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Case IPR2014-01209  
Patent 7,051,147 B2

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

KALAN, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Oracle Corporation and NetApp Inc. (collectively, “Petitioner”)<sup>1</sup> 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. Crossroads Systems, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 11, “Prelim. Resp.”).

On January 30, 2015, we instituted trial as to claims 1, 2, 4, 5, 10, 11, and 13 of the ’147 patent. Paper 12 (“Dec.”). During trial, Patent Owner filed a Patent Owner Response (Paper 29, “PO Resp.”), which was accompanied by a Declaration from John Levy, Ph.D. (Ex. 2053). Petitioner filed a Reply to the Patent Owner Response. Paper 44 (“Reply”). An oral hearing was held on October 30, 2015. A transcript of the consolidated hearing has been entered into the record. Paper 76 (“Tr.”).

Petitioner filed a Motion to Exclude (Paper 58) and Reply in support of the Motion to Exclude (Paper 69). Patent Owner filed an opposition to Petitioner’s Motion to Exclude (Paper 63).

Patent Owner also filed a Motion to Exclude (Paper 60) and Reply in support of the Motion to Exclude (Paper 70). Petitioner filed an opposition to Patent Owner’s Motion to Exclude (Paper 65).

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. We determine that Petitioner has shown by a preponderance of the evidence that claims 1, 2, 4, 5, 10, 11, and 13 of the ’147 patent are unpatentable.

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<sup>1</sup> Huawei Technologies Co. Ltd. was a Petitioner in the original Petition. Pet. 1. On October 8, 2015, we granted a joint motion to terminate Petitioner Huawei Technologies Co. Ltd. Paper 68.

## 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.) 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 IPR2014-01207 and IPR2014-01544.

### 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 relates to a storage router and storage network where devices (e.g., workstations) connected to a Fibre Channel (“FC”) transport medium are provided access to storage devices connected to 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 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. *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. Prior Art Supporting Instituted Unpatentability Grounds*

1. Judith A. Smith & Meryem Primmer, *Tachyon: A Gigabit Fibre Channel Protocol Chip*, HEWLETT-PACKARD J. 1, 1–17 (1996) (“Smith”) (Ex. 1005);
2. U.S. Patent No. 6,219,771 B1, issued Apr. 17, 2001 (“Kikuchi”) (Ex. 1006);
3. U.S. Patent No. 6,073,209, issued June 6, 2000 (“Bergsten”) (Ex. 1007); and
4. JP Patent Application Pub. No. Hei 5[1993]-181609, published July 23, 1993 (“Hirai”) (Ex. 1008).

Petitioner also relies on the Declaration of Professor Jeffrey S. Chase, Ph.D. (Ex. 1010, “Chase Declaration”).

*E. Instituted Unpatentability Grounds*

We instituted an *inter partes* review of claims 1, 2, 4, 5, 10, 11, and 13 of the ’147 patent on the following grounds:

References	Basis	Claim(s) Instituted
Kikuchi and Bergsten	§ 103	1, 2, 4, 10, 11, and 13
Kikuchi, Bergsten, and Smith	§ 103	5
Bergsten and Hirai	§ 103	1, 2, 4, 10, 11, and 13
Bergsten, Hirai, and Smith	§ 103	5

### III. ANALYSIS

For the challenged claims, Petitioner must prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e).

#### A. 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* 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). Only those terms which are in controversy need 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).

In our Decision to Institute, we determined that no claim terms required construction. Based on our review of the complete record, we maintain our determination that no constructions are necessary.

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