

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

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U.S. DISTRICT COURT
BY: [Signature]

CROSSROAD SYSTEMS (TEXAS), INC.,
Plaintiff,

-vs-

Case No. A-03-CA-754-SS

DOT HILL SYSTEMS CORPORATION,
Defendant.

**REPORT AND RECOMMENDATION OF THE SPECIAL MASTER
REGARDING UNITED STATES PATENT NOS. 5,941,972 and 6,425,035 B2**

Attached hereto is the Special Master’s Report and Recommendation to United States District Judge Sam Sparks regarding the construction of claims in United States Patent Nos. 5,941,972 (“the ‘972 patent”) and 6,425,035 B2 (“the ‘035 patent”).

The Special Master notes that during the course of the pre-hearing and post-hearing briefing as well as the *Markman* hearing itself, the parties reached agreement on certain terms initially identified as being in dispute. For instance, the parties’ stipulated definition of the claim term “native low level, block protocol,” which is the same in both patents, was incorporated into their Stipulated Definitions of Claim Terms [#131], filed with the Court on August 31, 2004. Also, although Crossroads initially identified the term “remote storage devices” in the ‘035 patent as one of the terms requiring the Court’s construction, it has apparently abandoned that position since the parties’ dispute over the meaning of “remote storage devices” may be resolved by the Court’s construction of the word “remote” without the need for a separate construction of the entire phrase.

Additionally, in its post-hearing briefing, Crossroads stipulated to Dot Hill’s definition of the term “allow access” in both patents based on the representations of Dot Hill’s counsel at the hearing and in Dot Hill’s briefing that the portion of Crossroads’ proposed definition which was excluded by Dot Hill’s definition—“preventing unauthorized communication”—is part of the definition of the phrase, “implementing access controls,” which also appears in the patents. *See*

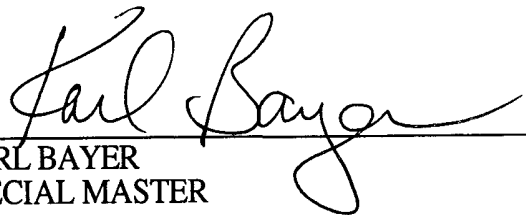
245 of 209

CROSSROADS EXHIBIT 2006
Cisco Systems et al v Crossroads Systems, Inc.
IPR2014-01544

Crossroads's Post-Hr'g *Markman* Br. at 8; Tr. of *Markman* Hr'g at 119:2-19; Dot Hill's Post-*Markman* Hr'g Claim Construction Br. at 22.

Proposed constructions for the remaining disputed terms are attached hereto. The parties may file written objections to the recommendations made in this report within ten (10) days from the date of their receipt of it pursuant to the Court's Order of February 23, 2004.

SIGNED this the 19th day of January 2005.


KARL BAYER
SPECIAL MASTER

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

**Notice of Document/Attachment(s) Not Imaged
and Contained in Expandable Folder**

**See Expandable File(s) to View/Copy
Document/Attachment(s)**

Civil Case No. A:03-754 SS

Crossroad Systems (Texas) Inc.

VS.

Dot Hill Systems Corporation

Attachments to
Document #: 245

Description: Report and Recommendation of the Special
Master Regarding U.S. Patent Nos.
5,941,972 and 6,425,035 B2

File Date: January 21, 2005

Prepared by: dm

This sheet to be imaged as the last page.

All additional pages to be sent by certified mail to all parties

| Special Master's Proposed Construction of Disputed Terms | | | |
|---|--|--|---|
| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>A storage router for providing virtual local storage on remote storage devices to devices, comprising:</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31. Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> |
| <p>A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> | <p>Storage Router: Intrinsic: '035 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls Col. 2, lines 53-55 "FIG. 2 is a block diagram of one embodiment of a storage router with a storage network that provides global access and routing"; Col. 3, lines 30-32 Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..." Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

United States Patent No. 6,425,035 B2

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|---|----------------------------------|--|-------------------------------|
| | | | | <p>Col 2, lines 56-58 "FIG. 3 is a block diagram of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66</p> <p>Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
|--|-----------------------------------|---|--------------------------------------|
| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | <p>Dot Hill's Evidence</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the</p> | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
|--|-----------------------------------|----------------------|---|
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| | | | <p>most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a</p> |
| | | | Special Master's Construction |

| Special Master's Proposed Construction of Disputed Terms | | | | |
|--|---|---|--|--|
| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| | | | | Special Master's Construction |
| A storage router for providing virtual local storage on remote storage devices to devices, comprising: | <p>Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."</p> | <p>Virtual Local Storage:</p> <p>Intrinsic: '035 patent: col. 2, ll. 29-31; col. 4, ll. 7-16; col. 4, ll. 44-47.</p> <p>Extrinsic: Tr. 13:3-14; Tr. 18:5-12; Tr. 111:6-15; Tr. 184:8-185:1; Tr. 187:12-20; Webster's II New Riverside University definitions of "appearance" and "characteristics," Shelton Decl. ISO Crossroads' Reply, Ex. 6; ¶ 12 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to be within or locally connected to the initiator device.</p> <p>NOTE: This is the definition of <i>virtual local storage</i>, but since this phrase appears only in the preamble to explain the context in which the storage router is used, it is not a limitation of this claim.</p> | <p>to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> <p>Virtual Local Storage:</p> <p>Intrinsic: '035 Patent: Abstract; Col. 1, lines 19-20; Col. 1, lines 63-65; Col. 2, lines 1-4; Col. 4, lines 51-54; and Claim 1 ("virtual local storage on remote SCSI storage devices")</p> <p>Col. 1, lines 39-42, "Local storage typically consists of a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation."</p> <p>Col. 2, lines 29-31 and Col. 4, lines 19-25,</p> |
| | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to be within or locally connected to the initiator device.</p> | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to be within or locally connected to the initiator device.</p> | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to be within or locally connected to the initiator device.</p> | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to be within or locally connected to the initiator device.</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|----------------------|----------------------------------|--|-------------------------------|
| | | | | <p>distinguishing virtual local storage from ordinary remote storage.</p> <p>Col. 8, lines 62-65 and Col. 9, lines 3-6 associating virtual local storage with storage space.</p> <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)</p> <p><i>Webster's II New Riverside Dictionary</i> (1984) definition of "storage" as "a space for storing goods" or "the part of a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Crossroads' <i>Markman</i> Brief at 1, stating "The patents-in-suit concern inventions that allow computers to access remote storage devices as if they were local (i.e. 'virtual local storage'), while at the same time providing access controls." (Crossroads' Brief)</p> <p>Crossroads' <i>Markman</i> Brief, Crossroads Systems (Texas), Inc. v. <u>Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) ("Crossroads' <i>Chaparral</i> <i>Markman</i> Brief", concerning the '972 Patent) at 3, where Crossroads states that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to devices connected to a</p> |
| | | | Special Master's Construction |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>A storage router for providing virtual local storage on remote storage devices to devices, comprising: a buffer providing memory work space for the storage router; a first controller operable to connect to and interface with a first transport medium;</p> | <p>Remote: "Indirectly connected through at least one serial network transport medium that encapsulates the native low-level block protocol."</p> | <p>Remote: Intrinsic: '035 patent: col. 1, ll. 23-36; col. 2, ll. 1-34; col. 5, ll. 46-48; col. 5, ll. 52-57; col. 6, ll. 19-31; col. 9, ll. 26-31. Extrinsic: Tr. 102:14-20; Rhyne Cross, Tr. 159:17-18; Rhyne Cross, Tr. 161:7-8; Rhyne Cross, Tr. 174:14-24; Tr. 180:5-14; Mr. Erwine's Notes, Shelton Decl. ISO Crossroads' Reply, Ex. 4.</p> | <p>Remote: Indirectly connected through a computer through a network." (DHS Brief Ex. 10) Remote: Intrinsic: '035 Patent: Col. 1, lines 39-42 using the term "remote" to refer to storage which is not "local," and defining "local" as "a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 1, lines 63-67, describing storage capacity which is not local as "remote." Col. 2, line 32 "significantly remote"</p> |
| <p>Special Master's Construction</p> | <p>Remote: Indirectly connected and capable of physical separation. NOTE: This is the definition of <i>remote</i>, but since this phrase appears only in the preamble to explain the context in which the storage router is used, it is not a limitation of this claim.</p> | <p>Remote: Indirectly connected through at least one serial network transport medium that encapsulates the native low-level block protocol."</p> | <p>Remote: Indirectly connected through at least one serial network transport medium.</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|----------------------|----------------------------------|--|-------------------------------|
| | | | | <p>September 1, 1996) as "In networks, remote refers to files, devices, and other resources that are not connected directly to your workstation. Resources at your workstation are considered local" (DHS Brief Ex. 6)</p> <p><i>Webopedia</i> definition of "local" (Last modified September 1, 1996) as "In networks, local refers to files, devices, and other resources at your workstation. Resources located at other nodes on the network are remote." (DHS Brief Ex. 6)</p> <p>Deposition of inventor Hoese, pages 143, 146, 147, 154-155 confirming that "remote" is not a function of distance by stating "it appears to be that the intent was to describe the storage as</p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>not being directly connected as local storage would be, but to be connected remotely, as in across a network or other means." (DHS Brief Ex. 14)</p> <p>Deposition of inventor Russell pages 104-105 confirming that "remote" is not a function of distance by stating "And it might be right next to me or it could be, you know, across the country, but that would allow me to get at that remote storage." (DHS Brief Ex. 15)</p> <p>Declaration of Rhyme, paragraph 19, stating that "[T]he meaning of 'remote' in general and in the specific context of the Crossroads patents has nothing to do with the physical distance between a workstation</p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>and a storage device, but rather has to do with the topological nature of the interconnection between those devices." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Rhyne, paragraph 27, stating that "[T]he common meaning of 'remote' is the opposite of 'local,' and does not carry a distance characteristic." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Hodges in Support of Crossroads' Opening Markman Brief (7/27/04), paragraph 9, stating that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to storage devices connected to a computer through a network). Local storage also</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Evidence |
| | | | Special Master's Construction |
| a second controller operable to connect to and interface with a second transport medium; and a supervisor unit coupled to the first controller, the second controller and the buffer, the supervisor unit operable to map between devices connected to the first transport medium and the storage devices, | Supervisor Unit: "A computer processing device programmed to process data in a buffer in order to map between device connected to a first transport medium and devices connected to a second transport medium which implements access controls." | Supervisor Unit: Intrinsic: '035 patent: col. 6, ll. 3-10; col. 9; ll. 22-31. Extrinsic: Hodges Direct, Tr. 36:3-37:9. | typically refers to storage devices which are located a very short distance from the computer, i.e. a few feet." (Crossroads' Brief) Markman hearing testimony of Rhyme at 15:3-15, showing that a definition of "remote" could be simply "indirectly connected." (Hearing Transcript) Supervisor Unit: Intrinsic: '035 Patent: Col. 5, lines 12-17, describing a Supervisor Unit that "comprises a microprocessor ..." Col. 1, lines 37-39 and col. 4, lines 39-40 equating a "computing device" with workstations. Compare '035 claims |
| | | | Supervisor Unit: A device comprising at least: (1) a microprocessor, incorporating independent data and program memory spaces; and (2) associated logic required to implement a stand alone processing system and programmed to process data in a buffer in order to map between devices connected to a first transport medium and devices connected to a second transport medium and which implements access controls. |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| | | | Special Master's Construction |
| to implement access controls for storage space on the storage devices and to process | | | <p>with claims of U.S. Patent No. 5,941,972 ('972 Patent), showing that the '035 patent claims closely track the '972 patent claims, except that the limitations of Fibre Channel and SCSI protocols have been replaced with more generic terms.</p> <p>Extrinsic: <i>Chaparral</i> Markman Order at 9 (DHS Brief Ex. 8)</p> <p><i>Crossroads' Chaparral</i> Markman Brief at 25, where Crossroads argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)</p> <p>Data: Any digital information.</p> <p>Extrinsic:</p> |
| | | | <p>Data: Any digital information excluding commands and requests to access</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>data in the buffer to interface between the first controller and the second controller to allow access from devices connected to the first transport medium to the storage devices using native low level, block protocols.</p> | <p>requests used to access data in a storage unit."</p> | <p>'035 patent: col. 4, l. 10; col. 4, ll. 48-50; col. 5, ll. 18-32; col. 7, ll. 24-32.</p> <p>Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.</p> | <p>Dot Hill's Evidence</p> <p><i>Webster's II New Riverside Dictionary</i> (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)</p> <p><i>Webopedia</i> definition of "data" as [d]istinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS Brief Ex. 6)</p> <p>Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> |
| <p>to implement access controls for storage space on the storage devices and to process</p> | <p>Allow Access: "Permit or enable communication in order to</p> | <p>Allow Access: Extrinsic:</p> | <p>Special Master's Construction</p> <p>digital information.</p> <p>Allow Access: Permit or enable communication to read or write data.</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Evidence |
| <p>data in the buffer to interface between the first controller and the second controller to allow access from devices connected to the first transport medium to the storage devices using native low level, block protocols.</p> | <p>read or write data."</p> | <p>Tr. 119:2-5.</p> | <p>read or write data.</p> |
| | | | <p>'035 Patent: Col. 2, lines 9-15, distinguishing "access controls" from the concept of "allowing access." Claim 1, reciting the term "access controls" separate and apart from the words "allow access," describing "a supervisor unit ... that implements access controls for storage space on the SCSI storage devices; and ... to allow access from Fibre Channel initiator devices to SCSI storage devices" Claim 7, reciting the term "access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access</p> |
| | | | <p>Special Master's Construction</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|----------------------|----------------------------------|--|-------------------------------|
| | | | | <p>controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"</p> <p>Extrinsic; <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)</p> <p><i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> <p>Crossroads' Post-<i>Markman</i> Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>Special Master's Construction</p> | <p>Dot Hill's Evidence</p> | <p>to read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-Hearing Brief)</p> | <p>Special Master's Construction</p> |
| <p>1. A storage router for providing virtual local storage on remote storage devices to devices, comprising: a buffer providing memory work space for the storage router; a first controller operable to connect to and interface with a first transport medium; a second controller operable to connect to and interface with a second transport medium; and a supervisor unit coupled to the first controller, the second controller and the buffer, the supervisor unit operable to map between devices connected to the first transport medium and the storage devices, to implement</p> | <p>Crossroads' Proposed Construction</p> | <p>First Transport Medium: A communications link.</p> | <p>First Transport Medium: (see attached stipulations)</p> |
| | | <p>First Transport Medium: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> <p>Intrinsic: '035 Patent: Col. 2, lines 39-41 "A</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>access controls for storage space on the storage devices and to process data in the buffer to interface between the first controller and the second controller to allow access from devices connected to the first transport medium to the storage devices using native low level, block protocols.</p> | | | <p>Dot Hill's Evidence</p> <p>further technical advantage of the present invention is providing support for SCSI storage devices as local storage for Fiber Channel hosts.”</p> <p>Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as “SCSI Initiator to FC Target” and the third mode of operation as “SCSI Initiator to SCSI Target.”</p> <p>Col. 5, line 47 using the phrase “SCSI networks.”</p> <p>Extrinsic: Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing Exhibits Ex. 1-4)</p> <p>Network World article (May 8, 1989) describing SCSI networks that</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| | | | Dot Hill's Evidence |
| | | | Special Master's Construction |
| | | interface multiple, dissimilar workstations" (DHS Post-Hearing Brief Ex. B) | |
| | | Network World article (March 14, 1995) describing extender products that depend upon the existence of SCSI networks" (DHS Post-Hearing Brief Ex. C) | |
| | | Letter from Steve Sprinkle to James Lambert dated October 29, 2002, showing that Crossroads believes that the '035 Patent claims cover "access controls between devices without regard to the protocol." (DHS Post-Hearing Brief, Ex. D) | |
| | | Crossroads' abandoned April 23, 2004 claim term construction proposing that "first | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
| <p>The storage router of claim 1,</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |
| | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.</p> <p>Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> |
| | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>transport medium' be defined as "a communication medium other than SCSI" (DHS Post-Hearing Brief, Ex. E)</p> <p>Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix)</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | Crossroads' Evidence | Dot Hill's Evidence |
| | | Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response. | lines 30-32 Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..." Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2 Col. 2, lines 56-58 "FIG. 3 is a block diagram of a one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66 Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server. |
| | | | Special Master's Construction |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic:</p> |
| | | | <p>Special Master's Construction</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|----------------------|----------------------------------|---|-------------------------------|
| | | | | <p>Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. "[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server." (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | Dot Hill's Evidence |
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| wherein the supervisor unit maintains an allocation of subsets of storage space to associated devices connected to the | Supervisor Unit: "A computer processing device programmed to process data in a buffer in order to map between device connected to a first transport | Supervisor Unit: Intrinsic: '035 patent: col. 6, ll. 3-10; col. 9; ll. 22-31. | Supervisor Unit: Intrinsic: '035 Patent: Col. 5, lines 12-17, describing a Supervisor |
| | | | Supervisor Unit: A device comprising at least: (1) a microprocessor, incorporating independent data and program memory spaces; and (2) associated logic required to |
| | | | devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript) |
| | | | Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A) |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | <p>medium and devices connected to a second transport medium which implements access controls."</p> | <p>Extrinsic: Hodges Direct, Tr. 36:3-37:9.</p> | <p>storage devices and which implements access controls.</p> |
| | | | <p>Dot Hill's Evidence</p> |
| | | | <p>Special Master's Construction</p> |
| | | | <p>implement a stand alone processing system and programmed to process data in a buffer in order to map between devices connected to a first transport medium and devices connected to a second transport medium and which implements access controls.</p> |
| | | | <p>Unit that "comprises a microprocessor ..."</p> <p>Col. 1, lines 37-39 and col. 4, lines 39-40 equating a "computing device" with workstations.</p> <p>Compare '035 claims with claims of U.S. Patent No. 5,941,972 ('972 Patent), showing that the '035 patent claims closely track the '972 patent claims, except that the limitations of Fibre Channel and SCSI protocols have been replaced with more generic terms.</p> <p>Extrinsic: <i>Chaparral</i> Markman Order at 9 (DHS Brief Ex. 8)</p> <p><i>Crossroads' Chaparral</i> Markman Brief at 25.</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>first transport medium, wherein each subset is only accessible by the associated device connected to the first transport medium</p> | | | <p>where Crossroads argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)</p> <p>First Transport Medium: NOTE: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> |
| | | | <p>First Transport Medium: A communications link.</p> |
| | | | <p>Special Master's Construction</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|--|--|-------------------------------|
| | | | <p>Intrinsic: '035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present invention is providing support for SCSI storage devices as local storage for Fiber Channel hosts." Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as "SCSI Initiator to FC Target" and the third mode of operation as "SCSI Initiator to SCSI Target." Col. 5, line 47 using the phrase "SCSI networks."</p> <p>Extrinsic: Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing Exhibits Ex. 1-4)</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | Dot Hill's Evidence |
| | | | Special Master's Construction |
| | | | <p>Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations" (DHS Post-Hearing Brief Ex. B)</p> <p>Network World article (March 14, 1995) describing extender products that depend upon the existence of SCSI networks" (DHS Post-Hearing Brief Ex. C)</p> <p>Letter from Steve Sprinkle to James Lambert dated October 29, 2002, showing that Crossroads believes that the '035 Patent claims cover "access controls between devices without regard to the protocol." (DHS Post-Hearing Brief, Ex. D)</p> <p>Crossroads' abandoned</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | <p>no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>storage network with a storage router that provides global access and routing"; Col. 3, lines 30-32</p> <p>Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col. 2, lines 56-58 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66</p> <p>Col. 3, lines 30-40,</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body</p> |
| | | | Special Master's Construction |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|----------------------|----------------------------------|--|-------------------------------|
| | | | | <p>of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively</p> | Special Master's Construction |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Evidence | Special Master's Construction |
|------------------------|-----------------------------------|--|---|-------------------------------|
| | | | <p>forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | |
| | | | | Special Master's Construction | |
| | | | | <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. "[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server." (Crossroads' Brief)</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)</p> <p>Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> |
| | | | <p>Special Master's Construction</p> <p>First Transport Medium: A communications link.</p> |
| first transport medium comprise workstations. | | | <p>First Transport Medium: (see attached stipulations)</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>NOTE: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> <p>Intrinsic: '035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present invention is providing support for SCSI storage devices as local storage</p> |
| | | | Special Master's Construction |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>for Fiber Channel hosts.”</p> <p>Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as “SCSI Initiator to FC Target” and the third mode of operation as “SCSI Initiator to SCSI Target.”</p> <p>Col. 5, line 47 using the phrase “SCSI networks.”</p> <p>Extrinsic: Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing Exhibits Ex. 1-4)</p> <p>Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations” (DHS Post-Hearing Brief Ex. B)</p> |
| | | | Special Master's Construction |

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| | | | <p>Dot Hill's Evidence</p> <p>Network World article (March 14, 1995) describing extender products that depend upon the existence of SCSI networks" (DHS Post-Hearing Brief Ex. C)</p> <p>Letter from Steve Sprinkle to James Lambert dated October 29, 2002, showing that Crossroads believes that the '035 Patent claims cover "access controls between devices without regard to the protocol." (DHS Post-Hearing Brief, Ex. D)</p> <p>Crossroads' abandoned April 23, 2004 claim term construction proposing that "first transport medium" be defined as "a communication medium other than SCSI" (DHS</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
| <p>Claim 2: The storage router of claim 2, wherein the storage devices comprise hard disk drives.</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31. Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997); Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> | <p>Post-Hearing Brief, Ex. E) Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix)</p> | |
| | | | <p>Storage Router: Intrinsic: '035 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls Col. 2, lines 53-55 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; Col. 3, lines 30-32 Col. 3, lines 51-53 (referring to Figure 2)</p> | | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

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| | | | | <p>"[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 56-58 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66</p> <p>Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col. 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in Crossroads Systems (Texas), Inc. v. Chaparral Network</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | Dot Hill's Evidence | Special Master's Construction |
| | | <p>Storage Inc. No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002)</p> | |

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| | | | | <p>definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role."</p> | |

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| | | | | <p>For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>and a direct memory access (DMA) interface coupled to the first-in-first-out queue and to the buffer.</p> | | <p>Crossroads says, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Dot Hill's Evidence</p> <p>Col. 2, lines 53-55 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; Col. 3, lines 30-32</p> <p>Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col. 2, lines 56-58 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines</p> |
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| | | | <p>Dot Hill's Evidence</p> <p>64-66</p> <p>Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col. 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> |
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| | | <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads'</p> | |

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| | | | <p>Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. "[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber</p> |
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| | | | <p>Dot Hill's Evidence</p> <p>network without involving a server." (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)</p> <p>Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex.</p> |
| | | | Special Master's Construction |

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| Actual Claims Language | Crossroads' Proposed Construction | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| <p>to the first transport medium;</p> <p>a first-in-first-out queue coupled to the first protocol unit; and</p> <p>a direct memory access (DMA) interface coupled to the first-in-first-out queue and the buffer.</p> | | <p>First Transport Medium: A communications link.</p> | <p>First Transport Medium:</p> <p>NOTE: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> <p>Intrinsic: '035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present</p> |
| | | | <p>First Transport Medium: (see attached stipulations)</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| | | | <p>invention is providing support for SCSI storage devices as local storage for Fiber Channel hosts."</p> <p>Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as "SCSI Initiator to FC Target" and the third mode of operation as "SCSI Initiator to SCSI Target."</p> <p>Col. 5, line 47 using the phrase "SCSI networks."</p> <p>Extrinsic: Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing Exhibits Ex. 1-4)</p> <p>Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations"</p> |
| | | | Special Master's Construction |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>(DHS Post-Hearing Brief Ex. B)</p> <p>Network World article (March 14, 1995) describing extender products that depend upon the existence of SCSI networks" (DHS Post-Hearing Brief Ex. C)</p> <p>Letter from Steve Sprinkle to James Lambert dated October 29, 2002, showing that Crossroads believes that the '035 Patent claims cover "access controls between devices without regard to the protocol." (DHS Post-Hearing Brief, Ex. D)</p> <p>Crossroads' abandoned April 23, 2004 claim term construction proposing that "first transport medium" be defined as "a</p> |
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| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>Claim 6</p> <p>the storage router of claim 5, wherein the second controller comprises: a second protocol unit operable to connect to the second transport medium; an internal buffer coupled to the second protocol unit; and a direct memory access (DMA) interface coupled to the internal buffer and to the buffer of the storage router.</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31. Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, <i>Network World</i>, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> |
| | | <p>Storage Router: Intrinsic: '035 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls Col. 2, lines 53-55 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; Col. 3, lines 30-32</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |
| | | <p>communication medium other than SCSP" (DHS Post-Hearing Brief, Ex. E) Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix)</p> | <p>Dot Hill's Evidence</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | Crossroads' Response. | <p>Dot Hill's Evidence</p> <p>Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2.</p> <p>Col 2, lines 56-58 "FIG. 3 is a block diagram of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66</p> <p>Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>"Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads</u></p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as</p> |
| | | | Special Master's Construction |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Evidence | Special Master's Construction |
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| <p>connected to the second transport medium; and a storage router interfacing between the first transport medium and the second transport medium, the storage router providing virtual local storage on the storage devices to the workstations and operable:</p> | | <p><i>Routing is the Way to Go</i>, Crossroads says, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Col. 2, lines 53-55 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; Col. 3, lines 30-32</p> <p>Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 56-58 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>storage"; Col. 3, lines 64-66</p> <p>Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | Dot Hill's Evidence | Special Master's Construction |
| | | ... | <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.)</u> (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
| | | | | <p>"router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>and a storage router interfacing between the first transport medium and the second transport medium, the storage router providing virtual local storage on the storage devices to the workstations and operable:</p> | <p>Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."</p> | <p>Virtual Local Storage:</p> <p>Intrinsic: '035 patent: col. 2, ll. 29-31; col. 4, ll. 7-16; col. 4, ll. 44-47.</p> <p>Extrinsic: Tr. 13:3-14; Tr. 18:5-12; Tr. 111:6-15; Tr. 184:8-185:1; Tr. 187:12-20; Webster's II New Riverside University definitions of "appearance" and "characteristics," Shelton Decl. ISO Crossroads' Reply, Ex. 6; ¶ 12 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to be within or locally connected to the initiator device.</p> |
| | | | <p>Virtual Local Storage: Intrinsic: '035 Patent: Abstract; Col. 1, lines 19-20; Col. 1, lines 63-65; Col. 2, lines 1-4; Col. 4, lines 51-54; and Claim 1 ("virtual local storage on remote SCSI storage devices") Col. 1, lines 39-42, "Local storage typically consists of a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 2, lines 29-31 and Col. 4, lines 19-25, distinguishing virtual local storage from ordinary remote storage. Col. 8, lines 62-65 and Col. 9, lines 3-6</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>associating virtual local storage with storage space.</p> <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)</p> <p><i>Webster's II New Riverside Dictionary</i> (1984) definition of "storage" as "a space for storing goods" or "the part of a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)</p> <p>Crossroads' <i>Markman</i> Brief at 1, stating "The patents-in-suit concern inventions that allow computers to access remote storage devices</p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Special Master's Construction |
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| <p>to implement access controls for storage space on the storage devices; and to allow access from the workstations to the storage devices using native low level, block protocol in accordance with the mapping and access controls.</p> | <p>read or write data."</p> | <p>Tr. 119:2-5.</p> | <p>Dot Hill's Evidence</p> <p>'035 Patent: Col. 2, lines 9-15, distinguishing "access controls" from the concept of "allowing access."</p> <p>Claim 1, reciting the term "access controls" separate and apart from the words "allow access," describing "a supervisor unit ... that implements access controls for storage space on the SCSI storage devices; and ... to allow access from Fibre Channel initiator devices to SCSI storage devices"</p> <p>Claim 7, reciting the term "access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| | | | <p>controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices'</p> <p>Extrinsic: <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)</p> <p><i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> <p>Crossroads' Post-<i>Markman</i> Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order</p> |

Special Master's Proposed Construction of Disputed Terms

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| <p>7. A storage network, comprising: a first transport medium; a second transport medium; a plurality of workstations connected to the first transport medium; a plurality of storage devices connected to the second transport medium; and a storage router interfacing between the first transport medium and the second transport medium,</p> | | | <p>First Transport Medium: A communications link.</p> | <p>to read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-Hearing Brief) First Transport Medium: NOTE: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> <p>Intrinsic: '035 Patent:</p> | <p>First Transport Medium: (see attached stipulations)</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>Special Master's Construction</p> |
| | | <p>Col. 2, lines 39-41 "A further technical advantage of the present invention is providing support for SCSI storage devices as local storage for Fiber Channel hosts."</p> <p>Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as "SCSI Initiator to FC Target" and the third mode of operation as "SCSI Initiator to SCSI Target."</p> <p>Col. 5, line 47 using the phrase "SCSI networks."</p> <p>Extrinsic: Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing Exhibits Ex. 1-4)</p> <p>Network World article (May 8, 1989) describing</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| | | | proposing that "first transport medium" be defined as "a communication medium other than SCSI" (DHS Post-Hearing Brief, Ex. E) |
| | | | Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix) |
| Claim 8: The storage network of claim 7, wherein the access controls include allocation of subnets of storage space to associated workstations, wherein each workstation is accessible by the associated workstation. | (No claim term issue) | | (No claim term issue) |
| Claim 9: The storage network of claim 7, wherein the storage devices comprise hard disk drives. | (No claim term issue) | | (No claim term issue) |
| Claim 10: The storage network of claim 7, wherein the storage router | Storage Router: (Defined by the plain | Storage Router: A device which forwards data | Storage Router: A data transmitting device that |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| comprises: a buffer providing memory work space for the storage router; | language of the claim] | <p>Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.</p> <p>Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, <i>Network World</i>, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of "storage router" to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>between an initiator device on one side of the router and a target storage device on the other side of the router.</p> |
| | | | <p>Dot Hill's Evidence</p> <p>Intrinsic: '035 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls</p> <p>Col. 2, lines 53-55 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; Col. 3, lines 30-32</p> <p>Col. 3, lines 51-53 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> |
| | | | <p>Special Master's Construction</p> <p>allows users to integrate different servers or work stations into a storage network.</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>Col 2, lines 56-58 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66</p> <p>Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 41-43 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 54-56 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> |
| | | | <p>Special Master's Construction</p> |

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| | | | | | <p>Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> | |

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| | | | <p>Dot Hill's Evidence</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)</p> <p>Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Dot Hill's Proposed Construction | Special Master's Construction |
| <p>a first controller operable to connect to and interface with the first transport medium, the first controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer; a second controller operable to connect to and interface with the second transport medium, the second controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer;</p> | <p>Data: "Any digital information excluding commands and requests used to access data in a storage unit."</p> | <p>Data: Any digital information.</p> | <p>Data: Any digital information excluding commands and requests to access digital information.</p> |
| | <p>Intrinsic: '035 patent: col. 4, ll. 10; col. 4, ll. 48-50; col. 5, ll. 18-32; col. 7, ll. 24-32.</p> <p>Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.</p> | <p>Data: Any digital information.</p> | <p>to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> <p>Data: Any digital information excluding commands and requests to access digital information.</p> <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)</p> <p><i>Webopedia</i> definition of "data" as "[d]isinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| and a supervisor unit coupled to the first controller, the second controller and the buffer, the supervisor unit operable: | <p>Supervisor Unit: "A computer processing device programmed to process data in a buffer in order to map between device connected to a first transport medium and devices connected to a second transport medium which implements access controls."</p> | <p>Supervisor Unit: Intrinsic: '035 patent: col. 6, ll. 3-10; col. 9; ll. 22-31. Extrinsic: Hodges Direct, Tr. 36:3-37:9.</p> | <p>Supervisor Unit: A microprocessor programmed to process data in a buffer in order to map between devices connected to the first transport medium and which implements access controls.</p> |
| | | <p>Brief Ex. 6) Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> <p>Supervisor Unit: Intrinsic: '035 Patent: Col. 5, lines 12-17, describing a Supervisor Unit that "comprises a microprocessor ..." Col. 1, lines 37-39 and col. 4, lines 39-40 equating a "computing device" with workstations. Compare '035 claims with claims of U.S. Patent No. 5,941,972 ('972 Patent), showing that the '035 patent claims closely track the '972 patent claims, except that the limitations of Fibre</p> | <p>Supervisor Unit: A device comprising at least: (1) a microprocessor, incorporating independent data and program memory spaces; and (2) associated logic required to implement a stand alone processing system and programmed to process data in a buffer in order to map between devices connected to a first transport medium and devices connected to a second transport medium and which implements access controls.</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Channel and SCSI protocols have been replaced with more generic terms.</p> <p>Extrinsic: <i>Chaparral</i> Markman Order at 9 (DHS Brief Ex. 8)</p> <p><i>Crossroads' Chaparral</i> Markman Brief at 25, where Crossroads argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| to map between devices connected to the first transport medium and the storage devices, to implement the access controls for storage space on the storage devices and to process data in the buffer to interface between the first controller | <p>Data: "Any digital information excluding commands and requests used to access data in a storage unit."</p> | <p>Data: '035 patent: col. 4, l. 10; col. 4, ll. 48-50; col. 5, ll. 18-32; col. 7, ll. 24-32.</p> <p>Intrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.</p> | <p>Data: Any digital information.</p> |
| | <p>Data: "Any digital information excluding commands and requests to access digital information."</p> | <p>Data: Any digital information excluding commands and requests to access digital information.</p> | <p>Data: Any digital information excluding commands and requests to access digital information.</p> |
| | | <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)</p> <p><i>Webopedia</i> definition of "data" as "[d]istinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS Brief Ex. 6)</p> <p>Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> | <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)</p> <p><i>Webopedia</i> definition of "data" as "[d]istinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS Brief Ex. 6)</p> <p>Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>storage router ... operable ... to implement access controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"</p> <p>Extrinsic: <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)</p> <p><i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> <p>Crossroads' Post-<i>Markman</i> Brief at page 8: "Crossroads agrees that 'allow access'</p> |

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Dot Hill's Evidence

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Dot Hill's Proposed Construction

Crossroads' Evidence

Crossroads' Proposed Construction

Actual Claims Language

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>10. The storage network of claim 7, wherein the storage router comprises: a buffer providing memory work space for the storage router; a first controller operable to connect to and interface with the first transport medium, the first controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer; a second controller operable to connect to and interface with the second transport medium, the second controller further operable to pull outgoing data from the buffer and to place incoming data</p> | | | <p>Dot Hill's Evidence</p> <p>should be construed as 'permit or enable communication in order to read or write data.' (Tr. 119:2-25.)' (Crossroads' Post-Hearing Brief)</p> <p>First Transport Medium: NOTE: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> |
| | | | <p>First Transport Medium: A communications link.</p> |
| | | | <p>First Transport Medium: (see attached stipulations)</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Evidence | Special Master's Construction |
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| <p>into the buffer; and</p> <p>a supervisor unit coupled to the first controller, the second controller and the buffer, the supervisor unit operable:</p> <p>to map between devices connected to the first transport medium and the storage devices,</p> | | | <p>Intrinsic:</p> <p>'035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present invention is providing support for SCSI storage devices as local storage for Fiber Channel hosts."</p> <p>Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as "SCSI Initiator to FC Target" and the third mode of operation as "SCSI Initiator to SCSI Target."</p> <p>Col. 5, line 47 using the phrase "SCSI networks."</p> <p>Extrinsic:</p> <p>Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| | | Exhibits Ex. 1-4) Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations" (DHS Post-Hearing Brief Ex. B) Network World article (March 14, 1995) describing extender products that depend upon the existence of SCSI networks" (DHS Post-Hearing Brief Ex. C) Letter from Steve Sprinkle to James Lambert dated October 29, 2002, showing that Crossroads believes that the '035 Patent claims cover "access controls between devices without regard to the protocol." (DHS Post-Hearing Brief, Ex. D) | Special Master's Construction |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | |
| | | <p>Tr. 111:6-15; Tr. 184:8-185:1; Tr. 187:12-20; Webster's II New Riverside University definitions of "appearance" and "characteristics," Shelton Decl. ISO Crossroads' Reply, Ex. 6; ¶ 12 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Dot Hill's Evidence</p> | |
| | | | <p>Col. 1, lines 39-42, "Local storage typically consists of a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 2, lines 29-31 and Col. 4, lines 19-25, distinguishing virtual local storage from ordinary remote storage. Col. 8, lines 62-65 and Col. 9, lines 3-6 associating virtual local storage with storage space. Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)</p> | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p><i>Webster's II New Riverside Dictionary</i> (1984) definition of "storage" as "a space for storing goods" or "the part of a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)</p> <p><i>Crossroads' Markman Brief</i> at 1, stating "The patents-in-suit concern inventions that allow computers to access remote storage devices as if they were local (i.e. 'virtual local storage'), while at the same time providing access controls." (<i>Crossroads' Brief</i>)</p> <p><i>Crossroads' Markman Brief, Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</i>, No. A00 CA 217SS (W.D. Tex.)</p> |
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| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction | Dot Hill's Proposed Construction |
| <p>A method for providing virtual local storage on remote storage devices connected to one transport medium to devices connected to another transport medium, comprising: interfacing with a first transport medium; interfacing with a second transport medium; mapping between devices connected to the first transport medium and the storage devices and implementing access controls for storage space on the</p> | <p>Remote: "Indirectly connected through at least one serial network transport medium that encapsulates the native low-level block protocol."</p> | <p>Remote: Intrinsic: '035 patent: col. 1, ll. 23-36; col. 2, ll. 1-34; col. 5, ll. 46-48; col. 5, ll. 52-57; col. 6, ll. 19-31; col. 9, ll. 26-31. Extrinsic: Tr. 102:14-20; Rhyme Cross, Tr. 159:17-18; Rhyme Cross, Tr. 161:7-8;</p> | <p>Remote: Indirectly connected and capable of physical separation.</p> |
| <p>Special Master's Construction</p> | <p>Remote: Intrinsic: '035 Patent: Col. 1, lines 39-42 using the term "remote" to refer to storage which is not "local," and defining "local" as "a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 1, lines 63-67,</p> | <p>Remote: Indirectly connected through at least one serial network transport medium.</p> | <p>Dot Hill's Evidence ("Crossroads' Chaparral Markman Brief, concerning the '972 Patent) at 3, where Crossroads states that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to devices connected to a computer through a network)." (DHS Brief Ex. 10)</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>storage devices; and allowing access from devices connected to the first transport medium to the storage devices using native low level, block protocols.</p> | | <p>Rhyne Cross, Tr. 174:14-24; Tr. 180:5-14; Mr. Erwine's Notes, Shelton Decl. ISO Crossroads' Reply, Ex. 4.</p> | <p>describing storage capacity which is not local as "remote." Col. 2, line 32 "significantly remote"</p> <p>Extrinsic: <i>Webopedia</i> definition of "remote" (Last modified September 1, 1996) as "In networks, remote refers to files, devices, and other resources that are not connected directly to your workstation. Resources at your workstation are considered local" (DHS Brief Ex. 6)</p> <p><i>Webopedia</i> definition of "local" (Last modified September 1, 1996) as "In networks, local refers to files, devices, and other resources at your workstation. Resources located at other nodes on</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>the network are remote." (DHS Brief Ex. 6)</p> <p>Deposition of inventor Hoese, pages 143, 146, 147, 154-155 confirming that "remote" is not a function of distance by stating "It appears to be that the intent was to describe the storage as not being directly connected as local storage would be, but to be connected remotely, as in across a network or other means." (DHS Brief Ex. 14)</p> <p>Deposition of inventor Russell pages 104-105 confirming that "remote" is not a function of distance by stating "And it might be right next to me or it could be, you know, across the country, but that would allow me to get at that remote storage." (DHS</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| | | | <p>Brief Ex. 15)</p> <p>Declaration of Rhyme, paragraph 19, stating that "[t]he meaning of 'remote' in general and in the specific context of the Crossroads patents has nothing to do with the physical distance between a workstation and a storage device, but rather has to do with the topological nature of the interconnection between those devices." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Rhyme, paragraph 27, stating that "[t]he common meaning of 'remote' is the opposite of 'local,' and does not carry a distance characteristic." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Hodges in Support of Crossroads' Opening Markman Brief</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| | | | (7/27/04), paragraph 9, stating that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to storage devices connected to a computer through a network). Local storage also typically refers to storage devices which are located a very short distance from the computer, i.e. a few feet." (Crossroads' Brief) |
| | | | Markman hearing testimony of Rhyne at 15:3-15, showing that a definition of "remote" could be simply "indirectly connected." (Hearing Transcript) |
| interfacing with a first transport medium; | | | Allow Access: Permit or enable communication to read or write data. |
| interfacing with a second transport medium; | | | Allow Access: Permit or enable communication in order to read or write data. |
| | | | Allow Access: Permit or enable communication to read or write data. |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>mapping between devices connected to the first transport medium and the storage devices and that implements access controls for storage space on the storage devices; and allowing access from devices connected to the first transport medium to the storage devices using native low level, block protocols.</p> | | | <p>controls" from the concept of "allowing access."</p> <p>Claim 1, reciting the term "access controls" separate and apart from the words "allow access," describing "a supervisor unit ... that implements access controls for storage space on the SCSI storage devices; and ... to allow access from Fibre Channel initiator devices to SCSI storage devices"</p> <p>Claim 7, reciting the term "access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access controls for storage space on the SCSI storage devices; and to</p> |
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| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>allow access from the workstations to the SCSI storage devices"</p> <p>Extrinsic: <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)</p> <p><i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> <p>Crossroads' Post-<i>Markman</i> Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order to read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>interfacing with a first transport medium;</p> <p>interfacing with a second transport medium;</p> <p>mapping between devices connected to the first transport medium and the storage devices and that implements access controls for storage space on the storage devices; and allowing access from devices connected to the first transport medium to the storage devices using native low level, block protocols.</p> | | | <p>Dot Hill's Evidence</p> <p>Hearing Brief</p> <p>First Transport Medium: NOTE: Although Crossroads has stipulated to the joint definition of both "first transport medium" and "second transport medium" as "a communications link," Crossroads continues to argue that this does not mean "any communications link," but rather that the '035 patent claims must be construed so as not to include transport media that both follow the SCSI protocol. (See, Hearing Transcript, page 188, line 21 to page 189, line 2)</p> <p>Intrinsic: '035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present invention is providing</p> |
| | <p>First Transport Medium: A communications link.</p> | | <p>First Transport Medium: (see attached stipulations)</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Special Master's Construction</p> <p>support for SCSI storage devices as local storage for Fiber Channel hosts.”</p> <p>Col. 6, lines 21-23, showing that the first transport medium can be SCSI by describing the second mode of operation as “SCSI Initiator to FC Target” and the third mode of operation as “SCSI Initiator to SCSI Target.”</p> <p>Col. 5, line 47 using the phrase “SCSI networks.”</p> <p>Extrinsic: Web page printouts produced at <i>Markman</i> Hearing (DHS Hearing Exhibits Ex. 1-4)</p> <p>Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations”</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>(DHS Post-Hearing Brief Ex. B)</p> <p>Network World article (March 14, 1995) describing extender products that depend upon the existence of SCSI networks" (DHS Post-Hearing Brief Ex. C)</p> <p>Letter from Steve Sprinkle to James Lambert dated October 29, 2002, showing that Crossroads believes that the '035 Patent claims cover "access controls between devices without regard to the protocol." (DHS Post-Hearing Brief, Ex. D)</p> <p>Crossroads' abandoned April 23, 2004 claim term construction proposing that "first transport medium" be defined as "a</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction | Dot Hill's Evidence |
| <p>Claim 12 The method of claim 11, wherein mappings between devices connected to the first transport medium and the storage devices are links allocating subsets of storage space to associated devices connected to the first transport medium, wherein each subset is only accessible by the associated device connected to the first transport medium.</p> | <p>No claim term at issue</p> | <p>First Transport Medium: A communication link</p> | <p>Dot Hill's Evidence</p> <p>communication medium other than SCS1" (DHS Post-Hearing Brief, Ex. E)</p> <p>Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix)</p> |
| <p>Claim 13 The method of claim 12, wherein the mappings between devices connected to the first transport medium and the storage devices are links allocating subsets of storage space to associated devices connected to the first transport medium, wherein each subset is only accessible by the associated device connected to the first transport medium.</p> | <p>No claim term at issue</p> | <p>First Transport Medium: A communication link</p> | <p>Dot Hill's Evidence</p> <p>communication medium other than SCS1" (DHS Post-Hearing Brief, Ex. E)</p> <p>Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix)</p> |
| <p>Claim 14 The method of claim 13, wherein the mappings between devices connected to the first transport medium and the storage devices are links allocating subsets of storage space to associated devices connected to the first transport medium, wherein each subset is only accessible by the associated device connected to the first transport medium.</p> | <p>No claim term at issue</p> | <p>First Transport Medium: A communication link</p> | <p>Dot Hill's Evidence</p> <p>communication medium other than SCS1" (DHS Post-Hearing Brief, Ex. E)</p> <p>Stipulated Definition of Claim Terms, page 1, defining "First transport medium" as "A communications link." (Exhibit B of this matrix)</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction | |
| | | | | <p>protocol's "Secret Learning" transcript, page 100, line 21 to page 100, line 22.</p> <p>Intrinsic 1055 Patent Col. 2, lines 29-31/A. Partly, 29, line 29, advantage or a mission any claim is providing support to SCSI storage devices as global storage for the Channel bus.</p> <p>Col. 6, lines 21-22 show that the first response means can be SCSI by describing the second mode of operation. SCSI is a standard for SCSI and the third mode of operation is SCSI simulator SCSI hardware.</p> <p>Col. 6, line 27, describing the SCSI network.</p> | | |

| Special Master's Proposed Construction of Disputed Terms | | | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction | |
| | | | | <p>Extrinsic Web page parlour produced by 7/27/2002 page 1 of 1 (DHS) Center Example (Ex. 12)</p> <p>Network World article (May 15, 1999) describing SCS network's multi- interface multiple dissimilar workstations (DHS) host-Exchange (Ex. 13)</p> <p>Network World article (March 1, 1995) describing extended products that depend upon the existence of SCS networks (DHS) Postcard by Birex (Ex. 14)</p> <p>Reference to site Springfield, Ill. Lambert dated October 29, 2002, showing that Crossroads believes that the '035 patent claims cover access controls</p> | | |

| Special Master's Proposed Construction of Disputed Terms | | | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction | |
| Claim 3 The method of claim 1, wherein the devices connected to the first transport medium comprise workstation | | | | between devices without regard to the protocol (DHS Post-Hearing Briefs (D)). Crossroads' abandoned April 23, 2004 claim amendment proposing that "first transport medium" be defined as "any communication medium other than a SCS or DHS Post-Hearing Briefs (D)." Stipulated definition of Claim Terms page 1 defining "first transport medium" as "any communication medium other than a SCS or DHS Post-Hearing Briefs (D)." Stipulated definition of Claim Terms page 1 defining "first transport medium" as "any communication medium other than a SCS or DHS Post-Hearing Briefs (D)." | | |
| Claim 3 The method of claim 1, wherein the devices connected to the first transport medium comprise workstation | | | | First Transport Medium. Although Crossroads has submitted to the joint definition both "first transport medium" and "second medium" and "second | First Transport Medium (see attached stipulations) | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>A storage router for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising:</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router</p> <p>Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27.</p> <p>Extrinsic: Marc Songimi, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, <i>Network World</i>, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |
| United States Patent (No. 5,941,972) | | | |
| <p>A storage router for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising:</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router</p> <p>Intrinsic: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls</p> <p>Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Figure 2</p> <p>Col. 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col. 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 1-2 "According</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | <p>Tr. 111:6-15; Tr. 184:8-185:1; Tr. 187:12-20; Webster's II New Riverside University definitions of "appearance" and "characteristics," Shelton Decl. ISO Crossroads' Reply, Ex. 6; ¶ 12 of Hodge Decl. ISO Crossroads' Response.</p> | <p>since this phrase appears only in the preamble to explain the context in which the storage router is used, it is not a limitation of this claim.</p> |
| | | | <p>Col. 1, lines 28-31, "Local storage typically consists of a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 2, lines 20-22; Col. 4, lines 5-7; and Col. 4, lines 13-18, distinguishing virtual local storage from ordinary remote storage. Col. 8, lines 54-57 and 62-65 associating virtual local storage with storage space.</p> |
| | | | <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9) <i>Webster's II New Riverside Dictionary</i> (1984) definition of "storage" as "a space for storing goods" or "the part of</p> |
| | | | <p>Special Master's Construction</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)</p> <p>Crossroads' <i>Markman</i> Brief at 1, stating "The patents-in-suit concern inventions that allow computers to access remote storage devices as if they were local (i.e. 'virtual local storage'), while at the same time providing access controls." (Crossroads' Brief)</p> <p>Crossroads' <i>Markman</i> Brief, <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.)</u> ("Crossroads' <i>Chaparral</i> <i>Markman</i> Brief", concerning the '972 Patent) at 3, where Crossroads states that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to devices connected to a computer through a</p> |
| | | | <p>Special Master's Construction</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>network.)" (DHS Brief Ex. 10)</p> <p>Crossroads' <i>Chaparral</i> Markman Brief at 1, where Crossroads interprets virtual local storage by stating "The '972 Patent concerns an invention which allows computers to access remote storage devices as if they were local - thus the term 'virtual local storage.'" (DHS Brief Ex. 10)</p> <p>Crossroads' <i>Chaparral</i> Markman Brief at 19, where Crossroads states that "[t]he term 'virtual local storage' refers to the remote storage of data that, from the perspective of the computer, has the appearance and characteristics of locally stored data." (DHS Brief Ex. 10)</p> <p>Markman Hearing testimony of Hodges at 83:3-8, admitting that Crossroads'</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>A storage router for providing virtual local storage on remote SCSI storage devices, comprising:</p> | <p>Remote: "Indirectly connected through at least one serial network transport medium that encapsulates the native low-level block protocol."</p> | <p>Remote: Intrinsic: '972 patent: col. 1, ll. 12-25; col. 1, l. 58 - col. 2, l. 24; col. 5, ll. 38-48; col. 6, ll. 12-24; col. 9, ll. 23-27. Extrinsic: Tr. 102:14-20; Rhyne Cross, Tr. 159:17-18; Rhyne Cross, Tr. 161:7-8; Rhyne Cross, Tr. 174:14-24; Tr. 180:5-14; Mr. Erwine's Notes, Shelton Decl. ISO Crossroads' Reply, Ex. 4.</p> | <p>Remote: Indirectly connected and capable of physical separation. NOTE: This is the definition of <i>remote</i>, but since this phrase appears only in the preamble to explain the context in which the storage router is used, it is not a limitation of this claim.</p> |
| <p>A storage router for providing virtual local storage on remote SCSI storage devices, comprising:</p> | <p>Remote: Indirectly connected through at least one serial network transport medium. Remote: Indirectly connected through at least one serial network transport medium.</p> | <p>proposed definition does not explain "characteristics of local storage," but that, instead of defining this term at the Markman hearing, Crossroads "will certainly be able to describe that" to the jury. (Hearing Transcript)</p> <p>Remote: Intrinsic: '972 Patent: Col. 1, lines 28-31 using the term "remote" to refer to storage which is not "local," and defining "local" as "a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 1, lines 53-57, describing storage capacity which is not local as "remote." Col. 2, line 23 "significantly remote"</p> | <p>proposed definition does not explain "characteristics of local storage," but that, instead of defining this term at the Markman hearing, Crossroads "will certainly be able to describe that" to the jury. (Hearing Transcript)</p> <p>Remote: Indirectly connected through at least one serial network transport medium.</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>Extrinsic: <i>Webopedia</i> definition of "remote" (Last modified September 1, 1996) as "In networks, remote refers to files, devices, and other resources that are not connected directly to your workstation. Resources at your workstation are considered local" (DHS Brief Ex. 6)</p> <p><i>Webopedia</i> definition of "local" (Last modified September 1, 1996) as "In networks, local refers to files, devices, and other resources at your workstation. Resources located at other nodes on the network are remote." (DHS Brief Ex. 6)</p> <p>Deposition of inventor Hoese, pages 143, 146, 147, 154-155 confirming that "remote" is not a function of distance by stating "it appears to be that the intent was to describe the storage as not being directly</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>connected as local storage would be, but to be connected remotely, as in across a network or other means." (DHS Brief Ex. 14)</p> <p>Deposition of inventor Russell pages 104-105 confirming that "remote" is not a function of distance by stating "And it might be right next to me or it could be, you know, across the country, but that would allow me to get at that remote storage." (DHS Brief Ex. 15)</p> <p>Declaration of Rhyme, paragraph 19, stating that "[T]he meaning of 'remote' in general and in the specific context of the Crossroads patents has nothing to do with the physical distance between a workstation and a storage device, but rather has to do with the topological nature of the interconnection between those devices." (DHS Responsive Brief Ex. 18)</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>Declaration of Rhyme, paragraph 27, stating that "[The common meaning of 'remote' is the opposite of 'local,' and does not carry a distance characteristic." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Hodges in Support of Crossroads' Opening Markman Brief (7/27/04), paragraph 9, stating that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to storage devices connected to a computer through a network). Local storage also typically refers to storage devices which are located a very short distance from the computer, i.e. a few feet." (Crossroads' Brief)</p> <p>Markman hearing testimony of Rhyme at 15:3-15, showing</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| <p>a buffer providing memory work space for the storage router;</p> <p>a Fibre Channel controller operable to connect to and interface with a Fibre Channel transport medium;</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router:</p> <p>Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27.</p> <p>Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, <i>Network World</i>, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Storage Router: The storage router mentioned earlier in this claim.</p> | <p>that a definition of "remote" could be simply "indirectly connected." (Hearing Transcript)</p> <p>Storage Router:</p> <p>Intrinsic: '972 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls</p> <p>Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the</p> |
| | | | | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

| Special Master's Proposed Construction of Disputed Terms | | | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction | |
| | | | | <p>Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> | | |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.)</u> (concerning the '972 Patent starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads'</p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Special Master's Proposed Construction of Disputed Terms | Special Master's Construction |
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| | | | Dot Hill's Evidence | |
| | | | Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4) | |
| | | | <i>Microsoft Computer Dictionary</i> (5 th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5) | |
| | | | <i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6) | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>a SCSI controller operable to connect to and interface with a SCSI bus transport medium; and a supervisor unit coupled to the Fibre Channel controller, the SCSI controller and the buffer, the supervisor unit operable; to maintain a configuration for SCSI storage devices connected to the SCSI bus transport medium that maps</p> | <p>Supervisor Unit: "A computer processing device programmed to process data in a buffer in order to map between FC devices and SCSI devices and which implements access controls."</p> | <p>Supervisor Unit: Intrinsic: '972 patent: col. 5, l. 63 - col. 6, l. 3; col. 9; ll. 18-27. Extrinsic: Hodges Direct, Tr. 36:3-37:9.</p> | <p>Supervisor Unit: A microprocessor programmed to process data in a buffer in order to map between Fibre Channel devices and SCSI devices and which implements access controls.</p> |
| <p>bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)</p> <p>Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> | <p>Supervisor Unit: A device comprising at least: (1) a microprocessor, incorporating independent data and program memory spaces; and (2) associated logic required to implement a stand alone processing system and programmed to process data in a buffer in order to map between FC devices and</p> | <p>Supervisor Unit: Intrinsic: '972 Patent: Col. 5, lines 5-10, describing a Supervisor Unit that "comprises a microprocessor ..." Col. 1, lines 26-28 and col. 4, lines 32-33 equating a "computing device" with</p> | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
| between Fibre Channel devices and SCSI storage devices and that implements access controls for storage space on the SCSI storage devices; | | | | workstations. Extrinsic: <i>Chaparral</i> Markman Order at 9 (DHS Brief Ex. 8) <i>Crossroads' Chaparral</i> Markman Brief at 25, where <i>Crossroads</i> argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10) | SCSI devices and which implements access controls. |
| and to process data in the buffer | | | Data: Any digital information. | Data: Any digital information excluding commands and requests to access digital information. Extrinsic: <i>Webster's II New Riverside Dictionary (1984)</i> definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9) <i>Webopedia</i> definition of "data" as "[d]istinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
| <p>The interface between the Fibre Channel controller and the SCSI controller to allow access from Fibre Channel initiator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration.</p> | <p>Allow Access: "Permit or enable communication in order to read or write data."</p> | <p>Allow Access: Extrinsic: Tr. 119:2-5.</p> | <p>Allow Access: Permit or enable communication in order to read or write data.</p> | <p>pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS Brief Ex. 6) Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> | <p>Allow Access: Permit or enable communication to read or write data.</p> |
| | | | | <p>Claim 1, reciting the term "access controls" separate and apart from the words "allow access," describing "a supervisor unit ... that implements access controls for storage space on the SCSI storage devices; and ... to allow access from Fibre Channel initiator devices to SCSI storage devices"</p> | <p>Claim 7, reciting the term</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>"access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"</p> <p>Extrinsic: <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)</p> <p><i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> <p>Crossroads' Post-<i>Markman</i> Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order to</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>The storage router of claim 1, wherein the configuration maintained by the supervisor unit includes an allocation of subsets of storage space to associated Fibre Channel devices, wherein each subset is only accessible by the associated Fibre Channel device.</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27. Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads</i> says, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Storage Router: Intrinsic: '972 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26 Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..." Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in</p> |
| <p>Special Master's Construction</p> | <p>Dot Hill's Evidence</p> | <p>read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-Hearing Brief)</p> | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| | | | | <p>Figure 2</p> <p>Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 1-2 "According</p> |
| | | | | Special Master's Construction |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| The storage router of claim 1, wherein the configuration maintained by the supervisor unit includes an allocation of subsets of storage space to associated Fibre Channel devices, wherein each subset is only accessible by the associated Fibre Channel device. | Supervisor Unit: "A computer processing device programmed to process data in a buffer in order to map between FC devices and SCSI devices and which implements access controls." | Supervisor Unit: Intrinsic: '972 patent: col. 5, l. 63 - col. 6, l. 3; col. 9; ll. 18-27. Extrinsic: Hodges Direct, Tr. 36:3-37:9. | Supervisor Unit: Intrinsic: '972 Patent: Col. 5, lines 5-10, describing a Supervisor Unit that "comprises a microprocessor . . ." Col. 1, lines 26-28 and col. 4, lines 32-33 equating a "computing device" with workstations. |
| | | | Supervisor Unit: A device comprising at least: (1) a microprocessor, incorporating independent data and program memory spaces; and (2) associated logic required to implement a stand alone processing system and programmed to process data in a buffer in order to map between FC devices and |
| | | | characteristics listed in the body of Claim 1 (Hearing Transcript) Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A) |

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| | <p>Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Dot Hill's Proposed Construction</p> | <p>Dot Hill's Evidence</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Dot Hill's Proposed Construction | Special Master's Construction |
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| | | <p>available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| 2, wherein the SCSI storage devices comprise hard disk drives. | [Defined by the plain language of the claim] | <p>Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27.</p> <p>Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997); Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Intrinsic: '972 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls</p> <p>Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage</p> |
| | | | <p>Special Master's Construction</p> <p>A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| | | | <p>network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term</p> |
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| | | | <p>Dot Hill's Evidence</p> <p>"storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex.</p> |
| | | | <p>Special Master's Construction</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>Special Master's Construction</p> |
| | | | <p>4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For</p> |

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| | | | <p>example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)</p> <p>Network World article</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Evidence |
| <p>Claim 1: The storage router of claim 1, wherein the Fibre Channel controller comprises: a Fibre Channel (FC) protocol unit operable to connect to the Fibre Channel transport medium; a first-in-first-out queue coupled to the Fibre Channel protocol unit; and a direct memory access (DMA) interface coupled to the first-in-first-out queue and to the buffer.</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27. Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says</i>, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> |
| | | <p>(December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> | <p>Storage Router: Intrinsic: '972 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> |
| | | | <p>Storage Router: A data transmitting device that allows users to integrate different servers or workstations into a storage network.</p> |

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| | | Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response. | <p>Dot Hill's Evidence</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col. 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes</p> |
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| | | | <p>data between the target and the initiator"</p> <p>Col 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> |
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| | | | | <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient</p> | |

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| | | | <p>available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct</p> |

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Crossroads' Evidence

Crossroads' Proposed Construction

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Evidence |
| <p>1, wherein the SCSI controller comprises: a SCSI protocol unit operable to connect to the SCSI bus transport medium; an internal buffer coupled to the SCSI protocol unit; and a direct memory access (DMA) interface coupled to the internal buffer and to the buffer of the storage router.</p> | <p>[Defined by the plain language of the claim]</p> | <p>Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27.</p> <p>Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads says, Network World</i>, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Intrinsic: '972 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls</p> <p>Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage</p> |
| | <p>Dot Hill's Proposed Construction</p> <p>A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> | | <p>Special Master's Construction</p> <p>A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |

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| | | | <p>network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes data between the target and the initiator"</p> <p>Col. 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term</p> |
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| | | | <p>"storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex.</p> |

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| | | | <p>Special Master's Construction</p> <p>4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)</p> <p>Network World article</p> |
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| <p>claim 7 A storage network, comprising: a Fibre Channel transport medium; a SCSI bus transport medium; a plurality of workstations connected to the Fibre Channel transport medium; a plurality of SCSI storage devices connected to the SCSI bus transport medium; and a storage router interfacing between the Fibre Channel transport medium and the SCSI bus transport medium, the storage router providing</p> | <p>Storage Router: [Defined by the plain language of the claim]</p> | <p>Storage Router: Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27. Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads</i> says, <i>Network World</i>, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO</p> | <p>Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the other side of the router.</p> |
| | | <p>Storage Router: Intrinsic: '972 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> | <p>Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.</p> |
| | | <p>Dot Hill's Evidence (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> | <p>Dot Hill's Evidence Special Master's Construction</p> |

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| <p>virtual local storage on the SCSI storage devices to the workstations and operable: to map between the workstations and the SCSI storage devices; to implement access controls for storage space on the SCSI storage devices;</p> | | <p>Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>Dot Hill's Evidence</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col. 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> <p>Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.</p> <p>Col. 3, lines 35-37 "Storage router 44 routes requests from initiator devices on one medium to target devices on the other medium and routes</p> |
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| | | | <p>data between the target and the initiator"</p> <p>Col 3, lines 48-50 "... storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSI bus 34"</p> <p>Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality ..."</p> <p>Claim 7 (including term "storage router" in body of claim, not just in preamble)</p> <p>Extrinsic: Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites message delivery. On a single network linking many computers through a mesh of possible connections, a router receives transmitted messages and forwards them to their correct destinations over the most efficient</p> |
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| | | | <p>available router ..." (DHS Brief Ex. 5)</p> <p><i>Webopedia</i> definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)</p> <p>U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channel-to-SCSI router thus provides a pass-through data management role. For example, when a Fibre Channel host issues a command to a SCSI target, the SCSI router receives the command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief at 12 and 14, stating that Crossroads' invention perform a routing function. "[T]he Crossroads invention routes native low level block protocols to the correct</p> |
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| SCSI storage devices to the workstations and operable: to map between the workstations and the SCSI storage devices; to implement access controls for storage space on the SCSI storage devices; | space in a remote storage device that has the appearance and characteristics of local storage." | <p>Intrinsic: '972 patent: col. 2, ll. 20-22; col. 4, ll. 1-10; col. 4, ll. 37-41.</p> <p>Extrinsic: Tr. 13:3-14; Tr. 18:5-12; Tr. 111:6-15; Tr. 184:8-185:1; Tr. 187:12-20; Webster's II New Riverside University definitions of "appearance" and "characteristics," Shelton Decl. ISO Crossroads' Reply, Ex. 6; ¶ 12 of Hodge Decl. ISO Crossroads' Response.</p> | is remotely connected to an initiator device, such that the storage space appears to the initiator device to be within or locally connected to the initiator device. |
| | | | <p>is remotely connected to an initiator device, such that the storage space appears to the initiator device to be within or locally connected to the initiator device.</p> <p>'972 Patent: Abstract; Col. 1, lines 7-8; Col. 1, lines 53-55; Col. 1, lines 58-61; Col. 4, lines 44-47; and Claim 1 ("virtual local storage on remote SCSI storage devices")</p> <p>Col. 1, lines 28-31, "Local storage typically consists of a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation."</p> <p>Col. 2, lines 20-22; Col. 4, lines 5-7; and Col. 4, lines 13-18, distinguishing virtual local storage from ordinary remote storage.</p> <p>Col. 8, lines 54-57 and 62-65 associating virtual local storage with storage space.</p> <p>Extrinsic: <i>Webster's II New Riverside Dictionary</i> (1984) definition of "virtual" as "[e]xisting or</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>resulting in effect through not in actual fact" (DHS Brief, Ex. 9)</p> <p><i>Webster's II New Riverside Dictionary</i> (1984) definition of "storage" as "a space for storing goods" or "the part of a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)</p> <p>Crossroads' <i>Markman</i> Brief at 1, stating "The patents-in-suit concern inventions that allow computers to access remote storage devices as if they were local (i.e. 'virtual local storage'), while at the same time providing access controls." (Crossroads' Brief)</p> <p>Crossroads' <i>Markman</i> Brief, <i>Crossroads Systems (Texas) Inc. v. Chaparral Network Storage Inc.</i>, No. A00 CA 217SS (W.D. Tex.) ("Crossroads' <i>Chaparral</i> <i>Markman</i> Brief", concerning</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>the '972 Patent) at 3, where Crossroads states that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to devices connected to a computer through a network.)" (DHS Brief Ex. 10)</p> <p>Crossroads' <i>Chaparral</i> Markman Brief at 1, where Crossroads interprets virtual local storage by stating "The '972 Patent concerns an invention which allows computers to access remote storage devices as if they were local - thus the term 'virtual local storage.'" (DHS Brief Ex. 10)</p> <p>Crossroads' <i>Chaparral</i> Markman Brief at 19, where Crossroads states that "[t]he term 'virtual local storage' refers to the remote storage of data that, from the perspective of the computer,</p> |
| | | | <p>Special Master's Construction</p> |

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| <p>and to allow access from the workstations to the SCSI storage devices using native low level, block protocol in accordance with the mapping and access controls.</p> | <p>Allow Access: "Permit or enable communication in order to read or write data."</p> | <p>Allow Access: Extrinsic: Tr. 119:2-5.</p> | <p>Allow Access: Permit or enable communication in order to read or write data.</p> |
| | | | <p>Dot Hill's Evidence</p> <p>has the appearance and characteristics of locally stored data." (DHS Brief Ex. 10)</p> <p>Markman Hearing testimony of Hodges at 83:3-8, admitting that Crossroads' proposed definition does not explain "characteristics of local storage," but that, instead of defining this term at the Markman hearing, Crossroads "will certainly be able to describe that" to the jury. (Hearing Transcript)</p> |
| | | | <p>Special Master's Construction</p> <p>Allow Access: Permit or enable communication to read or write data.</p> |

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| | | | <p>Dot Hill's Evidence</p> <p>for storage space on the SCSI storage devices; and ... to allow access from Fibre Channel initiator devices to SCSI storage devices"</p> <p>Claim 7, reciting the term "access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"</p> <p>Extrinsic: <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5) <i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> |
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| | | | Special Master's Construction |
| Claim 8 The storage network of claim 7, wherein the access control includes an indication of a subset of storage space no associated workstations, wherein each subset is only accessible by the associated workstation. | [No claim term in issue] | | Crossroads' Post-Markman Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order to read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-Hearing Brief) |
| Claim 9 The storage network of claim 7, wherein the SCSI storage devices comprise hard disk drives. | [No claim term in issue] | | |
| Claim 10 The storage network of claim 7, wherein the storage device comprises a buffer providing memory work space for the storage | Storage Router: [Defined by the plain language of the claim] | Storage Router: Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27. | Storage Router: Intrinsic: Figure 2, depicting Storage Router 44 with workstations |
| | | | Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| router; | | <p>Extrinsic: Marc Songini, <i>Storage Routing is the Way to Go</i>, <i>Crossroads</i> says, Network World, Dec. 8, 1997, at 19 (demonstrating that there was no accepted meaning of storage router to one of ordinary skill in the art in 1997), Shelton Decl. ISO Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.</p> | <p>other side of the router.</p> | <p>and disks, but no access controls</p> <p>Col. 2, lines 47-49 "FIG. 2 is a block diagram of one embodiment of a storage network with a storage router that provides global access and routing"; also Col. 3, lines 24-26</p> <p>Col. 3, lines 45-47 (referring to Figure 2) "[A]ny workstation ... can access any storage device ..."</p> <p>Figures 3, 4 and 5, distinguishing a Storage Router 56, which provides virtual local storage, from the Storage Router 44 depicted in Figure 2</p> <p>Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60</p> |
| | | | | <p>Special Master's Construction network.</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>Testimony of Geoffrey Hoese in <u>Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc.</u>, No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent) starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)</p> <p>Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)</p> <p>Joshua Eddings, <i>How the Internet Works</i> (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)</p> <p>Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)</p> <p><i>Microsoft Computer Dictionary</i> (5th ed. 2002)</p> | |

| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
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| | | | | <p>command and forwards it to the target." (DHS Brief Ex. 7)</p> <p>Crossroads' <i>Markman</i> Brief. at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]he Crossroads invention routes native low level block protocols to the correct remote storage device over a fiber network without involving a server.") (Crossroads' Brief)</p> <p>Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript).</p> <p>Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Special Master's Construction |
| <p>1. Fibre Channel controller operable to connect to and interface with a Fibre Channel transport medium, the Fibre Channel controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer; a SCSI controller operable to connect to and interface with a SCSI bus transport medium, the SCSI controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer; and a supervisor unit coupled to the Fibre Channel controller, the SCSI controller and the buffer, the supervisor unit operable: to maintain a configuration</p> | <p>Data: "Any digital information excluding commands and requests used to access data in a storage unit."</p> | <p>Data: Intrinsic: '972 patent: col. 4, l. 4; col. 4, ll. 40-42; col. 5, ll. 11-25; col. 7, ll. 18-23. Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.</p> | <p>Data: Any digital information.</p> | <p>Data: Any digital information excluding commands and requests to access digital information.</p> |
| | | | <p>Data: access controls, stating that "[a] storage router, according to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)</p> | |
| | | | <p>Data: Extrinsic: <i>Webster's II New Riverside Dictionary (1984)</i> definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9) <i>Webopedia</i> definition of "data" as "[d]istinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS Brief Ex. 6)</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| <p>for the SCSI storage devices that maps between Fibre Channel devices and SCSI storage devices and that implements the access controls for storage space on the SCSI storage devices;</p> <p>a SCSI controller operable to connect to and interface with SCSI bus transport medium, the SCSI controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer, and a supervisor unit coupled to the Fibre Channel controller, the SCSI controller and the buffer, the supervisor unit operable:</p> <p>to maintain a configuration for the SCSI storage devices that maps between Fibre Channel devices and SCSI storage devices and that implements the access controls for storage space on the SCSI storage devices;</p> | <p>Supervisor Unit: "A computer processing device programmed to process data in a buffer in order to map between FC devices and SCSI devices and which implements access controls."</p> | <p>Supervisor Unit: Intrinsic: '972 patent: col. 5, l. 63 - col. 6, l. 3; col. 9, ll. 18-27. Extrinsic: Hodges Direct, Tr. 36:3-37:9.</p> | <p>Supervisor Unit: A microprocessor programmed to process data in a buffer in order to map between Fibre Channel devices and SCSI devices and which implements access controls.</p> |
| | | <p>Supervisor Unit: Intrinsic: '972 Patent: Col. 5, lines 5-10, describing a Supervisor Unit that "comprises a microprocessor ..." Col. 1, lines 26-28 and col. 4, lines 32-33 equating a "computing device" with workstations. Extrinsic: <i>Chaparral</i> Markman Order at 9 (DHS Brief Ex. 8) Crossroads' <i>Chaparral</i> Markman Brief at 25, where Crossroads argues that the patent specification explicitly states that the supervisor unit</p> | <p>Supervisor Unit: A device comprising at least: (1) a microprocessor, incorporating independent data and program memory spaces; and (2) associated logic required to implement a stand alone processing system and programmed to process data in a buffer in order to map between FC devices and SCSI devices and which implements access controls.</p> |
| | | <p>Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> | <p>Dot Hill's Evidence</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| and to process data in the buffer to interface between the Fibre Channel controller and the SCSI controller to allow access from workstations to SCSI storage devices in accordance with the configuration. | <p>Data: "Any digital information excluding commands and requests used to access data in a storage unit."</p> | <p>Data: Intrinsic: '972 patent: col. 4, ll. 4-42; col. 5, ll. 11-25; col. 7, ll. 18-23. Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.</p> | <p>Data: Any digital information.</p> |
| and to process data in the buffer to interface between the Fibre Channel controller | <p>Allow Access: "Permit or enable communication in order to</p> | <p>Allow Access: Extrinsic:</p> | <p>Allow Access: Permit or enable communication in order to</p> |
| | | | <p>Data: comprises a microprocessor. (DHS Brief Ex. 10)</p> |
| | | | <p>Data: Extrinsic: <i>Webster's II New Riverside Dictionary (1984)</i> definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9) <i>Webopedia</i> definition of "data" as "[d]istinct pieces of information, usually formatted in a special way. Data can exist in a variety of forms - as numbers of text on pieces of paper, as bits and bytes stored in electronic memory or as facts stored in a person's mind." (DHS Brief Ex. 6) Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)</p> |
| | | | <p>Allow Access: Permit or enable communication to read or</p> |

| Special Master's Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Special Master's Construction |
| and the SCSI controller to allow access from workstations to SCSI storage devices in accordance with the configuration. | Construction read or write data." | Tr. 119:2-5. | Construction read or write data. |
| | | | Dot Hill's Evidence Col. 1, line 66 to col. 2, line 5, distinguishing "access controls" from the concept of "allowing access." Claim 1, reciting the term "access controls" separate and apart from the words "allow access," describing "a supervisor unit ... that implements access controls for storage space on the SCSI storage devices; and ... to allow access from Fibre Channel initiator devices to SCSI storage devices" Claim 7, reciting the term "access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices" Extrinsic: <i>Microsoft Computer</i> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence |
| <p>A method for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising:</p> <p>interfacing with a Fibre Channel transport medium; interfacing with a SCSI bus transport medium; maintaining a configuration for SCSI storage devices connected to the SCSI bus transport medium that maps between Fibre Channel devices and the SCSI storage devices and that implements access controls for storage space on the SCSI storage devices; and allowing access from Fibre Channel initiator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration.</p> | <p>Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."</p> | <p>Virtual Local Storage: Intrinsic: '972 patent: col. 2, ll. 20-22; col. 4, ll. 1-10; col. 4, ll. 37-41. Extrinsic: Tr. 13:3-14; Tr. 18:5-12; Tr. 111:6-15; Tr. 184:8-185:1; Tr. 187:12-20; Webster's II New Riverside University definitions of "appearance" and "characteristics," Shelton Decl. ISO Crossroads' Reply, Ex. 6; ¶ 12 of Hodge Decl. ISO Crossroads' Response.</p> | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to the initiator device to be within or locally connected to the initiator device.</p> | <p>Virtual Local Storage: Intrinsic: '972 Patent: Abstract; Col. 1, lines 7-8; Col. 1, lines 53-55; Col. 1, lines 58-61; Col. 4, lines 44-47; and Claim 1 ("virtual local storage on remote SCSI storage devices") Col. 1, lines 28-31, "Local storage typically consists of a disk drive, tape drive, CD-ROM drive or other storage device contained within, or locally connected to the workstation." Col. 2, lines 20-22; Col. 4, lines 5-7; and Col. 4, lines 13-18, distinguishing virtual local storage from ordinary remote storage. Col. 8, lines 54-57 and 62-65 associating virtual local storage with storage space.</p> |
| | | | | <p>Extrinsic: <i>Webster's II New Riverside</i></p> |
| | | | | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to the initiator device to be within or locally connected to the initiator device.</p> |
| | | | | <p>Virtual Local Storage: Storage space, in a device that is remotely connected to an initiator device, such that the storage space appears to the initiator device to be within or locally connected to the initiator device.</p> |

| Actual Claims Language | Crossroads' Proposed Construction | Special Master's Proposed Construction of Disputed Terms | Dot Hill's Evidence | Special Master's Construction |
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| | | | <p><i>Dictionary</i> (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)</p> <p><i>Webster's II New Riverside Dictionary</i> (1984) definition of "storage" as "a space for storing goods" or "the part of a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)</p> <p>Crossroads' <i>Markman</i> Brief at 1, stating "The patents-in-suit concern inventions that allow computers to access remote storage devices as if they were local (i.e. 'virtual local storage'), while at the same time providing access controls." (Crossroads' Brief)</p> <p>Crossroads' <i>Markman</i> Brief, Crossroads Systems (Texas), <i>Inc. v. Chaparral Network Storage Inc.</i>, No. A00 CA 217SS (W.D. Tex.)</p> | |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
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| | | <p>Dot Hill's Evidence</p> <p>("Crossroads' <i>Chaparral</i> Markman Brief", concerning the '972 Patent) at 3, where Crossroads states that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to devices connected to a computer through a network.)" (DHS Brief Ex. 10)</p> <p>Crossroads' <i>Chaparral</i> Markman Brief at 1, where Crossroads interprets virtual local storage by stating "The '972 Patent concerns an invention which allows computers to access remote storage devices as if they were local - thus the term 'virtual local storage.'" (DHS Brief Ex. 10)</p> <p>Crossroads' <i>Chaparral</i> Markman Brief at 19, where Crossroads states that "[t]he term 'virtual local storage' refers to the remote storage of</p> | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| transport medium that maps between Fibre Channel devices and the SCSI storage devices and that implements access controls for storage space on the SCSI storage devices; and allowing access from Fibre Channel initiator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration. | | Rhyme Cross, Tr. 159:17-18; Rhyme Cross, Tr. 161:7-8; Rhyme Cross, Tr. 174:14-24; Tr. 180:5-14; Mr. Erwine's Notes, Shelton Decl. ISO Crossroads' Reply, Ex. 4. | Special Master's Construction |
| | | | Dot Hill's Evidence |
| | | | Col. 1, lines 53-57, describing storage capacity which is not local as "remote." Col. 2, line 23 "significantly remote" Extrinsic: <i>Webopedia</i> definition of "remote" (Last modified September 1, 1996) as "In networks, remote refers to files, devices, and other resources that are not connected directly to your workstation. Resources at your workstation are considered local" (DHS Brief Ex. 6) <i>Webopedia</i> definition of "local" (Last modified September 1, 1996) as "In networks, local refers to files, devices, and other resources at your workstation. Resources located at other nodes on the network are |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>remote." (DHS Brief Ex. 6)</p> <p>Deposition of inventor Hoese, pages 143, 146, 147, 154-155 confirming that "remote" is not a function of distance by stating "It appears to be that the intent was to describe the storage as not being directly connected as local storage would be, but to be connected remotely, as in across a network or other means." (DHS Brief Ex. 14)</p> <p>Deposition of inventor Russell pages 104-105 confirming that "remote" is not a function of distance by stating "And it might be right next to me or it could be, you know, across the country, but that would allow me to get at that remote storage." (DHS Brief Ex. 15)</p> <p>Declaration of Rhyne, paragraph 19, stating that "[T]he meaning of 'remote' in general and in the specific</p> |
| | | | <p>Special Master's Construction</p> |

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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction |
| | | | <p>Dot Hill's Evidence</p> <p>context of the Crossroads patents has nothing to do with the physical distance between a workstation and a storage device, but rather has to do with the topological nature of the interconnection between those devices." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Rhyme, paragraph 27, stating that "[T]he common meaning of 'remote' is the opposite of 'local,' and does not carry a distance characteristic." (DHS Responsive Brief Ex. 18)</p> <p>Declaration of Hodges in Support of Crossroads' Opening Markman Brief (7/27/04), paragraph 9, stating that "The term 'local storage' typically refers to storage devices which are directly connected to the computer (as opposed to storage devices connected to a computer through a</p> |
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| Actual Claims Language | Crossroads' Proposed Construction | Crossroads' Evidence | Dot Hill's Proposed Construction | Dot Hill's Evidence | Special Master's Construction |
| <p>allowing access from Fibre Channel initiator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration.</p> | | | | <p>network). Local storage also typically refers to storage devices which are located a very short distance from the computer, i.e. a few feet." (Crossroads' Brief)</p> <p>Markman hearing testimony of Rhyme at 15:3-15, showing that a definition of "remote" could be simply "indirectly connected." (Hearing Transcript)</p> | <p>Allow Access: Permit or enable communication to read or write data.</p> |
| | | | <p>Allow Access: Permit or enable communication in order to read or write data.</p> | <p>Allow Access: Intrinsic: '972 Patent: Col. 1, line 66 to col. 2, line 5, distinguishing "access controls" from the concept of "allowing access." Claim 1, reciting the term "access controls" separate and apart from the words "allow access," describing "a supervisor unit ... that implements access controls for storage space on the SCSI storage devices; and ... to</p> | |

| Special Master's Proposed Construction of Disputed Terms | | | |
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| Actual Claims Language | Crossroads' Proposed Construction | Dot Hill's Proposed Construction | Special Master's Construction |
| | | | <p>allow access from Fibre Channel initiator devices to SCSI storage devices"</p> <p>Claim 7, reciting the term "access controls" separate and apart from the words "allow access," describing "a storage router ... operable ... to implement access controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"</p> <p>Extrinsic: <i>Microsoft Computer Dictionary</i> (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)</p> <p><i>WordNet Dictionary</i> definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)</p> <p>Crossroads' Post-Markman</p> |