IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS 2005 JA 21 AH 11: 28

**AUSTIN DIVISION** 

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

**CROSSROADS EXHIBIT 2006** Oracle Corp. et al v Crossroads Systems, Inc. IPR2014-01207

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.

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 Co	onstruction of Disputed Terms		ender der der der der der der der der der
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
		United States Pater	t No. 6,425,035 B2		
A storage router for providing virtual local storage on remote storage devices to devices, comprising:	Storage Router: [Defined by the plain language of the claim]	Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	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.	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) "[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	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

4 of 209

f			Special Master's Proposed Co	enstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
5 of 209		Construction		Construction	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  Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.  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"  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"	

ſ		Nicol (1904) (1914) (Marcon for content (1904) (1904) (1904) (1904) (1904) (1904)		nstruction of Disputed Terms	alesenachanorielusuura-amarkana kurusakeenaarsa	en de la companya de
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
6 of 209					Col. 4, lines 7-8  "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)	

		Special Master's Proposed Co	nstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
7 of 209				Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)	
				Microsoft Computer Dictionary (5 <sup>th</sup> 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	

• •

•.

			Special Master's Proposed Co	onstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
8 01 209		Construction		Construction	most efficient available router" (DHS Brief Ex. 5)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  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)	
	•				Crossroads' Markman Brief at 12 and 14, stating that Crossroads' invention perform a	

Special Master's Proposed Construction of Dispute Terms						
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
607 10 G					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)  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 I (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	

Special Master's Proposed Construction of Disputed Terms	
Actual Claims Language Crossroads' Proposed Crossroads' Evidence Dot Hill's Proposed Construction Construction	ill's Evidence Special Master's Construction
A storage router for providing virtual local storage on remote storage devices to devices, comprising:  A storage router for providing virtual local storage on remote storage devices to device that has the appearance and characteristics of local storage."  Virtual Local Storage:  "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."  Virtual Local Storage:  "A specific subset of 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.  Extrinsic:  Tr. 13:3-14; Tr. 181:5-12; Tr. 111:6-15; Tr. 184:8-185:1; 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.	device, such that the storage space appears to the initiator device to appears to the initiator device to within or locally connected to the initiator device.  3 51-54; and Claim that the storage space appears to the initiator device within or locally connected to the initiator device.

		Special Master's Proposed Co			
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
11 of 209				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:  Webster's II New Riverside Dictionary (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)  Webster's II New Riverside Dictionary (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)	

Į.			Special Master's Proposed Co	Instruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
72 01 209					Crossroads' Markman 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)  Crossroads' Markman Brief, Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.) ("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	

		ne se un anne su din processo de la companya de la Companya de la companya de la compa	Special Master's Proposed Co	onstruction of Disputed Terms	tallikusetakalisesileseneta ilililikusenetaisesile	
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
13 01 209	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;		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	•	Dot Hill's Evidence  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."	Remote: Indirectly connected through at least one serial network transport medium.
			Decl. ISO Crossroads' Reply, Ex. 4.		Col. 2, line 32 "significantly remote"  Extrinsic: Webopedia definition of "remote" (Last modified	

A Comment of the Control of the Cont	Market Company of the State of the State of the State of		d Construction of Disputed Terr	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				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)  Webopedia 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)  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	

	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
15 of 200				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)  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)  Declaration of Rhyne, 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	

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
16 of 209				and a storage device, but rather has to do with the topological nature of the interconnection between those devices." (DHS Responsive Brief Ex. 18)  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)  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	

	and the contraction of the first parties and the difference of the parties of the		Special Master's Proposed Co	enstruction of Disputed Terms	izunin komaturi - pragumun - brandarah izazan zaran eran	
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
17 of 209	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.	Supervisor Unit: A microprocessor programmed to process data in a buffer in order to map between devices connected to the first transport medium and storage devices and which implements access controls.	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)  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 Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
18 of 209					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.  Extrinsic: Chaparral Markman Order at 9 (DHS Brief Ex. 8)  Crossroads' Chaparral Markman Brief at 25, where Crossroads argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)	Data:
	to implement access controls for storage space on the	Data: "Any digital information	Data:	Data: Any digital information.	Data:	Any digital information excluding
ĺ	storage devices and to process	excluding commands and	Intrinsic:		Extrinsic:	commands and requests to access

F		ia kon essensia sensias de la konstanta en essensia de la constanta de la constanta de la constanta de la cons	Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
	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.	requests used to access data in a storage unit."	'035 patent: col. 4, l. 10; col. 4, ll. 48-50; col. 5, ll. 18-32; col. 7, ll. 24-32.  Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.		Webster's Il New Riverside Dictionary (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)  Webopedia 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)	Allow Access:
	to implement access controls for storage space on the	Allow Access: "Permit or enable	Allow Access:	Allow Access: Permit or enable	Allow Access:	Permit or enable communication
	storage devices and to process	communication in order to	Extrinsic:	communication in order to	Intrinsic:	to read or write data.

Special Master's Proposed Construction of Disputed Terms					(1)
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
data in the buffer to interface between the first controller and the second controller to allow access from devices connected to the first transpor medium to the storage device using native low level, block protocols.		Tr. 119:2-5.	read or write data.	'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	

			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
21 01 209		Construction		Construction	controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"  Extrinsic:  Microsoft Computer Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)  WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)  Crossroads' Post-Markman Brief at page 8: "Crossroads agrees that 'allow access'	
					should be construed as 'permit or enable communication in order	

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

representative de la completa de la	a kantaka ka ka mili kuto mpamanan maa ahabbasa maanam milik	Special Master's Propose	d Construction of Disputed Terr	odiem umilioniminatiskimies karijo ministra i straliter i sast NS	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
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.				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."  Extrinsic:  Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)  Network World article (May 8, 1989) describing SCSI networks that	

Special Master's Proposed Construction of Disputed Terms				
Actual Claims Language Crossroads' Proposed Crossroads' Evidence Construction	Dot Hill's Proposed 1 Construction	Dot Hill's Evidence	Special Master's Construction	
Z4 of 209		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		

र स्वतिकारीय क्षेत्र प्रसारक प्राप्त होति स्वतान्त्रीयम् तस्त्र क्षेत्र क्षेत्र स्वतिकारीय विश्वतिकारीय स्वतिक स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय स्वतिकारीय		Special Master's Proposed Co	nstruction of Disputed Terms		and the condition of the contract of the condition of the
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
Claim?  The storage router of claim 1,	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '035 patent: col. 9, 11. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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	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.	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)  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 that provides global access and routing"; Col. 3,	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
26 of 209		Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.		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 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 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
27 of 209				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"  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"  Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic:	

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
28 of 209				Testimony of Geoffrey Hoese in Crossroads 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) Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief	

	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
607 10 67					Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines	

	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 Constructio			
30 Of 200				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)  Crossroads' Markman 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)  Markman Hearing testimony of Hodges at 77:7-14, showing that				

Į						
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
					devices other than storage routers, such as bridges, may have all the characteristics listed in the body of Claim 1 (Hearing Transcript)	
31 01 209	•				Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning access	
9		·			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)	
	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: A microprocessor programmed to process data in a buffer in order to map between devices connected to the first transport medium and	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

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
32 of 209	medium and devices connected to a second transport medium which implements access controls."	Extrinsic: Hodges Direct, Tr. 36:3-37:9.	storage devices and which implements access controls.	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 Channel and SCSI protocols have been replaced with more generic terms.  Extrinsic: Chaparral Markman Order at 9 (DHS Brief Ex. 8)  Crossroads' Chaparral Markman Brief at 25,	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 Construct	ection of Disputed Terms		
	t Hill's Proposed astruction	Dot Hill's Evidence	Special Master's Construction
first transport medium,	st Transport Medium: communications link.	where Crossroads argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)  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)	First Transport Medium: (see attached stipulations)

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		
				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."  Extrinsic: Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)			

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			
	Construction		Construction	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 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
36 of 209					April 23, 2004 claim term construction 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 Base State Later Control			是1000 (100) (1000 (1000 (100) (1000 (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (1000 (100) (100) (100) (1000 (100) (100) (100) (1000 (100) (100) (1000 (100) (100) (100) (100) (1000 (100)		
	The storage router of claim 2, wherein the devices connected to the first transport medium comprise workstations.	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, Crossroads says, Network World, Dec. 8, 1997, at 19 (demonstrating that there was	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.	Intrinsic: '035 Patent:	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

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
37 of 209			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.		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) "[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 one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines 64-66	
				<u> </u>	Col. 3, lines 30-40,	

	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	
38 of 209			Crossroads' Evidence	Dot Hill's Proposed Construction	describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality	Special Master's Construction	
					" Claim 7 (including term "storage router" in body		

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
39 of 209					of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)	
					Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively	

=			Special Master's Proposed Co	Instruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
					forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)	
40 of 209					Microsoft Computer Dictionary (5 <sup>th</sup> ed. 2002) definition of "router" as "an intermediary device on a communications network that expedites	
209					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)	
					Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)	

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	
41 of 209				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)  Crossroads' Markman 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)		

(E			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
42					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)	
42 01 209					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)	
	first transport medium comprise workstations.			First Transport Medium: A communications link.		First Transport Medium: (see attached stipulations)

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
43 of 209				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)  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	

		Special Master's Propose	d Construction of Disputed Ten	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				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."	
				Extrinsic: Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)  Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations" (DHS Post-Hearing Brief Ex. B)	

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	
45 of 209				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 transport medium" be defined as "a communication medium other than SCSI" (DHS		

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
The storage router of claim 2, wherein the storage devices comprise hard disk drives.	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	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.		Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

CONTROL OF THE PROPERTY OF THE		Special Master's Propose	d Construction of Disputed Ter	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				"[A]ny workstation can access any storage device"  Figures 3, 4 and 5,	
ì				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 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.	
				Col. 3, lines 41-43 "Storage router 44 routes requests from initiator	

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
48 of 209	Construction		Construction	devices on one medium to target devices on the other medium and routes data between the target and the initiator"  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"  Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey	
				Hoese in <u>Crossroads</u> Systems (Texas), Inc. v. Chaparral Network	

		Special Master's Proposed C	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
49 of 209				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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)	
				Microsoft Computer Dictionary (5 <sup>th</sup> ed. 2002)	

	CARLO CONTROL OF THE PROPERTY	Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
50 of 209	Construction			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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  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.	

1	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		
51 01 209					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)  Crossroads' Markman 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)  Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges may have all the			
					storage routers, such as bridges, may have all the characteristics listed in			

Company (Arte of Company) and the Second Artestand Company of the	1912 yan banda dake akeu saberra dakeun barak banda dake banda dake bandari. Badaria	Special Master's Proposed Co	enstruction of Disputed Terms	Aprilia in Champing participates of America (In Property States of America).	and the time and the second
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
52 of 209				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)	
Claim'5		LATER STATE			
The storage router of claim 1, wherein the first controller comprises: a first protocol unit operable to connect to the first transport medium; a first-in-first-out queue coupled to the first protocol unit;	Storage Router: [Defined by the plain language of the claim]	Intrinsic: Claim 1 of the '035 patent: col. 9, 11. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go,	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.	Storage Router: Intrinsic:  '035 Patent: Figure 2, depicting Storage Router 44 with workstations and disks, but no access controls	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

margin of a large among and the margine consentrates in a set a will distribute the	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			
and a direct memory access (DMA) interface coupled to the first-in-first-out queue and to the buffer.  53 0f 209		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.		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) "[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 one embodiment of a storage network with a storage router that provides virtual local storage"; Col. 3, lines				

	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			
54 of 209				Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality"				

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	
55 of 209				Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads'		

	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				
56 of 209				Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)  Microsoft Computer Dictionary (5 <sup>th</sup> 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)					
				Webopedia definition of "router" as "a device that					

	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		
57 of 209				forwards packets along networks" (DHS Brief Ex. 6)  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)  Crossroads' Markman 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			

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
58 of 209				network without involving a server.") (Crossroads' Brief)  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)	
				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.	

The state of the s	The state of the s		d Construction of Disputed Terms		estanting man dien eine Teath eine deutsche State eine Auftrag der eine eine eine eine eine eine eine ei
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				A)	To the Control of the
to the first transport medium; a first-in-first-out queue coupled to the first protocol unit; and a direct memory access (DMA) interface coupled to the first-in-first-out queue and the buffer.			First Transport Medium: A communications link.	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	First Transport Medium: (see attached stipulations)
				Intrinsic: '035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present	

and a state and the second support of the second support	te de la final de la companya de la	Special Master's Propose	d Construction of Disputed Ten	MS	andre volve 60 plumaroja, produktiva Napolikova je spolenosti.
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
60 of 209				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."  Extrinsic:  Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)  Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations"	

ari y languaga ya masani ari kata ari kata ari ari kata ari ari ari ari ari ari ari ari ari ar	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			
61 of 209				(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 transport medium" be defined as "a				

and Continues all and the property of the prop	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		
The storage router of claim  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.	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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	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.	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)  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	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.		

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	
63 of 209		Crossroads' Response.		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 one embodiment of 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 Proposed Construction of Disputed Terms					
	ster's Construction				
"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"  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"  Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads					

n kadang kadang kanandalah ang manang kadandalah dan kadan mengalah 1973	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		
65 of 209				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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)			

			d Construction of Disputed Terr	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
66 of 209				Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  U.S. Patent No. 6,718,402 assigned to Crossroads Co. 1 lines	
				Crossroads, Col. 1, lines 29-32 "A Fibre Channel- to-SCSI router thus	

- Marie Contract Cont	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		
67 of 209				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)  Crossroads' Markman 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)  Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as			

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
68 of 209				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)	
A storage network,	Storage Router:	Storage Router:	Storage Router:	Storage Router:	Storage Router:
comprising:	[Defined by the plain	Intrinsic:	A device which forwards data between an initiator device on	Intrinsic:	A data transmitting device that allows users to integrate different
a first transport medium;	language of the claim]	Claim 1 of the '035 patent:	one side of the router and a	'035 Patent:	servers or work stations into a
a second transport medium;		col. 9, 11. 13-31.	target storage device on the	1	storage network.
a plurality of workstations		Coi. 9, 11. 13-31.	other side of the router.	Storage Router 44 with	anneada marii oran
connected to the first transport		Extrinsic:	Santa Sitto of the roader,	workstations and disks,	
medium;				but no access controls	
a plurality of storage devices	1	Marc Songini, Storage	1	Diff no access controls	

	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		
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:		Routing is the Way to Go, 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.		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) "[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 one embodiment of a storage network with a storage router that provides virtual local			

		Special Master's Propose	d Construction of Disputed Ten	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Constructio
70 of 209				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.  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"  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"  Col. 4, lines 7-8 "According to the present invention, storage router 56 has enhanced functionality	

	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			
71 of 209				Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads Systems (Testas), 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)				

	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		
72 of 209				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)  Microsoft Computer Dictionary (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)  Webopedia definition of			

	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			
73 of 209				"router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  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)  Crossroads' Markman Brief at 12 and 14, stating that Crossroads' invention perform a routing function. ("[T]be Crossroads invention routes native low level block protocols to the correct remote storage				

	indicated and the state with a function of the control of the cont	Special Master's Propose	1 Construction of Disputed Ten	mis	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
74 of 209				device over a fiber network without involving a server.") (Crossroads' Brief)  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)  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.	

	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				
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:  75 06 209	Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."	Virtual Local Storage:  '035 patent: col. 2, ll. 29-31; col. 4, ll. 7-16; col. 4, ll. 44-47.  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.	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.	A) 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	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.				

	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				
76 of 209				associating virtual local storage with storage space.  Extrinsic: Webster's II New Riverside Dictionary (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)  Webster's II New Riverside Dictionary (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)					
				Crossroads' Markman Brief at 1, stating "The patents-in-suit concern inventions that allow	·				
				computers to access remote storage devices					

(1201) \$50 pt 100 pt 1000 (1002 1205 -0040) \$7.2 (120 pt 1000)	are was supply familiar party commenced from the supply consistency and the supply consists of pro-	Special Master's Proposed Co	nstruction of Disputed Terms		and a supply to the first of the supply of t
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
77 of 209				as if they were local (i.e. 'virtual local storage'), while at the same time providing access controls." (Crossroads' Brief)  Crossroads' Markman Brief, Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.) ("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)	
to map between the	Allow Access:	Allow Access:	Allow Access:	1	Allow Access:
workstations and the storage	"Permit or enable		Permit or enable		Permit or enable communication
devices;	communication in order to	Extrinsic:	communication in order to	Intrinsic:	to read or write data.

Almy in the second of the seco	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				
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.	read or write data."	Tr. 119:2-5.	read or write data.	'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					

	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				
79 of 209				controls for storage space on the SCSI storage devices; and to allow access from the workstations to the SCSI storage devices"  Extrinsic: Microsoft Computer Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)					
·				WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)					
				Crossroads' Post- Markman Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order					

e chique con un grando con ser a contrata de la contrata del contrata de la contrata de la contrata del contrata de la contrata del la contrata de la contrata del la contrata de la contr			d 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
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 storage router interfacing between the first transport medium and the second transport medium,	Construction		First Transport Medium: A communications link.	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, Flearing Transcript, page 188, line 21 to page 189, line 2)	First Transport Medium: (see attached stipulations)
				Intrinsic: '035 Patent:	

Actual Claims Language  Crossroads' Proposed Construction  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 Initiator to SCSI Target."  Col. 5, line 47 using the phrase "SCSI extransics."  Extransics.  Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)	Special Master's Proposed Construction of Disputed Terms							
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 Hoperature  Extrinsic: Web page printouts produced at Markman Hearing (DHS Hearing	Actual Claims Language		Crossroads' Evidence		Dot Hill's Evidence	Special Master's Construction		
Network World article	81 of 209				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."  Extrinsic:  Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)			

	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				
82 of 209				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)  Crossroads' abandoned					
				April 23, 2004 claim term construction					

nd or generalization (2004), the company of the control of the con	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			
83 of 209				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)				
The storage network of claims 7, wherein the access controls include an allocation of subsets of storage space for a associated workstations where in each subsets; only accessible by the associated			PNOTEME AT ISSUE (INC.) AND ADDRESS OF THE ADDRESS OF T					
workstation Claim 9 The storage network of claims 7. wherein the storage devices a compass hard disk drives. Claim:10 The storage network of claim 7, wherein the storage router	Defined by the plain	Storage Router:	(No ferms at issue in Claim 9)  Storage Router: A device which forwards data		Storage Router: A data transmitting device that			

	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					
comprises: a buffer providing memory work space for the storage router;  84 Of 209	language of the claim]	Intrinsic: Claim 1 of the '035 patent: col. 9, ll. 13-31.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	between an initiator device on one side of the router and a target storage device on the other side of the 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) "[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	allows users to integrate different servers or work stations into a storage network.					

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		
85 of 209				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  Col. 3, lines 30-40, describing a storage network that includes a storage router instead of a network server.  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"  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"			

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
86 of 209				Col. 4, lines 7-8  "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)	

	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			
87 of 200				Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)  Microsoft Computer Dictionary (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				

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		
88 Of 200				most efficient available router" (DHS Brief Ex. 5)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  U.S. Patent No. 6,718,402 assigned to Crossroads, Col. 1, lines 29-32 "A Fibre Channelto-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)  Crossroads' Markman Brief at 12 and 14, stating that Crossroads' invention perform a			

		Special Master's Propose	Construction of Disputed Ten	ns	international in 15 16 to 10 metables described and 10 metables and 10 metable
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				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)  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)	
				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	·

nder giber til i millig milliger, set i milledetill til megligder, demikriver gilden stade besædet de	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 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;	Data: "Any digital information excluding commands and requests used to access data in a storage unit."	Data:  Intrinsic: '035 patent: col. 4, l. 10; col. 4, ll. 48-50; col. 5, ll. 18-32; col. 7, ll. 24-32.  Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.	Data: Any digital information.	to Crossroads, is a data transmitting device that allows users to integrate different servers into a storage network." (DHS Post-Hearing Brief Ex. A)  Data:  Extrinsic:  Webster's Il New Riverside Dictionary (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)  Webopedia 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	Data: Any digital information excluding commands and requests to access digital information.				

and highly bridge for the control of	en film and the first of the second of the s	Special Master's Proposed Co	onstruction of Disputed Terms	a feli a feria de la comunidad	and the second s
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
and a supervisor unit coupled to the first controller, the second controller and the buffer, the supervisor unit coperable:	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.	Supervisor Unit: A microprocessor programmed to process data in a buffer in order to map between devices connected to the first transport medium and storage devices and which implements access controls.	Brief Ex. 6)  Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (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 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	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.

The same of the sa	er end kriegen von der er gewerkt gegeneren per en er de en en bie de en en bestelle de en en bestelle de en e		d Construction of Disputed Terr	ns	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				Channel and SCSI protocols have been replaced with more generic terms.	
60				Extrinsic: Chaparral Markman Order at 9 (DHS Brief Ex. 8)	
2 of 209				Crossroads' Chaparral Markman Brief at 25, where Crossroads argues that the patent specification explicitly	
				states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)	

the state of the s	A STATE OF THE PROPERTY OF THE	Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's 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	Data: "Any digital information excluding commands and requests used to access data in a storage unit."	Intrinsic: '035 patent: col. 4, 1. 10; col. 4, 1l. 48-50; col. 5, 1l. 18-32; col. 7, 1l. 24-32.  Extrinsic: Hodges Direct, Tr. 41:14-28; Tr. 202:25-203:8.	Data: Any digital information.	Data: Extrinsic:  Webster's II New Riverside Dictionary (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)  Webopedia 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)	Data: Any digital information excluding commands and requests to access digital information.

		Special Master's Propose	d Construction of Disputed Terms		en vertram et entra de la forma de la monocia de la major de la monda de la monda de la como de la mone de la m En la monda de la monocia d
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
and the second controller to allow access from workstations to storage devices.	Allow Access: "Permit or enable communication in order to read or write data."	Allow Access:  Extrinsic: Tr. 119:2-5.	Allow Access: Permit or enable communication in order to read or write data.	Allow Access:  Intrinsic: '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	Allow Access: Permit or enable communication to read or write data.

The state of the second se	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				
				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: Microsoft Computer Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)  WordNet Dictionary					
				definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)  Crossroads' Post-					
				Markman Brief at page 8: "Crossroads agrees that 'allow access'					

	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				
10. The storage network of			First Transport Medium:	should be construed as 'permit or enable communication in order to read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-Hearing Brief)  First Transport	First Transport Medium:				
claim 7, wherein the storage couter comprises:  a buffer providing memory work space for the storage couter;  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			A communications link.	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,	(see attached stipulations)				
further operable to pull outgoing data from the buffer and to place incoming data				Transcript, page 188, line 21 to page 189, line 2)					

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 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,				Intrinsic: '035 Patent: Col. 2, lines 39-41 "A fürther 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."  Extrinsic: Web page printouts produced at Markman Hearing (DHS Hearing	

and the state of the	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			
98 of 209				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)				

	i un approprieta de la	Special Master's Proposed Co	onstruction of Disputed Terms		a aft grantifellig bette bette besteur te frank fresten fill en met fresteur reten en kan be
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
Claim 14  A method for providing virtual local storage on remote storage devices connected to one transport medium to devices connected to another transport medium, comprising:	Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."	Virtual Local Storage:  Intrinsic: '035 patent: col. 2, ll. 29-31; col. 4, ll. 7-16; col. 4, ll. 44-47.  Extrinsic: Tr. 13:3-14; Tr. 18:5-12;	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.	Crossroads' abandoned April 23, 2004 claim term construction 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)  Virtual Local Storage: Intrinsic: '035 Patent: Abstract; Col. 1, lines 19-20; Col. 1, lines 19-20; Col. 2, lines 1-4; Col. 4, lines 51-54; and Claim 1 ("virtual local storage on remote SCSI storage devices")	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.

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	
		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.		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: Webster's II New Riverside Dictionary (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)		

			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
101 of 209					Webster's Il New Riverside Dictionary (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)  Crossroads' Markman 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)  Crossroads' Markman	
					Brief, <u>Crossroads</u> Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.)	

	in na natura na 1870, in the ann an Sailean an Thaile in the Charles of Sailean and Paris (All Paris Co	Special Master's Proposed Co	nstruction of Disputed Terms		men de haran-y-maggiorene yn ee gyn ardrollede sy ar 150 e 190 y
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
102 of 209				("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)	
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	Remote: "Indirectly connected through at least one serial network transport medium that encapsulates the native low-level block protocol."	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;	Remote: Indirectly connected and capable of physical separation.	Intrinsic: '035 Patent:	Remote: Indirectly connected through at least one serial network transport medium.

	and the second of the second second second second second	Special Master's Proposed Co	onstruction of Disputed Terms	a Alexandria (1995) (1995) (1996) - Arriva (1996) (1996) (1996) (1996) (1996) (1996) (1996) (1996)	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
storage devices; and allowing access from devices connected to the first transport medium to the storage devices using native low level, block protocols.	Construction	Rhyne Cross, Tr. 174:14-24; Tr. 180:5-14; Mr. Erwine's Notes, Shelton Decl. ISO Crossroads' Reply, Ex. 4.	Construction	describing storage capacity which is not local as "remote."  Col. 2, line 32 "significantly remote"  Extrinsic: Webopedia 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)  Webopedia 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	

Million Science Graphs Park Street and Street Street Street Street	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			
104 05 200				the network are remote." (DHS Brief Ex. 6)  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)				
				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				

			Special Master's Proposed Co	nstruction of Disputed Terms		
ſ	Actual Claims Language	Crossroads' Proposed	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
}		Construction		Construction		
			;		Brief Ex. 15)	
					Declaration of Rhyne,	
					paragraph 19, stating that	
					"[T]he meaning of remote' in general and	
{				·	in the specific context of	
					the Crossroads patents	ļ
					has nothing to do with	
3					the physical distance between a workstation	
05 of 209	•				and a storage device, but	
3					rather has to do with the	
20					topological nature of the interconnection between	
9					those devices." (DHS	
[					Responsive Brief Ex. 18)	
- {			!		Declaration of Rhyne,	
					paragraph 27, stating that	
-					"[T]he common meaning of 'remote' is the	
					opposite of 'local,' and	
					does not carry a distance	ļ
					characteristic." (DHS	
					Responsive Brief Ex. 18)	
					Declaration of Hodges in	
İ					Support of Crossroads'	·
l					Opening Markman Brief	

the part of the same of the sa		Special Master's Proposed C	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
106 of 209				(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."	
interfacing with a first			Allow Access:	(Hearing Transcript) Allow Access:	Allow Access:
transport medium;			Permit or enable communication in order to	'035 Patent:	Permit or enable communication or ead or write data.
interfacing with a second transport medium;			read or write data.	Col. 2, lines 9-15, distinguishing "access	

		Special Master's Proposed Co	nstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
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.				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	

Î			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
108 01 209		Construction		Construction	allow access from the workstations to the SCSI storage devices"  Extrinsic:  Microsoft Computer  Dictionary (5 <sup>th</sup> ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)  WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)  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-	

and the state of t	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				
i			Fig. 4 Transport	Hearing Brief)					
interfacing with a first transport medium; interfacing with a second transport medium; mapping between devices connected to the first fransport 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.			First Transport Medium: A communications link.	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)  Intrinsic: '035 Patent: Col. 2, lines 39-41 "A further technical advantage of the present invention is providing	First Transport Medium: (see attached stipulations)				

	entre de la companya	er berging sentad sales error sign erspektische Springer ein erste sester soneren ersterstigt erspektivet en bisch	Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
607 10 01.1					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."	
					Extrinsic: Web page printouts produced at Markman Hearing (DHS Hearing Exhibits Ex. 1-4)  Network World article (May 8, 1989) describing SCSI networks that interface multiple, dissimilar workstations"	

	ti. Amitaliusatinin titaa maaliinkumaa aa tita		d Construction of Disputed Ten		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
111 of 209				(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 transport medium" be defined as "a	

	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				
				communication medium other than SCSI" (DHS Post-Hearing Brief, Ex. E)  Stipulated Definition of Claim Terms, page 1, defining "First transport					
1 1 10 10 10 10 10 10 10 10 10 10 10 10				medium" as "A communications link." (Exhibit B of this matrix)					
The method of claims 1912.  The cinemapoing of tween services (connected to the first transport medium and the storage devices includes a	[Norelamae]maussue]sens		Abirs (Allamsport Medium careomium canons link)	y North Althoreth Gerossroads has supmared The going definition of s	irst Transport Medium; see attracticd supulations);				
allocating subsets offstorages space to associated devices connected to the first transpo- medium whetein each subset is only accessible by the range associated device connected.				Doth sunthish por					
to the tive transport me dium is the state of the state				inean any seommunications link but rather than the 1935 patent claims must be seonstrued so as not to include transport media that both follow the SCST					

	and a substitute of the supplication of the substitute of the subs	Special Master's Proposed Co	onstruction of Disputed Terms	(1)	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				protocol (Secul caring) Transcript page 188, 127,	
				thine 2 stoppage 1991 inc.	
				(Intrinsic)	
				GOTS 24 lines 39 449 7 A 62 Ch futberte characters (1974)	
30				ladyantageiotillespiesent anyenioaasprovigings supnom for sigstestorage	
7208				devices as local storage was for the control of the	
				Golf 6 times 3/12/8 that is a showing that the times 1/12/8 that the times 1/1	
				stransport medium/canthers	
				ssecondimodelofs = 4,2 4,2 4,4 4,5 4,4 4,5 4,4 4,5 4,4 4,5 4,5 4,5	
				dumatorioù geranger a sa andiherdino bode on Toperarionas ESESTE	
				imenorio Sesi Lager	
				Coll stline 42 using the tribunes SCSI petworks."	

report, margination, parts littled against specific 3. Secretary of providing		Special Master's Proposed Co	onstruction of Disputed Terms		and the second position are her at the country of the party and the second seco
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				Exminsic Hall John Medical Produced at Vancara Language Hall Rearing Control of the Control of t	
	Figure 1994 A. Commission of the Commission of t			Tadinus Exc 140 Tagina de la light (May 8 1989) describilion SOST networks mar 23 et 2	
				iaerocemulipie Alssunyaeworksations OHSBost II caung Briete Evala)	
				Network Worldiarnoles (March 14, 1993) e. s.	
				inposition existence of a special section of the se	
				Letter from Steve 138 189 189 189 189 189 189 189 189 189 18	
				Erostroads believes that the 1035 Patent clams cover : access controls	

The state of the s	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	
				beiwaendevices without		
				Discribitation of		
				Giossipads galandoned 2.4 c. April 238 2004 olaim 5.7 c.		
				Memore in the second se		
				dhansporumednini desa. Dennedas, asis		
				communication medium.		
				Roce Heaving Blue 1 Excelled		
				Supulated Denin London		
				Claimsleims page lett. deiming Lust dansport		
				mediumicas a la l		
Claim 13.				(Exhirmorthismany); Ex		
Themethod of claim 12s; = 2	[Noclain] termini ssuel (3)	FIX.	Hirstyl ransport Medium as Accommunications link	Grinst Transportis (* 1817) Medjum (* 1827)		
wherein the devices (2) connected to the forst transpor				NOTE: Although sizes: Crossidads has supulated		
medulm comprise \$25 workstations;				forthe foint definition of both (first transport)		
				medium" and "second		

	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	
				uansportmedium: astla gomnumeation link 2/51		
				Chosmoniscommes to a same argue that this does not be a same argue that this does not be a same argue to be		
				communications wak dividance that the tops of paternoalaims mulistible.		
				constructisoasmot och sir intilide vansportmedia		
				charbonetolowiners (SEE) Photocolk (See Hearing 1997) Utenscript page (1882)		
				inic Inopac. 189; Inc. 120; Inc. 120		
				Untrinsic V03s Patents		
				Golfgomes 9 411 A former technical 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
The second secon				unvennon isprovidinger   support for SCSI storage; udevices as ibeal storage;		
				for Biber Channel hosts		
				960 6 Ilmes 27 23 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		
				SCSI by describing the		

here's course the second of th	enementer et erret e nete de som e nete perspektinget eller vol en most som delektive klos	Special Master's Proposed Co	enstruction of Disputed Terms	antigas (Samuel Level Laure, San Trades) and an 1960 of 1971 of 1980 of	<ul> <li>Amortino, and the Control of the Contr</li></ul>
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				second mode on a same	
				Thatator to FG Throng 22 and the third modern 5.7	
				repenation as USCST 1924 12 12 12 12 12 12 12 12 12 12 12 12 12	
				Colso line 47 hand the	
				minsel signification in the second se	
				Expension	
				AWE Spage point outs start in produced at Martman	
				Heathe (Dissueating) Exhibits 152,112)	
				Network World arrule:	
				May 8, 989) desortong Sest networks that year menace multiple	
				adssimuarsworks attors: (DES Post-Hearing differ	
			Total Cincillation	Example 1	
				Nerwork World amidle (March 14:1995)	
				describing extender a products that depend	
	50000000000000000000000000000000000000			upon the existence of	<b>。 1985年 - 1985年 - 1985年 - 1985年</b>

Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				Sestmetworks, (DHS)	
				Letter from Siteve:	
				Mambeit dated October 1 129 2002 showing that	
				Crossroad abelieves that the most property of the m	
	A Studio May			between devices without a	
				(DHSBostHearing)	
				(Crossoads) abandoned	
				wilsomilia 2004 (James) 2 sierm obstruction 3 proposine dan Tiere	
				transport medium (be as ) defined as (a)	
				communication medium	
				# Wost Hearing Brief Ex	
				Supulated Definition of	
				Claim Terms, page 1 defining "First fransport	

terrological and the state of t	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			
				n leating of the least of the l				
Claim M. C. M.	Piociam tematissiel			(deal) disploministicative)				
whereminestorage devices comprise hand disk-drives	pygotam (emarissie) sees		ONOTOMISATISSUESIN Glaimes.					
	19 25 3 11 2 11 2 11 2 1 1 1 1 1 1 1 1 1 1 1							

And the state of the second se	and the second of the second s	Special Master's Proposed Co	onstruction of Disputed Terms		147   1
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
		United States Pat	nt No. 5,941,972		
A storage router for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising:	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '972 patent at col. 9, 1l. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	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	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	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

	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		
121 of 209				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  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 1-2 "According			

The second size of the second si	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		
122 of 209				to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads' Internet Website defining a			

	and the state of t	Special Master's Propose	d Construction of Disputed Ten	MS	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
123 of 209				router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)  Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  U.S. Patent No. 6,718,402	

and the state of t	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		
124 of 209				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)  Crossroads' Markman 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)			
				Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as			
				bridges, may have all the			

to the training of the constitute of the constitute of the constitution of the constit		Special Master's Proposed Co	nstruction of Disputed Terms		(1) (1) (1) (1) (2) (2) (3) (3) (3) (3) (3) (3) (3) (3) (3) (3
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
125 of 209				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)	
A storage router for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising:	Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."	Virtual Local Storage:  Intrinsic: '972 patent: col. 2, Il. 20-22; col. 4, Il. 1-10; col. 4, Il. 37-41.  Extrinsic: Tr. 13:3-14; Tr. 18:5-12;	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.  NOTE: This is the definition of virtual local storage, but	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")	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.

The state of the s	and the state of t	Special Master S I Toposed C	onstruction of Disputed Terms	CONTROL TO THE PROPERTY OF THE	principal company of the company of
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
		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.	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.	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.  Extrinsic:  Webster's II New Riverside  Dictionary (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)  Webster's II New Riverside  Dictionary (1984) definition of "storage" as "a space for storing goods" or "the part of	

	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		
127 of 209				a computer that stores information for subsequent use or retrieval" (DHS Brief, Ex. 9)  Crossroads' Markman Brief at 1, stating "The patents-insuit 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)  Crossroads' Markman Brief, Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.)  ("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			

	Grand and deposit the first state of the sta	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				
128 of 209				network.)" (DHS Brief Ex. 10)  Crossroads' Chaparral 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)  Crossroads' Chaparral 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)  Markman Hearing testimony of Hodges at 83:3-8,					

	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 irtual local storage on temote SCSI storage devices of Fibre Channel devices, comprising:	Remote: "Indirectly connected through at least one serial network transport medium that encapsulates the native low-level block protocol."	Remote:  Intrinsic: '972 patent: col. 1, 1l. 12-25; col. 1, 1. 58 - col. 2, 1. 24; col. 5, 1l. 38-48; col. 6, 1l. 12-24; col. 9, 1l. 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.	Remote: Indirectly connected and capable of physical separation.  NOTE: This is the definition of remote, 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.	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)  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"	Remote: Indirectly connected through at least one serial network transport medium.			

Selection of the second second selection of the second second	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			
130 of 200				Extrinsic:  Webopedia 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)  Webopedia 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)  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				

	One in the second secon	Special Master's Propose	d Construction of Disputed Ten		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
131 of 209				connected as local storage would be, but to be connected remotely, as in across a network or other means."  (DHS Brief Ex. 14)  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)  Declaration of Rhyne, 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)	

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	
132 of 209				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)  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)  Markman hearing testimony of Rhyne at 15:3-15, showing		

		Special Master's Proposed Co	Instruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
	·			that a definition of "remote" could be simply "indirectly connected." (Hearing Transcript)	
a buffer providing memory work space for the storage router; a Fibre Channel controller operable to connect to and Interface with a Fibre Channel Gransport medium;	Storage Router: [Defined by the plain language of the claim]	Intrinsic: Claim 1 of the '972 patent at col. 9, 11. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	Storage Router: The storage router mentioned earlier in this claim.	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: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

	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			
134 of 209				Storage Router 44 depicted in Figure 2  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  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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"  Col 3, lines 48-50 " storage router 44 which routes requests and data as a generic transport between Fiber Channel 32 and SCSl bus 34"				

	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		
135 of 209				Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads'			

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		
136 of 209				Internet Website defining a router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)  Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)			

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	
137 of 209				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)  Crossroads' Markman 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)  Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as		

The production of the second state of the seco	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			
138 of 209				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)				
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	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, 1. 63 – col. 6, 1. 3; col. 9; ll. 18-27.  Extrinsic: Hodges Direct, Tr. 36:3-37:9.	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.	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	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			

	PARCELLES OF DESCRIPTION OF STREET	Special Master's Propose	d Construction of Disputed Terr	ns	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Constructio
between Fibre Channel devices and SCSI storage devices and that implements access controls for storage space on the SCSI storage devices;				workstations.  Extrinsic: Chaparral Markman Order at 9 (DHS Brief Ex. 8)  Crossroads' Chaparral Markman Brief at 25, where Crossroads 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:  Extrinsic:  Webster's II New Riverside  Dictionary (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)  Webopedia 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	Data: Any digital information excluding commands and requests to access digital information.

	and the supplier of the suppli	Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
interface between the Fibre	Allow Access:	Allow Access:	Allow Access:	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)  Allow Access:	Allow Access:
Channel controller and the Controller to allow Access from Fibre Channel Stitator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration.	"Permit or enable communication in order to read or write data."	Extrinsic: Tr. 119:2-5.	Permit or enable communication in order to read or write data.	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 SCS1 storage devices; and to allow access from Fibre Channel initiator devices to SCSI storage devices"  Claim 7, reciting the term	Permit or enable communication to read or write data.

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 Constructio			
				"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:  Microsoft Computer  Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)  WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)  Crossroads' Post-Markman  Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable communication in order to				

		Special Master's Proposed Co	onstruction of Disputed Terms	Particular and Selection to do not select the Selection of the Selection o	
9 9	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				read or write data,' (Tr, 119:2-25.)" (Crossroads' Post-Hearing Brief)	·
The storage router of claim	Storage Router:	Storage Router:	Storage Router:	Storage Router:	Storage Router:
1, wherein the configuration	[Defined by the plain language of the claim]	Intrinsic: Claim 1 of the '972 patent at col. 9, 1l. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	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.	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	A data transmitting device that allows users to integrate different servers or work stations into a storage network.

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			
143 of 209				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  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 1-2 "According				

State of the state	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			
144 of 209				to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads' Internet Website defining a				

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		
145 of 209				router as "[a] device which selectively forwards data between networks based on administratively defined preferences" (DHS Brief Ex. 4)  Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)			
				U.S. Patent No. 6,718,402			

Samuel Branch and Arthur Strain and Arthur Arthur Strain and Arthur Strain and Arthur Strain and Arthur		Special Master's Proposed	Construction of Disputed Terr		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
146 of 209				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)  Crossroads' Markman 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)  Markman Hearing testimony of Hodges at 77:7-14, showing that devices other than storage routers, such as bridges, may have all the	

Participants of the state of th	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				
147 of 209				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)					
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: 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.	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 require to implement a stand alone processing system and programmed to process data in a buffer in order to map between FC devices and				

The state of the s	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			
The storage router of claim 2, wherein the Fibre Channel devices comprise workstations.	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '972 patent at col. 9, 11. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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	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.	Extrinsic: Chaparral Markman Order at 9 (DHS Brief Ex. 8)  Crossroads' Chaparral Markman Brief at 25, where Crossroads argues that the patent specification explicitly states that the supervisor unit comprises a microprocessor. (DHS Brief Ex. 10)  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	SCSI devices and which implements access controls.  Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.			

$\sim$
F +6 1

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			
149 of 209		Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.		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 Figure 2  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  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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				

		Special Master's Proposed	l Construction of Disputed Terr	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
150 of 209				data between the target and the initiator"  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"  Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)	

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		
151 of 209				Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)  Microsoft Computer Dictionary (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			

	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		
152				available router" (DHS Brief Ex. 5)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  U.S. Patent No. 6,718,402			
2 of 209				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)			
				Crossroads' Markman 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			

			Special Master's Proposed Co	nstruction of Disputed Terms		
ļ	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
153 of 209	Claim 4			Construction	remote storage device over a fiber network without involving a server.") (Crossroads' Brief)  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)  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)	
	The storage router of claim	Storage Router:	Storage Router:	Storage Router:	Storage Router:	Storage Router:

	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		
2, wherein the SCSI storage devices comprise hard disk drives.  154 of 209	[Defined by the plain language of the claim]	Intrinsic: Claim 1 of the '972 patent at col. 9, ll. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	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	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 Figure 2  Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage	A data transmitting device that allows users to integrate different servers or work stations into a storage network.		

and the second of the second line. The characters is seen to be seen		Special Master's Proposed	Construction of Disputed Terr	MS	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
155 Of 200				network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"	

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		
156 of 209	Construction		Construction	"storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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.			

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			
157 Of 200				Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)				
				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				

		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
				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)	
158 of 209				Crossroads' Markman 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)	
				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)	
				Network World article	

7	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
159 of 2					(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)	
w	Claim Sand Land Land Land	1376.項面關係其第十四分。從	<b>建筑建设工程,1997年1998年</b>	<b>2016)至了自由的</b> 第一位,但是	<b>建筑的 中型 海洋产品的产业</b>	<b>《图》在《四次》。</b>
	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.	Storage Router: [Defined by the plain language of the claim]	Storage Router:  Intrinsic: Claim 1 of the '972 patent at col. 9, 1l. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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	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.	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	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

	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			
160 of 209		Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.		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 Figure 2  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  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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				

f			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
161 01 209					data between the target and the initiator"  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"  Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)	

The contract of the contract o	errorindes (grane has all leading of species of Military and Section 1867).	Special Master's Proposed	Construction of Disputed Terr	ms	
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
162 of 200	Construction			Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)  Microsoft Computer Dictionary (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	

-	

NATIONAL WARRANT CONTRACTOR	The second secon	Commencement of the Comment of the C		。 《中国大学····································	Company of the second s
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				available router" (DHS Brief Ex. 5)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)	:
				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)	
				Crossroads' Markman 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	

			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
					remote storage device over a fiber network without involving a server.") (Crossroads' Brief)  Markman Hearing testimony	
10401203					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)	
03	3				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-	
			November 18 July Project May 18 November 18 July 18 Ju		Hearing Brief Ex. A)	TENNETHER STEEL TO A SOURCE
	Claim 6 (1) (1) The storage router of claim	Storage Router:	Storage Router:	Storage Router:	Storage Router:	Storage Router:

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads'. Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
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.	[Defined by the plain language of the claim]	Intrinsic: Claim 1 of the '972 patent at col. 9, 1l. 5-27.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	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.	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 Figure 2  Col 2, lines 50-52 "FIG. 3 is a block diagram of one embodiment of a storage	A data transmitting device that allows users to integrate different servers or work stations into a storage network.

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		
166 of 209				network with a storage router that provides virtual local storage"; also Col. 3, lines 58-60  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term			

Special Master's Proposed Construction of Disputed Terms						
ossroads' Proposed	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction		
			"storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data between networks based on			
		ossroads' Proposed Crossroads' Evidence	ossroads' Proposed Crossroads' Evidence Dot Hill's Proposed	Dot Hill's Proposed nstruction  Crossroads' Evidence  Dot Hill's Proposed Construction  Crossroads' Evidence  Storage router" in body of claim, not just in preamble)  Extrinsic:  Testimony of Geoffrey Hoese in Crossroads 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)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  Glossary on Crossroads' Internet Website defining a router as "[a] device which selectively forwards data		

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	
				Microsoft Computer Dictionary (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)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)		
				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		

(M)	4.)
100	

Liver of the control	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	
				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)		
				Crossroads' Markman 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)		
				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)		
				Network World article		

The state of the s		Special Master's Proposed Co	onstruction of Disputed Terms		and programmed last of the company o
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
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 and the SCSI bus transport medium, the storage router providing	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.  Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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	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.	(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)  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	Storage Router: A data transmitting device that allows users to integrate different servers or work stations into a storage network.

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
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;  171 of 209		Crossroads' Reply, Ex. 5; ¶¶ 9-10 of Hodges Decl. ISO Crossroads' Response.		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 Figure 2  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  Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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	

and designed to the state of th		Special Master's Proposed Co	nstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
172 of 209				data between the target and the initiator"  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"  Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)  Extrinsic: Testimony of Geoffrey Hoese in Crossroads 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)	

	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		
173 of 209				Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)  Microsoft Computer Dictionary (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			

N.	
orac l	
100	
********	

	and the state of t		Special Master's Proposed Co	nstruction of Disputed Terms	1941   1941   1941   1941   1941   1941   1941   1941   1941   1941   1941   1941   1941   1941   1941   1941	
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
1/4 01 208					available router" (DHS Brief Ex. 5)  Webopedia definition of "router" as "a device that forwards packets along networks" (DHS Brief Ex. 6)  U.S. Patent No. 6,718,402 assigned to Crossroads, Col.	
607 I					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)	
					Crossroads' Markman 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	

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
175 of 209				remote storage device over a fiber network without involving a server.") (Crossroads' Brief)  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)	
				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)	
the storage router providing virtual local storage on the	Virtual Local Storage: "A specific subset of storage	Virtual Local Storage:	Virtual Local Storage: Storage space, in a device that	Virtual Local Storage: Intrinsic:	Virtual Local Storage: Storage space, in a device that

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
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."	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.	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.	'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.  Extrinsic: Webster's II New Riverside Dictionary (1984) definition of "virtual" as "[e]xisting or	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.

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
177 of 209				resulting in effect through not in actual fact" (DHS Brief, Ex. 9)  Webster's II New Riverside Dictionary (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)  Crossroads' Markman Brief at 1, stating "The patents-insuit 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)  Crossroads' Markman Brief, Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.) ("Crossroads' Chaparral Markman Brief", concerning	

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
178 of 209				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)  Crossroads' Chaparral 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)  Crossroads' Chaparral 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,	

. 18. paradiminings (april 1964 and april 2 many and april 2004 per april 2 million	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	
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.	Allow Access: "Permit or enable communication in order to read or write data."	Allow Access:  Extrinsic: Tr. 119:2-5.	Allow Access: Permit or enable communication in order to read or write data.	has the appearance and characteristics of locally stored data." (DHS Brief Ex. 10)  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)  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	Allow Access: Permit or enable communication to read or write data.	

	mentanta armenilari (matama (managala deningan managan)	Special Master's Propose	d Construction of Disputed Terr		AT PROPERTY OF PROPERTY OF THE
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				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:  Microsoft Computer  Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)  WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)	

Constructions and our designation and the charge product of the construction of the co	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		
181	·			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)			
Plann 8 The storage perwork of claims of subsets of storage space to land subsets of storage space subsets of	Noclaim termaters such such such such such such such suc		(Notems as sue in Clam 8)				
Claim 10  The storage network of claim 7, wherein the storage router 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, 11. 5-27.	Storage Router: A device which forwards data between an initiator device on one side of the router and a target storage device on the	Storage Router: Intrinsic: '972 Patent: 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		

	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				
182 of 209		Extrinsic: Marc Songini, Storage Routing is the Way to Go, 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.	other side of the router.	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 Figure 2  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	network.				

Annual of the transfer of the second of the	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			
183 of 209				Col. 3, lines 24-34, describing a storage network that includes a storage router instead of a network server.  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"  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"  Col. 4, lines 1-2 "According to the present invention, storage router 56 has enhanced functionality"  Claim 7 (including term "storage router" in body of claim, not just in preamble)				
	1			Extrinsic:				

Actual Claims Language Crossroads' Proposed Construction Construction Construction  Testimony of Geoffrey Hoese in Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.) (concerning the '972 Patent)	Special Master's Construction
in Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA 217SS (W.D. Tex.)	
starting at page 81, line 3, stating "Figure 2 is not my invention." (Exhibit A of this matrix)  Markman Hearing testimony of Hodges at 75:4-17 (Hearing Transcript)  Joshua Eddings, How the Internet Works (1994), pp. 21, 23, 29 (DHS Brief Ex. 3)  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)  Microsoft Computer Dictionary (5th ed. 2002)	

		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
185 of 209				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)  Webopedia definition of "router" as "a device that forwards packets along	
				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	

			Special Master's Proposed Co	nstruction of Disputed Terms		
	Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
					command and forwards it to the target." (DHS Brief Ex. 7) Crossroads' Markman Brief	
186 of 209					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)	
					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)	
					Network World article (December 8, 1997) describing the Crossroads' 4100 product as a "storage router" without mentioning	

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			
	·			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)				
pa 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:	Data: "Any digital information excluding commands and requests used to access data in a storage unit."	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.	Data: Any digital information.	Data: Extrinsic: Webster's II New Riverside Dictionary (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)  Webopedia 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)	Data: Any digital information excluding commands and requests to access digital information.			

Annual prints of the second of		Special Master's Proposed Co	onstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
for the SCSI storage devices that maps between Fibre Channel devices and SCSI storage devices and SCSI storage devices and that implements the access controls for storage space on the SCSI storage devices; a SCSI controller operable to connect to and interface with SCSI bus transport medium, the SCSI controller further sperable to pull outgoing data from the buffer and to place shooming 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 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;	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: 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.	Markman Hearing testimony of Hodges at 79:15-22 and 80:4-5 (Hearing Transcript)  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: Chaparral Markman Order at 9 (DHS Brief Ex. 8)  Crossroads' Chaparral Markman Brief at 25, where Crossroads argues that the patent specification explicitly	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.

	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			
	·			comprises a microprocessor. (DHS Brief Ex. 10)				
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.	Data: "Any digital information excluding commands and requests used to access data in a storage unit."	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.	Data: Any digital information.	Data: Extrinsic: Webster's II New Riverside Dictionary (1984) definition of "datum" (the singular form of "data") as "[o]ne piece of information." (DHS Brief Ex. 9)  Webopedia 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)	Data: Any digital information excluding commands and requests to access digital information.			
and to process data in the	Allow Access:	Allow Access:	Allow Access:	Allow Access:	Allow Access:			
buffer to interface between	"Permit or enable		Permit or enable	Intrinsic:	Permit or enable communication to read or			
the Fibre Channel controller	communication in order to	Extrinsic:	communication in order to	'972 Patent:	communication to read or			

		Special Master's Proposed Co	enstruction of Disputed Terms		
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
and the SCSI controller to allow access from workstations to SCSI storage devices in accordance with the configuration.	read or write data."	Tr. 119:2-5.	read or write data.	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:  Microsoft Computer	

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			
				Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)				
191 0				WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)				
f 209				Crossroads' Post-Markman Brief at page 8: "Crossroads agrees that 'allow access' should be construed as 'permit or enable				
Claim 1	·			communication in order to read or write data.' (Tr. 119:2-25.)" (Crossroads' Post-Hearing Brief)				

		Special Master's Proposed Co	onstruction 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 method for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising: 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.	Virtual Local Storage: "A specific subset of storage space in a remote storage device that has the appearance and characteristics of local storage."	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.	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.	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.  Extrinsic: Webster's Il New Riverside	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.

	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		
. 193 of 209				Dictionary (1984) definition of "virtual" as "[e]xisting or resulting in effect through not in actual fact" (DHS Brief, Ex. 9)  Webster's II New Riverside Dictionary (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)			
·			,	Crossroads' Markman Brief at 1, stating "The patents-insuit 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)  Crossroads' Markman Brief, Crossroads Systems (Texas), Inc. v. Chaparral Network Storage Inc., No. A00 CA			

With the second History and the second secon	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		
194 of 209				("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)  Crossroads' Chaparral 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)  Crossroads' Chaparral Markman Brief at 19, where Crossroads states that "[1]he term 'virtual local storage' refers to the remote storage of			

	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
607 10 GGL					data that, from the perspective of the computer, has the appearance and characteristics of locally stored data." (DHS Brief Ex. 10)  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	
	A method for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising: 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	Remote: "Indirectly connected through at least one serial network transport medium that encapsulates the native low- level block protocol."	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;	Remote: Indirectly connected and capable of physical separation.	jury. (Hearing Transcript)  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."	Remote: Indirectly connected through at least one serial network transport medium.

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 Constructio		
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.		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.		Col. 1, lines 53-57, describing storage capacity which is not local as "remote."  Col. 2, line 23 "significantly remote"  Extrinsic:  Webopedia 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)  Webopedia 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			

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
197 of 209				remote." (DHS Brief Ex. 6)  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)  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)  Declaration of Rhyne, paragraph 19, stating that "[T]he meaning of 'remote' in general and in the specific	

THE RESIDENCE OF SHAPE OF SHAP		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
198 of 209				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)  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)	
				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	

	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		
199 of 209				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)			
allowing access from Fibre Channel initiator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration.			Allow Access: Permit or enable communication in order to read or write data.	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	Allow Access: Permit or enable communication to read or write data.		

The state of the s		Special Master's Proposed Co	nstruction of Disputed Terms		
	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
200 of 209			CONSTRUCTION	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: Microsoft Computer Dictionary (5th ed. 2002) definition of "access" as "the act of reading data from or writing data to memory" (DHS Brief Ex. 5)  WordNet Dictionary definition of "access" as "the operation of reading or writing stored information" (DHS Brief Ex. 13)  Crossroads' Post-Markman	

The same of the state of the st		Special Master's Proposed Co	nstruction of Disputed Terms		MEDICAL TOTAL STREET, PROPERTY OF THE PROPERTY
Actual Claims Language	Crossroads' Proposed Construction	Crossroads' Evidence	Dot Hill's Proposed Construction	Dot Hill's Evidence	Special Master's Construction
				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)	
Avberein namfaming the configuration includes allocating subsets of islorage space to associated Fibre. Channel when is solid accessible, by the associated Tabre. Channel when is solid accessible, by the associated Tabre. Channel when is solid accessible.			(No tomis at issue in Claimer (1)		
Claim 3  Champa of Claim 12  Champa of Claim 12  Champa of Claim 12  Champa of Claim 12  Wherein the SCSI storage devices comprise hard disk drives	INo claim term at issue a		Noterins registress Claim (18)		

FILED

CROSSROADS SYSTEMS (TEXAS), INC., a

Texas Corporation,

Plaintiff and Counterclaim Defendant,

v.

DOT HILL SYSTEMS CORPORATION, a
Delaware Corporation,

Defendant and Counterclaim Plaintiff

)

Case No. A-03-CV-754-3S
)

Case No. A-03-CV-754-3S
)

Dot HILL SYSTEMS CORPORATION, a
)
Defendant and Counterclaim Plaintiff
)

## STIPULATED DEFINITIONS OF CLAIM TERMS

Plaintiff Crossroads Systems (Texas), Inc. and Defendant Dot Hill Systems Corporation, hereby stipulate to the following definitions of claim terms of U.S. Patent Nos. 5,941,972 ("the '972 Patent") and 6,425,035 ("the '035 Patent"):

Claim Term	Where Used	'972 Parent Stipulated Definition	'035 Patent Stipulated Definition
Buffer	1, 5, 6, 10	A memory device that is utilized to temporarily hold data.	Same as '972.
Devices	1, 2, 3, 10-	Any type of electronic device including, but not limited to, workstations.	Same as '972.
Direct memory access (DMA) interface	5, 6	A device that acts under little or no microprocessor control to access memory for data transfer.	Same as '972.
First transport medium	1-3, 5, 7, 10-13	n/a	A communications link.

 $<sup>^{\</sup>dagger}$  3<sup>rd</sup> Party Defendant FalconStor Software, Inc. has settled this action with Plaintiff, is to be dismissed from this action shortly, and is, therefore, not a party to this Stipulation.

Stipulated Definitions of Claim Terms

131

Claim Term	Where Used	'972 Patent Stipulated Definition	'035 Patent Stipulated Definition
Second transport medium	1, 6, 7, 10,	n/a	A communications link.
Workstation	3, 7, 8, 10, 13	A computing device that connects to the Fibre Channel, and may consist of a personal computer.	A computing device that connects to the first transport medium, and may consist of a personal computer.
Implement access controls for storage space on the SCSI storage devices.  Implement access controls for storage space on the storage devices.	1,7,10,	Provide controls which limit a computer's access to a specific subset of storage devices or sections of a single storage devices.	Same as '972.
Allocation of subsets of storage space to associated Fibre Channel devices, wherein each subset is only accessible by the associated Fibre Channel device	2, 12	Subsets of storage space are allocated to specific Fibre Channel devices.	n/a
Allocation of 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	2, 12	n/a	Subsets of storage space are allocated to specific devices connected to the first transport medium.
Allocation of subsets of storage space to associated workstations, wherein each subset is only accessible by the associated workstation	8	Subsets of storage space are allocated to specific workstations.	Same as '972.
Storage Devices	1, 4, 7, 9- 12, 14	n/a	Any storage device, including, for example, a tape drive, CD-ROM drive, an optical drive or a hard disk drive.

Claim Term	Where	'972 Patent Stipulated	'035 Patent Stipulated
	Used	Definition	Definition
Map and Mapping	1, 7, 10.	To create a path from a device on one side of the storage router to a device on the other side of the router, i.e. from a Fibre Channel device to a SCSI device (or vice-versa). A "map" contains a representation of devices on each side of the storage router, so that when a device on one side of the storage router wants to communicate with a device on the other side of the storage router, the storage router can connect the devices.	To create a path from a device on one side of the storage router to a device on the other side of the router. A "map" contains a representation of devices on each side of the storage router, so that when a device on one side of the storage router wants to communicate with a device on the other side of the storage router, the storage router can connect the devices.
First controller	1, 5, 10	n/a	A device that interfaces with the first transport medium.
Second controller	1, 6, 10	n/a	A device that interfaces with the second transport medium.
First protocol unit	5	n/a	A portion of the first controller that connects with the first transport medium.
Second protocol unit	6	n/a	A portion of the second controller that connects with the second transport medium.
First-in-first-out queue	S	A multi-element data structure from which elements can be removed only in the same order in which they were inserted; that is, it follows a first in, first out (FIFO) constraint.	Same as '972.
Hard disk drive	4, 9, 14	A well known magnetic storage media, and includes a SCSI hard disk drive.	A well-known magnetic storage media.
Initiator device	1,11	A device that issues requests for data or storage.	n/a .

Claim Term	Where	'972 Patent Stipulated	'035 Patent Stipulated
<u> </u>	Used	Definition	Definition
Maintaining a configuration	1, 2, 10,	Keep(ing) a modifiable setting of information.	n/a .
Fibre Channel	1, 2, 3, 5, 7, 10, 11, 12, 13	A known high-speed serial interconnect, the structure and operation of which is described, for example, in Fibre Channel Physical and Signal Interface (FC-PH), ANSI X3.230 Fibre Channel Arbitrated Loop (FC-AL), and ANSI X3.272 Fibre Channel Private Loop Direct Attach (FC-PLDA).	n/a .
Fibre Channel protocol	5	A set of rules that apply to Fibre Channel.	n/a
Fibre Channel device	1, 2, 3, 10, 11, 12, 13	Any device, such as a computer, that understands Fibre Channel protocol and can communicate using Fibre Channel protocols.	n∕a
Fibre Channel controller	1, 3, 10	A device that interfaces with a Fibre Channel transport medium.	n/a
Fibre Channel transport medium	1, 5, 7, 10,	A serial optical or electrical communications link that connects devices using the Fibre Channel protocol.	n/a .

4	
6: 1.15.6:	40): -

Claim Term	Where	'972 Patent Stipulated	'035 Patent Stipulated
	Used	Definition	Definition
Fibre Channel protocol unit	5	A portion of the Fibre Channel controller which connects to the Fibre Channel transport medium.	n/a
SCSI	1, 4, 6, 7, 9, 10, 11, 14	A high speed parallel interface that may be used to connect components of a computer system.	n/a
SCSI storage device	1, 4, 7, 9, 10, 11, 14	Any storage device including, for example, a tape drive, CD-ROM drive, or hard disk drive that understands the SCSI protocol and can communicate using the SCSI protocol.	n∕a
SCSI controller	1, 6, 10	A device that interfaces with the SCSI bus transport medium.	n/a
SCSI bus transport medium	1, 6, 7, 10, 11	A cable consisting of a group of parallel wires (normally 68) that forms a communications path between a SCSI storage device and another device, such as a computer.	n/a

5	
Stipulated Definitions of Claim Terms	
Superade Octobrolis to Com Totals	

Claim Term	Where Used	'972 Patent Stipulated Definition	'035 Patent Stipulated Definition
SCSI protocol unit	6	A portion of the SCSI controller which interfaces to the SCSI bus.	n/a
Native low level block protocol	1 - 14	A set of rules or standards that enable computers to exchange information and do not involve the overhead of high level protocols and file systems typically required by network servers.	Same as '972.

Respectfully Submitted,

Dated: August ½, 2004

Ву:

Alan D. Albright (Bar No. 973650)
Tracy McCreight (Bar No. 24037064
Gray Cary Ware & Freidenrich, L.L.P. 1221 South MoPac Expressway, Suite 400

Austin, Texas 78746-6875 (512) 457-7000

Dated: August 30, 2004

By:

John F. Sweeney (Pro Hac Vice)
William S. Feiler (Pro Hac Vice)
MORGAN & FINNEGAN, L.L.P.
345 Park Avenue
New York, New York 10154

(212) 758-4800

Natu J. Patel (Pro Hac Vice) THE PATEL LAW FIRM, P.C. 20250 Kline Lane Yorba Linda, CA 92887 (714) 777-6027

6

Franklin E. Gibbs (Pro Hac Vice)
Jason B. Witten (Pro Hac Vice)
WANG, HARTMANN & GIBBS, PC
1301 Dove Street, Suite 1050
Newport Beach, CA 92660
(949) 833-8483

Valerie W. Greenberg (Pro Hac Vice) THE GREENBERG LAW FIRM 121 Brite Avenue Scarsdale, New York 10583 (914) 722-9111

Patton G. Lochridge (Texas State Bar No. 12458500) Travis C. Barton (Texas State Bar No. 7902276) MCGINNIS LOCHRIDGE & KILGORE, L.L.P. 1300 Capitol Center 919 Congress Avenue Austin, Texas 78701 (512) 495-6000

Attorneys For Defendant and Counter-Plaintiff Dot Hill Systems Corporation

7

## CERTIFICATE OF SERVICE

I hereby certify that on the 31st day of August 2004, a true and correct copy of the above and foregoing document was forwarded via facsimile and Federal Express to counsel as follows:

Franklin E. Gibbs Jason Witten Wang, Hartmann & Gibbs, PC 1301 Dove Street, Suite 1050 Newport Beach, CA 92660-2812

Aaron Stiefel Kaye Scholer, LLP 425 Park Avenue New York, NY 10022-3598

Karl Bayer 8911 N. Capital of Texas Highway Westech 2, Suite 2120 Austin, Texas 78758 (Via facsimile and certified mail/return receipt requested)

Tracy L. McCreight