UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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SPECTRA LOGIC CORPORATION,
Petitioner,

v.

OVERLAND STORAGE INC.,
Patent Owner.

Case IPR2013-00357
Patent 6,328,766 B1

Before KEVIN F. TURNER, JAMES A. TARTAL, and
MATTHEW R. CLEMENTS, *Administrative Patent Judges*.

CLEMENTS, *Administrative Patent Judge*.

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

I.   INTRODUCTION

Spectra Logic Corporation ("Spectra Logic") filed a Petition (Paper 3, "Pet.") requesting *inter partes* review of claims 1–11 of U.S. Patent No. 6,328,766 B1 (Ex. 1007, "the '766 patent"). Overland Storage Inc. ("Overland") filed a Preliminary Response. Paper 10 ("Prelim. Resp."). On December 10, 2013, we instituted an *inter partes* review of claims 1–11 on certain grounds of unpatentability alleged in the Petition. Paper 11 ("Dec. to Inst.").

After institution of trial, Overland filed a Patent Owner Response. Paper 15 ("PO Resp."). Overland also filed a contingent Motion to Amend seeking to substitute proposed new claims 12–14 for original claims 3, 7, and 9, respectively. Paper 16 ("Mot. to Amend"). Spectra Logic filed a Reply to Patent Owner's Response (Paper 18, "Reply"), and an Opposition to Motion to Amend (Paper 17, "Opp. to Mot. Amend"). Overland then filed a Reply Brief in Support of Contingent Motion to Amend. Paper 19 ("Reply to Opp. to Mot. Amend")

Oral hearing was held on July 23, 2014.[1]

The Board has jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73.

Spectra Logic has shown by a preponderance of the evidence that claims 1–11 of the '766 patent are unpatentable. Overland's Motion to Amend is denied.

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[1] A transcript of the oral hearing is included in the record as Paper 25.

A. Related Proceedings

The parties indicate that the '766 patent is involved in six co-pending

cases:

Overland Storage, Inc. v. BDT AG¸ Case No. 3:12-cv-1700-JLS-BLM (S.D.
Cal.), filed August 13, 2010;

In the Matter of Certain Automated Media Storage Libraries, Inv. No. 337-
TA-746 (ITC), filed October 19, 2010;

Overland Storage, Inc. v. Spectra Logic Corporation¸ Case No. 3:12-cv-
1597-JLS-BLM (S.D. Cal.), filed June 28, 2012;

Overland Storage, Inc. v. PivotStor, LLC¸ Case No. 3:12-cv-1598-JLS-
BLM (S.D. Cal.), filed June 28, 2012;

Overland Storage, Inc. v. Qualstar Corporation¸ Case No. 3:12-cv-1605-
JLS-BLM (S.D. Cal.), filed June 28, 2012; and

Overland Storage, Inc. v. Quantum Corporation¸ Case No. 3:12-cv-1599-
JLS-BLM (S.D. Cal.), filed June 28, 2012.

Pet. 1–2; Paper 9, 1–2.

B. The '766 Patent

The subject matter of the '766 patent relates to automated data storage

and retrieval systems that comprise a library of media elements—e.g.,

magnetic tape cartridges, magnetic disks, or optical disks—as well as one or

more drives for reading from, and writing to, the media elements in the

library. Ex. 1007, 1:17–23. The '766 patent discloses a media element

library capable of communicating with a plurality of host computers. *Id.* at

2:9–12. "A media element library defines a virtual configuration different

from the physical configuration of media and drives actually present in the

library." *Id.* at Abstract. "A plurality of host computer systems

communicate with the library as if they were communicating with a conventional library having a physical configuration identical to the virtual configuration defined by the library." *Id.* "[E]ach media element is a member of one of a plurality of separate subsets . . . each of [which] is assigned for read/write access solely to a respective one of the plurality of host computers." *Id.* at 2:13–17. Figure 3 of the '766 patent, reproduced below, depicts the connections between components in one embodiment of a data storage system.

FIG.3
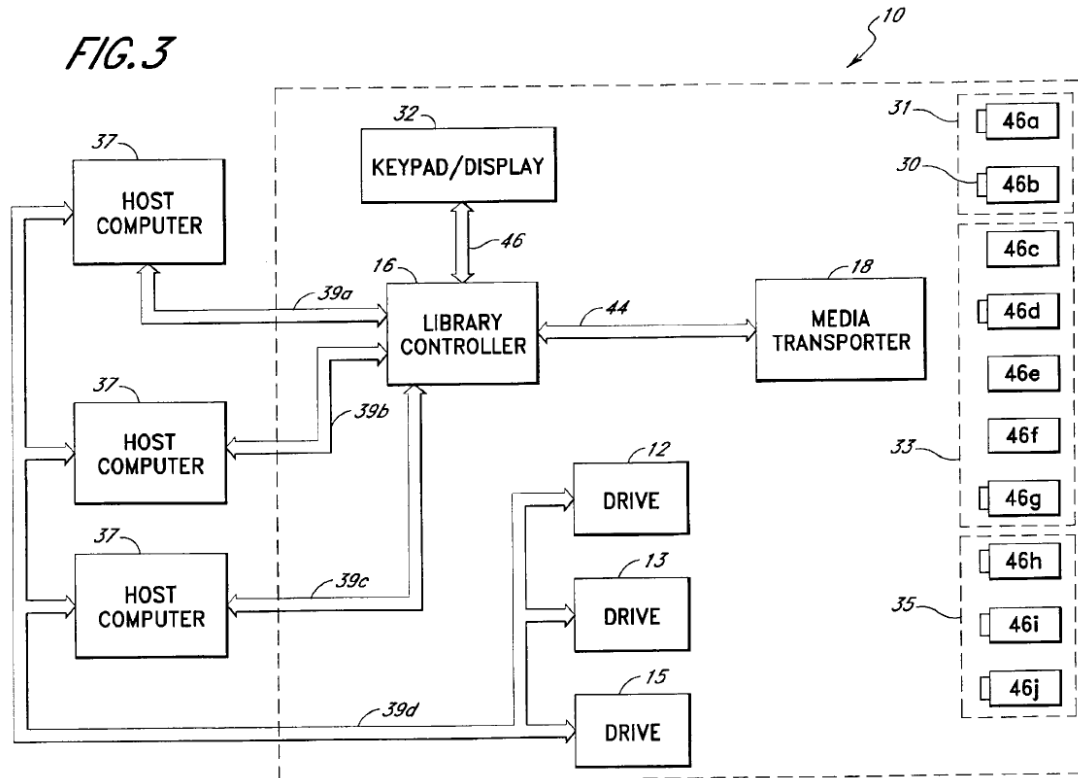
As illustrated in Figure 3, "each of the media storage locations 46*a* through 46*j* are grouped into one of three sets 31, 33, and 35." *Id.* at 5:12–13 (emphasis omitted). "Each of the sets 31, 33, 35 [is] allocated by the controller for use by one of the three host computers 37, respectively." *Id.* at

5:14–15 (emphasis omitted). "[E]ach subset of the media elements 30 present in a given group . . . is available for read/write access to one of the host computers, but is unavailable for read/write access to the other host computers." *Id.* at 5:17–20 (emphasis omitted). "By allocating a subset of the media locations 46*a* through 46*j* for use by each of the host computers, the risk is eliminated that one of the host computers 37 will disadvantageously modify the data that is being relied [upon] by one of the other host computers 37." *Id.* at 5:41–45 (emphasis omitted). "To further reduce the risk of conflict between the host computers 37, each of the drives 12, 13, and 15 . . . may be reserved for read/write access by respective ones of the host computers 37." *Id.* at 5:46–49 (emphasis omitted). Although Figure 3 illustrates each of a plurality of host computers 37 connected to library controller 16 via communication bus 39a, 39b, and 39c, respectively (*id.* at Fig. 3, 5:3–5), in other embodiments the host computers may connect to the library controller through a specific network. *Id.* at Fig. 4; 5:64–6:44.

C. Illustrative Claim

Of the challenged claims, claims 1, 2, and 10 are the only independent claims and are directed to a system, a method, and a method, respectively. Claim 1 is illustrative and is reproduced below:

1. A data storage system comprising:

a plurality of media element drives;

a plurality of media elements, all of which are readable in each of said plurality of media element drives;

a plurality of media element storage locations;

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a moveable carriage adapted to transport media elements from at least one of said media element storage locations to at least one of said media element drives;

a plurality of host computers; and

a controller coupled to said plurality of media element drives, said moveable carriage, and said plurality of host computers, wherein said controller is configured such that a subset of said plurality of media elements and a subset of said plurality of media element drives are available for read/write access by a first one of said plurality of host computers and are unavailable for read/write access by a second one of said plurality of host computers.

D. Prior Art Supporting the Instituted Challenge

Spectra Logic relies on the following prior art reference:

| 3494 GSP | IBM 3494 Guide to Sharing and Partitioning | Nov. 1996 | Ex. 1006 |

E. The Instituted Ground of Unpatentability

We instituted trial on the asserted ground that claims 1–11 are unpatentable under 35 U.S.C. § 102 as anticipated by 3494 GSP. Dec. to Inst. 20.

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14,

2012). Also, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Two exceptions to the general rule that a claim term is given its ordinary meaning are: 1) when a patentee sets out a definition and acts as his or her own lexicographer; or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution. *See In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). For an inventor to act as his or her own lexicographer, the definition must be set forth in the specification with reasonable clarity, deliberateness, and precision. *Id.*

1. *"unavailable"*

All of the challenged claims recite the term "unavailable." In the Decision to Institute, we construed "unavailable" as "not accessible for the manipulation of data." Dec. to Inst. 8. Neither party contests our initial construction of "unavailable." We maintain our construction of "unavailable" as "not accessible for the manipulation of data." *Id.*

2. *"data manipulation commands"*

Claim 2 requires "data manipulation commands." In the Decision to Institute, we construed "data manipulation commands" as "commands that move, copy, change, or delete data mechanically or electronically, request the status of a library or media element, or move or load media." Dec. to Inst. 9. Neither party contests our construction of "data manipulation commands." We maintain our construction of "data manipulation

commands" as "commands that move, copy, change, or delete data mechanically or electronically, request the status of a library or media element, or move or load media." *Id.*

3. *"host computer"*

All of the challenged claims require a "host computer." The '766 patent does not define explicitly the claim term "host computer," but does state that "[t]he host computer system 36 may be a personal computer, a mainframe, a local area network server, or *any of a wide variety of data processing apparatus* well known to utilize media, libraries for data storage." Ex. 1007, 4:10–14 (italics added) (bold omitted). Accordingly, in the Decision to Institute, we construed "host computer" as "a data processing apparatus."

Overland argues, as it did in the Preliminary Response, that "host computer" should be construed to require that it be "separate and external from the library." PO Resp. 6–10. As we noted in our Decision to Institute, however, claim 1 does not recite a "library," much less specify whether the recited "host computer" is separate and external from such a library. We are not persuaded by Overland's argument that "[c]laim 1 uses the term 'data storage system' because it claims the entire system—the library by its individual components (media, drives, controller, etc.) plus the host computers." PO Resp. 7 (citing Ex. 1007, 3:16–4:6, cl. 1). Claim 1 does not recite a "library" and none of the independent claims use the word "external." Moreover, the portions of the Specification relied upon by Overland—e.g., column 1, lines 16–20; column 3, line 16 to column 4, line

6—do not use, much less define, the term "data storage system." We acknowledge, as we did in the Decision to Institute, that Figures 2 to 4 depict the host computer outside the hashed line representing library 10. The '766 patent, however, describes those figures as illustrating only a "[p]referred embodiment." Ex. 1007, 2:61–63. We decline to import limitations from a preferred embodiment into the claim. *See Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1354 (Fed. Cir. 2012) ("While claim terms are understood in light of the specification, a claim construction must not import limitations from the specification into the claims."); *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371 (Fed. Cir. 2003) (Even in cases where a patent describes only a single embodiment, courts have rejected the contention that the claims of the patent must be construed as being limited to that embodiment.).

Overland also argues that a "host computer" must be "capable of running application programs that can send commands to the library." PO Resp. 10–12. As support, Overland relies upon the '766 patent's description of "an application program such as an automated data backup program running on the host computer system 36." Ex. 1007, 4:34–36 (emphasis omitted); *see also* 7:20–39, 8:6–25, 9:4–16, 10:6–31 (describing commands sent from host computer system(s)). The portions of the '766 patent relied upon by Overland do not define "host computer." Moreover, none of the independent claims recite an "application program," and two independent claims—1 and 10—do not recite "commands." As a result, we are not persuaded that the broadest reasonable interpretation of "host computer" in

the context of the '766 patent requires that it be "capable of running application programs that can send commands to the library."

Accordingly, we maintain our construction of "host computer" as "a data processing apparatus."

4. "controller"

Claims 1–9 require a "controller." The '766 patent does not define "controller." The specification describes "library controller 16" and "memory and I/O controller 54," but those uses do not define "controller." In the Decision to Institute, we concluded that no express construction of "controller" was necessary. Dec. to Inst. 11–12.

Overland contends "controller" should be construed as "a unit in the library that manages its operation." PO Resp. 12–14. As discussed above, we are not persuaded by Overland's argument that the recitation in claim 1 of "data storage system" requires a library. We acknowledge, as we did in the Decision to Institute, that Figures 2–4 depict library controller 16 within the hashed line indicating library 10. As discussed above, however, the '766 patent describes those figures as illustrating only a "[p]referred embodiment." Ex. 1007, 2:61–63. We decline to import limitations from a preferred embodiment into the claim. *See Deere & Co.*, 703 F.3d at 1354; *Altiris*, 318 F.3d at 1371.

We maintain our conclusion that no express construction of "controller" is necessary.

5. *"coupled"*

Claims 1–9 require "coupled." The term "coupled" is not defined explicitly in the Specification of the '766 patent. The Specification describes Figure 2 as illustrating "a communication bus 38*a coupled* to the library control module 16." Ex. 1007, 4:7–10 (italics added) (bold omitted). That use of the term "coupled," however, does not define it. The plain meaning of "coupled" encompasses both *direct* and *indirect* coupling.[2] Here, the claim does not require *direct* coupling. Nor does the Specification require that such a limitation be read into the claim. Accordingly, in the Decision to Institute, we construed "coupled" to have its plain and ordinary meaning, which includes *indirect* coupling via intervening components, as well as direct coupling. Dec. to Inst. 12.

Overland does not dispute that "coupled" includes indirect coupling, but contends that "the plain and ordinary meaning of the term coupled requires an element of communication or transfer between the endpoints. More specifically, the endpoints of the coupling operation must be compatible in terms of a communication protocol and capable of communication." PO Resp. 14. As support, Overland relies on the testimony of its declarant, Mr. Ian Jestice, that: "it is also my understanding that the plain and ordinary meaning of the term coupled requires an element

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[2] *See, e.g.*, *MEMS Tech. Berhad v. Int'l Trade Comm'n*, 447 Fed. App'x. 142, 151–53 (Fed. Cir. 2011) (unpublished) (declining to limit "electrically coupled" to *direct* coupling); *Cf. Ex parte Palomar*, No. 2009-011698, 2011 WL 3666727, at *2 (BPAI Aug. 3, 2011) (non-precedential) (construing a claim reciting "*directly* coupled" as excluding indirect coupling).

of communication or transfer between the endpoints. More specifically, the endpoints of the coupling operation must be compatible in terms of a communication protocol and capable of communication." Ex. 2005 (Declaration of Ian Jestice) ¶ 63. Mr. Jestice, however, provides no evidence to support his understanding. Overland cites language from the *MEMS Tech.* case, but that language is silent as to communication or communication protocols. We, therefore, are not persuaded that the plain and ordinary meaning of "coupled" at the time that the '766 patent was filed required "the endpoints of the coupling operation [to] be compatible in terms of a communication protocol and capable of communication," as Overland contends.

Accordingly, we maintain our construction of "coupled" as having its plain and ordinary meaning, which includes *indirect* coupling via intervening components, as well as direct coupling.

6. *"queuing" / "sequentially performing"*

Claim 2 recites "queuing" and "sequentially performing." The '766 patent does not define "queuing" or "sequentially performing", but explicitly states that "[t]he commands may then be sequentially performed either *in the order received, or in a different order* if library efficiency of operation may be improved by promoting some commands above others in the queue." Ex. 1007, 10:1–5 (emphasis added). Moreover, as Spectra Logic points out, even the inventor concedes that claim 2 "didn't specify" first-in, first-out. Reply 13 (citing Ex. 1019, Exhibit A, 57–58). Accordingly, we determine that the broadest reasonable interpretation of either "queuing" or

"sequentially performing" is not limited to first-in, first-out, as Overland
contends.

B. Claims 1–11 – Anticipated by 3494 GSP

Spectra Logic alleges that claims 1–11 are unpatentable under
35 U.S.C. § 102(a) and (b) as anticipated by 3494 GSP. Pet. 29–40.

Overland counters that 3494 GSP does not disclose each of the claim
limitations recited in claims 1–11. PO Resp. 23–36. As support, Overland
proffers the Declaration of Mr. Ian Jestice. *Id.* (citing Ex. 2005 ¶¶ 80–104).

Upon consideration of the parties' contentions and supporting
evidence, we determine that Spectra Logic has demonstrated by a
preponderance of the evidence that claims 1–11 are anticipated by 3494
GSP.

3494 GSP

3494 GSP describes multisystem access to the IBM 3494 and 3495
tape libraries. Ex. 1006, 17.[3] Both IBM Automated Tape Libraries have:
(1) a cartridge accessor for mounting and demounting cartridges;
(2) cartridge storage cells for storing cartridges; and (3) a Library Manager
for communicating with the host systems and controlling all activities within
the IBM Automated Tape Library. *Id.* at 21. Figure 5 of 3494 GSP is
reproduced below.

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[3] Citations are to the page numbers in the lower right-hand corner of Exhibit
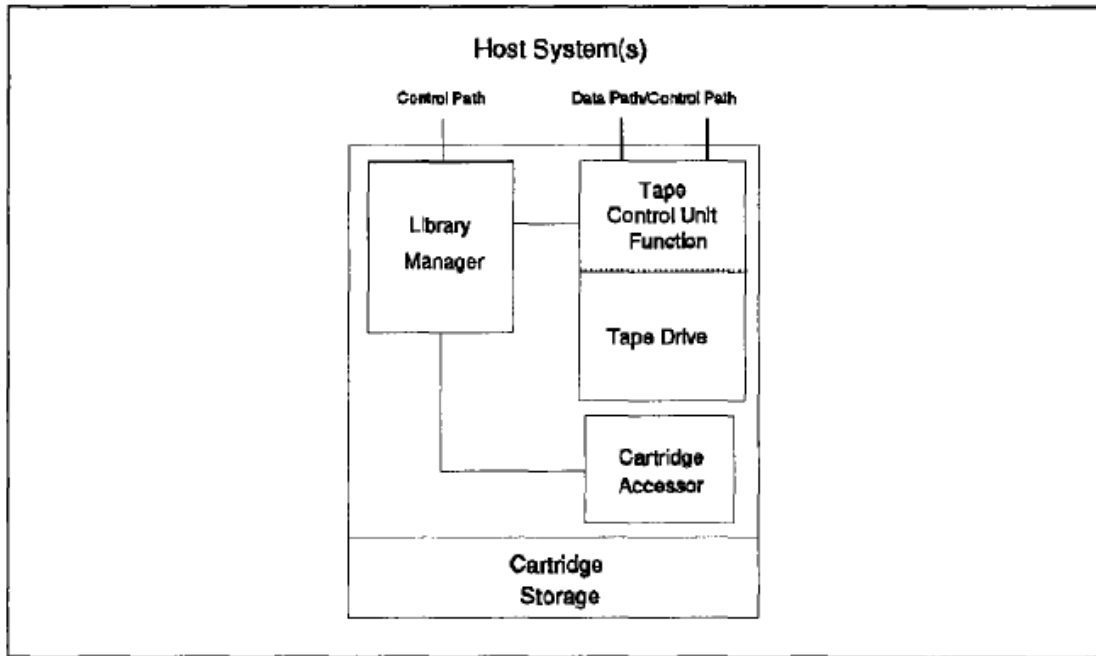1006.

Figure 5. Basic Building Blocks of an IBM Automated Tape Library Dataserver

Id. at 22. Figure 5 of 3494 GSP depicts the components of an

IBM Automated Tape Library Dataserver. "The Library Manager is the

central component that manages all movements inside an IBM Automated

Tape Library and communicates with all attached hosts." *Id.* at 18, 85.

"The Library Manager, which consists of the LIC [Licensed Internal Code]

for library management and communicates with the host systems, controls

all activities in the IBM Automated Tape Library." *Id.* at 24.
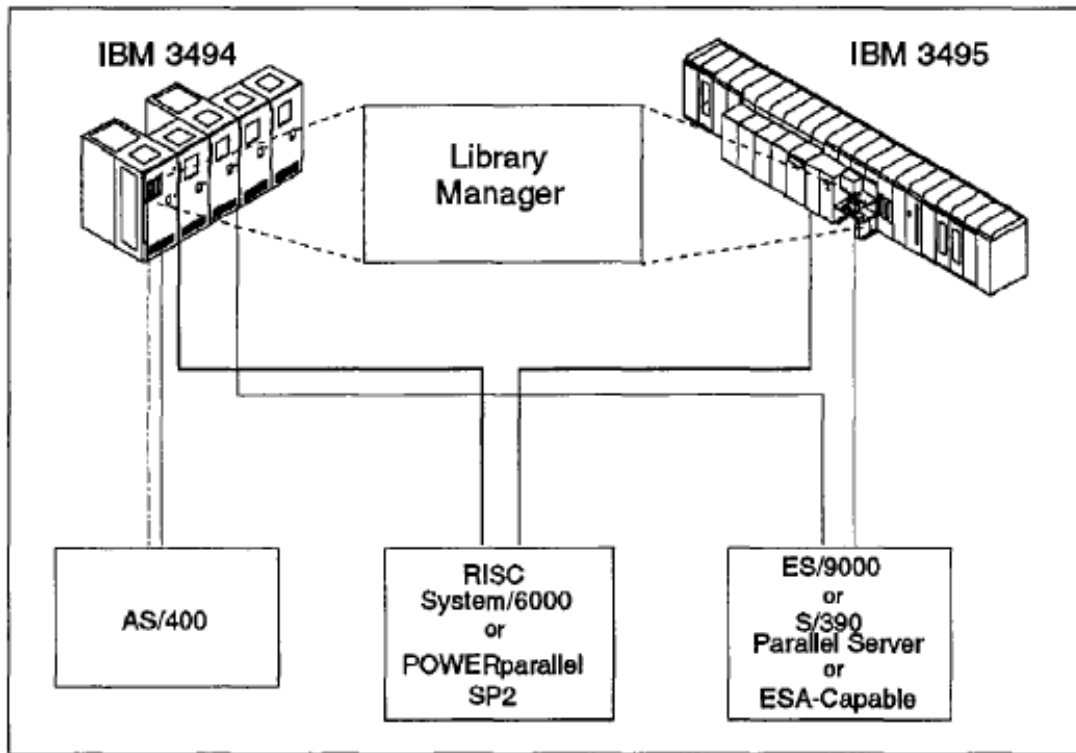
Figure 1 of 3494 GSP is reproduced below.

Figure 1. Automated Tape Libraries Hardware Components

Id. at 18. Figure 1 of 3494 GSP depicts the library manager, IBM 3494 tape library, IBM 3495 tape library, and various hosts that may access the tape libraries. "The Library Manager receives requests from hosts for automated operations and returns status information." *Id.* at 24. "The Library Manager can communicate with the host system through four control paths: ESCON, parallel, RS-232, and LAN." *Id.* "The LAN control path uses a Token-Ring or Ethernet physical link and Advanced Program-to-Program Communication (APPC) or Transmission Control Protocol/Internet Protocol (TCP/IP)." *Id.*
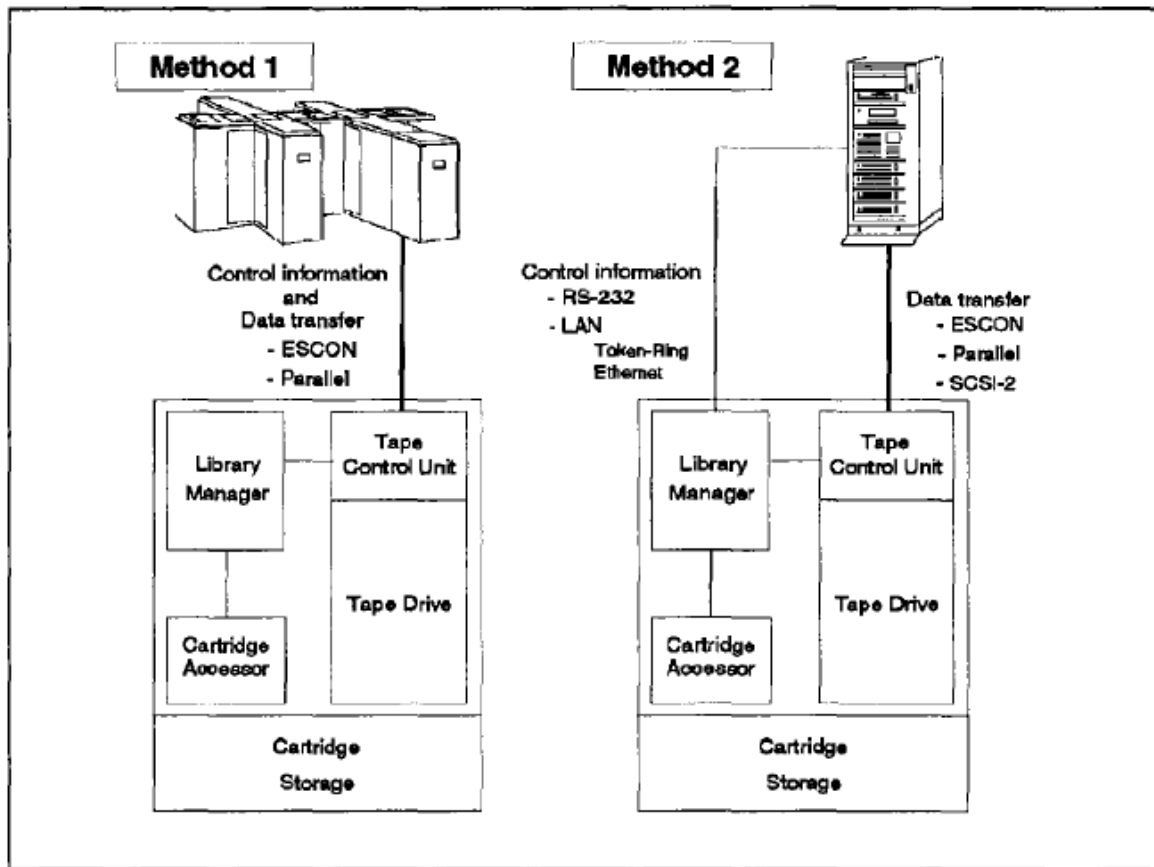
Figure 6 of 3494 GSP is reproduced below.

Figure 6. Host Connections

Id. at 25. Figure 6 of 3494 GSP depicts two alternative methods of
attachment. "The host system has no knowledge of the actual physical
location of a volume in a particular IBM Automated Tape Library." *Id.* at
24. "The physical location is managed exclusively by the Library Manager,
which stores the physical location of the volumes in an inventory database,
based on its volume serial number." *Id.* "All systems attached to an IBM
Automated Tape Library communicate with the same Library Manager and
refer to the same Library Manager database." *Id.* at 78. "In the Library
Manager database, volumes are grouped into volume categories for use by

the Library Manager and the attached host systems." *Id.* "Different host
software platforms use different Library Manager volume categories." *Id.*

"An IBM Automated Tape Library can be shared by different systems
in two ways: by logically dividing it into different partitions (*partitioning*)
or by allowing all attached systems to sequentially access the tape volumes
in the library (*sharing*)." *Id.* at 19. "The term *partitioning* means dividing a
physical library into multiple logical libraries." *Id.* at 85. "Each logical
library contains drives and volumes that other hosts cannot access." *Id.*
"Host access to an IBM Automated Tape Library means access to the
Library Manager, drives, and scratch and private volumes." *Id.*
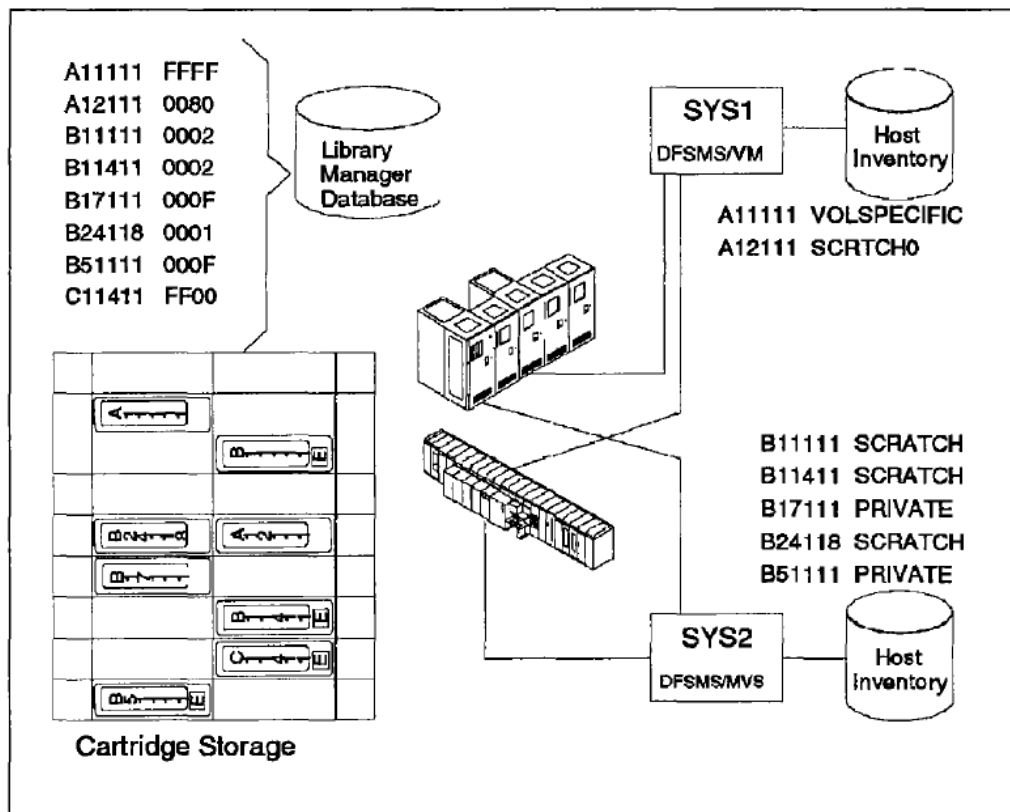
Figure 21 of 3494 GSP is reproduced below.

Figure 21. Partitioning an IBM Automated Tape Library Dataserver

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Id. at 86. Figure 21 of 3494 GSP shows partitioning of an IBM Automated Tape Library between a Multiple Virtual Storage ("MVS") and a Virtual Machine ("VM") system. As depicted in Figure 21, the Library Manager database contains the volume serial number and volume category information. *Id.* "The host inventories contain only those volume serial numbers that belong to the volume categories that each host uses." *Id.* "Each host or complex owns its own set of drives and volumes, which another system or complex cannot access without manual intervention." *Id.* at 88. "Each system knows only about its part of the library." *Id.* "The logical partitioning of a physical library means that volumes in different partitions cannot be shared." *Id.* at 89.

<u>*Spectra Logic's Contentions*</u>

We are persuaded that Spectra Logic has demonstrated by a preponderance of the evidence that claims 1–11 are anticipated by 3494 GSP.

In particular, claim 1 recites "a plurality of media element drives." We agree with Spectra Logic's contention that 3494 GSP's disclosure of tape drives residing within the IBM Automated Tape Library discloses this limitation. *See* Pet. 29. With respect to the recitation in claim 1 of "a plurality of media elements all of which are readable in each of said plurality of media element drives," 3494 GSP's disclosure of tapes and IBM3590 cartridges discloses this limitation, as asserted by Spectra Logic. *See* Pet. 29. Claim 1 also recites "a plurality of media element storage locations,"

which Spectra Logic contends, and we agree, correspond to 3494 GSP's disclosure of cartridge storage cells. Pet. 29.

Claim 1 recites "a moveable carriage adapted to transport media elements from at least one of said media element storage locations to at least one of said media element drives." Spectra Logic relies upon 3494 GSP's cartridge accessor that selects and transports cartridges from their storage areas to the tape drives as disclosing this limitation, and we agree. *See* Pet. 29.

We also are persuaded that the disclosure in 3494 GSP of "attached hosts" that communicate with the Library Manager of the IBM Automated Tape Library corresponds to the requirement in claim 1 of "a plurality of host computers." *See* Pet. 30.

Claim 1 also recites "a controller coupled to said plurality of media element drives, said moveable carriage, and said plurality of host computers." For this limitation, Spectra Logic relies upon 3494 GSP's disclosure of a Library Manager within the IBM Automated Tape Library that communicates with all attached hosts and controls all activities within the IBM Automated Tape Library. Pet. 30. With respect to the further requirement of claim 1 that "wherein said controller is configured such that a subset of said plurality of media elements and a subset of said plurality of media element drives are available for read/write access by a first one of said plurality of host computers and are unavailable for read/write access by a second one of said plurality of host computers," Spectra Logic relies upon 3494 GSP's disclosure of the Library Manager being configured to partition

the IBM Automated Tape Library into logical libraries. Pet. 30–31. We are persuaded that Spectra Logic has shown that each of these limitations is disclosed by 3494 GSP.

Independent claim 2 recites "queuing said plurality of data manipulation commands in a memory of said media element library; and sequentially performing said data manipulation commands." Spectra Logic relies upon 3494 GSP's disclosure of an operations queue as disclosing this limitation, and we agree. *See* Pet. 33. We further determine that Spectra Logic has demonstrated that each of the additional limitations recited in independent claim 10 and dependent claims 3–9 and 11 are disclosed by 3494 GSP, as set forth in the Petition. *See* Pet. 33–40.

Host computer

Overland contends that the Virtual Tape Server is not a "host computer" under Overland's proposed construction. PO Resp. 23–24. We decline to adopt Overland's construction of "host computer" for the reasons discussed above, and, therefore, find Overland's argument unpersuasive.

Overland also contends that the Virtual Tape Server is not a "host computer" as initially construed by the Board. PO Resp. 24–26. Specifically, Overland argues that (1) "[t]he Virtual Tape Server is not a personal computer, a mainframe or a local area network server;" (2) it cannot use media libraries without being connected to another host computer; (3) a person of ordinary skill in the art would understand it to be a controller, not a host computer; and (4) it cannot initiate an operation on its own. *Id.* at 25–26. Our construction, however, does not require that the

recited "host computer" be a personal computer, mainframe, or local area network server, or that it use media libraries without being connected to another host computer. It requires only that the host computer be a "data processing apparatus." Mr. Jestice's testimony is not persuasive because it does not address whether a person of ordinary skill in the art would understand the Virtual Tape Server to be a "data processing apparatus." Ex. 2005 ¶¶ 83–86.

Even assuming, though, that the Virtual Tape Server is not a "host computer," we would not be persuaded that 3494 GSP does not disclose a "host computer" because the Petition identifies 3494 GSP's attached hosts—not the Virtual Tape Server—as the recited "host computers." Pet. 30.

In view of the foregoing, we conclude that Spectra Logic has demonstrated sufficiently that 3494 GSP discloses a "host computer."

Controller

Overland contends that 3494 does not disclose "a controller coupled to . . . said plurality of host computers" because the host computers "are connected to the Virtual Tape Server and not to the Library." PO Resp. 26–29 (citing Ex. 2005 ¶¶ 87, 88, 91). Specifically, Overland contends that the controller is not "coupled," as Overland proposes that term be construed, to the host computers because 3494 GSP's Library Manager is "not compatible in terms of a communication protocol or even capable of communication" with the host computer attached to the Virtual Tape Server. *Id.* at 28. Spectra Logic counters that the 3494 GSP discloses that "'[h]ost system

software also communicates with the Library Manager for controlling the IBM 3494,' albeit through the tape control unit." Reply 11.

We decline to adopt Overland's construction of "coupled" for the reasons discussed above. We construe "coupled" to include direct and indirect coupling. Overland acknowledges that 3494 GSP discloses host computers "indirectly connected or attached" to the Library Manager via the Virtual Tape Server. PO Resp. 28. In any event, the Petition relies not upon the plurality of host computers attached to the Virtual Tape Server, but upon 3494 GSP's disclosure that the Library Manager itself is coupled to a plurality of host computers. Pet. 30; *see also* Ex. 1006, 18 ("The Library Manager . . . communicates with *all attached hosts*"), 21 ("A Library Manager for communicating with the host system*s*"), 24 ("communicates with the host system*s*" and "receives requests from host*s*") (emphasis added).

In view of the foregoing, we conclude that Spectra Logic has demonstrated by a preponderance of the evidence that the Library Manager (i.e., "controller") is "coupled" to a "plurality of host computers."

Media elements readable in each media element drive

Overland contends that 3494 GSP does not disclose "a plurality of media elements, all of which are readable in each of said plurality of media element drives," as required by claim 1, or "wherein all media elements are readable in each of said media element drives," as required by claim 2. PO Resp. 29–30. Specifically, Overland argues that because the 3490 tapes emulated by the Virtual Tape Server are virtual—i.e., they do not physically

exist—they are not readable in each of the physically-existing 3490 and 3590 tape drive subsystems in the non-VTS partition. *Id.* Spectra Logic counters that 3494 GSP teaches physical tapes that are readable in each of the physical tape drives. Reply 12.

We are not persuaded by Overland's argument because the Petition relies upon the physical tapes, not the virtual 3490 tapes emulated by the Virtual Tape Server, as the recited "plurality of media element drives." Pet. 29. 3494 GSP discloses that "[t]he Library Manager is the central component that manages all movements inside an IBM Automated Tape Library." Ex. 1006, 18. Spectra Logic also argues that the IBM 3494 library can be installed with exclusively the same drives such that all tapes would be readable in each drive. Pet. 32. Overland does not contend that the physical tapes (i.e., the 3490 tapes and/or 3590 tapes) are not readable in each of the physical tape drives (i.e., the 3490 tape drive subsystem and/or the 3590 tape drive subsystem).

In view of the foregoing, we conclude that Spectra Logic has demonstrated sufficiently that each of the physical tapes (i.e., "media elements") is readable in each of the physical tape drives (i.e., "media element drives").

Queuing and sequentially performing commands

Overland contends that 3494 GSP does not disclose "queuing said plurality of data manipulation commands [received from said plurality of host computers]," as recited by claim 2. PO Resp. 30–33. Overland first argues that the Library Manager's management of an operations queue does

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"not disclose the specific situation described in the method of claim 2." PO Resp. 30. Overland provides no further argument or analysis. We are not persuaded by Overland's conclusory assertion.

Overland also argues that commands from host computers attached to the Virtual Tape Server are not queued because those commands are received by the Virtual Tape Server, not by the Library Manager. PO Resp. 31–32. As discussed above, Petitioner does not rely exclusively upon the host computers attached to the Virtual Tape Server as the recited "host computers." Pet. 31–33. 3494 GSP also discloses that the Library Manager attaches to host system<u>s</u> (plural) other than through the Virtual Tape Server. Ex. 1006, 18, 21, 24. Overland does not explain why commands from those host computers would not be received by the Library Manager. Accordingly, we are not persuaded that "the Library Manager[] will never receive commands from the plurality of host computers," as Overland contends. PO Resp. 31.

Finally, Overland argues that 3494 GSP does not disclose "queuing" and "sequentially performing" commands because it does not disclose first-in, first-out queuing. PO Resp. 32–33. Spectra Logic counters that (1) Overland's construction of the term "queuing" as first-in, first-out is overly narrow; and (2) in any event, 3494 GSP discloses first-in, first-out queuing at least in the instance where there are two substantially simultaneous commands. Reply 12–14. As discussed above, we decline to adopt Overland's proposed constructions of "queuing" and "sequentially

performing." Accordingly, we are not persuaded that 3494 GSP does not disclose queuing or sequentially performing.

In view of the foregoing, we conclude that Spectra Logic has demonstrated sufficiently that the Library Manager queues commands and that those commands are subsequently performed sequentially (i.e., one at a time).

Network interface

Overland acknowledges that the 3494 GSP discloses a Library Manager comprising a network interface, but contends that "the host computer that connected to the VTS partition did not connect to the VTS or the 3494 tape library though a network interface." PO Resp. 33–34. Spectra Logic counters that the Library Manager has a network interface. Reply 14. As discussed above, Spectra Logic does not rely exclusively upon the host computers attached to the Virtual Tape Server as the recited "host computers." Pet. 31–33. 3494 GSP also discloses that the Library Manager attaches to host system̲s (plural) other than through the Virtual Tape Server. Ex. 1006, 18, 21, 24. Figure 6 of 3494 GSP depicts two methods by which "[t]he IBM Automated Tape Library can be attached to the host systems," the second of which uses a "LAN" interface that can be Token-Ring or Ethernet to communicate "Control information" between the host system and the Library Manager. *Id.* at 25; *see also* Pet. 34 (citing same).

In view of the foregoing, we conclude that Spectra Logic has demonstrated sufficiently that the Library Manager "comprises a network interface routed to each one of said plurality of host computers."

Sending [requests for / responses containing] resource information

Overland contends that 3494 GSP does not disclose all of the
limitations of claim 10. PO Resp. 34–36. Overland argues that "[t]here is
no indication that the host computers connected to the Virtual Tape Server
can send requests for resource information, nor is there any indication that
the Library manager would respond to such a request with the resource
information just for that partition." *Id.* at 34–35. Overland also argues that
"that host can only send requests to the VTS and cannot send requests for
status information to the library itself" (*id.* at 35), and "[t]he host computer
coupled to the VTS partition does not see its associated portion of the media
locations and media element drives" (*id.* at 36). All of these arguments
focus on the host computers attached to the Virtual Tape Server. As
discussed above, however, Spectra Logic does not rely exclusively on the
host computers connected to the Virtual Tape Server. 3494 GSP also
discloses a plurality of host computers attached to the Library Manager. Ex.
1006, 18, 21, 24. The host computers attached to the Library Manager send
requests to the Library Manager and receive status information in return.
Pet. 36–39; Reply 15. We are persuaded that these requests and responses
disclosed in 3494 GSP satisfy the limitations of claim 10.

Overland also argues that 3494 GSP does not disclose "a tape library
configured for library-based partitioning receiving requests for status
information" (PO Resp. 35). That argument, however, is not commensurate
with the limitations of claim 10, which does not recite "a tape library,"
"library-based partitioning," or "receiving requests for status information."

Finally, Overland asserts that 3494 GSP does not disclose "sending a response that only includes the number of media elements and drives within that particular partition," but does not provide any further argument or analysis. PO Resp. 35. 3494 GSP discloses that "[t]he Library Manager receives requests from hosts for automated operations and *returns status information*." Ex. 1006, 24 (emphasis added). 3494 GSP further discloses that "[e]ach host or complex owns its own set of drives and volumes, which another system or complex cannot access without manual intervention. Each system knows only about its part of the library." *Id.* at 88; *see also* Pet. 39 (citing same).

In the view of the foregoing, we conclude that Spectra Logic has demonstrated sufficiently that 3494 GSP discloses "sending a response to said [first/second] request" and "whereby said one of the plurality of host computers sees only its associated portion of the media storage locations and its associated portion of the media element drives," as recited in claim 10.

Conclusion

For the foregoing reasons, we determine that Spectra Logic has demonstrated by a preponderance of the evidence that claims 1–11 are unpatentable under 35 U.S.C. § 102(b) as anticipated by 3494 GSP.

C. Overland's Motion to Amend

Overland moves to substitute claims 12–14 for challenged claims 3, 7, and 9, respectively, if we find claims 3, 7, and 9 unpatentable. Mot. to Amend 1. As stated above, we determine that Spectra Logic has demonstrated by a preponderance of the evidence that all of the challenged

claims are unpatentable, including claims 3, 7, and 9. Therefore, Overland's

Motion to Amend is before us for consideration. For the reasons set forth

below, Overland's Motion to Amend is *denied*.

Proposed substitute claims 12, 13, and 14 are each independent

claims. Proposed substitute claims 12, 13, and 14 are reproduced as

follows:[4]

> 12 (substitute for claim 3): A data storage system comprising:
>
> a tape library comprising a housing;
>
> a plurality of media element drives within said housing;
>
> a plurality of media elements within said housing all of which are readable in each of said plurality of media element drives;
>
> a plurality of media element storage locations within said housing;
>
> a moveable carriage within said housing adapted to transport media elements from at least one of said media element storage locations to at least one of said media element drives;
>
> a plurality of host computers separate from and external to said housing and coupled to the tape library over a network;
>
> a controller within said housing coupled to said plurality of media element drives, said moveable carriage, and said plurality of host computers, wherein said controller is configured in response to a command from one of the plurality of host computers over the network such that a subset of said plurality of media elements and a subset of said plurality of media element drives are available for

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[4] Claims 3, 7, and 9 depend from claim 1. The text of claim 1 has been included without underlining in the newly-proposed claims.

read/write access by a first one of said plurality of host computers and are unavailable for read/write access by a second one of said plurality of host computers~~.~~; and

3. The data storage system of claim 1, additionally comprising a user configurable memory <u>within said housing</u> storing data defining said controller's response to <u>said configuration</u> commands from said plurality of host computers such that said subset of said plurality of media elements and said subset of said plurality of media element drives is user selected.

13 (substitute for claim 7): A data storage system comprising:

<u>a tape library comprising a housing;</u>

a plurality of media element drives <u>within said housing</u>;

a plurality of media elements <u>within said housing</u> all of which are readable in each of said plurality of media element drives;

a plurality of media element storage locations <u>within said housing</u>;

a moveable carriage <u>within said housing</u> adapted to transport media elements from at least one of said media element storage locations to at least one of said media element drives;

a plurality of host computers <u>separate from and external to said housing and coupled to the tape library over a network</u>[; and]

a controller <u>within said housing</u> coupled to said plurality of media element drives, said moveable carriage, and said plurality of host computers, wherein said controller is configured <u>in response to a command from one of the plurality of host computers over the network</u> such that a subset of said plurality of media elements and a subset of said plurality of media element drives are available for

read/write access by a first one of said plurality of host computers and are unavailable for read/write access by a second one of said plurality of host computers~~.~~;

~~7.   The data storage system of claim 1,~~ wherein said controller comprises a plurality of input-output interfaces for coupling to respective ones of said plurality of host computers.

14 (substitute for claim 9): A data storage system comprising:

<u>a tape library comprising a housing</u>;

a plurality of media element drives <u>within said housing</u>;

a plurality of media elements <u>within said housing</u> all of which are readable in each of said plurality of media element drives ~~9. The data storage system of claim 1,~~ wherein said media elements comprise magnetic tape cartridges[;]

a plurality of media element storage locations <u>within said housing</u>;

a moveable carriage <u>within said housing</u> adapted to transport media elements from at least one of said media element storage locations to at least one of said media element drives;

a plurality of host computers <u>separate from and external to said housing and coupled to the tape library over a network</u>;

a controller <u>within said housing</u> coupled to said plurality of media element drives, said moveable carriage, and said plurality of host computers, wherein said controller is configured <u>in response to a command from one of the plurality of host computers over the network</u> such that a subset of said plurality of media elements and a subset of said plurality of media element drives are available for read/write access by a first one of said plurality of host computers and are unavailable for read/write access by a second one of said plurality of host computers.

Mot. to Amend 2–5 (underlining added by Overland to show the added features).

A motion to amend claims in an *inter partes* review is not, itself, an amendment. As the moving party, Overland bears the burden of proof to establish that it is entitled to the relief requested. 37 C.F.R. § 42.20(c). Therefore, Overland's proposed substitute claims are not entered automatically, but only upon Overland having demonstrated by a preponderance of the evidence the patentability of those substitute claims. *See, e.g.,* 37 C.F.R. § 42.1(d) (noting that the "default evidentiary standard [in proceedings before the Board] is a preponderance of the evidence").

1. *Claim Construction*

Claim construction is an important step in a patentability determination. *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1339 (Fed. Cir. 2003); *Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003) ("Both anticipation under § 102 and obviousness under § 103 are two-step inquiries. The first step in both analyses is a proper construction of the claims . . . . The second step in the analyses requires a comparison of the properly construed claim to the prior art." (internal citations omitted)). A motion to amend claims must identify how the proposed substitute claims are to be construed, especially when the proposed substitute claims introduce new claim terms. *See Idle Free Sys., Inc. v. Bergstrom, Inc.*, Case IPR2012-00027, slip op. at 7 (PTAB June 11, 2013) (Paper 26).

In its Motion to Amend, Overland introduces several new claim terms—e.g., "tape library," "housing," "separate from and external to,"

"over a network"—in its proposed substitute claims. Overland argues that those claim features distinguish the proposed substitute claims from the prior art. *See, e.g.*, Mot. to Amend 9–14. Yet, Overland does not provide any claim constructions or explanations for how the new claim terms should be construed.

Without a reasonable construction of the new claim features added by the proposed substitute claims, Overland's motion does not provide adequate information for us to determine whether Overland's proposed substitute claims are patentable over the prior art generally. Therefore, we are not persuaded that Overland has met its burden to demonstrate patentability of the proposed substitute claims under 37 C.F.R. § 42.20(c).

2. *Written Description Support*

A motion to amend claims must identify clearly the written description support for each proposed substitute claim. 37 C.F.R. § 42.121(b). The requirement that the motion to amend must set forth the support in the original disclosure of the patent is with respect to *each claim*, not for a particular feature of a proposed substitute claim. The written description test is whether the original disclosure of the application relied upon reasonably conveys to a person of ordinary skill in the art that the inventor had possession of the claimed subject matter as of the filing date. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Thus, the motion should account for the claimed subject matter as a whole, i.e., the *entire* proposed substitute claim, when showing where there is sufficient written description support for each claim feature. *See*

Nichia Corp. v. Emcore Corp., Case IPR2012-00005, slip op. at 4 (PTAB June 3, 2013) (Paper 27).

In its Motion to Amend, Overland addresses the new claim features added by the proposed substitute claims. Mot. to Amend 6–9. Overland's Motion to Amend does not, however, address the written description support for the claimed subject matter as a whole, and, therefore, insufficiently sets forth the written description support for each proposed substitute claim as required by 37 C.F.R. § 42.121(b)(1) and § 42.121(b)(2).

3. *Patentability over Prior Art*

The patent owner bears the burden of proof in demonstrating patentability of the proposed substitute claims over the prior art in general, and, thus, entitlement to add these claims to its patent. *See Idle Free*, Paper 26 at 7. In a motion to amend, the patent owner must show that the conditions for novelty and non-obviousness are met with respect to the prior art available to one of ordinary skill in the art at the time of the invention. With regard to obviousness as the basis of potential unpatentability of the proposed substitute claims, the patent owner should present and discuss facts which are pertinent to the first three underlying factual inquiries of *Graham*: (1) the scope and content of the prior art, (2) differences between the claimed subject matter and the prior art, and (3) the level of ordinary skill in the art, *with special focus on the new claim features* added by the proposed substitute claims. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). The patent owner should identify each new claim feature, and come forward with technical facts and reasoning about that particular feature. Some

discussion and analysis should be made about the specific technical disclosure of the closest prior art as to each particular feature, and the level of ordinary skill in the art, in terms of ordinary creativity and the basic skill set of a person of ordinary skill in the art, regarding the feature.

Here, we are unpersuaded that Overland has demonstrated by a preponderance of the evidence that the proposed substitute claims are patentable. In its Motion to Amend, Overland does not adequately address what was previously known in the art, much less the level of ordinary skill in the art, regarding each new claim feature added by its proposed substitute claims. Indeed, Overland argues patentability based on only one of the new claim features.

Notably, proposed substitute claims 12–14 add the feature that the controller is configured "in response to a command from one of the plurality of host computers over the network." In its Motion to Amend, Overland argues that the amended claims are patentable because this feature is not disclosed by 3494 GSP. Mot. to Amend 9–10. Specifically, Overland argues that 3494 GSP discloses partitioning only using a control panel physically located on the library itself. *Id.* Overland does not, however, identify any support in 3494 GSP for that proposition. As discussed above, 3494 GSP discloses that the Library Manager can communicate with host systems over a LAN interface. Ex. 1006, 18, 21, 24. The Library Manager is, therefore, responsive to commands from the host systems over the network. Moreover, 3494 GSP discloses that commands from the host systems are used "[t]o dedicate a tape drive to a specific host system in a

multihost system environment." Ex. 1006, 94; Opp. to Mot. Amend 3–4. Accordingly, we are not persuaded that the newly-proposed additional claim feature is not disclosed in 3494 GSP.

Even if we were, the IBM 3494 Operator Guide ("3494 OG") discloses that "[t]he host can associate volumes into logical groupings in the library. A logical grouping is called category, which the library manager identifies by hexadecimal number from 0000 to FFFF." Ex. 1005, 43; Opp. to Mot. Amend 4. Other than noting that this teaching is in 3494 OG, not 3494 GSP, Overland does not provide any analysis as to why this teaching in combination with the teachings in 3494 GSP would not render obvious a "controller partitioning a library in response to a command from a host computer." Reply to Opp. to Mot. Amend 2.

Overland also does not discuss U.S. Patent No. 5,925,119 to Maroney (Ex. 1015), which was cited by the Examiner during prosecution of the '766 patent. Opp. to Mot. Amend 4–5. Maroney discloses library 10 with a network interface logic card 70 and embedded server 74 that "may communicate with the network interface 70 for serving any requesters on the network." Ex. 1015, Fig. 5, 9:12–33 (emphasis omitted). Spectra Logic contends that the newly added feature—"in response to a command from one of the plurality of host computers over the network"—would have been obvious in view of Maroney. Opp. to Mot. Amend 4–5. Overland attacks Maroney individually for not teaching other aspects of the claim, but as discussed above, we have determined that 3494 GSP discloses those aspects. *In re Keller*, 642 F.2d 413, 426 (CCPA 1981) ("one cannot show non-

obviousness by attacking references individually where, as here, the rejections are based on combinations of references").

Overland asserts that there was a long-felt need for the invention disclosed in the '766 patent. Mot. to Amend 11–12. Specifically, Overland asserts that "[t]ape libraries were not usually accessed over a network, and they certainly were not configured over a network." Mot. to Amend 11; Ex. 2005 ¶ 112. Overland, however, presents no credible evidence this need was satisfied by the invention claimed in the proposed substitute claims.

Overland also asserts commercial success because Spectra Logic sells products that practice the invention of the proposed substitute claims. Mot. to Amend 12–14. Overland, however, does not provide persuasive evidence that Spectra Logic's products are commercially successful, that Spectra Logic's product is covered by any proposed substitute claim, or that such success was attributable to the patented feature. *Id.*

For the foregoing reasons, we conclude that Overland has not met its burden in showing that the proposed substitute claims are patentable over the prior art.

4. *Conclusion*

For the foregoing reasons, Overland has not, in its Motion to Amend, satisfied its burden of proof.

III. CONCLUSION

Spectra Logic has shown by a preponderance of the evidence that claims 1–11 of the '766 patent are unpatentable under 35 U.S.C. § 102(b) as anticipated by 3494 GSP. Overland's Motion to Amend is denied.

IV. ORDER

Accordingly, it is

ORDERED that claims 1–11 of the '766 patent are held unpatentable;

FURTHER ORDERED that Overland's Motion to Amend is *denied*; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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