UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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VEEAM SOFTWARE CORPORATION,
Petitioner,

v.

VERITAS TECHNOLOGIES, LLC,[1]
Patent Owner.

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Case IPR2014-00090
Patent 7,024,527 B1

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Before WILLIAM V. SAINDON, THOMAS L. GIANNETTI, and
TRENTON A. WARD, *Administrative Patent Judges*.

SAINDON, *Administrative Patent Judge*.

DECISION ON REMAND

GRANTING-IN-PART PATENT OWNER'S MOTION TO AMEND
37 C.F.R. §§ 42.108, 42.121

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[1] Patent Owner previously was identified as Symantec Corporation. *See*
Paper 40 (Patent Owner's Updated Mandatory Notices).

I. INTRODUCTION

This case was remanded to the Board following an appeal to the Federal Circuit. *Veritas Techs. LLC v. Veeam Software Corp.*, 835 F.3d 1405 (Fed. Cir. 2016). The Federal Circuit affirmed the Board's decision that Petitioner had demonstrated by a preponderance of the evidence that certain claims of U.S. Patent No. 7,024,527 ("the '527 patent") would have been obvious. The Federal Circuit vacated our decision denying Patent Owner's Motion to Amend.

Following remand, the Board authorized Patent Owner to file a Supplement to the Motion to Amend. Upon consideration of the Motion to Amend and the Supplement to the Motion to Amend (collectively, the "Motion"), and the Federal Circuit's guidance, we grant the Motion as to substitute claim 27 and deny the Motion as to substitute claim 26, for the reasons set forth below.

II. BACKGROUND

Our first Final Written Decision (Paper 37, "Final Dec.") determined that claims 1, 6, 8, 20, and 24 of the '527 patent were unpatentable as obvious. We also determined that Patent Owner had not met its burden of proof in its Motion to Amend (Paper 19, "Mot."). Final Dec. 29.

On appeal, the Federal Circuit "[found] no error in the Board's obviousness analysis and conclusion." *Veritas Techs.*, 835 F.3d, at 1413. The Federal Circuit, however, "vacate[d] the Board's decision [to deny] the motion to amend and remand[ed] the matter to allow for a determination of the patentability of the proposed substitute claims." *Id.* at 1415. This Decision on Remand addresses only the Motion.

Subsequent to the remand, we held a conference call with the parties

to discuss the Board's decision in *Ex parte Mewherter* in relation to

substitute claim 27. Paper 42, 2 (citing *Ex parte Mewherter*, 107 USPQ2d

1857 (PTAB 2013) (precedential)). We then issued an order authorizing

Patent Owner to file a Supplement to its Motion to Amend that "modif[ied]

proposed substitute claim 27 to read, 'A non-transitory computer-accessible

medium.'" *Id.* at 3. We also gave both parties the opportunity to file

supplemental briefs that could "include any arguments in support of its

position" regarding claim 27. *Id.* Thus, after Patent Owner filed a

Supplement to its Motion to Amend (Paper 45, "Supp. Mot."), Petitioner

filed an Opposition to Patent Owner's Supplement (Paper 46, "Supp. Opp."),

and Patent Owner filed a Reply (Paper 47, "Supp. Reply").

A. *Proposed Substitute Claims*

Patent Owner proposed to substitute claim 26 if claim 1 is

unpatentable and to substitute claim 27 if claim 20 is unpatentable. We

determined claims 1 and 20 to be unpatentable in our first Final Decision,

and the Federal Circuit affirmed that determination. *Veritas Techs.*, 835

F.3d, at 1415. The proposed substitute claims are reproduced below, with

underlining indicating newly added words and square brackets indicating

removed words:

> 26. A system, comprising:
> a primary storage;
> a backup storage;
> a restore application configured to restore a set of files from the
>   backup storage to the primary storage, wherein the set of files
>   is a subset of a plurality of files that were previously backed-
>   up to the backup storage; and
> a file server configured to, during said restore:

receive, from an application, a request for at least a portion of a particular file on the primary storage;

in response to determining that the particular file is in the set of files, determine that one or more blocks of data of [a]the particular file in the set of files needed by [an]the application have not been restored; and

direct the restore application to restore the determined one or more blocks of data in response to said determination that the one or more blocks of data have not been restored;

wherein the restored one or more blocks of data are provided directly to the application and are accessible by the application while said restore is in progress

27. A non-transitory[2] computer-accessible medium comprising program instructions, wherein the program instructions are configured to implement:

a restore application starting a restore of a set of files from a backup storage to a primary storage, the restore application retrieving one or more properties associated with the set of files from the backup storage;

a file server pre-allocating space on the primary storage where the set of files is to be restored based, at least in part, on the one or more retrieved properties, the file server providing allocation information pertaining to the pre-allocated space to the restore application, wherein the allocation information enables the restore application to generate a map correlating a set of origin blocks on the backup storage to a set of destination blocks on the primary storage;

during said restore:

[a]the file server determining that one or more blocks of data of a file in the set of files needed by an application have not been restored; and

the file server directing the restore application to restore the determined one or more blocks of data in response to said determining that the one or more blocks of data have not been restored, wherein the determined one or more blocks of data

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[2] Double underlining here represents the addition to the claim proposed in Patent Owner's Supplement to Motion to Amend.

> are restored ahead of a default order in which data blocks of
> the set of files are restored during said restore; and
>
> the restore application restoring the determined one or more
> blocks of data;
>
> wherein the restored one or more blocks of data are accessible by
> the application while said restore is in progress.

Mot. 1–3; Supp. Mot. 2–3.

To aid our analysis, it is useful to provide shorthand names for the limitations added in these proposed substitute claims. Proposed substitute claim 26 essentially recites three new limitations. The first specifies that the set of files being restored is a subset of files previously backed up; we refer to this as the "subset" limitation. The second specifies that the request comes from an application and that a determination is made as to whether the request relates to a file in the set of files; we refer to this as the "request" limitation. The third specifies that the restored blocks are provided directly to the application; we refer to this as the "direct" limitation.

Proposed substitute claim 27 also essentially recites three new limitations. The first specifies that properties are retrieved; we refer to this as the "property" limitation. The second specifies that the file server pre-allocates space on primary storage; we refer to this as the "pre-allocation" limitation. The third specifies that the file needed by an application is restored ahead of a default order; we refer to this as the "default order" limitation.

III. ANALYSIS

Patent Owner proposes two substitute claims: claim 26 for claim 1, and claim 27 for claim 20. Mot. 1; Supp. Mot. 2–3. Patent Owner further asks to revise the dependency of corresponding dependent claims, in the

event a claim is substituted. Mot. 1, n.1; Supp. Mot. 1, n.1. Based solely on our review of the record before us and in view of the discussion below, we determine on remand that proposed substitute claim 26 is not patentable and that proposed substitute claim 27 is patentable. We address each in turn.

A. Proposed Substitute Claim 26

Under 35 U.S.C. § 316(d)(3), an amendment in an *inter partes* review cannot introduce new matter. New matter is defined as an addition to the disclosure without support in the original disclosure. Normally, a claim element without support in the original disclosure (i.e., the application as originally filed) merits a rejection under 35 U.S.C. § 112 for lack of written description support. *See, e.g.*, *In re Rasmussen*, 650 F. 2d 1212, 1214 (CCPA 1981) ("The proper basis for rejection of a claim amended to recite elements thought to be without support in the original disclosure, therefore, is § 112, first paragraph . . . .").

Patent Owner's Motion to Amend addresses where it believes written description support can be found in the original disclosure. Mot. 6–10 (citing Ex. 2008). Patent Owner relies on the testimony of John V. Levy, Ph.D. Ex. 2010. Petitioner's Opposition addresses where it finds fault in Patent Owner's analysis (Opp. 2–4), and relies on the testimony of Ahmed M. Amer, Ph.D. (Ex. 1011). Petitioner identifies two limitations in proposed substitute claim 26 that it argues run afoul of the prohibition on new matter, namely, the "subset" limitation and the "directly" limitation. Opp. 2–4. Patent Owner's Reply addresses Petitioner's Opposition (Reply 1–3) and relies on further testimony of Dr. Levy (Ex. 2012). We have reviewed these papers and the evidence cited therein, and begin our analysis with the two limitations identified by Petitioner.

1. The "Subset" Limitation

The "subset" limitation in proposed substitute claim 26 states that "the set of files [to be restored] is a subset of a plurality of files that were previously backed-up to the backup storage." It has two components. First, it requires that the set of files being restored "were previously backed-up to the backup storage." Mot. 1–2. This component provides context—that the to-be-restored files were previously backed up. The second, and more consequential, component requires that the system be configured to restore "a subset of" those previously backed up files.

Patent Owner's stated intent in this proposed amendment is to avoid the prior art, which describes restoring all files on the backup storage. *See* Mot. 4 ("[T]his limitation further clarifies that the set of files is not . . . all the files [on the backup storage] but, rather, a particular subset of files . . . ."); *see also* Ex. 2010 ¶ 56 (similar); Final Dec. 25 (finding that the prior art's disclosure of restoring all blocks from backup storage "will result in a restoration of a set of files" as recited in claim 1). Because the scope of the phrase "subset of a plurality of files" includes all or less than all of the files,[3] Patent Owner states that the proposed claim amendment is intended to clarify that less than all files may be restored. Mot. 4.

In alleging that the "subset" limitation meets the requirements of 35 U.S.C. § 316(d)(3), Patent Owner cites to a little over a third of the 51 paragraphs in the original disclosure (Exhibit 2008) as providing support. Mot. 7 (citing paragraphs 2–4, 6, 9, 11, 20, 21, 24, 25, 27, 28, 34, 35, 38, 39, 41, and 42). Patent Owner also cites to the testimony of its expert, Dr. Levy.

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[3] According to Patent Owner's expert, Dr. Levy, "[a] subset is a *portion or all* of the set." Ex. 1009, 15:8–25 (emphasis added).

Id. (citing Ex. 2010 ¶¶ 40–43). Dr. Levy, in turn, provides a more precise

explanation. Ex. 2010 ¶¶ 42–43 (citing Ex. 1001, 1:10–40, 1:66–2:9, 2:28–

31, 6:62–7:12, 8:49)[4]; *see also id.* ¶ 44 (citing Ex. 1001, 8:14–38).

Petitioner argues that it has reviewed Patent Owner's citations and is

unable to find "indication that the inventor possessed restoring only some of

the previously backed up files." Opp. 3; *see also id.* at 2–3; Ex. 1011 ¶¶ 23–

26. Petitioner focuses on the three main passages of the '527 patent relied

on by Dr. Levy, which we discuss in turn. As to the remainder of the cited

passages, Patent Owner does not identify their relevance, and we do not

discern them to be more persuasive evidence than the passages discussed by

Dr. Levy.

Dr. Levy first testifies that for certain embodiments in the '527

patent's original disclosure "there is a request to restore 'some files,' rather

than 'all the files.' [Ex. 1001,] 8:49 . . . ; 6:67." Ex. 2010 ¶ 42. The

relevant description in column 8 of Exhibit 1001 states:

> FIG 4 illustrates the restore mechanism in an environment
> with a media server according to one embodiment. Primary
> storage 206 may be, for example, a disk array that holds the data
> being accessed by the file server 200 and to which a restore is

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[4] Dr. Levy cites to the issued '527 patent, Exhibit 1001, instead of its
original disclosure, which Patent Owner alleges can be found in
Exhibit 2008. The test for new matter is relative to the original disclosure
in a patent application, not relative to the issued patent. Patent Owner
provides Exhibit 2009, however, which is a claim chart that correlates
citations in the '527 patent to the original application. We are not aware of
any meaningful difference between the disclosures of Exhibits 1001 and
2008. We follow Dr. Levy's convention because it provides more precision
with respect to citations, and because there does not seem to be a dispute that
Exhibit 1001 contains essentially the same relevant disclosure as
Exhibit 2008.

being performed. The backup storage 204 may hold the data that
was previously stored as part of a backup operation. In one
embodiment, the restore application may reside primarily on the
Media Server 202. In one embodiment, some components of the
restore application may reside on the File Server (client) 200. *In
one embodiment, when a request is made to restore some files,
the files may be pre-allocated and mapped by the restore
application using the capabilities of the file system on file server
200.* The extents pre-allocated by the file server 200 may be
transferred to the Media Server 202, and the restore application
may correlate the location of the data on the backup storage 204
to the extents on the Primary Storage 206.

Ex. 1001, 8:39–55 (emphasis added).

Notably, this passage does not compare or contrast "some files" with
"all the files," as Dr. Levy alleges. *See* Ex. 2010 ¶ 42. It does not mention
"all the files," and Dr. Levy fails to identify a source for this quoted
language. In any event, this passage states only that there is a request "to
restore some files." Ex. 1001, 8:49. Petitioner's expert, Dr. Amer, testifies
that that a person of ordinary skill in the art would understand this passage to
state that "the inventor was using the map to track whether blocks had been
restored . . . not [to] describe restoring only selected files of the files that
were previously backed up." Ex. 1011 ¶ 26. We find the testimony of Dr.
Amer to be persuasive over that of Dr. Levy, for the reasons that follow.

The passage reproduced above, and relied upon by Dr. Levy, never
states that less than all the files backed up are restored. First, the passage
establishes that "the data" being operated on in this passage is the data from
a disk array. Ex. 1001, 8:41–43. In other words, the passage is discussing a
disk array, not individual files thereon. That disk array is the primary
storage, and the backup storage simply holds what was in primary storage.
Id. at 8:43–45 (stating that backup storage holds "the data that was

previously stored as part of a backup operation"). Accordingly, there is a correspondence between the primary and backup storage—the latter holds the backed up version of the former. A map is created to keep track of the correspondence. *Id.* at 8:48–51. As Dr. Amer testifies, however, there is no discussion in this passage of a selection of less than all of the backed up data, or some other method for culling the data. Ex. 1011 ¶ 26. Thus, there is no reason a person of ordinary skill in the art would understand that anything less than all of "the data" just discussed in the prior sentences, i.e., the contents of the backup storage backed up from the disk array of the primary storage, are involved in the restore. We credit the testimony of Dr. Amer that this passage does not provide support for the "subset" limitation.

Dr. Levy next testifies that the "subset" limitation finds support at column 6, line 67, which states "[i]n one embodiment, *for each file in the restore*, there may be a map 120 generated for that file that correlates source and destination information for the file." Ex. 2010 ¶ 42 (emphasis added). This passage states no more than that there is a map generated that includes each file. Just as in the column 8 passage described above, there is nothing that describes less than all files being restored.

Dr. Levy then testifies that the '527 patent "describes embodiments in which the system does a pre-check to determine whether or not a file that is being requested is in the set of files being restored." Ex. 2012 ¶ 31. Dr. Levy does not provide a citation here, but we understand him to be referencing column 8, lines 14 through 17. In context, however, this passage does not state what Dr. Levy says—instead it merely discloses pre-checking

whether a requested file has already been restored. The relevant portions of

column 8 of the '527 patent are reproduced below:

> The restore may be preceding normally in the background while on-demand restores may be occurring if the file system 110 determines blocks that it needs have not yet been restored.
>
> While the data is being moved, the map 120 is being updated so that the map 120 reflects what has been restored to the primary storage 116. . . .
>
> . . . .
>
> In one embodiment, *if a file access by an application does not involve a file that is being restored*, then the file system 110 may determine that it does not have to check the map to determine if the file's blocks have been restored. In one embodiment, the restore application 112 may inform the file system 110 *when the restore has completed so that the file system 110 will know it no longer needs to check the map* 120 and the map 120 may be disposed of the desired.
>
> In one embodiment, each file's metadata may include an indication to mark if the file is to be restored. When the file system 110 receives a request for a file or a portion of the file, the file system 110 may check the metadata for the file to determine if the file is to be restored. . . . In one embodiment, *the file system 110 may check the file's metadata to determine if the file has been restored; if the file has been restored, then the file system 110 can serve the request without checking the map* 120; otherwise, the file system 110 checks the map 120 and, if the map 120 indicates the needed blocks have not been restored, notifies the restore application 112 to restore the needed non-restored blocks.

Ex. 1001, 8:4–38 (emphases added).

Notably, the passage does not state the pre-check is of whether the file

"*is in* the set of files being restored," as Dr. Levy characterizes it. Ex. 2012

¶ 31 (emphasis added). Instead, the passage states that the pre-check is of

whether the access "*involve[s]* a file that is being restored." *Id.* at 8:15

(emphasis added). As the remaining portions of this passage make clear, a file is not involved in restoration *after it has been restored*. *Id.* at 8:32–35 ("[T]he file system 110 may check the file's metadata to determine if the file has been restored; if the file has been restored, then . . . ."). When a file is no longer being restored, i.e., it has been restored fully, its metadata indicates as much, so that the file system knows that it does not need to check the map for that file. *Id.* Contrary to Patent Owner's arguments, the passage at this portion of column 8 of the '527 patent describes keeping track of files that have been restored, and not checking blocks for those files that have been restored. *See id.* Accordingly, we credit the testimony of Dr. Amer, who testifies that he has reviewed the passages cited by Dr. Levy but does not find them to describe the "subset" limitation. Ex. 1011 ¶ 24.

In conclusion, we find that Patent Owner fails to establish sufficiently that the original disclosure of the '527 patent describes restoring less than all of the backed up files. Similarly, we find that the '527 patent disclosure does not describe functions or processes that would permit it to do so. Instead, the passages relied upon by Patent Owner for implicit support do not provide support, as they are not given their proper context. At best, the disclosure as a whole does not *preclude* a system that restores less than all of the backed up files, but that does not provide reasonable conveyance of possession of the invention. *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997) ("[I]t is not a question of whether one skilled in the art *might* be able to construct the patentee's device from the teachings of the disclosure [but] whether the application necessarily discloses that particular device." (internal citation and quotation omitted) (cited with approval in *Ariad Pharm., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1352 (Fed. Cir.

2010))). Accordingly, we are persuaded that Patent Owner was not in possession of a restore application configured to restore less than all of the files that were previously backed up. We find that the "subset" limitation in proposed substitute claim 26 lacks written description support under 35 U.S.C. § 112(a) and, therefore, does not comply with 35 U.S.C. § 316(d)(3).

2. *The "Direct" Limitation*

The "direct" limitation specifies that the restored one or more blocks of data are provided directly to the application. Patent Owner cites to 14 of the 51 paragraphs in the '527 patent, as well as 4 paragraphs that are not in the '527 patent. Mot. 8 (citing Ex. 2008 ¶¶ 5–8, 28, 32, 33, 36, 39, 40, 42, 43, 50, 51, 70, and 73–75[5]). Patent Owner also cites the testimony of Dr. Levy, who in turn cites to Exhibit 1001. Exhibit 2010 ¶¶ 45–46 (citing Ex. 1001, 3:46–49, 4:67–5:7, 7:40–44).

Petitioner argues that the '527 patent describes providing the blocks *indirectly* to the application, via the file system. Opp. 4. Petitioner relies on the testimony of Dr. Amer. *Id.* (citing Ex. 1011 ¶¶ 27–28). Dr. Amer points out that the '527 patent states that "the restore application 112 may provide the requested block directly to the requestor (e.g. file system 110)," which he asserts is not the application. Ex. 1011 ¶ 28 (quoting Ex. 2008 ¶ 27). Dr. Amer concludes that the specification does not describe providing the data directly to the application, but rather indirectly.

Turning to the specification, we find the testimony of Petitioner's expert, Dr. Amer, convincing. Paragraph 27 of Exhibit 2008 (corresponding

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[5] Exhibit 2008 only contains 51 paragraphs. *See* Ex. 2008 ¶ 51 (the last paragraph).

to Ex. 1001, 4:58–5:9) describes the "requestor" as either the file system or the media server, based on the context in the passage. It does not describe or suggest that the application is the requestor. Specifically, as stated in the paragraph, the first step in the restore is that a file system or media server determines whether an application needs a block that has not been restored. Ex. 1001, 4:63–66. Notably, the application does not request a block—the file system or media server determines whether the request *involves* a block not restored. It is the purpose of the file system (or equivalent) to convert file names into the blocks actually holding the data. *See, e.g.*, Ex. 2010 ¶¶ 32–33 (describing how the file system receives a file read command, causing it to look to which blocks correspond to that file); *see also* Ex. 2006 ¶ 36; Ex. 1007 ¶ 38 (similar). The implication is that instead of requesting blocks, the application requests files (because the application does not know how the file system is organized; that is the purpose of the file system). Further, we note that the specification describes how either the restore application or the file server, media server, or the like, updates the map so that the overall system knows whether the data has been restored. *See* Ex. 1001, 4:45–57 (describing the restore application, file system, driver, volume manage, or a combination thereof maintain the map); 7:13–32 (similar). The application is not described in the '527 patent's original disclosure as having access to this map, or being able to restore the data. This is further indication that the '527 patent does not consider the application to be something that directly receives a block, because the '527 patent does not discuss the application interfacing with the map. Thus, as described in the '527 patent, the application does not know which block to request or where to restore it to, if it were received. This, again, is

consistent with the various components of the system performing their established roles, i.e., the application not making requests for blocks. In conclusion, in the first step of the restore, the file or media server—not the application—determines whether an application needs an unrestored block.

The second step of the restore is that the file system or media server *sends a request* to the restore application to restore the block. *Id.* at 4:67–5:6. In this way, the file system or media server is the "requestor," as far as the restore application is concerned. The third step is for the restore application to restore the block. *Id.* at 5:5–6. Patent Owner's argument relies on an alternative embodiment to the third step for support, which states that, instead of the restore application restoring the requested block, the requested block can be provided "directly to the requestor (e.g. file system 110)." *Id.* at 5:7–9. Given the context of the steps just described, even in this alternative embodiment, the "requestor" is simply the entity making the request in the prior sentence, i.e., the file system or media server.[6] Thus, this passage does not provide the written description support Patent Owner alleges.

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[6] Other passages in the specification indicate that the request is made by the file system, volume manager, file server, media server, or a driver, i.e., entities that act as the intermediary for the application, but never the application itself. Ex. 1001, 3:42–45 (request by file system or volume manager); 4:58–63 (request by media server); 5:10–26 (request by file server, file system, a driver on the file server, or media server); 5:57–6:1 (similar); 7:37–40 (request by file system); 8:28–31 (similar); 8:61–64 (similar); 9:16–19 (similar); 9:26–28 (request by driver under the file system); 9:56–60 (request by file system). This, again, is consistent with these entities maintaining their established roles.

Furthermore, even assuming the alternative embodiment provides support as argued by Patent Owner, it is clear that proposed claim 26 does not encompass this alternative embodiment. The alternative embodiment requires that the block is provided directly to the requestor *in lieu of* the restore application restoring the block immediately. *Id.* at 5:5–9 ("[T]he restore application . . . restore[s] the block . . . . *Alternatively*, the restore application 112 may provide the requested block directly . . . ." (emphasis added)). Proposed claim 26 claims, however, that the *restore application* is directed to restore the block. Thus, that clause in the claim specifies that it is the restore application that restores (copies to primary storage), such that the alternative of providing the block directly to the file system is precluded by proposed by claim 26.

Patent Owner next argues that Petitioner's expert, Dr. Amer, admits that the requestor in the above-cited passage in column 5 could be the application. Reply 2–3 (citing Ex. 2013, 22:20–23:9). We have reviewed the cited testimony of Dr. Amer and do not find that his statements amount to an admission that the disclosure provides adequate written description support for proposed substitute claim 26. Dr. Amer was asked, during cross-examination, what the "requestor" could be that is referenced in column 5, line 8. Ex. 2013, 21:17–24:19. When asked what besides the file system could be the "requestor," Dr. Amer made clear he could "only answer in general and not with regard to the specific cite." *Id.* at 22:22, 23:8–9, 23:16–19. He then provided an explanation of "all [the] different possibilities in a general data storage system." *Id.* at 23:8–9. Those possibilities included an application requesting data "through an underlying file system," "through [a] higher level API that then goes through a file

system," or "if it has sufficient privileges, directly to the underlying block storage device." *Id.* at 22:25–23:7. This is nothing more than an exposition of all of the variants theoretically possible or obvious to Dr. Amer of what *could* request a block. Possession of an invention is not shown by exposition of what would be obvious to a person of ordinary skill in the art in view of the disclosure; it extends only to those things actually described as being the invention. *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) ("[A] description that merely renders the invention obvious does not satisfy the requirement." (citing *Lockwood v. Am. Airlines,* 107 F.3d 1565, 1571–72 (Fed. Cir. 1997))); *Lockwood*, 107 F.3d at 1572 ("[I]t is not a question of whether one skilled in the art *might* be able to construct the patentee's device from the teachings of the disclosure [but] whether the application necessarily discloses that particular device." (internal citation and quotation omitted)). Given this, and that Dr. Amer goes to lengths to clarify that his statement is "in general" and not with respect to the '527 patent disclosure, we do not find Dr. Amer to have conceded that Patent Owner had possession of an invention where the "requestor" could be the application.

In light of the above, we find that: (1) the specification makes clear that the "requestor" in the column 5 passage is the file system or media server; it is not an open-ended call for anything that could possibly request; (2) the specification makes clear that there are many devices that also could be the requestor (*see supra* n.6), but none of them are the application; (3) these requestor entities are described as having access to the map, but not the application; and (4) Dr. Amer does not concede that Patent Owner has possession of an invention where the application is the requestor. As such,

we are persuaded that Patent Owner fails to establish sufficiently that it was in possession of a system wherein the restored blocks of data are provided directly to the application. We find that the "direct" limitation in proposed substitute claim 26 lacks written description support under 35 U.S.C. § 112(a) and, therefore, does not comply with 35 U.S.C. § 316(d)(3).

B. *Proposed Substitute Claim 27*

For this claim, Patent Owner provides its analysis regarding written description support (Mot. 8–10; Supp. Mot. 3–5) and how the claim distinguishes over the prior art (Mot. 12–13, 14–15; Supp. Mot. 8–10). Patent Owner relies on the testimony of Dr. Levy (Ex. 2010). Petitioner argues that the claim is unpatentable for being directed to non-statutory subject matter (Opp. 1–2), is not amended in response to a ground of unpatentability involved in the trial (Supp. Opp. 1–2), introduces new matter (Opp. 5; Supp. Opp. 2–3), is indefinite (Opp. 6; Supp. Opp. 4), and is not patentable over the prior art (Opp. 8–10, 12–13; Supp. Opp. 4–10). Petitioner relies on the testimony of Dr. Amer (Ex. 1011). Patent Owner replies to Petitioner's arguments in its Reply and Supplemental Reply, which rely on further testimony of Dr. Levy (Ex. 2012). We have reviewed these papers and the evidence cited therein.

Based upon our review, we determine that Patent Owner has demonstrated persuasively that its Motion should be granted with respect to proposed claim 27. We address the section 112 issues, then the sections 102 and 103 issues, the section 101 issue, and finally the responsive to a ground of unpatentability issue.

1. 35 U.S.C. § 112 – Written Description

Petitioner argues that proposed substitute claim 27 does not have sufficient written support of its "property" and "default order" limitations. Opp. 5; Supp. Opp. 2–3. With respect to the "default order" limitation, Petitioner argues that the specification states that the blocks may be restored "on demand and out-of-order" but does not describe possession of a "default order." Opp. 5 (citing Ex. 1001, 3:51–53; Ex. 1011 ¶ 30); Supp. Opp. 2–3 (citing the same evidence). Patent Owner offers the testimony of Dr. Levy, who testifies that the "out-of-order" restoration means that the restoration is not the "standard or default order" and that the "out-of-order" blocks "are being restored ahead of this order." Ex. 2012 ¶ 35.

We agree with Patent Owner that the "default order" referenced in the claim is the order that the block would have been restored absent the request to restore it out of order. The '527 patent describes the on-demand restoration as "out-of-order," i.e., not in the order it would have been restored absent the request. Ex. 1001, 3:52–54. We credit the testimony of Dr. Levy that "out-of-order" here would be understood as restored ahead of the standard or default order. Ex. 2012 ¶ 35. Therefore, we find that Patent Owner was in possession of an invention that restores blocks out of order, that is, ahead of a "default order."

Petitioner also argues that there is an issue with respect to the "during said restore" aspect of the "default order" limitation. Opp. 5 (referencing the argument at Opp. 4). Petitioner criticizes Patent Owner's narrow interpretation of the limitation in Patent Owner's Response (*see* Paper 18, 5,

17[7]) and argues that "the specification contemplates restoring needed blocks throughout the restore process." *Id.* at 4. We construed "during said restore" to mean "at some point in the entire time of; in the course of" in our first Final Written Decision. Final Dec. 8–10. In view of our construction in the first Final Written Decision, Petitioner's argument is mooted because our construction contemplates the example where blocks can be recovered throughout the restore process.

With respect to the "property" limitation, Petitioner argues that the '527 patent describes that the restore application provides properties, but not that it retrieves properties. Opp. 5 (citing Ex. 1011 ¶ 31; Ex. 1001, 6:51–53; Ex. 2010 ¶ 47); Supp. Opp. 3 (citing Ex. 1001, 6:51–53; Ex. 1011 ¶ 31; Ex. 2012 ¶ 47; Ex. 2013, 52:5–58:18). Patent Owner points to a portion of the specification that states that the "restore application 112 may provide the file names and size of the files, and potentially other information about the set of files." Reply 3 (citing Ex. 1001, 6:47–53). Patent Owner's expert, Dr. Levy, further testifies that the properties would be stored on primary or backup storage and could be retrievable from there. Ex. 2012 ¶ 38 (citing Ex. 2013, 111:5–113:8). We are persuaded by Patent Owner's arguments.

Petitioner's argument is essentially that the restore application provides properties but that the specification does not describe from where it gets those properties, let alone that it gets them from backup storage. Opp. 5; *see also* Ex. 2013, 111:5–113:8 (Petitioner's expert, Dr. Amer, testifying that the specification "makes no reference as to where [the properties are] retrieved from").

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[7] Paper 18 is Patent Owner's Response to the Petition.

Petitioner's arguments are based upon an improper construction of proposed claim 27. The claim states that the restore application "retriev[es] . . . [the] properties associated with *the set of files from the backup storage*" (emphasis added). We do not construe this phrase as requiring that the restore application gets the properties from the backup storage, but rather that the restore application gets the properties from the files that are from the backup storage. In other words, we construe the prepositional phrase "from the backup storage" to modify the "set of files," on the principle that modifiers are generally next to the words that they modify. *See, e.g.*, William Strunk, Jr. & E.B. White, *The Elements of Style* 30 (4th ed. 2000) ("Modifiers should be placed next to the words they modify."). Our reading here is consistent with the reading of the phrase proposed by Patent Owner's expert, Dr. Levy. Ex. 2010 ¶ 59 (testifying that he understands the limitation to require "the restore application to retrieve . . . properties associated with this set of files that are being restored from the backup storage"). Accordingly, Petitioner's argument about where the restoration retrieves the properties from is premised on an improper interpretation of the claims.

We are persuaded that Patent Owner has established that proposed claim 27 does not add new matter. Specifically, for the reasons discussed above, we agree with and adopt as our own Patent Owner's position as to where each newly added limitation finds support in the original disclosure. Mot. 8–10.

2. *35 U.S.C. § 112 – Definiteness*

Petitioner asserts that inclusion of the phrase "during said restore" renders the claim indefinite. Opp. 6. We construed this claim term in our

first Final Written Decision and do not agree that the term is indefinite.

Final Dec. 8–10. Petitioner also asserts that it is unclear what the phrase

"based, at least in part" modifies in the "pre-allocation" limitation. Opp. 6;

Supp. Opp. 4. Petitioner states that "based" could modify "pre-allocating"

or "restored." Opp. 6; Supp. Opp. 4. As we will explain, from the context

of the claims and specification, we determine that the portion of the sentence

beginning with the word "based" serves as a phrase to tell the reader how the

file server pre-allocates space, and that there is no definiteness issue.

The relevant part of the "pre-allocation" limitation states, "a file

server pre-allocating space on the primary storage where the set of files is to

be restored based, at least in part, on the one or more retrieved properties."

The subject of the clause is "file server." It is "pre-allocating" (a verb)

something: "space" (an object). There is then a chain of modifiers,

clarifying that the space is "on the primary storage" and the primary storage

is, in turn, "where the set of files is to be restored." The next word is the

word at question, "based." Taking out the chain of modifiers, which simply

expound on other parts of the clause, the clause reads: *a file server pre-*

allocating space based [remainder of clause]. Thus, "based" tells the reader

how the pre-allocation of space is done by the file server. This makes sense

in context, because one of the retrieved properties may be size, a highly

relevant piece of information used to determine how to pre-allocate space.

Ex. 1001, 6:51–58 (explaining that the restore application provides file

names and sizes to the file system, which uses that information to pre-

allocate space). Accordingly, we disagree with Petitioner that the phrase is

unclear or indefinite.

22

In light of the above, Petitioner has not persuaded us that proposed claim 27 is indefinite. Further, we are persuaded that Patent Owner has established sufficiently that the claim is definite. Specifically, for the reasons discussed above, we agree with and adopt as our own Patent Owner's position as to what the claim means. Mot. 5–6.

3. 35 U.S.C. §§ 102 & 103 – Prior Art

Patent Owner first discusses how Ohran, the primary reference asserted against its claims during trial, fails to disclose the new limitations, e.g., the "property" limitation, in which "the restore application retriev[es] one or more properties associated with the set of files." Mot. 12–13 (citing Ex. 2010 ¶¶ 148). Patent Owner argues that Ohran is directed to block-level restoration, such that "Ohran lacks any meaningful disclosure regarding files, let alone retrieving any information [i.e., properties,] about any such files" (Mot. 12 (citing Ex. 2010 ¶ 148)). Petitioner does not point to a disclosure of Ohran (or WinNT) with respect to the file-level aspects of the claim. We agree with Patent Owner that Ohran does not disclose the "property" limitation, and we determine that this additional limitation overcomes the ground originally asserted against claim 20 (which claim 27 proposes to replace).

As to whether substitute claim 27 is patentable over the prior art in general, Patent Owner addresses how Dr. Levy's testimony explains that the prior art does not disclose the subject matter of claim 27 as a whole. Mot. 14–15 (citing Ex. 2010 ¶¶ 93–95). Petitioner argues that the newly-added limitations are described in Curran (Ex. 1002), Ohran (Ex. 1003), Kodama I (Ex. 1013), or Kodama II (Ex. 1014). Opp. 8–10, 12–13 (citing Ex. 1011 ¶¶ 30, 35–39, 41, 45); Supp. Opp. 5–9 (providing a claim chart

addressing the limitations of claim 27). Patent Owner responds that those references are directed to the block level (as opposed to the file level) or to different processes altogether. Reply 4–5 (citing Ex. 2012 ¶¶ 43–66); Supp. Reply 4–5 (similar). We have reviewed these papers and the evidence cited therein.[8]

Our previous determination that claim 20 would have been obvious was based upon a combination of Ohran and WinNT. *See* Final Dec. 13. We start our analysis there. A fundamental feature of Ohran is that it uses block-level restoration. *See* Ex. 1003 ¶ 20; Ex. 2010 ¶ 149 (Dr. Levy testifying that "Ohran is a block level restore"). There is no need to pre-allocate space on the primary storage in Ohran because the backup storage is an exact block-by-block replica of the primary storage. Ex. 2010 ¶ 149; Ex. 2012 ¶ 62. As Dr. Levy, testifies "blocks on the backup have a one-for-one correspondence to blocks on the primary" (Ex. 2010 ¶ 149), such that "there is no need to preallocate (or allocate) any space on either disk" (Ex. 2012 ¶ 62). We agree with Dr. Levy's analysis. Accordingly, we find there is no reason to pre-allocate space for restoration in a block-level restoration, nor does Petitioner offer a sufficient reason. As such, we are not apprised of a reason for adding pre-allocation of space in a block-level restoration, and there is a reason why a person of ordinary skill in the art would not have

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[8] Dr. Levy also cites various documents he allegedly considered as prior art in paragraphs 82 through 89 of his Exhibit 2010 declaration. These documents were not submitted as exhibits, and are not considered. 37 C.F.R. § 42.63(a) ("Evidence consists of affidavits, transcripts of depositions, documents, and things. *All evidence must be filed in the form of an exhibit.*" (emphasis added)).

considered to add such a step (i.e., the blocks already have a one-for-one correspondence to blocks on the primary storage).

Petitioner has also directed our attention to Curran with respect to proposed claim 27. Opp. 9, 12–13. Curran provides on-demand restoration of files, but only checks whether the file has been restored, rather than any individual blocks in the file. Ex. 1002, 1:45–52 (on-demand restore), 3:19–24 (restoration of a *file* out of turn). To modify Curran's system to comport with proposed claim 27 would require a further step of determining whether blocks of a requested, unrestored file have been restored. *See* Dec. on Inst. 11–12 (finding persuasive Patent Owner's argument that Curran does not teach this limitation in claim 20). But if Curran's restoration is proceeding file by file, then if a file is not restored, then none of its blocks would have been restored. Accordingly, based on our understanding of the art (as informed by the art and declarations of record), in a file-level restoration system, once a file is requested and it is determined that it needs to be restored, there is no reason to check whether one or more blocks of that file need to be restored—all of them need to be restored. We also note that Petitioner has not offered a persuasive reason to modify Curran in this way. Accordingly, we are not apprised of a reason for modifying Curran's file-level restoration to make a further check if the blocks of an unrestored file have been restored, and there is a reason why a person of ordinary skill in the art would not have considered such a step (all blocks of a file need to be restored in order to restore the file).

Petitioner also directs us to Kodama I and II. Opp. 9–10, 12–13; Supp. Opp. 5–9. Kodama I describes a system that provides a recovery mode where blocks on an external disk are used to replace blocks on a local

disk. Ex. 1013 ¶ 40; *see also id.* ¶ 35 (describing a block map to track recovery). Kodama I is directed to block-level mirroring and recovery. Ex. 1013 ¶ 9 (describing a bitmap for keeping track of blocks); *see also* Ex. 2012 ¶ 60 (Dr. Levy testifying that Kodama I describes "synchronization . . . at block level" and is "unaware of files"). Kodama II describes a system that essentially describes an on-demand request for a block. *See* Ex. 1014 7:8–27; Ex. 1011 ¶ 35. It also is directed to the block level. *See* Ex. 1014, 2:21–31 (discussing block level operations); Ex. 2012 ¶ 60 (Dr. Levy testifying that "synchronization in Kodama [II] occurs . . . at block level). Because these references are at the block level, they share the inadequacies of Ohran expressed above.

In conclusion, we find that Curran and Ohran are missing certain features of the claim. On the record before us, we do not see a reason why a person of ordinary skill in the art would have modified these references to arrive at the claimed invention. In addition, we are aware of reasons, stated above, why a person of ordinary skill in the art would not have pursued these modifications. Accordingly, Patent Owner's Motion convinces us that that proposed claim 27 is patentable over the prior art of record.

4. *35 U.S.C. § 101 – Statutory Subject Matter*

Petitioner argues that a computer-accessible medium, as defined by the '527 patent, includes transitory signals conveyed over a network and is unpatentable. Opp. 1 (citing *In re Nuijten*, 500 F.3d 1346, 1356 (Fed. Cir. 2007)). Specifically, the '527 patent states:

> Generally speaking, a carrier medium may include storage media or memory media such as magnetic or optical media, e.g., disk or CD-ROM, volatile or non-volatile media such as RAM (e.g. SDRAM, DDR SDRAM, RDRAM, SRAM, etc.), ROM, etc. *As*

> *well as transmission media or signals such as electrical,*
> *electromagnetic, or digital signals, conveyed via a*
> *communication medium such as network and/or a wireless link.*

Ex. 1001, 10:2–9 (emphasis added).

In addition, Patent Owner's expert, Dr. Levy, admits that the "specification does disclose that some embodiments may be implemented by . . . a carrier medium . . . [that] include[s] . . . transmission media." Ex. 2012 ¶ 74 (citing Ex. 1001, 9:66–10:9).

In a precedential opinion, a panel of the Board determined that a claim directed to "machine-readable storage medium" fails to define statutory subject matter under 35 U.S.C. § 101 unless limited expressly to exclude signals, carrier waves, etc. *Ex parte Mewherter*, Appeal 2012-007692, 107 USPQ2d 1857 (PTAB 2013). As a result of the Supplement to the Motion to Amend, claim 27 contains such an express limitation, because it is directed to a "non-transitory computer-accessible medium." Accordingly, we are determine that, under 35 U.S.C. § 101, claim 27 is directed to statutory subject matter. *See* Supp. Mot. 7–8.

5. Whether the Supplement to the Motion to Amend Was Responsive to a Ground of Unpatentability

Our Rules provide that "[a] motion to amend may be denied" where "[t]he amendment does not respond to a ground of unpatentability involved in the trial." 37 C.F.R. § 42.121(a)(2)(i). Petitioner points out that 35 U.S.C. § 101 cannot be a basis for a ground of unpatentability in *inter partes* reviews[9] and argues that the Supplement to the Motion to Amend,

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[9] 35 U.S.C. § 311(b) states: "A petitioner in an inter partes review may request to cancel as unpatentable 1 or more claims of a patent *only on a ground that could be raised under section 102 or 103* and only on the basis

adding "non-transitory" to overcome a potential 35 U.S.C. § 101 issue, is not responsive to a ground of unpatentability involved in the trial. Supp. Opp. 1–2.

Patent Owner points to the Board's "broad discretionary powers to . . . determine the conduct of a proceeding and consider additional motions to amend." Supp. Reply 1–2 (citing 37 C.F.R. §§ 42.5(b),[10] 42.121(c)[11]). Patent Owner also points to USPTO Guidance, which provides a procedure for overcoming a claim rejection such as one under *Mewherter*. *Id.* at 1 (citing *Subject Matter Eligibility of Computer Readable Media*, 1351 Off. Gaz. Pat. Office 212 (Feb. 23, 2010)). Patent Owner argues further that the "procedural nuances in IPRs" preclude the same ability to easily address this issue and that we should use our "broad discretionary powers" to allow Patent Owner to modify proposed substitute claim 27 to include the words, "non-transitory." *See id.* at 1–2.

In our view, the requirement in 37 C.F.R. § 42.121(a)(2)(i) that precludes amendments not responsive to a ground of unpatentability in a trial requires that any claim proposed in a motion to amend must be the result of a genuine effort to overcome the instituted grounds. We do not view the requirement to be that every word added to or removed from a claim in a motion to amend must be solely for the purpose of overcoming an instituted ground. Thus, we do not view 37 C.F.R. § 42.121(a)(2)(i) as

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of prior art consisting of patents or printed publications." (Emphasis added).

[10] 37 C.F.R. § 42.5(b) states, "The Board may waive or suspend a requirement of parts 1, 41, and 42 and may place conditions on the waiver or suspension."

[11] 37 C.F.R. § 42.121(c) provides for the Board to authorize an additional motion to amend.

precluding additional modifications that address potential 35 U.S.C. § 101 or § 112 issues.

Once a proposed claim includes amendments to address the prior art grounds in the trial, a patent owner can also include additional limitations to address potential § 101 or § 112 issues. Allowing an amendment to address potential 35 U.S.C. § 101 or § 112 issues in a motion to amend under 37 C.F.R. § 42.121, when a given claim is being amended already in view of a 35 U.S.C. § 102 or § 103 ground, serves the public interest by ensuring issuance of valid and clear patents. In this proceeding, with proposed substitute claim 27, Patent Owner has added limitations in an attempt to distinguish over the prior art. Thus, the proposed claim as a whole is "responsive to a ground of unpatentability involved in the trial," and we determine in this circumstance that the additional words added to address the § 101 issue are permissible.

Further, we note for clarity that we did not provide Patent Owner a second motion to amend under 37 C.F.R. § 42.121(c). Instead, we provided Patent Owner an opportunity to *supplement* its original motion by modifying proposed substitute claim 27 to add "non-transitory."

6. *Conclusion for Proposed Substitute Claim 27*

Our analysis above shows that Patent Owner demonstrates sufficiently that proposed substitute claim 27 satisfies the requirements of 35 U.S.C. §§ 101, 112, 102, and 103 by a preponderance of the evidence before us. We grant Patent Owner's Motion to enter proposed substitute claim 27.

7. Existing Dependent Claims 21–25

Patent Owner also requested that we revise the dependency of the claims originally depending from claim 20, now amended as proposed substitute claim 27. Those are claims 21–25. Patent Owner's request is not in the proper form, which would require proposing, e.g., substitute claims 28–32 that were duplicates of claims 21–25, and providing an analysis of how they meet the statutory requirements of patentability. Although the former requirement is trivial, the latter may not be. Changing dependency may introduce problems, e.g., under 35 U.S.C. § 112.[12]

Here, however, we see no issues with Patent Owner's proposal. Claim 21 specifies that the map generation is prior to the restore and that the determination uses the map. Claim 22 discusses the restore application using messages. Claim 23 specifies that the file system of the file server is what determines. Claim 24 specifies that the driver of the file server is what determines. Claim 25 specifies that the map is updated. The newly added limitations of proposed claim 27 do not introduce any apparent section 112(a), (b), or (d) issues. Accordingly, Patent Owner's analysis with respect to independent proposed claim 27 is sufficient in this instance. We

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[12] For example, consider original claims 1–3:
1. A nail.
2. The nail of claim 1, made of aluminum.
3. The nail of claim 1, made of steel.
Proposed substitute claim 4: A nail, made of steel.
With this proposed substitute claim 4, claim 2 would fail if amended to depend from claim 4, unless the specification had support for a steel/aluminum nail. Claim 3 would also fail, for failing to further limit the independent claim.

therefore grant Patent Owner's Motion to update the dependency of current claims 21–25 to depend from proposed substitute claim 27.

IV.   ORDER

In view of the foregoing, it is hereby:

ORDERED that Patent Owner's Motion is *granted in part*; the Motion is *denied* as to proposed claim 26 and *granted* as to proposed claim 27;

FURTHER ORDERED that Patent Owner's request in its Motion to update the dependency of current claims 21–25 is *granted*, and Patent Owner must file, no later than five business days from the entry of this Decision, a paper listing the updated dependent claims; and

FURTHER ORDERED that this is a final written decision and that 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.

Case IPR2014-00090
Patent 7,024,527

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