

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NETSKOPE, INC.,

Petitioner,

v.

FORTINET, INC.,

Patent Owner.

PTAB Case No. IPR2023-00456

Patent No. 11,036,856

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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UPDATED EXHIBIT LIST

Exhibit	Description
1001	U.S. Patent No. 11,036,856 to Graun et al. (“the ’856 patent”)
1002	Supporting Declaration of Dr. Michael Franz (“Franz”)
1003	File History of U.S. Patent No. 11,036,856
1004	U.S. Patent No. 11,281,775 to Burdett et al. (“Burdett”)
1005	FortiSandbox – Administration Guide, Version 2.3.2 (“FortiSandbox”)
1006	U.S. Patent No. 9,811,662 to Sharpe et al. (“Sharpe”)
1007	U.S. Patent Publication No. 2015/0100357 to Seese et al. (“Seese”)
1008	U.S. Patent Publication No. 2020/0050686 to Kamalapuram et al. (“Kamalapuram”)
1009	U.S. Patent No. 10,382,468 to Dods (“Dods”)
1010	Microsoft Computer Dictionary, Fourth Edition (1999)
1011	Declaration of Andrew N. Klein in Support of Motion for Pro Hac Vice Admission
1012	Transcript of the Testimony of John Richard Black (February 29, 2024) (“Black Dep. Tr.”)
1013	Rebuttal Declaration of Dr. Michael Franz (“Franz Reb.”)

I. INTRODUCTION

Patent Owner Fortinet Inc.'s ("PO") Response recycles arguments the Board already rejected in its Institution Decision. Because PO offers nothing new to challenge the Board's Institution Decision, the Board should affirm that the challenged claims are invalid over the grounds asserted in the petition.

First, PO recycles its argument that "copying" and "moving" files are patentably-distinct terms. But the Board already expressly rejected this argument as inconsistent with the patent's intrinsic record, wherein "copying," "moving," and similar terms are used interchangeably. Indeed, PO's position would eliminate at least one claimed embodiment and render the specification internally inconsistent. The Board can affirm its prior conclusion on this basis alone.

Moreover, extrinsic evidence corroborates that "copying" and "moving" are interchangeable. While PO recycles expert testimony the Board already rejected, Petitioner's rebuttal evidence shows PO misunderstands the use of "copying" and "moving" in the industry. For example, PO's own technical documents even use "copying" and "moving" interchangeably.

Once "copying" and "moving" are correctly understood, the asserted references firmly disclose the claimed "copying," as the Board already found. And even if the Board now adopts PO's position, the asserted references still disclose "copying" because, *inter alia*, PO's position makes "moving" mean one of two

things: “moving with copying” or “moving without copying.” PO itself admits the asserted references disclose “moving,” which includes “moving with copying”.

Next, PO mischaracterizes the references and the statements of Petitioner's expert to attack the motivation to combine. But these attacks assume drawbacks to Petitioner's proposed combinations that the Board has already rejected and are outweighed by the combinations' benefits. Once the references are properly understood—the way the Board understood them on institution—PO's arguments fail.

Finally, PO's attack against the obviousness of dependent claims can be rejected for misstating the proposed combinations, mischaracterizing the references, and employing impermissible hindsight. These defects are fatal.

Because the Board's Institution Decision was correct, '856 claims 1-28 should be found unpatentable as obvious.

II. AS THE BOARD FOUND IN THE INSTITUTION DECISION, PO'S DISTINCTION BETWEEN “COPYING” AND “MOVING” IS LEGALLY AND FACTUALLY FLAWED.

In the Institution Decision, the Board correctly rejected PO's distinction between “copying” and “moving” as inconsistent with the intrinsic record. (*See, e.g.,* ID, 23 (“The patent ascribes no significance to copying or moving files. It...applies the terms ‘copying,’ ‘sharing,’ ‘transferring,’ and ‘move’ interchangeably.”) (emphasis in original); *see also* ID, 20-24, 35.) Now, post-

institution and under the same intrinsic record, PO recycles that mistaken distinction, citing little more than expert testimony in support. As explained below, the intrinsic record—which has not changed—does not distinguish between “copying” versus “moving” files. Moreover, the Board’s initial determination is supported by expert testimony on how “copying” can include “moving” and vice versa. Petitioner’s rebuttal evidence even shows PO itself uses “moving”/“copying” interchangeably. Thus, the record supports the Board’s finding that “moving”/“copying” are used interchangeably and the asserted references render the claims obvious.

A. The intrinsic and extrinsic evidence use “copying” and “moving” interchangeably.

According to PO, “moving” “requires changing the location of the information independent of any particular mechanism for doing so” and “copying” “requires creating at least temporarily a second copy of portions of that information.” (POR, 17.) So, according to PO, “moving” is a genus with two species: “moving without copying” and “moving with copying.” (Black Dep. Tr., 9:8-9 (“So there’s sort of two species of moving a file....”)). Moving without copying occurs when a file moves within the same file system, while moving with copying occurs when a file moves to a different file system. (Black Dep. Tr., 9:5-10:11.)¹ There can also

¹ PO uses the terminology “same file system” and “different file system” to delineate when one would use each type of move. Except in cases where further clarity is

be “plain old copying” where “you make a copy and you don’t remove the original.”
(Black Dep. Tr., 27:18-19.)

As explained below, PO’s distinctions between “moving,” “copying,” and other, similar terms are inconsistent with the record and, in fact, render the ’856 patent nonsensical.

1. The intrinsic record uses “moving” and “copying” interchangeably.

As its own expert conceded, PO cites nothing in the intrinsic record that ascribes any significance to “moving” versus “copying.” (Black Dep. Tr., 13:21-14:4.) That is entirely consistent with the claims and specification, both of which support the Board’s initial conclusion. (ID, 20-23; POR, 16-17.) Interchangeable use of terms equates the terms for claim construction purposes. *Wasica Fin. GMBH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1282 (Fed. Cir. 2017).

a. The claims.

The claims undermine PO’s argument in two ways: (1) they use “moving” and “copying” interchangeably, and (2) they show that PO’s argument would read out dependent embodiments.

needed, we will use this terminology for consistency with PO, with the assumption that the term “the same file system” refers to the same physical storage volume and the term “different file systems” refers to different physical storage volumes.

(i) Claim 12.

While PO cites a small portion of claim 12, when read in its entirety, that claim actually confirms that “moving” and “copying” are interchangeable:

12. The secure data transfer system of claim 1, wherein the network security device makes said determination regarding whether the untrusted file is a clean file that is free of malicious content by first moving the untrusted file from the first repository to a third repository, and then applying one or more security checks to the untrusted file in the third repository, and moving back the checked file as a clean file into the first repository for onward copying to the second repository or moving the checked file as a clean file directly from the third repository to the second repository.

(’856 patent, cl. 12 (highlighting added); *see also* ’856 patent, 6:36-45.) Here, claim 12 uses “moving” and “copying” interchangeably to refer to relocating a file between repositories. A POSITA would therefore read the ’856 claims as indicating that “copying” and “moving” are interchangeable, contradicting PO’s argument that these terms require different actions. (Franz Reb., ¶¶6-10, 29-30.)

(ii) PO’s distinction excludes claimed embodiments.

PO’s only support for its proposed “moving”/“copying” distinction reads out dependent embodiments and therefore cannot be correct. An independent claim *must* be broad enough to cover dependent embodiments. *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022); *see also Dow Chemical Co. v. United States*, 226 F.3d 1334, 1342 (Fed. Cir. 2000). Here, PO eliminates the

embodiment described in Figure 1A and claimed in claims 9/20/28, resulting in an improper construction of claim 1.

Dependent claims 9/20/28 specify that the “second repository” forms “part of the public cloud file store.” (’856 patent, cls. 9, 20, 28.)

9. The secure data transfer system of claim 1, wherein the second repository forms part of the public cloud file store.

This embodiment is described in connection with Figure 1A. (*Id.*, Fig. 1A.) Based on these dependent claims, a proper construction of the independent claims must cover the embodiment in which a clean file is copied to a repository within the *same* public cloud file store.

PO focuses instead on Figure 1B as an example of the claimed “copying,” where a file is “copied” from one physical storage media to another. (POR, 23.) This embodiment is claimed in dependent claims 8/19/27, which specify that the second repository “is part of the network security device or part of an external storage device that forms part of the enterprise network.” (’856 patent, cls. 8, 19, 27.)

PO’s false distinction reads-out the embodiment in claims 9/20/28. As mentioned, PO contends “copying” is recited in the independent claims because the first and second repositories are located on separate file systems. (POR, 22-23.) Dr. Black emphasized that fact during examination. (Black Dep. Tr., 10:8-10, 35:11-18 (explaining the “copying” in the independent claims, in spite of its purported

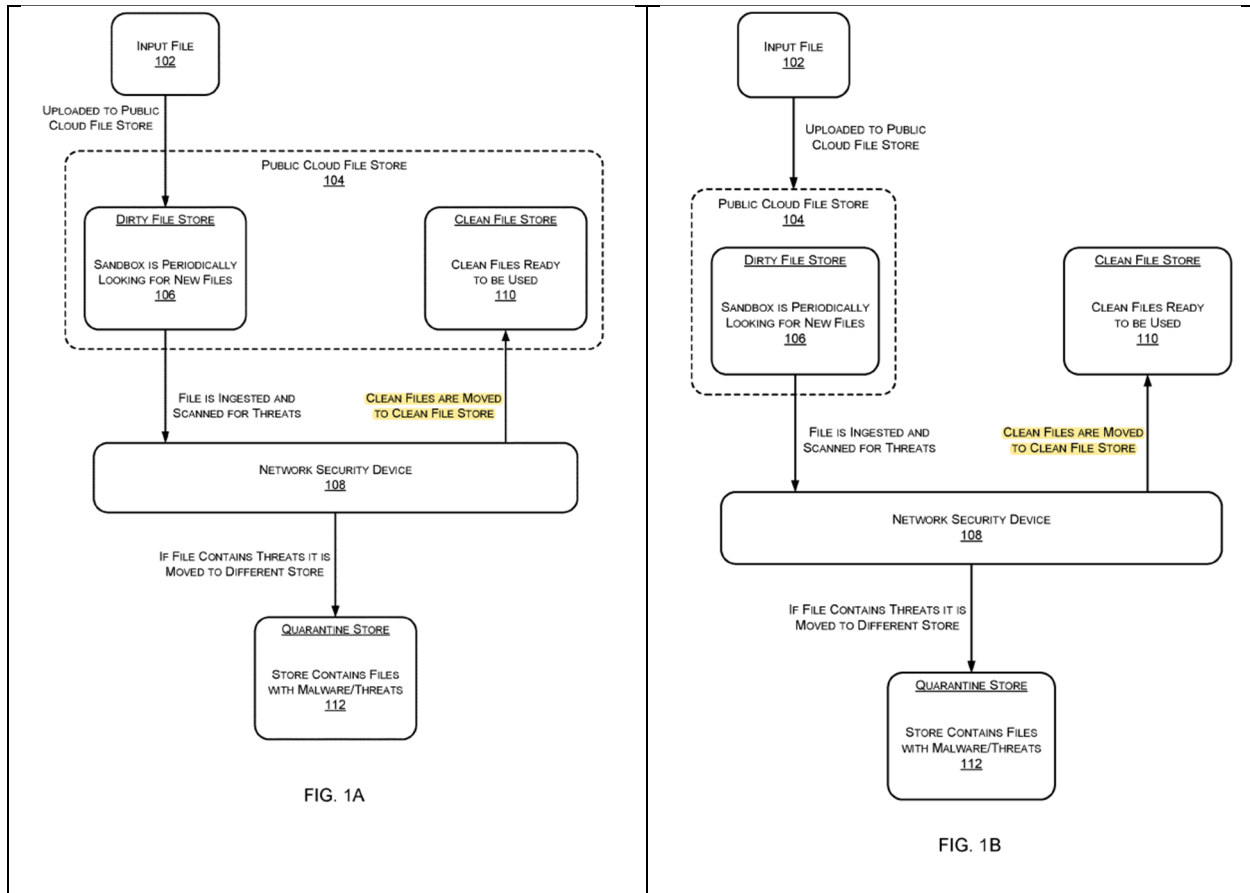
inefficiencies, was useful because a person might want to “physically isolate [files] from the suspect or potentially dirty files by moving them to a completely separate location.”); *see also* 36:21-37:9.) Yet that narrow reading of “copying” excludes the embodiment in claims 9/20/28 wherein the first and second repositories are on the same file store (i.e., the same file system). (Franz Reb., ¶12.) Thus, PO’s position is legally improper.

b. The specification uses “moving” and “copying” interchangeably.

The specification likewise ascribes no special meaning to “moving” versus “copying.” In fact, as the Board found, it repeatedly uses those terms interchangeably. (ID, 23.)

First, the patent does not explain *any* distinction between “copying” and “moving” files. (Franz Reb., ¶¶6-12.) PO’s expert conceded that fact. (*See, e.g.*, Black Dep. Tr., 13:2-6.)

Second, Figures 1A and 1B both recite that “clean files are *moved* to clean file store.” (’856 patent, Figs. 1A-1B; Franz Reb., ¶11-12.)



Then, to describe the *same* operation, the description of Figure 1A recites “*copying and/or transferring*” the file:

As noted above, upon determining that the file at issue is clean, that is, free from malware, network security device 108 can make the clean file accessible to the users by copying and/or transferring the clean file from dirty file store 106 to clean file store 110 that is accessible to the users.

(’856 patent, 8:53-57.) Thus, Figures 1A and 1B use “moving” and “copying” to refer to the same operation, regardless of whether the file is moving within the same volume (Figure 1A) or between different volumes (Figure 1B). (*See, e.g., id.*; *see also, e.g., id.*, 3:32-35, Figs. 1A and 1B (disclosing that a file with a threat is

“moved” to a quarantine store, which is not on the public cloud file store).) The patent also uses “transfer” and “share” to refer to this exact same operation.² (See, e.g., *id.*, 3:42-43 (“the verified *clean files are transferred* to a data location that is accessible to end users.”)³, 6:5-10 (“In an embodiment, the network security device can *copy the file to the second repository by sharing it...*”), 8:55-56 (“the clean file accessible to the users by *copying and/ or transferring the clean file...*”).) Thus, the specification itself uses “moving” and “copying” interchangeably.

PO does not refute these disclosures other than with conclusory expert testimony. Rather, PO focuses on Figure 1B to argue that figure shows the patent “envisions scenarios (such as Figure 1B), where ‘moving’ files without ‘copying’ is

² Other than conclusory expert testimony, PO does not address the patent’s interchangeable use of “transferring.” For “sharing,” PO contends that is yet *another, distinct* operation from “moving” and “copying” that means making a file accessible to others (Black Supp. Dec., ¶51), which is something that can be done by “moving” and “copying.” But the intrinsic record says otherwise. (Franz Reb., ¶¶6-7, 10.)

³ All emphasis added unless stated otherwise.

not practical.”⁴ (POR, 20; *see also* 22 (“The insight disclosed in the ‘856 patent, which is the reason for the claiming ‘copying’ of files...is reflected in Figure 1B.”).) Yet this is entirely inconsistent with Figure 1A, which exposes the problem with PO’s argument. Figure 1A’s description recites “copying” clean files within the same public cloud file store (i.e., the same file system). (’856 patent, 8:56-57.) But PO’s expert’s view is that “copying” only occurs between different file systems. (Black Dep. Tr., 10:7-11 (“You don’t have any other choice, because *you’re moving it to a different file system*...Your only choice, really, then *is to do a copy, and then erase the original*”); *see also id.* 35:11-37:9; POR, 20, 22.) PO’s argument that “copying” is undertaken only between different file systems is inconsistent with the specification’s disclosure of copying within the same file system. (Franz Reb., ¶¶11-13.)

⁴ PO provides no citations to the ’856 patent itself to support its interpretation—again, it relies only upon unsupported assertions by its expert. (Black Supp. Decl., ¶60; *see also* Black Deposition. Tr., 13:21-14:4 (“Q: And in your paragraphs 48 and 49, where you expound on your definitions of move and copy, do you cite any portions of the spec to support your testimony? A. I don’t see citations to the ’856 spec in paragraphs 48 or 49.”))

2. Extrinsic evidence contradicts PO's argument.

In addition to the intrinsic evidence, the extrinsic evidence confirms that “moving” and “copying” are used interchangeably.

a. Fortinet's own document uses “moving” and “copying” interchangeably.

PO's own exhibit, 2023 FortiSandbox Guide (Ex. 2003), undercuts its argument that “moving” and “copying” are not used interchangeably:

Enable copying or moving clean files to a sanitized location	Copy or move files with a Clean rating to another location. By default, a new folder is created for each scheduled scan job in the sanitized location and all clean files are copied into it with the original folder structure. To save space, uncheck <i>Keep a complete copy of clean files for every scheduled scan</i> so that files of the same path have only one copy in the sanitized location.
Enable Scheduled Scan	Enable scheduled scan and specify the schedule type.
Description	Optional description for the network share entry.
Send notification email after each scan	Email a summary report for each network share scan to the specified users.

	When a file is moved, to leave a copy in its original location , go to the Quarantine edit page or sanitized share and select the <i>Keep Original File At Current Location</i> .
---	--

(Ex. 2003, 76 (annotations added))

Enable moving clean files to a sanitized location	Select to move Clean rating files to another location. By default, a new folder is created for each scheduled scan job in the sanitized location and all clean files are copied under it with the original folder structure. To save storage size, the user can un-check <i>Keep a complete copy of clean files for every scheduled scan</i> , then files of the same path will have only one copy saved in the sanitized location.
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(Ex. 2003, 99 (annotations added); Franz Reb., ¶¶14-16.)

b. “Copying” can include a directory update without duplication of bits, while “moving” can include duplicating bits.

Use of the terms in the industry also shows that PO's distinction between “copying” (duplicating bits) and “moving” (not duplicating bits) is incorrect.

“Copying” and “moving” data can both include updating a directory without duplicating bits. As noted by PO, a file can be “moved” within a filesystem by changing the file's location as indicated in a file system directory. (POR, 17; Franz Reb., ¶¶17-26.) But a file can also be “copied” by updating the file system directory in modern file systems that employ copy-on-write—a popular technique used in Windows Server since 2012. (Franz Reb., ¶20.) In file systems that provide copy-on-write semantics, bits of the copied file are not duplicated until one of the copies is modified, at which time differences between the copies are recorded in newly allocated disk blocks. (Franz Reb., ¶¶18-22.)

Conversely, both “copying” and “moving” data from a source to a destination can require duplication of bits when the source and destination are located on different volumes. (Franz Reb., ¶¶23-28; Black Dep. Tr., 27:11-19 and 43:14-44:17.)

“Copying” and “moving” operations can therefore be effectively identical under some circumstances.

c. PO's definition of "copying" covers "moving."

PO argues that the plain meaning of "copying" requires "creating at least temporarily a second copy of portions of that information." (POR, 17). However, even if this definition of "copying" is accepted, "moving" a file can satisfy the definition. When a file is "moved" using PO's "moving with copying" formulation, for example, data is replicated to the new location. (Black Dep. Tr., 44:15-17.) Even if the data is "deleted" from the source location immediately upon completion of the move, the data is not deleted from memory until the memory is overwritten. (Franz Reb., ¶¶23-24). Thus, even "moving" a file temporarily creates a second copy of portions of the file. (*Id.*) PO's proposed definition of "copying" demonstrates the absurdity of the proposed distinction between these operations. (Franz Reb., ¶¶29-30.)

Thus, both the intrinsic and extrinsic evidence show there is no ascribed significance to "moving" versus "copying."

B. The Asserted Grounds Render Obvious "Copying" a Clean File From a First to a Second Repository.

Once the definition of "copying" is properly understood, the references cited in the Petition render this operation obvious. (ID, 24, 35.) But even under PO's false distinction, the asserted grounds satisfy the claims. Thus, under either interpretation, the Board can affirm its original conclusion.

1. Petitioner's position in based on obviousness, not anticipation

A claim can be obvious over prior art despite differences between them. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966) (“Under §103...differences between the prior art and the claims at issue are to be ascertained.”) Petitioner submits, and the Board affirmed, that the '856 claims are invalid based on their obviousness over prior art including Burdett-FortiSandbox and Sharpe-Seese-Kamalapuram. (See Pet., 33-35, 67-68; ID, 24, 35.) PO's request to the Board to find that Burdett and Kamalapuram do not disclose “copying” a file from a dirty file repository to a clean file repository because these references do not use the word “copy” (POR, 20, 31) is unsupported by any legal basis for a finding of obviousness.

2. Burdett-FortiSandbox renders the “copying” limitation obvious.

Each of PO's arguments against the obviousness of “copying” a file in view of Burdett's disclosure fails.

a. Burdett's disclosure of “moving” renders the claimed “copying” obvious.

As described in the Petition and affirmed by the Board, Burdett renders “copying” a file to a second repository obvious through its depiction of a “malicious file store” and a “clean file store” in Figure 3 and its disclosure that “the scanning service may move files...in order to control access.” (Burdett, 25:27-28; Pet., 33-34; ID, 24.) As explained by Dr. Franz, in many circumstances moving files entails

copying the file from one location to another before deleting the original. (Franz Op., ¶96.)

Moreover, Burdett changing a path in a file system renders “copying” a file obvious, despite PO’s arguments otherwise. (Pet., 33-34; POR, 21-22.) As discussed above, a POSITA would have known that copying a file can be—and often was—accomplished using a directory update in which no bits are actually duplicated unless one of the copies is subsequently modified. This was commonly done using the copy-on-write technique, which was widely used in Windows Server since at least 2012. (Franz Reb., ¶20). A POSITA therefore would have understood Burdett’s description of changing a path in a file system to be consistent with the claim term “copying,” which is sufficient for a showing of obviousness.⁵

b. Burdett’s disclosure renders “copying” obvious even under PO’s erroneous construction.

Even under PO’s erroneous construction of “copying,” Burdett still renders that limitation obvious.

⁵ PO misquotes Petitioner’s expert to support their argument that “copying” is not obvious in view of Burdett. (Franz Reb., ¶¶47-49.)

(i) Burdett discloses “moving,” a genus that includes “copying.”

Selections between known, predictable solutions are obvious. *See, e.g., KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“When...there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.”); *Uber Tech., Inc. v. X One, Inc.*, 957 F.3d 1334, 1341 (Fed. Cir. 2020) (finding obvious a selection between two known, predictable solutions.)

Burdett’s disclosure of “moving” renders the claimed “copying” obvious because, as PO contends, there are two known species of a “move” operation—moving with copying and moving without copying.⁶ PO contends “moving” files “*can* be implemented using ‘copying,’” but “can also be implemented *without* any copying.” (POR, 17 (emphasis in original).) Dr. Black himself testified that there are “two species of moving a file,” one in which the file “moves within the same file system” and the other in which the file is “moving [] to a different file system.” (Black Dep. Tr., 9:8-10:11; *see also id.*, 12:11-14, 16:3-18, 17:18-18:8, 24:6-14,

⁶ Disclosure of a genus can anticipate a species within that genus when the genus is so small that one skilled in the art can “at once envisage each member” of the genus. (*Application of Petering*, 301 F.2d 676, 681-2 (C.C.P.A. 1962); *Application of Schaumann*, 572 F.2d 312, 315 (C.C.P.A. 1978).)

26:4-17, 43:13-44:17). In fact, Dr. Black states that “*you can’t get around copying if you do a type 2 move*” – that is, a “move” operation from one file system to another *necessarily includes copying*. (*Id.*, 44:16-17.) Thus, even under PO’s framework, “moving” (a genus) discloses both species of “moving with copying” and “moving without copying.” Burdett broadly discloses “moving.” (Burdett, 25:29-31.)

PO argues that Burdett cannot disclose “moving with copying” because “Burdett’s ‘moving’ is implemented by modifying file system directory entries.” (POR, 21). The only citation to Burdett to support this assertion is the following: “Burdett then describes ‘mov[ing]’ files by ‘chang[ing] ... the location (e.g., path in a file system) of a file.’ Burdett at 25:28-31.” (*Id.*) But PO does not provide the complete disclosure to the Board. The full portion of Burdett cited by PO states:

In some implementations, the scanning service may *move files* or change the name of files in order to control access. *For example*, to prevent access to a file, the scanning service may change the name or the location (e.g., path in a file system) of a file in order to prevent access.

(Burdett, 25:26-31.) When read in context, this portion of Burdett offers changing the “path in a file system” as an *exemplary* mechanism to prevent access to a file, not as a low-level technical description of a “moving” operation that excludes the species “moving with copying.”

Accordingly, when reading Burdett's disclosure of "moving" files, Petitioner has properly established that, even under PO's erroneous construction, the "copying" is obvious in view of Burdett.

(ii) Burdett likewise discloses moving with copying.

Burdett's disclosure is not limited to moving a file within the same file system – the "moving without copying" species described by PO. Burdett's scanning service is configured to access data from multiple storage volumes. (Burdett 23:38 ("one or more cloud data stores 306"); 28:2-3 ("multiple data stores (e.g., multiple S3 buckets).").) Since the scanning service can retrieve files from multiple volumes, a POSITA would have found it obvious to configure the scanning service to move files into multiple volumes after determining the files are clean, including moving a file from a dirty file repository on one volume to a clean file repository on another, different volume. In this case, Burdett's "move" could not have been affected by merely changing a path in a file system. (Franz Reb., ¶¶23-26.) Indeed, Dr. Black confirmed that moving a file from one S3 Bucket to another would warrant a copy operation. (Black Dep. Tr., 36:12-37:9.) Thus, even if the '856 claims are interpreted as requiring "moving with copying" and clean and dirty file repositories on separate physical volumes, this would have been obvious from Burdett.

c. A “copy” operation would not necessarily impact efficiency of Burdett’s system.

Patent Owner asserts that Burdett cannot render obvious “moving with copying” because, in their view, “copying” a file from one repository to another in Burdett’s disclosure would make Burdett’s system less efficient. (POR, 24-27). Not so.

A POSITA would have known that the processing requirements to “copy” and “move” are dependent on several factors, including the configuration of the file system(s) in which the files are moved or copied – and not that “copying” always entails a significantly higher processing cost than “moving.” (Franz Reb., ¶¶23-26.) In, for example, file systems that employ copy-on-write semantics as described above, copying a file within the same volume entails little more than copying a pointer to data, using nearly identical processing resources as a “move” operation in which a pointer is updated in a file system directory. (*Id.*) On the other hand, “moving” a file from one volume to another would entail similar duplication of bits as a “copy” operation. (*Id.*) Patent Owner, however, compares apples to oranges by juxtaposing the processing requirements of a “move” operation within the *same* volume to a “copy” operation between *different* volumes. (POR, 2, 24-27; Franz Reb., ¶¶31-32.) For the reasons discussed above, the claims of the ’856 patent are not limited to copying files from one file system to another. Patent Owner’s efficiency argument is therefore based on a flawed premise that would not have

concerned a POSITA. Furthermore, a combination does not need to be “the most desirable.” *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004). The Board can disregard it.

3. Sharpe-Seese-Kamalapuram renders obvious the “copying” limitation.

PO’s arguments for nonobviousness of “copying” a file in view of Sharpe-Seese-Kamalapuram fail for similar reasons to those discussed for Burdett-FortiSandbox.

Moreover, as Petitioner explained, Sharpe-Seese-Kamalapuram disclosed the claimed “copying.” (Pet., 67-68.) The Board agreed. (ID, 35.)

Even under PO’s framework, Kamalapuram discloses the claimed “copying.” (Franz Reb., ¶33.) Like Burdett, Kamalapuram broadly disclosed the genus of moving a file. (Kamalapuram, ¶ 122 (“a file may be stored in an isolated area of the network storage system while waiting to be scanned, and may be moved to a general storage area only after the file has been scanned by a security analysis system of the network storage system.”).) Since Kamalapuram discloses the genus of “moving,” it discloses *both* species of “moving with copying” and “moving without copying” within this genus.

Moreover, as discussed for Burdett-FortiSandbox, a POSITA would have known that “copying” can be accomplished by changing a pointer using the widely-used copy-on-write technique. (*See, supra*, Section II.A.2.b.) Thus, contrary to PO’s

position, “copying” files in the Sharpe-Seese-Kamalapuram combination would have caused no material efficiency loss. (Franz. Reb., ¶34.)

III. A POSITA HAD AMPLE REASON TO COMBINE THE REFERENCES AS PETITIONER PROPOSES, AS THE BOARD FOUND ON INSTITUTION.

In the Institution Decision, the Board correctly found motivation to combine the references. (ID, 25, 33-35.) The Board can again reject PO's recycled arguments.

A. Burdett and FortiSandbox would have been obvious to combine.

PO's misplaced attacks on the motivation to combine Burdett and FortiSandbox are legally and factually flawed.

Legally, PO's arguments about an allegedly “inferior” system are irrelevant. *In re Fulton*, 391 F.3d at 1200. Petitioner has provided a sound motivation to combine that PO has failed to meaningfully rebut. That there *might* be some unspecified, conclusory drawbacks is irrelevant.

Factually, PO's arguments are conclusory and overlook explicit disclosure from Burdett.

First, PO's alleged drawbacks are vague, conclusory, and hypothetical. (*See* Supp. Black Dec., ¶ 65 (combination “*may* result in network congestion” and “there is always *the possibility* of a third party snooping traffic”).) Importantly, PO provides no credible evidence that these alleged drawbacks outweigh benefits of the

proposed combination, which provides improved security and efficiency. (Franz Reb., ¶¶37-38); *see, e.g., Intel Corp. v. PACT XPP Schweiz AG*, No. 2022-1038, 2023 WL 2198649, at *4 (Fed. Cir. Feb. 24, 2023) (finding motivation to combine where “expert merely opine[d] that there [was] an unspecified processing speed ‘cost’” associated with implementing [feature] but [did] not opine on whether the benefits of the implementation outweigh[ed] the cost.”).

Moreover, PO cherry-picks sections of Burdett and FortiSandbox, while ignoring other disclosure in these references, to support an argument that the combination is inefficient. (POR, 27-30.) Burdett contemplates files being transferred out of the cloud infrastructure for scanning purposes. (*See, e.g., Burdett*, 29:34-38 (a file is “copied to the data store of the scanning service” to be scanned for malicious content); 30:59-62 (“The scanning service may copy the file from the cloud data store to another data store” for scanning the file, where “[t]he another data store may be a local data store.”).) Since Burdett already describes copying a file to repositories outside the cloud file store to scan the file for malware, its techniques are complemented by FortiSandbox’s disclosure of a device outside the cloud file store that scans for malware. There is no reason that a POSITA would have found it too inefficient to implement the scanning operation of Burdett on a network security device such as the FortiSandbox device. (Franz Reb., ¶¶35-39.)

B. Sharpe and Seese would have been obvious to combine.

Like the Burdett-FortiSandbox combination, PO attacks the motivation to combine Sharpe and Seese by ignoring explicit disclosure in these references and imposing additional requirements for showing obviousness than are legally required.

1. Sharpe-Seese would not have been prohibitively inefficient.

Recycling similar objections to those raised with respect to the Burdett-FortiSandbox ground, PO uses a selective reading of Sharpe to argue Sharpe and Seese would not have been obvious to combine. (POR, 33-34.) The Board has already rejected these arguments and can do so again. (ID, 35.)

Contrary to PO's position that the "more efficient solution" would "run Sharpe's malware scans directly in the same cloud storage provider environment 4210" (POR, 34), Sharpe reasons that because cloud-based scans can suffer from vulnerabilities that compromise the security of files, an anti-virus service "located at a secure site in close network proximity with the cloud storage system...[could] perform anti-virus scans for the distributed filesystem." (Sharpe, 98:26-32; *see also* Pet., 53). Seese describes just such a secure site for anti-virus scans of a cloud file system. (Seese, [0018], [0064], [0067]; Pet., 63-64.) Sharpe therefore contains explicit motivation for the combination with Seese.

Sharpe also described transferring files between various environments. (*See, e.g.,* Sharpe 97:48-51 (a cloud controller "*accesses* the data blocks for the new file

from cloud storage system 302...and the files are *transferred* to anti-virus services 4214”).) Thus, for similar reasons as those discussed above with respect to Burdett, a POSITA would not have found it prohibitively inefficient to perform Sharpe’s anti-virus scan on a network security device such as Seese’s because Sharpe already contemplates files or portions of files being transferred from cloud storage to an anti-virus service. (Franz Reb., ¶¶40-41.)

2. PO’s narrow rebuttal to the Sharpe-Seese combination demands evidence that is not required to establish obviousness.

PO also construes the Sharpe-Seese combination more narrowly than is required for a showing of obviousness. (POR, 33-36.)

Obviousness does not require evidence that a feature from one reference can be bodily incorporated into another reference. *See Intel Corp. v. PACT XPP Schweiz AG*, No. 2022-0138 (Fed. Cir. Feb. 24, 2023); *Elbrus Int’l Ltd. v. Samsung Elecs. Co.*, 738 F. App’x 694, 698 (Fed. Cir. 2018).

Here, by their assertion that a POSITA would not have been motivated to combine Sharpe and Seese because “there is no need for [DLP from Seese and malware scanning from Sharpe] to be deployed on the same server” (POR, 34), PO is improperly requiring a showing that the references can be bodily incorporated into one another. For the reasons explained in the Petition, a POSITA would have found it obvious to modify Sharpe based on Seese. (Pet., 63-64.)

**IV. THE SHARPE-SEESE-KAMALAPURAM COMBINATION
RENDERED CLAIMS 8/19/27 OBVIOUS.**

PO's arguments against Sharpe-Seese-Kamalapuram for claims 8/19/27 ignores key teachings of the art.

A. PO misstates Petitioner's proposed combination of Sharpe-Seese-Kamalapuram

To argue that the prior art does not disclose the features of claims 8/19/27, PO states that Seese does not disclose one feature ("copying" files), Kamalapuram does not disclose another feature (a second repository outside the cloud file store), and thus the combination does not disclose both features. (POR, 37.) This argument is an improper obviousness analysis that fails to address why the claims are not obvious in view of the *combination* of prior art references.

As stated in the Petition, claims 8/19/27 are obvious over Sharpe-Seese-Kamalapuram because Kamalapuram disclosed or rendered obvious copying a file to a second repository after the file was determined to be clean (Kamalapuram, [0122]; Pet., 67-68.) and Seese described a repository that formed part of an enterprise network. (Seese, [0006]; Pet., 75-76; Franz Op., ¶200.) PO's misstatement of this obviousness ground can be rejected.

B. The location of a second repository is merely an implementation decision.

As explained in the Petition, a POSITA would have known that the location of the claimed second repository would have been nothing more than an

implementation decision, and thus obvious to the POSITA. (Pet., 76; Franz Op., ¶¶43, 200.) An enterprise network administrator could have made this decision based on several factors, including the importance of the data stored in the second repository or a need to improve security of files associated with an enterprise. (*Id.*; Franz Reb., ¶¶42-44.) PO attempts to rebut the obviousness of the second repository's location based on absurd interpretations of the motivations of people who have nothing to do with the capabilities and motivations of a POSITA.

First, PO's assertion that important files are not stored to public cloud file stores does not negate the obviousness of a repository outside the public cloud file store to which files are copied after passing a malware scan. (POR, 38.) The decision to initially store a file in the public cloud would typically be made independently of the configuration of the repository to which files are copied once they have passed a malware scan, and thus a file being initially stored in a public cloud file store provides no information about the importance of a file and is independent of the obviousness of the second repository's location. (Franz Reb., ¶¶42-44.)

PO's second argument – that there is no drawback to allowing files to remain in the public cloud if they are permitted to be stored there initially – is also independent of obviousness. (POR, 38.) This argument implies that claims 8/19/27 recite requirements they do not, such as a requirement that the file *cannot* remain in

the public cloud file store after it has been copied to the second repository, and ignores operational considerations that would motivate this configuration. (Franz Reb., ¶¶43-44.)

Rather, as explained in the petition, a POSITA can readily select the location for the clean file repository. (Pet., 76; Franz Op., ¶200; Franz Reb., ¶¶42-44.)

C. The Sharpe-Seese-Kamalapuram combination is not based on hindsight

Finally, PO attacks the Sharpe-Seese-Kamalapuram combination applied to claims 8/19/27, purportedly based on hindsight bias, but only citing similarities between Burdett (from Ground 1) and Kamalapuram (from Ground 2) as allegedly offering no basis for treating Ground 1 and Ground 2 art differently. (POR, 39.) The Board can discard these flimsy arguments because the similarities highlighted by PO ignore the Seese reference, which, as discussed above and presented in the Petition, renders obvious the features of claims 8/19/27 in combination with Sharpe and Kamalapuram. (Pet., 75-76; Franz Op., ¶200.)

V. THE SHARPE-SEESE-KAMALAPURAM-DODS COMBINATION RENDERED CLAIMS 3, 6, 11, 15, 17, 23, AND 25 OBVIOUS.

The Board should maintain its finding that claims 3, 6, 11, 15, 17, 23, and 25 are obvious over the combination of Dods with Sharpe-Seese-Kamalapuram, as in Petitioner's Ground 3. (ID, 36-37.) PO's only rebuttal to this ground ignored Petitioner's explanation motivating the combination of references. (See POR, 40.)

As explained in the Petition and affirmed by the Board, Dods supplements the Sharpe-Seese-Kamalapuram combination to improve the combination's malware detection capabilities. (Pet., 80.) Dods describes malware detection techniques—including those recited in the claims—that are not explicitly discussed in Sharpe-Seese-Kamalapuram but that were well-known to those skilled in the art and usable to perform malware detection in the Sharpe-Seese-Kamalapuram combination. (Pet., 80-81; Franz Reb., ¶45.)

VI. CONCLUSION

For these reasons, the Board should cancel claims 1-28.

Dated: March 8, 2024

Respectfully submitted,

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CERTIFICATION OF WORD COUNT UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE totals 5,433 words, excluding the parts exempted by 37 C.F.R. § 42.24(a). This word count was made by using the built-in word count function tool in the Microsoft Word 365 software used to prepare the document.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that true copies of the foregoing
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