PUBLIC VERSION

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Paper 64
Date: August 1, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BOX, INC. and DROPBOX, INC.,
Petitioner,

v.

TOPIA TECHNOLOGY, INC.,
Patent Owner.

IPR2023-00433
Patent 10,067,942 B2

Before NEIL T. POWELL, CHARLES J. BOUDREAU, and JOHN R. KENNY, *Administrative Patent Judges.*

KENNY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)
Granting Motion to Seal
37 C.F.R. § 42.14

I. INTRODUCTION

Box, Inc. and Dropbox, Inc. (collectively, "Petitioner") filed a Petition to institute an *inter partes* review of claims 1, 3, 4, 10, 12 and 13 (the "challenged claims") of U.S. Patent No. 10,067,942 B2 (Ex. 1002, the "'942 patent," "challenged patent") pursuant to 35 U.S.C. § 311 *et seq*. Paper 3 ("Pet."). Topia Technology, Inc. ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp."). With our authorization, Petitioner filed a Preliminary Reply to Patent Owner's Preliminary Response (Paper 10, "Prelim. Reply"), and Patent Owner filed a Sur-reply to Petitioner's Preliminary Reply (Paper 14, "Prelim. Sur-reply").[1]

We determined that the Petition established a reasonable likelihood that Petitioner would prevail with respect to at least one claim, and we instituted *inter partes* review as to all challenged claims of the '942 patent and all grounds of unpatentability asserted in the Petition. Paper 17 ("Institution Dec.").

Following institution of the trial, Patent Owner filed a Response. (Paper 30, "PO Resp."), Petitioner filed a Reply (Paper 37, "Pet. Reply"), and Patent Owner filed a Sur-reply (Paper 49, "PO Sur-reply").

A consolidated oral hearing with IPR2023-00427 was held on May 22, 2024. A transcript of the hearing is part of the record. Paper 62 ("Hearing Tr.").

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[1] Several documents cited have been filed under seal. Unless otherwise specified, our citations refer to the sealed versions of these documents. Public versions of the sealed documents are available in the case file on P-TACTS.

We have jurisdiction under 35 U.S.C. § 6. For the reasons discussed below, we determine that Petitioner has shown, by a preponderance of the evidence, that the challenged claims are unpatentable.

II. BACKGROUND

A. Related Matters

The parties identify the following district court proceedings involving the '942 patent:

Topia Technology, Inc. v. Box, Inc., 6:21-cv-01372-ADA (W.D. Tex.)[2];

Topia Technology, Inc. v. Dropbox, Inc., 6:21-cv-01373-ADA (W.D. Tex.);

Topia Technology, Inc. v. Egnyte, Inc., 1:21-cv-01821-CJB (D. Del.);

Topia Technology, Inc. v. Box, Inc., 6:20-cv-01175-ADA (W.D. Tex.);

Topia Technology, Inc. v. Box, Inc., 3:23-cv-00063-LB (N.D. Cal.); and

Topia Technology, Inc. v. Dropbox, Inc., 3:23-cv-00062-AGT (N.D. Cal.).

Pet. 1; Paper 5, 1.

The parties identify the following related patents: U.S. Patent Nos. 9,143,561; 10,642,787; 10,289,607; 10,754,823; and 11,003,622. Pet. 1–2; Paper 5, 1–2.

The parties identify the following *inter partes* review proceedings involving the '942 patent or related patents: IPR2022-00782, IPR2022-00427, IPR2023-00429, IPR2023-00430, IPR2023-00431, and IPR2023-00432. Pet. 2; Paper 5, 3.

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[2] This case was transferred to the Northern District of California. *See* Ex. 2020, 2–3.

B. Real Parties-in-Interest

Petitioner identifies Box, Inc. and Dropbox, Inc. as its real parties-in-interest. Pet. 2. Petitioner states that "[t]he other defendants in the pending litigations, Vistra Corp., SailPoint Technologies Holdings, Inc., Clear Channel Outdoor Holdings, Inc., and Egnyte, Inc., are not real-parties-in-interest and have had no involvement with this proceeding but are identified here in the interest of over-inclusion." *Id.* Patent Owner contests this identification and contends that Petitioner fails to name Egnyte, Inc. ("Egnyte") as a real party-in-interest. PO Resp. 1–3. We further discuss this issue *infra*.

Patent Owner identifies Topia Technology, Inc. as its real party-in-interest. Paper 5, 1.

C. The '942 Patent

The '942 patent is titled "Architecture for Management of Digital Files Across Distributed Network." Ex. 1002, code (54). The '942 patent relates to sharing files between electronic devices and aims to improve file transfer and synchronization between a user's multiple computing devices. *Id.* at 1:18–32, 4:49–54. Figure 2 of the '942 patent is reproduced below.

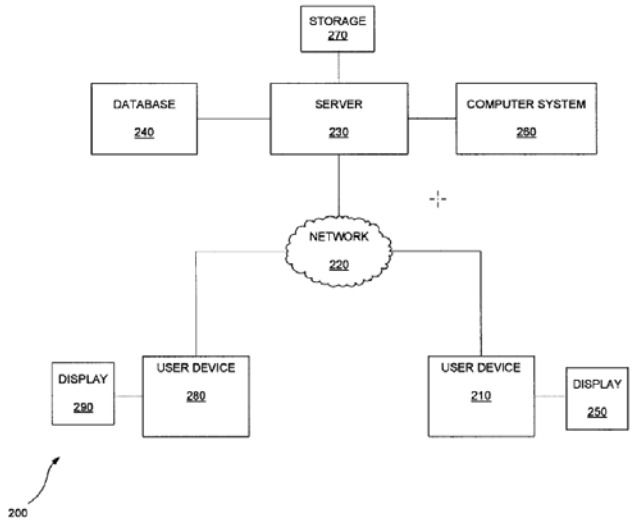

FIG. 2

Figure 2 shows computer network system 200 including electronic user devices 210, 280, such as personal computers or workstations, that are linked via network 220 (e.g., the Internet) to an electronic device or system, such as server 230. *Id.* at 7:26–32. Applications running on one or more user devices 210, 280 can cooperate in two-way communication with server 230 and one or more applications running on server 230. *Id.* at 7:49–54. A file-transfer and/or synchronization application installed on user devices 210, 280 having user interfaces allows a user to view, access, and/or organize files to be synched among the user devices. *Id.* at 7:65–8:15.

In operation, a file that the user desires to be synched or shared is uploaded by user device 210 and received by server 230. Ex. 1002, 8:16–18, 8:32–44. Server 230 stores the received file to storage 270 if destination user device 280 is offline or otherwise temporarily not in communication with server 230. *Id.* at 8:26–29, 8:45–63. Upon resuming communication with destination user device 280, server 230 transfers the temporarily stored file to user device 280, whereupon the previous version of the file on user device 280 is replaced with the latest version of the file modified on user

device 210. *Id.* at 8:29–31, 8:54–59. A similar reverse-direction synchronization process may be performed with regard to a file modified on user device 280 and synchronized to user device 210. *Id.* at 8:63–67.

D. Challenged Claims

Petitioner challenges claims 1, 3, 4, 10, 12, and 13. Pet. 1. Claims 1 and 10 are independent. Claim 1 reads:

> 1. [1pre][3] A system comprising:
>
> [1a] a first electronic device, associated with a user, configured to:
>
> [1b] receive, via a first application at the first electronic device, a copy of a modified first electronic file from a second application at a second electronic device associated with the user, wherein the modified first electronic file copy is automatically received from the second application responsive to the user modifying a content of the first electronic file;
>
> [1c] determine whether the first electronic device is in communication with a third electronic device;
>
> [1d] automatically send, via the first application, the modified first electronic file copy to a third application at the third electronic device responsive to the determination that the first electronic device is in communication with the third electronic device and responsive to receiving the modified first electronic file copy from the second electronic device;
>
> [1e] receive, via the first application, a copy of a modified second electronic file from the third application at the third electronic device associated with the user, wherein the modified second electronic file copy is automatically

[3] For ease of reference, we provide bracketed identifiers for the preambles and limitations of the challenged claims that are discussed. These designations are similar to those provided in the Petition.

received from the third application responsive to the user modifying a content of the second electronic file;

[1f] determine whether the first electronic device is in communication with the second electronic device; and

[1g] automatically send, via the first application, the modified second electronic file copy to the second application at the second electronic device responsive to the determination that the first electronic device is in communication with the second electronic device and responsive to receiving the modified second electronic file copy from the third electronic device,

[1h] wherein, responsive to sending the modified first electronic file copy to the third electronic device, an older version of the first electronic file stored on the third electronic device is automatically caused to be replaced with the modified first electronic file copy such that the modified first electronic file copy is stored on the third electronic device in lieu of the older version of the first electronic file, and

[1i] wherein, responsive to sending the modified second electronic file copy to the second electronic device, an older version of the second electronic file stored on the second electronic device is automatically caused to be replaced with the modified second electronic file copy such that the modified second electronic file copy is stored on the second electronic device in lieu of the older version of the second electronic file.

Ex. 1002, 10:60–11:45.

E. Asserted Challenges to Patentability and Prior Art

Petitioner challenges claims 1, 3, 4, 10, 12 and 13 based on the grounds in the table below.

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)
1	1, 3, 4, 10, 12, 13	103(a)[4]	Sigurdsson,[5] Shappell[6]
2	1, 3, 4, 10, 12, 13	103(a)	Brown,[7] Hesselink[8]

Pet. 4.

In addition to the asserted references, Petitioner relies on a Declaration of Dr. Ravin Balakrishnan. Ex. 1028 ("Balakrishnan Decl."). Petitioner submits also a Reply Declaration by Dr. Balakrishnan. Ex. 1046 ("Balakrishnan Reply Decl."). Patent Owner has submitted a declaration of Prashant Shenoy, Ph.D. (Ex. 2013, "Shenoy I Decl.") and a second declaration of Dr. Shenoy (Ex. 2025, "Shenoy II Decl."). The parties have also submitted transcripts of the depositions of Dr. Balakrishnan and Dr. Shenoy. Exs. 1045 ("Shenoy Dep."), 2033 ("Balakrishnan Dep.").

III. ALLEGED FAILURE TO NAME A REAL PARTY-IN-INTEREST

Patent Owner contends that Egnyte, the defendant in *Topia Technology, Inc. v. Egnyte, Inc.*, 1:21-cv-01821-CJB (D. Del.) (the "Egnyte Litigation"), should have been named in the Petition as a real party-in-interest. PO Resp. 1. Patent Owner asserts that because Egnyte is "time-

[4] The Leahy-Smith America Invents Act ("AIA") included revisions to 35 U.S.C. §§ 102, 103 that became effective on March 16, 2013. Because the '942 patent claims priority, through a continuation application, to a provisional application filed before March 16, 2013, and neither party has argued that the provisions of the AIA apply, we apply the pre-AIA versions of the statutory bases for unpatentability. *See* Ex. 1002, codes (63), (60).
[5] US 2007/0174246 A1 (Ex. 1016).
[6] US 2005/0091289 A1 (Ex. 1020).
[7] US 7,035,847 B2 (Ex. 1025).
[8] US 2005/0120082 A1 (Ex. 1026).

barred under 35 U.S.C. § 315(b)," this *inter partes* review "should therefore be terminated." *Id.*

In its Preliminary Response, Patent Owner contended that "[t]he facts demonstrate that Egnyte is both an RPI to this petition and a privy of Petitioner[]." Prelim. Resp. 5. Patent Owner argued that "[f]or over 17 months, Petitioner[] and Egnyte have been intertwined with respect to not only this Petition, but also the co-pending litigations which involve the '942 Patent and its five related patents." *Id.* (footnote omitted). Patent Owner relied mainly on the alleged facts that Petitioner and Egnyte "share litigation counsel," specifically, Ms. Heidi L. Keefe, a partner at the law firm Cooley LLP and lead counsel in this proceeding, and further, that Petitioner and Egnyte "are pursuing a single and unified invalidity defense strategy in all forums." *Id.* at 5–6. Patent Owner asserted also that Egnyte and Petitioner "are parties to a joint defense agreement," and "have submitted *identical* invalidity contentions, of which the grounds in the Petition overlap." *Id.*

In its Preliminary Reply, Petitioner responded that "Egnyte is not an RPI or privy" of Petitioner. Prelim. Reply 1–6. With this paper, Petitioner submitted declaration testimony from Ms. Keefe. Ex. 1029 ("Keefe Decl."). Ms. Keefe testified that her involvement in the Egnyte Litigation was limited to arguing a motion to dismiss based on 35 U.S.C. § 101 (lack of statutory subject matter). *Id.* ¶¶ 5, 16. She testified that "[m]y oral argument on the Section 101 motion was the full extent of my representation of Egnyte. Neither I nor any other counsel for Petitioners involved in these IPRs have represented Egnyte on any other issue." *Id.* ¶ 5.

As to Egnyte's "identical" preliminary invalidity contentions, Ms. Keefe testified that "[n]either I nor anyone else at Cooley LLP advised

Egnyte regarding what to include in its preliminary invalidity contentions." Ex. 1029 ¶ 11. She stated that "Petitioner[] and Egnyte are competitors" and "did not collaborate in any way in developing Petitioner['s] IPRs." *Id.* ¶ 23. She testified that Petitioner "independently prepared, funded, and filed the IPRs for [its] own benefit, without considering Egnyte's interests and with no input from Egnyte." *Id.* ¶ 20.

At her deposition, under cross-examination by Patent Owner's counsel, Ms. Keefe confirmed the statements in her declaration. She testified that her representation of Egnyte was "narrow." Ex. 2018, 37:9–12 ("I entered a pro hac [in the Egnyte Litigation] in order to represent Egnyte in the 101 hearing in Delaware. That was my narrow engagement. That is all I did. That's all I've ever done."). [redacted] She testified that she is not Egnyte's counsel in the litigation, but that Egnyte is represented by another firm, FisherBroyles. *Id.* at 48:7–8. She testified that her representation of Egnyte ended with arguing the 101 motion. *Id.* at 48:20–23. She testified, emphatically, that "I am not, have not, and will not represent Egnyte in the district court litigation in Delaware for anything other than the 101 oral argument that I represented them in." *Id.* at 85:15–18.

In its Preliminary Sur-reply, Patent Owner responded that "[i]n the midst of preparing the Petitions, lead counsel Ms. Keefe orchestrated a back-room, off-the-books deal to represent long time Cooley client Egnyte in furtherance of a three-part master plan to circumvent the IPR statutory time bar and estoppel provisions." Prelim. Sur-reply 1. We did not agree with Patent Owner's assertions of a "deal" involving Ms. Keefe or her firm,

Cooley. Institution Dec. 11–13. We found that the evidentiary record before us, summarized *supra*, did not support the existence of any such "deal." *Id.* at 12. Nor did we find any evidence before us that Egnyte was a "long time Cooley client." *Id.* at 12 n.8.[9] Instead, the testimony of Ms. Keefe established that it was "agreed" she would argue the Section 101 motion for Egnyte because of her prior "extensive experience" arguing such motions in the District of Delaware. Ex. 1029 (Keefe Decl.) ¶ 4. She argued the motion on December 20, 2022, and at that point, her involvement and that of her firm in the Egnyte Litigation ended. *Id.* ¶¶ 4–5. We found, therefore, that there is no record support for Patent Owner's allegation of collusion between Ms. Keefe and Egnyte "to circumvent the IPR statutory time bar and estoppel provisions." Institution Dec. 12; *see* Prelim. Sur-reply 1.

Post-institution, Patent Owner renews its argument that "the Petition fails to identify all real parties in interest/privies of Petitioners, in particular, Egnyte Inc., which is time-barred under 35 U.S.C. § 315(b)." PO Resp. 1–7. Patent Owner for the most part repeats earlier arguments rejected in the Institution Decision while, at the same time, presents no new supporting evidence. For example, Patent Owner again points to the joint defense agreement ("JDA") in the Egnyte Litigation, which Patent Owner asserts "gives Petitioners a second bite at the apple, in the event the IPR allegations are unsuccessful, in contrast to the statute and its intent." *Id.* at 2.

As discussed, Ms. Keefe addressed the JDA in her testimony. Ex. 1029 (Keefe Decl.) ¶ 6. [redacted]

[9] Ms. Keefe was unsure whether Egnyte was a former or current client of Cooley. Ex. 2018, 36:5–7.

[redacted]

Patent Owner contends again that "[t]hrough the JDA, Petitioners and Egnyte have collaborated on the grounds raised in the Petition." PO Resp. 2. As alleged proof, Patent Owner again asserts that "Egnyte and Petitioners' district court invalidity contentions are identical." *Id.*; *see* Prelim. Resp. 3. On this subject, Ms. Keefe confirmed that neither she nor Cooley advised Egnyte in preparing those contentions. Ex. 2018, 158:3–9.[10] As discussed above, the text of the JDA supports this testimony. Ex. 1030, 6–7 §§ 2.5, 2.5.1.

On July 22, 2024, approximately a week before the due date for this Decision, we received an email from Patent Owner's counsel, attaching two documents. Ex. 3005. Patent Owner contends that "consideration of this information is in the interest-of-justice because it is relevant to Egnyte's status as an unnamed RPI in these proceedings and was not available to the

[10] Petitioner points out that its invalidity contentions in district court were served before Egnyte's. Pet. Reply 2.

Board when it found Egnyte is not an RPI stating there was no evidence that Egnyte was a 'long time Cooley client.'" *Id.* (citing Institution Dec. 12).

The first of the two documents is a heavily-redacted, recent (July 15, 2024) email that appears to be from Egnyte's counsel to counsel for Patent Owner. Ex. 2050. The email indicates that the second document (Ex. 2051) was produced in the Egnyte Litigation and relates to Ms. Keefe's representation of Egnyte in the Egnyte Litigation, a fact that is not disputed. The second document appears to be a [redacted] engagement letter indicating that in [redacted] Egnyte engaged Cooley [redacted] Ex. 2051, 1. No further explanation of these documents is provided.

We have reviewed the documents and, for the reasons that follow, find they do not support Patent Owner's RPI claim. The [redacted] engagement letter makes no reference to Ms. Keefe or the Egnyte Litigation, and therefore does not provide contrary evidence to Ms. Keefe's testimony that the scope of her participation in that litigation was limited or that no documents exist that outline the scope of that representation. Nor does it contradict her testimony that she did not know if Cooley had an initial engagement letter with Egnyte. Ex. 2018, 32:1–3. Patent Owner cites no evidence that she knew of the letter when she testified. She explained in her testimony that she checked Cooley's conflicts records and "Egnyte was listed either as a former client or a current client. And I cannot remember which it was." *Id.* at 36:5–7. In sum, we see nothing in these documents that supports Patent Owner's unnamed-RPI theory based on Ms. Keefe's limited participation in the Egnyte Litigation.

As Petitioner pointed out, the sharing of trial counsel in district court by a non-party to an IPR accused of infringing the same patent as the

petitioner is a common occurrence, and by itself it is insufficient to make that non-party a real party-in-interest. Prelim. Reply 4 (citing *Adobe Inc. v. Rah Color Techs. LLC*, IPR2019-00629, Paper 35 at 12–13 (PTAB Sept. 4, 2019)). That is especially true here, where any overlapping representation was "narrow," and the accused products in the pending litigations are different. *Id.*; *see* Ex. 1029 (Keefe Decl.) ¶ 14 ("PO is accusing different products of infringement in the Egnyte litigation from those accused in the litigations involving Petitioner[]").

Patent Owner continues to rely heavily on *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336 (Fed. Cir. 2018) ("*AIT I*"), on remand, *RPX Corp. v. Applications in Internet Time, LLC*, IPR2015-01750, Paper 128 at 5 (PTAB Oct. 2. 2020) (precedential) ("*AIT II*"). PO Resp. 2–7; PO Sur-reply 2–6. For the reasons stated in our Institution Decision (at pp. 12–15) and those discussed below, we determine that the *AIT* decisions do not support Patent Owner.

In *AIT I*, the Federal Circuit, in remanding the case to the Board, instructed that "[d]etermining whether a non-party is a 'real party in interest' demands a flexible approach that takes into account both equitable and practical considerations, with an eye toward determining whether the non-party is a clear beneficiary that has *a preexisting, established relationship with the petitioner*." *AIT I*, 897 F.3d at 1351 (emphasis added).

Initially, Patent Owner contended that "the focus of the real-party-in-interest inquiry is on the patentability of the [challenged] claims . . . , *bearing in mind who will benefit* from having those claims canceled or invalidated." Prelim. Resp. 6–7 (quoting *AIT II*, Paper 128 at 5) (second and third alterations in original). We did not agree that either *AIT I* or *AIT II* supports

this argument as presented by Patent Owner on the facts before us. Institution Dec. 12–15. We explained that the "Federal Circuit's analysis in *AIT I* went far beyond determining only whether a party benefits from the filing of the petition." *Id.* at 13. For example, the Federal Circuit's analysis required determining whether "the non-party . . . has a preexisting, established relationship with the petitioner." *AIT I*, 897 F.3d at 1351. We found that the record in this case provided no persuasive evidence of such a "preexisting, established relationship" between Petitioner and Egnyte. Institution Dec. 13.

Many other facts were considered by the Federal Circuit in *AIT I*, including evidence of close cooperation between RPX and Salesforce (the unnamed alleged RPI). Those facts included, for example, the following:

> 1. Testimony regarding "six communications between RPX and Salesforce employees in which the AIT-Salesforce Litigation and/or the AIT Patents were mentioned or discussed."
>
> 2. The first of these communications was initiated by RPX, during which RPX "mentioned that RPX had become aware that Salesforce had been sued by AIT"; "provided a small amount of information" that RPX knew about the litigation; indicated that, although RPX did not have knowledge of AIT's expectations for its litigation campaign, it had previous dialogue on other matters with the same counsel who was representing AIT in the litigation; and offered to reach out to that counsel.
>
> 3. The following month, after Salesforce "had just renewed its membership agreement with RPX," an in-person meeting was held during which Salesforce "indicated that it would be interested if RPX could reach out to AIT and find out any information regarding AIT's expectations for its litigation campaign."
>
> 4. During a phone call, Salesforce "again indicated that it would be interested in any information RPX could obtain

> concerning AIT's expectations for its litigation campaign." Shortly after this third communication, Salesforce filed its CBM petitions.
>
> 5. RPX initiated a call to Salesforce approximately two weeks later, during which Salesforce informed RPX that it had filed the CBM petitions, that a stay would therefore be granted in the district court litigation, and that Salesforce no longer was interested in having RPX reach out to AIT to obtain information about AIT's expectations for that litigation.

AIT I, 897 F.3d at 1342. These facts were considered in the Board's decision on remand, along with the nature of RPX's "business model" and Salesforce's "relationship with RPX." *AIT II*, Paper 128 at 10–15, 20–23.

Unlike in *RPX*, there is no evidence of record that Petitioner's "business model" involves filing patent challenges for the benefit of other entities. *See AIT II*, Paper 128 at 13 ("[A]s the Federal Circuit noted, RPX's SEC filing states that one of [RPX's] strategies for transforming the patent market is the facilitation of challenges to patent validity.") (citing *AIT I*, 897 F.3d at 1351) (alterations in original) (internal quotation marks omitted). And here, in contrast to *AIT I* and *AIT II*, there is no evidence of record of any preexisting relationship or close cooperation between Petitioner and Egnyte regarding the contents of the Petition. *See* Ex. 1029 (Keefe Decl.) ¶ 23 (Petitioner and Egnyte "had no pre-filing communications regarding the potential content of Petitioner['s] IPR petitions."). Nor is there any evidence of the other factors considered by the Federal Circuit in *AIT I*, such as evidence of a "very significant payment shortly before" the petition was filed, *AIT I*, 897 F.3d at 1342, or evidence that Petitioner has held itself out as "an

extension of a client's in-house legal team," *id.* at 1340.[11] And there is no evidence here of overlapping board of director members between the petitioner and the unnamed party, as there was in *AIT I*. *Id.* at 1354; *see* Ex. 1029 (Keefe Decl.) ¶ 23 ("Petitioners and Egnyte are competitors, share no board members, and had no pre-filing communications regarding the potential content of Petitioners' IPR petitions.").

During the course of this trial, Patent Owner has presented no new evidence on any of these factors, other than Exhibits 2050 and 2051, which were addressed above. Patent Owner contends that Petitioner "[redacted] for shared counsel's representation of Egnyte to invalidate the '942 Patent, while drafting the Petition." PO Resp. 3. But Patent Owner cites no persuasive evidence to support this assertion other than Ms. Keefe's testimony that [redacted]. *Id.* (citing [redacted]). Ms. Keefe testified emphatically, "I am not, have not, and will not represent Egnyte in the district court litigation in Delaware for anything other than the 101 oral argument that I represented them in." *Id.* at 85:15–18. We find that Ms. Keefe's [redacted] work on a specific issue is *de minimis* and does not amount to [redacted].

Similarly, Patent Owner's reliance on a "mutual interest in invalidating the '942 Patent" is an insufficient basis for its argument that Egnyte is the real party in interest and is not supported by *AIT*. PO Resp. 3. As we pointed out, the Federal Circuit's analysis in *AIT* required determining whether "the

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[11] [redacted]

non-party . . . has a preexisting, established relationship with the petitioner." *AIT I*, 897 F.3d at 1351. We find that Patent Owner presents no persuasive evidence of such a "preexisting, established relationship" between Petitioner and Egnyte. *See* discussion *supra* and at page 15 of our Institution Decision (citing Ms. Keefe's testimony that Petitioner and Egnyte "had no pre-filing communications" regarding the potential content of the Petition.). For the reasons discussed, the mere fact that they are parties to the JDA does not support the existence of such a "preexisting, established relationship" between Petitioner and Egnyte.

Patent Owner points to no communications between Petitioner and Egnyte, and its argument that "the fact that the '942 Patent is being asserted against Egnyte" is evidence that Egnyte "would have been interested in Board review" is speculation. PO Resp. 6.[12] The factors from *AIT I* are cited and relied on by the Board on remand in *AIT II*. *See, e.g.*, *AIT II*, Paper 128 at 11 (business model), 20 (pre-existing relationship), 27 (overlapping board members), 29 (communications with petitioner). Having considered the facts of record in this case, we determine that Patent Owner's reliance on *AIT I* and *AIT II* as support for its dismissal argument is misplaced. For the foregoing reasons, we find that the record does not demonstrate that Egnyte is an RPI, and we determine that Petitioner has met its burden of identifying all RPIs. We therefore deny Patent Owner's request to dismiss the Petition because of a failure to name Egnyte as a real party-in-interest.

[12] Patent Owner has not moved for discovery of those communications in this proceeding. *See* PO Resp. 7 ("Petitioner and Egnyte have refused to produce communications between them.").

We address briefly Patent Owner's passing argument that Egnyte is a privy of Petitioner. PO Resp. 5. Citing *Taylor v. Sturgell*, 553 U.S. 880 (2008), our Consolidated Trial Practice Guide[13] explains that "[t]here are multiple factors relevant to the question of whether a non-party may be recognized as a . . . privy." Consolidated Trial Practice Guide at 15 (internal quotation marks omitted). *Taylor* provides a well-known listing of factors that "provide a framework" for determining privity. *Taylor*, 553 U.S. at 893 & n.6.

Other than its passing reference to privity, Patent Owner does not address the *Taylor* framework or otherwise support its assertion of privity between Petitioner and Egnyte. For the reasons discussed, we conclude that the sparse record before us does not demonstrate that Egnyte is a privy of Petitioner.

IV. ANALYSIS OF ASSERTED GROUNDS

A. Obviousness

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art;

[13] Patent Trial and Appeal Board Consolidated Trial Practice Guide (November 2019), available at https://www.uspto.gov/TrialPracticeGuideConsolidated.

(3) the level of skill in the art; and (4) so-called "secondary considerations," including commercial success, long-felt but unsolved needs, failure of others, and unexpected results. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). During the trial, neither party has presented any evidence on the fourth *Graham* factor.

B. Level of Ordinary Skill in the Art

According to Petitioner, an ordinarily skilled artisan "would have possessed a bachelor's degree in computer science (or similar degree), and two years of work experience developing software, including at least some experience with storage, synchronization, and human-computer interaction technologies." Pet. 6 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 15–21). Petitioner adds that "[a] person could also have qualified with more formal education and less technical experience, or vice versa." *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 17, 21).

Patent Owner does not dispute this description of the ordinarily skilled artisan. *See* Ex. 2025 (Shenoy II Decl.) ¶¶ 14–16.

We adopt the formulation of the level of ordinary skill in the art proposed by Petitioner as it is consistent with the prior art before us in this proceeding.

C. Claim Construction

Prior to institution, neither party proposed any claim construction for our consideration. Pet. 6 (Petitioner "do[es] not believe express claim construction is presently necessary.") (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 22–27); Ex. 2013 (Shenoy I Decl.) ¶ 21 ("In my analysis I have interpreted the claims in accordance with their plain and ordinary meaning."). As trial progressed, however, it became apparent that construction of the terms

"automatic" and "automatically" in the context of sending files, appearing in all claims, might well be dispositive of issues in the case. Patent Owner responded, not with an express construction, but with the following argument: "[T]he disclosures of Sigurdsson, Brown and Hesselink clearly require a client to send a request for synchronization of certain data before downloading the requested data, and therefore fail to disclose the 'automatic sending' limitation." PO Resp. 8. Petitioner, in turn, criticized Patent Owner for its "erroneously narrow" construction. Pet. Reply 4. Petitioner countered Patent Owner's implicit construction with the following: "The patent uses the term 'automatically' with its plain and ordinary meaning to indicate that files are transferred 'automatically' by a system as opposed to being transferred 'manually' by a human user from one device to another." *Id.* at 5.

The dispute over the meaning of "automatically" continued at the oral argument. At the hearing, Patent Owner proposed making a distinction between automatic at the "system level" and automatic at the "component level." This distinction came in response to a hypothetical question involving the iPhone posed by the Board to Patent Owner's counsel:

> [THE BOARD]: Let's say that when I unlock my iPhone, it sends a signal to the server saying I'm available to receive the emails. And in response to that, the server downloads the emails to my phone. Let's assume that that's hypothetically how the system operates. How would that, how would you describe that, automatic or manual?

Hearing Tr. 41:3–7. After further colloquy, Patent Owner's counsel answered as follows:

> [COUNSEL]: It's automatic for the system level. That's exactly how I would view it, is that it is automatic from the system level. And if you want to go down the component level, then it would not be automatic. That's actually the end.

Id. at 43:11–14. This subject came up again later in the hearing, when Patent Owner's counsel responded to a question as follows:

> [COUNSEL]: [Y]ou know, [the Board] talked about the iPhone example and the iPhone, you wake up in the morning, you turn your iPhone on and all of a sudden the emails appear. Is that automatic or not? Well, we would say, yes, it's automatic at the system level. I mean, and *we don't disagree with the Petitioners that automatic would include without manual intervention*. But it's more than that. It's really between the two actors that are involved in whatever element of the claim that automatic transfer appears.

Id. at 57:12–18 (emphasis added).

1. Legal Principles

We construe claim terms as relevant to the parties' contentions and to the extent necessary to resolve the issues in dispute. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999); *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). We must, therefore, resolve the controversy over the meaning of "automatically" in the claims before undertaking our analysis of the prior art.

The Board applies the same claim construction standard as that applied in federal courts. 37 C.F.R. § 42.100(b) (2019). In this context, claim terms "are generally given their ordinary and customary meaning" as understood by an ordinarily skilled artisan at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence."[14] *DePuy Spine, Inc.*

[14] Neither party has based its claim construction argument on the prosecution history of the '942 patent.

v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317.

2. Analysis

As instructed by *Phillips*, we first look to the words of the claim. *Phillips*, 415 F.2d at 1312. Patent Owner contends that the '942 patent claims a "user-centric computer network architecture for file synchronization, where a server automatically receives a modified file from one device associated with a user when the user modifies the file and the server *automatically sends* it to another device *associated with the same user*." PO Resp. 7. To illustrate this interpretation of "automatically," Patent Owner points to the language of limitation 1d: "Consistent with this focus, claim feature [1d] (and similarly claim [10c]) recites 'a first electronic device, associated with a user, configured to . . . automatically send, via the first application, the modified first electronic file copy to a third application at the third electronic device [associated with a user] . . . .'" *Id.* at 7 (alterations in original) (emphases omitted).

Patent Owner relies on the Federal Circuit's decision in *Rovi Guides, Inc. v. Vidal*, No. 2020-1994, 2022 WL 1152311 at *1 (Fed. Cir. Apr. 19, 2022). PO Resp. 9. Patent Owner contends *Rovi Guides* stands for the proposition that "all terms included in the claim must be considered since each term must add something more." *Id.* Citing *Rovi Guides*, Patent Owner contends that "[t]he *automatically* sending limitation requires the first application on the first electronic device (e.g., a server) to *automatically* send the modified first electronic file copy to the third electronic *associated with*

the user." *Id.* at 10. Elsewhere in its Response, Patent Owner distinguishes a prior art data transfer process from the claimed automatic updating process because it is based on a "client pull" in contrast to a "data push." *Id.* at 49–50; *see also* Ex. 2025 (Shenoy II Decl.) ¶ 202.

Petitioner responds that Patent Owner's construction of "automatically" in limitation 1d (and corresponding limitation 10c) is "erroneously narrow." Pet. Reply. 4. Referring to the '942 patent specification, Petitioner asserts that "[t]he patent uses the term 'automatically' with its plain and ordinary meaning to indicate that files are transferred 'automatically' by a system as opposed to being transferred 'manually' by a human user from one device to another." *Id.* at 5 (citing Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 23, 26–28, 32–34, 52, 67). In further support of this construction, Petitioner points to several instances where the specification contrasts manual operations (e.g., moving or transferring files) with automatic operations. *Id.* (citing Ex. 1002, 1:33–65, 3:5–21, 3:65–4:2). Embracing Patent Owner's description of the claims as "user-centric," Petitioner contends "[n]othing in the claims or specification requires file transfer that is automatic 'from the perspective of the server' in the extremely narrow sense PO assumes—unilaterally initiated by the server without receiving any communication from another device." *Id.* at 6. Neither of the independent claims expressly recites a server.[15] Petitioner argues that Patent Owner "does not attempt to argue any disclaimer, disavowal, or lexicography that would exclude 'automatic' transfers that occur in response to

[15] Claims 1 and 10 are directed to a system and its method of operation, respectively.

communications between devices." *Id.* (citing *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012)).

We agree with Petitioner that the language of the claims does not limit transfers to those that are automatic "from the perspective of the server," that is, unilaterally initiated without receiving communication from another device. *See* Pet. Reply 5–6. As Petitioner explains, "[t]he ['942] patent's only use of the word 'automatically' in the detailed description of the preferred embodiment reflects this user-centric perspective." *Id.* (citing Ex. 1002, 7:47–51); *see also* Ex. 1046 (Balakrishnan Reply Decl.) ¶ 52.

Phillips instructs us that "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315 (internal quotation marks and citation omitted). While we do not find the parties' arguments based on the claim language alone sufficient to resolve this issue, we are persuaded that the specification of the '942 patent makes it clear that the claims should not be limited to what Patent Owner and Dr. Shenoy term "push" transfer operations by a server, but should at least encompass "pull" operations by a client device. Specifically, the '942 patent expressly states that pull transfer operations may be interchanged with pull transfer operations in the disclosed system:

> [A]s an alternative to the approach described with reference to FIG. 3, wherein the transfer clients 310, 320 function to "push" modified or created files to the synch application 380, the synch application 380 may instead function to periodically "pull" or otherwise actively retrieve such files from the transfer clients 310, 320.

Ex. 1002, 10:51–56; *see* Ex. 1046 (Balakrishnan Reply Decl.) ¶ 32.

We have considered Patent Owner's other claim construction arguments and find them unavailing. PO Resp. 8–12; PO Sur-reply 6–13. For example, we do not find Patent Owner's argument that "[i]f 'automatically' merely means the files are transferred by the system instead of by a human user, then the term 'automatically' would add nothing to the claim" to be persuasive. PO Sur-reply 8. We disagree with Patent Owner that knowing that a file transfer is not manual provides no additional information over just knowing that there is a transfer. The former excludes manual transfers by a human user while the latter does not. We further disagree that Patent Owner's "push" construction gives meaning to "automatically," while a construction that would also include a "pull" would not. Nor are we persuaded by Patent Owner's argument that the '942 patent's discussion of the interchangeability of push and pull transfers is "an unclaimed alternative embodiment." PO Sur-reply 12. The Federal Circuit has observed that "there is a strong presumption against a claim construction that excludes a disclosed embodiment." *Nobel Biocare Servs. AG v Instradent USA, Inc.*, 903 F.3d 1365, 1381 (Fed. Cir. 2018). Patent Owner has identified nothing in the intrinsic record that convinces us this presumption has been overcome here. Finally, we do not credit the argument by Patent Owner at the oral hearing that there is a distinction between the automatic at the "system level" and the "component level." *See* discussion *supra*; Hearing Tr. 43:11–14; 57:12–18. The argument is not timely, and in any event unsupported by the intrinsic evidence or testimony.

In summary, we reject Patent Owner's proposed construction of "automatically" as being limited to "push" transfer operations that are initiated by a server and not including "pull" operations that are initiated by a

client as contrary to the '942 patent specification. Instead, we adopt as most consistent with the specification Petitioner's broader construction of "automatically" as the transfer of files that is not done manually by a human user. Pet. Reply 5; *see also* Ex. 2033 (Balakrishnan Dep.), 141:22–142:16.

D. Description of the Prior Art References

1. Sigurdsson (Ex. 1016)

Sigurdsson discloses a system for sharing and synchronizing content across a user's multiple computing devices. Ex. 1016 ¶¶ 2, 4, 16. Figure 4 of Sigurdsson is reproduced below.

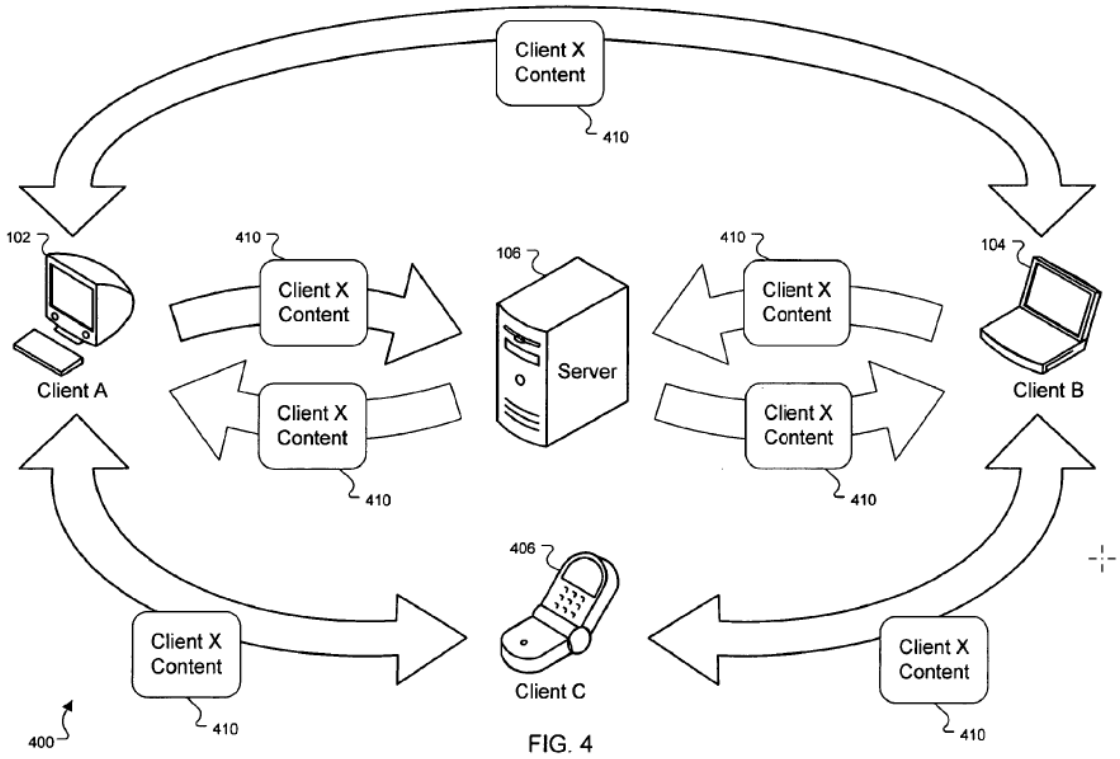

Figure 4 of Sigurdsson is a schematic showing system 400 for sharing and synchronizing content using a mixed peer-to-peer and client/server architecture. *Id.* ¶ 51. Server 106 is used to share content among Client A 102, Client B 104, and Client C 406, which may include, e.g., home

computers, work computers, and mobile computers such as cell phones. *Id.* ¶¶ 27, 51.

For example, a user at Client A 102 may edit and save a document on their work computer. Ex. 1016 ¶ 52. Client X content 410 originating on Client A 102, which can include a copy of the document saved by the user as well as metadata, is posted to Server 106. *Id.* ¶ 54. Server 106 stores Client X content 410 and, upon receiving a request for missing content from, e.g., Client B 104, transmits Client X content 410 to Client B 104. *Id.* ¶¶ 46, 55. Each of clients 102, 104, 408 can push new data to other clients instead of waiting until the other clients send a request for missing content. *Id.* ¶ 84.

System 400 can enable peer-to-peer content sharing and synchronization for clients that are currently online to share Client X content 410 directly between the clients. Ex. 1016 ¶ 62. For system 400 to supply Client X content 410 to an offline client, Server 106 can be used as a drop box for Client X content 410 until the offline client comes online again. *Id.* ¶ 62.

2. Shappell (Ex. 1020)

Shappell discloses a computer network system that enables users to share files in a server-less shared memory space. Ex. 1020, code (57), ¶ 1. Files in the shared space can be copied to a user's local machine. *Id.* ¶ 62. When a modification of a file contained in the shared space occurs, machines that have previously obtained a copy of the shared file will remove the local copy of the out-of-date file and obtain an updated version of the file. *Id.* ¶ 81.

3. Brown (Ex. 1025)

Brown discloses client machines synchronizing with each other by synchronizing to a common server account. Ex. 1025, 2:65–67. Figure 1 of Brown is reproduced below.

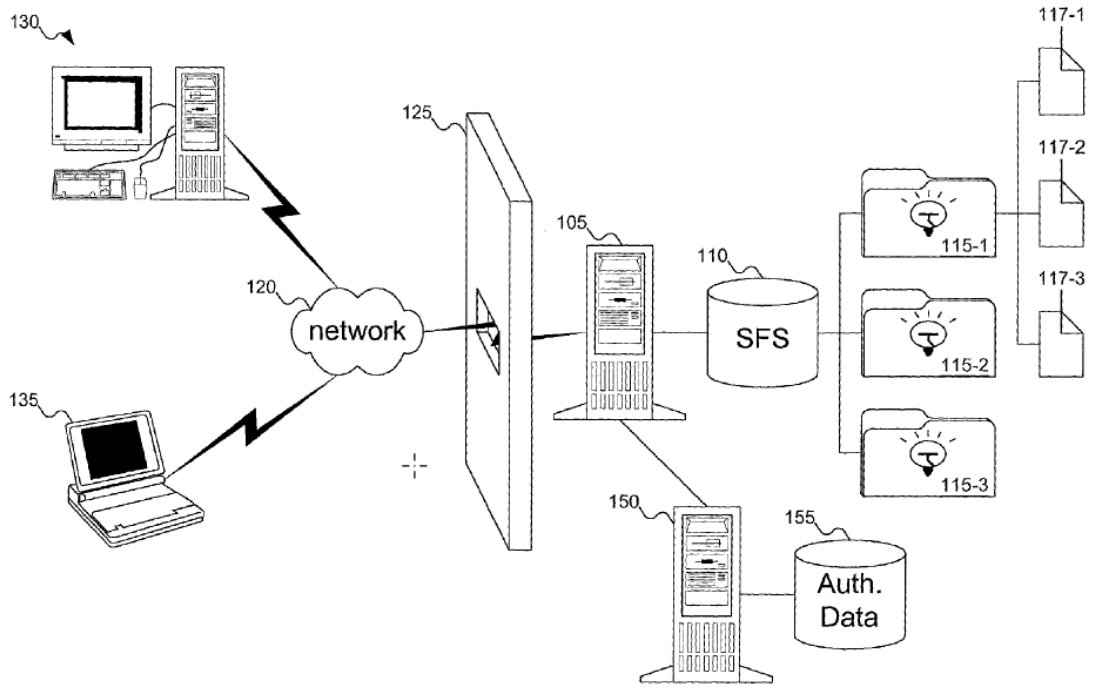

FIG. 1

Figure 1 of Brown shows server 105 with clients 130, 135 accessing files stored on server 105. *Id.* at 3:54–56. Server 105 includes server Synchronization File System (SFS) 110 with a functional interface and metadata organization that enables synchronization by clients 130, 135. *Id.* at 2:59–62. Clients 130, 135 include a client Synchronization Application (SA) that uses server SFS 110 to synchronize local client data with server 105. *Id.* at 2:63–65. The synchronization process is initiated by a client SA when it makes a sync poll call to server 105, passing to it a client

sync index (CSI) identifying its current known state of the server account. *Id.* at 5:14–17.

If a server sync index (SSI) value representing the state of the server account matches the CSI value passed in by the polling client, the client is up to date with the current state of its server account. Ex. 1025, 5:3–13, 5:17–19. In that case, server SFS 110 returns the SSI (having the same value as the CSI) back to the client. *Id.* at 5:19–21. Otherwise, server SFS 110 returns the SSI along with server metadata information the client needs to transition its account from its current state to the current state of server 105. *Id.* at 5:21–24. The client SA also monitors local file system activity on the client and sends changes to server SFS 110 during synchronization. *Id.* at 3:46–50.

4. Hesselink (Ex. 1026)

Hesselink discloses synchronization of files among a user's multiple computers. Ex. 1026 ¶ 210. "[A] user may choose to always synchronize all copies of a file, wherein, whenever the user makes a change to that file locally, at any location, then all of the devices which subscribe to that file are automatically updated immediately." *Id.*

E. Asserted Obviousness of Claims 1, 3, 4, 10, 12, and 13 over Sigurdsson and Shappell

1. Claim 1

Petitioner asserts that claim 1 would have been obvious over the combination of Sigurdsson and Shappell. Pet. 12–33. Petitioner provides a

limitation-by-limitation claim analysis,[16] supported by expert testimony. *See id.*; Ex. 1028 (Balakrishnan Decl.) ¶¶ 412–464.

For the reasons that follow, we find that Petitioner demonstrates that each limitation of claim 1 is met by the combination of Sigurdsson and Shappell.

a. Preamble[17]

Petitioner contends the preamble of claim 1 ("A system comprising") is met by the system comprising Sigurdsson's clients A–C and Server 106 in Figure 4, reproduced in Section IV.D.1, *supra*. Pet. 12–13 (citing Ex. 1016 ¶¶ 45–51, Fig. 4; Ex. 1028 (Balakrishnan Decl.) ¶¶ 146–149, 413).

b. [1a] a first electronic device, associated with a user, configured to

Petitioner contends that Sigurdsson teaches limitation 1a. Pet. 13–14. Petitioner identifies Server 106 in Figure 4 of Sigurdsson as the "first electronic device" in limitation 1a. *Id.* at 15 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 414–416). Petitioner contends that Server 106 is configured to execute, using processor 910, instructions stored in memory 920 or storage device 930. *Id.* at 13–14 (citing Ex. 1016 ¶¶ 105, 109–110, Ex. 1028 (Balakrishnan Decl.) ¶ 415). Further, Petitioner argues that Sigurdsson discloses that Server 106 may be associated with a user because it can store and authenticate a user ID for each user. *Id.* at 17 (citing Ex. 1016 ¶¶ 27, 49; Ex. 1028 (Balakrishnan Decl.) ¶ 416).

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[16] Our analysis in this and the following section tracks Petitioner's paragraph references for the claim limitations. *See* Pet. Appendix A.
[17] We do not express a view on whether the preambles of claims 1 or 10 are limiting.

c. [1b] receive, via a first application at the first electronic device, a copy of a modified first electronic file from a second application at a second electronic device associated with the user, wherein the modified first electronic file copy is automatically received from the second application responsive to the user modifying a content of the first electronic file

Petitioner contends that Sigurdsson teaches limitation 1b. Pet. 14–19. Petitioner contends that Sigurdsson's Server 106 is "configured to receive . . . a copy of a first electronic file in the form of, for example, a very large maintenance manual." *Id.* at 17 (internal quotation marks omitted) (alteration in original) (Ex. 1016 ¶ 58; Ex. 1028 (Balakrishnan Decl.) ¶¶ 418–421). Petitioner contends that in Sigurdsson, "Client A may automatically receive the modified first electronic file (maintenance manual) from the second application (HTTPS Client/server) responsive to the user modifying a content of the electronic file." *Id.* (internal quotation marks and emphasis omitted) (citing Ex. 1016 ¶¶ 58, 61; Ex. 1028 (Balakrishnan Decl.) ¶ 421). Petitioner maps the recited first application to synchronization manager 332, which is included in Server 106, which Petitioner contends is the recited first electronic device. *Id.* at 13–14 (citing Ex. 1016 ¶ 48; Ex. 1028 (Balakrishnan Decl.) ¶¶ 414–428). Petitioner asserts that synchronization manager 332 performs the functions of sending, receiving, and storing data because Server 106 contains only one other application: authentication manager 334, which handles authentication and security functions. *Id.* at 15 (citing Ex. 1016 ¶¶ 48–49, 112; Ex. 1028 (Balakrishnan Decl.) ¶ 418).

Petitioner maps the recited second and third electronic devices to Clients A and C, respectively. Pet. 15 (citing Ex. 1016 ¶ 51; Ex. 1028 (Balakrishnan Decl.) ¶ 419) . Petitioner argues that Sigurdsson describes its

client devices as being associated with a user. *Id.* (citing Ex. 1016 ¶ 31; Ex. 1028 (Balakrishnan Decl.) ¶ 428). Petitioner asserts that an ordinarily skilled artisan would have recognized the benefit of having Server 106 serve as a drop-box for a user's files. *Id.* at 16 (citing Ex. 1016 ¶¶ 27–29, 61; Ex. 1028 (Balakrishnan Decl.) ¶ 427). Petitioner further argues that Server 106 is configured to receive a maintenance file from an application on Client A. *Id.* at 17 (citing Ex. 1016 ¶ 58; Ex. 1028 (Balakrishnan Decl.) ¶ 418–421). Petitioner asserts that Client A sends a file to Server 106 when content is changed. *Id.* at 17–18 (citing Ex. 1016 ¶ 84). Further, Petitioner contends that the content sent can include a full copy of the modified file. *Id.* (citing Ex. 1016 ¶¶ 74, 83, 85, 104, 110; Ex. 1028 (Balakrishnan Decl.) ¶¶ 418–425).

d. [1c] determine whether the first electronic device is in communication with a third electronic device

Petitioner contends that Sigurdsson teaches or suggests limitation 1c. Pet. 19–21. Petitioner asserts that it would have been obvious to use Server 106 to determine whether Server 106 is in communication with Client C. *Id.* at 19 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 429–431). Petitioner contends that Sigurdsson teaches that system 400 automatically detects whether a particular client is offline. *Id.* (citing Ex. 1016 ¶ 61; Ex. 1028 (Balakrishnan Decl.) ¶ 430). Further, Petitioner asserts that Sigurdsson teaches that when a client comes online it can notify Server 106 that it is online. *Id.* (citing Ex. 1016 ¶ 61; Ex. 1028 (Balakrishnan Decl.) ¶ 430).

> *e. [1d] automatically send, via the first application, the modified first electronic file copy to a third application at the third electronic device responsive to the determination that the first electronic device is in communication with the third electronic device and responsive to receiving the modified first electronic file copy from the second electronic device*

Petitioner contends that Sigurdsson alone and in combination with Shappell teaches or suggests limitation 1d. Pet. 21–26; Ex. 1028 (Balakrishnan Decl.) ¶ 432; Pet. Reply 9. Petitioner asserts that Client C (the third electronic device) may include an HTTPS client/server (third application). *Id.* at 21–22 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 432–446). Petitioner asserts that, in the embodiment of Figure 6 (reproduced below) Server 106 may send a modified maintenance manual (the modified first electronic file copy) received from Client A to Client C to keep Client C up to date with the latest file changes from other clients. *Id.* (citing Ex. 1016 ¶ 68). Petitioner quotes Sigurdsson's disclosure that "Server 106 sends the Client X content 410 to the Client C 406." *Id.* (quoting Ex. 1016 (Sigurdsson) ¶ 68).

Figure 6 of Sigurdsson follows.

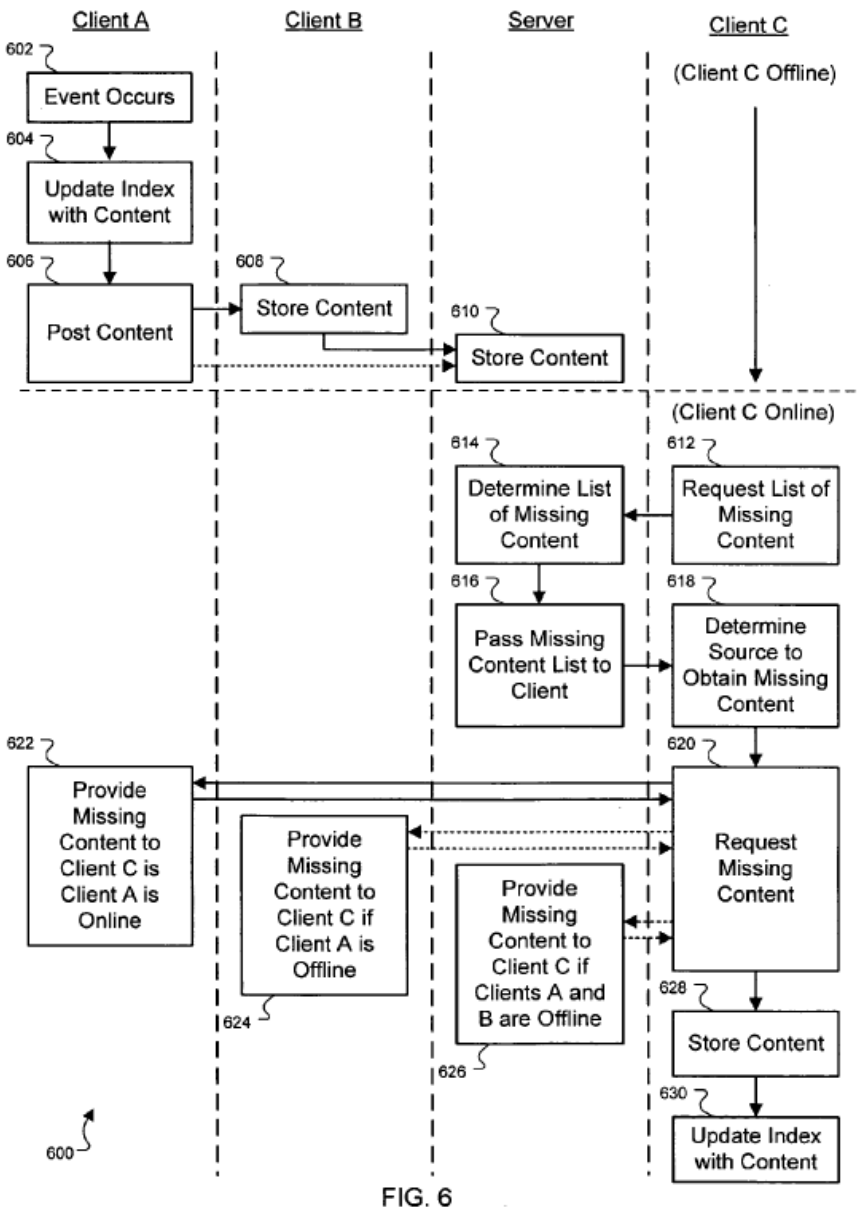

FIG. 6

Figure 6 is a sequence diagram showing a method for sharing and synchronizing content using a mixed peer-to-peer and server architecture when a client that is off-line comes online according to Sigurdsson. Ex. 1016 ¶ 21. Petitioner relies on Step 626 as showing a server sending missing content to a third client. Pet. 22 (citing Ex. 1016 ¶ 80). Petitioner contends that "[i]t would have been obvious to practice this limitation in view of additional examples in Sigurdsson, which teach or suggest receiving Client A

content at Server 106 and automatically transferring the content to Client B, C, or any other client." *Id.* (citing Ex. 1016 ¶ 68; Ex. 1028 (Balakrishnan Decl.) ¶ 436).

Petitioner contends that Sigurdsson teaches or suggests that the first electronic file copy (the maintenance manual) is sent responsive to a determination that the first electronic device (server 106) is in communication with the third electronic device (Client C). Pet. 23 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 441). Petitioner contends that Sigurdsson teaches or suggests determining whether server 106 is in communication with client C and only in response to that determination sending the file to Client C. *Id.* (citing Ex. 1016 ¶ 69; Ex. 1028 (Balakrishnan Decl.) ¶¶ 429–431, 434).

Petitioner contends further that "[an ordinarily skilled artisan] would have been motivated to use these teachings and Server 106 to automatically send the modified first electronic file copy (e.g., maintenance manual) to the third electronic device (Client C) responsive to receiving the modified first electronic file copy from the second electronic device." Pet. 24 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 435) (internal quotation marks and emphases omitted). Petitioner asserts that Server 106 includes a synchronization manager that synchronizes content stored on and shared between different clients. *Id.* (citing Ex. 1016 ¶ 48; Ex. 1028 (Balakrishnan Decl.) ¶ 435). Petitioner contends that synchronization in this context means version comparisons of files to ensure they contain the same data. *Id.* (citing Ex. 1021, 506; Ex. 1028 (Balakrishnan Decl.) ¶ 435). Petitioner contends that, therefore, an ordinarily skilled artisan would have understood Sigurdsson's synchronizing to include or suggest using the synchronization

manager on Server 106 to automatically transfer a modified first electronic file copy received from Client A to Client C. *Id.* at 24–25 (citing Ex. 1016 ¶¶ 69–80; Ex. 1028 (Balakrishnan Decl.) ¶ 435).

Petitioner further asserts that it would have been obvious in view of Sigurdsson that the first electronic file could be received and stored on the third electronic device (Client C). Pet. 25 (citing Ex. 1016 ¶¶ 81, 104; Ex. 1028 (Balakrishnan Decl.) ¶ 455). Petitioner further contends that, in addition, it would have been obvious that, instead of implementing Client C as a mobile device as shown in Figure 4 (which may have had limited memory in November 2008), Client C could have been implemented as a computer with memory large enough to store a large file, such as an updated maintenance manual. *Id.* (citing Ex. 1016 ¶¶ 45, 50–51, Ex. 1028 (Balakrishnan Decl.) ¶ 455).

Petitioner contends that the content transferred to the server by Client A may include a full copy of the user's modified file. Pet. 25 (citing Ex. 1016 ¶¶ 8, 28, 54, 65; Ex. 1028 (Balakrishnan Decl.) ¶¶ 417–428). Petitioner contends that it would have been obvious that the same "Client X Content" received from Client A, including a full copy of the modified file, could have been sent from the server to Client C when Client C comes back online after being offline. *Id.* at 25–26 (citing Ex. 1016 ¶¶ 68, 80, Ex. 1028 (Balakrishnan Decl.) ¶ 436).

Patent Owner's response to this challenge to claim 1 focuses to a large extent on claim limitation 1d. PO Resp. 12–19. Patent Owner's contentions regarding this limitation will be discussed *infra*, including Patent Owner's argument that the three electronic devices recited in the limitation must be associated with the same user.

f. [1e] receive, via the first application, a copy of a modified second electronic file from the third application at the third electronic device associated with the user, wherein the modified second electronic file copy is automatically received from the third application responsive to the user modifying a content of the second electronic file

Petitioner contends that Sigurdsson teaches or suggests limitation 1e. Pet. 26. Petitioner asserts that it would have been obvious to implement the functionality performed by Client A discussed for limitation 1b using Client C (third electronic device) and an HTTPS Client/server on Client C (third application) to automatically transfer a copy of a modified second electronic file (e.g., a small office memo) when the file is modified. *Id.* (citing Ex. 1016 ¶ 58, Ex. 1028 (Balakrishnan Decl.) ¶¶ 447–448). Petitioner further contends that Client C is "associated with the user." *Id.* (citing Ex. 1016 ¶¶ 417–428). Petitioner further contends that Sigurdsson describes Client C as operating similarly to Client A, and it would have been obvious to include the same components in Clients A and C to implement the functionality recited in claim [1b] using Client C to automatically transfer a file to the server. *Id.* (citing Ex. 1016 ¶¶ 50–51, 68, Ex. 1028 (Balakrishnan Decl.) ¶¶ 429–431, 448).

g. [1f] determine whether the first electronic device is in communication with the second electronic device

Petitioner contends that Sigurdsson teaches or suggests limitation 1f. Pet. 27. Petitioner asserts that Sigurdsson's clients operate similarly and are interchangeable, so it would have been obvious to implement the functionality described for limitation 1c for determining whether the first electronic device is in communication with the third electronic device but instead for "determin[ing] whether the first electronic device is in

communication with the second electronic device." *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 449–450). Petitioner contends that Sigurdsson discloses determining whether Client B is offline instead of Client C and it would have been obvious to also detect whether the server is in communication with Client A, given that Clients A and B include similar components and perform similar functions. *Id.* (citing Ex. 1016 ¶ 50, Ex. 1028 (Balakrishnan Decl.) ¶ 450).

> *h. [1g] automatically send, via the first application, the modified second electronic file copy to the second application at the second electronic device responsive to the determination that the first electronic device is in communication with the second electronic device and responsive to receiving the modified second electronic file copy from the third electronic device*

Petitioner argues that Sigurdsson teaches or suggests limitation 1g. Pet. 28. Petitioner contends that Sigurdsson's clients operate similarly and are interchangeable. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 451–452). Further, Petitioner contends that it would have been obvious to automatically transfer the modified second electronic file copy (small office memo) from the server, via the server's first application, to the second application (HTTPS Client/server at Client A) "responsive to the determination that the first electronic device" (Server 106) "is in communication with the second electronic device" (Client A) "and responsive to receiving the modified second electronic file copy from the third electronic device" (Client C). *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 452) (emphases omitted).

Patent Owner contends that Petitioner has not made an insufficient showing for claim limitation 1g. PO Resp. 12–19. Patent Owner's contentions regarding this limitation will be discussed *infra*.

i. [1h]wherein, responsive to sending the modified first electronic file copy to the third electronic device, an older version of the first electronic file stored on the third electronic device is automatically caused to be replaced with the modified first electronic file copy such that the modified first electronic file copy is stored on the third electronic device in lieu of the older version of the first electronic file

Petitioner contends that the combination of Sigurdsson and Shappell teach or suggest limitation 1h. Pet. 28–33. Petitioner asserts that Shappell teaches automatically transferring a modified file to another client after receiving the modified file from an originating client. *Id.* at 28–29 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 461–462). Further, Petitioner contends that Shappell teaches using automatic replication to automatically replace an out-of-date file with an updated version on a receiving computer. *Id.* at 29 (citing Ex. 1016 ¶¶ 62, 81, Figs. 19–20; Ex. 1028 (Balakrishnan Decl.) ¶ 461).

Petitioner contends that an ordinarily skilled artisan would have been motivated to apply Shappell's teachings to Sigurdsson's system and methods based on Sigurdsson's disclosure of concerns about limited memory on Server 106 and the need to manage data stored on that server. Pet. 29 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 440, 459–462). Petitioner argues that these concerns would have motivated an ordinarily skilled artisan to automatically transfer an incoming, updated file from Server 106 to any other client device that may need the file as quickly as possible and to replace the older version of the file stored on Server 106 to avoid unnecessary use of Server 106's memory. *Id.* at 29–30 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 440). Petitioner also argues that it would have been obvious to replace an older version of a file on a user's computer to prevent copies of outdated versions

from endlessly accumulating in storage on the user's computers. *Id.* at 31 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 460, 462).

j. Motivation to Combine

Petitioner contends that it would have been obvious to combine Sigurdsson with Shappell's teachings, predictably resulting in Sigurdsson's system where a modified file received from an originating client is automatically forwarded to a receiving client after receipt of the file at Server 106, to replace an older version of the file stored at the receiving client. Pet. 32. Petitioner contends that the combination would have straightforwardly combined prior art elements according to known techniques to predictably improve Sigurdsson's system in the same way the relevant features enhance Shappell's disclosed systems, automatically transferring a modified file received at a server from an originating client to a receiving client to replace an older version of the file stored at the receiving client. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 183, 462).

Petitioner contends that an ordinarily skilled artisan would have been motivated to consider Shappell given its origination with leading file-management vendor Microsoft, as Sigurdsson likewise contemplates standard "home" and "work" computers with Microsoft software. Pet. 32 (citing Ex. 1016 ¶¶ 27, 42, 45, 58, 60; Ex. 1028 (Balakrishnan Decl.) ¶ 184).

Petitioner contends that an ordinarily skilled artisan would have had a reasonable expectation of success in combining Sigurdsson's and Shappell's teachings. Pet. 32 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 183, 462).

Patent Owner contends that Petitioner has made an insufficient showing for a motivation to combine Sigurdsson and Shappell. PO

Resp. 10–12. Patent Owner's contentions regarding Petitioner's proposed motivation to combine will be discussed *infra*.

> *k. [1i] wherein, responsive to sending the modified second electronic file copy to the second electronic device, an older version of the second electronic file stored on the second electronic device is automatically caused to be replaced with the modified second electronic file copy such that the modified second electronic file copy is stored on the second electronic device in lieu of the older version of the second electronic file*

Petitioner contends that Sigurdsson teaches or suggests limitation 1i. Pet. 33. Petitioner asserts that Sigurdsson explains that its clients operate similarly and are interchangeable. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 463–464). Further, Petitioner asserts, for the reasons it presented for limitation 1h, it would have been obvious to implement the functionality of limitation 1h for the second electronic file copy and the second electronic device, rather than the first electronic file copy and the third electronic device, respectively. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 464).

l. Discussion

There are four disputed issues for claim 1 for this ground. The first disputed issue concerns limitation 1d. PO Resp. 8–9, 11–12. The second disputed issue is whether the combination of Sigurdsson and Shappell teaches or suggests first, second, and third electronic devices associated with the same user. *Id.* at 9–10. The third disputed issue is whether an ordinarily skilled artisan would have combined Sigurdsson and Shappell, and the fourth disputed issue is whether the combination of Sigurdsson and Shappell teaches or suggests limitation 1g. *Id.* at 10–12.

i. Limitation 1d

Patent Owner disputes Petitioner's contention that the combination of Sigurdsson and Shappell teaches or suggests limitation 1d's "automatic send[ing]" recitation: "automatically send, via the first application, the modified first electronic file copy to a third application at the third electronic device . . . responsive to receiving the modified first electronic file copy from the second electronic device." PO Resp. 12; Ex. 1002, 11:22–28. Patent Owner contends that "[t]he Petition fails to give proper weight to 'automatically send,' and instead of considering the disclosure of Sigurdsson as a whole, or even the full description of the relied-upon embodiment in Sigurdsson, improperly relies on select sentences taken out of context while ignoring the principal structure and operations taught by Sigurdsson." PO Resp. 12. Patent Owner contends that "[t]here is no dispute that the transfer Sigurdsson describes in step 626 of FIG. 6 is not automatic from the perspective of the server." *Id.* at 13. Patent Owner further explains, "[t]his is because the transfer of missing content from Server 106 to Client C is initiated by a request from Client C for a list of missing content in step 612 and a request for the missing content in step 620." *Id.*

Petitioner responds that Patent Owner's arguments "rely heavily on an erroneously narrow claim construction of 'automatically' transferring files." Pet. Reply 4. More specifically, Petitioner asserts Patent Owner's claim construction "incorrectly assumes this automatic transfer requires 'push-based functionality.'" *Id.* at 4–5. We agree with this argument by Petitioner. We find that Patent Owner's analysis relies on a construction of "automatic" that we have rejected. *See* Section IV.C, *supra*. Specifically, Patent Owner argues that "[w]hile it is true that Sigurdsson discloses that the Server 106

can transmit the content to the remaining client peers, such as the Clients B and C, Sigurdsson is clear that this transmission of the content by the server 106 is performed only after receiving a request for the missing content from the Clients B and C." PO Resp. 18 (citing Ex. 2025 (Shenoy II Decl.) ¶ 147) (emphasis omitted). We determined *supra*, however, that neither the language of the claims nor the specification of the '942 patent supports this narrow construction of "automatically transfer" as permitting a "push" but not a "pull." *See* Section IV.C, *supra*. We have rejected this construction and, therefore, we find that under a proper construction of "automatically," for the reasons given by Petitioner and Dr. Balakrishnan and summarized above, Petitioner has demonstrated that claim limitation 1d is taught by Sigurdsson.

We have considered Dr. Shenoy's testimony on limitation 1d and do not find it convincing because it is also based on Patent Owner's rejected claim construction for "automatically." For example, Dr. Shenoy testifies that "Sigurdsson requires a server to receive a request from a client device before the server transmits missing content to the client device." Ex. 2025 (Shenoy II Decl.) ¶ 137. Dr. Shenoy further testifies that "Sigurdsson describes that its system is implemented as an HTTP client/server operating based on request/response process." *Id.* Dr. Shenoy further testifies that "[a]n HTTP protocol did not support push-based functionality at the time of the invention. Therefore [an ordinarily skilled artisan] would not read Sigurdsson as disclosing "automatically sending the modified first electronic file copy to the third electronic device." *Id.* This analysis by Dr. Shenoy is contrary to our construction of "automatically" and therefore we do not credit it. *See* Section IV.C, *supra*.

Even under Patent Owner's construction of "automatically," however, we would disagree with Patent Owner's argument and Dr. Shenoy's testimony that Sigurdsson does not teach or suggest that server 106 automatically sends a modified file to a client. PO Resp. 12; Ex. 2025 (Shenoy II Decl.) ¶¶ 136–138, 147. Sigurdsson expressly teaches sending a modified file from its server 106 to its Client C (the third electronic device) in its description of step 626 and of the "alternative embodiment of step 606" in the sequence diagram of Figure 6. *See* Ex. 1016 ¶¶ 68, 80, Fig. 6; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 113–114, 116–117, 121. Referring to Figure 6, Sigurdsson discloses that "[i]n step 626, the server sends the missing content to the third client. For example, referring to FIG. 4, the Server 106 sends the Client X Content 410 to the Client C 406." Ex. 1016 ¶ 80. Similarly, with the alternative embodiment of step 606, "the Client X Content 410 can be sent directly to the Server 106, thus bypassing the Client B 104. The *Server 106 can then transmit the content to* the remaining client peers, such as the *Clients B and C*." Ex. 1016 ¶ 68 (emphasis added). This describes an automatic transfer from Server 106 to Client C even with Patent Owner's construction of automatically. Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 97, 101, 113. Further, the user devices in Sigurdsson include both an HTPPS client and an HTTPS server, meaning that Sigurdsson's sever has an HTPPS client that can effectively push data to user devices. *Id.* ¶¶ 86–87, 113–114; Ex. 1016 Fig. 3, ¶¶ 31, 47, 68, 86. We credit Dr Balakrishnan's testimony that thus an ordinarily skilled artisan would understand that Sigurdsson teaches or suggests the use of an HTTPS client in server 106 to automatically push content from server 106 to an HTTPS server in Client B

or Client C, i.e., without any request for such content. *See* Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 86–87, 113–114, 121.

Patent Owner argues that the transfer in step 626 is not automatic from the perspective of the server because Sigurdsson describes this transfer as being initiated by requests from Client C: a list of missing content in step 612 and a request for missing content in step 618. PO Resp. 13. We disagree. *See* Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 86–87, 97–101, 104–107, 113, 121. But, in any event, Sigurdsson does not describe the sending of a modified file with the alternative embodiment of step 606 as resulting from any request from Client C. Ex. 1016 ¶ 68; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 97–101, 104–107, 113, 120–121.[18] Further, the step does not require a request from a client. Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 97–101, 104–107, 113, 120–121. We further credit Dr. Balakrishnan's testimony that HTTPS servers at the relevant time could implement push-based data/file transfers to clients. *Id.* ¶ 114 (citing Ex. 1041 (IETF HTTP/1.1) § 9.5 (dated June 1999)). Further, we disagree with Patent Owner's argument and Dr. Shenoy's testimony that the description of Figure 6 as a whole limits the alternative embodiment of step 606 to pull-based transfers. PO Resp. 12; Ex. 2025 (Shenoy II Decl.) ¶ 139. Sigurdsson's description of the alternative embodiment of those steps does not limit that embodiment to the pull-based

[18] Paragraph 120 refers to claim 1 of the '561 patent. That may have been a typographical error since paragraph 120 is in the section of the declaration that addresses the '942 patent. In any event, the '942 patent is a continuation of the '561 patent and shares the same specification. Ex. 1002, code (63). The parties have also argued the automatically transferring limitation of claim 1 of the '561 and the automatically sending limitation of the '942 patent together.

transfers of the main embodiment of Figure 6. It sets forth an alternative embodiment that can be used with different architectures. Ex. 1046 (Balakrishnan Reply Decl.) ¶ 94. And the descriptions of other embodiments in the '942 patent further indicate that the alternative embodiment of steps 606 and 626 are not limited to pull-based transfers. *Id.* ¶¶ 92–96.

Sigurdsson also describes other automatic transfers of files from computers to clients, for example, with client-to-client transfers. Ex. 1016 ¶ 31 ("When the Client A 102 (e.g., the user's home computer) connects to the Server 106, Client B Content 112 originating from the Client B 104 is automatically copied to the Client A 102, as indicated by arrow 116 . . . . Similarly, whenever the Client B 104 (e.g., the user's work computer) connects to the Server 106, any missing Client A Content 108 is copied automatically to the Client B 104, as indicated by arrow 118."). This description also suggests making the transfer of files from server 106 to Client C automatic. Ex. 1028 (Balakrishnan Decl.) ¶ 438 ("It would have been obvious in view of these disclosures to automatically transfer a modified file received from Client A *to Server 106*, and *then automatically transfer* the modified file, via an 'open connection,' *to Client C* as soon as the file is received at the server," emphases added); Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 112, 117.

Further, we credit Dr. Balakrishnan's testimony that "[i]t would have been obvious in view of Sigurdsson in combination with Shappell to 'automatically' send the [modified first electronic] file [copy] responsive to receiving the modified first electronic file copy from the second electronic device." Ex. 1028 (Balakrishnan Decl.) ¶ 435 (emphases omitted). He explains that "[an ordinarily skilled artisan] would have understood and

found it obvious that Sigurdsson's reference to 'synchroniz[ing]' content stored on and shared between clients would have encompassed using the Synchronization Manager to automatically send, via the first application, the modified first electronic file copy to a third application at the third electronic device responsive to receiving the modified first electronic file copy from the second electronic device." *Id.* (second alteration in original) (citing Ex. 1021, 506; Ex. 1016 ¶ 48). He further testifies that "Sigurdsson explains that Client A content received at the Server could be automatically transferred by the Server to Client B, C, or any other client." *Id.* ¶ 436 (citing Ex. 1016 ¶ 68). We address the parties' dispute regarding combining Sigurdsson and Shappell *infra*. As set forth in Section IV.E.1.l. iii below, we find that an ordinarily skilled artisan would have been motivated to combine the teachings of these references.

Finally, we find that Shappell's disclosure of "automatic replication" in combination with Sigurdsson teaches or suggests a system where a modified file received from an originating client is automatically forwarded to a receiving client after receipt of the file at Server 106. Ex. 1028 (Balakrishnan Decl.) ¶ 439; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 124–130. As discussed below, we find that an ordinarily skilled artisan would have combined the teachings of those references with a reasonable expectation of success. *See* Pet. 30–31; Pet. Reply 15–16; Ex. 1028 (Balakrishnan Decl.) ¶¶ 182–184, 189, 461–462.

In sum, we find that Sigurdsson alone and in combination with Shappell teaches or suggests limitation 1d. Ex. 1028 (Balakrishnan Decl.) ¶¶ 432–446.

ii. Electronic Devices Associated with the Same User

Patent Owner argues that claim 1 requires that the first, second, and third devices recited in limitation 1d be associated with the same user. PO Resp. 9; *see also id.* at 38 ("The language expressly requires the second electronic device and the third electronic device to be associated with the same user."). Patent Owner disputes Petitioner's contention that Sigurdsson teaches or suggests this requirement. *Id.* at 9. Patent Owner also argues that Shappell does not disclose this requirement. *Id.* at 39–40.

Petitioner relies on Sigurdsson as teaching or suggesting sending and transferring files among multiple devices associated the same user. Pet. 15–16; Pet. Reply 17. Dr. Balakrishnan testifies that Sigurdsson discloses that its Clients A, B, and C are associated with the same user. Ex. 1028 (Balakrishnan Decl.) ¶ 428. Further, Dr. Balakrishnan explains that Sigurdsson describes Client A as a user's home computer and Client B as a user's work computer. *Id.* (citing Ex. 1016 ¶¶ 28–29, 55). Dr. Balakrishnan further explains that Figure 4 depicts Client C as a user's mobile device. *Id.* (citing Sigurdsson ¶ 27, Fig. 4). Patent Owner provides no counterarguments regarding this showing. Instead, Patent Owner merely argues that Sigurdsson does not teach or suggest this same-user requirement without providing an explanation to support that argument and without addressing Petitioner's contrary showing. After reviewing the record, we credit Dr. Balakrishnan's testimony that Sigurdsson teaches or suggests the same user requirement. Ex. 1028 (Balakrishnan Decl.) ¶ 428

Patent Owner explains why it contends and Dr. Shenoy testifies that Shappell does not disclose same-user requirement of claim 1. PO Resp. 39–40; Ex. 2025 (Shenoy II Decl.) ¶ 190. Those contentions by Patent Owner

and that testimony by Dr. Shenoy are unavailing, however, because Petitioner does not rely upon Shappell for that same-user requirement. Pet. 15–16; Pet. Reply 17.

iii. Combination of Sigurdsson and Shappell

Patent Owner disputes Petitioner's contention that an ordinarily skilled artisan would have been motivated to combine Sigurdsson and Shappell. PO Resp. 10–11, 34–37. In particular, Patent Owner argues that it would not have been obvious to combine Sigurdsson and Shappell because Shappell teaches away from using a server. PO Resp. 34. We disagree.

As Dr. Balakrishnan testifies, the combination of Sigurdsson and Shappell would have straightforwardly combined prior art elements according to known techniques to predictably improve Sigurdsson's system in the same way the relevant features enhance Shappell's disclosed systems, automatically transferring a modified file received at a server from an originating client to a receiving client to replace an older version of the file stored at the receiving client. Ex. 1028 (Balakrishnan Decl.) ¶¶ 183, 462. As Dr. Balakrishnan further testifies, an ordinarily skilled artisan would have been motivated to consider Shappell given its origination with leading file-management vendor Microsoft, as Sigurdsson likewise contemplates standard "home" and "work" computers with Microsoft software. Ex. 1028 (Balakrishnan Decl.) ¶ 184; Ex. 1016 ¶¶ 27, 42, 45, 58, 60.

Patent Owner contends, and Dr. Shenoy testifies, that Shappell expressly and repeatedly discounts the use of a server by specifically requiring a server-less shared space. PO Resp. 34; Ex. 2025 (Shenoy II Decl.) ¶ 85. Patent Owner further contends that Shappell discloses a computer implemented method and system enable users to share files in a

server-less shared space. PO Resp. 35. Patent Owner cites Dr. Balakrishnan's cross-examination testimony in support of this contention. *Id.* (citing Ex. 2024, 64:11–20). Patent Owner asserts, and Dr. Shenoy testifies, that, on the other hand, Sigurdsson proposes a system including a client/server mechanism. *Id.* at 37; Ex. 2025 (Shenoy II Decl.) ¶ 185. Patent Owner further asserts, and Dr. Shenoy testifies, that a central feature of Sigurdsson's network architecture is using the client/server mechanism for providing access to client that are offline, and then come online. PO Resp. 37; Ex. 2025 (Shenoy II Decl.) ¶ 186. Patent Owner further contends, and Dr. Shenoy testifies, that modifying Sigurdsson's architecture to a server-less shared space would change the principle of operation of Sigurdsson and as such an ordinarily skilled artisan would not have modified the teachings of Sigurdsson with the teachings of Shappell. Pet. 37; Ex. 2025 (Shenoy II Decl.) ¶ 186.

We find Patent Owner's teaching away arguments and Dr. Shenoy's supporting testimony for that argument to be unavailing. A "reference does not teach away if it merely expresses a general preference for an alternative invention but does not criticize, discredit or otherwise discourage investigation into the invention claimed." *UCB, Inc. v. Actavis Lab'ys UT, Inc.*, 65 F.4th 679, 692 (Fed. Cir. 2023)). Patent Owner cites nothing in Shappell that criticizes, discredits, or otherwise discourages using a server. Indeed, Shappell teaches that its "remote computer 49" in its Fig. 1, with which user "device 20" may communicate, may be "a server" or "a peer device" (Ex. 1020 ¶ 37), and further Shappell discloses that its "type of network . . . is not critical" and is only "preferably" peer-to-peer. Ex. 1020 ¶ 40; Ex. 1046 (Balakrishnan Reply Decl.) ¶ 128. Shappell further discloses

that files may be transferred "indirectly" between user devices, as in a client/server architecture. Ex. 1020 ¶ 40; Ex. 1046 (Balakrishnan Reply Decl.) ¶ 128. Similarly, Sigurdsson also teaches the interchangeability of client/server and peer-to-peer communication. Ex. 1016 ¶¶ 51–52, 57, 61–62, 79; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 88, 94, 122. Given these naturally complementary teachings, an ordinarily skilled artisan would have been motivated to look to Shappell to improve upon Sigurdsson. *See* Ex. 1028 (Balakrishnan Decl.) ¶¶ 181–194.

iv. Limitation 1g

Similar to claim limitation 1d, claim limitation 1g requires automatic sending of a modified electronic file by the first electronic application. Patent Owner's analysis does not distinguish limitation 1g from limitation 1d. For the reasons given for limitation 1d and based on our discussion above of limitation 1g, Petitioner's arguments and evidence as to limitation 1g are persuasive. We find that the combination of Sigurdsson and Shappell teaches or suggest limitation 1g. *See* Ex. 1028 (Balakrishnan Decl.) ¶¶ 451–452.

v. Other Limitations

Patent Owner does not challenge Petitioner's analysis of other limitations of claim 1 for this ground, and we are persuaded by Petitioner's showing that the combination of Sigurdsson and Shappell teaches or suggests each of those limitations. We note that limitations 1b and 1e recite wherein a modified first and second, respectively, electronic file copy is automatically received. Patent Owner, however, has not separately challenged these limitations, and, as mentioned, we are persuaded by Petitioner's showing for those limitations.

vi. Conclusion—Claim 1

For the reasons given, we find that the Petition demonstrates by a preponderance of evidence that the combination of Sigurdsson and Shappell teaches or suggests each limitation of claim 1 and that an ordinarily skilled artisan would have combined the references as described with a reasonable expectation of success. We further determine that Petitioner has demonstrated by a preponderance of evidence that claim 1 would have been obvious over the combination of Sigurdsson and Shappell.

2. Claim 10

Petitioner states that "Claim 10 is substantially identical to claim 1 except that it recites a 'method' instead of a 'system.'" Pet. 39 (emphases omitted). Petitioner's obviousness analysis of this claim relies on its analysis of claim 1. *Id.* Petitioner's analysis concludes that claim 10 would have been obvious over the combination of Sigurdsson and Shappell. *Id.*; Ex. 1028 (Balakrishnan Decl.) ¶¶ 481–482.

Limitation 10c is similar to limitation 1d and includes the "automatically send[ing]" limitation. Ex. 1002, 11:5–11, 12:14–18. Limitation 10f is similar to limitation 1g. *Id.* at 11:22–28, 12:42–48; Pet. Claims Listings (claims 1 and 10). Patent Owner does not provide a separate analysis for limitations 10c or 10f, but instead refers to arguments directed to claim limitations 1d and 1g discussed *supra*. PO Resp. 11–12.

For the reasons given for claim 1 and those presented in the Petition, we determine that Petitioner has demonstrated by a preponderance of the evidence that claim 10 would have been obvious over the combination of Sigurdsson and Shappell. Pet. 12–33, 39. The Petition demonstrates that this combination of references teaches or suggests each limitation of the claim

and that an ordinarily skilled artisan would have combined the references as described with a reasonable expectation of success. *Id.*; Ex. 1028 (Balakrishnan Decl.) ¶¶ 481–482; see also *id.* ¶¶ 412–464.

3. Dependent Claims 3, 4, 12, and 13

Claim 3 depends from claim 1, and claim 4 depends from claim 3. Claim 12 depends from claim 10, and claim 13 depends from claim 12. Petitioner provides analyses for each of these dependent claims with supporting expert testimony from Dr. Balakrishnan. Pet. 34–39. Patent Owner does not separately respond to these dependent claims.

For the reasons given for claims 1 and 10, and for those presented in the Petition, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 3, 4, 12, and 13 would have been obvious over the combination of Sigurdsson and Shappell. Pet. 34–39.

4. Conclusion—Sigurdsson and Shappell

In sum, after considering the arguments presented in the parties' papers, we determine that Petitioner has proven that the challenged claims would have been obvious over the combination of Sigurdsson and Shappell.

F. Asserted Obviousness of Claims 1, 3, 4, 8, 10, and 11 over Brown and Hesselink

1. Claim 1

Petitioner asserts that claim 1 would have been obvious over the combination of Brown and Hesselink. Pet. 40–60. Petitioner provides a limitation-by-limitation claim analysis, supported by expert testimony. *See id.*; Ex. 1028 (Balakrishnan Decl.) ¶¶ 802–847. For the reasons that follow, we find that Petitioner demonstrates that each limitation of claim 1 is met by the combination of Brown and Hesselink.

a. Preamble

Petitioner shows that the preamble of claim 1 is disclosed in Figure 1 of Brown, reproduced in Section IV.D.3, *supra*. Pet. 40 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 577–580, 803).

b. [1a] first electronic device, associated with a user, configured to

Petitioner contends that Brown teaches limitation 1a. Pet. 40–41. Petitioner identifies server 105 in Brown as the recited "first electronic device," and the Synchronization File System ("SFS") as the recited "first application." *Id.* (citing Ex. 1025, 2:59–62, 3:56–57, Ex. 1028 (Balakrishnan Decl.) ¶¶ 804–806). Petitioner asserts that server 105 is associated with a user because the SFS stores folders that are associated with a user. *Id.* at 41. (citing Ex. 1025, 2:65–67, 3:62–4:2, 5:3–4; Ex. 1028 (Balakrishnan Decl.) ¶ 806).

c. [1b] receive, via a first application at the first electronic device, a copy of a modified first electronic file from a second application at a second electronic device associated with the user, wherein the modified first electronic file copy is automatically received from the second application responsive to the user modifying a content of the first electronic file

Petitioner contends that the combination of Brown and Hesselink teaches or suggests limitation 1b. Pet. 41. Petitioner asserts that Brown teaches that its client devices may be in communication with server 105. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 808, 831). Petitioner identifies clients 130 and 135 as the recited second and third electronic devices, respectively. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 808, 831). Petitioner argues that clients 130 and 135 are each associated with a user. *Id.* at 42 (citing Ex. 1025, 4:62–64, 11:55–56; Ex. 1028 (Balakrishnan

Decl.) ¶ 808). Further, Petitioner contends that "Brown describes in detail an exchange of metadata information between client 130 and server 105 to determine file changes on the client and server." *Id.* at 42–43 (citing Ex. 1025, Figs. 4A–4C, 5, 8A–11F, 10:7–9, 10:7–11:52, 11:64–66, 13:57–16:39; Ex. 1028 (Balakrishnan Decl.) ¶¶ 809–811). Petitioner further asserts that "Brown also teaches that client 130's SA may monitor activity in its local file system to identify modified files to send to the server." *Id.* at 43 (citing Ex. 1025, 3:47–50).

Petitioner explains that "Brown discloses that such synchronization of modified files may be performed 'automatically' using the client's SA to transfer modified files to the server." Pet. 44 (citing Ex. 1025, 3:40–47) (emphasis omitted). Petitioner adds that "it would have been obvious in view of Brown in combination with Hesselink to automatically receive a copy of a modified file from client 130 at server 105 responsive to the user modifying a content of the first electronic file." *Id.* at 46 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 817–823).

d. Motivation to Combine

Petitioner contends further that "[i]t would have been obvious to combine the teachings of Brown and Hesselink, predictably resulting in the synchronization system of Brown in which the scheduling algorithm causes the upload of a modified file from a user device responsive to the user modifying the file as taught by Hesselink." *Id.* at 45–46 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 601, 823). Petitioner asserts that both references are directed to techniques for effectively synchronizing modified versions of files between client devices over a network. *Id.* at 46 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 602). Petitioner further asserts that both references

are reasonably pertinent to the problems faced by the inventor of the challenged patent for improving upon existing file synchronization systems. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 602).

Petitioner contends that the combination would have been a straightforward matter of combining prior art elements according to known techniques to yield predictable results, namely the system of Brown as modified in view of Hesselink's teachings. Pet. 46 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 603). Petitioner asserts that this modification would have provided a predictable improvement to Brown's system, improving the Brown system in the same way that the relevant features enhance Hesselink's disclosed system, by synchronizing files between clients and a server responsive to the user modifying files. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 603).

Petitioner also asserts that Hesselink also provides express motivations to combine its teachings with Brown's to implement Hesselink's automatic concurrent transmission of changes to files, including (1) saving time for the user, and (2) avoiding problems associated with storing two different versions of a file or an outdated version of a file. Pet. 47 (citing Ex. 1026 ¶ 189; Ex. 1028 (Balakrishnan Decl.) ¶ 605). Petitioner further asserts that these express motivations naturally harmonize with Brown's stated goal to provide "a way to maintain distributed files across multiple clients, maintaining currency at each client as changes are made." *Id.* at 47–48 (citing Ex. 1026, 1:46–50; Ex. 1028 (Balakrishnan Decl.) ¶ 605). Further, Petitioner contends that, given this concern in Brown, an ordinarily skilled artisan would have found it obvious to look to Hesselink's teachings to

automatically push file updates to connected clients as soon as they occur. *Id.* at 48 (citing Ex. 1026 ¶ 183; Ex. 1028 (Balakrishnan Decl.) ¶ 606).

Petitioner contends that an ordinarily skilled artisan would have had a reasonable expectation of success in combining Brown and Hesselink's teachings. Pet. 48 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 607).

e. [1c] determine whether the first electronic device is in communication with a third electronic device

Petitioner argues that the combination of Brown and Hesselink teach or suggest limitation 1c. Pet. 53. Petitioner asserts that it would have been obvious to synchronize Brown's server with laptop computer 135 (a third electronic device). *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 825). Further, Petitioner asserts that the client would attempt to initiate communication with the server, and the server could determine whether the first electronic device (server 105) is in communication with a third electronic device (client 135) based on whether the server receives the client's initial communication. *Id.* (citing Ex. 1025, 3:1–8, 3:42–46; Ex. 1028 (Balakrishnan Decl.) ¶ 825). Petitioner further asserts that limitation 1c would have been obvious in view of Hesselink's disclosure of repeatedly checking whether devices are communicating for synchronization. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 826–827).

f. [1d] automatically send, via the first application, the modified first electronic file copy to a third application at the third electronic device responsive to the determination that the first electronic device is in communication with the third electronic device and responsive to receiving the modified first electronic file copy from the second electronic device

Petitioner contends that the combination of Brown and Hesselink teach or suggest limitation 1d. Pet. 54. Petitioner asserts that it would have been

obvious to configure Brown's SFS associated with server 105 to automatically send via the first application, the modified first electronic file copy to a third application (e.g., client 135's SA) at the third electronic device (client 135). *Id.* at 54–55 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 829–835). Further, Petitioner asserts that it would have been obvious to automatically send the modified first electronic file copy to laptop client 135 responsive to receiving the modified first electronic file copy from the second electronic device, particularly in view of Hesselink's teachings regarding automatically and immediately forwarding file updates to all synchronizing clients. *Id.* at 55 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 807–823, 831).

g. [1e] receive, via the first application, a copy of a modified second electronic file from the third application at the third electronic device associated with the user, wherein the modified second electronic file copy is automatically received from the third application responsive to the user modifying a content of the second electronic file

Petitioner contends that the combination of Brown and Hesselink suggests limitation 1e. Pet. 56. Petitioner asserts it would have been obvious implement the functionality performed by client 130 in Petitioner's discussion of limitation 1b but instead using the SA (third application) at client 135 (third electronic device) to automatically transfer a copy of a modified second electronic file to the server responsive to the user modifying a content of the second electronic file. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 807–823, 837). Petitioner argues that client 135 is associated with a user. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 807–823). Further, Petitioner asserts that an ordinarily skilled artisan would have found it obvious that a text document that is different from the first electronic file

could be the second electronic file. *Id.* (citing Ex. 1025, 11:64-66; Ex. 1028 (Balakrishnan Decl.) ¶ 879).

Petitioner asserts that an ordinarily skilled artisan would have understood that Brown's client devices client devices 130 and 135 are fungible in the sense that files would be synchronized bidirectionally between the client devices as files are modified on both devices. Pet. 57 (citing Ex. 1028 (Balakrishnan Decl.) ¶ 838).

h. [1f] determine whether the first electronic device is in communication with the second electronic device

Petitioner contends that the combination of Brown and Hesselink teach or suggest limitation 1f. Pet. 58–59. Petitioner asserts that Brown's clients operate similarly and are interchangeable, so it would have been obvious to implement the functionality Petitioner described for limitation 1c for determining whether the first electronic device is in communication with the third electronic device but instead for determining whether the first electronic device is in communication with the second electronic device. *Id.* at 58. (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 824–838, 839–840). Petitioner also argues that limitation 1f would have been obvious over the combination of Brown and Hesselink. *Id.* at 58–59 (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 824–827).

i. [1g] automatically send, via the first application, the modified second electronic file copy to the second application at the second electronic device responsive to the determination that the first electronic device is in communication with the second electronic device and responsive to receiving the modified second electronic file copy from the third electronic device

Petitioner contends that the combination of Brown and Hesselink teach or suggest limitation 1g. Pet. 59. Petitioner asserts that Brown's clients

operate similarly and are interchangeable. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 842). Further, Petitioner asserts that it would have been obvious to automatically transfer the modified second electronic file copy from Brown's server, via the server's first application, to the second application responsive to the determination that the first electronic device (server) is in communication with the second electronic device desktop client 130) and responsive to receiving the modified second electronic file copy from the third electronic device (laptop client 135). *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 842).

> *j. [1h]wherein, responsive to sending the modified first electronic file copy to the third electronic device, an older version of the first electronic file stored on the third electronic device is automatically caused to be replaced with the modified first electronic file copy such that the modified first electronic file copy is stored on the third electronic device in lieu of the older version of the first electronic file*

Petitioner contends that Brown teaches limitation 1h. Pet. 59–60. Petitioner asserts that Brown teaches that client 135 could replace an older version of the first electronic file stored on client 135 with the modified first electronic file copy such that the modified file copy is stored in lieu of the older version. *Id.* (citing Ex. 1025, 2:63–67, 10:18–27, 10:53–55; Ex. 1028 (Balakrishnan Decl.) ¶¶ 843–845).

k. [1i] wherein, responsive to sending the modified second electronic file copy to the second electronic device, an older version of the second electronic file stored on the second electronic device is automatically caused to be replaced with the modified second electronic file copy such that the modified second electronic file copy is stored on the second electronic device in lieu of the older version of the second electronic file

Petitioner contends that Brown teaches or suggests limitation 1i. Pet. 60. Petitioner asserts that Brown's clients operate similarly and are interchangeable. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶¶ 846–847). Further, Petitioner asserts that, for the reasons it presented for limitation 1h, it would have been obvious to implement the functionality of limitation 1h for the second electronic file copy and the second electronic device (client 130), rather than the first electronic file copy and the third electronic device (client 135), respectively. *Id.* (citing Ex. 1028 (Balakrishnan Decl.) ¶ 847).

l. Discussion

There are four disputed issues for claim 1 for this ground. The first disputed issue concerns limitation 1d. PO Resp. 8–9, 40–60. The second disputed issue is whether the combination of Brown and Hesselink teach or suggest first, second, and third electronic devices associated with the same user. *Id.* at 9, 50–54. The third disputed issue is whether an ordinarily skilled artisan would have combined Brown and Hesselink, and the fourth disputed issue is whether the combination of Brown and Hesselink teach or suggest limitation 1g. *Id.* at 10–12, 41, 54–60.

i. Limitation 1d

For limitation 1d, Patent Owner repeats its previous claim construction argument distinguishing "push" transfer processes that it contends are "automatic" from "pull" processes that it contends are not "automatic." PO

Resp. 42–43. Patent Owner asserts that "the claims of the '942 Patent adopt a push-based file transfer from the server to the client, thus allowing the server to send the modified file to the client without a need for the client to explicitly request it." *Id.* at 43 (emphasis omitted). Patent Owner continues, "Brown discloses the completely opposite method, that is, client pull." *Id.* Dr. Shenoy's analysis is similar. *See, e.g.*, Ex. 2025 (Shenoy II Decl.) ¶ 202 ("the automatic file transfer of the '942 Patent teaches a push-based file transfer from the server to the client, thus allowing the server to send the modified file to the client without a need for the client to explicitly request it. Brown's disclosure is directed to the opposite method, that is, client pull.") (emphasis omitted).

Particularly, in our consideration of claim construction, we expressly rejected a construction limiting the '942 patent claims to "push" transfer operations. *See* Section IV.C.2, *supra*. We also rejected the argument that the claims must be viewed as "automatic from the perspective of the server." *See id.*; PO Resp. 7–8. In essence, this argument is a variation of Patent Owner's contention that the server must unilaterally initiate file transfers, without receiving communication from another device. Thus, the core of Patent Owner's analysis of this ground and of Dr. Shenoy's testimony is based on a rejected claim construction and for this reason must fail. *See* PO Resp. 40–52.

We find that, under the proper construction of "automatically," for the reasons given by Petitioner and Dr. Balakrishnan and summarized above, Petitioner has demonstrated that claim limitation 1d is taught by the combination of Brown and Hesselink. For example, as Dr. Balakrishnan testifies, Brown discloses that "[f]rom the user's perspective, the

synchronization process is automatic, runs in the background and requires minimal monitoring or intervention." Ex. 1025, 3:40–42. Ex. 1046 (Balakrishnan Reply Decl.) ¶ 197. Further, the evidence shows that the combination of Brown and Hesselink discloses a server that automatically transfer files. *See also* Pet. 41–46, 54–56; Ex. 1028 (Balakrishnan Decl.) ¶¶ 828–835; Ex. 1046 (Balakrishnan Reply Decl.) ¶ 197.

Patent Owner's arguments are unavailing, however, even if one were to adopt Patent Owner's proposed construction for automatically sending. Patent Owner and Dr. Shenoy do not address the combination of Brown and Hesselink relied on by Petitioner. Instead, Patent Owner and Dr. Shenoy address the references separately. For example, regarding the automatic sending limitation, Patent Owner argues that Hesselink "neither teaches or suggests that a server is configured to automatically update other computers on the network, only that 'the system' is configured to do so." PO Resp. 44–45 (citing Ex. 1026 ¶ 183) (emphases omitted); *see* also Ex. 2025 (Shenoy II Decl.) ¶ 210. Petitioner responds that Patent Owner's argument does not "directly rebut" the combination of Brown and Hesselink because Petitioner relies on "[t]he modified Brown server, configured to receive a modified file from one user device and immediately push it to another user device." Pet. Reply 19. We agree with Petitioner and credit Dr. Balakrishnan's testimony that this combination satisfies Patent Owner's claim interpretation for automatic sending. *Id.*; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 177–199, 212.

Similarly, Patent Owner contends and Dr. Shenoy testifies that "Hesselink only discusses the pull-based synchronization throughout its disclosure." PO Resp. 47; Ex. 2025 (Shenoy II Decl.) ¶ 205. But, as

Petitioner points out, Petitioner relies on Brown's server synchronizing files between multiple user devices, obviously modified based on Hesselink's teachings and motivation to receive a modified file from one user device and immediately transfer it to another user device. Pet. 41–52, 54–56; Pet. Reply 20; Ex. 1026 ¶¶ 183, 189, 192, 107. In addition to relying on a rejected claim construction, Patent Owner's argument that this ground fails to show "automatic" file synchronization does not take into account Brown's explicit disclosure that its server pushes changes down to syncing clients. Pet. Reply 20; Ex. 1025, 5:36–38; Ex. 1046 (Balakrishnan Reply Decl.) ¶ 212). We, therefore, agree with Petitioner and Dr. Balakrishnan that "[t]he modified Brown server, configured to receive a modified file from one user device and immediately push it to another user device, indisputably satisfies [Patent Owner's] claim interpretation." Pet. Reply 19 (citing Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 134–157).

ii. Electronic Devices Associated with the Same User

Patent Owner argues that claim 1 requires that the first, second, and third devices recited in limitation 1d be associated with the same user. PO Resp. 9; *see also id.* at 38 ("The language expressly requires the second electronic device and the third electronic device to be associated with the same user."). Patent Owner argues, and Dr. Shenoy testifies, that Hesselink does not teach or suggest this requirement. *Id.* at 9, 50–54; Ex. 2025 (Shenoy II Decl.) ¶ 211.

We do not agree with Patent Owner's "same user" argument. As Petitioner and Dr. Balakrishnan point out, the Petition relies on Brown, not Hesselink, for the "same user" teaching. Pet. Reply 21; Pet. 42 ("Brown teaches that clients 130 and 135 are 'each associated with a user.'")

(emphasis omitted); Ex. 1028 (Balakrishnan Decl.) ¶ 808; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 206–209 . We find, for the reasons given by Petitioner and Dr. Balakrishnan, that Brown discloses file synchronization among multiple devices associated with the same user and therefore meets this limitation. *See* Pet. Reply 21; Pet. 40–41 (citing Ex. 1025, 1:24–50; 4:62–64; 11:55–56); Ex. 1028 (Balakrishnan Decl.) ¶ 808; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 206–209.

iii. Combination of Brown and Hesselink

Patent Owner disputes Petitioner's contention that an ordinarily skilled artisan would have been motivated to combine Brown and Hesselink. PO Resp. 10–11, 34–37. In particular, Patent Owner argues that it would not have been obvious to combine Brown and Hesselink because "Brown aims to minimize the load on the server processor," and the combination with Hesselink would "fundamentally and impermissibly change the principle of operation of Brown from a pull type synchronization system to a push type synchronization system." PO Resp. 55–56; *see also* Ex. 2025 (Shenoy II Decl.) ¶¶ 218–219. This, like Patent Owner's other arguments, relies on a rejected claim construction.

Beyond that, however, the argument is wrong as a matter of law. As the Federal Circuit has explained, "[t]he fact that the motivating benefit [from combining references] comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another." *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000). Here, the additional burden on the server would be minimal because numerous functions performed by Brown's

clients would still be performed by Brown's clients in the combination. Ex. 1046 (Balakrishnan Reply Decl.) ¶ 213; Brown 3:22–26. In addition, there would be clear advantages to modifying Brown's system, such as quick and efficient synchronization. Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 200–218.

Patent Owner argues that Hesselink's disclosure of HTTP requests would discourage Hesselink's use with a push-type file transfer. PO Resp. 49–50 ("[T]he HTTP protocol is a request-response protocol and the HTTP servers use the client-pull architecture.") (emphasis omitted); *see also* Shenoy Decl. ¶ 208. Not only is this argument contrary to our claim construction, but it is also contrary to the disclosures of Brown and Hesselink that other protocols besides HTTP can be used to transfer files. Ex. 1025, 3:1–5; Ex. 1026 ¶ 75; Ex. 1046 (Balakrishnan Reply Decl.) ¶ 182. Further, we credit Dr. Balakrishnan's testimony that two of Hesselink's embodiments expressly contemplate using HTTP to effectively push data from a source client to a server and then from the server to a destination client. Ex. 1046 (Balakrishnan Reply Decl.) ¶ 184.

Patent Owner contends that Hesselink's peer-to-peer architecture teaches away from the combination. PO Resp. 56–60; Ex. 2025 (Shenoy II Decl.) ¶¶ 223–224. Patent Owner asserts that Hesselink teaches away from using server/client configurations taught by Brown because "Hesselink raises security concerns in using server/client architecture for file synchronization." *Id.* at 58–59; *see also* Ex. 2025 (Shenoy II Decl.) ¶ 225. We do not find this assertion or testimony persuasive. Patent Owner's arguments and Dr. Shenoy's testimony do not meet the test for a teaching away. As discussed *supra*, in Section IV.E.1, "that 'better alternatives exist in the prior art does

not mean that an inferior combination is inapt for obviousness purposes.'" *Bayer Pharma AG*, 874 F.3d at 1327 (Fed. Cir. 2017).

For the reasons given by Dr. Balakrishnan, we find that Hesselink does not teach away from client-server architectures, but at best describes a peer-to-peer alternative. *See* Ex. 1046 (Balakrishnan Reply Decl.) ¶ 214–218. For example, Hesselink discloses that its computers may include a file server and may connect via a connection server. Ex. 1026 ¶¶ 84–86, 122, 126; Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 214–215. Further, Hesselink's examples of storing family photos in "some unknown location" with "unknown" security or requiring costly setup and use of a "dedicated private network" do not disparage client/server models generally. Ex. 1046 (Balakrishnan Reply Decl.) ¶ 208. Brown teaches security for its server (including encryption and authentication) and is not directed to a server that must run on a dedicated private network (instead contemplating standard connection to a server over the Internet "or any other type of network"). Ex. 1025, 3:8–16, 4:50–52, 8:24–40 (encryption), 17:39–59 (authentication), 4:7–10 (network). Further, Hesselink's security concerns do not apply to systems with "secure ways of storing things"—like Brown. Ex. 1046 (Balakrishnan Reply Decl.) ¶ 218.

For similar reasons, we find that Patent Owner's related argument that "[an ordinarily skilled artisan] would not have looked to Hesselink's peer-to-peer system to modify Brown's server" and Dr. Shenoy's supporting testimony unavailing. *See* PO Sur-reply 24; PO Reply 58–62; Ex. 2025 ¶ 229. We are persuaded by Dr. Balakrishnan's testimony that an ordinarily skilled artisan would recognize that Hesselink's teachings of automatically updating a peer-to-peer connection between two computers would also apply to a client/server architecture. Ex. 1046 (Balakrishnan Reply Decl.) ¶¶ 214–

218. The Federal Circuit instructs that "if a technique has been used to improve one device, and [an ordinarily skilled artisan] would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *Intel Corp. v. PACT XPP Schweiz, AG*, 61 F.4th 1373, 1380 (Fed. Cir. 2023) (quoting *KSR*, 550 U.S. at 417).

We also disagree with Patent Owner's argument that *Intel* is inapplicable here because Brown and Hesselink address different problems. PO Resp. 59–60. As Patent Owner recognizes, both Brown and Hesselink have as a goal synchronizing data on a user's multiple computing systems (e.g., office and home). *Id.* at 50; *Compare* Ex. 1025, 1:25–29, 1:47–55 *with* Ex. 1026 ¶ 8. We find that they are directed to solving the same problem.

Finally, we credit the testimony of Dr. Balakrishnan that the combination of Brown and Hesselink would have been a straightforward matter of combining prior art elements according to known techniques to yield predictable results, namely the system of Brown as modified in view of Hesselink's teachings. Ex. 1028 (Balakrishnan Decl.) ¶ 603. We further credit his testimony that the modification would have provided a predictable improvement to Brown's system, improving the Brown system in the same way that the relevant features enhance Hesselink's disclosed system, by synchronizing files between clients and a server responsive to the user modifying files. *Id.*

We further credit Dr. Balakrishnan's testimony that Hesselink also provides express motivations to combine its teachings with Brown's to implement Hesselink's automatic concurrent transmission of changes to files, including (1) saving time for the user, and (2) avoiding problems associated

with storing two different versions of a file or an outdated version of a file. Ex. 1028 (Balakrishnan Decl.) ¶ 605; Ex. 1026 ¶ 189. Further, we credit Dr. Balakrishnan's testimony that these express motivations naturally harmonize with Brown's stated goal to provide "a way to maintain distributed files across multiple clients, maintaining currency at each client as changes are made." Ex. 1028 (Balakrishnan Decl.) ¶ 605; Ex. 1026, 1:46–50. Further, we credit Dr. Balakrishnan's testimony that given this concern in Brown, an ordinarily skilled artisan would have found it obvious to look to Hesselink's teachings to automatically push file updates to connected clients as soon as they occur. Ex. 1028 (Balakrishnan Decl.) ¶ 606; Ex. 1026 ¶ 183.

iv. Limitation 1g

As noted *supra*, claim limitation 1g requires automatic transfer of a modified electronic file by the first electronic device. For this limitation, Patent Owner does not present a separate argument.

For the reasons given for limitation 1d and based on our discussion above of limitation 1g, Petitioner's arguments and evidence as to limitation 1g are persuasive. We find that the combination of Brown and Hesselink teaches or suggests limitation 1g. *See* Ex. 1028 (Balakrishnan Decl.) ¶¶ 841–842.

v. Other Limitations

Patent Owner does not challenge Petitioner's analysis of other limitations of claim 1 for this ground, and we are persuaded by Petitioner's showing that the combination of Brown and Hesselink teaches or suggests each of those limitations.

vi. Conclusion—Claim 1

For the reasons given, we find that the Petition demonstrates by a preponderance of evidence that the combination of Brown and Hesselink teaches or suggests each limitation of claim 1 and that an ordinarily skilled artisan would have combined the references as described with a reasonable expectation of success. We further determine that Petitioner has demonstrated by a preponderance of evidence that claim 1 would have been obvious over the combination of Brown and Hesselink.

2. Claim 10

Petitioner states that "Claim 10 is substantially identical to claim 1 except that it recites a 'method' instead of a 'system.'" Pet. 64 (emphases omitted); *see also* Ex. 1028 (Balakrishnan Decl.) ¶¶ 863–864. Petitioner's obviousness analysis of this claim relies on its analysis of claim 1. Pet. 64; Ex. 1028 (Balakrishnan Decl.) ¶ 864. Petitioner's analysis concludes that claim 10 would have been obvious over the combination of Brown and Hesselink. Pet. 64; Ex. 1028 (Balakrishnan Decl.) ¶¶ 863–864.

Patent Owner does not separately address claim 10 for this ground. PO Resp. 40–60. For the reasons given by Petitioner and Dr. Balakrishnan, we determine that Petitioner has demonstrated by a preponderance of evidence that claim 10 would have been obvious over the combination of Brown and Hesselink.

3. Dependent Claims 3, 4, 12, and 13

Petitioner provides analyses for each of these dependent claims. Pet. 59–64; Ex. 1028 (Balakrishnan Decl.) ¶¶ 908–912, 916–917. Patent Owner does not separately address these claims in its response.

For the reasons given for claims 1 and 10, and for those presented in the Petition, we determine that Petitioner has demonstrated by a preponderance of evidence that claims 3, 4, 12, and 13 would have been obvious over the combination of Brown and Hesselink.

4. Conclusion—Brown and Hesselink

In sum, after considering the arguments presented in the parties' papers, we determine that, for the reasons given, Petitioner has demonstrated that claims 1, 3, 4, 10, 12, and 13 would have been obvious over the combination of Brown and Hesselink.

V. CONCLUSION

For the foregoing reasons, we have determined that Petitioner has demonstrated by a preponderance of the evidence that the challenged claims of the '942 patent are not patentable. In summary,

Claims	35 U.S.C. §	References	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 3, 4, 10, 12, 13	103(a)	Sigurdsson, Shappell	1, 3, 4, 10, 12, 13	
1, 3, 4, 10, 12, 13	103(a)	Brown, Hesselink	1, 3, 4, 10, 12, 13	
Overall Outcome			**1, 3, 4, 10, 12, 13**	

VI. MOTION TO SEAL

The parties have filed a Joint Motion to Seal. Paper 57. The Motion requests sealing a portion of page 4 of our Decision Denying Patent Owner's Motion to Amend the Protective Order. Paper 54 ("Decision"). The parties have submitted a redacted public version of that Decision. Paper 57.

Petitioner contends that the "redacted content on page 4 of the Decision are portions of confidential materials that have been previously filed and maintained under seal in this proceeding relating to confidential joint-defense and attorney-client relationships," and "[h]ence the Petitioners respectfully request sealing of this content." Paper 58 at 3. The Motion to Seal is not opposed.

We have reviewed the Motion and the document at issue and have considered Petitioner's explanation of the confidential nature of the materials for which sealing is sought. We find there is good cause and therefore we grant the motion to seal.

VII. ORDER

It is

ORDERED that claims 1, 3, 4, 10, 12 and 13 of the '942 patent are not patentable;

FURTHER ORDERED that the Joint Motion to Seal (Paper 57) is granted;

FURTHER ORDERED that, no later than ten business days after the issuance of this Final Written Decision, the parties may file a joint motion to seal portions of this Decision, explaining why those portions should remain under seal, and including as an attachment a redacted version of this Decision that can be made publicly available;

FURTHER ORDERED that this Final Written Decision shall remain under seal until any joint motion to seal is resolved;

FURTHER ORDERED that this Final Written Decision shall be made public if, after the expiration of the time for the parties to file a joint motion to seal, no such motion has been filed; and

FURTHER ORDERED that because this is a Final Written Decision, 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.[19]

[19] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this Final Decision, we draw Patent Owner's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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