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Paper 48
Entered: June 30, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DROPBOX, INC.,
Petitioner,

v.

MOTION OFFENSE, LLC,
Patent Owner.

IPR2024-00286
Patent 11,611,520 B1

Before THOMAS L. GIANNETTI, JENNIFER S. BISK, and NORMAN H. BEAMER, *Administrative Patent Judges*.

BEAMER, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)
Dismissing Petitioner's Motion to Exclude
37 C.F.R. § 42.64

I. INTRODUCTION

On January 22, 2024, Dropbox, Inc. ("Petitioner") filed a Petition ("Pet.") pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–8 and 17–21 of U.S. Patent No. 11,611,520 B1 ("the '520 patent"). Paper 1. On April 30, 2024, Motion Offense, LLC ("Patent Owner") responded by filing, with its Preliminary Response, a Disclaimer In Patent Under 37 C.F.R. 1.321(a), disclaiming claims 1–8 of the '520 patent. Ex. 2045. On July 25, 2024, we instituted *Inter Partes* review as to claims 17–21. Paper 12. Subsequently, Patent Owner filed a Response ("PO Resp."), Petitioner filed a Reply ("Reply"), and Patent Owner filed a Sur-Reply ("Sur-Reply"). Papers 21, 28, 36. An oral hearing was held on April 23, 2025, and a copy of the transcript was entered into the record. Paper 46 ("Tr.").

Additionally, Petitioner filed a Motion to Exclude Evidence (Paper 40), to which Patent Owner filed an Opposition (Paper 41), and Petitioner filed a Reply (Paper 44).

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a). Based on the complete record, we find that Petitioner has shown, by a preponderance of the evidence, that claims 17–21 of the '520 patent are unpatentable. We also dismiss as moot Petitioner's Motion to Exclude.

II. BACKGROUND

A. The '520 Patent

The '520 patent is titled "Methods, Systems, and Computer Program Products for Processing a Data Object Identification Request in a Communication." Ex. 1001, code (54). The '520 patent is a continuation-

in-part of, *inter alia*, U.S. Patent Applications Nos. 13/624,906 and 13/626,635 ("the '906 application" (Ex. 2003) and "the '635 application" (Ex. 2004), respectively). Ex. 1001, code (63). Both applications are incorporated by reference into the '520 patent in their entirety. *Id.* at 1:53–62. The subject matter of the challenged claims appears to most closely track a so-called "Folder Share" embodiment primarily disclosed in the '635 application.[1] *See* PO Resp. 2–7.

The '520 patent purports to address "a need for methods, systems, and computer program products for processing a data object identification request in a communication." Ex. 1001, 2:13–15. In particular, a pertinent exemplary process is broadly summarized by the steps of Figures 2A and 2B of the '635 application. Ex. 2004, Figs. 2A, 2B, ¶¶ 16–17. A first part of the process creates and transmits a message including a "mount descriptor." *Id.* at Figs. 2B, 8A, ¶¶ 120, 124, 132, 135. An originating communications agent (referred to as the "second" agent) represents a user (the second user) and, in a first step 212, receives data object information identifying a data object in a second data store of a second execution environment that includes the originating (second) communications agent. *Id.* at Fig. 2B, ¶ 120. In the next step 214, the mount descriptor is created and configured for accessing the data object by a first data store in a recipient (first) execution environment that includes a first communications agent that represents a recipient (first) user. *Id.* ¶ 124. In the next step 216, the second

[1] We make no findings here as to the sufficiency of written description support for the challenged claims, including whether support for the claimed subject matter is properly based on the prior applications incorporated by reference.

communications agent places the mount descriptor in a first message addressed to the first user. *Id.* ¶ 132. In the next step 218, the second communications agent sends the first message to the "first" communications agent.[2] *Id.* ¶ 135.

A second part of the process uses the received mount descriptor to create a representation of the data object in the first data storage and provide access to that data object, which originated from the second data store. Ex. 2004, Fig. 2A, ¶¶ 93, 97, 100, 109. In the first step 202, the first communications agent receives the first message (which includes the mount descriptor) from the second communications agent. *Id.* ¶ 93. In the next step 204, the first communications agent detects the mount descriptor. *Id.* ¶ 97. In the next step 206, the first communications agent determines a first location of the data object in the first data store. *Id.* ¶ 100. In the next step 208, the first communications agent creates, based on the mount descriptor, a representation of the data object in the first data storage, wherein accessing the representation results in accessing the data object that was stored in the second data store. *Id.* ¶ 109.[3]

A more specific example of the disclosed method, in which the data object is a folder, for creating the first message addressed to the recipient ("first") user is illustrated in Figure 6D, reproduced below.

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[2] As indicated, we adhere to the '635 application's designations of the originating agent, user, data store, and execution environment as the "second" agent, etc., and of the recipient agent, etc. as the "first" agent, etc.

[3] Figure 2A includes a step 210 which is not described in the application, and which does not relate to the other steps in Figures 2A and 2B, and accordingly we assume it was erroneously included.

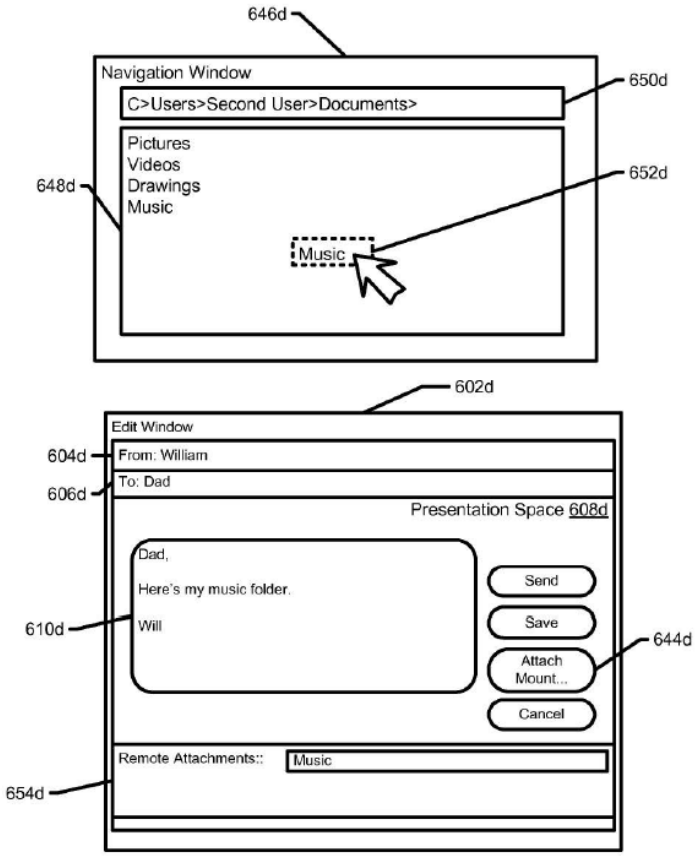

FIG. 6D

Figure 6D is a user interface including Edit Window 602d and Navigation Window 646d. Ex. 2004 ¶¶ 25, 122.

Edit window 602d is presented in response to the originating ("second") user input to create a new email, allowing input of contactor UI element 604d ("William"), contactee UI element 606d ("Dad"), and user message UI element 610d in presentation space 608d. Ex. 2004 ¶¶ 82, 102, 122. Selection of attach mount UI element 644d presents navigation window UI element 646d. *Id.* ¶¶ 122, 123. The navigation window presents folder content pane UI element 648d, including "representations" of one or more folders (including a "Music" folder) located in path UI element 650d ("C>Users>Second User>Documents>"). *Id.* ¶ 123. Pointer UI element

652d illustrates a drag and drop operation of the representation of the "Music" folder in contents pane UI element 648d, dropped on edit window UI element 602d. *Id.* This causes creation of a "mount descriptor," included in the email, for accessing the Music folder from the second data store by a first data store. *Id.* ¶ 124. This is depicted in Figure 8A reproduced below.

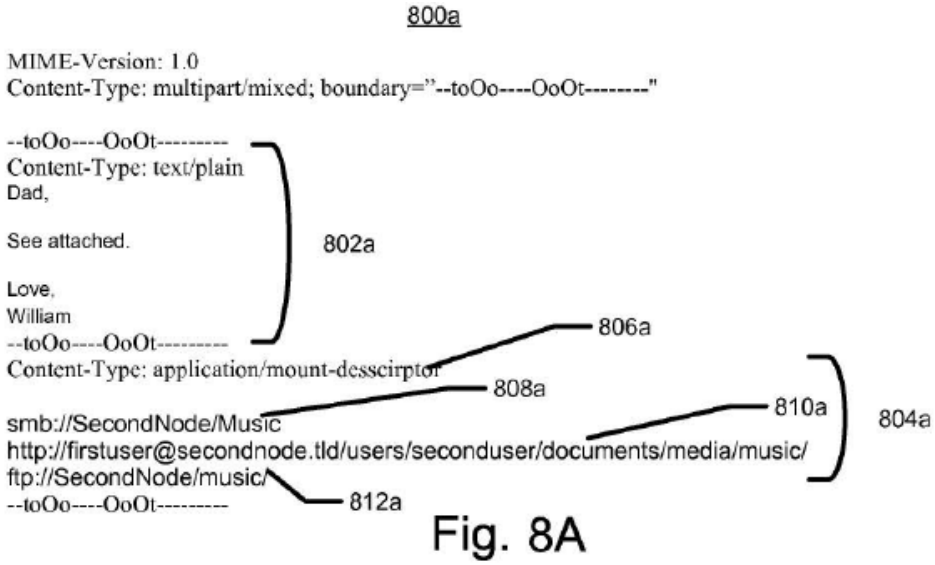

Fig. 8A

> Figure 8A includes an exemplary content portion 800a of an email message, including user readable message portion 802a and mount descriptor portion 804a, which identifies alternative URLs for accessing the "Music" folder. Ex. 2004 ¶¶ 30, 96, 112, 130.

Upon receipt of the email, a user interface such as Figure 6A, represented below, is generated at the recipient ("first") execution environment.

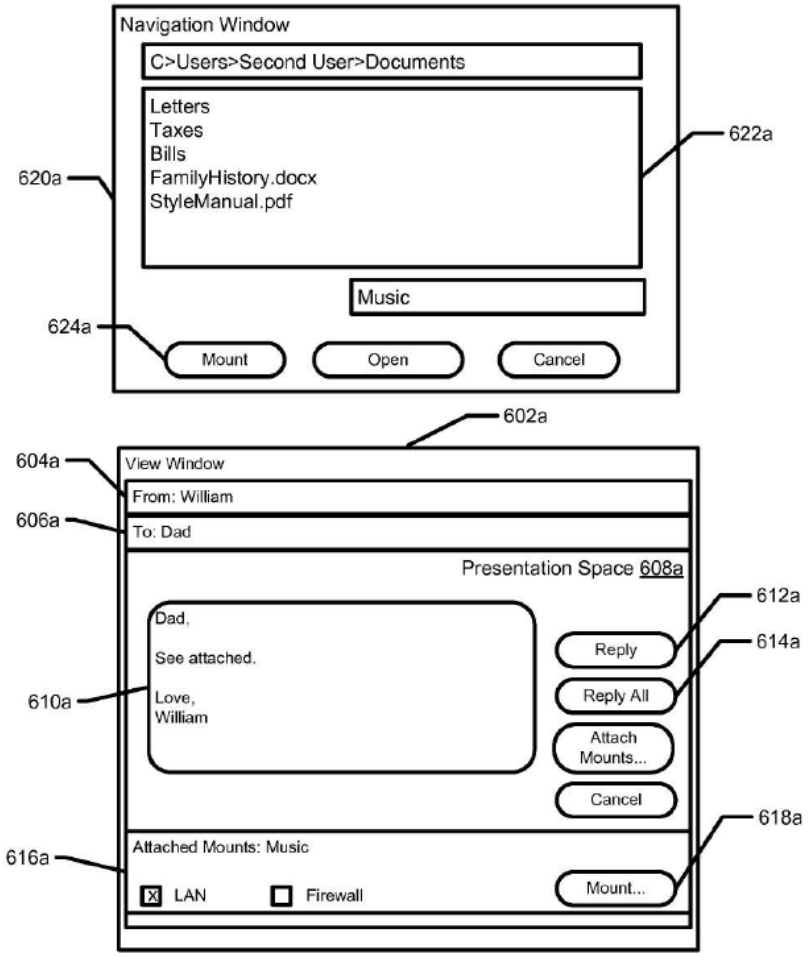

FIG. 6A

Figure 6A illustrates a user interface with view window 602a presented upon receipt of the email and navigation window UI element 620a. Ex. 2004 ¶¶ 22, 102–103.

View window 602a presents contactor UI element 604a ("William"), contactee UI element 606a ("Dad"), and user message UI element 610a in presentation space 608a. Ex. 2004 ¶¶ 82, 102. Attached mounts UI element 616a identifies, based on the received mount descriptor, the "Music" folder, which is mountable from the version of the folder stored at the originating ("second") user environment. *Id.* ¶ 102. Selection of mount user element

618a displays navigation window UI element 620a that includes presentation space 622a for identifying a location in the first data store to mount the remote "Music" folder identified in the mount descriptor. *Id.* ¶¶ 103–104. Selection of mount UI element 624a allows the first user to cause the folder identified in the mount descriptor to be attached to a location identified in navigation window UI element 620a. *Id.* ¶ 104.

In one example, there is created, based on the mount descriptor, a representation of the folder at the selected location, wherein accessing the representation includes accessing the data object that originated from the data store of the originator ("William"). Ex. 2004 ¶¶ 8, 109. A "representation" is described, for example, as a window or other visual interface element displayed on a screen of a display presenting information representing a program entity such as a folder. *Id.* ¶¶ 49–52, 69.

B. Illustrative Claim

Independent claim 17 is representative and is reproduced below.[4]

> 17. A method, comprising:
>
> [a]: causing, at a first node, display of: a first user interface element, for collecting information associated with at least one folder,
>
> [b]: a second user interface element, for collecting at least one object associated with at least one email address, the at least one object associated with at least one email address being the at least one email address or an alias associated with the at least one email address, and

[4] The bracketed letters and paragraph arrangement are taken from the Petition, but do not impact our analysis. Pet. 84–85.

[c]: a third user interface element, for detecting an indication of a selection thereof to cause an initiation of a sharing of the at least one folder;

[d]: causing generation of at least one email, based on the information associated with the at least one folder, the at least one object associated with the at least one email address, and the detection of the indication of the selection of the third user interface element to cause the initiation of the sharing of the at least one folder, where the at least one email: identifies the information associated with the at least one folder, includes an Hypertext Transfer Protocol (HTTP) link, does not include a file attachment, for permitting avoidance of at least one file from being communicated to and stored at the second node until an initiation of the communication of the at least one file by a user of the second node is detected and the communication commences via at least one server that stores the at least one file, is at least partially pre-written, and is automatically caused to be received without requiring user involvement after the detection of the indication of the selection of the third user interface element to cause the initiation of the sharing of the at least one folder;

[e]: receiving, from the second node and at at [*sic*] least one server, a signal for causing creation of a first representation of the at least one folder, in a location among one or more folders, that is stored at the at least one server and that is displayable via at least one web page;

[f]: causing, at the second node, receipt of the at least one web page, that results in display, at the second node and via the at least one web page, the first representation of the at least one folder that is stored at the at least one server; and

> [g]: causing, at the second node, receipt of code for storage at the second node and cooperation with a file explorer interface of a client-based file explorer application, for being utilized to: cause creation of a second representation of the at least one folder, in a location among one or more folders, that is stored at the second node and that is displayable via the file explorer interface of the client-based file explorer application.

Ex. 1001, 55:1–56.

C. Asserted Grounds

Petitioner asserts that claims 17–21 are unpatentable based on the following grounds.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
17–21	103(a)	Houston[5], Garcia[6]
17–21	103(a)	Houston, Garcia, Manzano[7]
17–21	103(a)	Houston, Garcia, Wu[8]
17–21	103(a)	Houston, Garcia, Manzano, Wu

Pet. 6.[9] In support of its patentability challenge, Petitioner relies on, *inter alia*, the Declaration of Todd Mowry, Ph.D. and the Second Declaration of

[5] U.S. Patent No. 8,825,597 B1 (Ex. 1003) ("Houston").

[6] U.S. Patent No. 9,633,125 B1 (Ex. 1004) ("Garcia").

[7] U. S. Patent Application Publication No. 2010/0005138 A1 (Ex. 1005) ("Manzano").

[8] U.S. Patent Application Publication No. 2007/0011246 A1 (Ex. 1006) ("Wu").

[9] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), included amendments to 35 U.S.C. §§ 102 and 103 that

Todd Mowry, Ph.D. Ex. 1002 ("Mowry Decl."); Ex. 1034 ("Mowry 2nd Decl.").

D. Real Parties in Interest

The parties identify themselves as the real parties-in-interest. Pet. 2; Paper 7, 2.

E. Related Proceedings

The parties identify *Motion Offense, LLC v. Dropbox, Inc.*, No. 6:20-cv-00251 (W.D. Tex.); *Motion Offense, LLC v. Dropbox, Inc.*, No. 6:23-cv-0303 (W.D. Tex.); and *Dropbox, Inc. v. Motion Offense, LLC*, IPR2024-00287 (PTAB) as related proceedings. Pet. 1–2; Paper 7, 2.

III. ANALYSIS OF PETITIONER'S GROUNDS

A. Legal Standards

To prevail in its grounds for unpatentability during trial, Petitioner must demonstrate by a preponderance of the evidence that the claims are unpatentable. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d). "In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (2012) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")). This

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became effective after the filing of the '906 and '635 applications. Petitioner relies only on prior art predating these applications, although it reserves the right to argue that the '520 patent is not entitled to the filing dates of those applications. Pet. 5 n.1. For this Decision, we apply the pre-AIA version of Section 103, although application of the AIA version would not alter our analysis.

burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

A patent claim is unpatentable under 35 U.S.C. § 103 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; (3) the level of ordinary skill in the art; and (4) when in evidence, objective indicia of nonobviousness (also called secondary considerations), such as commercial success, long-felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze the grounds based on obviousness in accordance with the above-stated principles.

B. Level of Skill in the Art

In determining whether an invention would have been obvious at the time it was made, 35 U.S.C. § 103(a) requires us to resolve the level of ordinary skill in the pertinent art at the time of the invention. *Graham*, 383 U.S. at 17. The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors that may be considered in determining the level of ordinary skill in the art include, but

are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.*

Petitioner asserts that a person of ordinary skill in the art at the time of the earliest claimed priority date of the '520 patent (September 22, 2012):

> would have had at least the equivalent of a Bachelor's degree in electrical engineering, computer science, or a related field and two or more years of experience in a related field such as networked computer systems using Internet protocols. Less work experience may be compensated by a higher level of education, such as a Master's Degree, and vice versa.

Pet. 3–4 (citing Mowry Decl. ¶ 29). Patent Owner does not dispute Petitioner's definition. PO Resp. 17.

Petitioner's proposal is consistent with the level of ordinary skill in the art as reflected by the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC*, 57 F.3d at 1579. For purposes of this Decision, we apply Petitioner's articulation.

C. Claim Construction

The Petition was accorded a filing date of January 22, 2024. Paper 5, 1. In an *inter partes* review for a petition filed on or after November 13, 2018, a claim "shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b)." 37 C.F.R. § 42.100(b). We apply the claim construction standard from *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (*en banc*). Claim terms need only be construed to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

Petitioner submits that no claim construction is necessary. Pet. 13–14. However, Patent Owner asserts that the claim 17 phrase, "representation of the at least one folder," should be construed as:

> a folder that can be displayed at the user's node, but whose file contents are stored remotely and are not communicated to the user till the user initiates the communication.

PO Resp. 28. Patent Owner argues that a representation of a folder is itself a folder because claim 17 requires the representation to be stored "in a location among one or more folders," either on a "server" or at a "node." *Id.* at 30 (citing Smith Decl. ¶ 77).[10] Moreover, argues Patent Owner, the representations "do not contain the contents of the file(s) when they are first created," based on the claim 17 requirement that the email sent to the recipient:

> does not include a file attachment, for permitting avoidance of at least one file from being communicated to and stored at the second node until an initiation of the communication of the at least one file by a user of the second node is detected and the communication commences via at least one server that stores the at least one file.

PO Resp. 31 (citing Smith Decl. ¶ 80). Patent Owner argues that this requirement necessarily also requires the proposed construction to include that the representation's file contents "are not communicated to the user till the user initiates the communication." *Id.* at 31–32.

Patent Owner also relies on the language of unasserted claims 1, 7, and 8, which require that the files in the represented folder are not stored at the recipient's node or communicated to the recipient when the

[10] "Smith Decl." refers to Exhibit 2051, the Declaration Of Dr. Michael Smith, submitted by Patent Owner in support of its Response.

representation is created, but rather are not communicated until an indication is sent to open a file. PO Resp. 32–34 (citing Smith Decl. ¶¶ 81–82).

In addition, Patent Owner argues that the original '635 application specification supports its construction, given the requirement in original application claim 1 that a representation of a data object is created at the recipient's "first" data store and that "accessing the representation includes accessing the data object from the second [originating] data store." PO Resp. 35–36 (citing Smith Decl. ¶¶ 83–85). Patent Owner argues that this means that "the content of the representations' files are stored on a server (i.e., 'in a second data store') rather than at the user's node and are not accessed by the user till the user accesses the representation." *Id.* at 36. Patent Owner also cites various statements in the specification that also state that "'when [the representation is] accessed[,]' the user 'access[es] the data object from the second data store' (i.e., the server) rather than from within the representation at the user's node." *Id.* (citing Ex. 2004 ¶¶ 8–13, 109, 135; Smith Decl. ¶ 86).

In reply, Petitioner argues that Patent Owner "improperly stuffs limitations into [its claim construction] that are out of context and unsupported by the specification." Reply 1. Petitioner submits that, in accord with the ordinary meaning of "representation," a representation of a folder "simply refers to some sign or symbol that stands in place of (i.e., represents) the [folder]." *Id.* at 2 (citing Mowry 2nd Decl. ¶¶ 7–8). Petitioner also argues that it is illogical to equate the representation of a folder with the folder itself, given that the claims require displaying the representation of the folder on a webpage or file explorer application, which would not apply to the actual folder itself. *Id.* (citing Mowry 2nd Decl. ¶¶ 9–

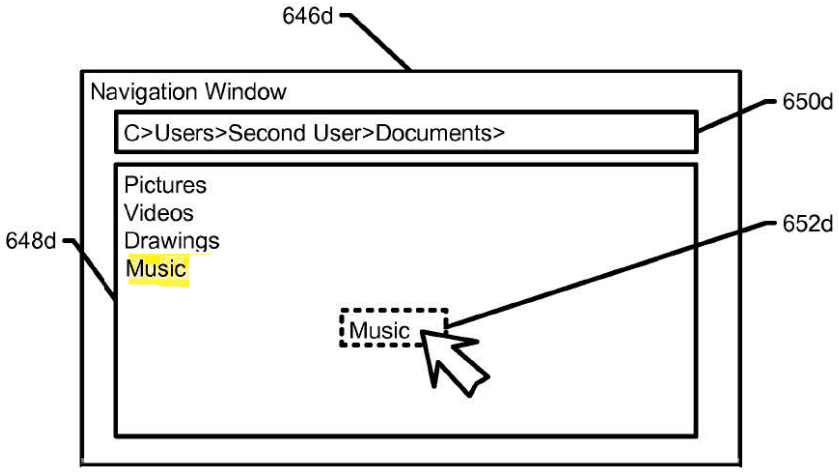
10). In regard to Patent Owner's reliance on the claim 17 requirement that the email sent to the recipient "does not include a file attachment, for permitting avoidance of at least one file from being communicated to and stored at the second node until an initiation of the communication of the at least one file by a user of the second node is detected," Petitioner argues that this email requirement relates to a separate, earlier step in the claimed method, not to the steps of creating and displaying representations. *Id.* at 3 (citing Mowry 2nd Decl. ¶¶ 11–12).

Petitioner also argues that Patent Owner's reliance on unasserted '520 claims 1, 7, and 8 is misplaced, because those claims, which include the same "representation of the at least one folder [or data object]" phrase, additionally include essentially the same requirements that Patent Owner would import into that phrase — rendering Patent Owner's construction superfluous for those claims. Reply 4–5 (citing Mowry 2nd Decl. ¶ 13). Thus, argues Petitioner, "representation of the at least one folder" should be construed the same way for claim 17 as for claims 1, 7, and 8, to not add the requirements that Patent Owner asserts. *Id.* In addition, Petitioner argues that nothing in the '635 application requires Patent Owner's construction of issued '520 claim 17. *Id.* at 5–6 (citing Mowry 2nd Decl. ¶¶ 14–16). Patent Owner explains that, although the '635 application discloses embodiments in which "accessing the representation includes accessing the data object from the second [originating] data store," nothing in the application precludes communication of the data object separate from that accessing. *Id.*

In its Sur-Reply, Patent Owner argues that its construction is not illogical, because "the claimed representation is a ***different*** 'folder' containing objects whose contents are stored remotely until the user accesses

them," and "PO's construction simply makes clear that the representation of the folder is not a copy of the actual folder and its contents." Sur-Reply 2–3. Patent Owner also argues that it is appropriate to rely on other portions of claim 17, and on clams 1, 7, and 8, which "make[] clear that any file contents are not stored at the [recipient] node until a user initiates communication of those contents." *Id.* at 3–4. In addition, Patent Owner argues that it is appropriate to rely on the '635 application, given that it is incorporated by reference in the '520 patent. *Id.* at 4–5. Patent Owner also asserts that Petitioner's "competing construction" is improper new argument. *Id.* at 5–7.

We conclude that there is no basis for Patent Owner's proposed construction of "representation of the at least one folder." Petitioner is correct that a representation of a folder is not the folder itself, but (in keeping with the ordinary meaning of "representation") is rather some sign or symbol that stands for the folder. Reply 2. This is confirmed by the explicit example of a representation of a folder in the '635 application, illustrated in the portion of Figure 6D reproduced below (highlighted here for purposes of explanation).



This portion of Figure 6D depicts representations of several folders, including the highlighted "Music" folder. The '635 application specifically states:

> A folder content pane UI element 648d in navigation window UI element 646d is presented including ***representations*** of one or more data objects[11] at a location, identified in a path UI element 650d. A pointer UI element 652d illustrates a drag and drop operation of a "***Music" folder represented*** in contents pane UI element 648d, dropped on edit window UI element 602d.

Ex. 2004 ¶ 123 (emphasis added). The word "Music" in the above figure is a representation of a folder, not the folder itself. The actual folder is an entity in a file system that stores files (in the case of a "Music" folder, presumably MP3 or WAV files, or the like).

Patent Owner misconstrues the claim language, "a first representation of the at least one folder, in a location among one or more folders, that is stored at the at least one server" and "a second representation of the at least one folder, in a location among one or more folders, that is stored at the second node." Patent Owner infers from this language that the representation is itself a folder that is "in a location among one or more folders" and is stored on a server or at the second node. PO Resp. 30. Not so — the representation of a folder, such as the word "Music" in the above figure, is not stored at a server or node, but rather is simply displayed on a screen. As the '635 application states:

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[11] As stated in the '635 application:

> [A] "data object". . . refers to an entity, identifiable within a data store, for storing and/or accessing data . . . . Exemplary data objects include files and folders in a file system.

Ex. 2004 ¶ 69.

> A representation of a program entity may be stored and/or otherwise maintained in a presentation space. As used in this document, the term "presentation space" refers to a storage region allocated and/or otherwise provided for storing presentation information . . . . A screen of a display, for example, is a presentation space.

Ex. 2004 ¶ 52. Thus, we find that the language, "representation of the at least one folder, in a location among one or more folders, that is stored at the at least one server [or node]," is properly read to mean that it is the folder, not its representation, that is "in a location among one or more folders" and that is stored on a server or node.

Patent Owner's reliance on the requirement in claim 17 — that the email sent from the originator to the recipient does not include a file attachment, so that a file is not communicated to the recipient until the recipient initiates its communication — is misplaced. Patent Owner infers from this requirement that the separate requirement of creating a representation of a folder at the recipient's node cannot be accompanied by a communication of the folder contents to the recipient. PO Resp. 31–32. But there is nothing in the claim language or the specification that rules out an embodiment in which the action that causes the claimed "initiation of the communication of the at least one file" (which must occur separately from the claimed email) is the same action that initiates the claimed "signal for causing creation of a first representation of the at least one folder." In other words, claim 17 allows whatever action the recipient takes to signal the creation of the representation can also initiate the communication of files associated with that representation.

Patent Owner's reliance on disclaimed claims 1, 7, and 8 undercuts Patent Owner's proposed construction. Like claim 17, those claims include

the phrase "representation of the at least one folder," but they also explicitly impose essentially the same requirements that Patent Owner would import into its construction of that phrase. There would be no reason to apply Patent Owner's construction to these other claims — the claims already explicitly impose those requirements. The principle that claim terms are to be construed consistently across all claims argues against construing "representation . . ." in claim 17 to include the additional requirements separately called out in claims 1, 7, and 8. *Phillips*, 415 F.3d at 1314 ("claim terms are normally used consistently throughout the patent"). Claim limitations explicitly included in one claim militate against importing those limitations into a separate claim. *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998) ("The doctrine of claim differentiation create[s] a presumption that each claim in a patent has a different scope").

Finally, the '635 application does not support Patent Owner's construction. Patent Owner relies on original claim 1 and other portions of the specification that describe "creating . . . a representation of the data object at the location, wherein accessing the representation includes accessing the data object from the second data store." PO Resp. 35–36. From this, Patent Owner argues that the data object cannot be at the referenced "location" when its representation is created, but rather is at the "second data store," and only when the representation is then accessed can it be communicated to the "location." *Id.* Even if this assumption were correct,[12] it may provide support for disclaimed claims 1, 7, and 8, which

[12] The phrase "accessing the data object from the second data store" is ambiguous. Patent Owner assumes that it means that the data object is directly accessed from the second data store. But nothing in the

explicitly include commensurate requirements. But this specific embodiment should not be imported into broader claim 17. *SuperGuide Corp. v. DirecTV Enter., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) ("a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment").

D. Secondary Considerations

In addition to its arguments directed to the relied-on references analyzed below, Patent Owner argues that evidence of commercial success, industry praise, long-felt but unsolved needs, industry skepticism and failure of others, and unexpected results provide additional factual evidence that the challenged claims would not have been obvious. PO Resp. 54–63. Patent Owner relies on Petitioner's "Smart Sync" feature incorporated in its Dropbox products, which keeps a user's files and folders synchronized between their local filesystem and Petitioner's servers. *Id.* at 54–55.

An aspect of Smart Sync that Patent Owner focuses on is that the synchronized files "take[] up virtually no local disk space until [they're] needed," and that "whenever they need to access files stored in the cloud, users can download them with a quick double click." PO Resp. 54–55 (citing Exs. 2012, 2014; Smith Decl. ¶ 119). Patent Owner argues that the widespread adoption and commercial success of Smart Sync demonstrates the commercial success of the claimed inventions of the '520 patent. *Id.* at 59 (citing Exs. 2012–2025; Smith Decl. ¶ 127). Patent Owner alleges that

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specification rules out the that the data object, which was originally located at the second data store (*i.e.*, it is "from" the second data store), has already been communicated to the referenced "location" when it is accessed.

there is a nexus between Smart Sync and the claimed inventions, given the ability to make available shared folders (and the files within them) to recipients simply as "representations" without needing to download the contents of any files to each such user's local drive until they are needed. *Id.* at 56 (citing Smith Decl. ¶ 123).

Patent Owner submits evidence that Smart Sync's ability to save local storage space while providing access to files in the cloud received industry praise. PO Resp. 60–61 (citing Exs. 2012, 2014, 2019–2020, 2025; Smith Decl. ¶¶ 128–130). Patent Owner argues that the ability of Smart Sync to avoid storing files locally until needed satisfied a long-felt need to solve the problem of locally storing large files like photos and videos on local storage with limited capacity. *Id.* at 61–62 (citing Exs. 2013, 2017, 2021–2025; Smith Decl. ¶¶ 131–133). Patent Owner further argues that, after the invention of the '520 patent subject matter, "companies such as Amazon, Microsoft, Google, Box and others began implementing the specific features covered by the challenged claims." *Id.* at 62 (citing Exs. 2027–2044; Smith Decl. ¶ 134). Patent Owner also submits evidence that it asserts shows industry skepticism, failure of others, and unexpected results related to the Smart Sync features. *Id.* at 62–63 (citing Exs. 2017, 2018, 2022; Smith Decl. ¶¶ 135–138).

Notwithstanding what the teachings of the prior art would have suggested to one skilled in the art, objective evidence of nonobviousness (so called "secondary considerations") may lead to a conclusion that the challenged claims would not have been obvious. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Objective evidence of nonobviousness "may often be the most probative and cogent evidence in the record" and

"may often establish that an invention appearing to have been obvious in light of the prior art was not." *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (quoting *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983)). Objective evidence may include long-felt but unsolved need, failure of others, unexpected results, commercial success, copying, licensing, and praise. *See Graham*, 383 U.S. at 17–18; *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

Commercial success is typically shown with evidence of "significant sales in a relevant market." *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006). "When a patentee can demonstrate commercial success, usually shown by significant sales in a relevant market, and that the successful product is the invention disclosed and claimed in the patent, it is presumed that the commercial success is due to the patented invention." *J.T. Eaton & Co. v. Atlantic Paste & Glue Co.*, 106 F.3d 1563, 1571 (Fed. Cir. 1997).

To give substantial weight to objective indicia of nonobviousness such as commercial success, a proponent must establish a nexus between the evidence and the merits of the claimed invention. *ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016). Nexus is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). "[T]here is no nexus unless the evidence presented is 'reasonably commensurate with the scope of the claims.'" *ClassCo*, 838 F.3d at 1220 (quoting *Rambus Inc. v. Rea*, 731 F.3d

1248, 1257 (Fed. Cir. 2013)). A patentee is entitled to a presumption of nexus "when the patentee shows that the asserted objective evidence is tied to a specific product and that product 'embodies the claimed features, and is coextensive with them.'" *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (quoting *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). "[T]he patentee retains the burden of proving the degree to which evidence of secondary considerations tied to a product is attributable to a particular claimed invention." *Fox Factory*, 944 F.3d at 1378. The Federal Circuit has held that "if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus." *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000).

"A finding that a presumption of nexus is inappropriate does not end the inquiry into secondary considerations"; rather, "the patent owner is still afforded an opportunity to prove nexus by showing that the evidence of secondary considerations is the 'direct result of the unique characteristics of the claimed invention.'" *Fox Factory*, 994 F.3d at 1373–74 (quoting *In re Huang*, 100 F.3d 125, 140 (Fed. Cir. 1996)). "Ultimately, the fact finder must weigh the [objective indicia] evidence presented in the context of whether the claimed invention as a whole would have been obvious to a skilled artisan." *See Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 33, 33 (PTAB Jan. 24, 2020) (precedential) (citing *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1331–32 (Fed. Cir. 2016)).

As evidence of commercial success and other objective evidence of nonobviousness, Patent Owner relies on publicly available marketing

literature and news articles related to Petitioner's "Smart Sync" synchronization engine incorporated in Petitioner's desktop applications. PO Resp. 54–63 (citing Exs. 2012–2025). In arguing nexus, Patent Owner relies on descriptions of Smart Sync as:

> [A] "feature that makes all the content in a user's Dropbox account seamlessly accessible from their desktop file system — and the content takes up virtually no local disk space until it's needed," such that "Team members gain full visibility and unprecedented access to their entire Dropbox right from their desktop file system, no matter how large."

PO Resp. 54 (quoting Ex. 2012). Key to Patent Owner's theory of nexus is the fact that Smart Sync provides that "whenever they need to access files stored in the cloud, users can download them with a quick double click," and "[t]he upstream files look like any other item in your Dropbox . . . click on one and it will quickly download and open, as if it were there on your disk the whole time." *Id.* at 55 (citing Exs. 2014–2015). Patent Owner argues:

> There is a nexus between Smart Sync and the claimed inventions. For example, as set forth above, a key benefit of the claimed inventions is the ability to make available shared folders (and the files within them) to recipients simply as "representations" without needing to download the contents of any files to each such user's local drive until they are needed. Thus, not only does the shared folder overwhelm the recipient's drive space, but each recipient has the ability to selectively download only those files they need to access. Moreover, because no files are automatically downloaded to the recipient's computer at the time of sharing, for each such file that a recipient wishes to download, the recipient is guaranteed to access the most up-to-date version of the file.

PO Resp. 56 (citations omitted).

The problem with Patent Owner's nexus arguments is that, as concluded above in Section III.C, the challenged claims do not pertain to the features identified by Patent Owner—rather, those features at most pertain to disclaimed independent claims 1 and 7. Claim 17 does not require folders (and the files within them) to be provided to recipients simply as "representations," without needing to download the contents of any files to each such user's local drive until they are needed. Indeed, counsel for Patent Owner conceded at the Oral Hearing that its secondary considerations argument depends on its claim construction position:

> [The Panel]: do you agree . . that your secondary considerations argument also depends on your claim construction being adopted?
>
> [Counsel]: Yes. Yes, if there is — if the claims are not construed to encompass representation as we've proposed, then I would agree that Smart Sync, it's distinct, and so there wouldn't be a nexus.

Tr. 25:23–26:3. In sum, we find that the record does not support a finding of nexus to support Patent Owner's assertions of objective indicia of nonobviousness.

E. Alleged Obviousness of Claims 17–21 over Houston and Garcia

Petitioner challenges claims 17–21 as obvious over the combination of Houston and Garcia. Pet. 15–64.[13]

[13] Petitioner also challenges claims 1–8 over Houston and Garcia, but because Patent Owner has disclaimed those claims, we do not consider that portion of Petitioner's challenge, except to the extent that Petitioner relies on its analysis of those claims in its analysis of claims 17–21.

1. Houston

Houston, titled "Network Folder Synchronization," issued September 2, 2014, from an application filed August 13, 2010. Ex. 1003, codes (54), (45), (22). Houston "relates generally to sharing of data over a network" and "is directed to synchronization of a folder and its contents shared between multiple clients." *Id.* at 1:14–18. Houston Figure 1 is reproduced below.

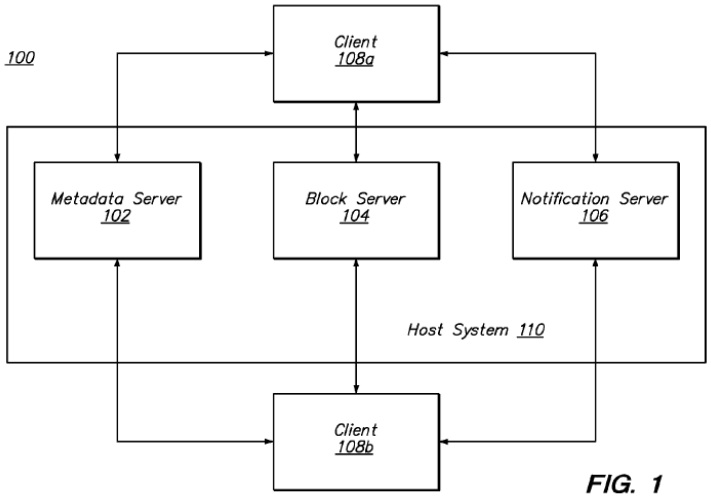


Figure 1 "is a block diagram of a host system and clients for maintaining synchronized shared folders." Ex. 1003, 2:22–23.

System 100 includes clients 108a, 108b and host system 110, and further includes metadata server 102, block server 104, and notification server 106. Ex. 1003, 2:59–62. Client 108 enables a user to create, modify and delete files on the client's local file system, and for those actions to be synchronized with versions of the same files on host system 110 and on one or more other client computers. *Id.* at 3:25–28. A user creates a folder and designates it as one that should be synchronized, and its contents are then managed by client 108 to maintain that synchronization. *Id.* at 3:29–31. A

user can create a shared synchronized folder either through a user interface portion of client 108, or via a web server. *Id.* at 3:31–34.

Block server 104 receives, stores, and serves blocks of data constituting synchronized files. Ex. 1003, 2:66–67. Metadata server 102 receives requests from clients to update block server 104's copy of synchronized folders and provides clients with a list of metadata for files being synchronized. *Id.* at 2:63–65. Notification server 106 provides updates to clients when a synchronized folder has been updated on block server 104. *Id.* at 2:67–3:3.

Houston Figures 2, 3 and 4 are reproduced below.

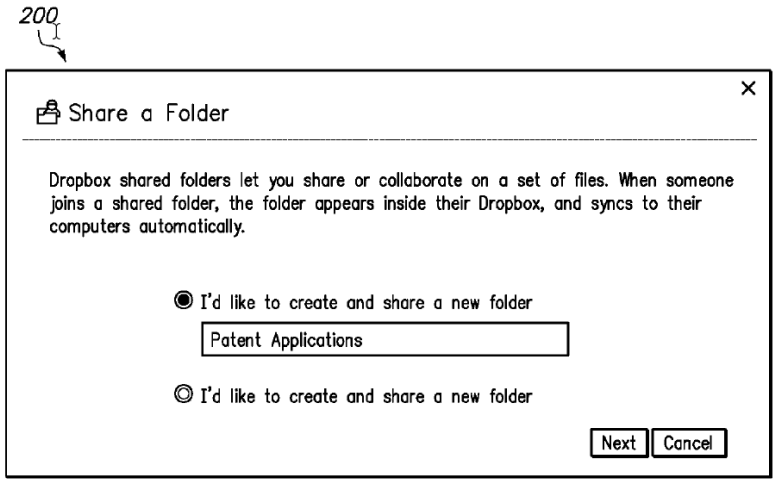

200
Share a Folder
Dropbox shared folders let you share or collaborate on a set of files. When someone joins a shared folder, the folder appears inside their Dropbox, and syncs to their computers automatically.
I'd like to create and share a new folder
Patent Applications
I'd like to create and share a new folder
Next
Cancel

FIG. 2

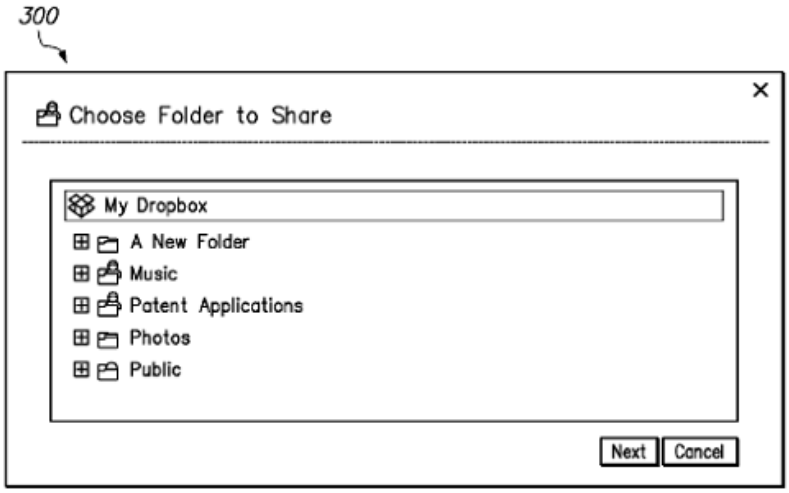

300
Choose Folder to Share
My Dropbox
A New Folder
Music
Patent Applications
Photos
Public
Next
Cancel

FIG. 3

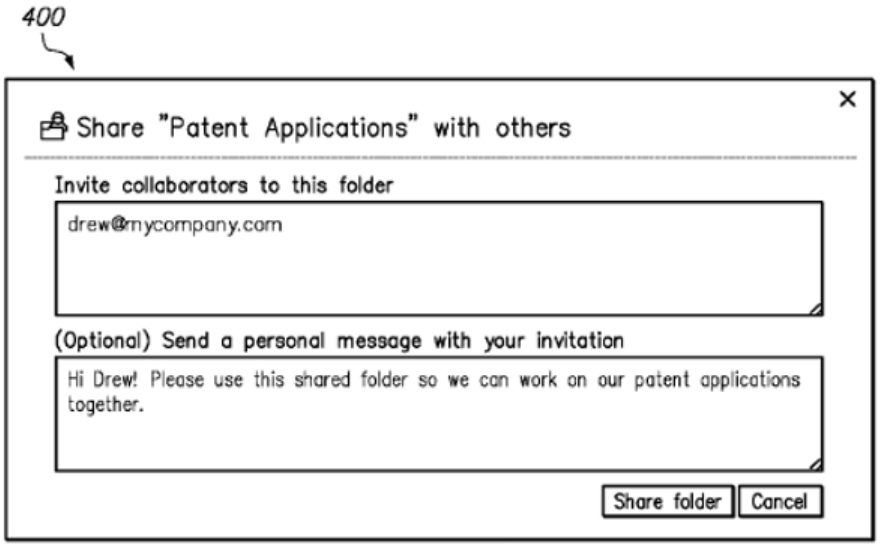


FIG. 4

> Figures 2 and 3 each "illustrate[] a user interface window for creating a shared synchronized folder," *i.e.*, of existing folders to be shared. Figure 4 "illustrates a user interface window for sharing a folder." Ex. 1003, 2:25–33.

Figure 2 illustrates a user interface window accessed via a web interface, and Figure 3 illustrates a user interface portion of a client, either of which can be used to designate a folder to be synchronized and shared — in the illustrated examples, a "Patent Applications" folder is so designated. Ex. 1003, 3:29–40. Once the user has chosen or created the folder to be shared, Figure 4 illustrates user interface window 400 via which the user can invite other users to share the folder. *Id.* at 3:40–43.

Houston Figure 10 is reproduced below.

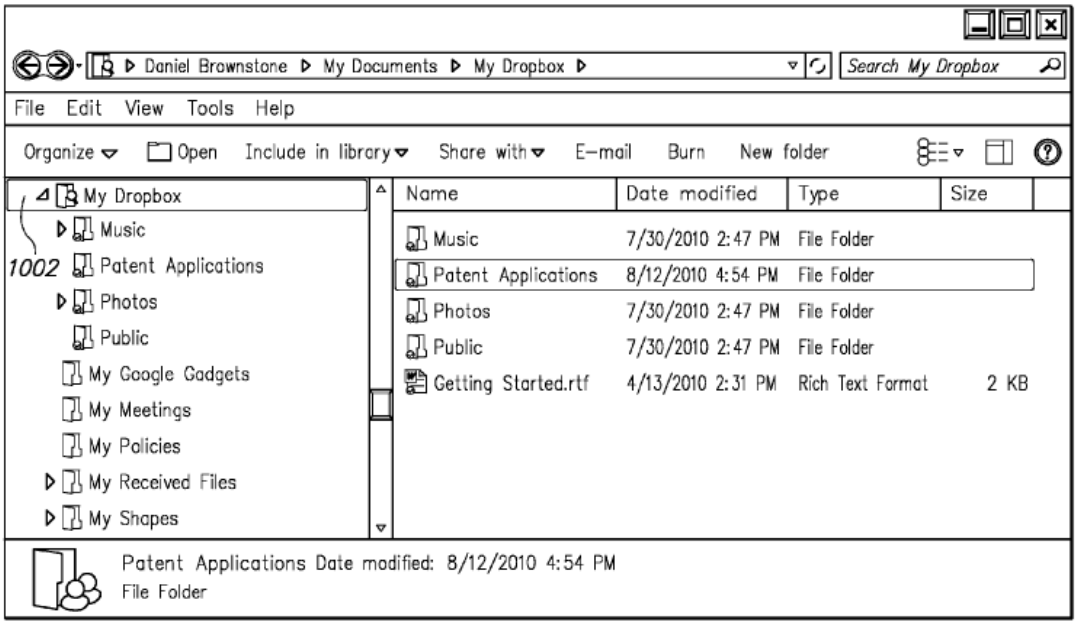


FIG. 10

> Figure 10, reproduced above, "illustrates an interface for interacting with shared folders." Ex. 1003, 2:48–49.

The user interface shown in Figure 10 allows users to interact with shared folders, which in this example is "My Dropbox" folder 1002, which is synchronized with the host system. Ex. 1003, 7:18–23. That folder includes the folders Music, Patent Applications, Photos, and Public, and the document Getting Started.rtf, stored on the user's system. *Id.* at 7:26–28. Figure 11 is reproduced below.

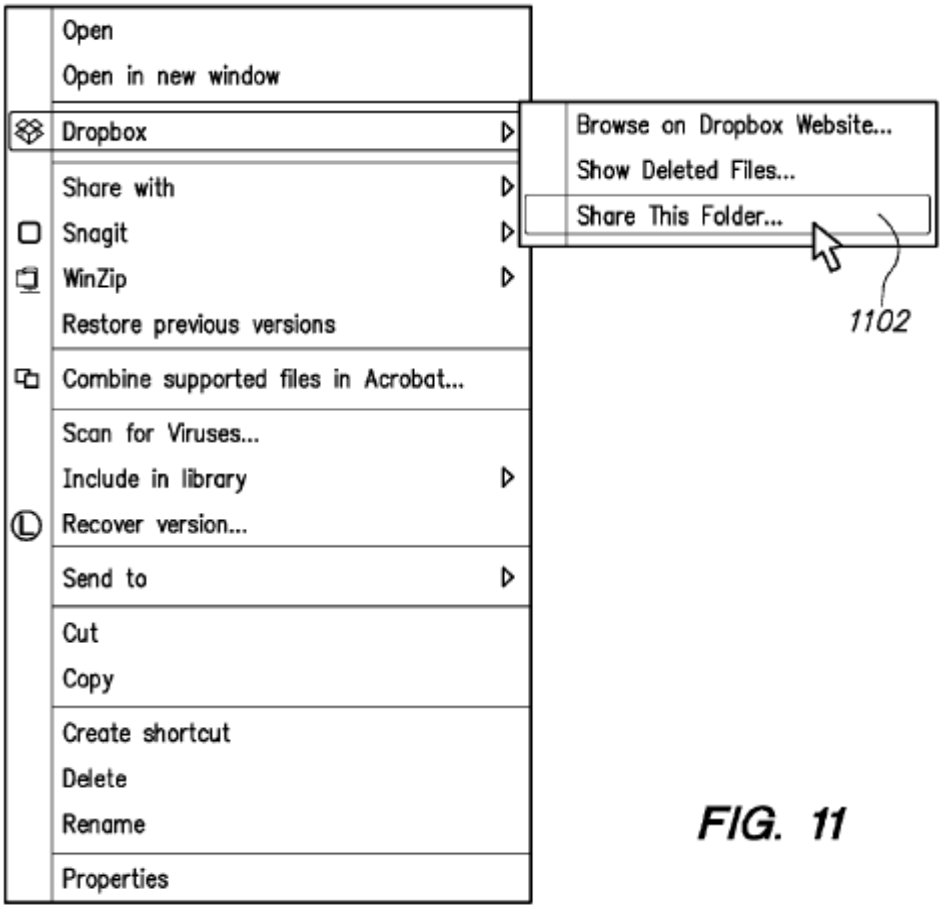


FIG. 11

Figure 11, reproduced above, "illustrates a selection menu for sharing a folder." Ex. 1003, 2:51–52.

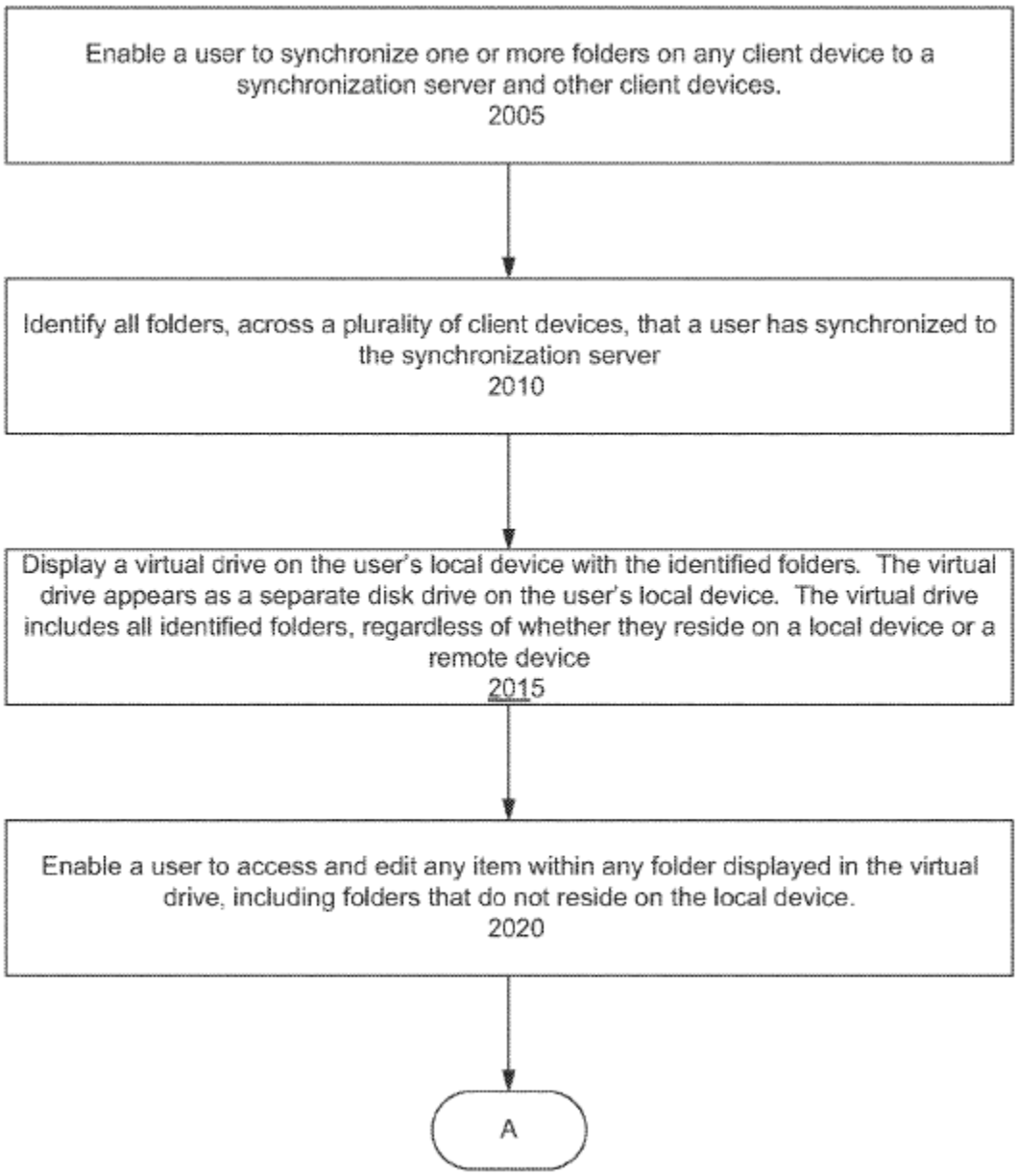
By right-clicking on the folder name and selecting "Share This Folder . . ." option 1102, a user can share the "Patent Applications" folder. Ex. 1003, 7:32–36. Alternatively, the user can use a web interface to communicate the share instructions to host system 110. *Id.* at 7:37–38. In either case, the user also specifies the account identifier of the user(s) with whom the folder is to be shared. *Id.* at 7:38–40. If an invited user accepts the invitation to share the folder, metadata server 102 creates a link in the user's storage that points to the folder, and notification server 106 provides

change notifications to the invited user's client, and the invited user's client obtains the latest version of the synchronized file. *Id.* at 7:49–58.

2. Garcia

Garcia, titled "System, Method, and Computer Program for Enabling a User to Synchronize, Manage, and Share Folders Across a Plurality of Client Devices and a Synchronization Server," issued April 25, 2017, from an application filed August 10, 2012. Ex. 1004, codes (54), (45), (22). Garcia "relates generally to a synchronization system and, more particularly, to a system and method for enabling a user to synchronize, manage, and share folders across a plurality of client devices and a synchronization server." *Id.* at 1:11–15.

Garcia Figure 20a is reproduced below.



> Figure 20a is "a flowchart that illustrates a method . . . for enabling a user to access and edit, via a virtual drive, local and remote objects, including objects synchronized to a plurality of synchronization software clients." Ex. 1004, 2:66–3:3.

In step 2005, a user is enabled to synchronize one or more folders on any synchronization client to the synchronization server and other

synchronization clients. Ex. 1004, 5:14–17. When a user synchronizes an object to the synchronization server, the synchronization server stores a copy of the object. *Id.* at 8:29–31. In step 2010, all folders, across a plurality of synchronization clients that a user has backed up or synchronized to the synchronization server, are identified, as well as any folders that the user shares with other users. *Id.* at 5:17–20. Each of the synchronization clients stores metadata with information on all folders shared with or by the user and all folders that the user has backed up or synced to the synchronization server (including the contents of the folder). *Id.* at 5:20–24. The synchronization client on the client device uses this metadata to generate the virtual drive and the user interface. *Id.* at 5:24–26.

In step 2015, a virtual drive is displayed on the user's local client device with the identified folders. Ex. 1004, 5:27–28. The virtual drive appears as a separate disk drive on the user's local client device. *Id.* at 5:28–30. The virtual drive includes all of the user's synced folders, regardless of whether a folder resides on the local client or only on a remote client. *Id.* at 5:30–32.

In step 2020, a user is enabled to access and edit any item within any folder displayed in the virtual drive, including folders that do not reside on the local client. Ex. 1004, 5:32–35. When a user double clicks on a file or item in a remote folder in the virtual drive, the server downloads its copy of the file/item to the local synchronization software client (i.e., the client currently being used by the user). *Id.* at 5:35–39. The user can then edit the file/item as desired. *Id.* at 5:39–40. In one embodiment, when a user double clicks on a local folder, the user is taken to the folder in the local file system view. *Id.* at 5:40–42. In another embodiment, the server downloads its copy

of the item/file in the local computer. *Id.* at 5:42–43.

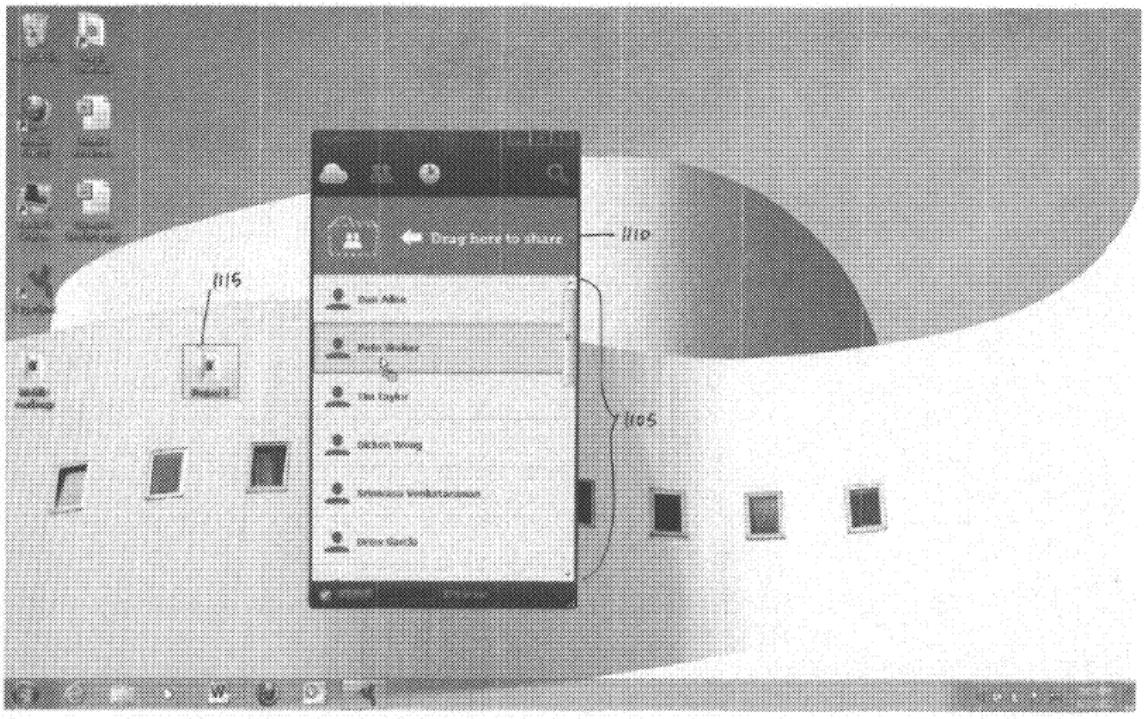
Garcia Figures 3–14 "are screenshots of an exemplary user interface in a synchronization system." Ex. 1004, 2:60–61. Figure 10 is reproduced below.

> Figure 10 illustrates how a user accesses files in a folder displayed in the client sync application. Ex. 1004, 10:52–55.

Any file in folders 1005 in the synchronization system may be accessed through a virtual drive 1010, including folders located only on a remote device or folders located only on the synchronization server.
Ex. 1004, 10:60–64. A virtual drive is a file representation view of non-file system data, such that folders 1005 may be viewed as if they resided on the hard drive of the local device (e.g., a home computer) and the user may open, add, edit, delete, and move files within these folders, including files that reside on a remote device. *Id.* at 10:64–11:2. Changes made via the

virtual drive are automatically synchronized with the synchronization server and applicable client devices. *Id.* at 11:2–4. When a user double clicks on a folder in the user interface of the client sync application, the virtual drive is displayed. *Id.* at 11:4–7. Not only are all of the user's folders that have been synchronized to or stored on the server accessible through the virtual drive, but also all of the folders 1015 shared with the user by other users. *Id.* at 11:7–10.

Garcia Figures 11–12 illustrate the functionality of a "sharing view." Ex. 1004, 11:11–12. Figure 11 is reproduced below.

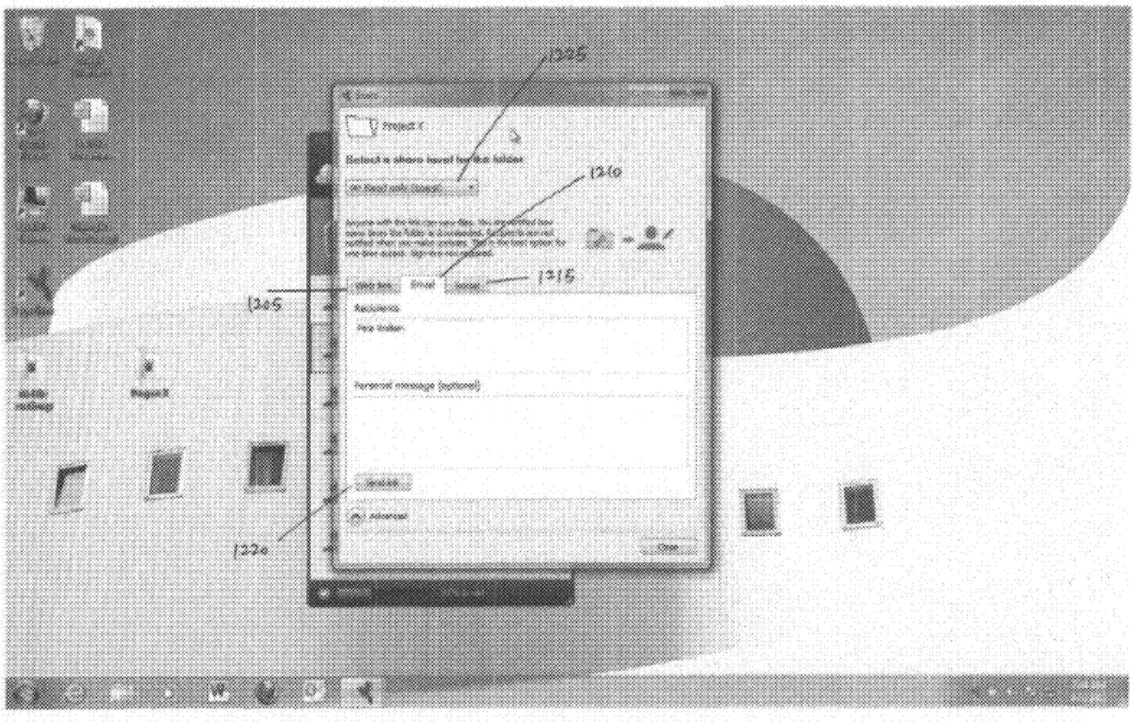


> Figure 11 shows a list of contacts 1105, each of which is a drop target zone, and a separate dedicated drop target zone 1110. Ex. 1004, 11:12–14.

The list of contacts 1105 may be compiled from the user's Microsoft Outlook contacts, mobile device contacts, or any other contacts. Ex. 1004, 11:14–16. When a user drags a folder, such as folder 1115 in the

figure, to a particular contact, the folder or a link to the folder is automatically sent (via email, text, or other means) to the contact. *Id.* at 11:16–19. Dragging the folder automatically displays a dialog box that provides a user with options for sharing the folder with the contact. *Id.* at 11:19–23.

An example of such a dialog box is shown in Figure 12, reproduced below.



> Figure 12 illustrates that sharing folder 1115 may be by web link 1205, by email 1210, or by social networking 1215. Ex. 1004, 11:23–26.

The user contact information is automatically populated into the "Recipients" field. Ex. 1004, 11:26–27. When the user clicks on send link button 1220, a link to folder 1115 is sent to the contact. *Id.* at 11:27–29. When the contact clicks on the link to folder 1115, the contents of the folder are shared with the contact. *Id.* at 11:29–31.

Garcia Figure 13 is reproduced below.

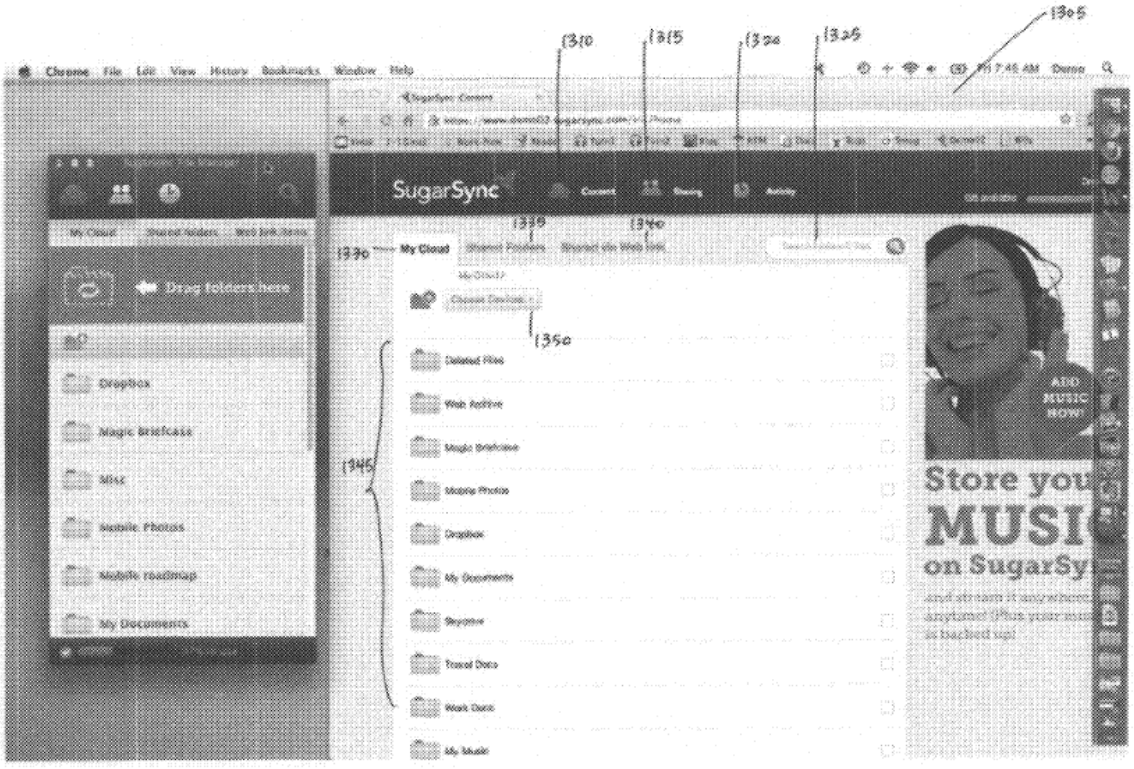


Figure 13 illustrates web interface 1305 for the synchronization system. Ex. 1004, 11:44–45.

The web interface 1305 has a content view 1310, sharing view 1315, activity view 1320, and search field 1325. *Id.* at 11:46–48. In a My Cloud tab 1330 (of the content view 1310) is a list of folders 1345 from all synchronized client devices. Ex. 1004, 11:50–52.

3. Motivation To Combine

For some of the requirements of claims 17–21, elaborated below, Petitioner argues that one of ordinary skill in the art would have been motivated to combine Houston with certain features of Garcia because (i) Houston and Garcia are from the same field of endeavor, directed to synchronizing and sharing folders; (ii) the combination would have yielded

expected, predictable results, using known and routine computer programming principles; (iii) the combination would have been obvious to try given that sending an email with a link was one of only a few common and predictable methods for sharing folders; (iv) the combination would have been readily implemented given that it used information already received by Houston's system; (v) and the combination was suggested because Garcia expressly disclosed a benefit of sending an email message with a link to a shared folder (as required by requirement 17[d] discussed below). Pet. 27–31 (citing Ex. 1003, code (57), Figs. 1–4, 1:41–45, 1:53–54, 3:31–43; Ex. 1004, code (57), Figs. 2, 11–12, 10:32–34, 10:40–43, 11:39–43, cl. 3; Mowry Decl. ¶¶ 87–92). In addition, for similar reasons, Petitioner argues that a person of ordinary skill in the art would have had a reasonable expectation of success in making the combination. *Id.* at 31–32 (citing Ex. 1003, code (57), 1:53–54; Ex. 1004, code (57); Mowry Decl. ¶ 93).

Patent Owner argues that a person of ordinary skill in the art would not have been motivated to combine Houston and Garcia to perform claim elements 17[d]–[g] (referring to the claim 17 requirements "causing generation of at least one email . . . ."; ". . . causing creation of a first representation . . . ."; "causing . . . receipt of the at least one web page . . . ."; and ". . . cause creation of a second representation . . . ."). PO Resp. 45–46; Sur-Reply 7–14. Patent Owner argues that, "[w]hereas Houston 'automatically' downloads local copies from shared folders and synchronizes them with other local copies, Garcia functions as a 'virtual drive' for remotely stored files without first downloading them locally to all a user's devices. PO Resp. 45 (citing Ex. 1003, 3:64–4:3; 2:17–18, 5:37–

6:3). Patent Owner argues that Houston teaches away from the combination because it criticizes systems like Garcia that store documents remotely. *Id.* at 46 (citing Ex. 1003, 1:29–35; Smith Decl. ¶ 104); Sur-Reply 9–12.[14] Patent Owner further argues that modifying Houston from an automatic downloading system to a "virtual drive" would have "frustrated the heart of the inventions of Houston and would render it inoperable for its intended purposes," and "result in the loss of 'key functions' and 'benefit.'" *Id.* (citing Ex. 1003, Abstr.; Smith Decl. ¶ 105).

Patent Owner's arguments are not pertinent to Petitioner's proffered combination of Houston with Garcia as applied to the remaining challenged claims 17–21. As discussed further below, Petitioner relies on Garcia as supplementing Houston for details regarding the requirements of generating and sending an email with a link to a folder but without a file attachment, and for synchronizing folders and providing interfaces for display of shared folders. Pet. 26–27, 36–39, 57–60. For the challenged claims, Petitioner does not need to rely on the combination to modify Houston's system such that, when an icon for a shared folder is created in Houston's interface at an invited user's client, the client does not store a file in the shared folder —

[14] For this argument and others, Patent Owner cites for additional support portions of U.S. Provisional Patent Application No. 61/233,787. PO Resp. 18, 42, 46; Sur-Reply 9–12. This application is designated in Houston as a related application, and incorporated by reference therein. Ex. 1003, code (60), 1:6–10. We denied as untimely Patent Owner's request to belatedly add this application to the record. Ex. 3002; Paper 39. Even accepting Patent Owner's representations of the relied-on disclosures in that application, those disclosures are cumulative to Houston's criticisms of systems that store documents remotely, and are irrelevant for the same reasons as discussed herein with respect to those Houston disclosures.

that aspect of the Houston/Garcia combination is only relevant to claims 1–8, which have been disclaimed. *Id.* at 40–41; Ex. 2045.[15]

Thus, Patent Owner's argument that Houston teaches away from combining with Garcia to delay storing a file when a folder is shared is not applicable to Petitioner's challenges of claim 17–21, in light of our conclusion set forth above in Section III.C rejecting Patent Owner's proposed construction of claim 17. The fact that the Houston system ensures the availability of synchronized local copies of files at each user's local system and criticizes systems that store documents remotely, such as in Garcia, is irrelevant to those claims. On this record, there is nothing about that particular difference in the approaches of Houston and Garcia that would support a finding that one of ordinary skill in the art would have been discouraged from adopting Houston to take advantage of the teachings in Garcia regarding use of email and folder interfaces.

In sum, Patent Owner focuses on a specific irrelevant detail of Houston regarding local storage of files, whereas Petitioner relies on other features of the combination of Houston and Garcia. *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary

[15] As an alternative argument in reply, Petitioner argues that, if the Board were to adopt Patent Owner's proposed construction of "representation of the at least one folder," one of ordinary skill would still have been motivated to combine Houston with Garcia, and the combination would have satisfied the requirements of claim 17, even under Patent Owner's construction. Reply 7–15. Because we have not adopted Patent Owner's construction, we do not need to address these reply arguments, nor Patent Owner's responses to those arguments in its Sur-Reply.

reference. . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d at 425; *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012). "Combining the *teachings* of references does not involve an ability to combine their specific structures." *In re Nievelt*, 482 F.2d 965, 968 (CCPA 1973). We are persuaded by Petitioner's declarant's testimony that one of ordinary skill would have been motivated to apply the email and folder interface teachings of Garcia to modify Houston. Mowry Decl. ¶¶ 84–93, 102–104, 148, 151–152.

Accordingly, we determine that Petitioner has proved by a preponderance of the evidence that one of ordinary skill in the art would have been motivated to combine Houston and Garcia in the manner argued by Petitioner.

4. Independent Claim 17

a) Preamble and Requirements 17[a]–17[c]

For the "method" preamble of independent claim 17, Petitioner generally relies on the disclosure in Houston of "[a] method for synchronizing a shared folder over a network." Pet. 15–16, 56 (citing Ex. 1003, Fig. 1, cl. 1; Mowry Decl. ¶ 144).[16]

For claim requirement 17[a] of a first user interface for collecting folder information,[17] Petitioner relies on the disclosure in Houston of

[16] Based on the present record, we make no determination at this stage of the proceeding that the preamble of claim 17 is limiting.

[17] For economy of presentation, we refer to the portions of claim 17 identified by bracketed letters at Section II.B above, and in some instances paraphrase the referenced claim requirement, although the complete language of each claim requirement is the subject of our analysis.

Figure 2, a web interface allowing a user to enter the name of a folder to share, and also Figure 3, a user interface window, which allows the user to select a folder to share. Pet. 17–21, 56 (citing Ex. 1003, Figs. 2, 3, 3:31–40; Mowry Decl. ¶¶ 64–71, 145).

For claim requirement 17[b] of a second user interface for collecting email address information, Petitioner relies on the disclosure in Houston of Figure 4, a user interface window, which allows the user to enter an email address. Pet. 21–23, 56 (citing Ex. 1003, Fig. 4, 3:40–43; Mowry Decl. ¶¶ 72–76, 146).

For claim requirement 17[c] of a third user interface for initiating sharing the folder, Petitioner again relies on the disclosure in Houston of Figure 4, in which selection of the "Share folder" button allows the user to invite another user to share the folder. Pet. 23–24, 56 (citing Ex. 1003, Fig. 4; Mowry Decl. ¶¶ 77–78, 147).

Other than its arguments discussed above regarding motivation to combine, Patent Owner does not specifically respond to Petitioner's arguments regarding requirements 17[a]–17[c]. *See generally* PO Resp. Accordingly, we are persuaded that the record supports Petitioner's arguments regarding these claim requirements.

b) Requirement 17[d]

For the claim requirement 17[d] of generating an email with various specified requirements, Petitioner relies on the combination of Houston and Garcia. Pet. 24–32, 57. For the general requirement of generating an email, and the further specific requirements of identifying in the email the information associated with the at least one folder, and not including a file attachment in the email, Petitioner first relies on Houston alone, based on the

disclosures that clients may share folders with one another via a host system over a network, that a client can provide the folder information and an email to the server and invite others to share the folder, and that "attaching files [to emails is] cumbersome for many computer users." *Id.* at 24–26 (citing Ex. 1003, Fig. 1, 1:41–42, 1:53–54, 2:67–3:3, 3:5–10, 3:22–24, 3:40–43, 7:18–51; Mowry Decl. ¶¶ 80–83). Petitioner argues that, based on these disclosures, it would have been obvious that an invitation to notify the collaborator about the folder being shared and how to access the folder would be in the form of an email message to the provided email address, without attaching any file contents of the folder itself. *Id.* at 25–26 (citing Mowry Decl. ¶ 82).

In the alternative, Petitioner argues that one of ordinary skill would have known to use, in the Houston system, an email to invite a user to share a folder based on the disclosure in Garcia that a client can share a folder with another client by generating and sending an email with a link to, and identification of, the shared folder, instead of an attachment. Pet. 26–27, 57 (citing Ex. 1004, Figs. 2, 9, 11–12, 8:8–26, 10:32–34, 10:38–40, 11:39–43, cl. 3; Mowry Decl. ¶¶ 84–86). For the 17[d] requirement of including a Hypertext Transfer Protocol (HTTP) link in the email, and the requirement that the email is at least partially pre-written, Petitioner argues that an HTTP link was known as the conventional type of link to be inserted in an email, and that at least the "From" and "To" fields in the email of Garcia would be pre-written. *Id.* at 57 (citing Mowry Decl. ¶ 148). For the requirement of automatically causing the email to be received without requiring user involvement after the action of requirement 17[c], Petitioner argues that because neither Houston nor Garcia expressly requires a user's approval for

an email to be sent or received, a person of ordinary skill would have understood the email to be automatically received by the person to which the email is addressed, without any user involvement, as was the norm. *Id.*

In the Patent Owner Response, in addition to arguing that the asserted combination of Houston and Garcia was not motivated, which argument, as discussed above, we find unpersuasive, Patent Owner argues that the combination does not teach the requirement of claim 17[d] of:

> causing generation of at least one email [that] does not include a file attachment, for permitting avoidance of at least one file from being communicated to and stored at the second node until an initiation of the communication of the at least one file by a user of the second node is detected and the communication commences via at least one server that stores the at least one file.

PO Resp. 41–43.

Patent Owner argues that Houston does not disclose this requirement because it "creates a folder that automatically downloads local copies of files from a remote server, regardless of whether a user initiates the download." PO Resp. 42 (citing Smith Decl. ¶ 97). Patent Owner also argues that, even if the combination of Houston and Garcia were motivated, the claim 17[d] requirement would still not be met because "Garcia teaches that the recipient of a shared folder does download the shared folder at the node where the folder share invitation is received." *Id.* at 47 (citing Smith Decl. ¶ 106).

However, as Petitioner argues above, Houston discloses that a client can provide an email to the server to invite others to share a folder, and Houston explains that "attaching files [to emails is] cumbersome for many computer users." Pet. 25–26 (citing Ex. 1003, Fig. 4, 1:41–42, 3:40–43, 7:50–51). From this, Petitioner argues that it would have been obvious for

the email invitation to notify how to access the folder, rather than sending the folder contents itself. *Id.* Petitioner further argues that the claim 17[d] requirement would have been obvious over the combination of Houston and Garcia given the disclosure in Garcia of sharing a folder by sending an email with a link to the folder, instead of an attachment. *Id.* at 27, 57 (citing Ex. 1004, Figs. 9, 11–12, 10:32–34, 10:38–40, 11:39–43, cl. 3).

We are persuaded that the record supports Petitioner's arguments regarding this claim requirement. Both Houston alone, and the combination of Houston and Garcia, teach or suggest sending an email with a link to a folder to be shared, rather than the folder contents. Only if the recipient clicks on the link are the contents of the folder shared. Ex. 1004, 11:29–31. The act of clicking on the link in the email ***after*** the email is received is the required "initiation of the communication" that must occur separately from the email itself, as required by claim 17[d]: "causing generation of at least one email [that] does not include a file attachment, for permitting avoidance of at least one file from being communicated to and stored at the second node until an ***initiation of the communication*** of the at least one file by a user of the second node is detected and the communication commences via at least one server that stores the at least one file" (emphasis added). It does not matter if Houston or Garcia automatically downloads local copies of files when a recipient clicks on the email link, because that is a separate step following the step of claim 17[d].

c) Requirements 17[e]–17[g]

Claim requirements 17[e] and 17[f] require:

> receiving, from the second node and at at [*sic*] least one server, a signal for causing creation of a first representation of the at least one folder, in a location among one or more folders,

> that is stored at the at least one server and that is displayable via at least one web page;
>
> causing, at the second node, receipt of the at least one web page, that results in display, at the second node and via the at least one web page, the first representation of the at least one folder that is stored at the at least one server.

Ex. 1001, 55:38–47. For these requirements, Petitioner relies on the disclosure in Houston of host servers that synchronize and store folders, that receive requests from clients to update the server's copy of synchronized folders and provide clients with a list of metadata for files being synchronized, and that provide a web interface that allows access to shared folders. Pet. 57–58 (citing Ex. 1003, 2:10–12, 2:63–66; Mowry Decl. ¶ 150). Petitioner also relies on the disclosure in Garcia of the ability of a user to synchronize a folder to a synchronization server, which provides a web interface to users that displays shared folders. *Id.* at 58–60 (citing Ex. 1004, Figs. 2, 10, 13, 5:9–11, 8:29–31, 10:60–61, 11:7–10, 11:44–50; Mowry Decl. ¶¶ 151–152).

Claim requirement 17[g] requires:

> causing, at the second node, receipt of code for storage at the second node and cooperation with a file explorer interface of a client-based file explorer application, for being utilized to: cause creation of a second representation of the at least one folder, in a location among one or more folders, that is stored at the second node and that is displayable via the file explorer interface of the client-based file explorer application.

Ex. 1001, 55:48–56. For this requirement, Petitioner relies on Figure 10 of Houston, depicting a file-explorer-type interface for interacting with shared folders. Pet. 33–35, 60 (citing Ex. 1003, Figs. 2, 10, 2:48–50, 7:18–31, 7:49–58; Mowry Decl. ¶¶ 96–99). Petitioner argues that one of skill in the

art would have understood that code that allows such access to the host system would be stored on the invited collaborator's client device. *Id.* at 33 (citing Ex. 1003, 3:43–45, 8:64–9:4; Mowry Decl. ¶ 97). Petitioner also relies on Figure 10 of Garcia, also depicting a file-explorer-type interface for interacting with shared, synchronized folders stored on a synchronization server. *Id.* at 36–39, 60 (citing Ex. 1004, Figs. 10, 21, 2:37–41, 5:27–30, 6:36–67, 7:14, 7:22–29, 10:59–63, 11:7–10; Mowry Decl. ¶¶ 102–104). Petitioner cites the fact that Garcia further discloses local client synchronization software that functions to synchronize client devices with the synchronization server. *Id.* at 36–37 (citing Ex. 1003, Fig. 21, 7:1–3; Mowry Decl. ¶ 102).[18]

Patent Owner argues that neither Houston alone nor the combination of Houston and Garcia teach or suggest causing creation of a first or second representation of a folder, as required by claim requirements 17[e]–17[g]. PO Resp. 42–43, 47–49. Patent Owner primarily relies on its proposed construction of "representation of the at least one folder." *Id.* However, as discussed above in Section III.C, we have not adopted that construction. Therefore, it is irrelevant whether, as Patent Owner argues, "Houston's system 'automatically' and 'immediately' synchronizes folders and their contents among multiple clients by downloading local copies of shared

[18] Petitioner also relies on the combination of Houston and Garcia to modify Houston's system such that, when an icon for a shared folder is created in Houston's Figure 10 interface at an invited user's client, the client does not store a file in the shared folder, as taught by Garcia. Pet. 40–41 (citing Mowry Decl. ¶¶ 105–106). However, this aspect of Petitioner's challenge relates to a requirement of claims 1 and 7, which claims are no longer a subject of this proceeding. *See* Ex. 2045.

documents to each user's client," or "Garcia teaches that the recipient of a shared folder ***does download*** the shared folder at the node where the folder share invitation is received." *Id.* at 42, 47. Indeed, during oral argument, counsel for Patent Owner conceded:

> [W]e agree that claim construction is, you know, dispositive issue here, the meaning of representation. If representation is construed to include copies of a folder, a folder and its content, then I'd think that, you know, we would not prevail.

Tr. 25:1–4.[19]

Accordingly, notwithstanding Patent Owner's specific arguments directed to claim requirement 17[e]–17[g], and its arguments discussed above generally relating to all of Petitioner's grounds, for the reasons discussed above, we are persuaded that the record sufficiently supports Petitioner's arguments regarding claim requirements 17[e]–17[g].

d) Conclusion Regarding Claim 17

Based on our analysis set forth above, including our analysis of Patent Owner's arguments regarding secondary considerations of nonobviousness, we determine, having considered and weighed the entirety of the evidence, that Petitioner has proved by a preponderance of the evidence that

[19] Patent Owner also argues that Garcia at most only creates representations of folders at "other devices," but not at the node where the invitation to the shared folder is received. PO Resp. 47–48. Patent Owner argues that Garcia only teaches that the recipient of the shared folder receives a link and downloads the contents of the folder when the link is accessed. *Id.* (citing Smith Decl. ¶ 107). However, we agree with Petitioner, that the disclosure of Garcia taken as a whole teaches or suggests that representations of folders are created at all nodes when folders are shared. Reply 15–18.

independent claim 17 is unpatentable under 35 U.S.C. § 103(a) over the combination of Houston and Garcia.

5. Dependent Claim 18

Claim 18 adds to claim 17 the requirement, "wherein the email and the file explorer interface are displayed via separate interfaces for permitting access to the at least one folder via multiple different interfaces based on a detection of an indication that the HTTP link has been selected." Ex. 1001, 55:57–61. For this requirement, Petitioner relies on the above-discussed teachings of the Houston/Garcia combination of an email including an HTTP link and a client-based file explorer interface, together with the understanding of one of ordinary skill that clicking the HTTP link would have opened a web page in a web browser that is separate from a file explorer interface of a client-based file explorer application and that the user would be able to access the shared folder from the web page or the file explorer interface. Pet. 60–61 (citing Ex. 1004, Fig. 10; Mowry Decl. ¶¶ 156–157).

Patent Owner argues that Petitioner has not shown that the requirements that "the email and the file explorer interface are displayed via separate interfaces." PO Resp. 49 (citing Smith Decl. ¶ 109). Also, relying on documents purporting to describe the commercial ("SugarSync") version of Garcia, Patent Owner argues that clicking on the HTTP link in the email does not access interfaces, but merely downloads folder contents. *Id.* at 49–51 (citing Ex. 1004, 1:66–2:3, 11:16–31; Ex. 2011, 75–76; Ex. 2010, 78; Smith Decl. ¶ 110).

Petitioner replies that, given that Garcia discloses an email with an HTTP link, a person of ordinary skill would have understood that such an

email would necessarily have been displayed via an interface. Reply 18–19 (citing Ex. 1004, Fig. 12; Mowry 2nd Decl. ¶ 42). In addition, Petitioner points to its arguments that both web browser and file explorer interfaces are taught by Garcia. *Id.* at 19–21 (citing Pet. 61; Ex. 1004, Figs. 10, 13, 14, 11:44–46, 11:50–56; Mowry 2nd Decl. ¶¶ 43–45). Petitioner also argues that the characteristics of the SugarSync documents are not inconsistent with Petitioner's arguments. *Id.* at 21–22 (citing Mowry 2nd Decl. ¶¶ 46–49).

We are persuaded by Petitioner's arguments regarding claim 18. The fact that arguably related SugarSync documents indicate use of an interface other than a web page does not alter the disclosures in Garcia of using a web page. "Combining the *teachings* of references does not involve an ability to combine their specific structures." *In re Nievelt*, 482 F.2d at 968.

Based on our analysis set forth above, including our analysis of Patent Owner's arguments regarding secondary considerations of nonobviousness, we determine, having considered and weighed the entirety of the evidence, that Petitioner has proved by a preponderance of the evidence that independent claim 18 is unpatentable under 35 U.S.C. § 103(a) over the combination of Houston and Garcia.

6. Dependent Claims 19–21

Claim 19 adds to claim 17 the requirement, "wherein the file explorer interface of the client-based file explorer application is displayed via an interface that does not include a web page displayed via a web browser." Ex. 1001, 55:62–65. Claim 20 adds to claim 17 the requirement, "wherein the file explorer interface is part of an operating system of the second node." *Id.* at 55:66–67. For these requirements, Petitioner relies on the above-

discussed Figure 10 disclosure of Garcia. Pet. 51, 61–63 (citing Ex. 1004, Fig. 10, 7:25–29; Mowry Decl. ¶¶ 130, 159, 161).

> Claim 21 adds to claim 17 the requirement:
>
> wherein at least one of: the first user interface element, the second user interface element, and the third user interface element are caused by sending a first communication; the receipt of the at least one web page is caused by sending a second communication; or the receipt of the code is caused by sending a third communication.

Ex. 1001, 56:1–8. For this requirement, Petitioner relies on the disclosure in Garcia of a synchronization server sending a web interface to a client device, which Petitioner argues satisfies the "second communication" alternative of claim 21. Pet. 63–64 (citing Ex. 1004, Fig. 2; Mowry Decl. ¶¶ 163–164).

Other than its arguments discussed above relating to claims 17 and 18, which we have considered, and its arguments discussed above generally relating to all of Petitioner's grounds, Patent Owner does not specifically respond to Petitioner's arguments regarding dependent claims 19–21. *See generally* PO Resp. Based on our analysis set forth above, including our analysis of Patent Owner's arguments regarding secondary considerations of nonobviousness, we determine, having considered and weighed the entirety of the evidence, that Petitioner has proved by a preponderance of the evidence that independent claims 19–21 are unpatentable under 35 U.S.C. § 103(a) over the combination of Houston and Garcia.

F. Alleged Obviousness of Claims 17–21 over Houston, Garcia, and Manzano

Petitioner alternatively challenges claims 17–21 as obvious over the combination of Houston, Garcia, and Manzano. Pet. 64–73. Manzano, titled

"Electronic File Sharing," was published January 7, 2010, from an application filed April 21, 2009. Ex. 1005, codes (54), (43), (22). Manzano is directed to sharing of electronic files among electronic devices. *Id.* ¶ 2. Petitioner's reliance on Manzano as an additional reference, in combination with Houston and Garcia, is not applicable to this proceeding to the extent that it is primarily directed to several requirements of claims 1, 3, and 7, which have been disclaimed. Pet. 64–65. Petitioner also relies on Manzano regarding claim requirement 17[g] "to the extent [Patent Owner] further contends that a representation of a folder in a file explorer interface implies that at least one file in the folder is not downloaded when the representation of the folder is caused." *Id.* at 65. As discussed in Section III.C above, Patent Owner does make this contention regarding "representation," but we have not adopted that construction. Therefore, we need not address this argument.

G. Alleged Obviousness of Claims 17–21 over Houston, Garcia, and Wu, and of Claims 17–21 over Houston, Garcia, Manzano, and Wu

Petitioner alternatively challenges claims 17–21 as obvious over the combination of Houston, Garcia, and Wu, and claims 17–21 over Houston, Garcia, Manzano, and Wu. Pet. 73–77. Other than its arguments discussed above relating to claims 17 and 18, which we have considered, and its arguments discussed above generally relating to all of Petitioner's grounds, Patent Owner does not specifically address these challenges. *See generally* PO Resp.

Wu is titled "System and Method of Producing E-Mail." Ex. 1006, code (54). Wu "relates to a system and method of producing E-mail, and more particularly to a system and method for producing the contents of an

E-mail." *Id.* ¶ 2. Wu teaches, for its solely applied feature, producing emails using "predetermined subject templates" and "predetermined content templates" stored in databases. Pet. 73–74 (citing Ex. 1006 ¶¶ 5–9, 17–32). Petitioner relies on Wu as teaching or suggesting the portion of claim 17[d] that requires the subject email to be "at least partially pre-written." *Id.* at 73. However, as discussed above, we find that the combination of Houston and Garcia sufficiently teaches or suggests this requirement, and therefore we do not consider this alternative argument.

IV. PETITIONER'S MOTION TO EXCLUDE

Petitioner moves to exclude portions of Patent Owner's Sur-Reply, directed to allegations that Petitioner failed to provide routine discovery pursuant to 37 C.F.R. § 42.5(b)(1)(iii), concerning features of its Dropbox and SugarSync products which were allegedly inconsistent with positions that Petitioner is taking in this proceeding, and arguments in the Sur-Reply based on the disclosures in Houston's provisional '747 application, which Patent Owner requested be added to the record, but which request was denied. Paper 40, 1; Ex. 1036.

We have not relied on these portions of the Sur-Reply because they are cited by Patent Owner in connection with arguments that are only pertinent if its proposed construction of "representation of the at least one folder" were adopted, which we have not done. Therefore, Petitioner's Motion To Exclude is dismissed as moot.

V. CONCLUSION[20]

For the foregoing reasons, we are persuaded that Petitioner establishes by a preponderance of the evidence that claims 17–21 of the '520 patent have been shown to be unpatentable.

In summary:

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
17–21	103	Houston, Garcia	17–21	
17–21	103	Houston, Garcia, Manzano[21]		
17–21	103	Houston, Garcia, Wu[21]		
17–21	103	Houston, Garcia, Manzano, Wu[21]		
Overall Outcome			17–21[22]	

[20] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this 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).

[21] We do not reach these grounds because we have determined that claims 17–21 have been shown to be unpatentable over the combination of Houston and Garcia.

[22] As noted, claims 1–8 were subject to Petitioner's challenge but were subsequently disclaimed.

VI. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 17–21 of US Patent 11,611,520 B1 have been shown to be unpatentable under 35 U.S.C. § 103; and

FURTHER ORDERED that Petitioner's Motion to Exclude is dismissed as moot; and

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

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