Paper 42 Entered: June 30, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC., Petitioner,

v.

MEMORYWEB, LLC, Patent Owner.

IPR2022-00032 Patent 9,552,376 B2

Before LYNNE H. BROWNE, NORMAN H. BEAMER, and JASON M. REPKO, *Administrative Patent Judges*.

REPKO, Administrative Patent Judge.

JUDGMENT Final Written Decision

Determining No Challenged Claims Unpatentable 35 U.S.C. § 318(a)

Dismissing Patent Owner's Motion to Exclude 37 C.F.R. § 42.64

I. INTRODUCTION

Apple Inc. ("Petitioner") filed a petition requesting *inter partes* review of claims 1–12 of U.S. Patent No. 9,552,376 B2 (Ex. 1001, "the '376 patent"). Paper 1 ("Pet."). On July 8, 2022, we instituted a review of all challenged claims based on all grounds in the Petition. Paper 12 ("Inst. Dec."). Patent Owner filed a Response. Paper 20 ("PO Resp."). Petitioner filed a Reply. Paper 39¹ ("Reply"). Patent Owner filed a Surreply. Paper 31 ("Sur-reply"). An oral hearing was held on March 14, 2023. A transcript of that hearing has been entered into the record. Paper 41 ("Tr.").

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued under 35 U.S.C. § 318(a). For the reasons that follow, Petitioner has not shown by a preponderance of the evidence that claims 1–12 are unpatentable.

A. Related Matters

Patent Owner identifies the following related matters: *MemoryWeb*, *LLC v. Samsung Electronics Co., Ltd. et al.*, No. 6-21-cv-00411 (W.D. Tex.); *MemoryWeb, LLC v. Apple Inc.*, No. 6-21-cv-00531 (W.D. Tex.); *MyHeritage (USA), Inc. et al. v. MemoryWeb, LLC*, No. 1-21-cv-02666 (N.D. Ill.); IPR2022-00111; PGR2022-00006; IPR2022-00033; IPR2022-00031; IPR2022-00222; and IPR2021-01413. Paper 6, 2–3 ("Patent Owner's Updated Mandatory Notice").

¹ As authorized by the Board, Petitioner filed a corrected Reply to change incorrect citations to the deposition transcript of Patent Owner's expert, Dr. Surati. *See* Ex. 3002 (email from the parties, and response from the Board). Patent Owner did not oppose. *Id*.

B. The '376 Patent

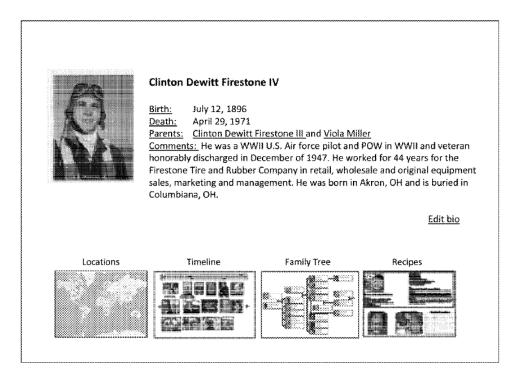
The '376 patent relates to a platform for managing and using digital files, such as digital photographs. *See* Ex. 1001, 1:14–17. Through the platform's interface, a user can tag and select files to create views. *See id.* at 5:26–35. For example, the "people view" is shown below. *Id.* at 6:20–26, Fig. 6.

FIG. 6



The people view, above, shows thumbnail photos of all the people in the system. *Id*. Clicking on the thumbnail causes a "profile view," shown below, to be displayed. *See id*.

FIG. 7



The profile view, above, displays a person's image, date of birth, date of death, parents' names, and other biographical information. *Id.* The profile view also displays links to other views containing information about the person: Locations, Timeline, Family Tree, and Recipes. *Id.* at 6:27–49. The Locations view, for example, has an interactive map showing where the digital files were taken. *Id.* at 6:14–19.

C. Claims

Of the challenged claims, claims 1, 5, and 12 are independent. Claim 5 is reproduced below.

5. A computer-implemented method, comprising:

storing, on one or more non-transitory computer-readable storage media, a plurality of digital files, each of the digital files having a content data portion and a metadata portion including tags, the content data including a digital photograph or image or video;

- displaying, on a video display device associated with a client device, the digital photograph or image or video of a first of the digital files and overlaying thereon:
- (i) a first user selectable element, all of the digital files associated with a person tag being members of a first set of digital files, the first user selectable element having a first boundary with alphanumeric text therein indicating (i) a name of a person corresponding to the person tag and (ii) the number of digital files in the first set of digital files, and
- (ii) a second user selectable element, all of the digital files associated with a geotag being members of a second set of digital files, the second user selectable element having a second boundary with alphanumeric text therein indicating (i) a location name corresponding to the geotag and (ii) the number of digital files in the second set of digital files;
- responsive to a click or tap of the first user selectable element via a user interface device of the client device, displaying a people view on the video display device, the displaying the people view including displaying (i) the name of the person corresponding to the person tag and (ii) all of the digital photographs or images or videos in the first set of digital files; and
- responsive to a click or tap of the second user selectable element via the user interface device of the client device, displaying a location view on the video display device, the displaying the location view including displaying (i) the location name corresponding to the geotag, (ii) all of the digital photographs or images or videos in the second set of digital files, and (iii) a map image indicating geographic coordinates of the geotag.

Ex. 1001, 36:43–37:14.

D. References

Name	Reference	Exhibit No.
A3UM	Aperture 3 User Manual, Apple Inc. (2010)	1005
Belitz	US 2010/0058212 A1	1006
Rasmussen	US 7,620,496 B2	1025

E. Asserted Grounds

Petitioner asserts that claims 1–12 are unpatentable on the following ground. Pet. 4.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–12	103 ²	A3UM, Belitz, and Rasmussen

II. ANALYSIS

A. Status of A3UM as a Printed Publication

1. The Petition

Petitioner challenges claims 1–12 as obvious over A3UM, Belitz, and Rasmussen. *See* Pet. 4. A3UM is a user manual for Apple's Aperture 3 product. *Id.* at 14. Aperture 3 is digital-image management software. *Id.* at 13 (citing Ex. 1005, 1–4). Petitioner asserts that A3UM is a "printed publication that was publicly disseminated in February 2010." *Id.* at 14. Thus, Petitioner asserts that A3UM is prior art under section 102. *Id.*

According to Petitioner, A3UM was published in two forms: an HTML file set and a PDF file. *Id.* The challenges in the Petition are based on the HTML file set. *Id.* (citing Ex. 1005). In this Decision, we refer to those files as "the A3UM HTML file set."

Petitioner obtained the A3UM HTML file set from an Aperture 3 installation DVD. *See id.* at 15–16. According to Petitioner, "Dr. Terveen inspected Aperture 3 retail boxes obtained from Apple and from two independent sources and confirmed that the installation DVD in each was the same as the version disseminated in February of 2010 (*i.e.*, v.3.0)."

² Congress amended section 103 when it passed the Leahy-Smith America Invents Act (AIA). Pub. L. No. 112–29, § 3(c), 125 Stat. 284, 287 (2011). Petitioner asserts that the claims are unpatentable under either version of section 103. Pet. 4.

Id. at 15 (citing Ex. 1003 ¶¶ 75–85). Dr. Terveen testifies that Exhibit 1005 "is a true and correct copy of the HTML file set both on the Aperture 3 installation DVDs and as copied to computers during Aperture 3's installation." Id. at 16 (citing Ex. 1003 ¶¶ 73, 90, 97, 98).

To show that the A3UM HTML file set was publicly disseminated, Petitioner primarily relies on the declaration of Matthew Birdsell. *Id.* at 14. Mr. Birdsell "is an Apple employee with personal knowledge of the publication and dissemination of the Aperture 3 User Manual in early 2010." *Id.* (citing Ex. 1020 ¶¶ 2–4). In February 2010, Mr. Birdsell was an independent contractor for Apple who "personally worked on Apple documentation and publications regarding each version of Aperture throughout its lifespan, including Aperture 3." Ex. 1020 ¶ 2.

a. The Locally Stored A3UM HTML File Set

Mr. Birdsell testifies that the A3UM HTML file set "was included on the installation DVD in retail packages of Aperture 3 that were sold and distributed within the United States in early 2010 and was copied to a computer's local storage during installation of Aperture 3." Pet. 14 (citing Ex. 1020 ¶¶ 12–14).

Petitioner asserts that users can access the locally stored A3UM HTML file set "by selecting 'Help>Aperture Help' from the menu while Aperture was running and clicking 'Aperture 3: User Manual' on the page that appeared." *Id.* at 16 (citing Ex. 1003 ¶¶ 86–90). According to Petitioner, contemporaneous Apple publications explain that the A3UM HTML file set is accessible through internal Aperture's help function. *Id.* (citing Ex. 1051, 7, 159; Ex. 1003 ¶ 99). Patent Owner does not dispute this. *See generally* PO Resp.; Sur-reply. We determine that Petitioner's assertion (Pet. 16) and Dr. Terveen's testimony (Ex. 1003 ¶¶ 86–90, 99) is sufficiently supported by the

evidence of record. See Ex. $1020 \, \P \, 12(b)$; Ex. 1051, 7 ("Open Aperture, then choose Help > Aperture Help. Then click the link to the user manual"), 159 (providing a similar explanation). Thus, we credit Dr. Terveen's testimony on this issue. See Ex. $1003 \, \P \, 86-90, 99$.

In addition to the internal help function, Petitioner asserts that "[s]killed artisans could obtain A3UM from the Aperture 3 installation DVD or from computers onto which Aperture 3 had been installed." Pet. 16. Dr. Terveen testifies that, to access the content of A3UM, a skilled artisan could open the A3UM HTML file set with a web browser. *Id.* at 16–17 (citing Ex. 1003 ¶¶ 91–97). Petitioner asserts that the user "would see the same content and interface when opening the HTML file sets obtained from the installer DVD or as placed on local storage during installation of Aperture 3." *Id.* at 16–17 (citing Ex. 1003 ¶¶ 91–97).

b. The A3UM HTML File Set on Apple's Website

Mr. Birdsell testifies that the A3UM HTML file set "was also published on the www.apple.com website." Ex. 1020 ¶¶ 17–20. Petitioner asserts that "the A3UM HTML file set was loaded onto a publicly accessible website (http://documentation.apple.com/en/aperture/usermanual/) where it became accessible to any member of the public starting on the date of commercial sale of Aperture 3." Pet. 17 (citing Ex. 1020 ¶¶ 9–11). Petitioner asserts that archived copies of the Aperture 3 website from 2010 "include an embedded URL pointing to the HTML-based User Manual" and "display the same table of contents entries as A3UM (EX1005), including sub-sections when manually selected." *Id.* (citing Ex. 1003 ¶ 103; Ex. 1021, 6). Petitioner contends that "a skilled artisan, exercising only reasonable diligence, could have located A3UM by following links on the apple.com web site" or "[a]lternatively, that person could have located A3UM using the search

feature within the apple.com web site or using well-known search engines." *Id.* at 17–18 (citing Ex. 1003 \P ¶ 101–103; Ex. 1021; Ex. 1020 \P ¶ 18–19).

Petitioner submits a screen capture of Apple.com from *the Internet Archive's Wayback Machine*³ showing Aperture 3 for sale in February 2010, and a table of contents for the user manual. *Id.* at 15 (citing Ex. 1021, 2).

Petitioner also includes three articles discussing Aperture 3 software and its February 9, 2010, release date. *Id.* (citing Exs. 1044, 1045, 1048). Petitioner argues that "many individuals had installed Aperture 3—and thereby transferred A3UM—onto their computers before June 2010, which required use of the installer DVD supplied via the retail package of Aperture 3." *Id.*

For the reasons that follow, we determine that Petitioner has shown that the A3UM HTML file set (1) was sufficiently disseminated through the Aperture 3 installer DVD that was sold by Apple, and (2) was sufficiently publicly accessible via Apple's website at the relevant time to meet the requirements to be a "printed publication" under 35 U.S.C. § 102. *See id.* at 14–18.

2. Analysis

A person is not entitled to a patent if their invention was "described in a printed publication . . . before the effective filing date of the claimed invention." 35 U.S.C. § 102(a)(1). The determination of whether a document is a "printed publication" under 35 U.S.C. § 102 "involves a case-by-case inquiry into the facts and circumstances surrounding the reference's disclosure to members of the public." *Medtronic, Inc. v. Barry*, 891 F.3d

³ The Internet Archive's Wayback Machine, from Archive.org, archives webpages. Ex. 1022, 1 (Archive.org affidavit); Pet. 15 n.1.

IPR2022-00032 Patent 9,552,376 B2

1368, 1380 (Fed. Cir. 2018) (citing *In re Klopfenstein*, 380 F.3d 1345, 1350 (Fed. Cir. 2004)).

"Because there are many ways in which a reference may be disseminated to the interested public, 'public accessibility' has been called the touchstone in determining whether a reference constitutes a 'printed publication' bar under 35 U.S.C. § 102(b)." *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348 (Fed. Cir. 2016) (quoting *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986)). "A given reference is 'publicly accessible' upon a satisfactory showing that such document has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it." *SRI Int'l, Inc. v. Internet Sec. Sys., Inc.*, 511 F.3d 1186, 1194 (Fed. Cir. 2008) (quoting *Bruckelmyer v. Ground Heaters, Inc.*, 445 F.3d 1374, 1378 (Fed. Cir. 2006)).

a. Is A3UM an executing software program?

Patent Owner argues that the A3UM HTML file set is not a "printed publication" as that term is used in Section 102. *See* PO Resp. 41–44; Surreply 6–7. Patent Owner argues that, because users can only access the contents for A3UM when running the software program or following installation of the Aperture 3 application, A3UM "is part of an executing software program," which "cannot be the basis of an IPR." PO Resp. 44 (citing *Ex Parte Nelson*, No. 2020-004978, 2020 WL 8186425, at *15 (PTAB Dec. 31, 2020); *Capsugel Belgium NV v. Innercap Techs., Inc.*, IPR2013-00331, Paper 9 at 15 (PTAB Dec. 9, 2013); *Supercell Oy v. GREE, Inc.*, IPR2021-00501, Paper 7 at 6 (PTAB Aug. 17, 2021)); Sur-reply 6–7.

We disagree that the A3UM HTML file set is an executing software program. The files can be read and rendered by software, including but not

limited to Aperture 3. *See*, *e.g.*, Ex. 1089, 98:5–99:10; Ex. 2023, 80:2–81:6. In the context of the printed publication requirement of Section 102, there is not a meaningful difference between the A3UM HTML file set and other documents stored on a computer.

The files themselves are linked by their content, source, and organization to form the Aperture 3 user manual. *See* Ex. 1005. The A3UM HTML file set has a coherent organization, and the files collectively function as a single document separate from the executing software itself (Aperture 3). *See id*. For example, the text "Aperture 3 User Manual" appears in the header of each page, and "/aperture/usermanual/" appears in the footers. *See id*. Also, the manual's index page contains embedded hyperlinks to help the user navigate the manual's sections. *See*, *e.g.*, Ex. 1003 ¶¶ 102.f, 103; Ex. 1020 ¶ 19.f; Ex. 1021, 8. Based on its form and purpose, the A3UM HTML file set should be considered a single document that is separate from the executing software itself.

Patent Owner argues that the A3UM HTML file set was hidden on the installation disk and required "a convoluted series of steps that likely proved challenging even to Petitioner's expert" to find. PO Resp. 39–40. In Patent Owner's view, because the A3UM HTML file set is embedded within Aperture 3, there is not a "bright line demarcation" between the product and user manual. *Id.* at 40 (citing *Cisco Sys., Inc. v. Centripetal Networks, Inc.*, IPR2018-01436, Paper 40 at 23 (PTAB Jan. 23, 2020)).

We disagree. Both Petitioner and Patent Owner demonstrate that the A3UM HTML file set can be opened from the DVD installer disk before installation and from local storage after installation. Ex. 1020 ¶¶ 12–16; Ex. 1003 ¶ 95; Ex. 1089, 27:4–7, 98:5–99:10; Ex. 1071, 5; Ex. 2023, 80:2–81:6; Ex. 2026, 71:11–72:8. Although the user manual is accessible through the

actual Aperture 3 software in the internal help functionality after installation, that does not necessarily make it part of a product. Rather, the files are in a folder on their own and their contents can be accessed without Aperture 3 running. Ex. 1089, 98:5–99:10; Ex. 2023, 80:2–81:6.

The evidence does not show that finding the files required "a convoluted series of steps," as Patent Owner argues. PO Resp. 39–40. As discussed in detail below, the files could be located and revealed with only a few commands. *See*, *e.g.*, Reply 10–11. Also, the A3UM HTML file set was available on the Aperture 3 website. *See*, *e.g.*, Ex. 1021. This shows that the user manual functioned as a standalone document outside the Aperture 3 software. *See id*. So, although the A3UM HTML file set could be viewed by executing Aperture 3, that was only one of several ways to view the files.

Thus, we determine that the A3UM HTML file set is not executing software or inseparable from it. Rather, the A3UM HTML file set is read and displayed by an executing software program, which is not meaningfully different from any other document stored on a computer.

- b. Was the A3UM HTML file set publicly accessible via distribution of the Aperture 3 DVD?
 - i. Sales of the Aperture 3 DVD

Petitioner asserts that Apple sold and distributed the Aperture 3 DVD, which installed A3UM HTML file set on a user's computer. Pet. 14 (citing Ex. 1020 ¶¶ 12–16). Petitioner relies on the testimony of Mr. Birdsell to support this argument. *See id.* Mr. Birdsell testified that "more than 100,000 customers had purchased and were using the Aperture 3 product between February and June of 2010," which he based on his personal "experience with the utilization levels of the help resources on the Apple.com website at the time." Ex. 1020 ¶ 7. According to Mr. Birdsell's testimony, website

analytics for *documentation.Apple.com* corresponded to sales figures, and website access volume for Aperture 3 indicated that about 100,000 people had purchased the product. Ex. 2026, 51:16–20; 54:6–22.

Patent Owner argues that Petitioner's evidence of sales is insufficient to show that the A3UM HTML file set was publicly accessible.

PO Resp. 29–30. Patent Owner argues that Mr. Birdsell "merely 'believe[s]' that a number of customers purchased and were using the Aperture 3 product before June of 2010." *Id.* at 29. Patent Owner argues that Mr. Birdsell's testimony on sales of Aperture 3 is offered "without any evidentiary support or conducting a personal investigation" and "[m]ere speculation about the number of Aperture 3 purchases falls short of the preponderance of the evidence burden Petitioner is required to meet." *Id.* at 40–41 (citing Ex. 1020 ¶¶ 5–7; Ex. 2026, 53:16–55:17, 61:15–62:3; *Instradent USA, Inc. v. Nobel Biocare Servs. AG*, IPR2015-01786, Paper 106 at 33 (PTAB Feb. 15, 2017); *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1373 n.3 (Fed. Cir. 2019)). Patent Owner argues that Petitioner's evidence, at best, only shows offers for sale. *Id.* at 51 (citing Ex. 1021, 1–2; Ex. 2026, 56:23–57:9).

But "a petitioner need not establish that specific persons actually accessed or received a work to show that the work was publicly accessible." *Samsung*, 929 F.3d at 1374. "In fact, a limited distribution can make a work publicly accessible under certain circumstances." *Id.* (citing *GoPro, Inc. v. Contour IP Holding LLC*, 908 F.3d 690, 694 (Fed. Cir. 2018)).

Here, Patent Owner does not dispute Petitioner's evidence that Apple offered to sell Aperture 3, or that a copy of A3UM was included on the Aperture 3 installer DVD sold in the relevant timeframe. *See* PO Resp. 29–30, 40–41, 51. Rather, Patent Owner disputes whether there were actual

sales of the DVD with the A3UM HTML file set. Reply 3–4 (citing Ex. 2026, 54:23–55:17, 69:13–19, 53:16–54:17; *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138 (Fed. Cir. 1986); *Parrot S.A. v. Qfo Labs, Inc.*, IPR2018-01690, Paper 40 at 63–64 (PTAB Feb. 20, 2020); *Paint Point Med. Sys., Inc. v. Blephex, LLC*, IPR2016-01670, Paper 44 at 19–20 (PTAB Feb. 28, 2018)). Yet, even if the number of sales cannot be directly corroborated, Patent Owner has not offered any evidence beyond attorney argument that suggests Mr. Birdsell's testimony that there were over 100,000 sales is unreliable. *See* Reply 3; PO Resp. 29–30, 40–41, 51.

On the other hand, Petitioner's evidence is beyond mere speculation. Rather, we determine Petitioner has shown that Apple sold a sufficient number of DVDs that contained the A3UM HTML file set. Mr. Birdsell's testimony on this issue is credible and adequately supported by corroborating evidence. Ex. $1020 \, \P$ 7. For instance, Aperture 3 was marketed as shown by a press release (Exhibit 1048) and a feature on the home page of Apple (Exhibit 1021). Patent Owner's expert noted that Apple's website was "probably" one of the most visited websites in the world in 2010. Ex. 1089, 188:9-16. In fact, Mr. Birdsell testified that that the presence of Aperture 3 on the Apple home page meant that it received "top billing." Ex. 2026, 57:3-12. Also, Petitioner has provided two articles about Aperture from 2010 that discuss using an installed copy. *See* Ex. 1044, 2 ("[I]nstallation of Aperture 3 took ages."), 1045, 3 ("Before I installed Aperture 3....").

We agree with Petitioner that the 100,000 copies sold "far exceeds the number of disclosures recognized under the relevant dissemination law for printed publications." Pet. 15 (quoting *Cisco*, IPR2018-01436, Paper 40 at 23–31 (finding 586 copies to be sufficient for being publicly available

through dissemination); citing *Mass. Inst. of Tech. v. AB Fortia*, 774 F.2d 1104, 1109 (Fed. Cir. 1985) (determining six copies sufficient for dissemination)).

Patent Owner argues that Petitioner is "unable to distinguish between users who purchased retail boxes of Aperture 3 versus those who upgraded from Aperture 2 to Aperture 3" without having the Aperture 3 DVD. PO Resp. 30 (citing Ex. 2026, 62:23–63:20; 65:5–13); *see also id.* at 41. In Patent Owner's view, customers who purchased the DVD would not have navigated to the website. *Id.* at 30.

Yet, even without the knowledge of the exact number of users that purchased Aperture 3 retail boxes with the DVD instead of upgrading from Aperture 2 without the DVD, it is far more likely than not that a sufficient number of the over 100,000 people that purchased Aperture 3 did so by purchasing the DVD for it to be considered publicly disseminated.

Ex. 1020 ¶ 7. That is, under a preponderance-of-the-evidence standard, Petitioner has shown that Apple publicly disseminated the A3UM HTML file set in "thousands of retail boxes containing the Aperture 3 installation DVD to users between February 2010 and June 9, 2010." Pet. 14 (citing Ex. 1020 ¶ 7; Ex. 1021, 2; Ex. 1044; Ex. 1045; Ex. 1048).

Patent Owner argues that Dr. Terveen, an alleged person of ordinary skill in the art, had no knowledge of any Aperture 3 sales prior to this case. PO Resp. 40; *see also id.* at 22. But Petitioner need not show specific persons accessed Aperture 3, let alone that every person of ordinary skill in the art knew about Aperture 3 or its sales.

Patent Owner argues that "*Klopfenstein* did not hold that 'sales are not required;' the court noted that '[p]rotective measures' like 'license agreements' prohibiting copying weigh against a finding of accessibility."

Sur-reply 4 (citing *In re Klopfenstein*, 380 F.3d at 1351). Patent Owner argues that "Aperture 3 users were bound by a license agreement" that prohibits copying A3UM as part of the software program, so actual sales are required. *Id.* (citing Ex. 2007, 1–2). Even assuming this is true, for the reasons discussed above, Petitioner has provided sufficient evidence concerning actual sales. So Patent Owner's argument here is unavailing.

Thus, Petitioner has shown that the A3UM HTML file set was sufficiently disseminated on the Aperture 3 installer DVD that was sold by Apple. *See* Pet. 14–17.

ii. Indexing of the A3UM HTML File Set

"[I]ndexing is not required to show that a work is publicly accessible." *Samsung*, 929 F.3d at 1369. Yet, "[w]hen a reference is uploaded to a website or deposited in a library, the fact that the reference is indexed or cataloged in some way can indicate that it is publicly accessible." *Id*.

Patent Owner analogizes finding the files on the Aperture 3 DVD to locating books in a physical library:

The physical analogy would be requiring a person to know about the existence of a hidden section of a library (the *pkg. files), know how to access the hidden section of the library (i.e., unhiding the hidden files), know to move a portion of the hidden library section to another location (decompressing the Archive.pax.gz file), then know to navigate through thousands of shelves to collect a particular set of 746 books (the HTML file set).

PO Resp. 38; see also Sur-reply 6 (arguing that finding the files is like "being told that a book has been hidden in the library and then being asked to find it without guidance") (citing Ex. 1089, 409:2–19; PO Resp. 38). According to Patent Owner, Petitioner does not argue that "the installation DVD included any search functionality for locating the HTML file set," and

Dr. Terveen's assertion that "a POSITA^[4] would somehow look for hidden files, locally save and decompress one, then navigate through numerous subfolders is implausible and does not satisfy the requirements of public accessibility." PO Resp. 38.

Patent Owner argues that the HTML file set was intentionally "hidden" or "invisible" on the installation DVDs and that Petitioner's own expert was unable to "testify that he knew where or how to find the 'hidden files' on his own" and that "his testimony suggests Petitioner's counsel provided him with 'tips' on how to find the hidden files." *Id.* at 31–32 (citing Ex. 2023, 63:23–64:5, 64:19–66:10; 67:8–19; 73:10–22, 79:10–15); Sur-reply 5–6 (arguing that hidden files are not publicly accessible). Patent Owner argues that Dr. Terveen took many steps to locate the files. PO Resp. 32–38. Patent Owner argues that, when questioned, Dr. Terveen could not recall how long the process took. *Id.* at 38 (citing Ex. 2023, 101:11–102:20). Patent Owner argues that, to find the files, a person of ordinary skill in the art needed to already know what to look for and where to look, or needed to expand and inspect every single folder. *Id.* at 37.

Yet "a printed publication need not be easily searchable after publication if it was sufficiently disseminated at the time of its publication." *Suffolk Techs.*, *LLC v. AOL Inc.*, 752 F.3d 1358, 1365 (Fed. Cir. 2014). For the reasons explained in Section II.A.2.b.i, the A3UM HTML file set was sufficiently disseminated through use of the help functionality on the Aperture 3 installer DVD that anyone could purchase, even if the files were not visible on the DVD itself. That is, even without considering whether the

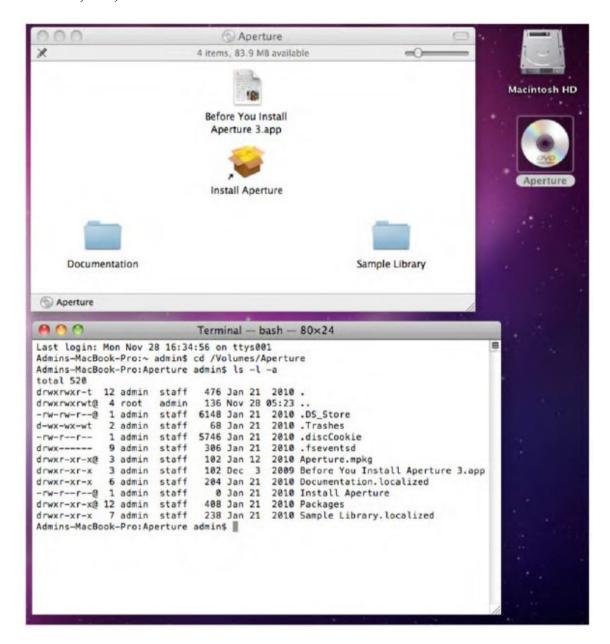
⁴ A person of ordinary skill in the art.

reference was sufficiently indexed, Petitioner's has shown that A3UM was sufficiently disseminated.

Still, Petitioner's evidence of indexing is sufficient and bolsters its case that A3UM was accessible. The relevant inquiry here is whether the reference was made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, could locate it. *SRI*, 511 F.3d at 1194.

Patent Owner's arguments focus on "hidden" files. *See, e.g.*, PO Resp. 30–32. "Hidden" files may not be visible in certain views of a directory. *See, e.g.*, Reply 10–11. According Dr. Terveen, the default view of a folder may hide files to reduce the number of files that are shown to the user. Ex. 2023, 67:23–68:24. For example, Dr. Terveen testified that configuration files could be "hidden." *See id.* at 67:25.

But Petitioner has shown that "hidden" files appear in other views of MacOS. Reply 11. Such a view is shown in the screenshot below.



In the screenshot from MacOS, above, the same directory is shown in two ways. *Id*. The top screenshot shows the "Aperture" directory in a window with two folder icons, captioned "Documentation" and "Sample Library," along with two other files represented by icons captioned "Before You Install Aperture 3.app" and "Install Aperture." *Id*. The bottom screenshot shows a window titled "Terminal" displaying the same directory as text. *Id*.

But, unlike the top window, the "Terminal" window also displays the names of "hidden" files. *Id*.

The "Terminal" window displays the command "ls -l -a." *Id*.

Petitioner explains that the command "ls -l -a" shows the "hidden" files in the "Terminal" window. Reply 10 (citing Ex. 1069, 112; Ex. 1089, 72:21–24, 73:18–74:4, 108:18–21; Ex. 1073, 6; Ex. 1084; Ex. 1085). In sum, Petitioner has shown that "hidden" files are simply files that are excluded for convenience in some views but are shown in other views, e.g., the "Terminal" window shown above. *See id*.

Dr. Surati testified that it "would be a reasonable assumption" that a person of ordinary skill in the art would figure out how to unhide files, for example, by looking at books or searching the internet if interested. Ex. 1089, 138:11–139:14. The "hidden files" could be viewed by navigating to the directory and typing a single command to list the files ("ls -1 -a"). *See* Reply 10 (citing Ex. 1069, 112; Ex. 1089, 72:21–24, 73:18–74:4, 108:18–21; Ex. 1073, 6; Ex. 1084; Ex. 1085). Typing a few commands in "Terminal" is not an unreasonable amount of effort. *See id*.

As for locating the directory where the files are stored, Petitioner has provided references that a person of ordinary skill in the art would be able to consult to familiarize themselves with a MacOS application's organization and distribution methods. *See, e.g.,* Ex. 1089, 56:17–57:17 (MacOS application bundles), 79:19–80:15 (hierarchical structure), 59:13–23 ("Resources" folder). These references provide the basic principles for navigating a MacOS application's file structure. According to Dr. Terveen, one of ordinary skill in the art would expect an application's help files in

⁵ Aperture 3 is a MacOS application. See, e.g., $2025 \, \P \, 119-120$.

HTML format to be in the Resources subfolder of the application bundle. Ex. $1003 \, \P \, 94$. Dr. Terveen's testimony here (id.) is adequately supported by the cited references, so we credit Dr. Terveen on this point. In sum, this evidence shows that the HTML file set was indexed in a meaningful way in the MacOS filesystem such that an interested person of ordinary skill in the art would be able to find it with no more than reasonable effort.

We do not credit the Surati Declaration on these issues because he does not give sufficient weight to the evidence about how MacOS applications are organized and distributed, and for reasons similar to those discussed above in connection with Patent Owner's arguments. *See* Ex. 2025 ¶¶ 114–129; *see also* Reply 7–9 (discussing Dr. Surati's testimony).

Patent Owner argues that Petitioner has not shown why a person of ordinary skill in the art would navigate to various subfolders or manipulate the files. Sur-reply 5–6 (citing Ex. 2025 ¶¶ 125–126, 128; Ex. 1071). We disagree. The Petition explains that a user has multiple ways of viewing the files because they "would see the same content and interface when opening the HTML file sets obtained from the installer DVD or as placed on local storage during installation of Aperture 3." Pet. 16–17 (citing Ex. 1003 ¶¶ 91–97). Dr. Terveen's original testimony submitted with the Petition shows that, to access the HTML file set outside of Aperture 3, one of ordinary skill in the art would navigate the subfolders because they would expect an application's help files in HTML format to be in the Resources subfolder of the application bundle. Ex. 1003 ¶ 94. In fact, there was specific guidance on how to do this. See Ex. 1070, 15–16 (a programming guide describing the bundle structure used to store resources and code); Ex. 1071, 5–6 (a programming guide describing bundle resources). So the record

shows that users had multiple options to view the files and had ample guidance on how to use those options. *See* Pet. 16–17; Ex. 1003 ¶ 94.

Although Petitioner was not required to show that the A3UM HTML file set was sufficiently indexed to establish that it was publicly accessible, we determine that Petitioner has produced sufficient evidence that it was sufficiently indexed. And we disagree with Patent Owner's arguments that the "hidden" files or the structure of the files weighs against Petitioner's showing that the A3UM HTML file set was accessible. PO Resp. 30–44; Sur-reply 5–6.

iii. Aperture 3 DVD - Conclusion

For the reasons discussed above, we disagree with Patent Owner's arguments about the sale of Aperture 3. *See* PO Resp. 29–30, 40–41. As explained above, we also disagree with Patent Owner's arguments about the accessibility of the A3UM HTML file set. *Id.* at 30–39; Sur-reply 5–6. Rather, considering the totality of the evidence, Petitioner has sufficiently shown that the A3UM HTML file set was publicly accessible through the sales and distribution of the Aperture 3 DVD, and the A3UM HTML file set was sufficiently indexed. *See* Pet. 14–17. We credit the testimony of Matthew Birdsell (Ex. 1020 ¶¶ 5–7) and Dr. Terveen (Ex. 1003 ¶¶ 72–99) on these issues. For reasons similar to those discussed in connection with Patent Owner's arguments, we assign little weight to the Surati Declaration on these issues. *See* Ex. 2025 ¶¶ 114–129.

c. Was the A3UM HTML file set publicly accessible via Apple's website?

In addition to proving by a preponderance of the evidence that A3UM was "publicly accessible" through distribution of public sales of the Aperture 3 software, Petitioner also has shown that the A3UM HTML file

set was "publicly accessible" via the Aperture 3 website. Pet. 17 (citing Ex. $1020 \, \P\P \, 9-11$).

Mr. Birdsell testified that the HTML file set was loaded onto a staging server the night before Aperture 3's launch, and he verified that "the files were live and accessible to customers and that all the links worked" on the website on launch day. Ex. 2026, 36:3–12. Also, Patent Owner's expert, Dr. Surati, testified that, because Apple had published a press release and marketed Aperture 3 on its home page, a person of ordinary skill in the art using a search engine such as Google to find photo management and editing software could find the Aperture 3 support page containing A3UM. *See* Ex. 1089, 187:12–188:8, 202:12–204:4, 205:17–206:2.

Patent Owner argues that (1) consumers did not know about Aperture 3 to look for it on Apple.com in the first place; (2) if they did go to Apple.com, they would not find it, exercising reasonable diligence; (3) A3UM was not available on Apple's website for long enough; and (4) Exhibit 1005 does not accurately represent the website's version of the Aperture 3 manual before June 2010. PO Resp. 21–29. Patent Owner's arguments are unavailing. Our reasoning follows.

i. Knowledge of Aperture 3

Patent Owner argues that a person of ordinary skill in the art exercising reasonable diligence would not have known to search for Aperture 3 or A3UM. PO Resp. 21; Sur-reply 7-8. In Patent Owner's view, it is not enough to show whether a person of ordinary skill in the art interested in Apple software would have visited the Apple.com website. PO Resp. 21. According to Patent Owner, Petitioner must show that a person of ordinary skill in the art would have known to navigate to Apple.com and then look for the Aperture 3 user-manual page in search of A3UM. *Id*.

Patent Owner argues that there is no evidence that consumers who knew about Aperture 3 were persons of ordinary skill in the art, or that a person of ordinary skill in the art interested in this subject matter would have known of Aperture 3. *See id.*; *see also* Sur-reply 7 (arguing no evidence that Apple was known for photo management). In Patent Owner's view, "The 'Aperture' Product name is not descriptive of photo management technology." PO Resp. 21. Patent Owner argues that Petitioner offers no evidence a person of ordinary skill in the art, including Dr. Terveen, would have known of or looked for information about Aperture 3. *Id.* at 21–22 (citing Ex. 2023, 49:4–50:11, 51:9–20; 52:2–4).

We disagree. Mr. Birdsell's testimony shows that approximately 95% of traffic accessing Aperture 3 came from search engines. Ex. 2026: 67:13–20. This suggests that a person did not need *a priori* knowledge of the reference in order to access it. *See Samsung*, 979 F.3d at 1374. Because Petitioner has demonstrated accessibility, Petitioner had no requirement to show the specific number of people who actually accessed it. *Id.*; *Constant v. Adv. Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988) ("Accessibility goes to the issue of whether interested members of the relevant public could obtain the information if they wanted to.").

ii. Indexing

Patent Owner argues a person of ordinary skill in the art "exercising reasonable diligence would not have found the website version of A3UM on Apple.com." PO Resp. 21. Patent Owner argues that "the Aperture 3 user manual page could be found only after executing several steps such as knowing to search for 'Aperture' or 'Aperture 3' in the search box or by navigating through a number of links on Apple.com" and that "there is no evidence on the record that searching Apple.com for other terms that would

IPR2022-00032 Patent 9,552,376 B2

be common, like 'photo,' for example, would have yielded any Aperture-related results." *Id.* at 23 (citing Ex. $1003 \, \P \, 102$; Ex. $1020 \, \P \, 18$; Ex. 2026, 67:21-69:11).

Patent Owner does note that "[w]hile users could have theoretically navigated to the product manual page, analytics evidence tracking the number of users who did so is unavailable and not in evidence." *Id.* at 23 n.3 (citing Ex. 2026, 69:20–23). Patent Owner contends, even if a person of ordinary skill in the art accessed "the Aperture 3 webpage through the homepage, a POSITA would still have needed to navigate through at least four more pages to reach the manual." *Id.* at 25 (Ex. 1003 ¶ 102; Ex. 1020 ¶ 19; Ex. 2026, 67:21–69:11). Patent Owner argues, because "the website's structure is critical in determining whether a reference is publicly accessible or merely technically accessible," Petitioner's argument lacks evidence of meaningful indexing and shows technical accessibility at best. *Id.* at 25–26 (citing *Salesforce.com, Inc. v. WSOU Inv., LLC*, IPR2022-00428, Paper 10 at 14 (PTAB July 13, 2022); *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 773 (Fed. Cir. 2018); *Samsung*, 929 F.3d at 1373).

We disagree. There is sufficient evidence that a person of ordinary skill could have reasonably found the website and then found the reference on that website. See Ex. 1089, 188:9–16 (testifying that Apple was probably one of the most visited sites in the world). Dr. Terveen was able to find the Aperture 3 support page on Apple.com in a few clicks by navigating to pages describing photo management and editing. Ex. 1003 ¶ 101; see generally Ex. 1021 (archived screenshots from Apple.com), Ex. 1074 (collection of screenshots of web pages advertising Aperture 3). For example, Dr. Terveen explained that the Apple.com website provided a "straightforward path" to access the web-hosted version of A3UM, which

included links mentioning the Aperture 3 product and other helpful information to guide the user: Click "Introducing *Aperture 3*," Click "Resources," Click the "Learn more" link below "Aperture Support page," Click "Aperture 3 User Manual." Ex. 1003 ¶ 102 (emphasis added). Dr. Terveen explained that the navigation involved five clicks after navigating to Apple.com, which is not an unreasonable number. *See id*. This evidence suggests that a person of ordinary skill in the art in 2010 could have found the Aperture 3 software through reasonable diligence without needing to run text-based searches on the website. We credit Dr. Terveen's Declaration on this issue. *Id*.

iii. The Date that A3UM was Available on the Website

Patent Owner argues that Petitioner has not demonstrated that Exhibit 1005 was on Apple.com in February 2010. PO Resp. 26–29. Patent Owner alleges that the version of the A3UM Table of Contents shown in the archived version of the website (Ex. 2010) has a copyright date of 2011, indicating that the A3UM HTML file set may not have been available on the website until after the critical date. PO Resp. 28 n.4; *compare* Ex. 2010, *with* Ex. 1021; Sur-reply 8–9.

But Mr. Birdsell's testimony indicates that the text of Exhibit 2010 also has a different font than the one used on Apple.com. *See, e.g.*, Ex. 2026, 49:1–13. Neither party fully explains why this and other minor discrepancies exist in the versions that were archived by the *Wayback Machine*. *See* PO Resp. 28–29.

Considering all the evidence and arguments, we determine that Petitioner has sufficiently explained, under the preponderance-of-the-evidence standard, that the extended URL accurately reflects the date that the *Wayback Machine* archived the page. Pet. 15 n.1 (citing Ex. 1022, 1).

For example, "the extended URL http://web.archive.org/web/
19970126045828/http://www.archive.org/ would be the URL for the record of the Internet Archive home page HTML file (http://www.archive.org/) archived on January 26, 1997 at 4:58 a.m. and 28 seconds (1997/01/26 at 04:58:28)." Ex. 1022, 1. The extended URL for the last page of the file with the title Aperture 3 User Manual is "https://web.archive.org/web/20100217035925/http://documentation.apple.com/en/aperture/usermanual/." Ex. 1021, 8. So, according to the Internet Archive's extended URL ("20100217035925"), the archived date is February 17, 2010. See Ex. 1022, 1. This is consistent with Mr. Birdsell's testimony that Apple began selling Aperture 3.0 in February 2010. Ex. 1020 ¶ 5. Thus, we credit the declarations of Dr. Terveen and Mr. Birdsell on this issue. Ex. 1003 ¶ 102; Ex. 1020 ¶ 5.

Patent Owner argues that Exhibit 1005 was created using the HTML file set from the DVD, not from the archived version of Apple.com that existed in 2010. PO Resp. 26–27; Sur-reply 2. Patent Owner argues that Petitioner has been unable to provide the version that existed on the website. PO Resp. 26–27. In Patent Owner's view, Dr. Terveen's and Dr. Birdsell's depositions indicate that they do not know how Exhibit 1005 was prepared, and that neither could testify that it is a true-and-correct copy of the website's version. *Id.* at 27–28; Sur-reply 3. Patent Owner argues that there are inconsistencies that cannot be resolved by looking at the exhibits because Exhibit 1021 is incomplete. PO Resp. 28–29.

Both Mr. Birdsell and Dr. Terveen, however, individually compared Exhibit 1005 to the HTML file set and found no discrepancies in the content itself. *See* Ex. 2026, 41:14–16; Ex. 2023, 61:13–17. Also, the path for each file is shown in the bottom-left corner of each page of Exhibit 1005. *See*

Ex. 1005. The file path in the bottom left corner is consistent with the expected file path discussed above in Section II.A.2.b.ii. *See id.*, 1 (showing the file path as "file:///Applications/Aperture.app/Contents/Resources/
English.lproj/aperture_help/en/aperture/usermanual/index.html") (emphasis added) (emphasis added); *see* Ex. 1003 ¶ 94 (explaining that one of ordinary skill in the art would expect an application's help files in HTML format to be in the Resources subfolder of the application bundle). We credit Mr. Birdsell's unrebutted testimony that the same version of A3UM would have been sent to both the disk packaging team and the team responsible for loading A3UM onto the website. Ex. 2026, 40:15–41:10. All this evidence taken together indicates that Exhibit 1005 is the same as the HTML file set. Apart from speculation, we have no evidence from Patent Owner to suggest otherwise.

iv. Duration of Dissemination

In determining whether interested persons could have accessed the publication, the duration of dissemination can be one of the factors that is considered. *Centripetal Networks, Inc. v. Cisco Sys., Inc.*, 847 F. App'x 869, 877 (Fed. Cir. 2021) (citing *GoPro*, 908 F.3d at 694–95). For references that were never distributed to the public or indexed, "[d]uration of the display is important in determining the opportunity of the public in capturing, processing and retaining the information conveyed by the reference." *In re Klopfenstein*, 380 F.3d at 1350. The more transient the duration that a reference was displayed, for example, "the less likely it is to be considered a 'printed publication." *Id*.

Here, for all the reasons discussed above, Petitioner has shown that the A3UM HTML file set was sufficiently distributed and indexed. *See supra* §§ II.A.2.c.ii–iii.

Even so, Patent Owner argues that "the reference to Aperture 3 only existed on the Apple.com homepage for only a matter of 'weeks,'" and such "limited duration of accessibility is a strong indication that the user manual through Apple.com website was not publicly accessible." PO Resp. 24 (citing Ex. 2026, 56:23–57:9; *Centripetal Networks*, 847 F. App'x at 876–77).

Although Aperture 3 was marketed for weeks on the home page, Aperture 3's product page remained for much longer. For example, Mr. Birdsell testified that he verified access to A3UM in 2010 and removed A3UM from the Apple website at the beginning of the COVID-19 pandemic in 2020. Ex. 2026, 66:4–12. Thus, Petitioner has proven by a preponderance of the evidence that A3UM was "publicly accessible" by a person of ordinary skill in the art for a sufficient amount of time. *See Klopfenstein*, 380 F.3d at 1351–52 (determining that three days was long enough to consider a reference "publicly available").

v. Apple Webpage - Conclusion

Thus, based on the totality of the evidence, the Apple webpage, more likely than not, displayed the A3UM HTML file set in 2010, and Petitioner has shown that the A3UM HTML file set was publicly accessible via Apple's website at the relevant time.

3. Mr. Birdsell's Testimony

Patent Owner argues that Mr. Birdsell's testimony lacks credibility, and that we should consider the fact that he is an Apple employee in assessing his testimony. PO Resp. 44–45.

Yet Patent Owner has offered little evidence beyond attorney argument that suggests Mr. Birdsell's testimony is unreliable on the basis of his employment or otherwise. On the other hand, Petitioner has provided

corroborating evidence, for example, to show that Aperture 3 was marketed, including a press release (Ex. 1048), featured on Apple's home page (Ex. 1021), and reviewed (*see* Exs. 1044 (*CrunchGear* review), 1045 (*Using Aperture 3: Part 1*), 1048 (press release with a quote from photographer Jim Richardson)), which is consistent with Mr. Birdsell's testimony. In Sections II.A.2.b–c, above, we discuss other instances in which we credit Mr. Birdsell's testimony because it is sufficiently persuasive and supported by the record.

Also, we disagree with Patent Owner's suggestion that Mr. Birdsell's situation is sufficiently similar to the specific circumstance in *Parrot S.A. v. Qfo Labs, Inc.* IPR2018-01690, Paper 40 at 63–64 (PTAB Feb. 20, 2020). PO Resp. 44–45; Reply 3. Patent Owner has provided no evidence to suggest that Mr. Birdsell has a financial stake in the outcome of this matter, such as by losing employment for example. *See Parrot*, IPR2018-01690, Paper 40 at 63–64 (giving little weight to testimony from witness who was a party's cofounder and admitted to having a financial stake in the outcome of the proceeding). But we do not disagree with Patent Owner on the more general point that we should consider the fact that Mr. Birdsell is an Apple employee when weighing his credibility. *See* PO Resp. 44–45.

That is, we disagree with Patent Owner to the extent that it argues Mr. Birdsell's testimony should be given no weight on the basis that he is employed by Apple. *Id.*; *see also* Sur-reply 3. Rather, we give Mr. Birdsell's testimony the appropriate weight where it is sufficiently persuasive and corroborated. *See supra* §§ II.A.2.b–c.

4. Conclusion

Petitioner has proven by a preponderance of the evidence that A3UM is a printed publication under Section 102.

B. Level of Ordinary Skill in the Art

According to Petitioner,

A person of ordinary skill in the art in 2011 (or 2014) would have had (1) at least a bachelor's degree in computer science, computer engineering, or electrical engineering, and (2) at least one year of experience designing graphical user interfaces for applications such as photo management systems.

Pet. 9 (citing Ex. 1003 \P ¶ 41–43).

In the Institution Decision, we applied Petitioner's proposed definition. Inst. Dec. 10. Patent Owner does not dispute Petitioner's proposed level of ordinary skill in the art. PO Resp. 18. We continue to find that the skill level identified by Petitioner (Pet. 9) is consistent with the record. Thus, we use the same definition here that we used in the Institution Decision.

C. Claim Construction

Only those claim terms that are in controversy need to be construed, and only 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) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). We do no need to construe any terms to resolve the issues in this case.

D. Obviousness

Petitioner asserts that the subject matter recited in claims 1–12 would have been obvious over A3UM, Belitz, and Rasmussen. Pet. 4.

1. A3UM

A3UM is a user manual for Apple's Aperture 3 digital-image management software. Ex. 1005. Aperture provides photographers with image management and adjustment tools. *Id.* at 1. For example, *Faces* is a

face-detection and face-recognition tool provided in Aperture. *Id.* at 28. *Faces* can identify and track people through all the images in a digital library. *Id. Places* is also a tool provided in Aperture that organizes images by location. *Id.* at 81. In *Places*, a user can search for image locations on a map and zoom to view those locations in detail. *Id.* The *Slideshow Editor* allows the user to create slideshows. *Id.* at 84.

2. Belitz

Belitz describes a user interface that displays a map with marked locations. Ex. 1006, code (57). Belitz explains "[i]f many locations are located close to one another they overlap and the view of the associated images become cluttered and it is difficult to discern between the various objects and the user is not provided with a good view of what location is associated with what." *Id.* ¶ 2. According to Belitz, the disclosed user interface addresses those concerns. *Id.* ¶ 5. Figures 4a and 4b, below, show screenshots of the user interface. *Id.* ¶ 51, 55.

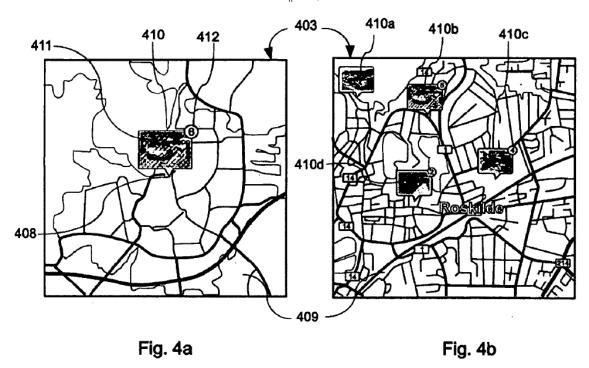


Figure 4a shows map 409. *Id.* ¶ 51. On the map, location 408 is marked by a graphical object 410. *Id.* Graphical object 410 contains visual representation 411. *Id.* ¶ 52. Visual representation 411 can be a photograph that is associated with the location. *Id.* Number indicator 412 shows how many graphical objects 410 are "stacked" at that location. *Id.* ¶ 54. Stacked graphical objects can be associated with other locations that are near marked location 408. *Id.*

3. Rasmussen

Rasmussen describes a digital map and tools for interacting with it. Ex. 1025, 9:35–49. In one example, a user creates a measuring tool on the map by positioning endpoints at various locations. *Id.* at 9:61–65. The user clicks the endpoints or the line between them to open an information window. *Id.* at 10:17–27. The window can display "latitude/longitude and/or geocode information." *Id.*

4. Claim 1

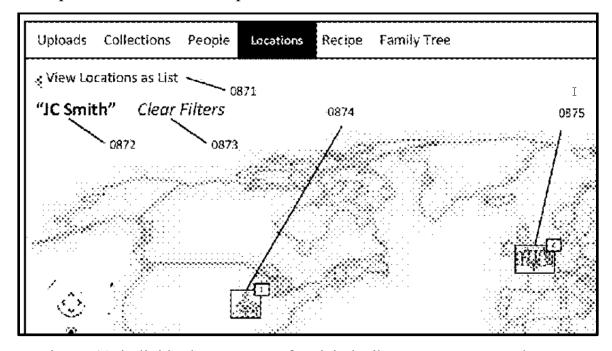
a. Map View and Location View

Claim 1 recites a "map view" that displays a thumbnail image on an interactive map:

- . . . displaying a map view on a video display device, the displaying the *map view* including displaying:
- (i) a representation of an *interactive map*, ...
- (ii) a first user selectable *thumbnail image* at a first location on the interactive map....

Ex. 1001, 35:23–30 (emphasis added).

Figure 41 of the '376 patent, reproduced below in-part, shows an example of an interactive map.



In Figure 41, individual or groups of "Digital Files" are represented as thumbnails 0874 and 0875 on an interactive map. *Id.* at 29:33–37. A user can select the thumbnail to see the Digital Files at the location. *Id.*

Claim 1 further recites a "location view" that is displayed in response to a click or a tap on the thumbnail in the "map view":

responsive to a click or tap of the first user selectable thumbnail image, displaying a first location view on the video display device, the first location view comprising a majority portion of a [second⁶] screenshot of the video display device, the displaying the first location view including displaying (i) a first location name corresponding to the first geotag, (ii) a scaled replica of each of the digital photographs or images or videos in the first set of digital files, and (iii) a first map image indicating the geographic coordinates of the first geotag, the displayed scaled replicas of each of the digital photographs or images or

⁶ The Certificate of Correction dated January 24, 2017 replaced "a majority

portion of a screenshot of the video display" with "a majority portion of a *second* screenshot of the video display." Ex. 1002, 554 (emphasis added).

IPR2022-00032 Patent 9,552,376 B2

> videos in the first set of digital files not being overlaid on the first map image and the second screenshot of the video display device not including the interactive map

Id. at 35:51–65 (emphasis added). Claim 1 recites a second location view with similar limitations that is displayed in response to a click or a tap on a second thumbnail. *See id*.

Figure 34 from the '376 patent, below, shows a single location application view. *Id.* at 24:24–41.

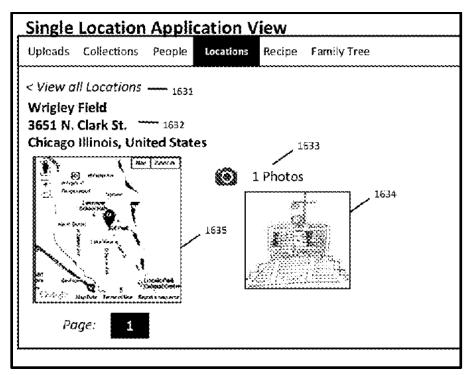


Figure 34's single location application view has one photo (1634). *Id.* The view displays a location name (1632), a zoomed-in image of the specific map location (1635), and an indication of how many photos were taken at the location (1633). *Id.*

b. The Petition and Patent Owner's Response

To address the recited "location view," Petitioner asserts that A3UM's user selects a pin on the interactive map in the *Places* view, then the user selects a thumbnail of an image in the *Browser*, which causes the *Viewer* to

IPR2022-00032 Patent 9,552,376 B2

display the original, full-size image. Pet. 50. This assertion is the basis for Petitioner's obviousness rationale. *See id.* at 50–57.

The record developed during the trial shows that Petitioner's challenge is based on an incorrect assertion about how A3UM's *Places* view works. *See* PO Resp. 52–56. Our reasoning follows.

c. The Second Screenshot

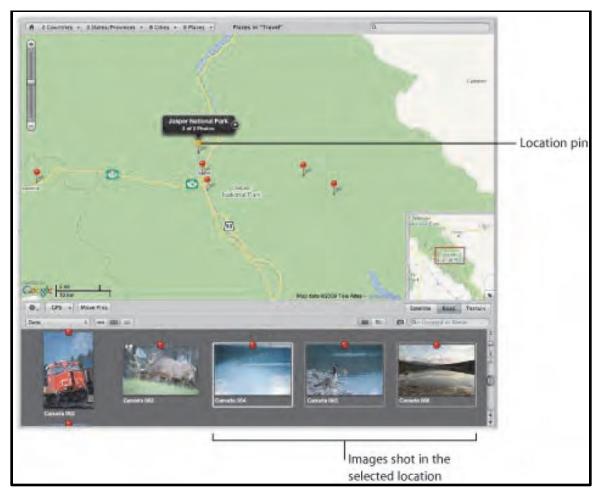
In claim 1, the "first location view" comprises "a second screenshot," among other things. Ex. 1001, 35:51–65. The claimed "map view" displays an "interactive map." *Id.* at 35:23–25. According to claim 1, the second screenshot does not include the interactive map. *Id.* at 35:63–65.

Petitioner asserts that A3UM teaches the recited location view and the second screenshot because, in part,

when a user "[s]elect[s] a red pin" ("click or tap") the interface (e.g., viewer, browser, inspector, toolbar), focuses on that information for that location ("[first/second] location view[s]"): the "selected pin turns orange, and the image or images associated with the location marked by the orange pin are selected in the Browser."

Pet. 47 (citing Ex. 1005, 436–437; Ex. 1003 ¶ 178). Here, Petitioner is referring to A3UM's *Places* view. *See id*.

If the user shot images with a GPS-enabled camera or iPhone, Aperture automatically plots each image on a location of a map shown in the *Places* view. Ex. 1005, 435. A screenshot of the *Places* view is reproduced below. *Id.* at 437.



The *Places* view shows a map with orange and red location pins. *Id.* A location label appears above the orange pin, indicating where the image was shot. *Id.* at 435.

We agree with Petitioner that a red pin turns orange when selected and the images associated with the location marked by the orange pin are selected in the *Browser*. *Id.* at 436; Pet. 47. The *Browser* is located at the bottom of the *Places* view. Ex. 1005, 437. The screenshot labels the images shot in the selected location that appear in the *Browser*. *Id*.

Patent Owner, though, disputes the Petition's description of what happens after this, when the user selects images in the *Browser*. PO Resp. 52–56. In particular, to address the requirement that the second

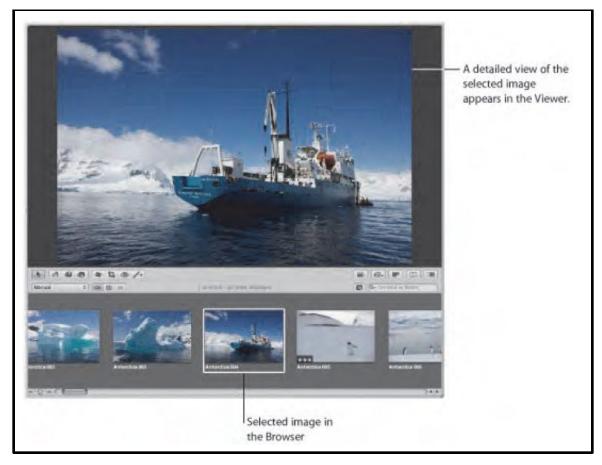
screenshot does not include the interactive map, the Petition provides the following rationale:

A3UM discloses selecting a pin on the interactive map to display a thumbnail representation of all photos matching that location in the Browser. EX1005, 436-437. Selecting a thumbnail in the Browser then prompts display of the original digital image in the Viewer. EX1005, 251. This display will be the digital image (e.g., a full-size photo) represented by the thumbnail in the Browser ("not including the interactive map"). EX1005, 51; EX1003, ¶186.

Pet. 50 (formatting removed, underlining added). That is, the Petition states that A3UM displays the original image in the *Viewer*. *Id*. According to the Petition, this means the display does not include the interactive map, as required by claim 1. *Id*. So, here, Petitioner asserts that the original digital image corresponding to the *Browser* selection replaces the interactive map displayed in the *Places* view. *Id*.

Patent Owner argues that A3UM does not replace the map with a full-size version of the selected image in the *Places* view. PO Resp. 55 (citing Ex. 2025 ¶¶ 156–157). Patent Owner's argument is adequately supported by Dr. Surati's testimony. Ex. 2025 ¶¶ 156–157. We credit Dr. Surati over Dr. Terveen on this issue because Dr. Surati's testimony is consistent with the teachings in A3UM. *See id.*; Ex. 1003 ¶ 186.

Specifically, the Petition and Dr. Terveen's declaration rely on page 251 of A3UM to support the assertion that the *Places* view displays the original digital image in the *Viewer*. *See* Pet. 50; Ex. 1003 ¶ 186. The cited part of A3UM provides an overview of the *Viewer*. Ex. 1005, 251. A screenshot showing the *Viewer* and *Browser* is reproduced below. *Id*.



The screenshot shows a *Viewer* displaying the image selected in the *Browser*. *Id*. The *Browser* displays several thumbnail images. *Id*. The *Viewer* displays a larger detailed view of the selected thumbnail image. *Id*.

Dr. Surati testifies that this part of A3UM is not describing the *Places* view. Ex. 2025 ¶ 159. According to Dr. Surati, "clicking the thumbnail in the Browser in the Places view does **not** cause the Places view map to be replaced with a full size image corresponding to the selected thumbnail image." *Id.* ¶ 156.

Dr. Surati's testimony (id. ¶¶ 155–157) is adequately supported by several examples from A3UM.

In the section explaining how to view the location information for an image or group of images, A3UM instructs the user to switch to the *Places* view. Ex. 1005, 435. A3UM then instructs the user: "In the Browser, select

an image." *Id.* "A location label appears above a pin in Places view, indicating the location where the image was shot." *Id.* This is illustrated in the screenshot below. *Id.*



The screenshot shows a location pin on the map and a selected image in the *Browser*. *Id*. The location pin has a label, indicating the location's name and the number of images that were captured there. *Id*. That is, contrary to Dr. Terveen's assertion and unlike the claimed second screenshot, the *Places* view displays a map after the user selects the thumbnail image in the *Browser*. *See* Ex. 1003 ¶ 186; Ex. 1001, 35:64–65 ("the second screenshot of the video display device not including the interactive map"). In fact, the *Places* view adds information to the map, the location label, to provide additional useful information in response to the user's selection. *See* Ex. 1005, 435.

Dr. Surati points to another example that supports his view. *See* Ex. 2025 ¶ 157 (citing Ex. 1005, 444). The screenshot below illustrates manually assigning locations to images in the *Browser* in *Places* view. Ex. 1005, 443–444.



The screenshot shows the *Places* view with a map and a *Browser* containing five images. *Id.* at 444. One of the images in the *Browser* is selected. *Id.* The map has a purple pin with a location label marking the location "where the image selection was shot." *Id.* at 443. According to A3UM, the user selected an image and dragged it to a location on the *Places*-view map. *Id.* In this example, the user has selected an image and *Places* view still shows the map. *Id.* As in the other example, the user's selection of the thumbnail image

in the *Places*-view *Browser* and subsequent interaction with the map serves a purpose: manually assigning locations to images. *See id*.

During his deposition, Dr. Terveen could not explain under what circumstances the *Places*-view map would be replaced with a full-size image in response to selecting a thumbnail image in the *Browser*. Ex. 2023, 152:10–154:22; Ex. 2024, 323:7–324:16. In particular, Dr. Terveen acknowledged that the example on page 436 does not replace the interactive map with the image selected in the *Browser*. Ex. 2023, 154:13–14 ("Well, not in this case it doesn't"). Dr. Terveen could not identify where that feature was found. *See id.* at 154:18–19 ("I can't recall right offhand if that is the case.").

In view of the two examples discussed above (Ex. 1005, 435, 443), we determine that the record favors Dr. Surati's testimony, and credit the Surati Declaration (Ex. 2025 ¶¶ 155–157) over the Terveen Declaration (Ex. 1003 ¶ 186). The record developed during trial shows that the *Places*-view map is not replaced with an image when the user selects a thumbnail image in the *Places*-view *Browser*. *See* PO Resp. 52–56.

In this way, Petitioner's challenge is based on an incorrect assertion about how A3UM's *Places* view works. *See id.* So, in the Petition as originally filed, Petitioner has not shown that A3UM teaches or suggests "the second screenshot of the video display device not including the interactive map," as recited in claim 1. *See* Pet. 50.

d. Petitioner's Reply

In the Reply, Petitioner argues that the Petition's obviousness challenge was based on a combination of teachings in different sections of A3UM, describing different behaviors of the *Browser* in different views. Reply 23 (citing Pet. 50–52). Petitioner argues that it explained why one of

ordinary skill in the art would have replaced how the *Browser* functions in the *Places* view with how the *Browser* functions in other views. *Id.* (citing Pet. 53). We disagree that the Petition contains any such analysis.

The Petition states, "A3UM discloses selecting a pin . . . Selecting a thumbnail in the Browser *then* prompts display of the original digital image in the Viewer." Pet. 50 (emphasis added). Here, the term "then" implies some relationship in time between the two selections. *Id.* Next, the Petition states, "A skilled person *would retain* this functionality in A3UM-Belitz-Rasmussen combination—thumbnails would replace the pin, but selecting the thumbnail would prompt display of the full image." *Id.* at 50–51 (emphasis added). The phrase "would retain" suggests that A3UM would be unmodified in the combination. *Id.* Also, before explaining that a skilled person would retain the function in the combination, Petitioner does not explain how or why multiple embodiments in A3UM would be combined. *See id.*

In discussing combining A3UM with Belitz, the Petition describes A3UM as disclosing the feature at issue:

A3UM *discloses* that selecting a map marker in Places view will display "[i]mages shot in the selected location" in the Browser, but the Places map will remain in the Viewer *until a user selects* an image to display in a larger fashion in the viewer.

Id. at 53 (emphasis added). Here, the Petition does not mention combining multiple views in A3UM. *Id.* Rather, after this discussion, the Petition presents an obviousness rationale for modifying A3UM's *Places* view with Belitz's teachings, not for combining multiple views in A3UM. *Id.* at 53–57.

In the Reply, Petitioner argues that Patent Owner has not alleged that combining multiple features from A3UM "would present any technical challenge to a skilled artisan to implement." Reply 23. But Petitioner has the

burden to show that the challenged claims are unpatentable. *See Dynamic Drinkware*, *LLC v. Nat'l Graphics*, *Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). And in the Petition as originally filed, Petitioner did not provide any reason for combining the *Viewer-Browser* features on page 251 with the *Places* view described elsewhere. *See* Pet. 50–57. Apart from alleging that it was possible to combine the *Places* view with the *Browser* features from other views, the Reply does not attempt to explain why one of ordinary skill in the art would have done so. *See* Reply 23–24. The Reply only cites page 53 of the Petition, which describes combining A3UM's *Places* view with Belitz to address the claimed "map image." *See id*.

Thus, Petitioner's Reply introduces a new rationale. *See id.* But "an IPR petitioner may not raise in reply 'an entirely new rationale' for why a claim would have been obvious." *Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1330–31 (Fed. Cir. 2019).

In sum, the Petition does not provide us with any reason to believe that Petitioner was relying upon a combination of multiple embodiments of A3UM to address the claimed second screenshot, but even ignoring the language indicating that A3UM's functionality was being retained, the Petition provided no relevant obviousness rationale.

e. Map Image

Claim 1 further recites that the "first location view" displays "a first map image":

responsive to a click or tap of the first user selectable thumbnail image, displaying a first location view . . . the displaying the first location view including displaying . . . (iii) a first map image indicating the geographic coordinates of the first geotag, the displayed scaled replicas of each of the digital photographs or images or videos in the first set of digital files not being overlaid on the first map image

Ex. 1001, 35:51–63 (emphasis added).

To address this limitation, Petitioner combines A3UM's *Places* view, Belitz, and A3UM's Metadata inspector. *See* Pet. 50–57. Petitioner's obviousness rationale is flawed because the basis for it is the incorrect assertion about the *Places* view discussed above. *Id.*; *see supra* § II.D.4.c.

Specifically, Petitioner proposes using Belitz's teachings to replace the alleged interaction between the *Browser* and interactive map in A3UM's *Places* view:

A3UM discloses that selecting a map marker in Places view will display "[i]mages shot in the selected location" in the Browser, but the Places map will remain in the Viewer until a user selects an image to display in a larger fashion in the viewer. EX1005, 436-438. By early 2010, it would have been obvious to modify A3UM to combine *these two steps* in view of Belitz's disclosure of displaying, in response to selecting a map marker, a "popup window" showing "at least some of the visual representations 411 of the graphical object 410c," as well as an image "shown in a larger size than the others which are shown in a list"

Pet. 53–54 (emphasis added). Yet A3UM does not disclose the "two steps" mentioned here. *See supra* § II.D.4.c. Petitioner asserts that replacing these "two steps" would "improve the user experience, such as by reducing the number of steps between selecting a map location and seeing an image with that location." Pet. 54–55 (citing Ex. 1003 ¶¶ 196–197). Petitioner explains that A3UM discloses that "users may prefer certain UI elements be automatically displayed." *Id.* at 55 (Ex. 1005, 74, 183, 259, 303–304).

Patent Owner argues that Petitioner failed to meet its burden because A3UM does not disclose the steps that are part of Petitioner's combination. PO Resp. 57–58 (citing Ex. 1005, 435–436; Ex. 2025 ¶ 164). We agree.

Because Petitioner has not shown that the user selects images in the *Browser* that replace the interactive map with a larger version of those images (*see supra* § II.D.4.c), Petitioner has not shown that it would have been obvious to replace those steps with Belitz's teachings. Pet. 53–54. Dr. Terveen does not give sufficient weight to the examples in A3UM where a user selects images in the *Browser* to add information to the interactive-map display. *See* Ex. 1005, 435, 443–444; *see supra* § II.D.4.c. Because the Surati Declaration is more consistent with those examples, we credit Dr. Surati's testimony (Ex. 2025 ¶ 164) over Dr. Terveen's (Ex. 1003 ¶ 197). For at least this reason, Petitioner has not shown that it would have been obvious to combine A3UM and Belitz to arrive at the claimed "location view" displaying the recited "map image."

Even assuming that Petitioner intended to combine the various embodiments in A3UM, as described for the first time in the Reply, Petitioner's obviousness rationale is still insufficient. *See* Reply 23–24. Under the reasoning introduced in the Reply, Petitioner proposes (1) modifying the *Places* view to allow the user to replace the interactive map with an image shown in the *Browser* (*id.* at 23), and (2) further modifying that combination to display an image in the *Viewer* in response to selecting the map marker in the *Places* view (Pet. 54–55). Petitioner asserts that this modification would "improve the user experience, such as by reducing the number of steps"—i.e., steps resulting from combining different embodiments. *See* Pet. 55; Reply 23. In this way, Petitioner's proposed combination creates an inefficiency that did not exist in A3UM, then purports to improve it by adding Belitz. *See* Reply 23. Here, the reason for adding Belitz's teaching weighs against modifying A3UM in the first place. *See id.*

Apart from that deficiency, Petitioner's proposal to incorporate Belitz's function also ignores the features in A3UM that depend on selecting the *Browser* images to interact with the map. *See id.* at 23–24. For example, as discussed in connection with the second screenshot, the user manually assigns locations to images by selecting them in the *Browser* and then interacting with the map shown in *Places* view. Ex. 1005, 443. The Petition does not explain how the user would be able to accomplish this if the map were replaced with the full-size image when the *Browser* image is selected. Pet. 54–55. Also, selecting the image in the *Places*-view *Browser* causes a location label to appear above a pin on the map. Ex. 1005, 435. This indicates where the image was shot. *Id.* Replacing the map with a larger image would remove this feature.

Petitioner's obviousness analysis purports to reduce steps at the expense of eliminating useful features in the *Places* view. *See* Pet. 53; Reply 23–24. Also, the feature that Petitioner proposes adding—viewing a larger version of an image—is provided elsewhere in the interface. Ex. 1005, 251. In fact, Petitioner argues that a user could access the larger image with very few steps, stating that "switching from the Places view to one with Viewer and Browser involves clicking an icon in the toolbar." Reply 23–24 (Ex. 1005, 65). This tends to show that there is little need to "reduce the number of steps," which is the reason for adding Belitz that is stated in the Petition. Pet. 55. Thus, under the reasoning in the Reply, Petitioner proposes removing features from the *Places* view with no discernable benefit. *See* Reply 23–24.

The record better aligns with Dr. Surati's testimony on this issue. *See* Ex. 2025 ¶¶ 167, 170. In particular, Dr. Surati highlights the problem with replacing the *Places*-view map with an image:

Modifying A3UM so that the Places map is replaced by an image when selecting a pin/marker would destroy the interplay between selections in the Browser and selections on the map. For instance, once a user selects a pin on the map, they would no longer be able to select a different pin on the map to investigate images at that new location because the map has been replaced by the Browser, without needing to take additional step(s).

Id. \P 167. Dr. Surati also explains that, contrary to Dr. Terveen's assertions (Ex. 1003 \P 197), the proposed modification would require additional steps to investigate other pins:

Dr. Terveen does not address the fact that the proposed modification would require additional steps to investigate locations on the Places map. For instance, if a user clicked one of the pins on the map and the map were then replaced with an image, the user would have to take some additional step(s) to navigate back to the view including the map and pins to investigate additional pins.

Ex. 2025 ¶ 170. Here, Dr. Surati's testimony is more consistent with A3UM's teachings than Dr. Terveen's testimony that the proposed modification would "improve the user experience" and "reduce the number of steps." *See* Ex. 1003 ¶ 197. Thus, we credit Dr. Surati's testimony (Ex. 2025 ¶¶ 167, 170) over Dr. Terveen's (Ex. 1003 ¶ 197).

To summarize, the most natural reading of the Petition leads to the conclusion that Petitioner's obviousness rationale rests on an assertion that was shown to be incorrect based on the record that was developed during trial. *See* Pet. 53–54; PO Resp. 57. But, even if we were to read the Petition as proposing to modify the *Browser* in *Places* view to work the way that it does in other views, Petitioner has not shown that it would have been obvious to incorporate Belitz's teachings in the manner proposed. *See* Reply 23–24. For these reasons, Petitioner has not shown that it would have

been obvious to combine A3UM and Belitz to arrive at the "location view" that displays a first map image, as recited in claim 1.

5. *Claim 5*

Claim 5 recites a location view displaying a map image, similar to the location views recited in claim 1. *Compare* Ex. 1001, 37:7–14 (claim 5), with id. at 35:51–36:14 (claim 1). Notably, claim 5 does not recite a location view with the second screenshot that is recited in claim 1. See id. at 37:6–15. Even so, Petitioner's challenge to claim 5 relies on the same reasons for combining Belitz and A3UM presented in connection with claim 1, which were shown to be unpersuasive. See Pet. 47–57, 65–66. In particular, referring to the location view in claim 5, Petitioner argues that "A3UM as combined with Belitz and Rasmussen satisfies these features for the same reasons as claim 1's '[first/second] location view' limitations." Id. at 66 (citing Pet. § VII.B.2.e; Ex. 1003 ¶ 237) (emphasis removed). Thus, for the reasons discussed in Section II.D.4.e, Petitioner has not shown that it would have been obvious to combine A3UM and Belitz to arrive at the location view displaying a map image, as recited in claim 5.

6. Claim 12

Claim 12 recites a location view displaying a map image similar to the location views recited in claim 1. *Compare* Ex. 1001, 38:28–47 (claim 12), *with id.* at 35:51–36:14 (claim 1). Referring to the location view in claim 12, Petitioner asserts that "A3UM as combined with Belitz and Rasmussen satisfies these features for the same reasons as claim 1's '[first/second] location view' features," and "A3UM as combined with Belitz and Rasmussen satisfies these features for the same reasons as claim 1's '[first/second] map image' features." Pet. 76–77 (citing Pet. §§ VII.B.2.e & f; Ex. 1003 ¶¶ 185–204, 288, 291) (emphasis removed).

For the reasons discussed in Section II.D.4 analyzing the challenge to claim 1, Petitioner has not shown that it would have been obvious to combine A3UM, Belitz, and Rasmussen to arrive at the "location view" and "map image" in claim 12.

7. Claims 2–4 and 6–11

Claims 2–4 and 6–11 depend from claims 1 or 5. Petitioner's challenges to those claims do not remedy the deficiencies identified above in Section II.D.4.

Claim 2 inherits the limitations of claim 1 and further defines the user-selectable thumbnail images. Ex. 1001, 36:15–21. Petitioner relies on Belitz's thumbnails to address the features recited in claim 2, and the challenge depends on combining Belitz with A3UM, as discussed in connection with claim 1. *See* Pet. 57–58. For the reasons discussed in Section II.D.4 analyzing the challenge to claim 1, Petitioner has not shown that it would have been obvious to combine A3UM, Belitz, and Rasmussen to arrive at the subject matter in claim 2.

Claim 3 further recites limitations related to the location view: "responsive to a click or tap of a first one of the displayed scaled replicas in the first location view." Ex. 1001, 36:22–24. In the challenge to claim 3, Petitioner repeats and relies upon the incorrect assertion about A3UM's *Places* view: "Selecting a pin on A3UM's Places map displays in the Browser thumbnail representations of all photos matching the pin location, EX1005, 436-437, and selecting a thumbnail ('a click or tap' of a 'scaled replica[]') displays the original digital image in the Viewer." Pet. 59. Thus, Petitioner's challenge is deficient for the same reasons discussed in Section II.D.4.

Claim 4 depends from claim 3 and recites limitations to the overlaying feature. Ex. 1001, 36:34–42. Petitioner's challenge to claim 4 depends on combining Belitz with A3UM, as discussed in connection with claim 1, because claim 4 incorporates the subject matter from claim 1 via its dependency. Pet. 61–63. For the reasons discussed in Section II.D.4 analyzing the challenge to claim 1, Petitioner has not shown that it would have been obvious to combine A3UM, Belitz, and Rasmussen to arrive at the subject matter in claim 4. *See id*.

Claims 6–11 depend from claim 5. Ex. 1001, 37:14–56. Petitioner's challenges to claims 6–11 depend on combining Belitz with A3UM, as discussed in connection with claim 5, because claims 6–11 incorporate the subject matter from claim 5. Pet. 66–72. None of the challenges address or obviate the deficiencies of Petitioner's combination of A3UM with Belitz. *See id.* For the reasons discussed in Section II.D.5 analyzing the challenge to claim 5, Petitioner has not shown that it would have been obvious to combine A3UM, Belitz, and Rasmussen to arrive at the subject matter in claims 6–11. *See id.*

Thus, Petitioner has not shown that the subject matter recited in claims 2–4 and 6–11 would have been obvious over the combination of A3UM, Belitz, and Rasmussen. *See id.* at 57–63, 66–72.

III. MOTION TO EXCLUDE

Patent Owner filed a motion to exclude A3UM (Exhibit 1005). Paper 35 ("Motion" or "Mot."). According to Patent Owner, Petitioner has not properly authenticated Exhibit 1005 as a true and correct copy of A3UM. *See id.* Even without excluding this exhibit, Petitioner has not proven any of

the challenged claims as unpatentable. *See supra* § II.D. Thus, we dismiss Patent Owner's Substitute Motion to Exclude as moot.

IV. CONCLUSION

Petitioner has not shown by a preponderance of the evidence that claims 1–12 are unpatentable.

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–12	103	A3UM, Belitz, Rasmussen		1–12
Overall Outcome				1–12

V. ORDER

It is

ORDERED that Petitioner has not shown that claims 1–12 of U.S. Patent 9,552,376 B2 are unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude is dismissed; and

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

FOR PETITIONER:

Jeffrey P. Kushan SIDLEY AUSTIN LLP jkushan@sidley.com

FOR PATENT OWNER:

Jennifer Hayes George Dandalides NIXON PEABODY LLP jenhayes@nixonpeabody.com gdandalides@nixonpeabody.com