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Paper 67
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

MEMORYWEB, LLC,
Patent Owner.

IPR2021-01413
Patent 10,621,228 B2

Before LYNNE H. BROWNE, NORMAN H. BEAMER, and KEVIN C. TROCK, *Administrative Patent Judges*.

TROCK, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

We have authority to hear this inter partes review under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons discussed below, we determine that Petitioner, Unified Patents, LLC ("Unified"), has shown by a preponderance of the evidence that claims 1–7 (the "challenged claims") of U.S. Patent No. 10,621,228 B2 (Ex. 1001, "the '228 Patent") are unpatentable. *See* 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2019).

A. Procedural History

The Petition (Paper 2, "Pet." or "Petition") requested *inter partes* review of the challenged claims of the '228 Patent. Patent Owner, MemoryWeb, LLC, filed a Preliminary Response. Paper 8 ("Prelim. Resp."). With our authorization, Petitioner filed a Preliminary Reply (Paper 11), and Patent Owner filed a Preliminary Sur-reply (Paper 12). Based upon the record at that time, we instituted *inter partes* review on all challenged claims on the grounds presented in the Petition. Paper 15 ("Institution Decision" or "Dec.").

After institution, Patent Owner filed a Response (Paper 23, "PO Resp."), Petitioner filed a Reply (Paper 29, "Pet. Reply"), Patent Owner filed a Sur-reply (Paper 35, "PO Sur-reply"), and with our authorization, Petitioner filed a Sur-sur-reply (Paper 42, "Pet. Sur-sur-reply").

Petitioner filed a Motion to Exclude certain evidence (Paper 44). Patent Owner opposed the motion (Paper 45).

On December 16, 2022, an oral hearing was held. The hearing comprised a confidential session and a public session. A transcript of the

hearing was made a part of this record. Paper 52 (confidential session), Paper 53 (public session).

B. Real Party-in-Interest

In the Petition, Petitioner stated that "[p]ursuant to 37 C.F.R. § 42.8(b)(1), Unified Patents, LLC . . . certifies that Unified is the real party-in-interest and certifies that no other party exercised control or could exercise control over Unified's participation in this proceeding, filing this petition, or conduct in any ensuing trial." Pet. 1.

In its Preliminary Response, Patent Owner argued that "Apple and Samsung[1] should have been [named] as RPIs [(real parties in interest)] in this proceeding, and the failure to identify Apple and Samsung is a basis for the Board to deny institution." Prelim. Resp. 28; *see also id.* at 22–28.

As noted above, we authorized additional preliminary briefing to allow the parties to address RPI issue, as well as other issues. Ex. 1020. In its Preliminary Reply, Petitioner argued that "Patent Owner's (PO's) RPI arguments should be rejected as inappropriate or, at best, premature. As is the case here, the Board need not address whether a party is an unnamed RPI where no time bar or estoppel provisions under 35 U.S.C. § 315 are implicated." Paper 11, 1 (citing *SharkNinja Operating LLC v. iRobot Corp.*, IPR2020-00734, Paper 11 at 18 (PTAB, Oct. 6, 2020) (precedential)

[1] We infer from the record that Patent Owner is referring to Samsung Electronics Co., Ltd. ("Samsung") and Apple, Inc. ("Apple") based on the petitions filed by these companies challenging the '228 patent. *See* Sec. C, below.

(*"SharkNinja"*); *Unified Patents, LLC v. Fat Statz, LLC*, IPR2020-01665, Paper 19 at 2–3 (PTAB, Apr. 16, 2021).

Based upon the preliminary record at that time, we instituted *inter partes* review on all the challenged claims on the grounds presented in the Petition, but declined to determine whether Apple and Samsung were real parties in interest. Dec. 15. We declined to decide the real party in interest question at that time partly because determining whether a non-party is an RPI is a highly fact-dependent question and the case was still in its preliminary stage without a fully developed factual record. Moreover, we determined that we need not address the RPI issue at that time because there was no allegation that Apple or Samsung were subject to a time bar or estoppel that would preclude *this* proceeding. Accordingly, under the Board's precedential decision in *SharkNinja*, IPR2020-00734, Paper 11 at 18, we declined to decide the RPI issue at that time. *See* Paper 15, 11–14.

After institution, Patent Owner raised the RPI issue again, arguing in its Response that

> the Board should terminate this proceeding because Petitioner has failed to name all real parties-in-interest ("RPIs"), including at least Samsung and Apple. Alternatively, the Board should find that Apple and Samsung are estopped from challenging the validity of claims 1–7 of the '228 patent in related proceedings: *Apple Inc. v. MemoryWeb, LLC*, IPR2022-00031 (the "Apple IPR") and *Samsung Electronics Co., Ltd., v. MemoryWeb, LLC*, IPR2022-00222 (the "Samsung IPR") (collectively, the "Related IPRs").

PO Resp. 14–15.

Given that we now had a fully-developed factual record before us, including probative evidence on the RPI issue that was not available to us at the institution phase of this case,[2] and the parties have been able to argue this issue before the Board during a confidential session of the hearing in this proceeding (*see* Paper 52), we were able to fully address the real party in interest issue raised by Patent Owner in its Response. Accordingly, based upon the complete evidentiary record and the parties' arguments, we issued an Order on March 8, 2023, (Paper 56) identifying Apple and Samsung as RPIs in this proceeding and instructing Petitioner to "update its Mandatory Notices by March 10, 2023, identifying all Real Parties in Interest consistent with this Order pursuant to its obligations under 37 C.F.R. § 42.8(b)(1)." *See* Paper 56, 34.

C. Related Matters

According to the parties, the '228 patent was asserted in the following district court proceedings: *MemoryWeb, LLC v. Samsung Electronics Co., Ltd. et al.*, Case No. 6:21-cv-00411 (W.D. Tex.); *MemoryWeb, LLC v. Apple Inc.*, Case No. 6:21-cv-00531 (W.D. Tex.); and *MyHeritage (USA), Inc. et. al. v. MemoryWeb, LLC*, Case No. 1:21-cv-02666 (N.D. Ill.). Pet. 1–2; Paper 4, 2; Paper 7, 2; Paper 9, 2–3.

Patent Owner also identifies U.S. Patent No. 9,098,531 ("the '531 patent"), U.S. Patent No. 10,423,658 ("the '658 patent"), U.S. Patent No. 9,552,376 ("the '376 patent"), U.S. Patent No. 11,017,020 ("the '020

[2] Since institution, the parties supplemented the record with Exhibits 1030–1043 and 2027–2047, which included the deposition transcript of the CEO of Unified (Ex. 2036), as well as other relevant evidence on this issue.

patent"), U.S. Patent No. 11,163,823 ("the '823 patent"), pending U.S. Patent Application 17/381,047, and pending U.S. Patent Application 17/459,933 as related to the '228 patent. Paper 7, 2; Paper 9, 2–3.

Patent Owner additionally indicates the following *inter partes* proceedings as related matters: *Samsung Electronics Co., Ltd., v. MemoryWeb, LLC*, IPR2022-00222 (PTAB) challenging the '228 patent; *Apple Inc. v. MemoryWeb*, LLC, IPR2022-00031 (PTAB) challenging the '228 patent; *Apple Inc. v. MemoryWeb, LLC*, IPR2022-00111 (PTAB) challenging the '020 patent; *Apple Inc. v. MemoryWeb, LLC*, PGR2022-00006 (PTAB) challenging the '020 patent; *Apple Inc. v. MemoryWeb, LLC*, IPR2022-00033 (PTAB) challenging the '658 patent; and *Apple Inc. v. MemoryWeb, LLC*, IPR2022-00032 (PTAB) challenging the '376 patent. Paper 7, 2; Paper 9, 2–3.

D. The '228 Patent (Ex. 1001)

The '228 patent is titled "Method and Apparatus for Managing Digital Files" and "relates generally to the management of digital files and, more particularly, to a computer-implemented system and method for managing and using digital files such as digital photographs." Ex. 1001, code (54), 1:21–24. The '228 patent describes a need for "a medium that allows people to organize, view, preserve and share [digital] files with all the memory details captured, connected and vivified via an interactive interface" and "allow digital files, including documents, photos, videos and audio, to tell a full story now, and for generations to come." *Id.* at 1:61–67. The '228 patent provides a solution in the form of "a computer-implemented method of associating digital tags with digital files" and "a web-based digital file

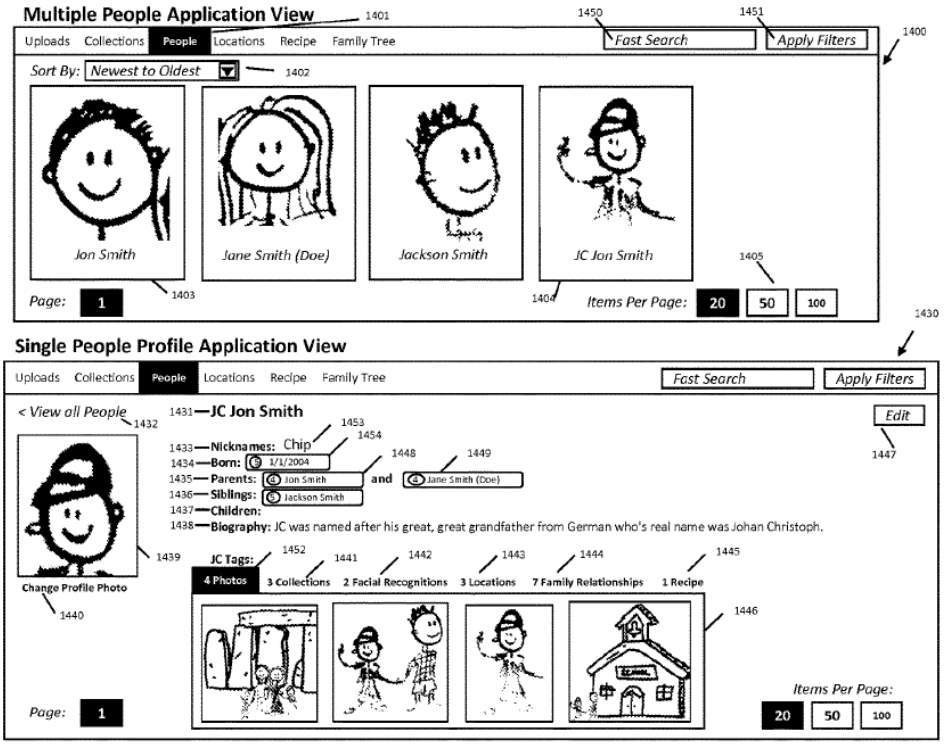
storage system [that] comprises a digital file repository for storing and retrieving digital files." *Id.* at 2:3–6, 2:21–25, 2:40–45.

The '228 patent describes details of an "Application" (also called the "MemoryWeb Application"), which is an online program that can (i) import, associate and embed digital tags to digital files, (ii) view, sort, annotate, and share digital files from various Application Views, and (iii) store the digital files through an interactive storage system through a user relationship table. *Id.* at 8:63–9:16. The '228 patent explains that the Application may be accessible "over various user interfaces" including those of "smart phones (e.g., iPhones), Personal Digital Assistants (PDAs) and Tablets (e.g., iPads)." *Id.* at 9:18–22. The Application provides views (i.e., "Application Views") that utilize the Application's ability to associate digital tags to digital files and display them in customized views such as Uploads, Collections, Slideshow, Location, Timeline, Family Tree, People Profile, and Recipes. *Id.* at 9:23–28. The views enable a user to display the user's digital media files and their tagged attributes. *Id.* at 5:57–60. The views include, *inter alia*: a location view that "identifies within an interactive map ([e.g.,] Google map . . .), where digital files were taken or originated . . . [and] can also provide additional outputs such as a journey route that identifies the specific locations for an event or trip that can be customized by users"; a people view that "shows thumbnail photos of all the people in the system that can be clicked in for a people profile view"; and a people profile view that "shows a profile picture of an individual, their birth/death information, family relationships, overview (comments) on the person, as well as links to other views that contain that individual in the system." *Id.* at

6:13–30. Some views provided by the '228 patent's Application are shown in Figures 32 and 34, reproduced below. *Id.* at 3:62–66, 28:22–24.

Figure 32 illustrates a People Application View (at indicator 1400) and a People Profile Application View (at indicator 1430). *Id.* at 18:37–40, 22:59–61.

FIG. 32



In Figure 32, above, People Application View 1400 is used to display all the people that were created within a user's Application. *Id.* at 22:60–23:11. This view can be seen by selecting "People" (illustrated at menu item 1401) from any of the Application Views within the Application, which then provides a list of people in various sort orders. *Id.* For each person, a thumbnail of their face along with their name is depicted, as shown in Figure

32, where Jon Smith (item 1403) and JC Jon Smith (item 1404) along with some other people are illustrated. *Id.* Also, at the top of every Application View within the Application, the user can select to apply filters (Apply Filters at item 1451). *Id.* In the People Profile Application View in Figure 32, a single profile (item 1430) is illustrated. *Id.* at 23:12–49. The profile shows: the individual's name (displayed at the top of the page, at 1431) along with their nicknames (at 1433); when they were born (at 1434); their family members (at 1435, 1436, 1437); their biography (at 1438); and a profile photo (at 1439). *Id.* For each person, the system can allow the user to quickly see all the tags that are associated to a person. *Id.*

In Figure 32, the system illustrates that there are four photos (1452) associated with that person and illustrates thumbnails of each of the four photos (1446). *Id.* These thumbnails can be selected and then the user will be taken to the slideshow view for that digital file. *Id.* If the user selects Locations (1443), all of the locations that the specific person has been tagged within will be displayed. *Id.* If the user selects Family Relationships (1444), the people that the user is associated with will be displayed in a family chart or tree. *Id.* If the user selects any of the Application Dot-Tags such as the individual's mother Jane Smith (Doe) (1449), the application will take the user to an individual people profile view of Jane Smith (Doe). *Id.* An Application Dot-Tag is a structure that enables navigation of the data in the Application, helps the user organize their digital files with key components of related information such as people, date of file, location, and collection, and indicates the manner in which a Digital Tag is displayed within the Application using pill-shaped indicators that can reside near a

file's image or overlaid on the file's image. *Id.* at 9:40–67. The '228 patent explains that the "Application Dot-Tag is more than just text" because "Memory-Web Application Dot-Tags act as mini search engines that allow the user to see how many matching files there are to that MemoryWeb Tag and if selected will take the user to the corresponding Application View to illustrate the linked search results of that Application Dot-Tag." *Id.*

Figure 34 of the '228 patent, reproduced below, illustrates Location Views. *Id.* at 21:36–38, 24:16–17.

FIG. 34

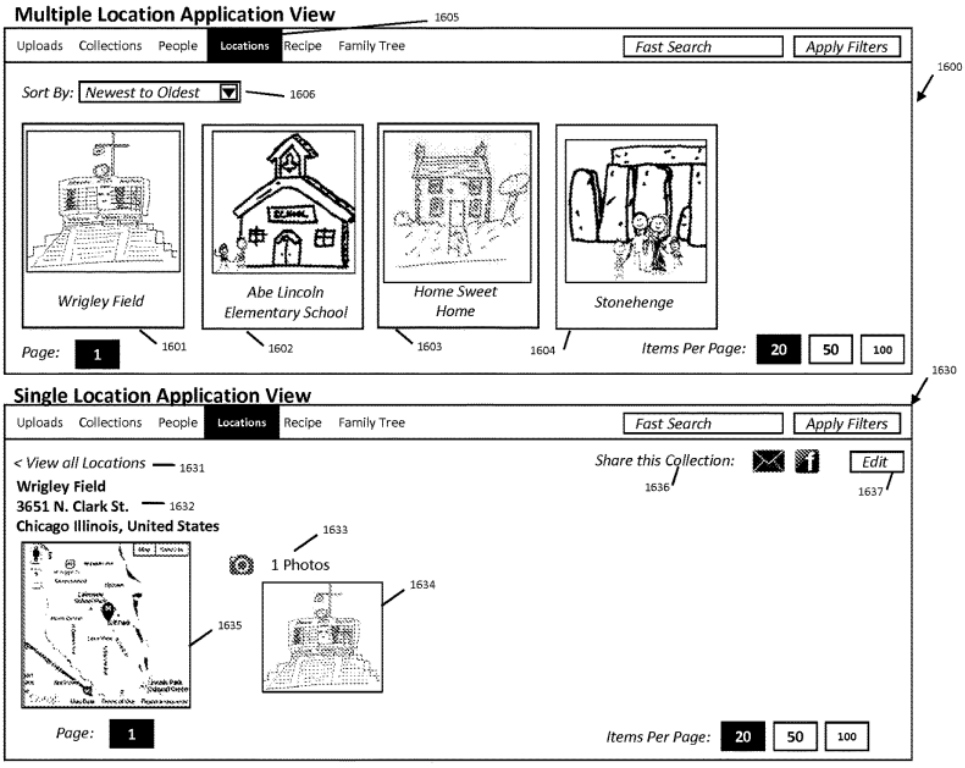


Figure 34, above, shows Location Application View 1600 that displays all the locations that were created within the user's Application; for each location, a thumbnail of a digital file from that location (e.g., Wrigley Field 1601); a view of a single location (1630), with the individual location

name displayed at the top of the page (1632); thumbnails of each digital file within the specific collection, such as a photo (1633) taken at Wrigley Field (1634) that is associated with the location Wrigley Field. *Id.* at 24:16–54. The '228 patent provides that "the Application can interact with a Third Party Geographical Mapping System to pull maps that correspond to the exact location of Digital Files that have a location tag." *Id.* at 32:10–13.

Figure 41 of the '228 patent, reproduced below, is a screenshot of an Application Dot-Tag Filter in a Location Application View. *Id.* at 4:7–8.

FIG. 41

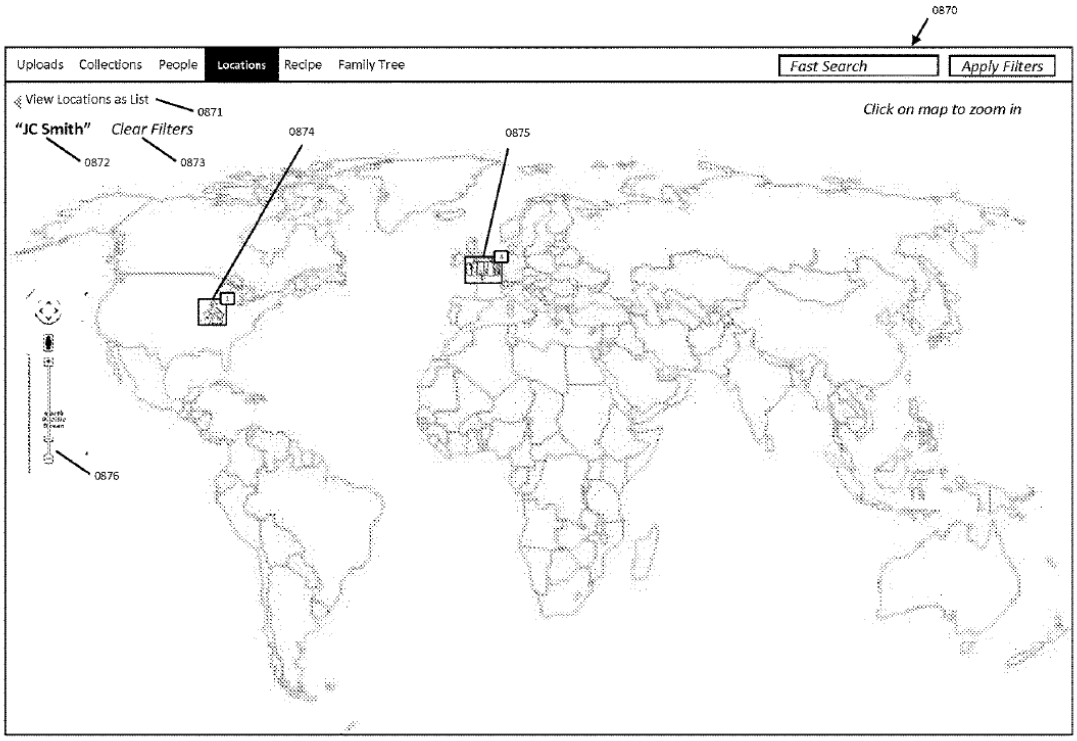


Figure 41, above, illustrates filtering results for an Application Dot-Tag filter in a Location Application View (at item 0870), providing a world map view that illustrates all the locations that are associated with one or

more digital files for a user. *Id.* at 29:41–64, 32:15–18. As shown in Figure 41, digital files are displayed within an interactive map (e.g., a Google map). *Id.* at 29:40–64. Individual or groups of digital files are illustrated as photo thumbnails (at indicators 0874 and 0875) on the map, and the user can select the thumbnail to see all the digital files with the same location, or the user can use the interactive map and narrow the map view by using a zoom in/zoom out bar (0876) or by selecting the map. *Id.* If an advanced filter is applied in the Locations Application View, a filter (e.g., of "JC Smith" at item 0872) is illustrated, and only the digital files that contain the person JC Smith are illustrated with their geographic location on the map. *Id.*

E. Challenged Claims

Petitioner challenges claims 1–7 of the '228 patent. Pet. 2, 4. Claim 1 is independent. Claim 1 is illustrative and is set out below.

> 1. [1a-preamble] A method comprising:
>
> [1b] responsive to a first input, causing a map view to be displayed on an interface, [1c] the map view including:
>
> (i) an interactive map;
>
> [1d] (ii) a first location selectable thumbnail image at a first location on the interactive map; and
>
> [1e] (iii) a second location selectable thumbnail image at a second location on the interactive map;
>
> [1f] responsive to an input that is indicative of a selection of the first location selectable thumbnail image, causing a first location view to be displayed on the interface, [1g] the first location view including (i) a first location name associated with the first location and (ii) a representation of at least a portion of one digital file in a first set of digital files, [1h] each of the digital files in the first set of digital files being produced from outputs

> of one or more digital imaging devices, the first set of digital files including digital files associated with the first location;
>
> [1i] responsive to an input that is indicative of a selection of the second location selectable thumbnail image, causing a second location view to be displayed on the interface, [1j] the second location view including (i) a second location name associated with the second location and (ii) a representation of at least a portion of one digital file in a second set of digital files, [1k] each of the digital files in the second set of digital files being produced from outputs of the one or more digital imaging devices, the second set of digital files including digital files associated with the second location; and
>
> [1l] responsive to a second input that is subsequent to the first input, causing a people view to be displayed on the interface, [1m] the people view including:
>
> > (i) a first person selectable thumbnail image including a representation of a face of a first person, the first person being associated with a third set of digital files including digital photographs and videos;
> >
> > [1n] (ii) a first name associated with the first person, the first name being displayed adjacent to the first person selectable thumbnail image;
> >
> > [1o] (iii) a second person selectable thumbnail image including a representation of a face of a second person, the second person being associated with a fourth set of digital files including digital photographs and videos; and
> >
> > [1p] (iv) a second name associated with the second person, the second name being displayed adjacent to the second person selectable thumbnail image.

Ex. 1001, 35:32–36:11 (with brackets noting Petitioner's labels, *see* Pet. 13–60).

F. Evidence

Reference or Declaration	Date	Exhibit No.
U.S. Patent Application Publication No. 2011/0122153 A1 ("Okamura")	May 26, 2011	Ex. 1004
U.S. Patent No. 6,714,215 B1 ("Flora")	March 30, 2004	Ex. 1005
U.S. Patent Application Publication No. 2011/0163971 A1 ("Wagner")	July 7, 2011	Ex. 1006
U.S. Patent Application Publication No. 2010/0172551 A1 ("Gilley")	July 8, 2010	Ex. 1007
Declaration of Benjamin Bederson, Ph.D.	Sept. 3, 2021	Ex. 1002
Reply Declaration of Benjamin Bederson, Ph.D.	Aug. 29, 2022	Ex. 1038
First Declaration of Professor Glenn Reinman	Dec. 17, 2021	Ex. 2001
Second Declaration of Professor Glenn Reinman	June 6, 2022	Ex. 2038

G. Asserted Grounds of Unpatentability

Claim(s) Challenged	35 U.S.C. §[3]	Reference(s)
1–7	103(a)	Okamura, Flora
1-7	103(a)	Okamura, Flora, Wagner
1–7	103(a)	Okamura, Flora, Gilley
1–7	103(a)	Okamura, Flora, Wagner, Gilley

Pet. 4.

II. ANALYSIS

A. Principles of Law: Obviousness

A claim is unpatentable as obvious under 35 U.S.C. § 103 if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious 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 skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary

[3] The Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. § 103. The '228 patent claims priority to Patent Application No. 13/157,214, providing an effective filing date of June 9, 2011. *See* Ex. 1001, code (63). Because this priority date is before the effective date of the applicable AIA amendments (March 16, 2013), we use the pre-AIA version of 35 U.S.C. § 103 in this proceeding.

considerations.[4] *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

The Supreme Court has made clear that we apply "an expansive and flexible approach" to the question of obviousness. *KSR*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. Reaching this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.*

B. Level of Ordinary Skill

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). "The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry." *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991).

[4] The current record does not present or address any evidence of nonobviousness.

Petitioner contends that a person of ordinary skill in the art "would have had at least a bachelor's degree in computer science, electrical engineering, or a related field, and at least two years of academic or industry experience in software development related to content management systems and user interfaces," and that "[m]ore education can supplement practical experience and vice-versa." Pet. 8 (citing Ex. 1002 ¶ 23).

Patent Owner does not provide a description of a person of ordinary skill in the art but "does not dispute Petitioner's proposed level of skill." PO Resp. 26.

Petitioner's description of the level of ordinary skill is generally consistent with the subject matter of the '228 Patent, with the exception of the qualifier "at least," which creates a vagueness that may extend the level to that reflecting an expert. Based on the record presented, including our review of the '228 patent and the types of problems and solutions described in the '228 patent and the cited prior art, we determine that a person of ordinary skill in the art is a person with a bachelor's degree in computer science, electrical engineering, or a related field, with two years of academic or industry experience in software development related to content management systems and user interfaces.

C. Claim Construction

Pursuant to 37 C.F.R. § 42.100(b), we apply the claim construction standard as set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Under *Phillips,* claim terms are generally given their ordinary and customary meaning as would be understood by one with ordinary skill in the art in the context of the specification, the prosecution

history, other claims, and even extrinsic evidence including expert and inventor testimony, dictionaries, and learned treatises, although extrinsic evidence is less significant than the intrinsic record. *Phillips*, 415 F.3d at 1312–17. Usually, the specification is dispositive, and it is the single best guide to the meaning of a disputed term. *Id.* at 1315.

Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Matal*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (in the context of an *inter partes* review, applying *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner asserts that "no terms of the '228 patent warrant construction beyond their ordinary and customary meaning." Pet. 8.

Patent Owner "does not believe claim construction is required because the plain and ordinary meaning of the claims is clear." PO Resp. 26.

For purposes of this Decision, we agree with the parties that no claim terms require express construction. *See Vivid Techs.*, 200 F.3d at 803 (holding that only terms that are in controversy need to be construed, and "only to the extent necessary to resolve the controversy"). To the extent that the meaning of any claim term is addressed, we use its ordinary and customary meaning as discussed in our analysis below.

D. Relevant Prior Art

1. Okamura (Ex. 1004)

Okamura is titled "Information Processing Apparatus, Information Processing Method, and Program" and "relates to . . . an information processing apparatus which displays contents such as image files, an

information processing method, and a program for causing a computer to execute the information processing method." Ex. 1004, code (54), ¶ 2. The image files may be digital files, such as "image files recorded by an image capturing apparatus such as a digital still camera," and Okamura's information processing apparatus (i) calculates transformed coordinates for each of a plurality of superimposed images associated with coordinates in a background image, by transforming coordinates of other superimposed images with respect to one superimposed image as a reference image in such a way that coordinate intervals within a predetermined area with respect to the reference image become denser with increasing distance from the reference image toward the boundary, (ii) sets coordinates of the reference image on the basis of a mean value obtained by calculating a mean of the calculated coordinates of the other superimposed images with respect to the reference image, and (iii) displays the background image and the plurality of superimposed images on a display section in such a way that the reference image is placed at the set coordinates in the background image. *Id.* at code (57) (Abstract), ¶ 91.

In Okamura, in accordance with an operational input for activating a content playback application, an index screen is displayed on a display. *Id.* ¶ 233. An index screen is a display screen that displays a listing of clusters (including image files, such as still image files) from which to select a desired cluster. *Id.* ¶¶ 125, 233, 139 ("Clustering refers to grouping (classifying) together a plurality of pieces of data within a short distance from each other in a data set" where "[t]he distance between contents refers to the distance between the positions (such as geographical positions,

positions along the temporal axis, or positions along the axis representing the similarity between faces) of two points corresponding to contents. A cluster is a unit in which contents are grouped together by clustering."). Examples of displays of index screens are shown in Figures 18 to 21. *Id.* ¶ 233. When a desired cluster is determined by a user operation on the index screen shown in each of Figures 18 to 21, a content playback screen is thereafter displayed. *Id.* ¶ 248.

Figures 18 and 19 of Okamura, reproduced below, are examples of display of index screens that display cluster maps as index images. *Id.* ¶¶ 38–39, 234.

FIG. 18

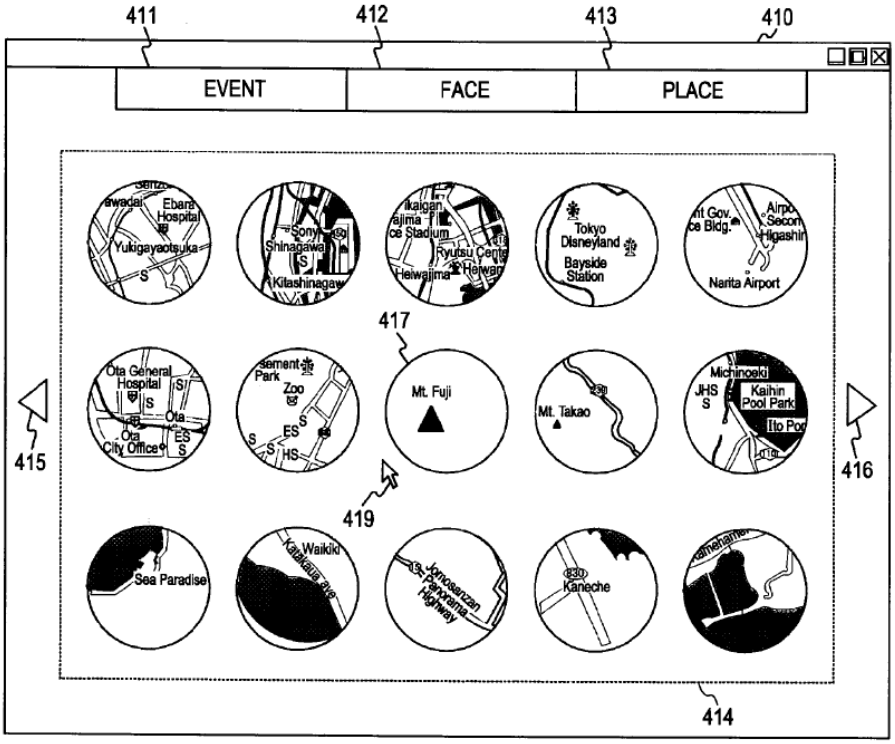


Figure 18 is an example of a display of an index screen. *Id.* ¶ 38.

FIG. 19

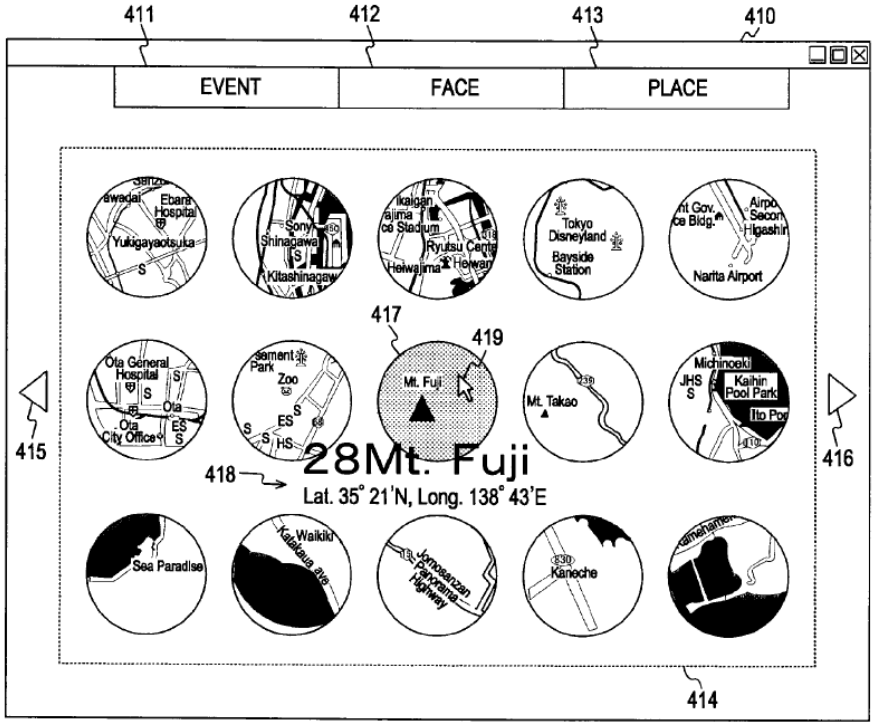


Figure 19 is another example of a display of an index screen. *Id.* ¶ 39.

As shown above in Figures 18 and 19, a cursor (mouse pointer) 419 that moves with the movement of a mouse is displayed on the screen shown on the display. *Id.* ¶ 234. The cursor 419 is a mouse pointer used to point to an object of instruction or operation on the screen displayed on the display section 181. *Id.* As shown in Figure 18, an "EVENT" tab 411, a "FACE" tab 412, a "PLACE" tab 413, a cluster map display area 414, and left and right buttons 415 and 416 are provided on an index screen 410. *Id.* ¶ 235. "EVENT" tab 411, "FACE" tab 412, and "PLACE" tab 413 are tabs for displaying another index screen. *Id.* ¶ 236. In the cluster map display area 414, a listing of marks (cluster maps) representing clusters is displayed. *Id.* ¶ 237. For example, as shown in Figure 18, cluster maps of the same size are displayed in a 3×5 matrix fashion, for example. *Id.* ¶ 237.

When the mouse is placed over a cluster map 417 by a user operation on index screen 410 shown in Figure 18, as shown in Figure 19, the color of the cluster map 417 is changed, and pieces of information 418 related to the cluster map 417 are displayed. *Id.* ¶ 240. For example, the entire cluster map 417 is changed to a conspicuous color (for example, grey) and displayed. *Id.* As the pieces of information 418 related to the cluster map 417, for example, the number of contents "28" belonging to a cluster corresponding to the cluster map 417, and the cluster title "Mt. Fuji" of the cluster are displayed. *Id.* Also, as the pieces of information 418 related to the cluster map 417, for example, information on the latitude and longitude of the center position of the cluster corresponding to the cluster map 417, "Lat. 35°21'N, Long. 138°43'E," is displayed. *Id.* As pieces of information 418 related to cluster map 417, information indicating the size of the cluster may be also displayed together. *Id.* ¶ 241. For example, the diameter of a circle corresponding to the cluster can be displayed indicating kilometers. *Id.* In order to allow the user to intuitively grasp whether the size of a circle corresponding to a cluster is large or small, display of icons or color can be made to differ depending on whether the size is large or not. *Id.* More particularly, Okamura explains:

> when comparing an urban area and a rural area with each other, it is supposed that while buildings, roads, and the like are densely packed in the urban area, in the rural area, there are relatively many mountains, farms, and the like, and there are relatively few buildings, roads, and the like. For this reason, the amount of information in a map often differs between the urban area and the rural area. Due to this difference in the amount of information in a map, it is supposed that when cluster maps of the urban area and rural area are displayed simultaneously, the user feels a

> difference in the perceived sense of scale between the urban area and the rural area. Accordingly, for example, by displaying these cluster maps in different manners depending on whether the size of a circle corresponding to a cluster is large or small, it is possible to prevent a difference in the perceived sense of scale between the urban area and the rural area, and intuitively grasp whether the size of a circle corresponding to a cluster is large or small. Also, as the pieces of information 418 related to the cluster map 417, other pieces of information such as the time range of the corresponding contents may be displayed.

Id. ¶ 241.

Figure 20 of Okamura, reproduced below, shows an example of a display of an index screen that displays index images generated on the basis of date and time information, and Figure 21 of Okamura, reproduced below, shows an example of a display of an index screen that displays index images generated on the basis of face information. *Id.* ¶ 234.

FIG. 20

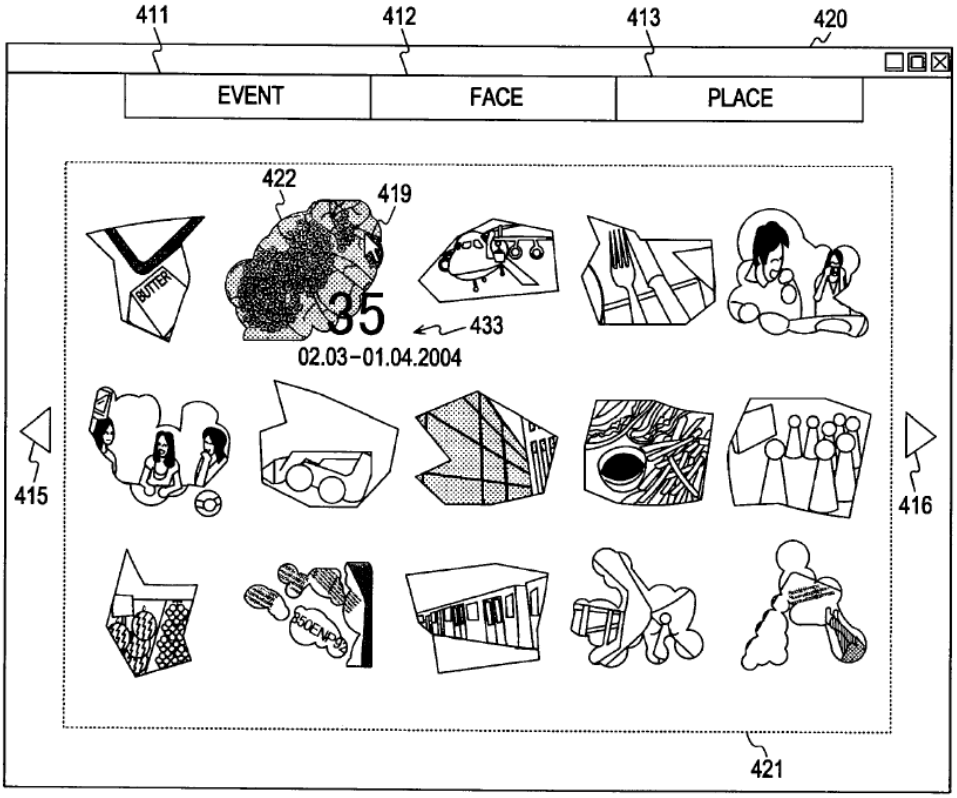


Figure 20 shows an example of a display of an index screen that displays index images generated on the basis of date and time information. *Id.* ¶ 234.

FIG. 21

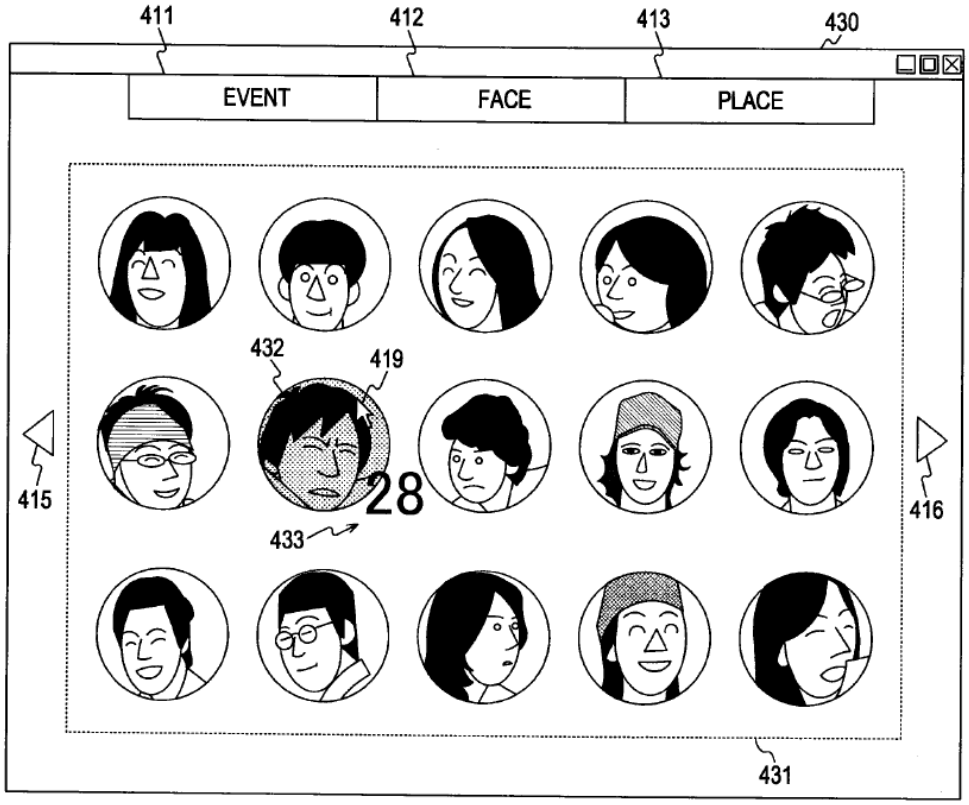


Figure 21 shows an example of display of an index screen that displays index images generated on the basis of face information. *Id.* ¶ 234.

As shown in Figure 20, above, "EVENT" tab 411, "FACE" tab 412, "PLACE" tab 413, left and right buttons 415 and 416, and event cluster image display area 421 are provided on index screen 420. *Id.* ¶ 242. When the mouse is placed over a thumbnail image 422 by a user operation on the index screen 420 shown in Figure 20, the color of the thumbnail image 422 changes, and pieces of information 423 related to the thumbnail image 422 are displayed. *Id.* ¶ 245.

And, as shown in Figure 21, "EVENT" tab 411, "FACE" tab 412, "PLACE" tab 413, left and right buttons 415 and 416, and face cluster image display area 421 are provided on index screen 430. *Id.* ¶ 243. In the face

cluster image display area 431 shown in Figure 21, images representing face clusters are displayed. *Id.* ¶ 246. Images representing face clusters may be thumbnail images of faces included in contents belonging to the face cluster. *Id.* To obtain a thumbnail image of a face, faces included in the contents belonging to the face cluster are extracted, the best-shot face is selected from among these extracted faces, and the thumbnail image of this selected face is used as the thumbnail image. *Id.* Thumbnail images are displayed, for example, in a 3×5 matrix fashion in the same manner as in Figure 18. *Id.* When the mouse is placed over a thumbnail image 432 by a user operation on the index screen 430 shown in Figure 21, the color of the thumbnail image 432 changes, and pieces of information 433 related to the thumbnail image 432 are displayed. *Id.* ¶ 247. As the pieces of information 433 related to the thumbnail image 432, for example, the number of contents "28" belonging to a cluster corresponding to the thumbnail image 432 is displayed. *Id.*

2. Flora (Ex. 1005)

Flora is titled "System and Method for Displaying Media Interactively on a Video Display Device" and "relates to an interactive map that allows users to display different items of visual and/or audio media corresponding to a location on the geographic map." Ex. 1005, code (54), 1:7–12. Flora's graphical user interface (GUI) allows a user to directly access items of visual and/or audio media by passing a cursor over points on an electronic map. *Id.* at code (57) (Abstract).

Figure 2 of Flora, reproduced below, illustrates a display screen of a software program that illustrates the display of a media icon in response to a selection of a location on an electronic geographic map. *Id.* at 2:66–3:2.

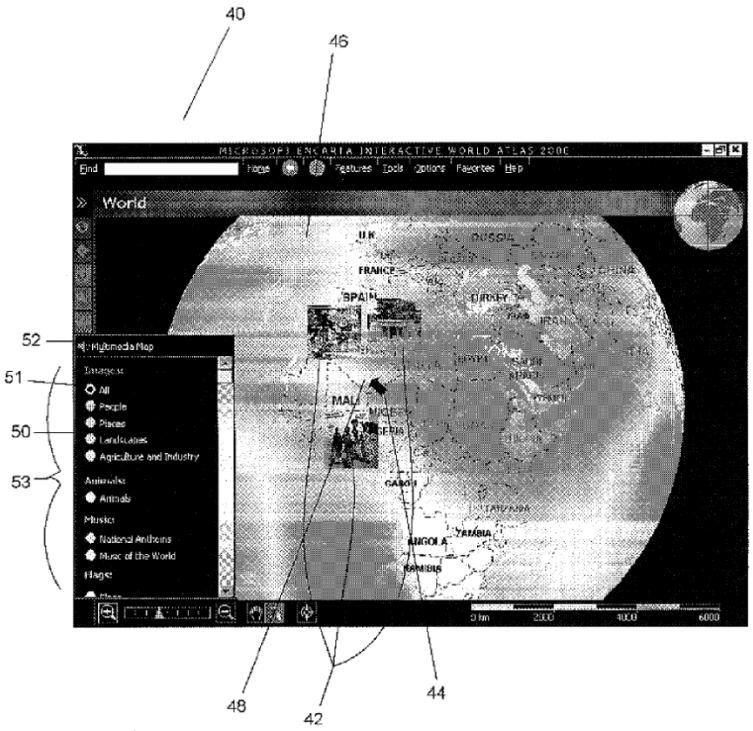


FIG. 2

Figure 2 illustrates a display screen of a software program that illustrates the display of a media icon in response to a selection of a location on an electronic geographic map. *Id.*

In Figure 2, above, media items, represented by icons 42 (or "thumbnail" versions), are displayed when a position indicator (cursor 44), is moved proximate to certain locations on an electronic geographic map 46. *Id.* at 6:5–21. Icons 42 notify the user that media items are associated with predetermined coordinates or "locations" on the map that are proximate to the position of the cursor 44. *Id.* The icons 42 also provide the user with a

visual object to select with the "click" of a mouse button (or another conventional mechanism) to obtain direct access to the content of the associated media items. *Id.* Flora explains that "[a]ll map locations are not necessarily associated with media items" and "if the user moves the cursor 44 to a new location on the electronic map, the icons 42 displayed proximate to the old location will eventually disappear or fade after a pre-determined period of time." *Id.* If content is associated with the new location, however, new icons will appear proximate to the new cursor position. *Id.*

Flora provides that the geographic map 46 of the globe is scalable and can show fine levels of geography, such as individual cities and towns. *Id.* at 6:22–41. The user may interact with a displayed icon 42 to gain access to further information regarding the subject of the displayed icon. *Id.* For example, the user can quickly see what media items, if any, are available at a chosen location by moving the cursor over an area of the map 46 proximate to that location. *Id.* For visual media, the user is presented with icons 42 or "thumbnail" versions of the available media items associated with one or more locations proximate to the position of the cursor 44. *Id.* In Figure 2, a user has restricted the categories of media to "images" by using media menu 50, such that the user is presented with various types of media for a selected graphical content, such as an electronic map. *Id.* at 6:42–65, 7:53–63.

Figure 3 of Flora, reproduced below, illustrates a display screen of a software program that illustrates the display of a full-size image of an item of visual media in direct response to a user clicking on a visual media icon on an electronic geographic map. *Id.* at 3:2–6.

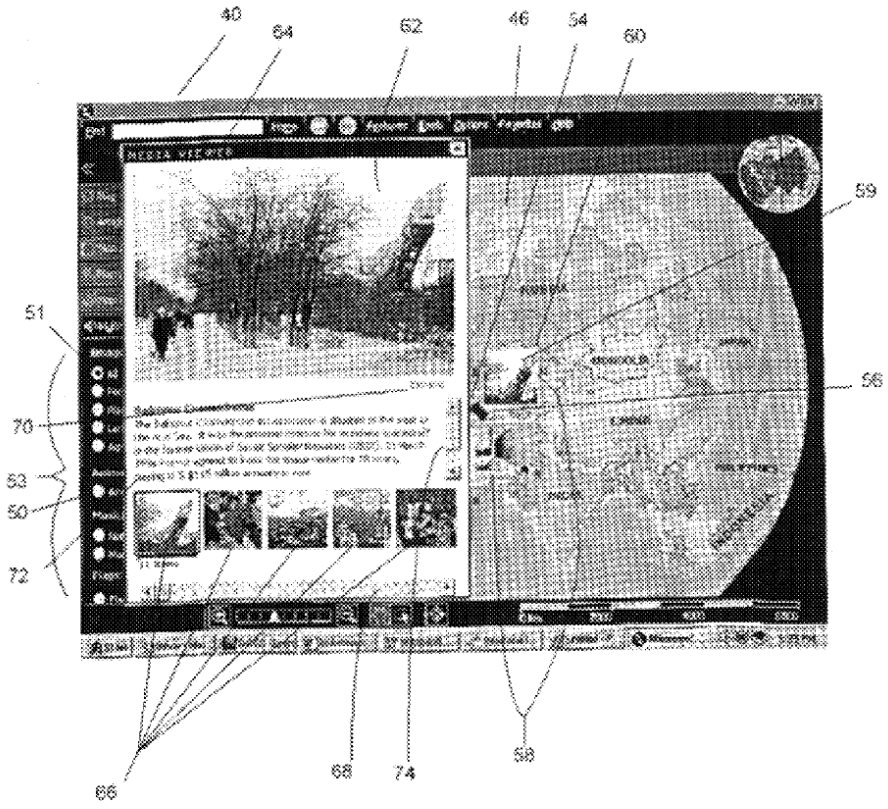


FIG. 3

Figure 3 illustrates a display screen of a software program that illustrates the display of a full-size image of an item of visual media in direct response to a user clicking on a visual media icon on an electronic geographic map. *Id.*

In the view illustrated in Figure 3, above, a user has restricted the type of media to be presented to "images," and has passed the cursor 56 over the map to a position that is proximate to locations associated with images, and in response to this user input, the user is presented with icons 58 representing images associated with the locations proximate to the cursor 56. *Id.* at 6:66–7:8. In Figure 3, multiple visual media items are associated with

the locations proximate to cursor 56 that have associated media items. *Id.* at 7:8–22. Only a single icon 59 can be presented for each specific location in a reduced-pixel or "thumbnail" format due to the limited size of the geographic map 46. *Id.* In order for the user to be presented with all icons for available media, icons representing the pertinent media items at the same location on the geographic map are consecutively displayed to the user, by scrolling among the available icons ("cycling"). *Id.* Thus, an icon representing each additional media item that is available for the locations proximate to the cursor 56 will cycle in the same icon window 60 as the initially displayed icon 59. *Id.*

In Figure 3, the user has moved the cursor 56 so as to contact one of the presented icons 59, and has selected the icon 59 so as to be given direct access to a full-size display of one of the media items 62 represented by the icon 59. *Id.* at 7:23–42. To provide such access, an additional window (media viewer) 64 is opened and displays the full-size image of the media item 62 therein. *Id.* The user can also access all other media items associated with the map location and that are cycled in the icon window 60 by selecting among the icons 66 associated with those other media items from a scrolling list 68 of icons 66 within the media viewer 64. *Id.* In order to access the additional media items, the user can contact the desired media item's icon 66 with the cursor 56 and select the media item through a mouse click. *Id.* Through media viewer 64, the user is also able to execute a hyperlink 70 and display an expanded version of the visual media item. *Id.* at 7:43–52.

3. Wagner (Ex. 1006)

Wagner is titled "Device, Method, and Graphical User Interface for Navigating and Displaying Content in Context," and "relates generally to electronic devices with touch-sensitive surfaces, including but not limited to electronic devices with touch-sensitive surfaces that are used to display and navigate through content." Ex. 1006, code (54), ¶ 2. Wagner describes an electronic device that displays one or more thumbnails, detects a first multi-contact gesture that includes movement of a first contact and a second contact, and, in response to detecting the first multi-contact gesture, the device displays content associated with a respective thumbnail, and enlarges the content associated with the respective thumbnail to a respective enlarged size in accordance with the first multi-contact gesture. *Id.* at code (57) (Abstract). The device further detects termination of the first multi-contact gesture, and, in response, performs the following operations: when a resizing metric based on the first multi-contact gesture is below a predefined threshold, the device ceases to display the content at the respective enlarged size; and, when the resizing metric based on the first multi-contact gesture is above the predefined threshold, the device displays the content on the display in a predefined arrangement. *Id.*

4. Gilley (Ex. 1007)

Gilley is titled "Organizing Images by Correlating Faces," and "relates to organizing images, such as digital images, by correlating one or more faces represented in the images." Ex. 1007, code (54), ¶ 2. Gilley describes methods and systems that perform the following operations: generate a correlation value indicating a likelihood that a face included in a

test image corresponds to a face associated with a base image; determine that a correlation threshold exceeds the correlation value and that the correlation value exceeds a non-correlation threshold; generate a similarity score based on one or more exposure values and one or more color distribution values corresponding to the test image and the base image; combine the similarity score with the correlation value to generate a weighted correlation value; and determine that the test image and the base image are correlated when the weighted correlation value exceeds the correlation threshold. *Id.* at code (57) (Abstract).

E. Ground 4 - Obviousness over Okamura, Flora, Wagner, and Gilley

For Ground 4, Petitioner asserts that claims 1–7 are unpatentable as obvious under 35 U.S.C. § 103 over the combined teachings of Okamura, Flora, Wagner, and Gilley. Pet. 95–96.[5] With respect to independent claim 1, Patent Owner specifically contests Petitioner's evidence and arguments directed to limitations [1b], [1d], [1e], [1g], [1j], [1n], and [1p]. PO Resp. 75–77. Patent Owner does not specifically contest Petitioner's evidence or arguments with respect to the other limitations of claim 1. *Id.* Patent Owner also contests Petitioner's evidence and arguments regarding dependent claims 2–7, as well as Petitioner's rationale to combine the asserted art. *Id.* at 76, 78. We address the parties' evidence and arguments with respect to the contested limitations first.

[5] For Ground 4, Petitioner relies in substantial part on the evidence and arguments it provides for Grounds 1–3. *See* Pet. 95–96. Patent Owner does the same. *See* PO Resp. 75–78.

1. Claim 1

Patent Owner contests Petitioner's evidence and arguments regarding the "interactive map" limitations [1b]–[1e][6] of claim 1. Limitations [1b]–[1e] recite the following:

[1b] responsive to a first input, causing a map view to be displayed on an interface,

[1c] the map view including: (i) an interactive map;

[1d] (ii) a first location selectable thumbnail image at a first location on the interactive map; and

[1e] (iii) a second location selectable thumbnail image at a second location on the interactive map;

a) Contested Limitations [1b]–[1e] – interactive map view

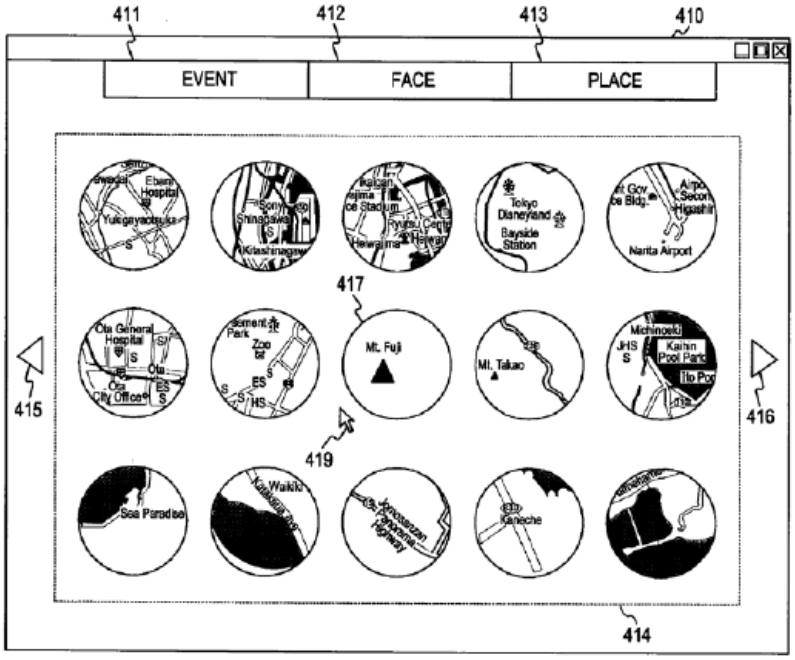
(1) Petitioner's Arguments

Limitation [1b] recites "*responsive to a first input, causing a map view to be displayed on an interface.*" For this limitation, Petitioner relies on Okamura's "content playback application [that] displays a screen having FACE tab 412 and PLACE tab 413, where each tab is selectable by depressing cursor 419 on a desired tab." Pet. 14 (citing Ex. 1004 ¶¶ 91, 232–247, Figs. 17–21).

Okamura's Figure 18 is shown below.

[6] Patent Owner does not specifically contest the preamble [1a] "a method comprising." *See* PO Resp. 33–78.

FIG. 18



Okamura's Figure 18, above, is a diagram showing an example of a display of index screen 410 displaying cluster maps, e.g., 417, in cluster map display area 414 as index images, with EVENT tab 411, FACE tab 412, and PLACE tab 413. Ex. 1004 ¶¶ 234–237. Petitioner explains that "[w]hen the 'PLACE' tab 413 is depressed using the cursor 419 by a user operation (*responsive to a first input*), cluster map display area 414 is displayed (*causing a map view to be displayed*) on a display interface of the content playback application (*on an interface*)." Pet. 14–15 (citing 1004 ¶¶ 232–241, Figs. 17–19).

According to Petitioner, "[c]luster map display area 414 is a *map view* because it has cluster maps 417, which are geographic areas of a map showing where media content (e.g., digital images) have been captured." Pet. 15 (citing Ex. 1004 ¶¶ 232–241, *see also id.* ¶¶ 18, 110, 130–135 (describing a displayed cluster map as "a map image formed by a map

included in a circle corresponding to each cluster"), 139, 213, 275–281, Figs. 27A–27B (discussing a modification to cluster map display area 414 where map display area 282 is displayed); Ex. 1002 ¶¶ 69–70).

Alternatively, Petitioner asserts that "[i]f the Board finds Okamura does not disclose or render obvious the claimed *interface*, Wagner discloses or at least renders obvious the *interface* in the form of software application 136-1's application view 191 that is a 'user interface window . . . in which information is displayed' and inputs (e.g., via touch, mouse clicks) are received." Pet. 70 (citing Ex. 1006 ¶¶ 108–109, 115, 120, 130–132, Fig. 1C; *id.* ¶¶ 66–86, 105).

Petitioner explains that "[b]ased on a detected event (e.g., a touch or mouse input), an application view 191 user interface window is updated to display new user interface objects such as 'digital images, video, text files, audio files, icons, and other graphics' or have the position(s) of displayed objects changed." Pet. 70 (citing Ex. 1006 ¶¶ 4, 45, 105–109, 115, 120, 128, 130–132, Fig. 1C).

Limitation [1c] recites *"the map view including: (1) an interactive map."* For this limitation, Petitioner asserts that " Okamura alone, or Okamura and Flora, discloses or at least renders obvious limitation [1c]." Pet. 18.

According to Petitioner, "Okamura's cluster map display area 414 (*the map view*) includes cluster maps 417 arranged in a 3x5 matrix (*an interactive map*). Pet. 18 (citing Ex. 1004 ¶¶ 234–241, Figs. 18–19).

Petitioner explains that

> The arranged cluster maps 417 form *an interactive map* because they show geographic map areas where content has been captured, and when mouse cursor 419 is "placed over a cluster map 417 by a user operation on the index screen 410," the "color of the cluster map 417 is changed" and "pieces of information 418 related to the cluster map 417" are displayed, making the map arrangement *interactive*.

Pet. 19 (citing Ex. 1004 ¶¶ 18, 110, 130–135, 139, 213, 232–248, 275–281, Figs. 18–19; Ex. 1002 ¶ 76).

Alternatively, Petitioner argues that "[i]f Okamura is not found to disclose or render obvious *an interactive map*, Flora discloses or at least renders obvious this element." Pet. 20. According to Petitioner, "Flora describes a GUI having scalable geographic map 46 (*an interactive map*) with 'icons . . . (or thumbnail versions)' of 'media items,' such as icons 58 and 59, positioned at various map locations of the map." Ex. 1005, 5:65–6:11, 6:66–7:42, Figs. 2, 3.

Flora's Figure 3 is shown below.

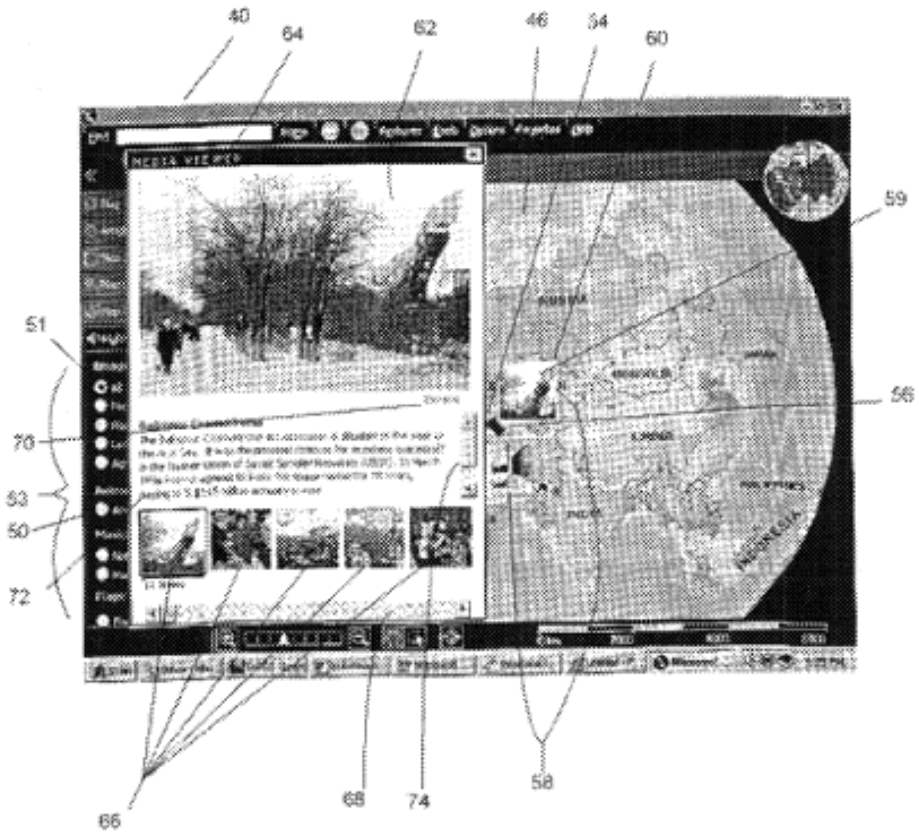


FIG. 3

Flora's Figure 3, above, shows a display screen of a software program that illustrates the display of a full-size image of an item of visual media in direct response to a user clicking on a visual media icon on an electronic geographic map. *Id.* at 3:3–6. Flora's Figure 3 shows media viewer 64 displaying geographic map 46 with cursor 56 and icons 58 and 59, representing images associated with locations proximate to cursor 56. *Id.* at 7:9–34.

Petitioner asserts that

> Flora's scalable geographic map 46 with icons 58 and 59 is *an interactive map* because (1) it is "scalable and can show fine

> levels of geography, such as individual cities and towns," where the map can be scaled upwards (e.g., zoomed out) or downwards (e.g., zoomed in) and categories of media displayed on the map via icons can be filtered; (2) a user can "click" an icon (e.g., using a mouse), interacting with the map to "obtain direct access to the content of the associated media item;" and (3) if a user's mouse cursor is moved to a new map location, "icons [] displayed proximate to the old location will eventually disappear or fade away" and, if present, "new icons will appear proximate to the new cursor position." *Id.*, 6:11-7:42, Figs. 2, 3; *id.*, 2:4-37 (describing Flora's GUI displaying the map is "interactive" and allows a user to "interact with a geographic map").

Pet. 21–22 (citing Ex. 1002 ¶¶ 77–80).

Limitation [1d] recites "*a first location selectable thumbnail image at a first location on the interactive map.*" For this limitation, Petitioner asserts that "Okamura and Flora disclose or at least render obvious limitation [1d]." Pet. 28. Petitioner asserts that "Okamura's cluster map display area 414 (*map view*) includes the display of content as taught by Flora's scalable geographic map 46 having icons 58 and 59 representing the locations where Okamura's content was captured." *Id.* Petitioner explains that

> Flora describes a first of the multiple selectable icons 58 and 59 (*a first location selectable thumbnail image*) displayed at a first location (*at a first location*) on scalable geographic map 46 (*on the interactive map*), where each icon 58 and 59 (including the first) is a *selectable thumbnail image* because they are each an "icon[] . . . (or thumbnail version[])" of a "media item[]."

Id. (citing Ex. 1005, 5:65–6:11, 7:4–13, Figs. 2, 3) (alterations in original).

Petitioner explains that "Flora states icons 58 and 59 can be presented for each specific location on map 46 in a 'reduced-pixel or "thumbnail" format,'" and that "[e]ach icon 58 and 59 is *selectable* by a 'user input, such

as a mouse click,' which opens media viewer window 64." Pet. 28 (citing Ex. 1005, 7:4–42, Fig. 3).

Limitation [1e] recites *"a second location selectable thumbnail image at a second location on the interactive map."* Petitioner asserts that Okamura and Flora disclose or at least render obvious limitation [1e]. "In the combination, Okamura's cluster map display area 414 (*map view*) includes the display of content as taught by Flora, which describes a second of the multiple selectable icons 58 and 59 (*a second location selectable thumbnail image*) displayed at a second location (*at a second location*) different from the first location on scalable map 46 (*on the interactive map*)." Pet. 29–30 (citing Ex. 1005, 5:65–6:11, 7:4–13, 7:23–42, Figs. 2, 3). According to Petitioner, "[e]ach icon 58 and 59 (including the second) is a *selectable thumbnail image.*" Pet. 30.

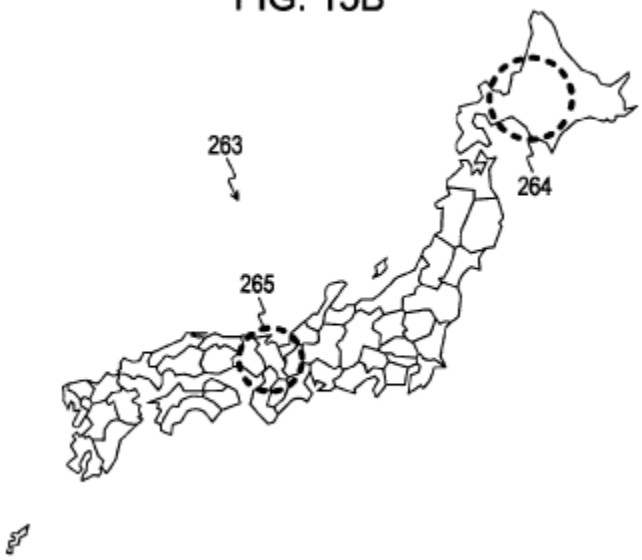
(2) Patent Owner's Arguments

(a) Limitation [1c] "interactive map"

Patent Owner argues that "[t]he term 'interactive map' requires a 'map,'" and "[t]he 3x5 matrix consisting of an array of 15 cluster maps of Okamura is not itself a 'map.'" PO Resp. 35 (citing Ex. 2038 ¶¶ 96–97). Patent Owner argues that "Okamura describes Fig. 15B as showing a 'a map 263 of the Japanese archipelago,' and explains that individual 'cluster maps are extracted from a map 263 of the Japanese archipelago' at extraction area 263." PO Resp. 35–36 (citing Ex. 1004 ¶ 226; Ex. 2038 ¶ 98).

Okamura's Figure 15B is shown below.

FIG. 15B



Okamura's Figure 15B, shown above, is a diagram showing an example of a map generated by a cluster information generating section. Ex. 1004 ¶¶ 35, 224. An extraction area of the map is indicated by a thick dotted circle. *Id.* ¶ 224.

According to Patent Owner, "In Okamura, each individual 'cluster map' is an excerpt of a larger map (e.g., the map of FIG. 15B), and FIG. 18 displays the cluster maps as index images in the cluster map display area 414." PO Resp. 36 (citing Ex. 1004 ¶¶ 234–235; Ex. 2038 ¶ 98). Patent Owner argues, "[t]his index (or array or matrix) of these index images (cluster maps) itself is not a map; at most, it is a compilation of excerpts of a map." *Id*.

Patent Owner argues that Petitioner "provides no obviousness analysis based on Okamura's cluster maps," and that "Dr. Bederson likewise did not offer any opinions on this theory." PO Resp. 36 (citing Pet. 18–19; Ex.

1002, 76). "Accordingly," Patent Owner argues, "Petitioner failed to meet its burden to demonstrate that limitation [1c] is obvious over Okamura alone." PO Resp. 36.

(b) Limitations [1b], [1d], [1e] first and second thumbnail images

With respect to these limitations, Patent Owner argues that "the claimed 'map view' displayed *in response to* the 'first input' must 'includ[e]' first and second 'thumbnail image[s] … on the interactive map.'" PO Resp. 52. Patent Owner argues that "[n]owhere, however, does Okamura or Flora, alone or in combination, disclose that the 'map view' displayed *in response to* the 'first input' would 'includ[e]' first and second 'thumbnail image[s] … on the interactive map' as claimed." *Id.* (citing Ex. 2038 ¶¶ 140–141). Patent Owner argues that "[i]f Okamura and Flora were combined as Petitioner proposes, the PLACE tab 413 (*first input*), would only cause Okamura's cluster map display area 414 (*map view*) and Flora's geographic map 46 (*interactive map*) to be displayed without Flora's icons 58, 59 (*thumbnail image[s]*) 'on the interactive map' as claimed." PO Resp. 52–53.

Patent Owner argues that "Flora makes clear that icons 58 and 59 of Fig. 3 (*first / second thumbnail images*) are not included 'on the interactive map' in response to a 'first input.'" *Id.* at 53. "Rather," Patent Owner argues, "assuming the thumbnail images are displayed at all, they are only displayed *after* the user provides an ***entirely separate*** 'user input.'" *Id.* (quoting Ex. 1005, 6:67–7:8; citing Ex. 2035, 71:4–25). According to Patent Owner, "[t]he so-called 'user input' of 'pass[ing] the cursor 56 over the

map' is ***not*** the Okamura PLACE tab 413 item that Petitioner identified as the claimed 'first input.'" PO Resp. 53 (citing Ex. 1005, 6:67–7:8; Ex. 2038 ¶ 142).

Patent Owner argues that "Petitioner has not identified any user input other than depressing Okamura's PLACE tab 413." PO Resp 53 (citing Pet. 14). "The Petition," Patent Owner argues, "is entirely silent on the requirement that the claimed 'map view' displayed *in response to* the 'first input' must 'includ[e]' first and second 'thumbnail image[s] … on the interactive map' and declines to proffer an alleged modification of Flora or Okamura addressing this deficiency." *Id.* at 53–54.

(3) Analysis

Patent Owner's first argument with respect to these limitations is that "[t]he term 'interactive map' requires a 'map,'" and "[t]he 3x5 matrix consisting of an array of 15 cluster maps of Okamura is not itself a 'map.'" PO Resp. 35 (citing Ex. 2038 ¶¶ 96–97).

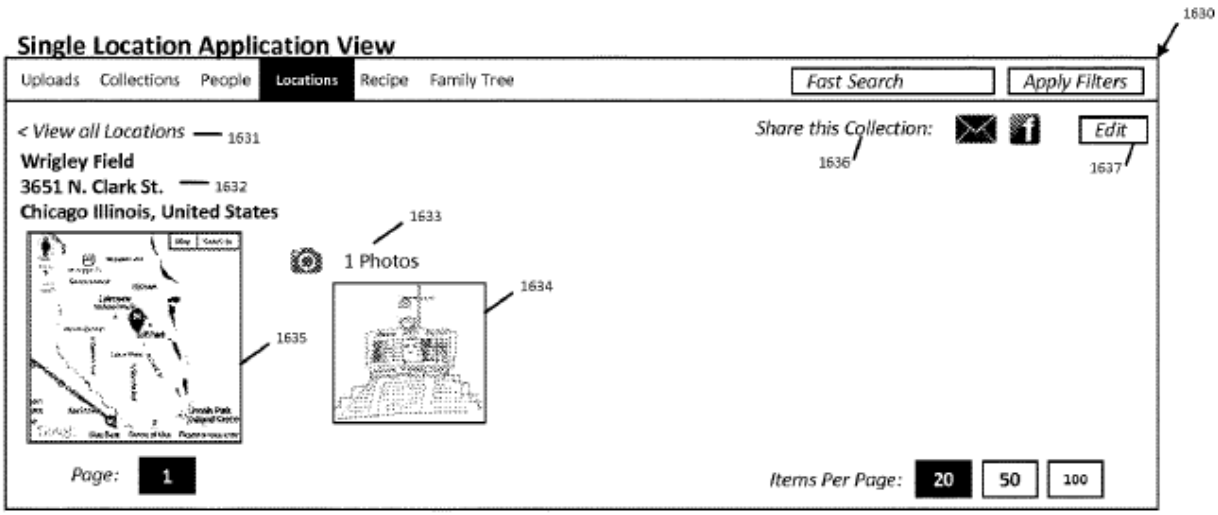
Petitioner provides two alternative prior art teachings for the recited "interactive map" of claim 1. First, Petition asserts that "Okamura's cluster map display area 414 (*the map view*) includes cluster maps 417 arranged in a 3x5 matrix (*an interactive map*). Pet. 18 (citing Ex. 1004 ¶¶ 234–241, Figs. 18–19). Second, Petitioner argues that "[i]f Okamura is not found to disclose or render obvious *an interactive map*, Flora discloses or at least renders obvious this element." Pet. 20. According to Petitioner, "Flora describes a GUI having scalable geographic map 46 (*an interactive map*) with 'icons [] (or thumbnail versions)' of 'media items,' such as icons 58

and 59, positioned at various map locations of the map." Pet. 20 (citing Ex. 1005, 5:65–6:11, 6:66–7:42, Figs. 2, 3).

Claim 1 recites a "*map view including: (1) an interactive map.*" Neither party, however, proposed any constructions for the claim terms "*map view*" or "*interactive map*". *See* Pet. 8 ("Petitioner submits no terms of the '228 patent warrant construction beyond their ordinary and customary meaning."); PO Resp 26 ("Patent Owner does not believe claim construction is required because the plain and ordinary meaning of the claims is clear").

The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art in question at the time of the invention when read in the context of the specification and prosecution history. *See Phillips*, 415 F.3d at 1313. The person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. *See Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998).

The '228 patent does not provide an express definition of the terms "*map view*" or "*interactive map*" and neither party points to one. The '228 patent does, however, provide some examples of an interactive map. For example, with respect to Figure 34, the '228 patent explains that "[a]s part of the individual Location View, an *interactive map* displaying a zoomed-in image of the specific location is displayed (1635). Ex. 1001, 24:52–54 (emphasis added). The Single Location Application View from Figure 34 of the '228 patent is shown below.



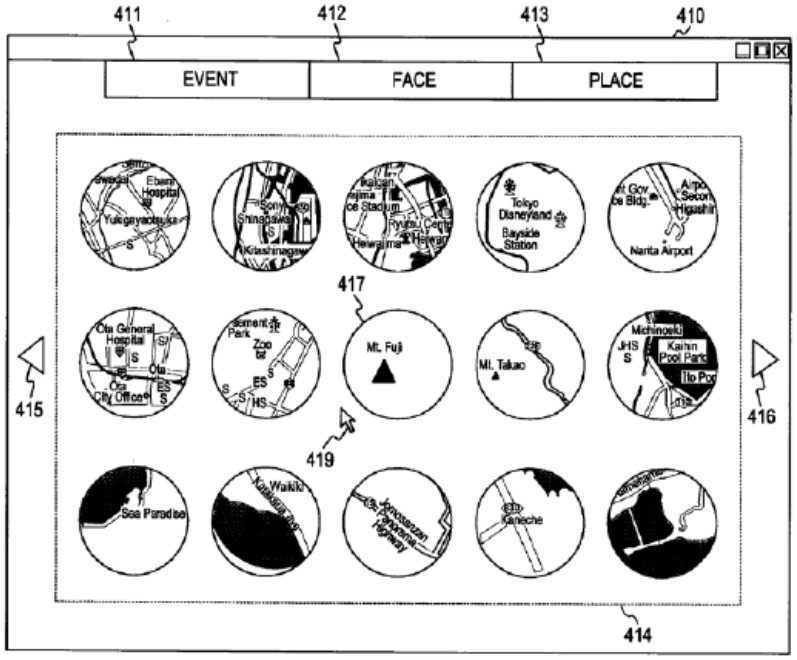
According to the '228 patent, in the Single Location Application View from Figure 34 shown above,

> a single location (1630) is illustrated. The individual location name is displayed at the top of the page (1632). Thumbnails of each Digital File within the specific collections are illustrated. In this example, the system illustrates a one photo (1633) taken at Wrigley Field (1634) that is associated with the location called Wrigley Field. . . . If the user selects View all Collections (1631), the Application will go back to the multiple Collection View (1600). As part of the individual Location View, *an interactive map displaying a zoomed-in image of the specific location is displayed* (1635).

Ex. 1001, 24:37–54 (emphasis added). In this respect then, the '228 patent illustrates that an "*interactive map*" can be presented as a "*zoomed-in image of the specific location*" as part of a larger location view.

This understanding from the '228 patent is consistent with the teaching provided in Okamura. Okamura's Figure 18 is shown below.

FIG. 18



Okamura explains that Figure 18, above, "show[s] an example of display of an index screen [410] that displays cluster maps [417] as index images." Ex. 1004 ¶ 234. Okamura describes the interactivity of these maps "when the mouse is placed over a cluster map 417 by a user operation on the index screen 410 shown in FIG. 18 . . . the color of the cluster map 417 is changed, and pieces of information 418 related to the cluster map 417 are displayed." *Id.* ¶ 240.

Dr. Bederson provides testimony consistent with this understanding. *See* Ex. 1002 ¶¶ 69–70, 76; Ex. 1038 ¶¶ 34–35. Dr. Bederson testifies that Okamura's "cluster map display area 414 is a view showing cluster maps 417, which are geographic map locations where Okamura's content, such as digital images, has been captured." Ex. 1002 ¶ 69; *see also* ¶ 76 (describing the interactive nature of Okamura's arranged cluster maps); Ex. 1038 ¶ 34.

Patent Owner, however, argues that in Okamura "each individual 'cluster map' is an excerpt of a larger map" and Okamura "displays the cluster maps as index images in the cluster map display area 414." PO Resp. 36 (citing Ex. 1004 ¶¶ 234–235; Ex. 2038 ¶ 98). Patent Owner argues that "[t]his index (or array or matrix) of these index images (cluster maps) itself is not a map; at most, it is a compilation of excerpts of a map." *Id.* Patent Owner's argument, however, is inconsistent with the example of an interactive map provided by the '228 patent, which shows how "*an interactive map*" can be displayed as "*a zoomed-in image of the specific location*" on a larger location view. Ex. 1001, 24:37–54.

Dr. Reinman testifies that "[t]he array of images shown in Okamura FIG. 18 are not a map" because they are "not laid out in a manner to form a map." Ex. 2001 ¶ 84. We find this testimony unpersuasive. Dr. Reinman does not point to anything in the '228 patent that would require such images to be "laid out in a manner to form a map," nor does Dr. Reinman explain why someone of ordinary skill in the art would expect them to be laid out in such a manner. Dr. Reinman also does not address the '228 patent's illustration that an "*interactive map*" can be shown as a "*zoomed-in image of the specific location*" as part of a larger location view. *See* Ex. 1001, 24:37–54. Moreover, neither Patent Owner nor Dr. Reinman address Petitioner's stated basis for asserting that Okamura's cluster map is "interactive" i.e. "when the mouse is placed over a cluster map 417 . . . the color of the cluster map 417 is changed." Ex. 1004 ¶ 240.

In addition to Okamura, Petitioner also provides an alternative argument that Flora "discloses or at least renders obvious the recited

"*interactive map*" limitation of claim 1. *See* Pet. 20. Petitioner asserts that "Flora describes a GUI having scalable geographic map 46 (*an interactive map*) with "icons [] (or thumbnail versions)" of "media items," such as icons 58 and 59, positioned at various map locations of the map. *Id.* (citing Ex. 1005, 5:65–6:11, 6:66–7:42, Figs. 2, 3) (parenthetical of quote in original). Patent Owner, however, does not contest Flora's teaching of this limitation. *See* PO Resp. 34–37.

Patent Owner's second argument with respect to these limitations is that "the claimed 'map view' displayed *in response to* the 'first input' must 'includ[e]' first and second 'thumbnail image[s] … on the interactive map.'" PO Resp. 52. Patent Owner argues that "[i]f Okamura and Flora were combined as Petitioner proposes, the PLACE tab 413 (*first input*), would only cause Okamura's cluster map display area 414 (*map view*) and Flora's geographic map 46 (*interactive map*) to be displayed without Flora's icons 58, 59 (*thumbnail image[s]*) 'on the interactive map' as claimed." PO Resp. 52–53.

We disagree with Patent Owner. The Petition explains that Okamura describes *responsive to a first input* (depressing PLACE tab 413), a cluster map display area 414 is displayed (*causing a map view to be* displayed) on a display interface of Okamura's content playback application (*on an interface*). Pet. 14–20. Combined with Flora, Okamura's cluster map display area 414 (*map view*) displays content as taught by Flora's geographic map 46 (*interactive map*) and media viewer 64, where Okamura's content is indicated at various locations on the map by Flora's icons 58 and 59 (*first location selectable thumbnail image*, *second location selectable thumbnail*

image). *Id.* 20–29. Patent Owner's argument that the combination would not result in displaying Flora's icons ignores Okamura and Flora's contributions to Petitioner's proposed combination. Petitioner's proposed combination relies on Flora's actual display of icons 58 and 59 on map 46 to show locations associated with media content, not whether Flora also describes that user input would display such icons. Pet. 22–27. Dr. Bederson competently explains Petitioner's basis for the proposed combination, which we credit. Ex. 1038 ¶ 64.

Patent Owner does not contest Petitioner's evidence with respect to Wagner for limitation [1b].

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets limitations [1b]–[1e]. We also find that Petitioner has demonstrated that Wagner meets limitation [1b].

b) Contested Limitations [1g], [1j] - the first (second) location view including (i) a first (second) location name associated with the first (second) location and (ii) a representation of at least a portion of one digital file in a first (second) set of digital files

(1) Petitioner's Arguments

For limitation 1[g], Petitioner argues that "Flora describes media viewer 64 for the selected first icon (*the first location view*) includes selectable icons 66 representing 'all other media items associated with the map location' of the first icon (i.e., Okamura's content captured at the location of the icon)." Pet. 33 (citing Ex. 1005, 7:23–42, Fig. 3). "In view of the combined teaching," Petitioner argues, "Flora's selectable icons 66

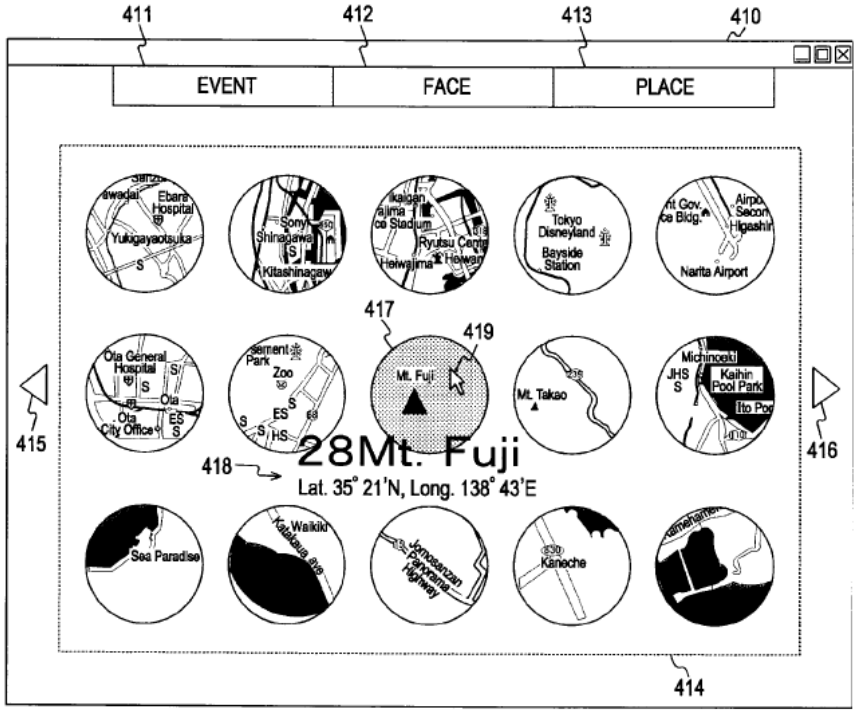
are a representation of each of Okamura's digital files (*a representation of at least a portion of one digital file*) in a set of digital files captured at the location of the first icon (*in a first set of digital files*)." Pet. 33 (citing Ex. 1004 ¶¶ 18, 91–93, 103–106, 110, 123, 130, 135–143, 213–220, 225, 232–241, 267). "The *first set of digital files*," Petitioner argues, "is the set of digital files, shown by icons 66 of the first icon's media viewer 64, captured at the location of the first icon," and "Okamura's captured content are *digital files* including 'image files' and 'moving image content' files." Pet. 33 (citing Ex. 1004 ¶¶ 2, 22, 91–92, 107–110, 139, 149, 501, Figs. 2A-2B).

Petitioner also argues that "Flora further describes media viewer 64 for the selected first icon (*first location view*) includes *a first location name associated with the first location* because media viewer 64 displays the location name associated with the location of a selected icon (including the first icon). Pet. 34 (citing Ex. 1005, 7:23–42, Fig. 3).

Petitioner further argues that Okamura in combination with Flora's media viewer 64 also renders obvious *a first location name associated with the first location* because Okamura describes displaying "'information 418' associated with content that includes the name of the location where content was captured." Pet. 35–36 (citing Ex. 1004 ¶ 240, Fig. 19). Petitioner points out that in "Figure 19 of Okamura, the *location name* 'Mt. Fuji,' corresponding to the location where content represented by cluster map 417 was captured, is displayed." Pet. 36 (citing Ex. 1004 ¶¶ 18, 110, 135–143, 213, 225, 240, Fig. 19). Petitioner argues that "'Mt. Fuji' is a displayed 'cluster title,' where cluster titles represent a *location name* because they refer to the name of a location or place; a cluster title can be a 'place name'

such as 'Tokyo-prefecture' or 'Saitama-prefecture,' or an address such as 'Tokyo-prefecture Shinagawa-ward Osaki 1-chome.'" Pet. 36 (citing Ex. 1004 ¶¶ 122–127, 136, 229, 240).

Okamura's Figure 19 is shown below.



Okamura's Figure 19, above, is a diagram showing an example of a display of index screen 410 displaying cluster maps in display area 414, with mouse cursor 419 placed over cluster map 417 displaying information 418 related to cluster map 417. Ex. 1004 ¶ 240.

Petitioner argues that combined, "Flora's media viewer window 64 for the first of the multiple selectable icons 58 and 59 (*first location view*) would have included the display of information including the location name associated with the location of a selected first icon (e.g., a 'place name' such as 'Mt. Fuji,' a prefecture, or a full address as discussed above) (*a first*

location name associated with the first location). Pet. 36–37 (citing Ex. 1004 ¶ 240, Fig. 19; Ex. 1005, 7:23–42, Fig. 3; Ex. 1002 ¶ 94).

In the alternative, Petitioner argues that "[i]f the Board finds Okamura and Flora do not disclose or render obvious displaying a *location name*, Wagner discloses or at least renders obvious this element." Pet. 74. Petitioner argues that "Wagner describes 'user interfaces for displaying and navigating through content on a map interface' in Figures 5S-5V below." *Id.* at 75 (citing Ex. 1006 ¶¶ 183, 228, Figs. 5S-5V). "In Figure 5S," Petitioner explains, "a displayed map includes pins 5026 representing content associated with geographic locations," and "Pin 5026-1 represents content 'associated with San Francisco, Calif.'" Pet. 75.

Wagner's Figure 5S is shown below.

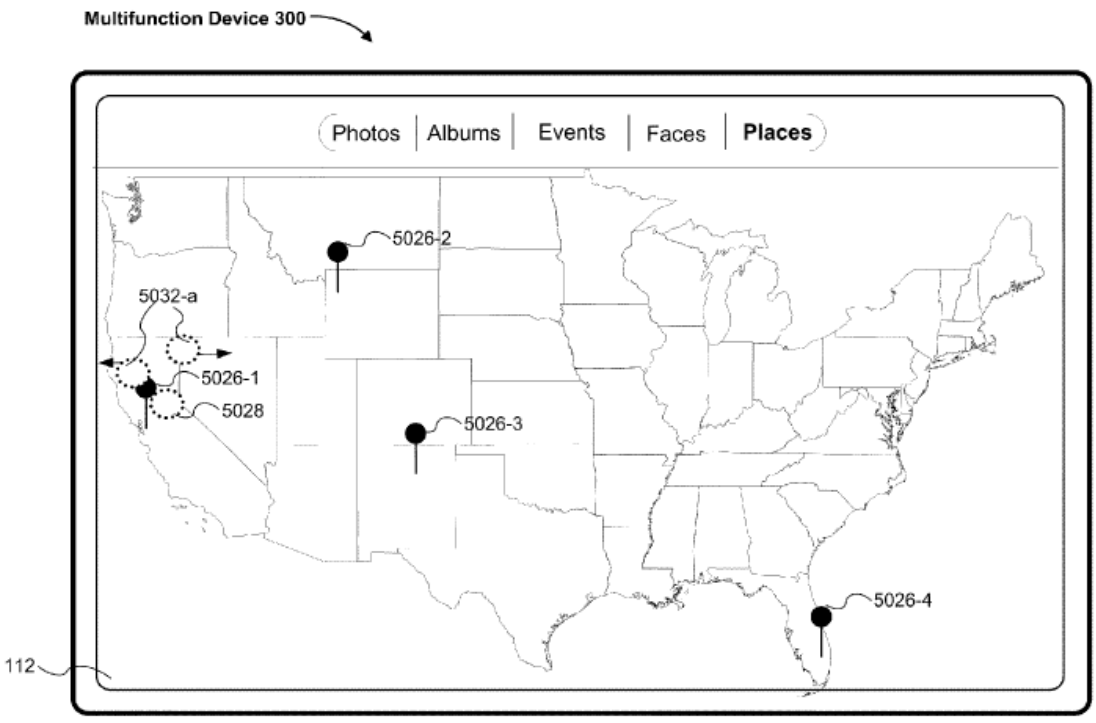


Figure 5S

Wagner's Figure 5S, above, depicts multifunction device 300 with touch-sensitive display 112 showing a map of the United States having a plurality of pins 5026 associated with geographic locations on the map. Ex. 1006 ¶ 183. Petitioner explains that "[b]ased on user input selecting pin 5026-1, 'representations of content 5808' associated with pin 5026-1's location (San Francisco, California) are displayed by a location viewer shown in Figure 5V." Pet. 75 (citing Ex. 1006 ¶¶ 183, 228, Fig. 5S-5V). Petitioner further explains that in Wagner's Figure 5V, "the location viewer displays a *location name* of 'San Francisco,' showing the arranged content (photos 1-8) is associated with the location San Francisco, California identified by pin 5026-1 in Figure 5S." Pet. 76.

With respect to limitation 1[j], Petitioner makes similar arguments and cites to similar evidence to meet the recited second location name associated with the second location and a representation of at least a portion of one digital file in a second set of digital files of the limitation. *See* Pet. 43–46.

In the alternative, Petitioner argues

> [i]f the Board finds Okamura and Flora do not disclose or render obvious displaying a *location name*, Wagner discloses or at least renders obvious this element for the same reasons discussed in Section VI.B.2.d. As discussed in Section VI.B.2.d, media viewer 64 for the selected second icon (*the second location view*) would have displayed a *second location name associated with the second location* as taught by Wagner where content for the second icon is captured.

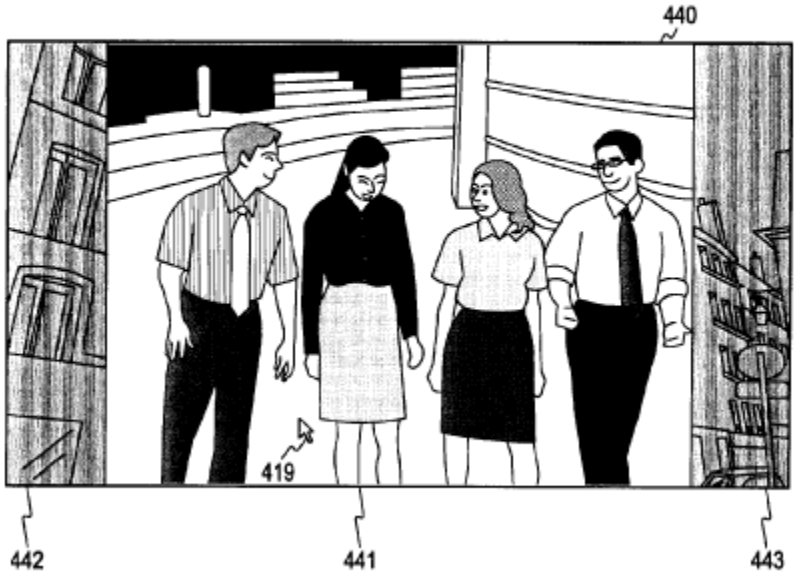
Pet. 80 (citing Ex. 1002 ¶¶ 135–142).

(2) Patent Owner's Arguments

Patent Owner argues that "the cited text in Flora does not disclose that the caption 72 includes any location name." PO Resp. 54 (citing Ex. 1005, 7:23–42). Patent Owner argues that "Petitioner's annotated version of Flora's Fig. 3 is *not* from the actual Flora patent reference Petitioner relies on under Ground 1 (EX1005)," but "was actually taken from Flora's prosecution file history (EX1008), which appears to contain higher resolution versions of Flora's drawings" and "Petitioner did not identify Flora's file history as part of its specific statutory grounds." PO Resp. 55–56, 58.

Patent Owner also argues that in Okamura, "when one of the cluster maps in Fig. 18 is selected, content 'corresponding to the selected cluster map [is] sequentially displayed on the content playback screen 440 shown in FIG. 22.'" PO Resp. 60 (citing Ex. 1004 ¶ 268). Okamura's Figure 22 is shown below.

FIG. 22



Okamura's Figure 22, above, depicts content playback screen 440 with content display area 441, preceding content display area 442, and succeeding content display area 443. Ex. 1004 ¶ 250.

Patent Owner argues that "the information 418 that was displayed when the mouse is placed over a cluster map in Fig. 18 is not included in the content playback screen 440 in Fig. 22." PO Resp. 61.

Patent Owner further argues that

> [i]n Okamura, the information 418 only appears in the cluster map display area 414 in Fig. 18, not the content playback screen 440 in Fig. 22 when one of the cluster maps is selected. In Petitioner's combination, following Okamura's teachings, the information 418 similarly could be displayed on the geographic map 46 when the cursor is moved over the icon 58, not the media viewer 64 after the icon 58 is selected.

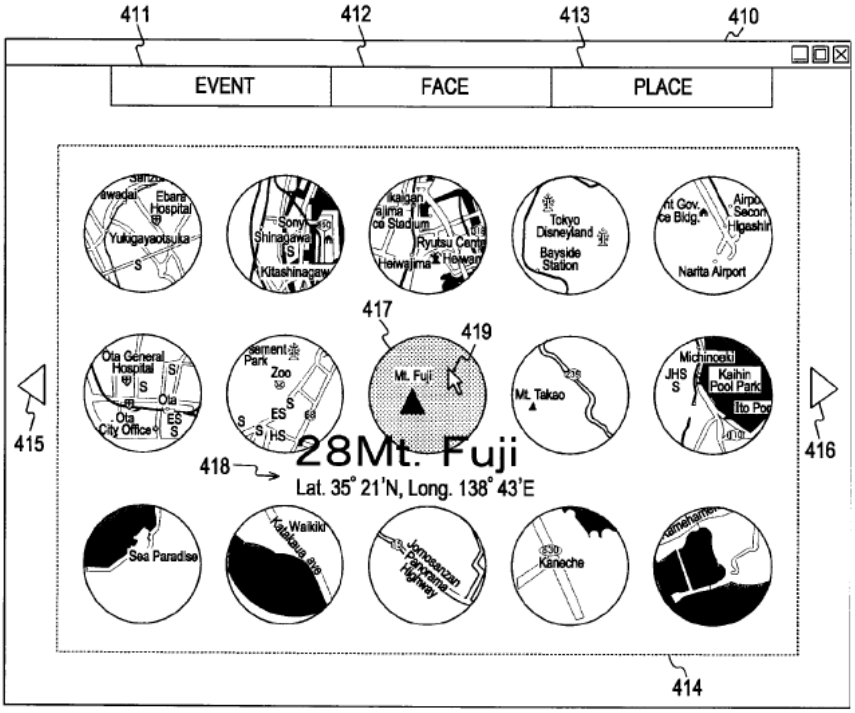
Id. at 61–62.

(3) Analysis

We agree with Petitioner that the proposed combination of Okamura and Flora teaches a *first (second) location view including a first (second) location name associated with the first (second) location*.

Here, Okamura describes displaying "information 418" associated with content that includes the name of the location where the content was captured. Ex. 1004 ¶ 240, Fig. 19. For example, in Okamura's Figure 19, a location name, Mt. Fuji, corresponds to the location where the content represented by cluster map 417 was captured. *Id.* ¶ 240, Figs. 18, 19. Okamura explains how such "cluster titles," represent location names because they refer to the place name for a group of image files created in that location. *Id.* ¶¶ 102, 109, 112, 116, 122–123, 136, 229–230, 240. Okamura explains that a cluster title can be a "place name" such as "Tokyo-prefecture" or "Saitama-prefecture," or an address such as "Tokyo-prefecture Shinagawa-ward Osaki 1-chome." *Id.* ¶¶ 122–123, 136, 229, 240.

Okamura's Figure 19 is shown below.



Okamura's Figure 19, above, is a diagram showing an example of a display of index screen 410 displaying cluster maps in display area 414, with cluster map 417 displaying location information 418 (including cluster title "Mt. Fuji" and latitude/longitude) related to cluster map 417. Ex. 1004 ¶ 240.

Flora describes media viewer 64 for the selected first icon (*the first location view*) that includes selectable icons 66 representing "all other media items associated with the map location" of the first icon (i.e., Okamura's content captured at the location of the icon). Ex. 1005, 7:23–42, Fig. 3. In view of Petitioner's combined teaching, Flora's selectable icons 66 are a representation of each of Okamura's digital files (*a representation of at least a portion of one digital file*) in a set of digital files captured at the location of

the first icon (*in a first set of digital files*). *Id.* at 7:23–42, Fig. 3.; Ex. 1004 ¶¶ 18, 91–93, 103–106, 110, 123, 130, 135–0143, 213–220, 225, 232–241, 267. The *first set of digital files* is the set of digital files, shown by icon 66 of the first icon's media viewer 64, captured at the location of the first icon. Okamura's captured content are *digital files* including "image files" and "moving image content" files. Ex. 1004 ¶¶ 2, 22, 91–92, 107–110, 139, 149, 501, Figs. 2A–2B.

Petitioner's position is supported by the testimony of Dr. Bederson, which we credit, because it is consistent with the teachings of Okamura and Flora as well as the disclosure of the '228 patent. Ex. 1002 ¶¶ 87–90.

Patent Owner argument that "Petitioner's annotated version of Flora's Fig. 3 is *not* from the actual Flora patent reference Petitioner relies on under Ground 1 (EX1005)," but "was actually taken from Flora's prosecution file history (EX1008)" is moot because we rely on Okamura's Figure 19, not Flora's Figure 3, for this particular teaching.

Patent Owner's other argument that "the information 418 that was displayed when the mouse is placed over a cluster map in Fig. 18 is not included in the content playback screen 440 in Fig. 22" is not availing. PO Resp. 61. Simply because location information displayed in association with a map cluster may not also be shown on a content playback screen does not negate the teaching to a person of ordinary skill in the art that the location information is displayed in association with a map cluster.

Patent Owner does not contest Petitioner's evidence with respect to Wagner for these limitations.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora, and in the alternative Wagner, meets limitations [1g] and [1j].

c) Contested Limitations [1n], [1p] - a first (second) name associated with the first (second) person, the first (second) name being displayed adjacent to the first (second) person selectable thumbnail image

(1) Petitioner's Arguments

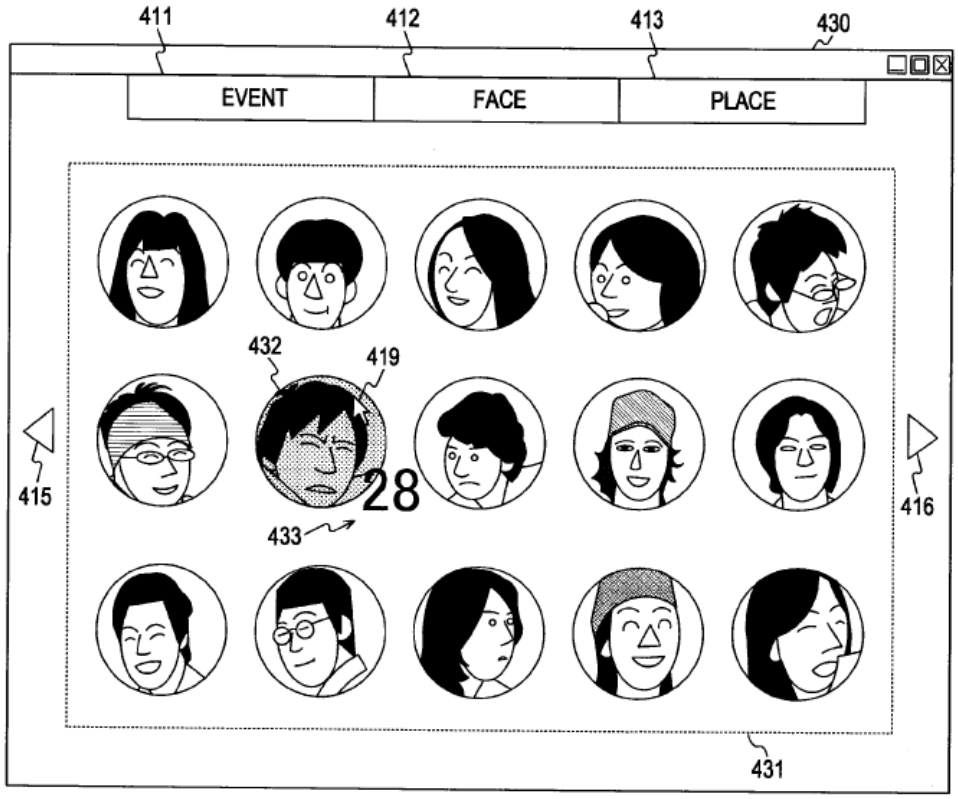
Petitioner asserts that "Okamura discloses or at least renders obvious limitation [1n]." Pet. 55. According to Petitioner,

> Okamura describes face cluster display area 431 (*the people view*) includes "information 433 related to the thumbnail image 432 [that] are displayed" and displayed information 433 includes "the name of the person corresponding to the face" of the person shown in a thumbnail image 432; thus, for the first person's thumbnail image 432, displayed information 433 includes that first person's name (*a first name associated with the first person*).

Id. (citing Ex. 1004 ¶ 247, Fig. 21).

Okamura's Figure 21 is shown below.

FIG. 21

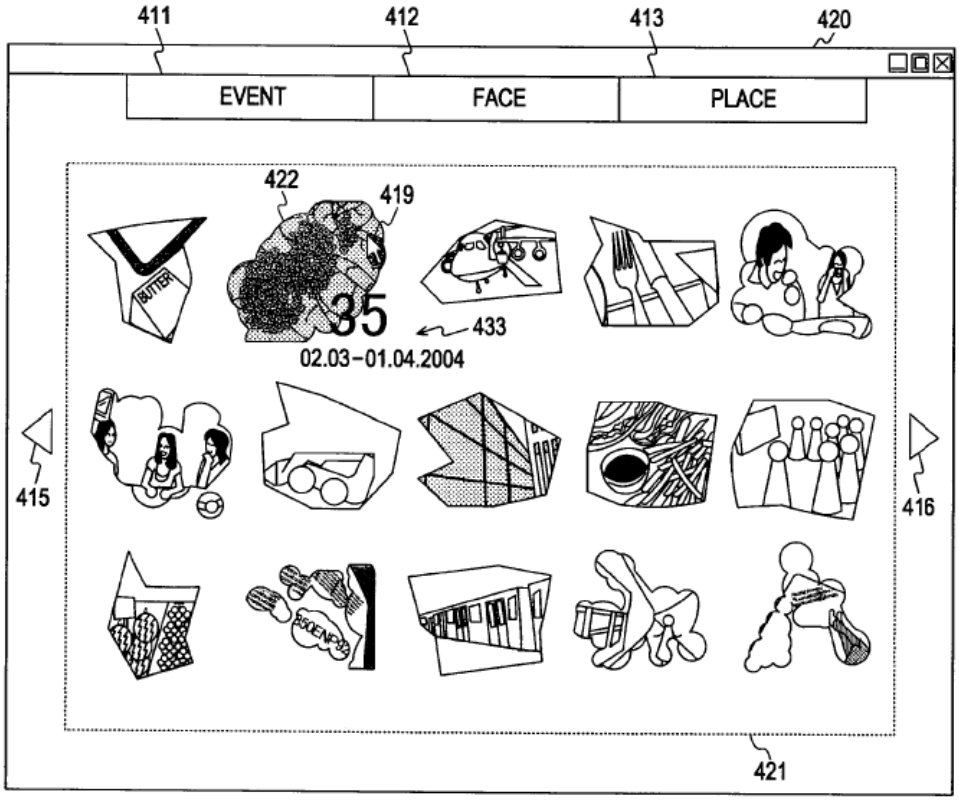


Okamura's Figure 21, above, depicts face cluster display area 431 having e.g. thumbnail image 432 with display information 433 related to thumbnail image 432, such as the name of the person corresponding to the face. Ex. 1004 ¶¶ 246–247.

Petitioner explains that information 433 can be displayed *adjacent* or next to thumbnail images because Okamura's Figure 20 figure shows date information "02.3-01.04.2004" of information 433 displayed *adjacent* or next to a thumbnail image. Pet. 56 (citing Ex. 1004 ¶ 247, Fig. 20). Petitioner state's that "[i]t therefore follows that when the information 433 [is] the person's name, it is similarly displayed in the same *adjacent* location as "02.3-01.04.2004" in Fig. 20." Pet. 56.

Okamura's Figure 20 is shown below.

FIG. 20



Okamura's Figure 20, above, depicts index screen 420 and event cluster image display area 421. Pieces of information 423 related to the thumb nail image 422 are displayed, for example, the time range 02.03-01.04.2004 of the contents belonging to the cluster are displayed. Also, as the pieces of information 423 related to the thumbnail image 422, other pieces of information such as a title may be displayed as well. Ex. 1004 ¶¶ 242, 244–245.

Petitioner argues that a person of ordinary skill in the art "would have understood when information 433 includes name information as discussed for Figure 21, Okamura discloses or at least renders obvious displaying name information for the first person's thumbnail image 432 (*the first name*

being displayed) adjacent or next to the first person's thumbnail image 432 (*adjacent to the first person selectable thumbnail image*). Pet. 57 (citing Ex. 1002 ¶¶ 110–114).

Petitioner similarly argues that Okamura discloses or at least renders obvious limitation [1p]. Petitioner argues that

> Okamura describes face cluster display area 431 (*the people view*) includes displayed "information 433 related to the thumbnail image 432" including "the name of the person corresponding to the face" of the person shown in a thumbnail image 432; thus, for the second person's thumbnail image 432, displayed information 433 includes that second person's name (*a second name associated with the first person*).

Pet. 60 (citing Ex. 1004 ¶ 247, Fig. 21).

Petitioner argues that

> Information 433 can be displayed *adjacent* to thumbnail images as discussed [above]. Thus, a [person of ordinary skill in the art] would have understood when information 433 includes name information as discussed for Figure 21, Okamura discloses or at least renders obvious displaying that name information for a second person's thumbnail image 432 (*the second name being displayed*) adjacent to the second person's thumbnail image 432 (*adjacent to the second person selectable thumbnail image*).

Pet. 61 (citing Ex. 1002 ¶¶ 118–122).

In the alternative, Petitioner argues that

> [i]f the Board finds Okamura does not disclose or render obvious *a first name associated with the first person, the first name being displayed adjacent* to a thumbnail image of the first person (limitation [1n]) and/or Okamura does not disclose or render obvious *a second name associated with the second person, the second name being displayed adjacent* to a thumbnail image of the second person (limitation 1[p]), Gilley discloses or at least renders obvious these concepts for the reasons discussed in

> Sections VI.C.2.b (limitation [1n]) and VI.C.2.c (limitation [1p]).

Pet. 95.

(2) Patent Owner's Arguments

Patent Owner argues that

> Nowhere . . . does Okamura teach that its face cluster display area 431 (people view) includes both a "first name" and ["]second name" in the same view. EX2038, ¶¶145-146. As discussed above, to display name information 433 corresponding to an individual thumbnail image, the user must place "the mouse . . . over a thumbnail image 432 by a user operation." EX1004, 0247; EX2035, 89:20-90:5; EX2038, ¶146. Doing so displays name information 433 for one person only – e.g. only the "first person." EX2038, ¶147. Nowhere does Okamura disclose or suggest any means for simultaneously including a second name in that same view, nor does the Petition articulate any proposed modification to Okamura's cursor input for doing so.

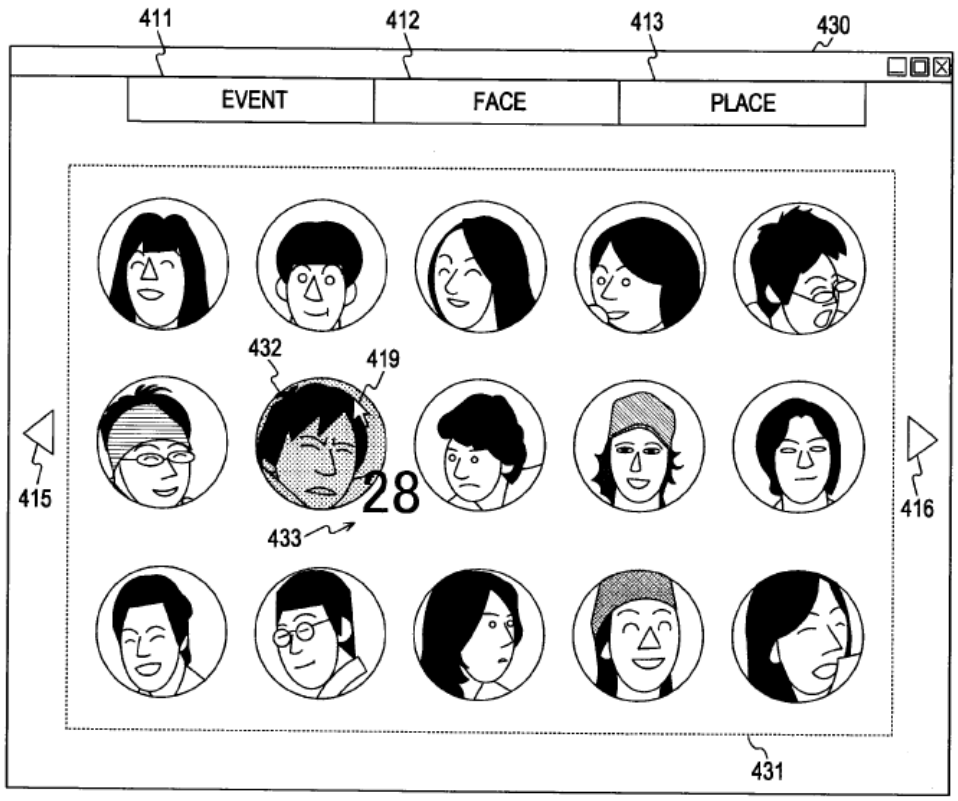
PO Resp. 63–64 (citing Ex. 2035, 85:5–86:6, 81:3–16; Ex. 2038 ¶ 148).

(3) Analysis

We agree with Petitioner that Okamura teaches the recited limitations [1n] and [1p]. Okamura describes face cluster display area 431 (*the people view*) that includes related information 433 such as "the name of the person corresponding to the face" shown in thumbnail image. Thus, for the first person's thumbnail image 432, displayed information 433 includes that first person's name (*a first name associated with the first person*). Ex. 1004 ¶¶ 246–247, Fig. 21.

Okamura's Figure 21 is shown below.

FIG. 21



Okamura's Figure 21, above, depicts face cluster display area 431 having e.g. thumbnail image 432 with display information 433 related to thumbnail image 432, such as the name of the person corresponding to the face. *Id.*

Okamura also explains that information 433 can be displayed *adjacent* or next to thumbnail images because Okamura's Figure 20 figure shows related date information "02.3-01.04.2004" displayed *adjacent* or next to the thumbnail image. Ex. 1004 ¶ 247, Fig. 20. When information 433 is the person's name, as Okamura shows in Figure 21, a person of ordinary skill in the art would understand that it could similarly be displayed in the same *adjacent* position as shown in Figure 20.

Dr. Bederson provides supporting testimony, which we credit, because it is consistent with the teachings of Okamura. *See* Ex. 1002 ¶¶ 110–114, 118–122.

We disagree with Patent Owner's assertion that claim 1 requires the "simultaneous" display of a "first name" and a "second name" in the same view. PO Resp. 63–64.

The relevant portion of claim 1 is set out below:

> [1l] responsive to a second input that is subsequent to the first input, causing a people view to be displayed on the interface,
>
> [1m] the people view including: (i) a first person selectable thumbnail image including a representation of a face of a first person, the first person being associated with a third set of digital files including digital photographs and videos;
>
> [1n] (ii) a first name associated with the first person, the first name being displayed adjacent to the first person selectable thumbnail image;
>
> [1o] (iii) a second person selectable thumbnail image including a representation of a face of a second person, the second person being associated with a fourth set of digital files including digital photographs and videos; and
>
> [1p] (iv) a second name associated with the second person, the second name being displayed adjacent to the second person selectable thumbnail image.

Ex. 1001, 35:61–36:11.

Patent Owner states in its Response that it "does not believe claim construction is required because the plain and ordinary meaning of the claims is clear." PO Resp. 26. In its Response, however, Patent Owner

points to Figure 32 of the '228 patent as "an exemplary embodiment showing a people view 1400 that includes 'a thumbnail of [each person's] face along with their name,'" concluding that "the 'people view' *must* 'includ[e]' both a 'first name' and a 'second name' displayed in the same view." *Id.* at 29 (citing Ex. 2038 ¶¶ 80–81) (emphasis added). Patent Owner then later argues that "[n]owhere does Okamura disclose or suggest any means for *simultaneously* including a second name in that same view." PO Resp. 63 (emphasis added).

Claim 1, however, does not recite the term "*simultaneously*" that Patent Owner now seeks to add, nor can the claim be reasonably read to impose such a requirement. Moreover, Patent Owner provides no compelling rationale for incorporating its interpretation of Figure 32 as "an exemplary embodiment" in order to restrict claim 1 in this way. The Federal Circuit has repeatedly explained that "[a] particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment." *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (emphasis added). We, therefore, decline Patent Owner's invitation do so here.

Patent Owner does not contest Petitioner's evidence with respect to Gilley for this limitation.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that Okamura, and in the alternative, Gilley, meets limitations [1n] and [1p].

d) Uncontested limitations

Petitioner provides evidence and arguments that the combined teachings of Okamura, Flora, Wagner, and Gilley meet the remaining portions of independent claim 1, namely [1a-preamble], [1f], [1h], [1i], [1k], [1l], [1m], and [1o]. *See* Pet. 13, 31–32, 40–43, 46–55, 58–60, 74, 79–81, 84, 86, and 95. Petitioner provides the testimony of Dr. Bederson in support of its position with respect to these portions of claim 1. *See* Ex. 1002 ¶¶ 69–125.

Patent Owner does not contest Petitioner's evidence and arguments with respect to these portions of claim 1. *See* PO Resp. 34–64

For the preamble [1a], "[a] method comprising," Petitioner relies on Okamura's method of using a "content playback application" to display media content. Pet. 13 (citing Ex. 1004 ¶¶ 232–248, Figs. 17–21).[7]

Petitioner asserts that Okamura and Flora teach limitation [1f], "*responsive to an input that is indicative of a selection of the first location selectable thumbnail image, causing a first location view to be displayed on the interface*."

Petitioner explains that

> [i]n the combination, Flora describes responsive to a "user input, such as a mouse click" selecting the first of multiple selectable icons 58 and 59 (*responsive to an input that is indicative of a selection of the first location selectable thumbnail image*), a media viewer 64 for the selected first icon opens and provides access to a media item 62 represented by the first icon and "all other media items associated with the map location" of media

[7] We need not determine whether the preamble is limiting as the prior art satisfies the recitation in the preamble and is not contested by the parties.

> item 62 (*causing a first location view to be displayed on the interface*). EX1005, 5:65-6:11, 7:4-42, Figs. 2, 3; [Pet.] Sections VI.A.3.c-VI.A.3.d. Media viewer 64 for the first icon is *a first location view* because it provides a display window for viewing each media item for a map location associated with the first icon; this is just like the '228 patent's description of a location view showing content associated with a selected location. *Id.*; EX1001, 24:37-51, Fig. 34. Media viewer 64 is *displayed on the interface* because it is displayed on GUI 40 and, combined with Okamura, is displayed using cluster map display area 414 that is itself displayed on the interface provided by Okamura's content playback application; content playback application is further displayed on a physical display of apparatus 100.

Pet. 31 (citing Ex. 1005, 7:8–42, Fig. 3; [Pet.] Sections VI.A.3.b-VI.A.3.d; Ex. 1002 ¶¶ 87–89).

In the alternative, Petitioner argues that

> [i]f the Board finds Okamura's content playback application does not disclose or render obvious the claimed *interface*, Wagner discloses or at least renders obvious this element for the reasons discussed in Section VI.B.2.b. Combining the Okamura-Flora system with Wagner in this manner would have provided Okamura-Flora's content playback application implements an updatable user interface window on which cluster map display area 414, displaying content as taught by Flora's geographic map 46 and media viewer 64 (and describing a *first location view* as discussed in Section VI.A.3.f), is displayed.

Pet. 74 (citing [Pet.] Sections VI.A.3.c, VI.A.3.f-VI.A.3.g, VI.B.2.b; Ex. 1002 ¶¶ 128–134).

Petitioner asserts that Okamura and Flora teach limitation [1h], "each of the digital files in the first set of digital files being produced from outputs of one or more digital imaging devices, the first set of digital files including digital files associated with the first location." Pet. 40.

Petitioner asserts that

> [i]n the combination, Flora describes media viewer 64 for the selected first icon (*the first location view*) includes selectable icons 66 representing each of Okamura's digital files (*a representation of at least a portion of one digital file*) in a set of digital files captured at the location of the first icon (*in a first set of digital files*). EX1005, 7:23- 42, Fig. 3; [Pet.] Sections VI.A.3.c, VI.A.3.f-VI.A.3.g. In the combination, because the set of digital files (*first set of digital files*) are the set of Okamura's digital files captured at the location of Flora's first icon and represented by icons 66, the set is *including digital files associated with the first location* as claimed. *Id.*
>
> Moreover, *each of the digital files in the first set of digital files* [is] *being produced from outputs of one or more digital imaging devices* because Okamura describes captured content at each location, including the set at the first location, is formed by "image files" and "moving image content" files (*each of the digital files in the first set of digital files*) produced by outputs from a "image capturing apparatus such as a digital still camera" and devices capturing "moving image content" (*being produced from outputs of one or more digital imaging devices*).

Pet. 40–42 (citing Ex. 1004 ¶¶ 2, 22, 91–92, 107–110, 139, 149, 501, Figs. 2A–2B).

Petitioner asserts that Okamura and Flora teach limitation [1i], "*responsive to an input that is indicative of a selection of the second location selectable thumbnail image, causing a second location view to be displayed on the interface*." Pet. 42.

Petitioner asserts that in the combination,

> by selecting the second of the multiple selectable icons 58 and 59 (*responsive to an input that is indicative of a selection of the second location selectable thumbnail image*), a media viewer 64 for the selected second icon opens and provides access to a media

> item 62 represented by the second icon and "all other media items associated with the map location" of media item 62 (*causing a second location view to be displayed on the interface*). EX1005, 5:65-6:11, 7:4-42, Figs. 2, 3; [Pet.] Sections VI.A.3.c-VI.A.3.e. Media viewer 64 for the second icon is *a second location view* because it provides a display window allowing a user to view each media item for a map location associated with the second icon at a second location different from the first location. *Id.*; Section VI.A.3.f; EX1002, ¶90. The media viewer 64 is *displayed on the interface* for the same reasons discussed in Section VI.A.3.f. *Id.*

Pet. 42.

In the alternative, Petitioner argues that

> [i]f the Board finds Okamura's content playback application does not disclose or render obvious the claimed *interface*, Wagner discloses or at least renders obvious this element for the reasons discussed in Section VI.B.2.b. Combining the Okamura-Flora system with Wagner in this manner would have provided Okamura-Flora's content playback application has an updatable user interface window on which cluster map display area 414, displaying content as taught by Flora's geographic map 46 and media viewer 64 (and describing a *second location view* as discussed in Section VI.A.3.i), is displayed.

Pet. 79 (citing Pet. Sections VI.A.3.c, VI.A.3.i, VI.B.2.b; Ex. 1002 ¶¶ 128–134).

Petitioner asserts that Okamura and Flora teach limitation [1k], "*each of the digital files in the second set of digital files being produced from outputs of the one or more digital imaging devices, the second set of digital files including digital files associated with the second location.*" Pet. 46.

Petitioner asserts that

> [i]n the combination, Flora describes media viewer 64 for the selected second icon (*the second location view*) includes

> selectable icons 66 that are a representation of each of Okamura's digital files (*a representation of at least a portion of one digital file*) in a set of digital files captured at the location of the second icon (*in a second set of digital files*), which is a different location to the first icon's. EX1005, 7:23-42, Fig. 3; [Pet.] Sections VI.A.3.c, VI.A.3.f-VI.A.3.j. In the combination, because the set of digital files (*second set of digital files*) are the set of Okamura's digital files captured at the location of Flora's second icon and represented by icons 66, the set is *including digital files associated with the second location* as claimed. *Id.* Moreover, *each of the digital files in the second set of digital files* [is] *being produced from outputs of the one or more digital imaging devices* because content files are captured by Okamura's digital camera and devices capturing moving images discussed in Section VI.A.3.h.

Pet. 46–47.

Petitioner asserts that Okamura teaches limitation [1l], "*responsive to a second input that is subsequent to the first input, causing a people view to be displayed on the interface.*" Pet. 47.

According to Petitioner,

> Okamura states "when the 'FACE' tab 412 is depressed using the cursor 419 by a user operation" (*responsive to a second input*) face cluster display area 431 showing "a thumbnail image of each of faces included in contents" is displayed (*causing a people view to be displayed*) on the display interface of the content playback application (*on the interface).* EX1004, ¶¶0099, 0110, 0139, 0234-0248, 0261-0262, 0267, Fig. 21; [Pet.] Section VI.A.3.b.
>
> Face cluster display area 431 is a *people view* because it shows thumbnail images 432 having the faces of different people (including a first person and a second person) who are included in captured content and allows for selection of content according to a person's presence. *Id.*, ¶¶0099, 0110, 0139, 0246-0260, 0267; EX1002, ¶¶100-101. A POSITA would have understood Okamura's content playback application provides the claimed

> *interface* on which face cluster display area 431 (*people view*) is displayed, and Okamura at least renders obvious having a single *interface* window on which the claimed *map view* and the claimed *people view* are displayed, for the same reasons discussed in Section VI.A.3.b.
>
> A POSITA would have also understood Okamura discloses or at least renders obvious the *second input* of selecting FACE tab 412 being *subsequent to the first input* of selecting PLACE tab 413. EX1004, ¶¶0232-0247, 0297-0302, Figs. 18-21, 31; [Pet.] Section VI.A.3.b; EX1002, ¶102. This is because Okamura's EVENT tab 411, FACE tab 412, and PLACE tab 413 are each selectable by a user from any of the index screens 410, 420, and 430 displaying cluster map display area 414, event cluster image display area 421, and face cluster display area 431, and tabs can be selected and display areas switched to in any order, including the selection of FACE tab 412 (*second input*) after or *subsequent* to the selection of PLACE tab 413 (*first input*). *Id.*; EX1004, ¶¶0297-0302, Fig. 31 (describing switching between index screens showing display areas).

Pet. 47–50.

In the alternative, Petitioner argues that

> [i]f the Board finds Okamura's content playback application does not disclose or render obvious the claimed *interface*, Wagner discloses or at least renders obvious this element for the reasons discussed in Section VI.B.2.b. In the combination of Okamura, Flora, and Wagner, Okamura-Flora's content playback application implements an updatable user interface window as described by Wagner, where Okamura's face cluster display area 431 is displayed on the updatable user interface window (*people view to be displayed on the interface*).

Pet. 80–81 (citing [Pet.] Sections VI.B.2.b, VI.A.3.l; Ex. 1002 ¶¶ 128–134).

Petitioner asserts that Okamura teaches limitation [1m], "*the people view including: (i) a first person selectable thumbnail image including a*

representation of a face of a first person, the first person being associated with a third set of digital files including digital photographs and videos."

Pet. 53.

> Petitioner asserts that
>
> Okamura describes face cluster display area 431 (*the people view*) including a thumbnail image 432 of a first person that includes a representation of a face of the first person (*a first person selectable thumbnail image including a representation of a face of a first person*). EX1004, ¶¶0099, 0110, 0139, 0234-0248, 0261-0262, 0267, Fig. 21; [Pet.] Section VI.A.3.l. Each thumbnail image 432, including that of the first person, is *selectable* because a user can click it using cursor 419, which begins content playback of content associated with the thumbnail image. EX1004, ¶¶0234, 0246-0250, Fig. 21.
>
> The first person (*first person*) shown by the thumbnail image 432 of the first person is *associated with a third set of digital files including digital photographs and videos* because the thumbnail image represents the set of digital content files including that person's face (shown in Figure 21 as including "28" files). EX1004, ¶¶0099, 0110, 0139, 0232-248, 0267, Fig. 21. This *third set* of content is different from the *first* and *second* sets of content because it is content including the first person's face and is not dependent on location. *Id.*; [Pet.] Sections VI.A.3.g-VI.A.3.h, VI.A.3.j-VI.A.3.k. The content forming the *third set* includes *digital photographs and videos* because Okamura's content includes "image files recorded by an image capturing apparatus such as a digital still camera" and its embodiments apply to "cases where moving image contents are used." EX1004, ¶¶0002, 0022, 0091-0092, 0107-0110, 0139, 0149, 0501, Figs. 2A-2B. Thus, at a minimum, a POSITA would have understood Okamura discloses or at least renders obvious *digital photographs and videos* included in the *third set of digital files* where the first person's face is present.

Pet. 53–55 (citing Ex. 1002 ¶¶ 107–109).

In the alternative, Petitioner argues that "[i]f the Board finds Okamura and Flora do not disclose or render obvious the *third set of digital files including digital photographs and videos* or *the fourth set of digital files including digital photographs and videos*, Wagner discloses or at least renders obvious these concepts." Pet. 80. Petitioner argues

> Wagner discloses that sets of content items managed by a content navigation system include "at least one video and at least one image," meaning Wagner teaches sets of content including at least one video (i.e., one or more videos) (*digital videos*) and at least one image (i.e., one or more images) (*digital photographs*).

Id. (citing Ex. 1006 ¶¶ 259–262; Ex. 1002 ¶ 143).

Petitioner asserts that Okamura teaches limitation [1o], "*[the people view including:] (iii) a second person selectable thumbnail image including a representation of a face of a second person, the second person being associated with a fourth set of digital files including digital photographs and videos*." Pet. 58.

Petitioner asserts that

> Okamura describes face cluster display area 431 (*the people view*) includes a thumbnail image 432 of a second person (different from that of the first person as shown in Figure 21) including a representation of a face of the second person (*a second person selectable thumbnail image including a representation of a face of a second person*). EX1004, ¶¶0099, 0110, 0139, 0234-0248, 0261-0262, 0267, Fig. 21; [Pet.] Section VI.A.3.l- VI.A.3.m. Each thumbnail image 432, including that of the second person, is *selectable* for the reasons discussed in Section VI.A.3.m.
>
> The second person (*second person*) shown by thumbnail image 432 of the second person is *associated with a fourth set of digital files including digital photographs and videos* because the

> thumbnail image represents the set of digital content files including that person's face. EX1004, ¶¶0099, 0110, 0139, 0232-248, 0267, Fig. 21. This *fourth set* of content is different from the *first* and *second* sets because it is content including the second person's face and is not dependent on location, and is different from the *third set* because it includes content featuring a different person's face (second person's face rather than first person's face). *Id.*; [Pet.] Sections VI.A.3.g-VI.A.3.h, VI.A.3.j-VI.A.3.k, VI.A.3.m. Okamura describes the content forming the *fourth set* includes *digital photographs and videos*, and that a POSITA would have understood Okamura discloses or at least renders obvious *digital photographs and videos* being included in the *fourth set of digital files* where the second person's face is present, because the same reasons discussed in Section VI.A.3.m with respect to the third set apply to the fourth set.

Pet. 58–60 (citing Ex. 1002 ¶¶ 115–117).

In the alternative, Petitioner argues that "[i[f the Board finds Okamura and Flora do not disclose or render obvious *the fourth set of digital files including digital photographs and videos*, Wagner discloses or at least renders obvious this element for the reasons discussed in [the Petition] Section VI.B.2.h." Pet. 84. Petitioner argues that "[i]n the Okamura, Flora, and Wagner combination, Okamura's content forming the *fourth set of digital files* would have included at least one image and at least one video (*digital photographs and videos*). *Id.* (citing [Pet.] Sections VI.A.3.m, VI.A.3.o, VI.B.2.h; Ex. 1002 ¶¶ 143–147).

We have considered Petitioner's evidence and arguments with respect to these portions of claim 1, as well as the testimony of Dr. Bederson. Based on the complete record, we determine that Petitioner has demonstrated that the combined teachings of Okamura and Flora meet the remaining portions of independent claim 1, namely [1a-preamble], [1f], [1h], [1i], [1k], [1l],

[1m], and [1o]. We also find that in the alternative, Wagner meets limitations [1f], [1i], [1l], [1m], and [1o].

2. Rationale to Combine

a) Petitioner's Arguments

Petitioner argues that a person of ordinary skill in the art

> would have been motivated to combine Okamura and Flora such that when organizing content according to location, Okamura's cluster map display area 414 displays content as taught by Flora's geographic map 46 and media viewer 64, where Okamura's content is indicated at various locations on the map by Flora's icons 58 and 59 and Flora's media viewer 64 provides a window for viewing Okamura's content associated with the locations, shown by icons 66.

Pet. 22 (citing Ex. 1002 ¶ 81).

Petitioner argues that a person of ordinary skill in the art "would have been motivated to combine Okamura and Flora in this manner because the combination enhances how Okamura displays content associated with various locations, using Flora's scalable geographic map with icons and media viewer, improving user experience." Pet. 24 (citing Ex. 1002 ¶ 82). Petitioner argues that "[c]ombining the teachings provides an interface displaying locations where Okamura's content has been captured on a scalable map and allows a user to view the content captured at a specific location using a media viewer, which provides a user with improved awareness regarding locations associated with content." Pet. 24–25.

Petitioner indicates that "Okamura explains its displayed cluster maps help a user 'easily grasp[]' areas where content has been captured and allow a user to 'easily grasp the distribution of the location of generation of

contents' included in the cluster. *Id.* at 25 (citing Ex. 1004 ¶¶ 213–215, 222, 272; *see also id.* ¶¶ 18, 110, 123, 130, 139). "[E]nhancing Okamura with Flora's discussed teachings," Petitioner argues, "furthers these goals because Flora's system improves how a user views content organized by location, 'allow[ing] a user to interface with' a map displaying content and 'facilitate[][ing] access to content associated with locations of the electronic map.'" Pet. 25 (citing Ex. 1005, 1:56–55, 2:2–9, 3:22–46; Ex. 1002 ¶ 82).

Petitioner also argues that a person of ordinary skill in the art "would have combined Okamura and Flora in the above manner using known programming techniques, adjusting the software of Okamura's content playback application such that cluster map display area 414 includes Flora's teachings." Pet. 25 (citing Ex. 1004 ¶¶ 232–241). "In particular," Petitioner argues, "the software of Okamura's cluster display control section 180 would have been adjusted using such techniques so cluster map display area 414 is modified to display content as taught by Flora's scalable map 46 with icons 58 and 59 and media viewer 64, where icons 58 and 59 represent locations on the scalable map 46 where Okamura's content was captured and the media viewer 64, displaying Okamura's content captured at specific locations via icons 66, is accessed by selecting respective icons 58 and 59." Pet. 25–26 (citing Ex. 1004 ¶¶ 18, 91–93, 103–106, 110, 123, 130, 135–143, 213–220, 225, 232–241, 267; Ex. 1005, 3:40–45, 7:3–52, Fig. 3; Ex. 1002 ¶ 83). "Okamura and Flora's teachings," Petitioner argues, "would have performed the same function of displaying content according to location whether separate or combined." Pet. 26.

Petitioner further argues that a person of ordinary skill in the art "would have recognized the combination's results would have been predictable: using Flora's geographic map 46 with icons 58 and 59 and media viewer 64 to organize and display Okamura's content on cluster map display area 414 according to location associated with the content." Pet. 26 (citing Ex. 1004 ¶¶ 18, 91–93, 103–106, 110, 123, 130, 135–143, 213–220, 225, 232–241, 267; Ex. 1005, 3:40–45, 6:66–7:52, Fig. 3; Ex. 1002 ¶ 84). Petitioner argues that "[t]his is because Okamura organizes and displays content based on the location at which content was captured, and Flora organizes and displays content according to its associated location using an interactive map." Pet. 26. Petitioner argues a person of ordinary skill in the art "would have had a reasonable expectation of success in combining Okamura and Flora's teachings because the combination's results would have been predictable as discussed above, and because both references relate to organizing content according to location associated with content." *Id.* "Combining their teachings," Petitioner argues, "would have been routine to [a person of ordinary skill in the art] due to this overlap and the simple software modifications to adjust cluster map display area 414 to include Flora's teachings." *Id.* at 26–27.

Petitioner argues that this demonstrates

> [c]ombining prior art elements (Okamura's cluster map display area 414; Flora's geographic map 46 with icons 58 and 59 and media viewer 64) according to known methods (known programming techniques to adjust the software of Okamura's content playback application) to yield predictable results (using Flora's geographic map 46 with icons 58 and 59 and media viewer 64 to organize and display Okamura's content on cluster

> map display area 414 according to location associated with the content).

Pet. 27.

Petitioner also argues that this demonstrates

> [s]imple substitution of one known element (Flora's geographic map 46 with icons 58 and 59 and media viewer 64) for another (Okamura's cluster map display area 414) to obtain predictable results (using Flora's geographic map 46 with icons 58 and 59 and media viewer 64 to organize and display Okamura's content according to location associated with the content).

Pet. 27 (citing MPEP 2143; *KSR Int'l Co. v. Teleflex Inc.,* 550 U.S. 398, 415–421 (2007); Ex. 1002 ¶¶ 85–86).

Petitioner argues that a person of ordinary skill in the art "would have been further motivated to combine these references such that Flora's media viewer 64 displays the location name, as described by Okamura, that relates to the location of a selected icon 58 or 59 (including the first icon and second icon) and corresponds to content displayed by the media viewer." Pet. 37 (citing Ex. 1002 ¶¶ 91–95; [Pet.] Sections VI.A.3.i-VI.A.3.j).

Petitioner argues that

> [c]ombining Okamura and Flora such that media viewer 64 explicitly displays a location name that (1) includes address and/or place name and (2) corresponds to a selected icon and content displayed by the media viewer would have further provided such improvements because a user would have had increased awareness of location associated with content, particularly for unfamiliar locations.

Pet. 37 (citing Ex. 1002 ¶ 96). According to Petitioner, "[t]his would have provided more information to a user viewing content and helped them understand the name, address, and spelling of locations at which content was

captured. *Id.* Petitioner argues that "[t]his would have helped the user avoid confusion and ensure accuracy, for example, when researching and viewing a content library." *Id.*

Petitioner argues that a person of ordinary skill in the art "would have combined Okamura and Flora in the above manner using known programming techniques, where software implementing media viewer 64 would have simply been modified so the discussed location name associated with a selected icon and corresponding content is displayed." Pet. 38 (citing Ex. 1004 ¶ 240, Fig. 19; Ex. 1005, 7:23–42, Fig. 3; Ex. 1002 ¶ 97).

"Further," Petitioner argues, "Flora's media viewer 64 includes displayed text as shown in Figure 3. Having the displayed text include location associated with a selected icon and corresponding content would have been routine and well within the capabilities of a POSITA because it would have simply entailed adjusting the text already displayed." Pet. 38. Petitioner argues that "Okamura and Flora's teachings would have also performed the same function of displaying content according to location whether separate or combined." Pet. 38.

Petitioner argues that a person of ordinary skill in the art "would have recognized the combination's results would have been predictable: Flora's media viewer 64 displaying a location name, as described by Okamura, that relates to the location of the selected icon and corresponds to content displayed by the media viewer." *Id.* (citing Ex. 1004 ¶ 240, Fig. 19; Ex. 1005, 7:23–42, Fig. 3; Ex. 1002 ¶ 98). Petitioner explains that "Flora and Okamura describe organizing and displaying content based on the location at which content was captured, Flora describes displaying a location

name in its media viewer, and Okamura's teachings simply make explicit the associated location name including address and/or place name is displayed by the viewer." Pet. 38–39. According to Petitioner, a person of ordinary skill in the art "would have also had a reasonable expectation of success in combining Okamura and Flora's teachings because the combination's results would have been predictable as discussed, and because both references relate to organizing content according to location associated with content." *Id.* at 39. "Combining their teachings," Petitioner argues, "would have been routine to a POSITA due to their overlap in subject matter and the simple programming modifications to adjust media viewer 64 to display location name as described by Okamura." *Id.*

Petitioner argues that

> [t]his analysis demonstrates a POSITA would have been motivated to combine the above teachings of Okamura and Flora because the combination would have combined prior art elements (Flora's media viewer 64; Okamura's displayed information 418 that includes location name) according to known methods (known programming techniques to adjust the software implementing Flora's media viewer 64) to yield predictable results (Flora's media viewer 64 displaying a location name that relates to the location of the selected icon and corresponds to content displayed by the media viewer).

Id. (citing Ex. 1002 ¶ 99).

Petitioner argues that a person of ordinary skill in the art would have been

> further motivated to combine the Okamura-Flora system with Wagner such that Okamura-Flora's content playback application implements an updatable user interface window as described by Wagner on which cluster map display area 414 (corresponding

> to the claimed *map view* (*see* [Pet.] Section VI.A.3.b)) displaying content as taught by Flora's geographic map 46 and media viewer 64, and face cluster display area 431 (corresponding to the claimed *people view* (*see* [Pet.] Section VI.A.3.l)) are displayed. EX1004, ¶¶0232-0248, Figs. 17-21; EX1006, ¶¶0004, 0045, 0105-0109, 0115, 0120, 0128, 0130-0132, Fig. 1C; [Pet.] Section VI.A.3.b- VI.A.3.c, VI.A.3.l; EX1002, ¶¶128-130. The Okamura-Flora system describes using an application (Okamura's content playback application) to display cluster map display area 414 and face cluster display area 431, and Wagner simply teaches using an application's updatable interface window to display these items. *Id.* Because the combination implements Wagner's interface teachings, providing an interface is updated to display different screens, it allows for a "more efficient method[] and interface[] for displaying and navigating through content" and can "conserve power and increase the time between battery charges" for the computing device displaying the interface.

Pet. 71 (citing Ex. 1006 ¶¶ 6–7, 13).

According to Petitioner, a person of ordinary skill in the art "would have effectuated the combination using known programming techniques, adjusting the content playback application software such that cluster map display area 414 and face cluster display area 431 are displayed on an updatable user interface window as taught by Wagner." Pet. 72 (citing Ex. 1004 ¶¶ 232–248, Figs. 17–21; Ex. 1006 ¶¶ 4, 45, 108–109, 115, 120, 128, 130–132, Fig. 1C). "Indeed," Petitioner indicates, "the software of Okamura's cluster display control section 180 controlling display on display section 181 would have been adjusted using such techniques." Pet. 72 (citing Ex. 1004 ¶¶ 91, 103–104, 232–249; Ex. 1002 ¶ 131). According to Petitioner, "[t]he Okamura-Flora and Wagner teachings would have

performed the same function of displaying information by an application whether separate or combined." Pet. 72.

Petitioner argues a person of ordinary skill in the art "would have recognized the combination's results would have been predictable: the Okamura-Flora system's content playback application implementing an updatable user interface window as described by Wagner that displays cluster map display area 414 and face cluster display area 431." *Id.* (citing Ex. 1004, ¶¶ 232–248, Figs. 17–21; Ex. 1006, ¶¶ 4, 45, 108–109, 115, 120, 128, 130–132, Fig. 1C; [Pet.] Sections VI.A.3.c, VI.A.3.g; Ex. 1002, ¶ 131–132).

According to Petitioner "[t]he Okamura-Flora system describes displaying cluster map display area 414 and face cluster display area 431, and Wagner simply specifies that an application's updatable user interface window displays these items." Pet. 72. Petitioner argues a person of ordinary skill in the art "would have had a reasonable expectation of success in combining the Okamura-Flora system with Wagner's teachings due to the predictability as discussed above, and because both references relate to user interface systems used to navigate and display content." Pet. 72–73. "Combining their teachings," Petitioner argues, "would have been routine to a POSITA due to the overlap in subject matter and the simple software modifications to adjust the content playback application to include Flora's teachings." *Id.* at 73.

Petitioner argues,

> [t]his analysis demonstrates a POSITA would have been motivated to combine the Okamura-Flora system with Wagner because it is a combination of prior art elements (Okamura-

> Flora's content playback application including cluster map display area 414 and face cluster display area 431; Wagner's a updatable user interface window (application view 191) of software application 136-1 as discussed) according to known methods (known programming techniques to adjust the software of Okamura's content playback application) to yield predictable results (the Okamura-Flora system's content playback application implementing an updatable user interface window as described by Wagner that displays cluster map display area 414 and face cluster display area 431).

Pet. 73 (citing Ex. 1002 ¶¶ 132–134).

Petitioner argues that a person of ordinary skill in the art would have been "further motivated to combine the Okamura-Flora system with Wagner such that Okamura-Flora's media viewer 64 displays the location name of a location associated with content as described by Wagner." Pet. 76 (citing Ex. 1002 ¶¶ 135–138). Petitioner argues that

> [i]n the combination, media viewer 64 for the first icon (*the first location view*) would have displayed a *first location name associated with the first location* that is the location where content for the first icon is captured, and media viewer 64 for the second icon (*the second location view*) would have displayed a *second location name associated with the second location* that is the location where content for the second icon captured.

Pet. 76–77 (citing [Pet.] Sections VI.A.3.g, VI.A.3.j).

According to Petitioner,

> [t]he Okamura-Flora combination describes media viewer 64 displays a location name associated with a selected icon (including the first icon and second icon) and content displayed by the viewer (*see* EX1005, 7:23-42, Fig. 3; [Pet.] Sections VI.A.3.f-VI.A.3.g, VI.A.3.i-VI.A.3.j) and Wagner simply specifies the displayed location name in such a viewer is a city name associated with content.

Pet. 77 (citing Ex. 1006 ¶¶ 183, 228, Figs. 5S-5V). "Moreover," Petitioner argues, "because the combination uses Wagner's interface teachings and makes clear the city associated with content, it allows for a 'more efficient method[] and interface[] for displaying and navigating through content.'" Pet. 77 (citing Ex. 1006 ¶¶ 6–7, 13; Ex. 1002 ¶ 139).

Petitioner argues a person of ordinary skill in the art "would have combined the Okamura-Flora system with Wagner in the above manner using known programming techniques, adjusting media viewer 64's software such that location name as taught by Wagner is displayed." Pet. 77 (citing Ex. 1004 ¶¶ 232–248, Figs. 17–21; Ex. 1005, 7:23–42, Fig. 3; Ex. 1006 ¶¶ 183, 228, Figs. 5S-5V; Ex. 1002, ¶ 140). "Additionally," Petitioner argues, "the Okamura-Flora and Wagner teachings would have performed the same function of displaying location information whether separate or combined." Pet. 77–78.

Petitioner argues a person of ordinary skill in the art "would have recognized the combination's results would have been predictable: the Okamura-Flora system's media viewer 64 displays the location name of a location associated with content as described by Wagner." Pet. 78 (citing Ex. 1004 ¶¶ 232–248, Figs. 17–21; Ex. 1005, 7:23–42, Fig. 3; Ex. 1006 ¶¶ 183, 228, Figs. 5S-5V; Ex. 1002 ¶ 141). Petitioner argues that "[t]his is because the Okamura-Flora system describes media viewer 64 displaying a location name associated with content displayed by the viewer, and Wagner simply specifies the displayed location name in a viewer is a city name (e.g., San Francisco)." Pet. 78. According to Petitioner, a person of ordinary skill in the art "would have had a reasonable expectation of success in combining

the Okamura-Flora system with Wagner's teachings because the combination's results would have been predictable as discussed, and because both references relate to user interface systems used to navigate and display content." *Id.* "Combining their teachings," Petitioner argues, "would have been routine to a POSITA due to the overlap in subject matter and the simple software modifications to adjust media viewer 64 to include Wagner's displayed location name teachings." *Id.*

According to Petitioner,

> [t]his analysis demonstrates a POSITA would have been motivated to combine the Okamura-Flora system with Wagner because it is a combination of prior art elements (Okamura-Flora's media viewer 64 that displays location information; Wagner's location viewer that displays a location name associated with content) according to known methods (known programming techniques, adjusting the Okamura-Flora media viewer 64's software such that location name as taught by Wagner is displayed) to yield predictable results (the Okamura-Flora system's media viewer 64 displays the location name of a location associated with content as described by Wagner).

Pet. 78–79 (citing Ex. 1002 ¶ 142).

Petitioner argues that a person of ordinary skill in the art would have been "further motivated to combine the Okamura-Flora system with Wagner such that the Okamura-Flora system manages content sets including at least one image and at least one image." Pet. 82 (citing Ex. 1006 ¶¶ 259–262; Ex. 1002 ¶¶ 143–144). Petitioner asserts that

> [i]n the combination, Okamura's content forming the *third set of digital files* would have included at least one image and at least one image (*digital photographs and videos*), and Okamura's content forming the *fourth set of digital files* would have included

> at least one image and at least one image (*digital photographs and videos*).

Pet. 82 (citing [Pet.] Sections VI.A.3.m, VI.A.3.o).

According to Petitioner, "Okamura's content includes 'image files recorded by an image capturing apparatus such as a digital still camera' and embodiments apply to 'cases where moving image contents are used.'" Pet. 82 (citing Ex. 1004 ¶¶ 2, 22, 91–92, 107–110, 139, 149, 501, Figs. 2A–2B). Petitioner argues that "[t]he Okamura-Flora combination therefore describes managing image and video content, and Wagner simply makes explicit that sets of managed content include at least one image and at least one video." Pet. 82 (citing Ex. 1006 ¶¶ 259–262).

According to Petitioner, a person of ordinary skill in the art "would have combined the Okamura-Flora system with Wagner in the above manner using known programming techniques, adjusting the Okamura-Flora content playback application's software such that Okamura manages content including both videos and image content." Pet. 82 (citing Ex. 1004 ¶¶ 2, 22, 91–92, 107–110, 139, 149, 501, Figs. 2A-2B). 'In particular," Petitioner argues, "the software of Okamura's content playback application would have been adjusted such that content storing section 210 stores content including videos and images to implement Wagner's teachings." Pet. 82–83 (citing Ex. 1004 ¶¶ 91–92, 267). Petitioner argues that "[t]his would have been straightforward because Okamura's system is applicable to image and video." Pet. 83. "Additionally," Petitioner argues, "the Okamura-Flora and Wagner teachings would have performed the same function of providing

content for display whether separate or combined." *Id.* (citing Ex. 1002 ¶¶ 145–146).

According to Petitioner, a person of ordinary skill in the art "would have recognized the combination's results would have been predictable: the Okamura-Flora system's sets of content include both at least one image and at least one video." Pet. 83 (citing Ex. 1004 ¶¶ 2, 22, 91–92, 107–110, 139, 149, 501, Figs. 2A–2B; Ex. 1006 ¶¶ 259–262; Ex. 1002 ¶ 146). Petitioner argues that "[t]his is because the Okamura-Flora's system is applicable to image and video content and Wagner simply makes explicit that sets of managed content include at least one image and at least one video." Pet. 83. Petitioner argues that a person of ordinary skill in the art "would have also had a reasonable expectation of success in combining the Okamura-Flora system with Wagner's teachings because the combination's results would have been predictable as discussed above, and because both references relate to user interface systems used to navigate and display content." *Id.* "Combining their teachings," Petitioner argues, "would have been routine to a POSITA due to the overlap in subject matter and the simple software modifications to adjust the content playback application to include Wagner's teachings." *Id.*

Petitioner argues that

> [t]his analysis demonstrates a POSITA would have been motivated to combine the Okamura-Flora system with Wagner because it is a combination of prior art elements (Okamura-Flora's system that manages content; Wagner's teachings that sets of content being managed include at least one video and at least one image) according to known methods (known programming techniques to adjust the software of Okamura's

> content playback application in the Okamura-Flora system) to yield predictable results (the Okamura-Flora system manages sets of content that include both at least one video and at least one image).

Pet. 84 (citing Ex. 1002 ¶ 147).

Petitioner also argues that a person of ordinary skill in the art would have been

> further motivated to combine the Okamura-Flora system with Gilley such that Okamura's face cluster display area 431 (*the people view*) displays thumbnail images 432 of people's faces included in content (including the first and second person thumbnail images) along with the name of each person adjacent to each thumbnail image 432 as taught by Gilley.

Pet. 88 (citing Ex. 1002 ¶¶ 152–154).

Petitioner argues that "[t]he Okamura-Flora system includes Okamura's face cluster display area 431 having thumbnail images 432 of people included in content, where 'information 433 related to the thumbnail image 432' including 'the name of the person corresponding to the face' of the person shown in each thumbnail image 432 is displayed." Pet. 88 (citing Ex. 1004 ¶ 247, Figs. 20, 21; [Pet.] Sections VI.A.3.m-VI.A.3.p; Ex. 1002 ¶ 155).

According to Petitioner,

> [t]he Okamura-Flora combination therefore describes face cluster display area 431 displaying the name of a person shown in each thumbnail image 432 (including the first and second person thumbnails), and Gilley specifies the name of each person, including first and second people, is displayed adjacent to each thumbnail image of a person, and at the same time as shown by Gilley's Figure 7.

Pet. 89 (citing Ex. 1007, Abstract, ¶¶ 2, 5, 15, 99–103, Figs. 7, 8).

Petitioner argues that

> [t]he combination would have provided benefits: displaying the name a person next to a thumbnail image representing a set of content including that person would have helped a user understand how content is organized and which content features specific people identified by name, providing an intuitive system that improves content management system accessibility.

Pet. 90.

According to Petitioner, "Gilley recognizes these benefits, stating its system provides an organizational scheme 'intuitive for users of an image system, enabling users to quickly understand the functioning of the system' and improved 'accessibility, organization and usability' of images in a library.'" *Id.* (citing Pet. 90; Ex. 1007 ¶¶ 14–16; Ex. 1002 ¶¶ 156–157).

Petitioner argues that a person of ordinary skill in the art

> would have combined the Okamura-Flora system with Gilley in the above manner using known programming techniques, adjusting the Okamura-Flora content playback application's software such that face cluster display area 431 displays thumbnail images 432 of people's faces along with the name of each person adjacent to each thumbnail image.

Pet. 91 (citing Ex. 1004 ¶ 247, Figs. 20, 21; Ex. 1007, Abstract, ¶¶ 2, 5, 15, 99–103, Figs. 7, 8). "Indeed," Petitioner points out, "the software of Okamura's cluster display control section 180 that controls display on display section 181 would have been adjusted using such techniques to implement Gilley's teachings." Pet. 91 (citing Ex. 1004 ¶¶ 91, 103–104, 232–249; Ex. 1002 ¶ 158). According to Petitioner, "[t]he Okamura-Flora and Gilley teachings would have performed the same function of displaying information associated with content (e.g., Okamura's information 433;

Gilley's names associated with content in Figure 7) whether separate or combined." Pet. 91.

Petitioner argues a person of ordinary skill in the art "would have recognized the combination's results would have been predictable: Okamura's face cluster display area 431 displays thumbnail images 432 of people's faces included in content along with the name of each person displayed adjacent to each of thumbnails images 432 as taught by Gilley." Pet. 91 (citing Ex. 1004 ¶ 247, Figs. 20, 21; [Pet.] Sections VI.A.3.m-VI.A.3.p; Ex. 1007, Abstract, ¶¶ 2, 5, 15, 99–103, Figs. 7, 8; Ex. 1002 ¶ 159). Petitioner argues that

> [t]he Okamura-Flora system describes face cluster display area 431 displaying information 433 (including name information) associated with each thumbnail images 432, and Gilley simply specifies displayed information is the name of a person shown by thumbnail image 432, the name is displayed adjacent to each thumbnail image 432, and the names are displayed for each thumbnail image 432 at the same time as shown in Gilley's Figure 7.

Pet. 91–92. Petitioner argues that a person of ordinary skill in the art "would have had a reasonable expectation of success in combining the Okamura-Flora system with Gilley's teachings because the combination's results would have been predictable as discussed above, and because both references relate to user interface systems used to navigate and display content." *Id.* at 92. "Combining their teachings," Petitioner argues, "would have been routine to a POSITA due to the overlap in subject matter and the simple software modifications to adjust the content playback application to include Gilley's teachings." *Id.*

> Petitioner argues that
>
> [t]his analysis demonstrates a POSITA would have been motivated to combine the Okamura-Flora system with Gilley because it is a combination of prior art elements (Okamura-Flora's face cluster display area 431 that displays thumbnail images 432 showing each person contained in content and information 433 for each thumbnail image 432; Gilley's display of thumbnail images showing each person's face contained in content and the name of each person adjacent to their respective thumbnail image) according to known methods (known programming techniques to adjust the software of Okamura's content playback application such that face cluster display area 431 displays thumbnail images 432 of people's faces included in content along with the name of each person displayed adjacent to each thumbnail image) to yield predictable results (Okamura's face cluster display area 431 displays thumbnail images 432 of people's faces included in content along with the name of each person displayed adjacent to each thumbnails image 432 as taught by Gilley).

Pet. 92–93 (citing Ex. 1002 ¶ 160).

b) Patent Owner's Arguments

Patent Owner argues that a person of ordinary skill in the art "would not combine Okamura with Flora as proposed, because Flora's use of a geographic map is analogous to the maps in Fujiwara and Takakura disparaged by Okamura." PO Resp. 39 (citing Ex. 1004 ¶¶ 3–11; Ex. 2038 ¶¶ 106–107).

Patent Owner argues that "Okamura expressly disparages Fujiwara and Takakura's use of a geographic maps, i.e., the same type of map as Flora, when discussing "the related art" in its paragraphs 0004-0006 and 0008-0011." PO Resp. 40 (citing Ex. 2038 ¶ 110). "In particular," Patent Owner argues, "Okamura states that using a geographic map makes it

'necessary to display the map at a scale sufficiently large to show the countries of the world' to convey 'correspondence between images taken in Tokyo and its vicinity and images taken in other regions.'" PO Resp. 40 (citing Ex. 1004 ¶ 9). Patent Owner argues that "[t]his 'makes it difficult to intuitively grasp the geographical correspondence between individual contents.'" PO Resp. 40 (citing Ex. 1004 ¶ 8).

Patent Owner argues that "Okamura also warns that the ability to zoom in on a scalable geographic map created problems because at this scale, 'it is not possible to display the generated positions of images taken in other regions . . . on the map.'" PO Resp. 40 (citing Ex. 1004 ¶ 10). "For these reasons," Patent Owner argues, "Okamura recommends using 'maps corresponding to individual clusters,' such as the static cluster map matrix of Fig. 18, so that the user can easily visualize the relative locations of various content." PO Resp. 40–41 (citing Ex. 1004 ¶¶ 213–215).

Patent Owner argues that "the content represented by the cluster maps in Fig. 18 of Okamura include images at various locations, including several locations in or around Tokyo . . . and at least one location in Hawaii." PO Resp. 41. Patent Owner argues that "[i]f the content from Okamura's Fig. 18 were displayed as taught by Flora, then the content in the Tokyo and its vicinity represented as separate map clusters in Fig. 18 . . . would need to be consolidated when the map is zoomed out at a scale that allows the content from Hawaii . . . to also be seen." *Id.*

Patent Owner argues that "Okamura also emphasizes the importance of showing content from different locations simultaneously regardless of how geographically far apart those locations are." *Id.* at 42 (citing Ex. 1004

¶ 9 ("when displaying the correspondence between images taken in Tokyo and its vicinity and images taken in other regions, and their generated positions"); Ex. 2038 ¶ 130). "However," Patent Owner argues, "in Flora, the user needs move the cursor 44 'proximate to certain locations on an electronic geographic map 46' to cause the icons to appear, and the icons disappear within a certain time after the cursor is moved away from a location." PO Resp. 42–43 (citing Ex. 1005, 6:5–19).

Patent Owner argues that "[i]f the user wanted to know whether or not there is content associated with other locations . . . the user would need to move the cursor in those areas." PO Resp. 43 (citing Ex. 1005, 6:5–19; Ex. 2038 ¶ 132). "Further," Patent Owner argues, "previously displayed icons may disappear after a certain period of time, such that the user would need to remember that there were icons one location to understand the correspondence between the various content associated with each icon that may appear on the map." PO Resp. 43 (citing Ex. 1004 ¶ 11; Ex. 2038 ¶ 132–133).

Patent Owner concludes that "Okamura teaches away from Petitioner's proposed use of Flora's scalable geographic map because a POSITA 'would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.'" PO Resp. 44.

Patent Owner also argues that "Petitioner separately provides reasons to combine (1) Okamura, Flora and Wagner and (2) Okamura, Flora and Gilley," but "Petitioner does not provide an independent rationale for combining Okamura, Flora, Wagner *and* Gilley." PO Resp. 76.

c) Analysis

Petitioner asserts that a person of ordinary skill in the art

> would have been motivated to combine Okamura and Flora such that when organizing content according to location, Okamura's cluster map display area 414 displays content as taught by Flora's geographic map 46 and media viewer 64, where Okamura's content is indicated at various locations on the map by Flora's icons 58 and 59 and Flora's media viewer 64 provides a window for viewing Okamura's content associated with the locations, shown by icons 66.

Pet. 22 (citing Ex. 1002 ¶ 81).

Petitioner explains that a person of ordinary skill in the art "would have been motivated to combine Okamura and Flora in this manner because the combination enhances how Okamura displays content associated with various locations, using Flora's scalable geographic map with icons and media viewer, improving user experience." Pet. 24 (citing Ex. 1002 ¶ 82). Petitioner explains that combining the teachings provides an interface displaying locations where Okamura's content has been captured on a scalable map and allows a user to view the content captured at a specific location using a media viewer, which provides a user with improved awareness regarding locations associated with content. *Id.* at 24–25.

Petitioner also explains that Okamura's displayed cluster maps help a user easily grasp areas where content has been captured and allow a user to easily grasp the distribution of the location of generation of contents included in the cluster. *Id.* at 25 (citing Ex. 1004 ¶¶ 213–215, 222, 272; *see also id.* ¶¶ 18, 110, 123, 130, 139). Enhancing Okamura with Flora's teachings, Petitioner explains, furthers these goals because Flora's system

improves how a user views content organized by location, allowing a user to interface with a map displaying content and facilitating access to content associated with locations on an electronic map. Pet. 25 (citing Ex. 1005, 1:56–55, 2:2–9, 3:22–46; Ex. 1002 ¶ 82).

Petitioner also asserts that a person of ordinary skill in the art would have been further motivated to combine the Okamura-Flora system with Wagner such that Okamura-Flora's content playback application implements an updatable user interface window as described by Wagner on which cluster map display area 414 displaying content as taught by Flora's geographic map 46 and media viewer 64, and face cluster display area 431 are displayed. Pet. 71 (citing Ex. 1004 ¶¶ 232–248, Figs. 17–21; Ex. 1006 ¶¶ 4, 45, 105–109, 115, 120, 128, 130–132, Fig. 1C; Ex. 1002 ¶¶ 128–130).

Petitioner explains that the Okamura-Flora system describes using an application (Okamura's content playback application) to display cluster map display area 414 and face cluster display area 431, and Wagner simply teaches using an application's updatable interface window to display these items. Pet. 71. Petitioner explains that because the combination implements Wagner's interface teachings of providing an interface updated to display different screens, it allows for a more efficient method and interface for displaying and navigating through content and can conserve power and increase the time between battery charges for the computing device displaying the interface. Pet. 71 (citing Ex. 1006 ¶¶ 6–7, 13).

Petitioner also explains that a person of ordinary skill in the art would have been further motivated to combine the Okamura-Flora system with Wagner such that Okamura-Flora's media viewer 64 displays the location

name of a location associated with content as described by Wagner. Pet. 76 (citing Ex. 1002 ¶¶ 135–138).

Petitioner explains that because the combination uses Wagner's interface teachings and makes clear the city associated with the content, it allows for a more efficient method and interface for displaying and navigating through content. Pet. 77 (citing Ex. 1006 ¶¶ 6–7, 13; Ex. 1002 ¶ 139).

Petitioner asserts that a person of ordinary skill in the art would have been further motivated to combine the Okamura-Flora system with Gilley such that Okamura's face cluster display area 431 displays thumbnail images 432 of people's faces included in the content (including the first and second person thumbnail images) along with the name of each person adjacent to each thumbnail image 432 as taught by Gilley. Pet. 88 (citing Ex. 1002 ¶¶ 152–154).

Petitioner explains that the combination would have provided benefits, such as displaying the name a person next to a thumbnail image representing a set of content. Pet. 90. Including that person would have helped a user understand how content is organized and which content features specific people identified by name, providing an intuitive system that improves content management system accessibility. *Id.*

Petitioner indicates that Gilley recognizes these benefits, explaining its system provides an organizational scheme intuitive for users of an image system, enabling users to quickly understand the functioning of the system with improved accessibility, organization and usability of images in a library. *Id.* (citing Ex. 1007 ¶¶ 14–16; Ex. 1002 ¶¶ 156–157).

Petitioner explains that a person of ordinary skill in the art would have combined the asserted art using known programming techniques, such as adjusting the software of Okamura's content playback application so that cluster map display area 414 includes Flora's teachings. Pet. 25 (citing Ex. 1004 ¶¶ 232–241).

With respect to Wagner, Petitioner explains that the programming techniques would include adjusting the content playback application software such that cluster map display area 414 and face cluster display area 431 are displayed on an updatable user interface window as taught by Wagner. Pet. 72 (citing Ex. 1004 ¶¶ 232–248, Figs. 17–21; Ex. 1006 ¶¶ 4, 45, 108–109, 115, 120, 128, 130–132, Fig. 1C).

With respect to Gilley, Petitioner explains that the techniques would have adjusted the Okamura-Flora content playback application's software such that face cluster display area 431 displays thumbnail images 432 of people's faces along with the name of each person adjacent to each thumbnail image. Pet. 91 (citing Ex. 1004 ¶ 247, Figs. 20, 21; Ex. 1007, Abstract, ¶¶ 2, 5, 15, 99–103, Figs. 7, 8).

Petitioner explains that a person of ordinary skill in the art would have recognized the combination's results would have been predictable, such as using Flora's geographic map 46 with icons 58 and 59 and media viewer 64 to organize and display Okamura's content on cluster map display area 414 according to location associated with the content. Pet. 26 (citing Ex. 1004 ¶¶ 18, 91–93, 103–106, 110, 123, 130, 135–143, 213–220, 225, 232–241, 267; Ex. 1005, 3:40–45, 6:66–7:52, Fig. 3; Ex. 1002 ¶ 84). Petitioner explains this is because Okamura organizes and displays content based on

the location at which content was captured, and Flora organizes and displays content according to its associated location using an interactive map. Pet. 26.

Petitioner also indicates that a person of ordinary skill in the art would have had a reasonable expectation of success in combining the prior art's teachings in this manner, in part because the combination's results would have been predictable, for example in the case of Okamura and Flora, the references relate to organizing content according to location associated with the content. Pet. 38–39.

Petitioner indicates combining the teachings of the prior art would have been routine to a person of ordinary skill because of this overlap and the simple software modifications required, for example, to adjust cluster map display area 414 to include Flora's teachings. *Id.* at 26–27.

Petitioner's position is corroborated by the testimony of Dr. Bederson, which we credit, as it is consistent with the teachings of Okamura, Flora, Wagner, and Gilley, the analysis is well-reasoned and supported by the evidence of record. *See* Ex. 1002 ¶¶ 81–86, 91–99, 123–125, 128–134, 154–160, 163; Ex. 1038 ¶¶ 38, 55–56, 60, 67, 70, 75.

Patent Owner argues that "Okamura teaches away from Petitioner's proposed use of Flora's scalable geographic map because a POSITA 'would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.'" PO Resp. 44.

Patent Owner argues that Okamura expressly disparages the use of geographic maps of the type used by Flora. PO Resp. 40 (citing Ex. 2038

¶ 110). Patent Owner argues that Okamura states that using a geographic map makes it necessary to display the map at a scale sufficiently large to show the countries of the world to convey correspondence between images taken in one vicinity and the vicinity where images are taken in other regions. PO Resp. 40 (citing Ex. 1004 ¶ 9). Patent Owner argues that this makes it difficult to intuitively grasp the geographical correspondence between individual contents. PO Resp. 40 (citing Ex. 1004 ¶ 8).

Patent Owner argues that Okamura also warns that the ability to zoom in on a scalable geographic map creates problems because at this scale it is not possible to display the generated positions of images taken in other regions on a map. PO Resp. 40 (citing Ex. 1004 ¶ 10). For these reasons, Patent Owner argues, Okamura recommends using maps corresponding to individual clusters, such as the static cluster map matrix of Fig. 18, so that the user can easily visualize the relative locations of various content. PO Resp. 40–41 (citing Ex. 1004 ¶¶ 213–215). Patent Owner provides the testimony of Dr. Reinman in support of its position. Ex. 2038 ¶¶ 102–133.

To teach away, however, a reference must actually "criticize, discredit, or otherwise discourage" investigation into the claimed solution. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). A reference does not teach away if it merely expresses a general preference for an alternative invention from amongst options available to the ordinarily skilled artisan, and the reference does not discredit or discourage investigation into the invention claimed. *Id.*

Here, Patent Owner argues that "Okamura states that using a geographic map makes it 'necessary to display the map at a scale sufficiently

large to show the countries of the world' to convey 'correspondence between images taken in Tokyo and its vicinity and images taken in other regions,'" and that this "makes it difficult to intuitively grasp the geographical correspondence between individual contents." PO Resp. 40 (citing Ex. 1004 ¶¶ 8–9). Patent Owner argues that "Okamura also warns that the ability to zoom in on a scalable geographic map created problems because at this scale, "it is not possible to display the generated positions of images taken in other regions . . . on the map" and that "Okamura recommends using 'maps corresponding to individual clusters.'" PO Resp. 40 (citing Ex. 1004 ¶¶ 10, 213–215).

Okamura's choice to use a display of cluster maps as index images, however, is not a "teaching away" as Patent Owner argues. Okamura is expressing a preference for an alternative way of displaying images representing content associated with positions on a map. Okamura explains that "it is important to be able to easily grasp the correspondence between a plurality of contents on the map, and each individual content" and so chooses to use a cluster map of index images. *See* Ex. 1004 ¶¶ 11, 234–241.

Okamura, however, does not overtly "criticize, discredit, or otherwise discourage" investigation into the use of a scalable map for such a display as Patent Owner argues and it certainly does not criticize, discredit or disparage the combination proposed by Petitioner. *See, e.g.,* Ex. 1038 ¶¶ 50–60. Moreover, some of Okamura's embodiments describe the use of maps with changing or differing scales as a way of displaying their information. *See, e.g.,* Ex. 1004 ¶¶ 19–20, 93, 215, 219. For example, Okamura uses the very characteristics Patent Owner says it disparages. Okamura's first

embodiment displays content organized by location, where "cluster map display screen 480 is provided with list display area 481 and map display area 482." Ex. 1004 ¶ 275–281, Figs. 27A, 27B. *See In re Gurley*, 27 F.3d 551, 552–553 (Fed. Cir. 1994) (reference's "statement of inferiority" does not teach away where reference utilized alleged inferior aspect).

Patent Owner also asserts that "Petitioner separately provides reasons to combine (1) Okamura, Flora and Wagner and (2) Okamura, Flora and Gilley," but "Petitioner does not provide an independent rationale for combining Okamura, Flora, Wagner *and* Gilley." PO Resp. 76. Patent Owner, however, provides no argument or discussion related to this point and cites to no particular authority to support it.

Significantly, the Federal Circuit has stated,

> we have repeatedly held that an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even common-sensical—we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him *capable* of combining the prior art references.

Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick, 464 F.3d 1356, 1368, (Fed. Cir. 2006).

Patent Owner has not argued that the ordinary artisan in this field of endeavor does not possesses the knowledge and skills rendering him *incapable* of combining the prior art references. Indeed, the level of ordinary skill here is a person with a bachelor's degree in computer science, electrical engineering, or a related field, with two years of academic or industry experience in software development related to content management systems and user interfaces. *See* Sec. II.B, above. Dr. Bederson testifies that a person of ordinary skill in the art "would have combined Okamura and Flora . . . *using known programming techniques*, adjusting the software of Okamura's content playback application such that cluster map display area 414 includes Flora's teachings" and "would have recognized the combination's results would have been predictable . . . because it is simple substitution of one known element . . . for another." Ex. 1002 ¶¶ 83, 84, 86 (emphasis added).

Here, Petitioner provides a proposed combination of prior art that is supported by the evidentiary record, and is explained in ample detail by the reasoned testimony of Dr. Bederson. Petitioner also identifies a number of benefits of the proposed combination that would have served as a reasoned basis for a person of ordinary skill in the art to combine the prior art in the manner described in the Petition.

As Petitioner explains, for example, the combination of Okamura and Flora enhances how Okamura displays content associated with various locations, using Flora's scalable geographic map with icons and media viewer, thus improving user experience. Pet. 24 (citing Ex. 1002 ¶ 82). Displaying locations where Okamura's content has been captured on a

scalable map allows a user to view the content captured at a specific location using a media viewer, which provides a user with improved awareness regarding locations associated with content. Pet. 24–25 (citing Ex. 1005, 1:56–55, 2:2–9, 3:22–46; Ex. 1002 ¶ 82). Flora's system improves how a user views content organized by location, allowing a user to interface with a map displaying content and facilitating access to content associated with locations on an electronic map. Pet. 25 (citing Ex. 1005, 1:56–55, 2:2–9, 3:22–46; Ex. 1002 ¶ 82). Wagner's teachings of providing an interface updated to display different screens allows for a more efficient method and interface for displaying and navigating through content and can conserve power and increase the time between battery charges for the computing device displaying the interface. Pet. 71 (citing Ex. 1006 ¶¶ 6–7, 13). Gilley displays the name a person next to a thumbnail image representing a set of content, so that including that person would have helped a user understand how content is organized and which content features specific people identified by name, providing an intuitive system that improves content management system accessibility. Pet. 88, 90 (citing Ex. 1002 ¶¶ 152–154).

Petitioner also explains how a person of ordinary skill in the art would have combined the references using known programming techniques, such as adjusting the software of Okamura's content playback application so that cluster map display area 414 includes Flora's teachings. Pet. 25 (citing Ex. 1004 ¶¶ 232–241). Petitioner explains that such modifications would have been routine simple software modifications (Pet. 26–27), with predictable results (Pet. 26 (citing Ex. 1004 ¶¶ 18, 91–93, 103–106, 110, 123, 130, 135–143, 213–220, 225, 232–241, 267; Ex. 1005, 3:40–45, 6:66–7:52, Fig. 3; Ex.

1002 ¶ 84)), and that a person of ordinary skill in the art would have had a reasonable expectation of success in combining the prior art's teachings in this manner (Pet. 38–39).

Based upon consideration of the entire record, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that a person of ordinary skill in the art at the time of the invention would have had sufficient reason to combine the teachings of Okamura, Flora, Wagner, and Gilley in the manner proposed and would have had a reasonable expectation of success in doing so.

3. Conclusion as to Claim 1

Based upon consideration of the entire record, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that the combined teachings of Okamura, Flora, Wagner, and Gilley meet the recited limitations of independent claim 1. We are also persuaded that a person of ordinary skill in the art would have had sufficient reason to combine the teachings of the asserted art in the manner described in the Petition and would have had a reasonable expectation of success in doing so.

We are persuaded that Petitioner has demonstrated by a preponderance of the evidence that independent claim 1 is unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Okamura, Flora, Wagner, and Gilley.

4. Dependent Claims 2–7

Petitioner argues that Okamura, Flora, Wagner, and Gilley teach the recited limitations of dependent claims 2–7. Pet. 62–69, 85, 94, 96.

a) Claim 2

Dependent claim 2 recites "*[t]he method of claim 1, wherein the map view further includes a first indication feature associated with the first location selectable thumbnail image, the first indication feature being based on a number of digital files in the first set of digital files*."

Petitioner asserts that the combination of Okamura and Flora teaches claim 2. Pet. 62. Petitioner asserts that Okamura displays "'information 418' including 'the number of contents [] belonging to a cluster corresponding to the cluster map 417.'" *Id.* (citing Ex. 1004 ¶ 240, Fig. 19). In Figure 19's example, "28" is the number of content files for the grayed cluster map. *Id.*

Petitioner asserts that

> [i]n the Okamura and Flora combination, Okamura's cluster map display area 414 (*the map view*) displays content organized by location using Flora's geographic map 46 and media viewer 64, where Okamura's content is indicated at various locations on the map by Flora's icons 58 and 59. [Pet.] Section VI.A.3.c. Combining Okamura's teachings regarding displayed information 418 with Flora would have resulted in Okamura's cluster map display area 414 (*the map view*) including Okamura's displayed information 418 showing the number of contents being displayed with Flora's icons 58 and 59, including the first of icons 58 and 59; thus, the first icon would include Okamura's displayed information 418 showing the number of contents associated with that first icon (*includes a first indication feature associated with the first location selectable thumbnail image*), where the displayed information 418 for the first icon (*the first indication feature*) shows the number of files in the first set of digital files at the location associated with the first icon (*being based on a number of digital files in the first set of digital files*). *Id.*; EX1004, ¶0240, Fig. 19; [Pet.] Section VI.A.3.c-

> VI.A.3.d, VI.A.3.g. Information 418 showing the number of contents of each icon, including that for the first icon (*the first indication feature*), would have been connected to each of icons 58 and 59, including the first icon, by overlapping each icon as shown by Okamura in Figures 19-21 below. EX1004, Figs. 19-21 (showing information 418 and 433 overlapping an associated cluster map).

Pet. 63.

Petitioner's position is supported by the testimony of Dr. Bederson. *See* Ex. 1002 ¶¶ 123–125.

Patent Owner argues that "[b]ecause Petitioner has failed to carry its burden . . . as to claim 1, Petitioner has also failed to do so in relation to dependent claims 2–7 as they incorporate the same limitations." PO Resp. 64. Patent Owner's argument, however, is premised on an incorrect assumption, because we have found that Petitioner has met its burden with respect to claim 1. *See* Sec. II.E.3.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets the limitations of dependent claim 2.

b) Claim 3

Dependent claim 3 recites "*[t]he method of claim 2, wherein the first indication feature is connected to the first location selectable thumbnail image*."

Petitioner asserts that the combination of Okamura and Flora teaches claim 3. Pet. 66. Petitioner argues that "the combination of Okamura and Flora provides that information 418 for each icon, including information 418 for the first icon (*the first indication feature*), would have been connected to

each of icons 58 and 59, including the first icon (*the first location selectable thumbnail image*), by overlapping each icon (*is connected to the first location selectable thumbnail image*). *Id.* at 66–67.

Patent Owner argues that "[n]owhere does Okamura teach that the cluster map display area 414 (*map view*) displayed in response to the PLACE tab 413 (*first input*) includes a first indication feature that is "connected to" a first thumbnail image on an interactive map. PO Resp. 65 (citing Ex. 2038 ¶ 155). "To include number of contents information 418," Patent Owner argues, "Okamura teaches that the user must first provide an *entirely separate input* that involves placing "the mouse ... over a cluster map 417 by a user operation." PO Resp. 65. "The 'user operation' of placing 'the mouse ... over a thumbnail image 432' is not the PLACE tab 413 Petitioner identified as the claimed 'first input.'" *Id.* at 66.

Patent Owner misapprehends the combination of Okamura and Flora described by Petitioner. The Petition explains that Okamura's teaches depressing the "PLACE" tab (*first input*) which causes the display of cluster map display area 414, and in the combination Okamura's display area 414 (*the map view*) displays content indicated at various locations on Flora's geographic map 46 by icons 58 and 59. *See* Pet. 14–18, 62–67. Okamura's information 418 teaches displaying the number of contents for each icon and would have been connected to each icon by overlapping as taught by Okamura's Figures 19–21. *Id.* That Okamura also teaches a feature whereby a user operation, such as a mouse movement, may display information 418 is not part of Petitioner's combination and therefore not relevant to Petitioner's proposed combination, which simply utilized the

teaching that information 418 is displayed in overlapping form. *Id.*; *see also* Ex. 1038 ¶ 72. Dr. Bederson's testimony is consistent with this understanding, which we credit. *See id.*

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets the limitations of dependent claim 3.

c) Claim 4

Dependent claim 4 recites "*[t]he method of claim 2, wherein the first indication feature includes a first number indicative of the number of digital files in the first set of digital files*."

Petitioner asserts that the combination of Okamura and Flora teaches claim 4. Pet. 67. Petitioner argues that "[i]n the combination, Okamura's displayed information 418 for the first icon (*the first indication feature*) shows the number of files in the first set of digital files at the location associated with the first icon (*includes a first number indicative of the number of digital files in the first set of digital files*)." *Id.* (citing Ex. 1004 ¶ 240, Fig. 19; [Pet.] Section VI.A.3.c-VI.A.3.d, VI.A.3.g, VI.A.4).

Patent Owner argues that "[b]ecause Petitioner has failed to carry its burden . . . as to claim 1, Petitioner has also failed to do so in relation to dependent claims 2–7 as they incorporate the same limitations." PO Resp. 64. Patent Owner's argument, however, is premised on an incorrect assumption, because we have found that Petitioner has met its burden with respect to claim 1. *See* Sec. II.E.3.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets the limitations of dependent claim 4.

d) Claim 5

Dependent claim 5 recites "*[t]he method of claim 2, wherein the map view further includes a second indication feature associated with the second location selectable thumbnail image, the second indication feature being based on a number of digital files in the second set of digital files.*"

Petitioner asserts that the combination of Okamura and Flora teaches claim 5. Pet. 67. Petitioner argues that in the combination,

> Okamura's cluster map display area 414 (*the map view*) includes Okamura's displayed information 418 displayed with Flora's icons 58 and 59, including the second of the icons 58 and 59; thus, the second icon would include Okamura's displayed information 418 showing the number of contents associated with the second icon (*includes a second indication feature associated with the second location selectable thumbnail image*) where displayed information 418 for the second icon shows the number of files in the second set of digital files at the location associated with the second icon (*being based on a number of digital files in the second set of digital files*).

Id. (citing Ex. 1004 ¶ 240, Fig. 19; [Pet.] Sections VI.A.3.e, VI.A.3.j, VI.A.4).

Patent Owner argues that "[n]owhere, however, does Okamura teach that its cluster map display area 414 (*map view*) includes both a "first indication feature" and "second indication feature" in the same view. PO Resp. 67 (citing Ex. 2038 ¶ 161). Patent Owner argues that "Okamura states that to include number of contents information 418, the user must first

provide an *entirely separate input* that involves placing "the mouse ... over a cluster map 417 by a user operation," and "doing so displays a number of contents indication for one location thumbnail image only – e.g. only the 'first location selectable thumbnail image.'" PO Resp. 67 (citing Ex. 2038 ¶ 162). Patent Owner also argues that "[n]owhere, however, does Okamura disclose or suggest any means for simultaneously including two indication features in that same view using Okamura's cursor. PO Resp. 67 (citing Ex. 2038 ¶ 163).

We disagree with Patent Owner. First, as we previously discussed, Claim 1 does not include the term "*simultaneously*" that Patent Owner seeks to add, nor can the claim be reasonably read to impose such a requirement. *See* Sec. II.E.1.c.3, above. The same analysis applies equally as well to dependent claim 5.

Moreover, Patent Owner's argument is flawed because Okamura's displayed information 418 shows the number of contents associated with both the first and second of icons 58 and 59 (*first indication feature* and *second indication feature*) displayed for each icon. As Dr. Bederson explains,

> in the combination, "Okamura's displayed information 418 showing the number of contents [][is] displayed with Flora's icons 58 and 59," where Okamura's cluster map display area 414 includes "displayed information 418 for the first icon (*the first indication feature*) [that] shows the number of files in the first set of digital files at the location associated with the first icon" and "displayed information 418 for the second icon [*the second indication feature*] [that] shows the number of files in the second set of digital files at the location associated with the second icon." *Id.*, 63, 68. Thus, a POSITA would have understood or at

> least found obvious that in the combination, because information 418 displaying contents is displayed with each of Flora's icons 58 and 59 (which includes the *first* and *second* claimed *thumbnail images*), *the first indication feature* and *the second indication feature* are provided for each of the icons.

Ex. 1038 ¶ 73.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets the limitations of dependent claim 5.

e) Claim 6

Dependent claim 6 recites "*[t]he method of claim 5, wherein the second indication feature is connected to the second location selectable thumbnail image*."

Petitioner asserts that the combination of Okamura and Flora teaches claim 6. Pet. 68. Petitioner argues that "[i]nformation 418 of the second icon (*the second indication feature*) would have been connected to the second icon (*connected to the second location selectable thumbnail image*) for the same reasons discussed in [the Petition] Section VI.A.4. *Id.*

Patent Owner argues "[b]ecause Petitioner has failed to carry its burden . . . as to claim 5 Petitioner has also failed to do so in relation to dependent claims 6 and 7 as they depend on claim 5 and incorporate the same limitations." PO Resp. 68.

Patent Owner's argument, however, is premised on an incorrect assumption, because we have found that Petitioner has met its burden with respect to claim 5. *See* Sec. II.E.4.d, g.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets the limitations of dependent claim 6.

f) Claim 7

Dependent claim 7 recites "*[t]he method of claim 5, wherein the second indication feature includes a second number indicative of the number of digital files in the second set of digital files.*"

Petitioner asserts that the combination of Okamura and Flora teaches claim 7. Pet. 69. Petitioner argues that "[i]n the combination, Okamura's displayed information 418 for the second icon (*the second indication feature*) shows the number of files in the second set of digital files at the location associated with the second icon (*includes a second number indicative of the number of digital files in the second set of digital files*). *Id.* (citing Ex. 1004 ¶ 240, Fig. 19; [Pet.] Section VI.A.3.c- VI.A.3.e, VI.A.3.i-VI.A.3.j, VI.A.7).

Patent Owner argues that "[b]ecause Petitioner has failed to carry its burden . . . as to claim 5 Petitioner has also failed to do so in relation to dependent claims 6 and 7 as they depend on claim 5 and incorporate the same limitations." PO Resp. 68.

Patent Owner's argument, however, is premised on an incorrect assumption, because we have found that Petitioner has met its burden with respect to claim 1. *See* Sec. II.E.4.d, g.

Based on the complete record and for the reasons we discuss, we find that Petitioner has demonstrated that the combination of Okamura and Flora meets the limitations of dependent claim 7.

g) Conclusion as to Dependent Claims 2–7

Based upon consideration of the entire record, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that the combined teachings of Okamura, Flora, Wagner, and Gilley meet the recited limitations of dependent claims 2–7. We are also persuaded that a person of ordinary skill in the art would have had sufficient reason to combine the teachings of the asserted art in the manner described in the Petition and would have had a reasonable expectation of success in doing so.

We are persuaded that Petitioner has demonstrated by a preponderance of the evidence that dependent claims 2–7 are unpatentable under 35 U.S.C. § 103(a) as obvious over the combined teachings of Okamura, Flora, Wagner, and Gilley.

F. Other Asserted Grounds

Petitioner asserts that claims 1–7 of the '228 patent are unpatentable as obvious under 35 U.S.C. § 103 over Okamura and Flora (Ground 1), Okamura, Flora, and Wagner (Ground 2), and Okamura, Flora, and Gilley (Ground 3). Pet. 4.

Because Petitioner has shown that all of the challenged claims are unpatentable with respect to Ground 4 as discussed above, we do not reach these other asserted grounds. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) ("The Commission . . . is at perfect liberty to reach a 'no violation' determination on a single dispositive issue."); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984, 990 (Fed. Cir. 2020) (recognizing that "[t]he Board has the discretion to decline to decide

additional instituted grounds once the petitioner has prevailed on all its challenged claims").

G. Motion to Exclude

Petitioner filed a Motion (Paper 44) to exclude exhibits 2041, 2042, and 2045, arguing that Patent Owner improperly filed the exhibits with its Sur-Reply (Paper 35) in violation of 37 C.F.R. § 42.23(b) (2020), which states in part that "[a] sur-reply may only respond to arguments raised in the corresponding reply and may not be accompanied by new evidence other than deposition transcripts of the cross-examination of any reply witness." Petitioner states that the exhibits are not deposition transcripts, and must be excluded. Paper 44, 2.

Patent Owner filed an Opposition (Paper 45), explaining that Patent Owner "introduced and cross-examined Dr. Bederson regarding each of the contested exhibits to test the opinions of Dr. Bederson's Second declaration (EX1038)." Paper 45, 1. Patent Owner does not contest that the exhibits are not deposition transcripts. *Id.*

The documents in question, Exhibits 2041, 2042, and 2045, were not relied upon by the Panel in arriving at its Decision in this matter. Therefore, Petitioner's motion to exclude is *denied* as moot.

III. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1–7 of U.S.

Patent No. Patent 10,621,228 B2 are unpatentable on the bases set forth in the following table.[8]

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

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–7	103(a)	Okamura, Flora[9]		
1–7	103(a)	Okamura, Flora, Wagner		
1–7	103(a)	Okamura, Flora, Gilley		
1–7	103(a)	Okamura, Flora, Wagner, Gilley	1–7	
Overall Outcome			1–7	

[9] Because each of the challenged claims is held unpatentable on the ground combining Okamura, Flora, Wagner, and Gilley as a basis for unpatentability, we do not reach the other asserted grounds in the Petition.

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that Petitioner has demonstrated by a preponderance of the evidence that claims 1–7 of U.S. Patent No. Patent 10,621,228 B2 are unpatentable;

FURTHER ORDERED that Petitioner's Motion to Exclude (Paper 44) is *denied* as moot;

FURTHER ORDERED that the parties shall, no later than 14 days from the entry of this Decision, jointly email a proposed redacted version of this Decision, which identifies proposed redactions with red highlighting, to trials@uspto.gov; and

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

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