

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE INC.,
Petitioner,

v.

VISUAL REAL ESTATE, INC.,
Patent Owner.

Case IPR2014-01340
Patent 7,929,800 B2

Before MICHAEL R. ZECHER, BEVERLY M. BUNTING, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

BUNTING, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. BACKGROUND

A. Introduction

Google Inc. (“Petitioner”) filed a corrected Petition requesting an *inter partes* review of claims 1–4, 10, 11, 13–15, and 18 (the “challenged claims”) of U.S. Patent No. 7,929,800 B2 (Ex. 1002, “the ’800 patent”) pursuant to 35 U.S.C. §§ 311–319. Paper 4 (“Pet.”). Patent Owner, Visual Real Estate, Inc., (“Patent Owner”) timely filed a Preliminary Response to the Petition. Paper 9 (“Prelim. Resp.”). Taking into account the arguments presented in the Preliminary Response, we determined that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioner would prevail in challenging claims 1–4, 10, 11, 13–15, and 18 of the ’800 patent under 35 U.S.C. §§ 102(b) and 103(a). Pursuant to 35 U.S.C. § 314, we instituted this trial on February 27, 2015, as to these claims based on the following asserted grounds of unpatentability (“grounds”):¹

1. Claims 1–4, 10, 11, 13–15, and 18 as anticipated under 35 U.S.C. § 102(b) by Di Bernardo;
2. Claims 1–4, 10, 11, 13–15, and 18 as unpatentable under 35 U.S.C. § 103(a) over Di Bernardo and Kumar.

Paper 11 (“Decision on Institution” or “Dec. on Inst.”).

During the course of trial, Patent Owner timely filed a Patent Owner Response (Paper 21 (“PO Resp.”)), and Petitioner timely filed a Reply thereto (Paper 22 (“Pet. Reply”)). Patent Owner then filed two motions. Patent Owner filed a Motion for Observation regarding certain cross-

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, took effect on March 18, 2013. Because the application from which the ’800 patent issued was filed before that date, our citations to 35 U.S.C. §§ 102 and 103 are to the pre-AIA version.

examination testimony of Petitioner’s rebuttal witness, Dr. John. R. Grindon (Paper 28 (“Obs.”)), and a Motion to Exclude (Paper 29 (“Mot. to Exclude”)). In turn, Petitioner filed a Response to Patent Owner’s Motion for Observation (Paper 33 (“Obs. Resp.”)) and an Opposition to Patent Owner’s Motion to Exclude (Paper 34 (“Exclude Opp.”)). An oral hearing was conducted on October 28, 2015, and a transcript of the hearing is entered in the record. Paper 37 (Tr.).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 as to the patentability of the challenged claims of the ’800 patent. For the reasons that follow, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–4, 10, 11, 13–15, and 18 of the ’800 patent are unpatentable. We also *deny* Patent Owner’s Motion to Exclude.

B. Related Matters

The parties represent that the ’800 patent is the subject of the following judicial proceeding: *Visual Real Estate, Inc., v. Google Inc.*, No. 3:14-cv-00274-TJC-JRK (M.D. Fla. Mar. 10, 2014). Pet. 2; Paper 7, 2. In addition to this Petition, Petitioner filed three other Petitions challenging the patentability of a certain subset of claims in the following patents owned by Patent Owner: (1) U.S. Patent No. 7,389,181 B2 (Cases IPR2014-01338 and IPR2014-01339); and (2) U.S. Patent No. 8,078,396 B2 (Case IPR2014-01341). See Pet. 2; Paper 7, 2–3. We instituted an *inter partes* review in each of these three cases. Case IPR2014-01338, Paper 11 (PTAB Feb. 23, 2015); Case IPR2014-01339, Paper 10 (PTAB Jan. 26, 2015); Case

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IPR2014-01341, Paper 11 (PTAB Feb. 27, 2015). To date, we have entered Final Written Decisions in Case IPR2014-01339, Paper 39 (PTAB Jan. 25, 2016), Case IPR2014-01338, Paper 39 (PTAB Feb. 22, 2016), and Case IPR2014-01341, Paper 38 (PTAB Feb. 19, 2016).

C. The '800 Patent (Ex. 1002)

The '800 patent, titled “Methods for and Apparatus for Generating a Continuum of Image Data,” issued April 19, 2011, from U.S. Patent Application No. 11/702,708 (“the '708 application”), filed on February 6, 2007. Ex. 1002, at [54], [45], [21], and [22]. The '800 patent claims priority to U.S. Patent Application No. 11/216,465 (“the '465 application”), filed on August 31, 2005. *Id.* at 1:8–16.

The '800 patent relates generally to generating data descriptive of a continuum of images, such as a geographic setting. Ex. 1002, 1:19–22. In one embodiment, the '800 patent discloses creating a continuum of image data, such as “a two-dimensional ribbon of street level views of geographic areas.” *Id.* at 2:4–6. The ribbons are created by capturing two or more images of a subject from disparate points on a continuum. *Id.* at 2:7–9. Portions of the two or more images are aligned in a dimension consistent with the path of the vehicle, and a composite image is generated from the aligned portions of the two or more images. *Id.* at 2:13–19.

Figure 1A of the '800 patent, reproduced below, illustrates composite image 100 formed by aligning image data sets 101–103 captured from a disparate point on a continuum. Ex. 1002, 3:26–29.

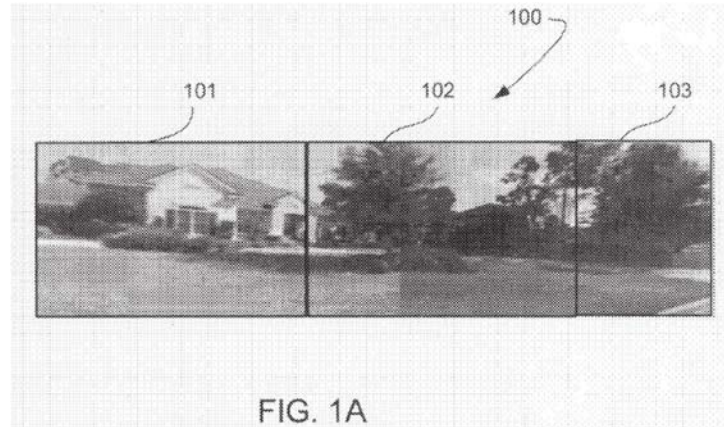


Figure 1 is illustrative of a composite image.

In addition to capturing image data, positional data descriptive of the location of the subject matter of the captured images can be generated by the image data recording device. *Id.* at 2:20–22, 3:4–6, 5:27–29. For example, positional data “can include any data indicative of where the subject matter of an image is located.” *Id.* at 5:29–30. In another example, “[t]he positional data can include, or be derived, from latitude and longitude coordinates of the position of a camera position used to capture the image data as well as an orientation of the camera.” *Id.* at 3:6–9, *see also id.* at 2:22–24 (disclosing how positional data includes “latitude and longitude coordinates”), 5:50–52 (disclosing geospatial data in terms of “latitude and longitude coordinates”).

The ’800 patent further describes the use of a device for recording a global position, e.g., global positioning system (“GPS”) device, that can be associated with the image recording device. *Id.* at 5:34–36. According to the ’800 patent, time stamps associated with both the captured image data and GPS data can be utilized to correlate the GPS location data with the captured image data. *Id.* at 5:37–40. In some embodiments, the altitude of the camera during image capture is recorded and used to approximate the

altitude of the subject matter of the image data. *Id.* at 2:25–27, 5:41–49. In an embodiment, the camera may be maintained “approximately orthogonal,” e.g. between 75° and 105°, to the subject. *Id.* at 2:28–31; 3:49–56. In other embodiments, “[t]he position of a camera can be combined with a direction of image capture and the depth of field of the camera, to determine a location of image data captured by the camera at a particular instance in time.” *Id.* at 6:62–65.

D. Illustrative Claim

Of the challenged claims, claim 1 is the only independent claim. Claims 2–4, 10, 11, 13–15, and 18 depend, directly or indirectly, from independent claim 1. Claim 1 is illustrative of the challenged claims and is reproduced below:

1. Apparatus for processing a continuum of image data, the apparatus comprising:
a computer server comprising a processor and a storage device; and executable software stored on the storage device and executable on demand, the software operative with the processor to cause the server to: capture two or more images of a subject, wherein the two or more images are captured from disparate points on a continuum; align portions of the two or more images in a dimension consistent with the continuum; and generate a composite image of the subject comprising the aligned portions of the two or more images, wherein the software is additionally operative to: *record positional data descriptive of a respective location of each of the two or more images; and associate the composite image with a particular portion of the subject based upon the positional data.*

Ex. 1002, 8:29–43 (emphasis added).

E. Prior Art

Petitioner relies upon the following prior art references (Pet. 3–4) and the Declaration of Dr. Henry Fuchs (Ex. 1001):

Reference	Patent/Printed Publication No. or Title	Date	Exhibit
Di Bernardo	U.S. Patent App. Pub. No. 2002/0047895 A1	Apr. 25, 2002	1004
Kumar	U.S. Patent No. 6,597,818 B2	July 22, 2003	1005

F. Instituted Grounds

As explained in the Introduction section above, we instituted trial based on the asserted grounds of unpatentability set forth in the table below. Dec. on Inst. 23.

Reference(s)	Basis	Claims Challenged
Di Bernardo	§ 102(b)	1–4, 10, 11, 13–15, and 18
Di Bernardo and Kumar	§ 103(a)	1–4, 10, 11, 13–15, and 18

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we interpret a claim term in an unexpired patent according to the broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–79 (Fed. Cir. 2015), *cert. granted sub nom. Cuozzo Speed Techs., LLC v. Lee*, 84 U.S.LW.

3218 (U.S. Jan. 15, 2016) (No. 15-446) (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation.”).

Under the broadest reasonable interpretation standard, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art, in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). An inventor may rebut that presumption by providing a definition of the term in the specification “with reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). In the absence of such a definition, limitations are not to be read from the specification into the claims. *See In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). We apply these general principles in construing the claims of the ‘800 patent.

1. Claim Phrases construed in the Decision on Institution

In its Petition, Petitioner proposed a claim construction for each of the following claim phrases: (1) “a continuum of image data” (all challenged claims); and (2) “associate the composite image with a particular portion of the subject” (all challenged claims). Pet. 8–9. Patent Owner did not dispute Petitioner’s proposed constructions in its Preliminary Response. Based on the evidence of record at that time, we determined in our Decision on Institution that there was no need to construe expressly these claim phrases. Dec. on Inst. 8. Patent Owner did not dispute our determination in its Patent Owner Response. *See generally* PO Response 3–4; *see also* Paper 12, 3 (“The patent owner is cautioned that any arguments for patentability not raised in the response will be deemed waived.”). Nor does Petitioner

propose an alternative claim construction for these claim phrases in its Reply. *See generally* Pet. Reply 2–8. Now, in view of the record developed during trial, we confirm that there is no need to construe expressly these claim phrases.

In its Preliminary Response, Patent Owner proposed a claim construction for the claim phrase “record ***positional data*** descriptive of a respective location of each of the two or more images.” Prelim. Resp. 7–9 (“recording limitation”). For purposes of the Decision on Institution, we determined that the claim phrase “‘record positional data descriptive of a respective location of each of the two or more images’ should be accorded its ordinary and customary meaning—namely, to ‘record positional data that is descriptive of a respective location of each of the two or more images.’” Dec. on Inst. 9. Specifically, we determined that the specification did not define positional data “with reasonable clarity, deliberateness and precision” to support limiting this term as Patent Owner proposed. *Id.*

2. “*record positional data descriptive of a respective location of each of the two or more images*”

Now, with the record fully developed, we again consider this claim phrase. In its Patent Owner Response, Patent Owner characterizes our determination that the “recording limitation” should be according its ordinary and customary meaning as “insufficient to resolve the present dispute.” PO Resp. 10. Specifically, Patent Owner argues that we did not explain in the Decision on Institution what is meant by “description of a respective location of each of the two or more images.” *Id.* Patent Owner contends that the following passage from the specification, “[p]ositional data can include any data ***indicative of where the subject matter of an image is***

located,” defines the term “positional data.” *Id.* (citing Ex. 1002, 5:29–30). In addition, Patent Owner directs our attention to other passages from the specification to support its position that “‘a location of image data’ refers to **a location of the actual subject of the image as opposed to a location of the camera itself.**” *Id.* at 10–11 (citing Ex. 1002, 6:62–65). According to Patent Owner, the point of the invention is the ability to “‘associate the composite image with a particular portion of the subject based on positional data’” (*Id.* at 11), which means that “‘positional data’” is used to calculate the location of the subject of the image (*Id.*). In effect, Patent Owner wants “positional data” to require the location of the subject matter being captured, in addition to the location of the camera taking the image or the image location. *See* PO Resp. 13–14. During oral argument, Patent Owner referred to annotated Figure 5 of the ’800 patent from the Patent Owner Response (*Id.* at 11–12) to clarify its position that the term “positional data” includes more than camera position alone.

MR. MACEDO: Okay. So you have three different position that are involved. One position is the path of the camera location, that line that we were referring to, and that's where the position of the camera is. The second position is the image location which at ribbon of the picture going in there. And the third location is the location of the subject. And when you look at the quotes that Mr. Almeling was reading earlier from this patent, every, single one of them is talking about how you figure out the location of the subject.

TR. 99:14–100:1.

As further support for its interpretation of “‘positional data’” as “‘indicative of a location of the ‘subject,’” Patent Owner directs our attention to the dependent claim 3, which recites wherein “the software is additionally operative to **generate the positional data based upon** latitude and longitude

coordinates of **a camera** capturing the two or more images and data descriptive of **the camera** orientation while the camera captured the two or more images." *Id.* at 12 (citing Ex. 1002, 8:47–51). Patent Owner argues that the language of claim 3 makes sense “only if the ‘positional data’ is indicative of a location of the ‘subject’ as described in the specification at 5:29-30, since the camera location, direction, altitude, etc. are used to calculate the location of the subject in the images.” *Id.*

In its Reply, Petitioner argues that we should maintain our construction of the “recording limitation” from the Decision on Institution, and that our initial construction was “reasonable and proper in light of the [broadest reasonable interpretation] standard.” Pet. Reply 3.

With the full record before us, we maintain our initial construction. To begin with, Patent Owner’s arguments ignore the full phrase of claim 1 that we are construing. Indeed, their arguments focus on the term “positional data” in isolation, without the context of the rest of the claim. Claim 1 does not recite “positional data,” by itself, rather it recites that the “positional data” is “descriptive of the respective locations of *each of the two or more images*.” Thus, the claim language informs us that the “positional data” provides information about the “respective location” of the images being captured, not necessarily the subject matter of the images being captured. Moreover, we are not persuaded by Patent Owner’s unsupported attorney argument that camera position alone is insufficient to determine the location of the subject, and associate the composite image with a particular portion of the subject based on positional data. See Tr. 100:2–101:6.

As for the specification, we agree with Petitioner that the passages of the specification cited by Patent Owner do not define expressly or implicitly the term “positional data” as “data that is ‘indicative of where the subject matter of the images is located.’” Nor do these passages in the specification exclude the use of the camera location alone as indicative of the position of the subject matter being captured, as Patent Owner contends. Pet. Reply 3 (citing PO Resp. 10). In fact, the specification uses several different variations of “positional data.” For instance, in the Summary of the Invention section, the specification discusses how “positional data is recorded that is descriptive of a respective location of each of the two or more images.” Ex. 1001, 2:20–22. In that discussion, the specification provides different examples of such “positional data,” including latitude and longitude coordinates or the altitude of the camera. *Id.* at 2:22–27.

Patent Owner’s preferred citation from the specification, however, discusses a different variant of “positional data.” *See id.* at 5:26–30. Instead of discussing how “positional data is recorded that is descriptive of a respective location of each of the two or more images” as recited in claim 1, this portion of the specification is discussing “positional data *descriptive of a location of the subject matter of an image.*” *See id.* Thus, even if we were to assume that Patent Owner’s citation, Ex. 1001, 5:29–30, was intended as an explicit definition, we are not persuaded that Patent Owner’s citation is a universal definition for the term “positional data.” Rather, it appears to be an explanation relevant to the particular type of positional data connected with the particular embodiment discussed in that paragraph of the specification.

Moreover, we note that the portion of the specification relied on by Patent Owner emphasizes that it is exemplary through use of permissible language such as “can.” See *id.* at 5:29–31. We do not agree that this language represents the type of disclaimer or lexicography necessary to limit the claim language. See *Prolitec, Inc. v. Scentair Techs., Inc.*, 807 F.3d 1353, 1358 (Fed. Cir. 2015) (“[T]he use of ‘may’ signifies that the inventors did not intend to limit [the claim]. . . .”). In addition, Petitioner argues persuasively that Patent Owner’s citation to a particular embodiment is not the broadest reasonable interpretation of the “positional data” given that the specification also “discloses that positional data ‘can include any data’ indicative of the location of the subject and gives the camera position as an example of such data.” *Id.* at 5 (citing Ex. 1002, 3:4–9 (latitude and longitude of camera and orientation of the camera), 5:26–40 (GPS data of image recording device), 5:50–59 (geospatial data of the camera)). See TR 100:2–4 (Now, one way that you can figure out the location of the subject is by using the camera position in conjunction with other things.).

Thus, we decline Patent Owner’s invitation to limit “positional data” to only data indicating the location of the subject matter of the image being captured. See *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by the explanations contained in the written description, it is important not to import into a claim limitations that are not a part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”).

As to Patent Owner’s contention that dependent claim 3 reinforces its proposed construction of “‘positional data’” as “the subject of the image” (PO Resp. 12), Petitioner argues persuasively that the broadest reasonable interpretation of the claim phrase “based upon the positional data,” in view of the ’800 specification, “does not require that the positional data alone must provide an exact match of the subject’s location, but instead that the ‘associat[ing]’ function is performed ‘based upon’ the positional data.” Pet. Reply 7.

In addition, Petitioner argues persuasively that Patent Owner’s argument surrounding claim 3 fails to support its proposed narrow construction because claim 3 is directed to a particular embodiment that includes both the coordinates of the camera and the camera orientation. *Id.* at 8. Moreover, we agree with Petitioner that claim 1, which is broader than claim 3, would not require both the camera coordinates and camera orientation. *Id.*

Having considered the full record developed during trial, and for purposes of this Decision, our position and analysis regarding the “recording limitation,” particularly as to the term “positional data” contained therein, remains unchanged. We conclude that the “recording limitation” should be accorded its ordinary and customary meaning—namely, to “record positional data that is descriptive of a respective location of each of the two or more images.”

B. Priority Date for the Challenged Claims of the ’800 Patent

As we explained previously, the ’800 patent issued April 19, 2011, from the ’708 application, filed on February 6, 2007. Ex. 1002, at [54], [45],

[21], and [22]. The '708 application claims priority to the '465 application, filed on August 31, 2005. *Id.* at 1:8–16.

In the Decision to Institute, we explained that, based on the record prior to instituting trial, we were persuaded by Petitioner's argument that the '465 application, does not provide sufficient written description support for the method steps of “aligning portions of two or more images,” as recited in independent claim 1. Dec. on Inst. 9–10 (citing Pet. 7). For purposes of the Decision to Institute, we determined that Petitioner presented sufficient evidence indicating that the challenged claims of the '800 patent only are entitled to claim the benefit of the filing date of the '708 application—namely, February 6, 2007. *Id.* at 10.

Although the burden of persuasion with respect to the unpatentability of the challenged claims remains with Petitioner, the burden of production of demonstrating that the challenged claims of the '800 patent are entitled to the earlier priority dates of the '465 application lies with Patent Owner. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1379–80 (Fed. Cir. 2015). In its Patent Owner Response, Patent Owner does not dispute that the earliest effective filing date of the challenged claims of the '800 patent is February 6, 2007. We, therefore, discern no reason to address or alter our determination in this regard for the purposes of this Final Written Decision.

C. Anticipation by Di Bernardo

Petitioner challenged claims 1–4, 10, 11, 13–15, and 18 as anticipated under 35 U.S.C. § 102 by Di Bernardo. Pet. 10–15, 29–38. In support of this asserted ground, Petitioner explains how Di Bernardo discloses each of

the claim limitations (*id.*) and relies on the declaration of Dr. Fuchs to support the analysis advocated in the Petition (Ex. 1001). Patent Owner disagrees, and focuses its arguments on challenging the teachings of Di Bernardo applied by Petitioner to account for the claim phrases “record positional data descriptive of a respective location of each of the two or more images; and associate the composite image with a particular portion of the subject based upon the positional data.” PO Resp. 3–4, 6–17.

For the reasons given below, after consideration of the Petition, the arguments in the Patent Owner Response, Petitioner’s Reply, and the evidence of record, we conclude that Petitioner has demonstrated, by a preponderance of the evidence, that each of claims 1–4, 10, 11, 13–15, and 18 of the ‘800 patent are anticipated by Di Bernardo. We begin our analysis with the principles of law that generally apply to a ground based on anticipation, followed by a brief summary of DI Bernardo, and then address the parties’ contentions in turn.

1. Principles of Law

A claim is anticipated if each limitation of the claim is disclosed in a single prior art reference arranged as in the claim. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). As recently reiterated by the Federal Circuit, “a reference can anticipate a claim even if it ‘d[oes] not expressly spell out’ all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would ‘at once envisage’ the claimed arrangement or combination.” *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (citing *In re Petering*, 301 F.2d 676, 681 (CCPA 1962)). We analyze this ground based on anticipation in accordance with the above-stated principles in mind.

2. Overview of Di Bernardo (Ex. 1004)

Di Bernardo relates generally to a system and method of creating and utilizing visual databases of geographic locations. Ex. 1004 ¶ 2. The data acquisition and processing system of Di Bernardo includes an acquisition device, such as a digital video camera, to record images while moving along a path. *Id.* ¶ 33. At the same time, the acquired GPS position of the moving camera is utilized to determine positional information, which is associated with the recorded video images. *Id.* ¶ 34. A post-processing system “uses the image and position sequences to synthesize the acquired images and create composite images of the location that was filmed.” *Id.* ¶ 44. The composite image is stored in an image database, and “associated with an identifier identifying the particular geographic location depicted in the image.” *Id.* ¶ 46. “[C]lose-ups and fish-eye views of the objects are also extracted from the video sequences using well-known methods, and stored in the image database.” *Id.* Di Bernardo also discloses an object information database containing information regarding objects depicted in the composite images, and notes that “each record in the object information database is preferably indexed by a city address.” *Id.* ¶ 71.

In response to a user inquiry regarding a location, i.e. by entering an address of the location, the host computer accesses “the geographic and object information databases to retrieve maps and information on the businesses in the geographic area,” which is transmitted back and displayed to the user (*id.* ¶ 79) as illustrated in Figure 16 reproduced below.

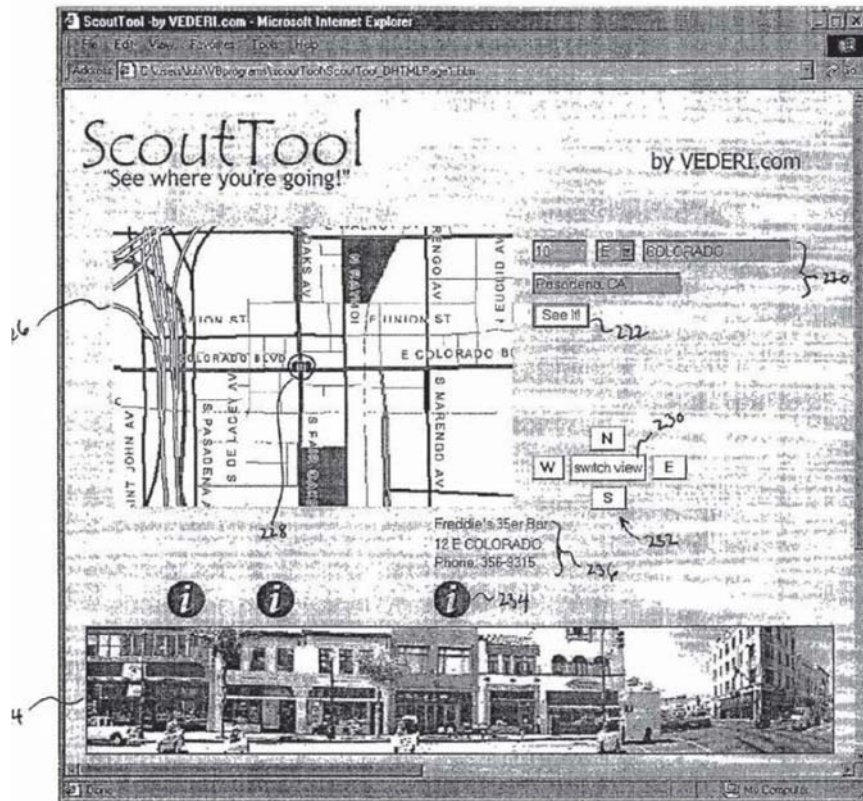


Figure 16 is an exemplary graphical user interface for requesting and receiving information about particular geographic locations.

3. Discussion

a. Claim 1

In its Petition, Petitioner relies on Di Bernardo to describe each of the limitations recited in independent claim 1. Pet. 10–15, 29–34. In its Patent Owner Response, Patent Owner challenges the sufficiency of Petitioner’s proofs in several respects that we discuss *infra*. We note, however, that most of the claim elements are undisputed. With respect to the undisputed limitations, we find that, based on the evidence cited in the Petition, Petitioner has presented sufficient evidence to support a finding that those limitations are disclosed by Di Bernardo. Pet. 10–15, 29–34. We address the parties’ positions regarding these disputed limitations in turn.

i) “record positional data descriptive of a respective location of each of the two or more images”

Independent claim 1 recites, in relevant part, “wherein the software is additionally operative to: *record positional data descriptive of a respective location of each of the two or more images.*” Ex. 1002, 8:39–41 (“the ‘recording’ limitation”). In its Petition, Petitioner argues that the “recording limitation” is satisfied by the disclosure in Figure 2 of Di Bernardo, and related discussion of how “a GPS receiver or inertial navigation system provides position information of the image recording device as the images are acquired.” Pet. 12–13 (citing Ex. 1004 ¶ 10).

In its Patent Owner Response, Patent Owner contends that claim 1 is not anticipated by Di Bernardo. PO Resp. 7– 17. First, Patent Owner argues that Di Bernardo teaches away from “using any ‘computationally intensive,’ ‘cumbersome,’ or ‘inefficient’ processes for generating the composite images.” *Id.* at 7 (citing Ex. 1004 ¶ 7). According to Patent Owner, Di Bernardo “offers its simplified system ‘to alleviate’ problems with such intensive techniques.” *Id.* (citing Ex. 1004 ¶ 9). To support this argument, Patent Owner entered into evidence the Declaration of Dr. John R. Grindon regarding the teachings of Di Bernardo. *Id.* (citing Ex. 2002 ¶ 39).

Before addressing the merits of the parties’ arguments, we first address the declaratory evidence of Dr. Grindon. It is noteworthy that Dr. Grindon was retained by Petitioner as an expert consultant *in an unrelated matter that did not involve the ’800 patent*—namely, *Vederi, LLC v. Google, Inc.*, No. 2:10-cv-07747 (C.D. Cal.). Ex. 2002 (“*Vederi* litigation”). Patent Owner avers that in the *Vederi* litigation, Dr. Grindon opined that “[t]he patents-in-suit [Di Bernardo], in seeking to improve upon the so-called

‘computationally intensive’ and ‘cumbersome’ methods of forming composite images in the prior art, teach a single way to form composite images that seeks to minimize this computational burden.” *Id.* (citing Ex. 2002 ¶ 39). As a result of Patent Owner’s introduction of Dr. Grindon into this proceeding, Petitioner sought clarification from Dr. Grindon regarding his testimony in the *Vederi* litigation, via a rebuttal declaration. Pet. Reply 1–2 (citing Ex. 1012). In this rebuttal declaration, Dr. Grindon explained that his prior testimony was directed toward the image quality of the final composite image as understood in October 2000, and not to the location of an image. Ex. 1012 ¶¶ 17–18.

The parties confirmed our understanding regarding the insertion of Dr. Grindon into this proceeding and the relevance of his testimony at oral argument. Tr. 87:22–98:1, 118:3–119:14. Based on the parties argument and all the evidence of record in this trial, and because Dr. Grindon *did not* consider the teachings of Di Bernardo with respect to the challenged claims of the ’800 patent, we accord the testimony of Dr. Grindon, specifically his statements suggesting that the Di Bernardo patents, in general, seek to minimize computational burdens, minimal weight. Ex. 2002 ¶ 39 (“The patents-in-suit, in seeking to improve upon the so-called ‘computationally intensive’ and ‘cumbersome’ methods of forming composite images in the prior art, teach a single way to form composite images that seeks to minimize this computational burden.”); *see also* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Turning back to the merits of the parties’ arguments, Patent Owner’s “teaching away” argument is unavailing because “teaching away” is not

relevant to an anticipation analysis. *Celeritas Techs., Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998).

Next, Patent Owner argues that Di Bernardo does not disclose the “recording limitation” because Di Bernardo describes recording the positional data of the camera itself used to take the image, and the location of the camera is different than “a particular portion of the subject.” PO Resp. 9 (citing Pet. 32–33). Patent Owner’s arguments, however, are predicated on its narrow interpretation of “positional data” as the “subject of the image.” We are not persuaded by this argument because it is not commensurate in scope with the “recording limitation” at issue. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (stating that limitations not appearing in the claims cannot be relied upon for patentability). As discussed in our claim construction section *supra*, after considering the parties’ arguments in this regard, we concluded that the cited passages of the specification did not support Patent Owner’s view that the “positional data” is the subject of the image being captured. Rather, we construed the “recording limitation” as to “record positional data that is descriptive of a respective location of each of the two or more images.”

In view of this construction, Petitioner argues persuasively that the specification of the ’800 patent describes that positional data “can include any data’ indicative of the location of the subject and gives the camera position as an example of such data.” Pet. Reply. 5. We are persuaded by, among other things, Di Bernardo’s description in Figure 2 of the image recording device that records images of object as it moves along a path. Ex. 1004 ¶ 10; Figure 2. We also credit the testimony of Petitioner’s declarant, Dr. Fuchs, that “latitude and longitude coordinates indicating the

position of the recording device during the recording of a particular image frame” are an example of “positional data descriptive of a respective location of each of the two or more images.” Pet. Reply 5 (citing Ex. 1001 ¶ 30). Specifically, because the testimony of Dr. Fuch’s in this regard is consistent with the disclosure in Di Bernardo relied upon by Petitioner to account for the “recording limitation.” Ex. 1001 ¶ 30 (citing Ex. 1004 ¶¶ 10, 36, 37, and 42.

In considering the record in its entirety, Petitioner has presented sufficient evidence to support a finding that Di Bernardo describes the claim phrase “record positional data descriptive of a respective location of each of the two or more images,” as recited in independent claim 1.

- ii) “associate the composite image with a particular portion of the subject based upon the positional data.”

Claim 1 also recites, in relevant part “associate the composite image with a particular portion of the subject based upon the positional data.” Ex. 1002, 8:41–43 (“the ‘associating’ limitation”). In its Petition, Petitioner contends that Di Bernardo discloses the use of positional data (i.e. geospatial designation) to associate the composite image with a particular portion of the subject (i.e. geographic area) to satisfy this limitation. Pet. 13 (citing Ex. 1001 ¶¶ 31, 32, 40). In its Patent Owner Response, Patent Owner contends that Di Bernardo discloses storing together street segments to form a composite image, and “each composite image is being associated with a plurality of subjects, e.g., all the odd houses along the street, rather than merely a portion of the subject (e.g., a tree or a house),” as required by the “associating” limitation. PO Resp. 16.

Petitioner counters that Patent Owner is relying on an overly narrow claim construction that inserts “only the single subject” into the claim when the broadest reasonable interpretation is not so limiting. Pet. Reply 13. Petitioner asserts that Patent Owner’s argument in this regard is inconsistent with Patent Owner’s position in the co-pending litigation. *Id.* at 14 (citing Ex. 1009, 12). Nonetheless, relying on the testimony of Dr. Fuchs, Petitioner observes that because the composite image of Di Bernardo is stored with the addresses of the odd houses along the street segment, the composite image is “‘associated’ with a portion of a subject house of the odd-numbered houses on the street segment) based on the address for the subject house.” *Id.* at 15 (citing Ex. 1001 ¶ 31; Ex. 1004 ¶¶ 71, 83, 85, Figure 16). Petitioner concludes that “the portion of the street segment depicted in the composite image could be a particular subject, such as a house, on the street segment, and the position along the street segment for which the image was computed could be a location of a particular portion of the subject.” *Id.* at 16 (citing Ex. 1004 ¶¶ 48, 77).

Having considered the parties’ arguments, Petitioner argues persuasively that the broadest reasonable interpretation of this claim limitation does not limit the claimed composite image “to association with a single house” as Patent Owner argues. Pet. Reply 13–16. We decline to import limitations from the specification into the claims when the claims are broader than the cited embodiment. Patent Owner’s argument that the geographic location of interest specified in the user query is limited to a street address, is likewise unpersuasive, because this argument is not commensurate in scope with claim 1. We are persuaded by, among other things, Di Bernardo’s description of Figure 16 as showing a graphical user

interface that “includes address input fields **220** allowing the user to enter the street number, street name, city and state of the particular location her or she desires to view.” Ex. 1004 ¶ 83. In considering the record in its entirety, Petitioner has presented sufficient evidence to support a finding that Di Bernardo describes the claim phrase “associate the composite image with a particular portion of the subject based upon the positional data” as recited in claim 1.

b. Dependent Claims 2–4, 10, 11, 13–15, and 18

Patent Owner argues that because Petitioner fails to show that claim 1 is anticipated by Di Bernardo, claims 2–4, 10, 11, 13–15, and 18 that depend from claim 1 are likewise not anticipated by Di Bernardo. PO Resp. 17.

As we explained previously, claims 2–4, 10, 11, 13–15, and 18 directly or indirectly depend from independent claim 1. By virtue of their dependency, each of these claims incorporate the same limitations as their underlying base claim. We have reviewed the Petition and supporting evidence set forth in the Petition regarding these claims, and find the evidence and argument demonstrates sufficiently that Di Bernardo anticipates these dependent claims as well. *See* Pet. 10–15, 29–38. Thus, based on the record developed during trial, we conclude that Petitioner has demonstrated by a preponderance of the evidence that these dependent claims are anticipated by Di Bernardo.

4. Summary

Based on further review of the record, and for the reasons discussed above, Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–4, 10, 11, 13–15, and 18 of the ‘800 patent are anticipated by Di Bernardo.

D. Obviousness Based on Di Bernardo and Kumar

The Petition challenges the patentability of claims 1–4, 10, 11, 13–15, and 18 of the ‘800 patent under 35 U.S.C. § 103(a) as obvious based on Di Bernardo and Kumar. Pet. 16–20, 38–45. As support for this contention, Petitioner relies upon the Declaration of Dr. Fuchs. Ex. 1001 ¶¶ 42–55. Patent Owner disagrees, and focuses its arguments on 1) challenging the teachings of Kumar with respect to the “recording limitation”; (2) asserting Di Bernardo and Kumar teach away from their combination and, as a result, teach away from the invention embodied in the challenged claims of the ‘800 patent; and (3) characterizing the rationales for combining the teachings of Di Bernardo and Kumar provided by Petitioner in its Petition as insufficient. PO Resp. 17–24.

Having considered the explanations and supporting evidence presented, we are persuaded that Petitioner has demonstrated by a preponderance of the evidence that the combination of Di Bernardo and Kumar discloses the claim limitations as recited in the challenged claims.

We begin our analysis with the principles of law that generally apply to a ground of unpatentability based on obviousness, followed by a brief overview of Kumar, and then we address each of the arguments presented by the parties.

1. Principles of Law

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.

Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966). We analyze these grounds based on obviousness in accordance with the above-stated principles.

2. Level of Skill in the Art

In determining the level of skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). There is evidence in the record before us that reflects the knowledge level of a person with ordinary skill in the art. Petitioner’s expert witness, Dr. Fuchs, attests that a person with ordinary skill in the art in the relevant time frame would be an individual who possesses a combination of experience and education in computer science, computer graphics, and imaging technology. Ex. 1001 ¶ 14. According to Dr. Fuchs, this would consist of the following: (1) a minimum of a bachelor degree in computer science or a related engineering field; and (2) 2–5 years of work or research

experience in the field of computer science and its sub-field of imaging technology.² *Id.*

Additionally, we note that the prior art of record in this proceeding—namely, Di Bernardo, and Kumar—is indicative of the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579; *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

3. Overview of Kumar (Ex. 1005)

Kumar describes a method and apparatus for performing geo-spatial registration within an image processing system to map camera coordinates and geo-coordinates. Ex. 1005, 1:18–20, 2:13–15. System 100 for geospatial registration illustrated in Figure 1 is reproduced below.

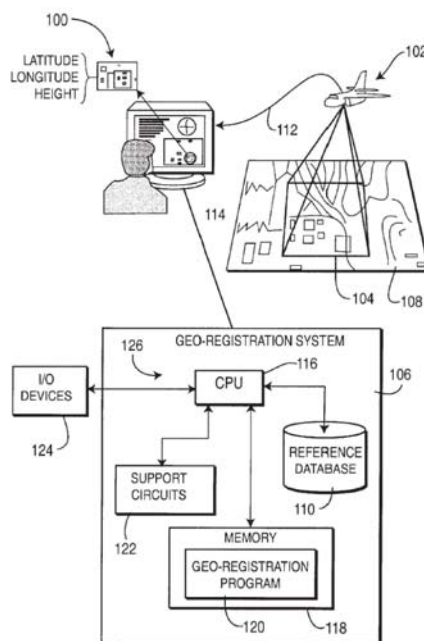


Figure 1 is a conceptual view of a geo-registration system.

² Petitioner's rebuttal witness, Dr. John R. Grindon, offers testimony as to the knowledge level of a person with ordinary skill in the art at the relevant time frame that is essentially the same as Dr. Fuchs's assessment. Ex. 1010 ¶ 12.

As shown in Figure 1, mobile platform 102 captures current video images of a scene at specific local 104. *Id.* at 3:45–37. System 106 geo-registers current video images to stored reference information within reference database 110. *Id.* at 3:50–54. In addition to image information, sensor platform 102 provides data (e.g., GPS information, inertial navigation system (“INS”), image scale, attitude, rotation) that is used by geo-spatial aligning module 202 and database module 204 as an initial scene identifier and sensor point-of-view indicator. *Id.* at 6:44–53. The data “can be used to maintain coarse alignment between subsequent video frames over regions of the scene where there is little or no image texture that can be used to accurately align the mosaic with the reference image.” *Id.* at 6:56–60.

4. Discussion

a. Claim 1

In its Petition, Petitioner relies upon Di Bernardo to teach the limitations recited in independent claim 1. Pet. 10–15, 29–38. Petitioner, however, contends that, to the extent we determine that Di Bernardo does not teach the “recording limitation” and “associating limitation” recited in independent claim 1, Kumar teaches these limitation. *Id.* at 16–20, 38–45. Specifically, Petitioner asserts that the “recording limitation” is satisfied by the disclosure in Kumar regarding a sensor platform that provides image data and engineering support data, e.g., GPS information, “used to identify information in a reference database that pertains to the video images provided by the sensor platform.” *Id.* at 16 (citing Ex. 1005, 3:47–54, 6:44–56). Further, Petitioner asserts that the “associating limitation” is met by the disclosure in Kumar regarding geo-registering the video images to reference information, “i.e. the video images are aligned with geodetically calibrated

reference imagery and information, to associate objects seen in videos to their corresponding geo-locations.” *Id.* at 17 (citing Ex. 1005, 3:47–54, 7:8–9).

Based on the teaching of Di Bernardo and Kumar, Petitioner contends that there are number of reasons that would have prompted one of ordinary skill in the art to combine these teachings. *Id.* at 18–20. First, Petitioner takes the position that one of ordinary skill in the art would have modified Di Bernardo’s system to incorporate Kumar’s teachings regarding generating and recording positional data, “so that the resulting system would achieve improved accuracy for identification of locations within a scene.” *Id.* at 19 (citing Ex. 1001 ¶ 52; Ex. 1005, 2:14–20). Second, Petitioner asserts that one of ordinary skill in the art would have modified Di Bernardo’s system “to incorporate Kumar’s teachings regarding ‘overlaying’ information associated with reference images on geo-registered video mosaics or overlaying video mosaics on reference imagery so that the resulting system would add context/meaning for a viewer of the composite image.” *Id.* at 18–19 (citing Ex. 1001 ¶ 53; Ex. 1005 2:30–35). Third, Petitioner argues that one of ordinary skill in the art would have modified Di Bernardo’s system with the teachings of Kumar because doing so would be using “known techniques (e.g., mapping between camera coordinates and geo-coordinates to geo-register a video mosaic, overlaying information on geo-registered video mosaics, or both) to improve similar devices (e.g., Di Bernardo’s system for generating and displaying composite images of a geographic location) in the same way.” *Id.* at 19 (citing Ex. 1001 ¶ 54). Relying on the testimony of its declarant, Dr. Fuchs, Petitioner contends that one of skill in the art would have recognized that the proposed combination

of Kumar and Di Bernardo “would have led to predictable results without significantly altering or hindering the functions performed by the system of Di Bernardo.” *Id.* (citing Ex. 1001 ¶ 54).

i) *Kumar discloses the “recording limitation”*

Patent Owner argues that Kumar does not disclose the “recording limitation” because Kumar relies on pattern recognition to align a reference image with a picture in a video sequence. PO Resp. 17–19. In comparison, Patent Owner observes that the ’800 patent combines camera position, “a direction of image capture, and the depth of field of the camera, to determine a location of image data captured by the camera at a particular instance in time.” *Id.* at 18 (citing Ex. 1002, 6:62–62). Based on our interpretation of the “recording limitation” discussed *supra*, Patent Owner’s arguments are unavailing because they are not commensurate in scope with claim 1. *See* Pet. Reply 17 (“neither the claims nor the specification of the ’800 patent require using any specific technique to identify a geographic position of an image.”). Petitioner argues persuasively that because the positional data recited in claim 1 is not limited by type, the positional data is not limited to “one specific location determination technique.” *Id.* Moreover, we are not persuaded by Patent Owner’s contention that the Petition fails to demonstrate how Kumar associates “a particular portion of a subject with a composite image.” PO Resp. 19. Relying on the testimony of Dr. Fuchs, Petitioner argues persuasively that the disclosure in Kumar regarding associating objects seen in current video images to their corresponding geolocations in which the objects in the current video images are geo-registered to reference information “stored within a reference database”

satisfies the “associating limitation” of claim 1. Pet. 18–19 (citing Ex. 1005 at 3:47–57, 7:7–9; Ex. 1001 ¶ 46).

In considering the record in its entirety, Petitioner has presented sufficient evidence to support a finding that Kumar describes the “recording limitation” as recited in claim 1.

ii) *Neither Di Bernardo nor Kumar Teach Away From Their Combination*

In its Patent Owner Response, Patent Owner argues that “Di Bernardo teaches against prior art techniques that are ‘computationally intensive and hence cumbersome and inefficient in terms of time and cost.’” PO Resp. 19 (citing Ex. 1004 ¶ 7). To support this argument, Patent Owner relies on the testimony of Dr. Grindon from the *Vederi* litigation. *Id.* (citing Ex. 2002, ¶ 39). For the reasons discussed *supra*, we accord Dr. Grindon’s testimony that the Di Bernardo patents, in general, seek to minimize computational burdens, minimal weight. Other than attorney argument, Patent Owner does not proffer sufficient arguments or evidence to support its contention that Di Bernardo teaches away from using computationally intensive techniques.

Patent Owner repeats its argument from the Patent Owner Preliminary Response that Di Bernardo itself teaches away from the use of 3D scene geometry and from determining a location of the actual subject. PO Resp. 20 (citing Ex. 1003 ¶ 8). As noted in the Decision on Institution, a reference teaches away from a claimed invention if it “criticize[s], discredit[s], or otherwise discourage[s]” modifying the reference to arrive at the claimed invention. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). We will not, however, “read into a reference a teaching away from a process

where no such language exists.” *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1364 (Fed. Cir. 2006).

Now, with the record fully developed, we remain unpersuaded. Patent Owner is reading into Di Bernardo a teaching away where no such language exists. Although the Background of the Invention section in Di Bernardo discloses a need for a system that “should not require the reconstruction of 3-D scene geometry,” this disclosure, by itself, does not mean that teachings from Di Bernardo are incapable of being combined with Kumar’s system that requires 3-D geometry. *See* Ex. 1004 ¶ 8. We agree with Petitioner that the cited passages “specifically refer to prior art practices (considered to be ‘cumbersome and inefficient’ in 2000) of generating a high quality composite image due to a high image sampling density and reconstruction of 3D scene geometry—all of which relate to image quality of a final composite image, not to determining a location of an image.” Pet. Reply 20 (citing Ex. 1012 ¶¶ 17-18; Ex. 1005 ¶¶ 7–8). Moreover, as we determined in the Decision on Institution, and Petitioner agrees, the cited passages from the background of the specification of the ’800 patent do not mean that Kumar’s suggestion for improved location determination “is incapable of being implemented in Di Bernardo’s system or that a POSITA *in 2007* would have avoided implementing Kumar’s suggestion.” *Id.* at 21 (citing Dec. on Inst. 18–20).

As such, we conclude that Patent Owner has in essence read into each reference a teaching away where no such language exists.

iii) *Google Provides a Sufficient Rationale to Combine the Teachings of Di Bernardo and Kumar*

In its Patent Owner response, Patent Owner argues that Petitioner's proffered rationales to combine Di Bernardo and Kumar "make no sense." PO Resp. 21. Specifically, Patent Owner argues that Petitioner's first rational, "that the resulting system would achieve improved accuracy for identification of locations within a scene," would be counter to Di Bernardo's stated choice of lower quality images to avoid algorithmic complexity. *Id.* Patent Owner also argues that Petitioner's second rationale, "so that the resulting system would add context/meaning for a viewer of the composite image" is deficient because "there is no explanation that anyone reading the Di Bernardo disclosure would have a desire to add context/meaning for a viewer of the composite image." PO Resp. 21–22. Patent Owner asserts that Di Bernardo explicitly rejects a solution that would improve the quality of the composite image. *Id.* Patent Owner characterizes Petitioner's third rationale directed to using "known techniques" "to improve similar devices" as conclusory and insufficient. *Id.* Specifically, Patent Owner argues that "there is no reason or explanation of how Kumar's teachings actually improve Di Bernardo, rather than simply adding unwanted complexity." *Id.* Patent Owner further challenges Petitioner's fourth rationale that the proposed combination of Kumar and Di Bernardo "would have led to predictable results without significantly altering or hindering the functions performed by the system of Di Bernardo." Specifically, Patent Owner asserts that the addition of Kumar's functionality to the Di Bernardo's system would "increase the time and

expense of generating images, which is contrary to the express need sought to be addressed by Di Bernardo.” *Id.* at 23.

In its Reply, Petitioner counters that Patent owner merely relies upon attorney argument to explain that Petitioner’s rationales for combining the teachings of Di Bernardo and Kumar are insufficient. Pet. Reply 22. Petitioner asserts that such attorney argument cannot supplant or overcome the overwhelming testimonial evidence supporting each of Petitioner’s rationales for combining the teachings of Di Bernardo and Kumar. *Id.* (citing Ex. 1001 ¶¶ 52–54). Petitioner also contends that Patent Owner’s attorney arguments are based on a number of legal and factual errors, including that the alleged motivation must be a problem recognized by Di Bernardo, the primary reference, and that Di Bernardo teaches away from “any and all ‘computationally intensive techniques.’” *Id.* at 23. Petitioner reiterates the reasons that would have prompted one of ordinary skill in the art to combine the teachings of Di Bernardo and Kumar advocated in the Petition. *Id.* at 23–25. Lastly, Petitioner asserts that Dr. Grindon confirmed in his Rebuttal Declaration that Patent Owner mischaracterized his testimony from the litigation involving a subset of Di Bernardo patents. *Id.* at 25 (citing Ex. 1012 ¶¶ 18).

The Supreme Court has held that an obviousness evaluation “cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents.” *KSR*, 550 U.S. at 419. Instead, the relevant inquiry here is whether Petitioner has set forth “some articulated reasoning with some rational underpinning to support the legal conclusion of

obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), cited with approval in *KSR*, 550 U.S. at 418.

When describing examples of what may constitutes a sufficient rationale to combine, the Supreme Court elaborated that, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 550 U.S. at 417. As the Supreme Court further recognized, in many cases a person of ordinary skill “will be able to fit the teachings of multiple patents together like pieces of a puzzle,” recognizing that a person of ordinary skill “is also a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. at 420–21.

In the Decision on Institution, we were persuaded that Petitioner’s proffered rationale and evidence was sufficient to support the proposed modification of claims 1–4, 10, 11, 13–15, and 18. For instance, both Di Bernardo and Kumar disclose similar systems for generating visualizations of geographic locations from a composite image composed of multiple 2-D images. *Compare* Ex. 1004, Abstract, Figures 1, 2 *with* Ex. 1005, Abstract, Figure 1. In addition to Di Bernardo, Kumar also discloses the “recording limitation” and “associating limitation” of claim 1. *See e.g.*, Ex. 1005, 6:44–53 (disclosing sensor platform 102 that “provides engineering support data (ESD), e.g. global positioning system (GPS) information, inertial navigation system (INS), image scale, altitude, rotation, and the like...”); *Id.* at 3:50–54 (disclosing that the system “‘geo-registers’ the current video images to the reference information or imagery stored within the reference database

110, i.e., the current video is aligned with geodetically calibrated reference imagery and information).

Moreover, we agree with Petitioner that where, as here, if a technique has been used to improve one device, i.e., Kumar discloses mapping between camera coordinates and geo-coordinates to geo-register a video mosaic, and overlaying information on geo-registered video mosaics, and Di Bernardo discloses generating and displaying a composite image of a geographic location, that one of ordinary skill in the art would have recognized that the proposed modification would improve similar devices in the same way. *See* Pet. 19 (citing *KSR*, 550 U.S. at 417).

We have considered Patent Owner's arguments; however, as discussed above, we are persuaded that Petitioner has provided an articulated reasoning with rational underpinning to support the legal conclusion of obviousness.

b. Dependent Claims 2–4, 10, 11, 13–15, and 18

Patent Owner argues that because Petitioner fails to show that claim 1 is obvious based on the proposed combination of Di Bernardo and Kumar, claims 2–4, 10, 11, 13–15, and 18 that depend from claim 1 are likewise not obvious. PO Resp. 23–24. For the same reasons discussed above with respect to independent claim 1, Patent Owner's arguments are not persuasive.

As we explained previously, claims 2–4, 10, 11, 13–15, and 18 directly or indirectly depend from independent claim 1. By virtue of their dependency, each of these claims incorporate the same limitations as their underlying base claim. We have reviewed the Petition and supporting evidence set forth in the Petition regarding these claims, and find that they

demonstrate sufficiently that the combination of Di Bernardo and Kumar also account for the limitations of those claims. *See* Pet. 38–45. Based on the record developed during trial, we conclude that Petitioner has demonstrated by a preponderance of the evidence that these dependent claims would have been obvious over the combination of Di Bernardo and Kumar.

5. Summary

Thus, based on our further review of the record, and for the reasons discussed above, Petitioner has demonstrated, by a preponderance of the evidence, that claims 1–4, 10, 11, 13–15, and 18 of the ‘800 patent are unpatentable under 35 U.S.C. § 103(a) as obvious based Di Bernardo and Kumar.

III. MOTION TO EXCLUDE

Patent Owner filed a Motion to Exclude Evidence under 37 C.F.R. § 42.64, seeking to exclude (1) certain portions of the Declaration of Dr. Fuchs (Exhibit 1001) based on Federal Rule of Evidence (“FRE”) 402, 403, 702, 703, 802, 901, and 903 as well as 37 C.F.R. §§ 42.62 and 42.65(a); (2) the Burgess patent (Ex. 1007) and the Roman article (Ex.1008) in their entirety based on FRE 402, 403 as well as 37 C.F.R. §§ 42.62 and 104(b)(5); and (3) certain portions of the Rebuttal Declaration of Dr. Grindon accompanying Petitioner’s Reply based on FRE 402, 403, 702, and 703, as well as 37 C.F.R. §§ 42.62 and 42.65(a). Mot. to Exclude 1–5. Petitioner, in turn, filed an opposition to Patent Owner’s motion. Opp. Exclude. In its Opposition, Petitioner counters that Patent Owner fails to provide legally sufficient objections under the FREs and, as a consequence, its Motion to

Exclude should be denied. Exclude Opp. 2–15. For the reasons discussed below, Patent Owner’s Motion to Exclude is *denied*.

As an initial matter, we note that the party moving to exclude evidence bears the burden of proving that it is entitled to the relief requested—namely, that the material sought to be excluded is inadmissible under the Federal Rules of Evidence. *See* 37 C.F.R. §§ 42.20(c), 42.62(a). A motion to exclude must, among other things, explain each objection. *See* 37 C.F.R. § 42.64(c); *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,767 (Aug. 14, 2012). In this case, Patent Owner does not explain adequately its objections to certain portions of Dr. Fuchs’s testimony, the Burgess patent and Roman article, and certain portions of Dr. Grindon’s rebuttal testimony. Consequently, Patent Owner has not met its burden of demonstrating that the aforementioned evidence should be excluded. For this reason alone, Patent Owner has not presented a sufficient basis to exclude certain portions of Dr. Fuchs’s testimony, the Burgess patent and Roman article, and certain portions of Dr. Grindon’s rebuttal testimony.

We note that there are additional considerations that weigh in favor of denying Patent Owner’s Motion to Exclude. We highlight a few of these considerations as follows. With respect to the Exhibit 1001, Patent Owner moves to exclude: (1) paragraphs 12, 16, 37, 38, 41, 42, 52, 55, 56, 59, 60, 83–84, 87, 92, and 97–100 of Fuchs’s testimony for relevance; (2) paragraphs 12, 37, 38, 41, 42, 52, 55, 56, 60, 84, 87, 92, and 97 for drawing legal conclusions that are not limited to Dr. Fuchs purported area of expertise; (3) paragraphs 56–60 and 93–97 for referencing the Burgess patent because an *inter partes* review was not instituted based on this patent; (4) and reference to the Roman article because an *inter partes* review was

not instituted based on this article. Mot. to Exclude 1–2. Patent Owner’s arguments go more towards the weight we should afford the cited paragraphs in the Declaration of Dr. Fuchs, rather than its admissibility. It is within our discretion to assign the appropriate weight to the testimony offered by Dr. Fuchs. *See, e.g., Yorkey v. Diab*, 601 F.3d 1279, 1284 (Fed. Cir. 2010) (holding the Board has discretion to give more weight to one item of evidence over another “unless no reasonable trier of fact could have done so”); *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) (“[T]he Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations.”).

Further, Patent Owner moves to exclude both the Burgess patent and Roman article on the basis of relevance. Mot. to Exclude 2–3. In particular, because we did not rely upon this evidence in the Decision on Institution. *Id.* at 3. We further note that Petitioner did not rely upon this evidence in its Petitioner’s Reply, nor did we rely upon this evidence in reaching our Final Written Decision. Accordingly, this aspect of Patent Owner’s Motion to Exclude is moot.

As to the Rebuttal Declaration of Dr. Grindon (Ex. 1010), Patent Owner moves to exclude paragraphs 21, 23, 28, 30 and 31 of Dr. Grindon’s rebuttal testimony based on relevance. *Id.* at 4. Among other things, Patent Owner argues that evidence in these paragraphs was offered by Petitioner for the first time in its Petitioner Reply, and “should have been included as part of Petitioner’s original petition[,] and should have been included as part of Petitioner’s *prima facie* case of invalidity.” *Id.* at 4. A motion to exclude is not a proper vehicle for a party to raise the issue of testimony in a rebuttal

declaration exceeding the permissible scope of reply testimony. *See Vibrant Media Inc. v. Gen. Elec. Co.*, Case IPR2013-00170, slip op. at 31 (PTAB June 26, 2014) (Paper 56) (“Whether a reply contains arguments or evidence that are outside the scope of a proper reply under 37 C.F.R. § 42.23(b) is left to our determination.”). Patent Owner also objects to paragraph 19 of Dr. Grindon’s rebuttal testimony as allegedly containing “conclusory statements.” *Id.* at 4–5.

In any event, based on our review of the arguments presented by Patent Owner in its Patent Owner Response, as well as the relevant paragraphs in the Rebuttal Declaration of Dr. Grindon, we determine that Dr. Grindon’s rebuttal testimony is responsive to Patent Owner’s argument directed to Dr. Grindon’s testimony from the *Vederi* litigation. *Compare* PO Resp. 20–21, *with* Ex. 1012 ¶¶ 17, 18. In other words, Dr. Grindon’s rebuttal testimony that seeks to clarify his testimony in the *Vederi* litigation falls within the purview of 37 C.F.R. § 42.23(b), which provides that a petitioner’s reply may only respond to arguments or evidence raised in the patent owner response. For these additional reasons, Patent Owner has not presented a sufficient basis to exclude certain portions of Dr. Fuchs’s testimony, the Burgess patent, the Roman article, and certain portions of Dr. Grindon’s rebuttal testimony.

For these reasons, we *deny* Patent Owner’s Motion to Exclude.

IV. MOTION FOR OBSERVATION

Patent Owner filed a Motion for Observation on the cross-examination testimony of Petitioner’s rebuttal witness, Dr. Grindon. Obs. Petitioner, in turn, filed a Response. Obs. Resp. To the extent Patent

Owner's Motion for Observation pertains to testimony purportedly impacting Dr. Grindon's credibility, we have considered Patent Owner's observations and Petitioner's responses in rendering this Final Written Decision, and accorded Dr. Grindon's rebuttal testimony appropriate weight as explained above. *See* Obs. 1–18; Resp. 1–15.

V. CONCLUSION

For the foregoing reasons, we determine that Petitioner has demonstrated, by a preponderance of the evidence that (1) claims 1–4, 10, 11, 13–15, and 18 of the '800 patent are anticipated under § 102(b) by Di Bernardo; and (2) claims 1–4, 10, 11, 13–15, and 18 are unpatentable under § 103(a) over the combination of Di Bernardo and Kumar.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–4, 10, 11, 13–15, and 18 of the '800 patent are held to be unpatentable;

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

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

IPR2014-01340
Patent 7,929,800 B2

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