

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MATTERPORT, INC.,
Petitioner,

v.

APPLIANCE COMPUTING III, INC.,
Patent Owner.

IPR2021-00939
Patent 10,102,673 B2

Before JAMESON LEE, MEREDITH C. PETRAVICK, and
BARBARA A. PARVIS, *Administrative Patent Judges*.

PETRAVICK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

On May 14, 2021, Matterport, Inc. (“Petitioner”) filed a petition (Paper 2, “Petition”) requesting *inter partes* review of claims 1–19 (“challenged claims”) of U.S. Patent 10,102,673 B2 (Ex. 1001, “the ’673 patent”). Appliance Computing III, Inc. (“Patent Owner”) filed a Preliminary Response. Paper 9 (“Prelim. Resp.”). Petitioner filed an authorized Reply. Paper 13 (“Reply”). Patent Owner filed an authorized Sur-Reply. Paper 14 (“Sur-Reply”).

We have authority to determine whether to institute review under 35 U.S.C. § 314 and 37 C.F.R. § 42.4. The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

Upon consideration of the parties’ contentions and the evidence of record, we conclude Petitioner has not established a reasonable likelihood of prevailing in demonstrating the unpatentability of any challenged claim of the ’673 patent. Accordingly, we do not institute an *inter partes* review.

B. *Real Parties-in-Interest*

Petitioner identifies itself and Redfin Corporation as real parties-in-interest. Pet. 1–2. Patent Owner identifies itself as real party-in-interest. Paper 4, 2.

C. *Related Matters*

Petitioner and Patent Owner both identify *Appliance Computing III, Inc. d/b/a Surefield v. Redfin Corp.*, Case No. 6:20-cv-00376 (W.D. Tex.)

(“the parallel district court proceeding”) involving the ’673 patent. Pet. 2; Paper 4, 2.

Petitioner has also filed three petitions for *inter partes* review of related U.S. Patent No. 9,836,885 (IPR2021-00936), U.S. Patent No. 10,510,111, (IPR2021-00937), and U.S. Patent No. 10,592,973 B2 (IPR2021-00938). Pet. 2; Paper 4, 2.

D. The ’673 patent

The ’673 patent is titled “Image-Based Rendering of Real Spaces” and relates to “the creation and rendering of three dimensional geometry combined with images of real world scenes.” Ex. 1001, code (54), 1:24–26. Figure 5 of the ’673 patent is reproduced below.

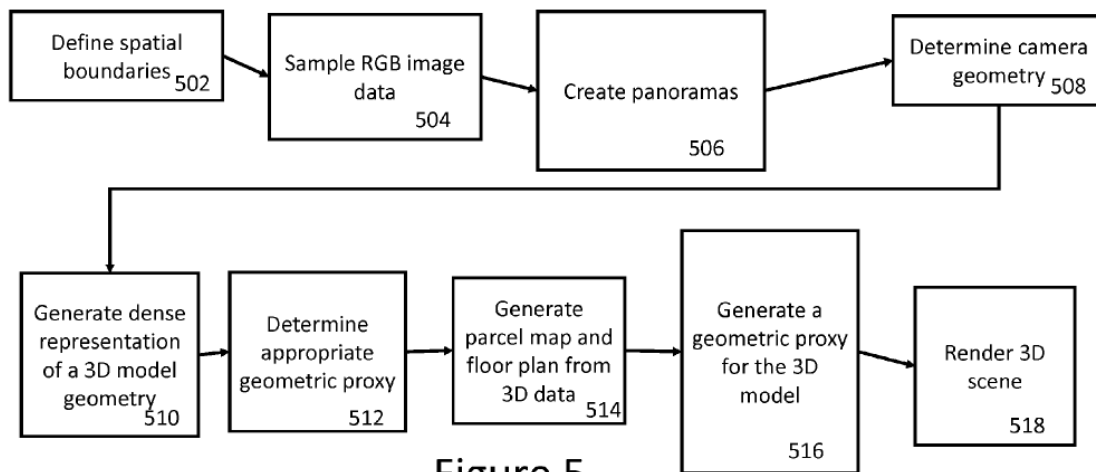


Figure 5

Figure 5, above, illustrates flowchart for computer-implemented, image-based rendering 100 for providing a 3D virtual model of real property. *Id.* at 8:38–41.

The flowchart shown in Figure 5 begins with step 502 in which the system generates the spatial boundaries in a model of the property that define any one or more of the following: (1) the land, such as a parcel

outline; (2) structure, such as a house, apartment, or office; (3) structure internals, such as rooms within the structure; and (4) air-space above the land. *Id.* at 8:42–47. In step 504, red green blue (RGB) image data is captured from each of the spatial boundaries. *Id.* at 8:48–49.

In step 506, panorama images are created from the RGB image data. *Id.* at 8:62–63. Panoramas may be created for image data captured by “smartphones or other mobile devices, video cameras, digital SLR cameras, specialized cameras (e.g., other cameras that take spherical panoramic images), etc.” *Id.* at 6:46–49. “The captured image data is processed to create panoramas, determine camera geometry, and 3D reconstruction algorithms are employed to generate dense representations of a 3D model, geometric proxies, parcel maps and floor plans.” *Id.* at 6:52–56.

Processing continues with step 508, in which the camera geometry is determined by use of first pass feature detection within the panoramas in order to spatially calibrate the panoramas. *Id.* at 9:1–3. In step 510, a second pass feature detection algorithm is applied. *Id.* at 9:12–16. Conversion is performed in step 512. *Id.* at 9:23–25.

Processing proceeds to step 514, in which the 3D data is used to generate a parcel map, such as the exterior and aerial views of the real estate, and a floor plan. *Id.* at 9:53–54.

In step 516, the 3D data is used to generate a geometric proxy for the 3D model of the real property. *Id.* at 9:58–59. In step 518, the results are combined and a 3D scene that has photorealistic views from within a panorama capture location, as well as semi-photorealistic views from other locations using a geometric proxy and real image data are rendered to a viewer. *Id.* at 9:60–65. In addition to the 3D views, 2D floor plans are

shown to the viewer user as well as descriptive spatial boundary labels. *Id.* at 9:65–66.

Of the challenged claims, claims 1, 10, and 13 are independent. Claims 1–9 depend directly or indirectly from claim 1, claims 9–12 depended directly or indirectly from claim 10, and claims 14–19 depend directly or indirectly from claim 13. Claim 1 is illustrative and reproduced below.

- [1.1]¹ 1. A method, comprising:
 - receiving image data of a plurality of spaces in a property, the image data including a plurality of images captured from a plurality of viewpoints;
 - [1.2] creating a plurality of panoramas of the plurality of spaces using the image data;
 - [1.3] rendering a virtual model of a selected space among the plurality of spaces using the plurality of panoramas;
 - [1.4] causing a device to display the virtual model with a first label indicating a location of the selected space; and
 - [1.5] defining spatial boundaries of the plurality of spaces in the property using the image data, the plurality of spaces including a plurality of rooms in the property,
 - [1.6] wherein the image data includes metadata associated with the plurality of images, the metadata indicating capture locations of the images,
 - [1.7] wherein rendering the virtual model of the selected space includes rendering a 3D scene of the selected space using the plurality of panoramas, and
 - [1.8] wherein rendering the 3D scene includes:

¹ Petitioner’s designations to reference the elements of claim 1 are set forth in brackets. Pet. 17–33. Herein we refer to the elements of claim 1 using Petitioner’s designations.

- determining camera geometry using the plurality of images;
- [1.9] receiving a selected viewpoint in the selected space;
- [1.10] generating a point cloud of the 3D model;
- [1.11] determining a geometric proxy for the selected view point using the determined camera geometry and the point cloud; and
- [1.12] generating the 3D model using the geometric proxy.

Ex. 1001, 16:7–34.

E. Evidence Relied on by Petitioner

Petitioner relies on the following evidence:²

References		Date	Exhibit
Cowtan	U.S. Patent Application Publication No. 20019/0031246 A1	Published Jan. 9, 2009	Ex. 1008
Bell436	U.S. Patent Application Publication No. 2014/0043436 A1	Published Feb. 13, 2014	Ex. 1009
Bell060	U.S. Patent Application Publication No. 2013/0004060 A1	Published Jan. 3, 2013	Ex. 1010

² The '673 patent issued from Application No. 15/832,653 filed December 5, 2017, which is a continuation of Application No. 14/525,057, filed on October 27, 2014, now U.S. Patent No. 9,836,885. Ex. 1001 at codes (21), (22), (63). The '673 patent also claims priority to Provisional Application 61/895,978, filed October 25, 2013. *Id.* at code (60).

References		Date	Exhibit
Triggs	Triggs B., McLauchlan P.F., Hartley R.I., Fitzgibbon A.W., “Bundle Adjustment — A Modern Synthesis,” <i>Vision Algorithms: Theory and Practice</i> , Lecture Notes in Computer Science, vol. 1883 (Springer, Berlin, Heidelberg) (2000)	Published 2000	Ex. 1011
Sun	U.S. Patent Application Publication No. 2016/0255357 A1	Published Sep. 1, 2016, Filed Jul. 15, 2013	Ex. 1012

Petitioner also relies on the Declaration of Yasutaka Furukawa, Ph.D. (Ex. 1004).

F. Asserted Ground of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following ground:

Claim(s) Challenged	35 U.S.C. § ³	Basis
1–19	103	Cowtan, Bell436
3, 4, 7, 8, 13, 18, 19	103	Cowtan, Bell436, Bell060
3, 4, 7, 13, 18, 19	103	Cowtan, Bell436, Triggs

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284, 287–88 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. Because the effective filing date of the ’673 patent appears subsequent to March 16, 2013 (Ex. 1001, codes (22), (63)), we refer to the post-AIA versions of §§ 102, 103.

Claim(s) Challenged	35 U.S.C. § ³	Basis
7, 13	103	Cowtan, Bell436, Sun

II. ANALYSIS

A. Discretion Under 35 U.S.C. § 314(a)

Patent Owner contends we should exercise our discretion under 35 U.S.C. § 314(a) to deny institution of *inter partes* review. Prelim. Resp. 8–16 (citing, e.g., *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”)). Because we determine that Petitioner fails to demonstrate that there is a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the petition, we need not address Patent Owner’s contentions concerning discretionary denial.

Accordingly, we do not exercise our discretion to deny institution under 35 U.S.C. § 314(a).

B. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) as “requiring *inter partes* review petitions to identify ‘with particularity . . . the evidence that supports the grounds for the challenge to each claim’”). That burden never shifts to the patentee. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Furthermore, Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person of ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of nonobviousness.⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

C. Level of Ordinary Skill

Petitioner asserts that one of ordinary skill in the art at the pertinent time of the '673 patent “would have a Bachelor of Science in Computer Science, or similar education, an understanding of the various techniques for image-based rendering, and at least 2 years of experience in their field of study, or equivalent practical experience in the relevant field.” Pet. 5. Patent Owner has not made its own assertion of the level of ordinary skill. Prelim. Resp. 6. Nor has Patent Owner expressed disagreement with Petitioner’s articulation. *See id.* Patent Owner states:

Patent Owner does not take issue with Petitioner’s proposed definition of a person of ordinary skill in the art at this time but reserves the right to challenge Petitioner’s definition of a person of ordinary skill in the art should it become necessary if a trial is instituted.

Id.

⁴ Patent Owner does not present objective evidence of nonobviousness with its Preliminary Response.

We find that the phrase “at least” in Petitioner’s proposed definition creates a vague, open-ended upper bound for the level of ordinary skill, and we therefore do not adopt that aspect of the proposal. With that exception, considering the subject matter of the ’673 patent, the background technical field, and the asserted prior art, we otherwise agree with Petitioner’s proposed qualifications for an ordinary level of skill. Petitioner’s proposed definition is consistent with the level of skill reflected in the specification of the ’673 patent and the asserted prior art references. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Accordingly, for purposes of this decision, and based on the current record, we adopt Petitioner’s assessment of the level of skill for one of ordinary skill in the art, except without the “at least” phrase.

D. Claim Construction

The parties provide contentions regarding construction of certain claim terms. To resolve the disputes between the parties, we need to address only the parties’ claim construction contentions for the term “panorama.” *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (explaining “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”); *see also U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (holding claim construction is not necessary when it is not “directed to, or has been shown reasonably to affect, the determination of obviousness”).

1. Legal Standards

We construe the challenged claims by applying the standard used in federal courts, in other words, “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§]

282(b),” which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b) (2020). Under this standard, the words of a claim generally are given their “ordinary and customary meaning,” which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *Phillips*, 415 F.3d at 1312–13.

2. “panorama”

Petitioner asserts: “Some terms in the ’673 patent have been construed in the [parallel district court proceeding]. See Ex. 1005. For this IPR, Petitioner has applied those constructions.” Pet. 6. In the parallel district court proceeding, the court determined that the term “panorama” means “a contiguous image of a scene composited from two or more partial images of the scene.” Ex. 1005, 5. This construction was proposed in the parallel district court proceeding by Patent Owner. *Id.*; Prelim. Resp. 22.

For the purposes of this decision, we apply Petitioner’s asserted construction, which is the construction from the parallel district court proceeding, i.e., that “panorama” means “a contiguous image of a scene composited from two or more partial images of the scene.”

E. *Alleged Obviousness of
Claims 1–19 over Cowtan and Bell* 436

1. *Law on Obviousness*

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious to a person having ordinary skill in the art to which said subject matter pertains. See *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, including commercial success, long-felt but unsolved needs, failure of others, and unexpected results (“the *Graham* factors”). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

2. Overview of Cowtan

Cowtan describes providing “multi-media virtual tours in the real estate industry.” Ex. 1008 ¶ 2. Figure 1 of Cowtan is reproduced below.

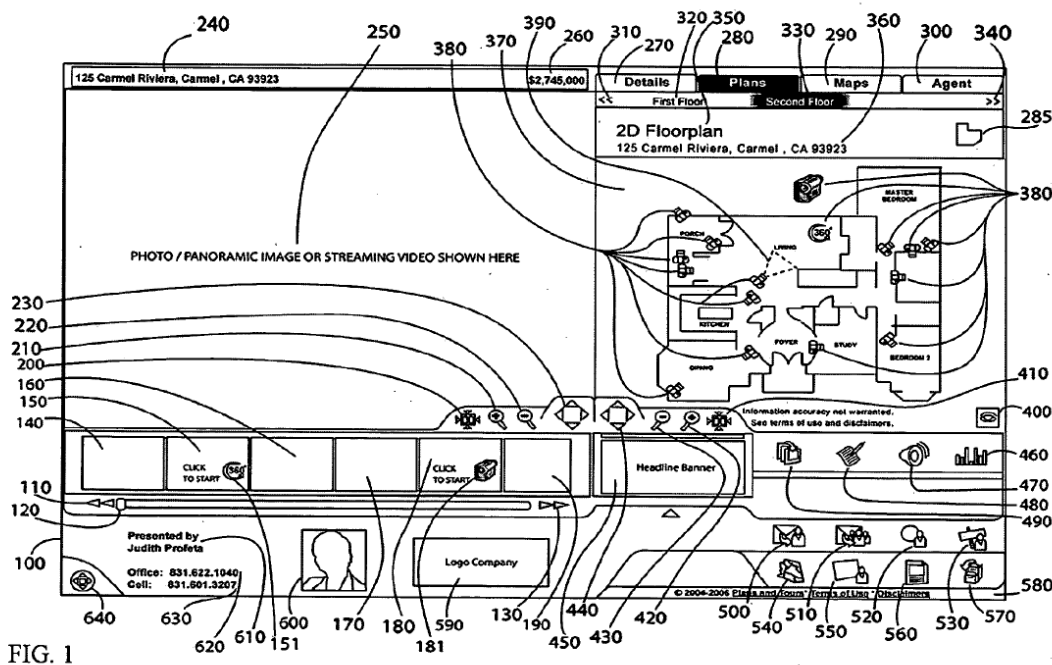


Figure 1 illustrates graphical user interface (GUI) 100 for an Internet-based multi-media virtual tour presentation system. *Id.* ¶ 16. GUI 100 has (1) image navigation section 110–190, (2) image display section 200–260, and (3) hierarchical information organization and navigation section 270–440. *Id.* ¶¶ 110–113.

Image navigation section 110-190 comprises one or more of the following: left select button 110, slide bar 120, right select button 130, first thumbnail 140, second thumbnail 150, third thumbnail 160, fourth thumbnail 170, fifth thumbnail 180, and sixth thumbnail 190. *Id.* ¶ 111. Image display section 200–260 comprises, among other things, photographic or panoramic image or streaming video display section 250. *Id.* ¶ 112. In image navigation section 110–190, a user may select one of the thumbnails to display a corresponding full size image in photographic or panoramic image or streaming video display section 250. *Id.* ¶ 117.

Hierarchical information organization and navigation section 270-440 includes, among other things, plan-based navigation system 370 comprising a plurality of photograph, panorama, or video point of origin and orientation icons 380. *Id.* ¶ 113. Plan-based navigation system 370 displays an image corresponding with a floor plan for the subject property. *Id.* ¶ 123. Each of photograph, panorama, or video point of origin and orientation icons 380 corresponds with one of the photographs or videos from the thumbnails in image navigation section 110–190. *Id.*

3. *Overview of Bell436*

Bell436 describes capturing and aligning multiple 3D scenes with one another. Ex. 1009 ¶ 3. Figure 2 of Bell436 is reproduced below.

Figure 2

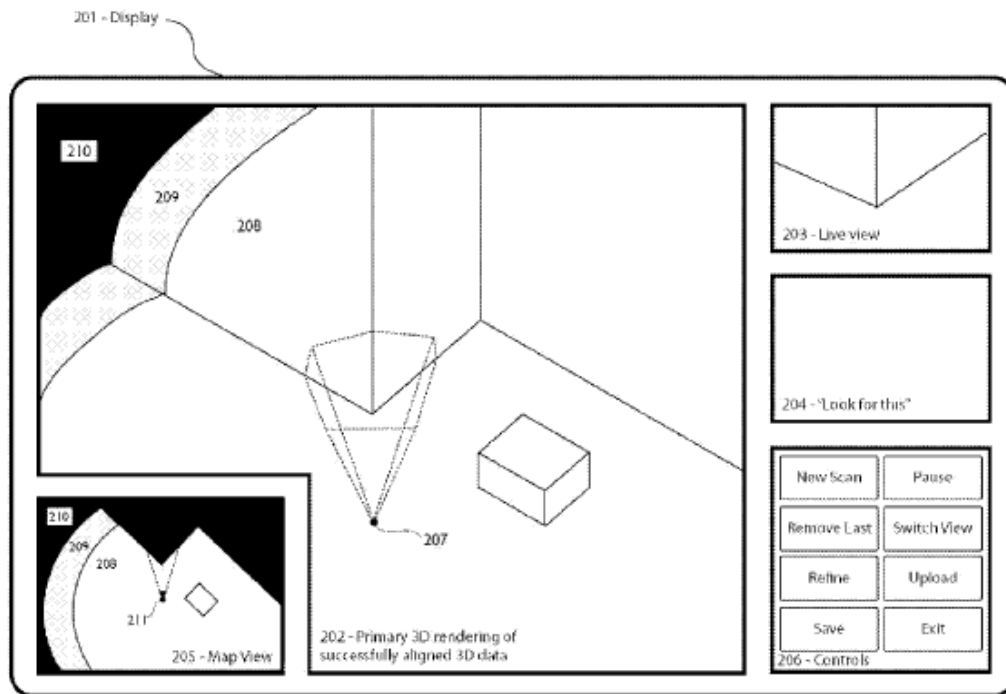


Figure 2 illustrates a graphical user interface with windows with view of the capture process and has primary 3D rendering 202 of successfully aligned captured 3D data 208 shown on display 201. *Id.* ¶¶ 56, 61.

As shown in Figure 2, primary 3D rendering 202 allows the user to see what areas have been captured. *Id.* Data 208 shown in primary 3D rendering 202 includes sets of points captured at various times by a 3D capture device with the different sets aligned into a common coordinate system for display. *Id.* ¶ 63. A user selects a location, area, or previous capture position on primary 3D rendering 202 or map view 205. *Id.* ¶ 75. Map view 205 is displayed in two dimensions and gives users a larger context for their position. *Id.* ¶ 81. The graphical user interface illustrated in Figure 2 includes set of controls 206 for the scan process. *Id.* ¶ 82.

4. *Claim 1*

Petitioner asserts that claims 1–19 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan and Bell436. Pet. 11–53. In particular, Petitioner relies upon both Cowtan and Bell436 to teach elements 1.1 and 1.2 of claim 1. *Id.* at 17–18.

Independent claim 1 recites:

[1.1] receiving image data of a plurality of spaces in a property,
the image data including a plurality of images captured from
a plurality of viewpoints;

[1.2] creating a plurality of panoramas of the plurality of spaces
using the image data;

Ex. 1001, 16:8–12. Claim 1, thus, requires that the plurality of panoramas recited in element 1.2 are created using the image data received in element 1.1. For the reasons given above with respect to claim construction, for purposes of this decision, we adopt the constructions that are being used in the parallel district court proceeding. In particular, we use the parties’ construction that “panorama” means “a contiguous image of a scene composited from two or more partial images of the scene.” Ex. 1005, 5.

We consider whether Petitioner has provided sufficient explanation showing how a person of ordinary skill in the art would have combined the teachings of Cowtan and Bell436 so as to meet the subject matter recited in element 1.2.

(a) Does the Petition explain sufficiently how the teachings of Cowtan and Bell436 would have been combined?

Petitioner relies on the combined teachings of Cowtan and Bell436 for element 1.2, i.e., “creating a plurality of panoramas of the plurality of spaces using the image data.” We consider whether Petitioner has provided sufficient explanation showing how a person of ordinary skill in the art

would have combined the teachings of Cowtan and Bell436 so as to meet the subject matter recited in element 1.2.

For the reasons given above with respect to claim construction, for purposes of this decision, we adopt the constructions that are being used in the parallel district court proceeding and asserted by Petitioner in this proceeding. In particular, we use the parties' construction that "panorama" means "a contiguous image of a scene composited from two or more partial images of the scene."

We start with a portion of the Petition having the title "Motivation to combine Cowtan and Bell436." Pet. 15. Petitioner asserts that a person of ordinary skill in the art would have looked to Bell436's 3D modeling technology and techniques for rendering 3D scenes to use with Cowtan's virtual tours of real estate. *Id.* at 15–16 (citing Ex. 1004 ¶ 107) ("A person of ordinary skill in the art reading Cowtan naturally would look to existing techniques for generating 3D models and rendering 3D scenes, such as that described in Bell436."), 17 (concluding "it would have been obvious to a POSITA^[5] to use the 3D modeling technology disclosed in Bell436 for the 3D walkthroughs, floorplans, visualizations or renderings disclosed in Cowtan for providing Internet-based virtual tours of real estate.")

The aforementioned contention is too conclusory and vague with respect to how a person having ordinary skill in the art would have combined the teachings of the asserted art to meet element 1.2. For instance, Petitioner does not identify differences between either Cowtan and Bell436 and element 1.2 or how Petitioner proposes to combine or modify the

⁵ POSITA is person of ordinary skill in the art.

asserted prior art to meet element 1.2. Also, Petitioner's contention does not address its proposed construction of "panorama" with sufficient specificity.

To meet element 1.2, Petitioner points to Cowtan's disclosure of Cowtan's broad disclosure of uploading full panoramas or partial panoramas. Pet. 18 (citing Ex. 1008 ¶¶ 110, 179, 182, Figs. 37, 40).

Petitioner does not explain sufficiently how Cowtan's broad disclosure of uploading full panoramas or partial panoramas teaches element 1.2, using the district court claim construction that "panorama" means "a contiguous image of a scene composited from two or more partial images of the scene." *See* Pet. 18; *see also* Ex. 1004 ¶ 206 (testimony of Petitioner's expert Dr. Furukawa that "Cowtan does not discuss the creation of these panoramas"). Element 1.2 requires creating the panoramas of the plurality of spaces using the received image data of element 1.1.

Petitioner also points to Bell436's disclosure of a 3D reconstruction system that is used to capture a panoramic view from a given viewpoint and 3D scene alignment method that aligns the panoramic 3D captures together. *See* Pet. 19 (citing Ex. 1009 ¶ 179). Petitioner does not explain sufficiently how Bell436's description of capturing a panoramic view or aligning the panoramic captures together teaches element 1.2 using the district court claim construction that "panorama" means "a contiguous image of a scene composited from two or more partial images of the scene." *See* Pet. 18; *see also* Prelim. Resp. 23–24 (arguing that aligning captured images does not disclose a panorama of a scene composited for two or more partial images of the scene).

In its Reply to Patent Owner's Preliminary Response, Petitioner provides arguments responding to Patent Owner's Preliminary Response.

Reply 5–7. Petitioner’s arguments should have been presented in the Petition. As an additional, independent reason for our denial, even considering Petitioner’s arguments in its Reply does not remedy the aforementioned deficiency. Citing page 18 of the Petition, Petitioner asserts “Bell436 does not simply refer to aligning images but to the generation of a ‘3D virtual **composite** scene.’” Reply 6 (citing Pet. 18). The Petition’s discussion of element 1.1 references a “3D virtual composite scene,” citing paragraph 62 of Bell436. Pet. 18 (citing Ex. 1009 ¶ 62). Paragraph 62 of Bell436, however, does not mention a 3D virtual composite scene. Ex. 1009 ¶ 62. Other paragraphs of Bell436 do describe creating virtual composite scenes to create a globally aligned 3D model. Ex. 1009 ¶¶ 176 (“such as the algorithm for aligning 3D scenes or 3D composite scenes”), 201 (“system for building a three-dimensional composite scene”). Petitioner, however, does not explain sufficiently how Bell436’s description of a 3D virtual composite scene teaches element 1.2 using the district court claim construction that “panorama” means “a contiguous image of a scene composited from two or more partial images of the scene.” *See* Sur-Reply 6–7 (arguing that “this disclosure does not pertain to a ‘scene composited from two or more images’ but rather only a composite scene with no explanation” of how that relates to the district court claim construction).

In its Reply, Petitioner also asserts that Patent Owner “fails to assert or provide any basis for why a Person of Ordinary Skill in the Art would not understand Cowtan’s explicit disclosure of creation and use of ‘full panoramas’ and ‘partial panoramas’ and Bell436’s capturing of a “panoramic view” would not render the claimed ‘creating a plurality of panoramas’ obvious.” Reply 6. However, it is Petitioner’s burden to show with particularity why the patent it challenges is unpatentable and that

burden never shifts to the patentee. *Harmonic Inc.*, 815 F.3d at 1363; *Dynamic Drinkware*, 800 F.3d at 1378.

In summary, Petitioner does not explain with sufficient specificity in what manner a person of ordinary skill in the art would have combined Bell436’s modeling technology or rendering techniques with Cowtan’s teachings to meet all elements of claim 1. Petitioner has not set forth with sufficient clarity the differences between the claimed subject matter and the prior art (*see Graham*, 383 U.S. at 17–18), and the Petition lacks sufficient explanation as to the manner in which the prior art is combined to account for those differences.

b) Does the Petition provide sufficient articulated reasoning with a rational underpinning as to why one of ordinary skill in the art would have combined the teachings of Cowtan and Bell436?

We turn to whether Petitioner provided sufficient articulated reasoning with a rational underpinning as to why one of ordinary skill in the art would have combined the teachings of Cowtan and Bell436 in the manner recited in claim 1. We again consider Petitioner’s contentions provided under the title “Motivation to combine Cowtan and Bell436,” as well as contentions provided in Petitioner’s element-by-element analysis. Pet. 15–16.

In its contentions, Petitioner points to similarities in Cowtan and Bell436. *Id.* For instance, Petitioner asserts “Cowtan and Bell436 *both* disclose the use of images (e.g., panoramas) to generate 3D scenes for various types of spaces, including rooms and other spaces on properties.” *Id.* at 15 (citing Ex. 1004 ¶ 106) (emphasis added). Petitioner also asserts “[s]imilarly, both references [Cowtan and Bell436] describe the use of

similar known techniques, such as 3D models, to yield the same predictable results.” *Id.* at 16.

Petitioner’s contentions pointing to similarities in Cowtan and Bell436 do not suffice as an articulated reason with rational underpinning to combine their respective teachings—more is required to support the legal conclusion of obviousness. *See KSR*, 550 U.S. at 418. The Federal Circuit has concluded that merely asserting that two references were drawn from the same field of art is “simply too conclusory” to show that the skilled artisan would have combined these references in the way of the claimed invention. *Securus Techs., Inc. v. Glob. Tel*Link Corp.*, 701 F. App’x 971, 976 (Fed. Cir. 2017); *see Microsoft Corp. v. Enfish, LLC*, 662 F. App’x 981, 990 (Fed. Cir. 2016) (determining that “the Board correctly concluded” that a petitioner “did not articulate a sufficient motivation to combine” where the only reason given was “that references were directed to the same art or same techniques”). In the same way, Petitioner’s contentions here that the references are similar, even if true, are insufficient to show why the skilled artisan would have combined Cowtan and Bell436 to arrive at the subject matter recited in the claims.

Petitioner also contends that a person of ordinary skill in the art reading Cowtan “naturally would look to” Bell436’s techniques. Pet. 15–16. Petitioner asserts that Cowtan and Bell436 both disclose the use of images to generate 3D scenes for rooms in floorplans. *Id.* at 17. The Petition does not explain with sufficient specificity in what manner a person of ordinary skill in the art would have combined Bell436’s modeling technology or rendering techniques with Cowtan’s teachings to meet all elements of claim 1. Under the circumstances here, Petitioner’s contention that a person of ordinary skill in the art reading Cowtan “naturally would look to” Bell436’s techniques

(Pet. 15–16) is conclusory and does not suffice as an articulated reason with a rational underpinning to combine the respective teachings of the references. *See KSR*, 550 U.S. at 418.

Petitioner also provides contentions as to why a person of ordinary skill in the art could have combined the references. Pet. 16 (asserting that Petitioner’s technology “*could* be used in real estate environments”) (emphasis added), 26 (asserting that a person of ordinary skill in the art “would realize this capture location metadata *could* be directly obtained from the image data as taught by Bell436”) (emphasis added). Those contentions, however, do not explain sufficiently why one of ordinary skill in the art reading Cowtan would have looked to specifically Bell436 for its particular teachings. Petitioner also does not identify a persuasive reason why a skilled artisan, viewing the teachings of Bell436, would have been motivated to modify Cowtan. That a person of ordinary skill in the art could have done so is not enough. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”); *In re Giannelli*, 739 F.3d 1375, 1380 (Fed. Cir. 2014) (“[T]he mere *capability* of pulling the handles is not the inquiry that the Board should have made; it should have determined whether it would have been obvious to modify the prior art apparatus to arrive at the claimed rowing machine.”).

Accordingly, we determine that Petitioner has not provided sufficient articulated reasoning with a rational underpinning as to why one of ordinary skill in the art would have combined the teachings of Cowtan and Bell436 in the manner recited in claim 1.

c) Conclusion

After consideration of the contentions and the evidence, we determine that Petitioner has not provided sufficient explanation to show how a person of ordinary skill in the art would have combined the teachings of Cowtan and Bell436 so as to meet the claimed subject matter. Also, Petitioner has not provided sufficient articulated reasoning with a rational underpinning as to why one of ordinary skill in the art would have combined the teachings of Cowtan and Bell436 in the manner recited in claim 1. Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 1 is unpatentable under 35 U.S.C. § 103 as obvious over Cowtan and Bell436.

5. Independent Claims 10 and 13

Independent claims 10 and 13 are similar to independent claim 1. Petitioner relies on its assertion for claim 1 and does not provide contentions for claims 10 and 13 that remedy the deficiency discussed with respect to claim 1. Pet. 50–51. Accordingly, for the reasons discussed with respect to claim 1, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claim 18 is unpatentable under 35 U.S.C. § 103 as obvious over Cowtan and Bell436.

6. Dependent Claims 2–17 and 19–23

We have considered Petitioner’s arguments and evidence for dependent claims 2–9, 11, 12, and 14–19. Petitioner does not provide contentions for claims 2–9, 11, 12, and 14–19 that remedy the deficiency discussed with respect to claim 1. Accordingly, for the reasons discussed with respect to claim 1, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 2–9, 11,

12, and 14–19 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan and Bell436.

*F. Alleged Obviousness of
Claims 3, 4, 7, 8, 13, 18, and 19 over Cowtan, Bell436, and Bell060*

Petitioner alternatively asserts that claims 2, 4, 7, 8, 13, 18, and 19 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan, Bell436, and Bell060. Pet. 53–61. Petitioner incorporates its contentions regarding the obviousness of claim 1 over the combination of Cowtan and Bell436 into its analysis for this ground. *Id.* at 56 (claim 1), 60 (claim 13). As applied by Petitioner, Bell060 does not make up for the deficiencies of the combination of Cowtan and Bell436 discussed above with respect to the obviousness of claim 1. Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 3, 4, 7, 8, 13, 18, and 19 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan, Bell436, and Bell060.

*G. Alleged Obviousness of
Claims 3, 4, 7, 13, 18, and 19 over Cowtan, Bell436, and Trigg*

Petitioner alternatively asserts that claims 3, 4, 7, 13, 18, and 19 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan, Bell436, and Triggs. Pet. 61–66. Petitioner incorporates its contentions regarding the obviousness of claim 1 over the combination of Cowtan and Bell436 into its analysis for this ground. *Id.* at 64 (claim 1), 66 (claim 13). As applied by Petitioner, Trigg does not make up for the deficiencies of the combination of Cowtan and Bell436 discussed above with respect to the obviousness of claim 1. Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 3, 4, 7, 13, 18, and 19 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan, Bell436, and Trigg.

*H. Alleged Obviousness of
Claims 7 and 13 over Cowtan, Bell436, and Sun*

Petitioner alternatively asserts that claims 7 and 13 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan, Bell436, and Sun. Pet. 67–69. Petitioner incorporates its contentions regarding the obviousness of claim 1 over the combination of Cowtan and Bell436 into its analysis for this ground. *Id.* at 68 (claim 1), 69 (claim 13). As applied by Petitioner, Sun does not make up for the deficiencies of the combination of Cowtan and Bell436 discussed above with respect to the obviousness of claim 1. Accordingly, we conclude that Petitioner has not demonstrated a reasonable likelihood that it would prevail in showing that claims 7 and 13 are unpatentable under 35 U.S.C. § 103 as obvious over Cowtan, Bell436, and Sun.

III. CONCLUSION

For the foregoing reasons, we conclude that the information presented in the Petition does not establish a reasonable likelihood that Petitioner would prevail in showing that any of claims 1–19 of the '673 patent is unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied, and we do not institute *inter partes* review of any claim of the '673 patent based on the grounds asserted in this Petition.

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