

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

XACTWARE SOLUTIONS, INC.,
Petitioner,

v.

EAGLE VIEW TECHNOLOGIES, INC.,
Patent Owner.

Case IPR2016-00591
Patent 8,209,152 B2

Before BRYAN F. MOORE, STACEY G. WHITE, and GARTH D. BAER,
Administrative Patent Judges.

BAER, *Administrative Patent Judge.*

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

I. INTRODUCTION

Xactware Solutions, Inc. (“Petitioner”), filed a Second Corrected Petition requesting an *inter partes* review of claims 1, 3, 6, 8–10, 12–16, 19, 22, 23, and 25 of U.S. Patent No. 8,209,152 B2 (Ex. 1001, “the ’152 patent”). Paper 9 (“Pet.” or “Petition”). Pursuant to 35 U.S.C. § 314(a), we determined the Petition showed a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of claims 1, 3, 6, 9, 10, 12–16, 19, 22, 23, and 25, and instituted an *inter partes* review of those claims. Paper 14, 17. Patent Owner filed a Patent Owner Response (Paper 37, “PO Resp.”), and Petitioner filed a Reply to Patent Owner’s Response (Paper 40, “Reply”). Patent Owner also filed a Motion to Exclude certain deposition testimony of Petitioner’s Expert. Paper 44. An oral hearing was held before the Board. Paper 51.

We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. Having considered the record before us, we determine Petitioner has shown by a preponderance of the evidence that claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23 of the ’152 patent are unpatentable, but has not shown by a preponderance of the evidence that claims 10, 15 and 25 are unpatentable. *See* 35 U.S.C. § 316(e).

II. BACKGROUND

A. RELATED PROCEEDINGS

The ’152 patent is also the subject of IPR2017-00034, and Xactware Solutions, Inc., is the Petitioner in that proceeding. Patents related to the ’152 patent are involved in IPR2016-00582, IPR2016-00586, IPR2016-00587, IPR2016-00589, IPR2016-00590, IPR2016-00592, IPR2016-00593,

IPR2016-00594, IPR2016-01775, IPR2017-00021, IPR2017-00027, IPR2017-00034, and IPR2017-000363. The '152 patent is involved in the following district court matter: *Eagle View Technologies, Inc., v. Xactware Solutions, Inc.*, No. 2:15-cv-07025 (D.N.J.). Pet. 1–2; Paper 7, 2–3.

B. THE '152 PATENT

The '152 patent relates to a roof estimation system that provides a user interface configured to facilitate roof model generation based on one or more aerial images of a building roof. Ex. 1001, (57). Figure 1 of the '152 patent is reproduced below.

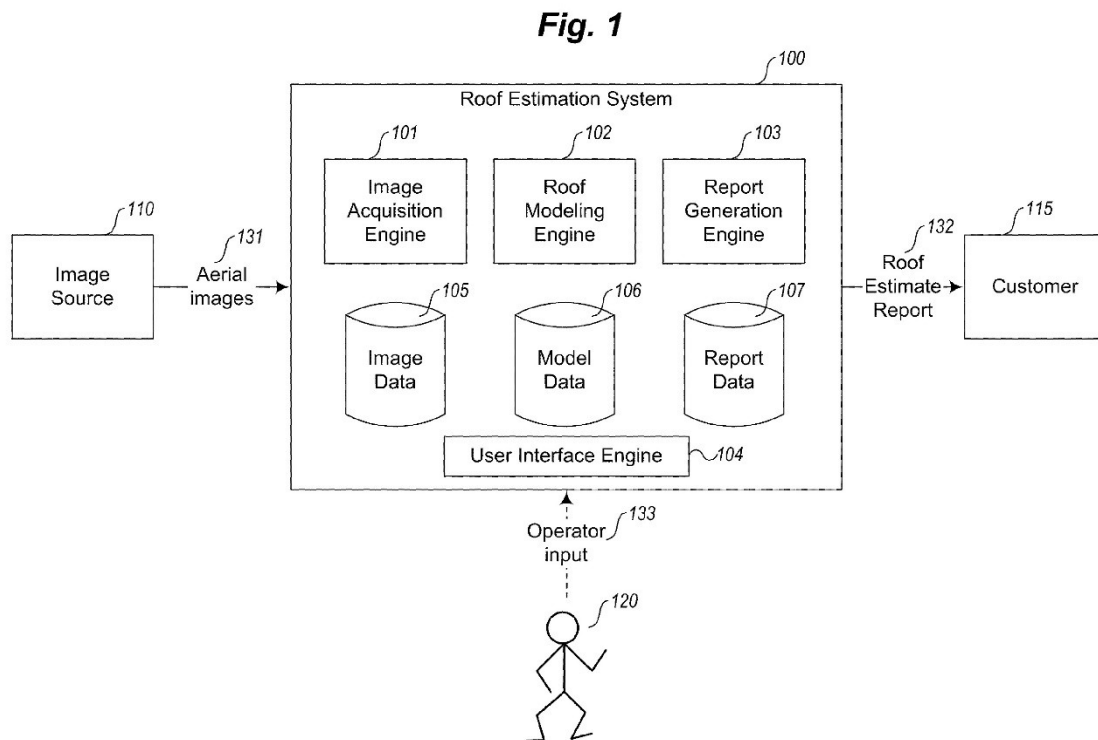


Figure 1 is a block diagram of an example Roof Estimation System (“RES”). Ex. 1001, 3:49–51. RES 100 includes image acquisition engine 101, roof modeling engine 102, report generation engine 103, image data 105, model data 106, and report data 107. *Id.* at 3:52–54. RES 100 is communicatively

coupled to image source 110, customer 115, and operator 120. *Id.* at 3:54–56. RES 100 is configured to generate roof estimate report 132 for a specified building, based on aerial images 131 of the building received from the image source 110. *Id.* at 3:60–63.

C. ILLUSTRATIVE CLAIM

Claims 1, 12, and 16 are independent. Claim 1 is illustrative and reproduced below.

1. A computer-implemented method for generating a roof estimate report, the method comprising:
 - displaying a first and a second aerial image of a building having a roof, each of the aerial images providing a different view of the roof of the building;
 - receiving an indication of a feature of the building shown in the first aerial image;
 - modifying a three-dimensional model of the roof based on the received indication of the feature of the building; and
 - displaying a projection of the feature from the modified three-dimensional model onto the first and second aerial images as a line drawing of the feature, each overlaid on corresponding locations of the feature on the first and second aerial images.

Ex. 1001, 23:63–24:9.

D. INSTITUTED GROUNDS OF UNPATENTABILITY

We instituted *inter partes* review on the following grounds of unpatentability.

Reference(s)	Basis	Challenged Claim(s)
Avrahami ¹	§ 102(b)	1, 3, 6, 9, 12–14, 16 19, 22, 23
Avrahami and Perlant ²	§ 103(a)	10
Avrahami and Aerowest ³	§ 103(a)	15
Avrahami and Applicad ⁴	§ 103(a)	25

Inst. Dec. 17.

III. ANALYSIS

A. PRINCIPLES OF LAW

Petitioner bears the burden of proving unpatentability of the challenged claims, and that burden never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must establish the facts supporting its challenge by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

To anticipate under 35 U.S.C. § 102, a prior art reference must disclose every limitation of the claimed invention, either explicitly or

¹ Yair Avrahami et al., *Extraction of 3D Spatial Polygons Based on the Overlapping Criterion for Roof Extraction from Aerial Images*, XXXVI, CMRT05, IAPRS (2005) (Ex. 1003, “Avrahami”).

² Frederick P. Perlant et al., *Scene Registration in Aerial Image Analysis*, Photogrammetric Engineering and Remote Sensing, Vol. 56, No. 4, Apr. 1990 (Ex. 1006, “Perlant”).

³ Hartfield et al., EP 1 010 966 B1, Oct. 23, 2002 (Ex. 1008, “Aerowest”).

⁴ APPLICAD PRODUCT BULLETIN, KEY FEATURES OF OUR ROOFING SOFTWARE (2002) (Ex. 1004, “Applicad”).

⁴ US App. No. 2007/0220174 A1 (Sept. 20, 2007) (Ex. 1006, “Abhyanker”).

inherently. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). Obviousness is resolved based on 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) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. CLAIM CONSTRUCTION

We conclude no express claim constructions are necessary to resolve whether Petitioner has shown by a preponderance of the evidence that claims 1, 3, 6, 8–10, 12–16, 19, 22, 23, and 25 are unpatentable. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

C. ASSERTED PRIOR ART

1. Overview of Avrahami (Ex. 1003)

Avrahami is a paper titled “Extraction of 3D Spatial Polygons Based on the Overlapping Criterion for Roof Extraction from Aerial Images.” Ex. 1004, 43. It discusses semi-automatic algorithms for extracting a 3D image from an aerial image. *Id.* at Abstract. The algorithm discussed in Avrahami has the following steps: (1) the operator manually points to the center of the left space area, (2) the left space area is segmented and a

bounding polygon is extracted, (3) estimated height is calculated, (4) the right space area is segmented and a bounding polygon is extracted, and (5) an iterative process is performed that matches both polygons followed by extraction of the spatial polygon. *Id.* at 43. The algorithm is semi-automatic because the first step is performed manually and the rest of the steps are performed automatically. *Id.* Figure 1 of Avrahami is reproduced below.

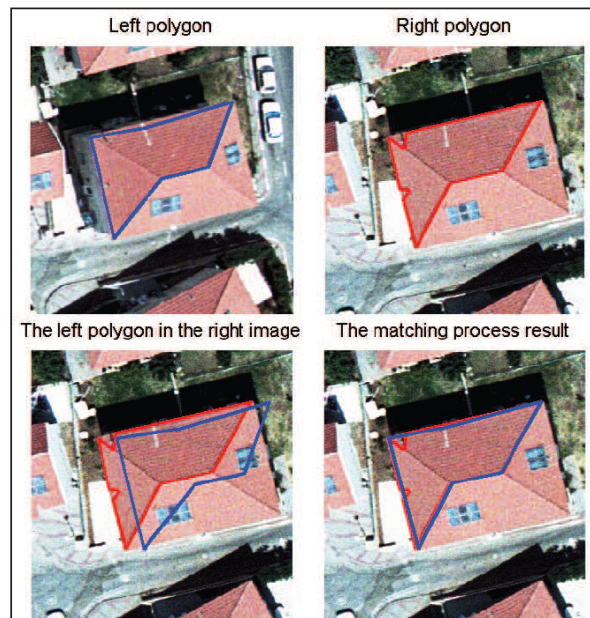


Figure 1. Result of the iterative matching process between the polygons in the right image space

Figure 1 depicts the results of Avrahami's matching process. *Id.* at 45. The top two images show the left and right polygons and the lower two images show the process of matching the polygons from the left and right images. *Id.*

2. Applicad (Ex. 1004)

Applicad is a product bulletin for a roofing software product. Ex. 1005, 1. Relevant to this case, Applicad teaches generating a roof estimate report based on a three-dimensional model. *Id.* at 2, 39–40.

3. Perlant (Ex. 1006)

Relevant to this case, Perlant discloses a system for scene registration in aerial image analysis. *See* Ex. 1006, 481–92. In particular, Perlant teaches a system in which a marker is displayed on an aerial image to specify a point or part of the image. *See, e.g., id.* at 482, FIG. 2. Based on the points selected on the aerial image, Perlant teaches registering aerial images to a reference grid. *See id.* at 482, FIG. 4.

4. Aerowest (Ex. 1008)

Relevant to this case, Aerowest discloses a network accessible roof modeling program executing on a computing system. *See* Ex. 1008 ¶¶ 0009–13, Fig. 2.

D. GROUNDS OF UNPATENTABILITY

1. Anticipation of Claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23 Based on Avrahami

Petitioner asserts that Avrahami anticipates each of claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23, relying on the reference’s disclosure and the Declaration of Mr. Harold Schuch (Ex. 1007). Petitioner provides detailed claim charts and points out where each claim limitation is considered to be described by the reference. Pet. 38–52. We find Petitioner’s evidence and arguments (viewed in light of Patent Owner’s Response) to be persuasive as to claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23, as explained below. We adopt Petitioner’s arguments as to these claims and explain below why Patent Owner’s arguments as to these claims are insufficient to overcome the evidence provided by Petitioner.

a. Disputed Elements

i. “display[ing] a first and a second aerial image of a building of a roof”

Independent claims 1 and 12 require “display[ing] a first and a second aerial image of a building of a roof.” Patent Owner contends that Petitioner has not shown that these limitations are disclosed by the asserted art. PO Resp. 12–15. The crux of Patent Owner’s argument is that while “Avrahami includes illustrative Figures 1, 3, and 5 that show side-by-side images of a roof, those are included in the paper to graphically illustrate the **internal** operation of the Avrahami algorithm.” *Id.* at 12. According to Patent Owner, “[t]he mere presence of those figures does not teach or disclose that the images in the figures should be displayed during performance of the algorithm.” *Id.* Further, Patent Owner asserts that the algorithm performed in Avrahami does not require the use of a second image because it provides a first image in which the user selects seed points and then the remainder of the algorithm occurs automatically. *Id.*

Petitioner disputes this reading of Avrahami and posits that the images shown in Avrahami are not renderings of internal operations, but rather images from a MATLAB implementation of Avrahami’s system. Reply 1; *see also* Ex. 1004, 46 (“In the course of research, a semi-automatic system for performing extraction from aerial images was developed using the MATLAB® environment, in order to examine the algorithm efficiency.”). As part of its discussion of testing performed in MATLAB, Avrahami notes that “Figures 3 and 5 show the extraction of polygons in the image space in test areas 1 and 2, accordingly.” Ex. 1004, 47. Based on these disclosures, Petitioner argues that “Avrahami explicitly discloses implementation on a computer system, and that implementation is shown in Figures 3 and 5.”

Reply 1–2; *see also* Ex. 2017, 69:14–21 (testimony of Dr. Harold Schuch that the figures shown in Avrahami are images that were shown on a computer screen).

We agree with Petitioner. Avrahami describes its algorithm as providing “for semi-automatic 3D spatial *polygon extraction from a pair of colored aerial images* with a known external model solution.” Ex. 1004, 43 (emphasis added). Avrahami touts that one of the advantages of its system is that “the operator can identify *at a glance* which buildings can be mapped by this method so as to combine it with traditional manual extraction or other semi-automatic method.” *Id.* at 48 (emphasis added). Further to this point, Figure 1 shows a side-by-side comparison of the images in the pair. *See id.* at Fig. 1 (displaying left and right polygons going through Avrahami’s iterative matching process). Further, we credit the testimony from Petitioner’s Expert, Mr. Schuch, that one skilled in the art would understand Avrahami’s images to be what “you see . . . on a computer screen” as “part of the production.” Ex. 2017, 69:20–21; *see also id.* at 71:2–4 (explaining that “[t]his is an actual production image”). Therefore, we find that Petitioner has proffered sufficient evidence that Avrahami discloses the disputed limitation.

ii. “modify[ing] a three-dimensional model of the roof based on the received indication of the feature of the building”

Patent Owner argues that Avrahami does not disclose “modify[ing] a three-dimensional model of the roof based on the received indication of the feature of the building,” as recited in independent claims 1, 12, and 16. PO Resp. 15–29. Petitioner relies on the algorithm shown in Figure 2 as corresponding to modifying a three-dimensional model as claimed. Pet. 43–44.

Avrahami's system uses an iterative method for maximal matching between the two polygons by "sliding" the left polygon in the direction of the epipolar line in the right image space until the polygons achieve a maximum overlap in the right image space. Ex. 1004, 45; Ex. 1007 ¶ 63. Figure 2 of Avrahami is reproduced below:

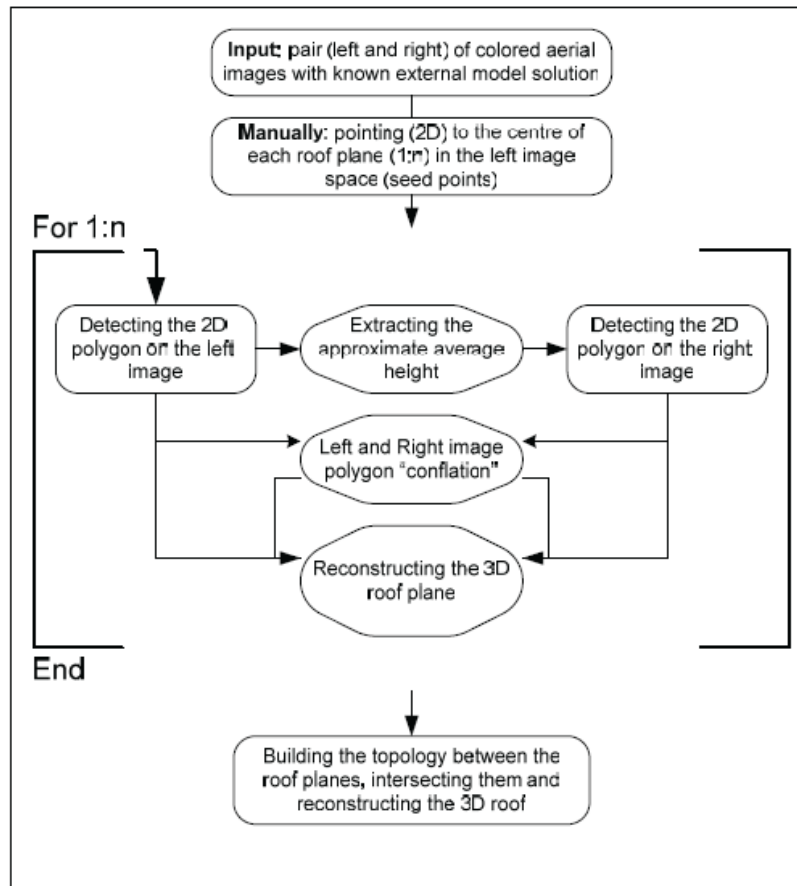


Figure 2. Flowchart of the roof extraction

Ex. 1004, 46. Figure 2 depicts a flowchart of Avrahami's roof extraction by matching right and left polygons. The algorithm consists of three main stages: manual pointing (seed points in 2D to the center area of each roof plane); performing an automatic process for extraction of the roof planes for each seed point; and building topology between the planes, with the outcome being a 3D roof. *Id.* at 46.

Patent Owner argues that Avrahami's algorithm does not modify a three-dimensional model of the roof based on the received indication of the feature of the building because Avrahami's "algorithm builds a three dimensional model of the roof only once, at the very end of the process, which is never subsequently modifiable." PO Resp. 16–17. According to Patent Owner, "[t]he creation of individual spatial polygons are merely intermediary steps on the path to initial creation of the model . . . before this final stage, Avrahami only creates individual spatial polygons ***that are not yet part of any model of a roof.***" *Id.* at 18. We disagree.

As Petitioner explains, Patent Owner's argument is based on an incorrect assumption that modifying a three-dimensional model of the roof requires first generating a fully-assembled model and then making a modification to that fully-assembled model. Reply 4. The claim language at issue is not so limited. The '152 patent's specification explains that "[m]odifying the 3D model may include adding or updating" features on an otherwise incomplete model. Ex. 1001, 22:52–54; *see id.* at 22:60–67. Avrahami discloses creating individual roof planes, modifying those planes prior to assembly, and assembling the planes into a final three-dimensional model. *See* Ex. 1004 at 44–46. Even though, as Patent Owner asserts, Avrahami's final 3D roof model is not modified post-assembly, Avrahami teaches the limitation at issue because an *incomplete* or partial model of the roof is still a model of the roof. Thus, modifying a three-dimensional model of the roof includes modifying individual roof planes prior to assembly and sequentially adding roof planes to a three-dimensional model, as Avrahami teaches.

iii. “display[ing] a projection of the feature from the modified three-dimensional model onto the first and second aerial images as a line drawing of the feature, each overlaid on corresponding locations of the feature on the first and second aerial images” (claims 1 and 12) and “displaying a projection of the feature from the modified three-dimensional model onto a second aerial image that provides a second view of the roof of the building as a line drawing of the feature, each overlaid on corresponding locations of the feature on the first and second aerial images” (claim 16)

For this element, Patent Owner reiterates its “displaying” and “modifying” arguments discussed above. See PO Resp. 29–31. We disagree with Patent Owner for the reasons explained above. For the reasons outlined above, we agree with Petitioner that Avrahami teaches “display[ing] a projection of the feature from the modified three-dimensional model onto the first and second aerial images as a line drawing of the feature, each overlaid on corresponding locations of the feature on the first and second aerial images” (as claims 1 and 12 require) and “displaying a projection of the feature from the modified three-dimensional model onto a second aerial image that provides a second view of the roof of the building as a line drawing of the feature, each overlaid on corresponding locations of the feature on the first and second aerial images” (as claim 16 requires).

iv. “transmit[ting] roof measurement information based at least in part on the modified three-dimensional model”

Claims 9 and 12 require “transmit[ting] roof measurement information based at least in part on the modified three-dimensional model.” In addition to reiterating its earlier “modifying” argument, Patent Owner argues Avrahami does not generate or transmit “roof measurement information.” PO Resp. 31–36. We disagree.

Avrahami creates and displays a model in a local coordinate system as depicted in Figures 4 and 6 (reproduced below):

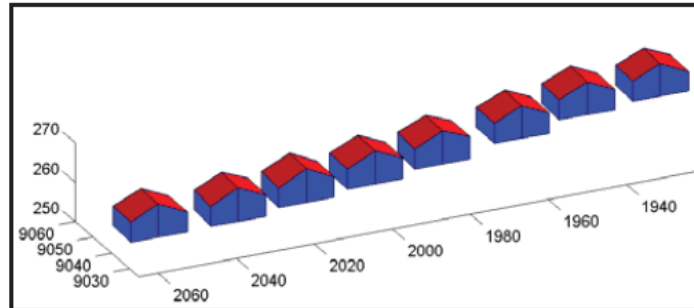


Figure 4. Test Area no. 1 - Roof extraction

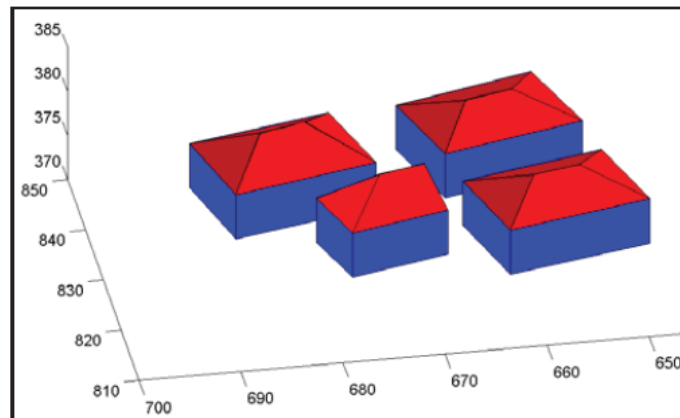


Figure 6. Test Area. 2 - Roof extraction

Figures 4 and 6 present extracted roofs in a local coordinate system. Ex. 1004, 47. We agree with Petitioner that Avrahami displays “roof measurement information” by displaying a roof in a local coordinate system, even though Avrahami does not label its measurement units. *See* Pet. 46; Reply 11. That is, because the claim term at issue does not require any particular units of measure, the numerical values along the axes in figures 4 and 6 convey “roof measurement information,” as claimed. We also agree with Petitioner automatic extraction of the 3D roof in a local coordinate system (i.e., “query[ing] and present[ing]” spatial data, Ex. 1004, 43) is a description of *transmitting* roof measurement information, as claimed. *See*

Pet. 46; Reply 11–12. The claim term at issue requires only “transmit[ting]” roof measurement information—it does not specify any particular source or destination for the transmission. The ’152 patent’s specification describes transmitting roof measurement information within the same system. *See* Ex. 1001, 17:28–30. Thus, it is of no moment that Avrahami does not disclose transmitting roof measurement information to a third-party system or separate computer, as Patent Owner argues. *See* PO Resp. 32–33.

b. Remaining Undisputed Elements

Petitioner contends Avrahami discloses the remaining limitations of claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23. *See* Pet. 38–52. Patent Owner does not address the merits of Petitioner’s assertions regarding the remaining limitations. *See* PO Resp. 9–36. We agree with Petitioner’s assertions and adopt them as our own findings.

c. Conclusion on Anticipation

For these reasons, having considered the parties’ contentions and supporting evidence, we determine Petitioner has shown by a preponderance of the evidence that Avrahami anticipates claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23.

2. Obviousness of Claims 10, 15, and 25

Petitioner asserts claim 10 is obvious over the combination of Avrahami and Perlant (Pet. 52–53), claim 15 is obvious over the combination of Avrahami and Aerowest (Pet. 54), and claim 25 is obvious over the combination of Avrahami and Applicad (Pet. 53–54). To contest obviousness, in addition to the arguments outlined above, Patent Owner asserts that it would not have been obvious for a person of ordinary skill in the art to combine the asserted references to arrive at the claimed invention,

and objective indicia of obviousness—commercial success and industry praise in particular—confirms that the claimed invention is nonobvious. *See* PO Resp. 36–64. We agree with Patent Owner that objective indicia of non-obviousness are decisive in this case, as explained below.

a. Objective Indicia of Nonobviousness

Notwithstanding what the teachings of the prior art would have suggested to one skilled in the art, objective evidence of nonobviousness may lead to a conclusion that the challenged claims would not have been obvious. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Objective evidence of nonobviousness “may often be the most probative and cogent evidence in the record” and “may often establish that an invention appearing to have been obvious in light of the prior art was not.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012). Patent Owner contends that objective factors including commercial success and praise of Patent Owner’s Twister and Render House products establish the non-obviousness of claims 10, 15, and 25. PO Resp. 49, 61,64.

i. Nexus

To be relevant, evidence of nonobviousness must be commensurate in scope with the claimed invention. *In re Huai-Hung Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011). Thus, to be accorded substantial weight, there must be a nexus between the merits of the claimed invention and the evidence of secondary considerations. *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995). “[N]exus” is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco*

Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1392 (Fed. Cir. 1988). There is a “presumption of a nexus” when a product is “coextensive” with a patent claim. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 723 F.3d 1363, 1372 (Fed. Cir. 2013).

We are persuaded by Patent Owner’s extensive evidence of nexus between its Render House and Twister products and the challenged claims. Patent Owner steps through each challenged claim on an element-by-element basis and directs us to images and specific passages from its Render House and Twister user guides that it argues embody the limitations of each challenged claim. PO. Resp. 50–58. Patent Owner also supports its assertion of nexus with testimony in the form of a Declaration from Dr. Chandrajit L. Bajaj that includes a claim chart detailing where each limitation of the challenged claim is found in its Twister and Render House products. Ex. 2010, 44–91.⁵

The Federal Circuit has held that “if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus.” *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000). Patent Owner has put forth sufficient evidence to show that its Twister and Render House products embody the elements of the challenged claims and thus, we look to Petitioner to rebut this presumed nexus and acknowledge that the presumption “cannot be rebutted with mere argument; evidence must be put

⁵ Here, we cited to page number and not paragraphs of Dr. Bajaj’s report because the paragraph containing the claim charts stretches over many pages.

forth.” *Id.* Petitioner argues that we should discount Patent Owner’s evidence of nexus because “Dr. Bajaj formed his opinion on Twister and Render House in a WebEx presentation with Patent Owner’s engineers,” but did not actually use the Twister or Render House products himself. Reply 22.

Under Federal Rule of Evidence 702, an expert witness may offer opinion testimony if (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case. Petitioner has not moved to exclude Dr. Bajaj’s testimony as impermissible under Rule 702, but instead has argued that we should not rely on Dr. Bajaj’s testimony because it is not evidence that that we can use to explain whether the sequence of screenshots provided by Patent Owner’s counsel embodies the elements of the challenged claims. Reply 21–23. We do not agree with Petitioner.

Dr. Bajaj testified that he “discussed these products with engineers at Patent Owner who use the Twister and Render House products on a regular basis” and that during those discussions he “personally directed Patent Owner’s engineers to operate the Twister and Render House software to confirm [his] understanding of the products’ operation.” Ex. 2010 ¶ 43. He also testified that “[m]y understanding of the features of the Twister and Render House products are further confirmed based on my review of user manuals for these two products.” *Id.* We find this explanation credible. Petitioner objects to the screenshots in Dr. Bajaj’s declaration because they

were not personally prepared by Dr. Bajaj. Reply 21–23. Dr. Bajaj, however, is testifying as to his opinion of the capabilities and features of the Twister and Render House products and these screenshots are merely visual aids to assist the Panel in understanding how Dr. Bajaj reached his conclusion. We see no impropriety in his use of images collected from other sources to document his opinions as to the operation of the products at issue. Thus, we are not persuaded by Petitioner’s arguments and we find that Patent Owner has provided sufficient evidence to establish a nexus between the challenged claims and the Twister and Render House products.

ii. Commercial Success

Patent Owner contends that its Twister and Render House products “used the patented invention to achieve tremendous commercial success by creating accurate roof estimate reports faster and at less expense than previous solutions.” PO Resp. 58. Patent Owner asserts that Petitioner recognized the benefits of those products and “entered a contract with Patent Owner for its roof reports soon after the release of Patent Owner’s first product.” *Id.* at 59 (citing Ex. 2021 (“EagleView and Xactware announced a new technology integration that will allow Xactware customers to access EagleView’s breakthrough roof measurement capabilities.”)). Patent Owner also provides evidence of rapid growth of its business after the introduction of these products. *Id.* at 59 (citing Ex. 2022 (noting “three-year revenue growth of 2,406 percent”)). Patent Owner directs us to statements from Scott Stephenson, President and CEO of Verisk Analytics, which is Petitioner’s parent company. *Id.* at 61 (citing Ex. 2023). In a call with investors, Mr. Stephenson “announced the acquisition of EagleView Technologies Corporation, or EVT, for a purchase price of \$650 million.

EVT is the parent company of both Pictometry International, a recognized leader in imagery, and EagleView, which is well known in the insurance industry.” Ex. 2023, 3. He also touted Patent Owner’s “significant intellectual property, including over 20 issued patents” and its position as a market leader, noting that:

Eagle View division is a leading provider of reports on structures used in claims processes in the property and casualty insurance and the contractor markets. The Eagle View division does at least some business with 24 of the top 25 insurance companies, as well as with over 30,000 building contractors.

Id. Finally Patent Owner offers the testimony of Chris Johnson, Vice President of Eagle View Technologies, to discuss financial reports for the years 2009–2012. Ex. 2011. In his declaration, Mr. Johnson testifies that the reports submitted into evidence all “reflect sales of reports created using the Twister and Render House products.” *Id.* ¶¶ 3–6.

Petitioner asserts that “Patent Owner has failed to demonstrate a nexus with the purportedly unique characteristics of the claimed invention and that for which there is alleged commercial success.” Reply 23–24. Our reviewing court has held that for evidence of commercial success to be relevant, “the patentee must establish a nexus between the evidence of commercial success and the patented invention.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). As noted above, however, Patent Owner has provided extensive evidence that the Twister and Render House products are coextensive with claims 10, 15, and 25 and that the reports sold were created using the Twister and Render House products. Thus, we are persuaded that nexus exists between the challenged claims and the commercially successful products at issue.

Petitioner also asserts that “Patent Owner has failed to make any showing as to market share, thus rendering their sales figures irrelevant and not adequately defined.” Reply 24. Patent Owner provided un rebutted evidence that “approximately 96 percent of the top 25 insurance carriers rely on [Eagle View Technologies 3D aerial roof measurement reports] in their claims departments.” Ex. 2020, 1; *see also* Ex. 2029, 8 (Verisk Analytics presentation noting that 24 of top 25 insurance companies and 30,000 contractors are Eagle View customers). In addition, Patent Owner’s evidence shows that its products are used by “about one-fifth of the roofing contractor market, according to an estimate by market researcher IbisWorld.” Ex. 2024. Patent Owner’s financial reports show both that it sold a significant number of roofing reports and that its sales grew significantly between 2009 and 2015. *See* PO Resp. 60–61. We find that this information, taken together with statement from others in the industry (*see* Ex. 2029) gives us a view of Patent Owner’s place in the relevant market and persuades us that Patent Owner’s Twister and Render House products experienced significant commercial success and wide-spread use in the industry.

Finally, Petitioner asserts that we should discount Patent Owner’s evidence of commercial success because “the evidence of commercial success only relates to the sale of the roof report and not the license or sale of the Twister and Render House products themselves.” Reply 23. We do not find this argument persuasive. As noted above, Patent Owner provided extensive evidence that the Twister and Render House products are coextensive with claims 10, 15, and 25, and that the commercially successful reports were created using the Twister and Render House products. A patent

challenger may respond to an allegation of presumed nexus by presenting evidence that shows the proffered objective evidence was “due to extraneous factors other than the patented invention.” *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1393 (Fed. Cir. 1988). However, as noted above, patent challenger cannot successfully rebut the presumption with argument alone—it must present evidence. *Brown & Williamson*, 229 F.3d at 1130 (citing *Demaco*, 851 F.2d at 1393). Petitioner has not done so in this case.

Patent Owner may commercialize its technology in many different ways. The choice to sell the output of the claimed method or claimed apparatus, as opposed to selling or licensing software that practices the claims does not undermine Patent Owner’s commercial success in the marketplace that is attributable to its claimed invention. Patent Owner is tasked with providing evidence tying the commercial success and the claims. That commercial success may take many forms and may be the result of many different business strategies, but in the end, for our purposes, the question is whether Patent Owner has shown a sufficient nexus between the commercial success and the claims. We are persuaded that Patent Owner has provided such evidence here. As noted above, Patent Owner and its declarant have extensively analyzed the Twister and Render House products and shown that these products embody claims 10, 15, and 25 in order to generate the roofing reports that it sold, and that the reports sold were created using the Twister and Render House products. Petitioner has not made any showing that the commercial success is based on something other than the contributions of the claimed invention to the generation of roofing reports. Thus, in light of extensive evidence of nexus, we are persuaded that

it is proper for Patent Owner to rely upon financial information relating to the sale of reports generated by the Twister and Render House products.

iii. Industry Praise

Praise from industry participants, especially competitors, is probative as to obviousness because such participants “are not likely to praise an obvious advance over the known art. Thus, if there is evidence of industry praise of the claimed invention in the record, it weighs in favor of the non-obviousness of the claimed invention.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1053 (Fed. Cir. 2016). Petitioner described Patent Owner’s products as “[u]sing aerial photography and patent-pending software [to] accurately calculate[] measurements for the roof’s ridges, rafters, valleys, slopes and more.” Ex. 2021, 1. Petitioner further noted that the “process saves contractors and roofers hours of time spent measuring and scoping a roof.” *Id.*

Verisk Analytics described Patent Owner as “a leader in sophisticated imagery for uses in the property and casualty, contractor, government, and commercial spaces.” Ex. 2023, 3. Verisk’s CEO stated that Patent Owner is “a leading provider of reports on structures used in claims processes in the property and casualty insurance and the contractor markets.” *Id.* He also noted that “[Patent Owner’s] solutions provide detailed, accurate measurements without the danger and added time of an adjustor climbing onto a roof.” *Id.* at 4.

Patent Owner directs us to an article from Bloomberg in which a roofer touts the accuracy of Patent Owner’s products, stating that “most insurance carriers at this point treat [Patent Owner’s roofing reports] as gospel.” Ex. 2024, 2. Patent Owner also directs us to an article from CNN

Money in which a partner at a claim investigation company stated that “[h]aving an Eagle View report has become an industry accepted standard.” Ex. 2025, 1. An article from the California Business Journal states that “Eagle View made one of the biggest breakthroughs in the history of the industry by creating a state-of-the-art software program that remotely snaps sophisticated aerial pictures of roofs and accurately measures lengths, pitches, valleys and other hard-to-see areas on roofs.” Ex. 2027, 2. In that article, a roofer is quoted as saying that “Eagle View changed the industry forever with this technology.” *Id.* We find Patent Owner’s extensive evidence of industry praise weighs in favor of the non-obviousness of the claimed invention.

b. Conclusions on Obviousness

We have considered Petitioner’s evidence and arguments about the asserted prior art’s teachings and the reasons why one skilled in the art would combine them. We have also weighed the objective indicia of non-obviousness presented by Patent Owner. Even assuming that we agree with Petitioner as to the disclosures in each of the asserted references and the reasons one skilled in the art would have to combine those disclosures, we are persuaded that objective indicia of nonobviousness—i.e., commercial success and industry praise—would outweigh the evidence of obviousness in this case. *See Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1361 (Fed. Cir. 1999) (holding that “even assuming that [the accused infringer] established a prima facie case of obviousness, [the patentee] presented sufficient objective evidence of nonobviousness to rebut it”). In particular, we are persuaded that Patent Owner has shown strong evidence of nexus between the challenged claims and the Twister and Render House products

used to produce the commercially successful reports. We are persuaded also that Patent Owner has shown strong evidence of industry praise. “These real world indicators of whether the combination would have been obvious to the skilled artisan in this case ‘tip the scales of patentability.’” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1058. Thus, upon consideration of the strength of Petitioner’s obviousness allegations and the strength of Patent Owner’s contentions as to secondary considerations of non-obviousness, we are persuaded that Petitioner has not met its burden to show that the challenged claims would have been obvious over the asserted prior art.

IV. PATENT OWNER’S MOTION TO EXCLUDE

Patent Owner filed a Motion to Exclude the re-direct deposition testimony of Petitioner’s expert (pages 117–120 of Ex. 2017). Paper 44. Because this Decision does not rely on that testimony, we deny Patent Owner’s Motion as moot.

V. CONCLUSION

In conclusion, Petitioner has shown by a preponderance of the evidence that claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23, of the ’152 patent are unpatentable under 35 U.S.C. § 102(b), but has not shown by a preponderance of the evidence that claims 10, 15 and 25 are unpatentable under 35 U.S.C. § 103(a).

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1, 3, 6, 9, 12–14, 16, 19, 22, and 23, of the ’152 patent are unpatentable as anticipated by Avrahami; and

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claim 10 of the '152 patent is unpatentable as obvious over the combination of Avrahami and Perlant; and

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claim 15 of the '152 patent is unpatentable as obvious over the combination of Avrahami and Aerowest; and

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claim 25 of the '152 patent is unpatentable as obvious over the combination of Avrahami and Applicad; and

FURTHER ORDERED that Patent Owner's Motion to Exclude (Paper 44) is DENIED as moot; and

FURTHER ORDERED that, because this is a Final Written Decision, the 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.

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