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Paper 12
Date: October 22, 2020

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VICTORIA'S SECRET STORES LLC,
Petitioner,

v.

ANDRA GROUP, LP,
Patent Owner.

IPR2020-00853
Patent 8,078,498 B2

Before LINDA E. HORNER, JAMES A. WORTH, and ERIC C. JESCHKE, *Administrative Patent Judges*.

JESCHKE, *Administrative Patent Judge*.

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

I. BACKGROUND

Victoria's Secret Stores, LLC ("Petitioner") filed a Petition to institute an *inter partes* review of claims 1, 2, 5–8, and 11 (the "challenged claims") of U.S. Patent No. 8,078,498 B2 (Ex. 1001, "the '498 patent"). Paper 1 ("Pet."). Andra Group, LP ("Patent Owner") filed a Patent Owner's Preliminary Response. Paper 10 ("Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2019). Section 314(a) of Title 35 of the United States Code provides that an *inter partes* review may not be instituted "unless . . . the information presented in the petition . . . shows that 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 evidence and arguments in the Petition (including its supporting testimonial evidence) as well as the evidence and arguments in the Preliminary Response, for the reasons below, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. We thus deny institution of *inter partes* review.

A. Related Proceeding

The parties identify a prior proceeding in the U.S. District Court for the Eastern District of Texas ("the Texas District Court") involving the '498 patent: *Andra Group, LP v. Victoria's Secret Stores, LLC*, No. 4:19-cv-00288-ALM-KPJ (E.D. Tex.), filed April 17, 2019. Pet. 2; Paper 8 (Patent Owner's Mandatory Notices) § 2. The Texas District Court dismissed that proceeding without prejudice. *See* Prelim. Resp. 6.

B. The '498 Patent

The '498 patent "relates to electronic commerce and, in particular, to a virtual showroom system and method." Ex. 1001, 1:15–16. According to the '498 patent, at the time of the invention, "[m]any buyers remain[ed] cautious . . . and avoid[ed] on-line purchases involving tangible, personal products[,] which traditionally require a more thorough, in-person inspection," because "[e]xisting technology d[id] not provide a buyer with sufficient opportunity to adequately evaluate such items prior to purchase." *Id.* at 1:28–33. One stated object of the invention is to "provide a virtual showroom which allows a user to more thoroughly evaluate articles and products for potential purchase." *Id.* at 1:37–41.

Figure 2 is reproduced below:

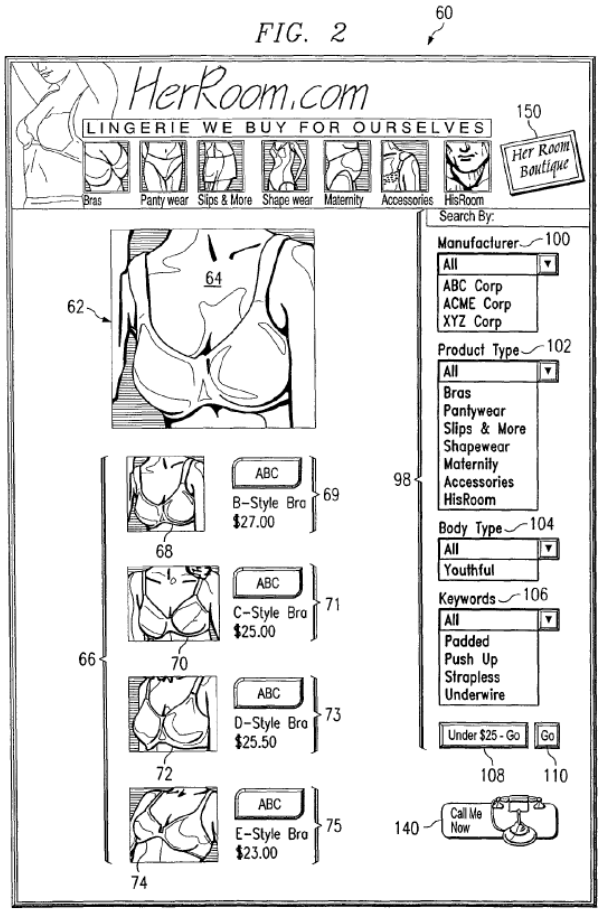


Figure 2 is "a schematic drawing illustrating a virtual showroom." Ex. 1001, 2:31–33. Depicted web-based virtual showroom 60 contains product information and electronic images of various articles of clothing. *See id.* at 3:47–50. In this embodiment, display field 66 provides electronic images of undergarments 68, 70, 72, and 74, with associated product descriptions 69, 71, 73, and 75. *Id.* at 4:18–21. "A user may select one of undergarments 68, 70, 72 and 74, for display within master display field 62 by 'clicking on' the graphical object, or icon which represent any of undergarments 68, 70, 72 and 74." *Id.* at 4:25–28.[1] The selected undergarment then becomes "the featured undergarment, and a larger electronic image of the featured undergarment is displayed within master display field 62." *Id.* at 4:28–32. According to the '498 patent, the larger image enables a user "to more thoroughly evaluate the featured undergarment." *Id.* at 4:37–38.

[1] Throughout this Decision, we omit any bolding of reference numerals and claim numbers in quotations from the '498 patent and prior art references, and also omit any italicization of prior art reference names in quotations from the briefs.

Figures 2A and 2B are reproduced below:

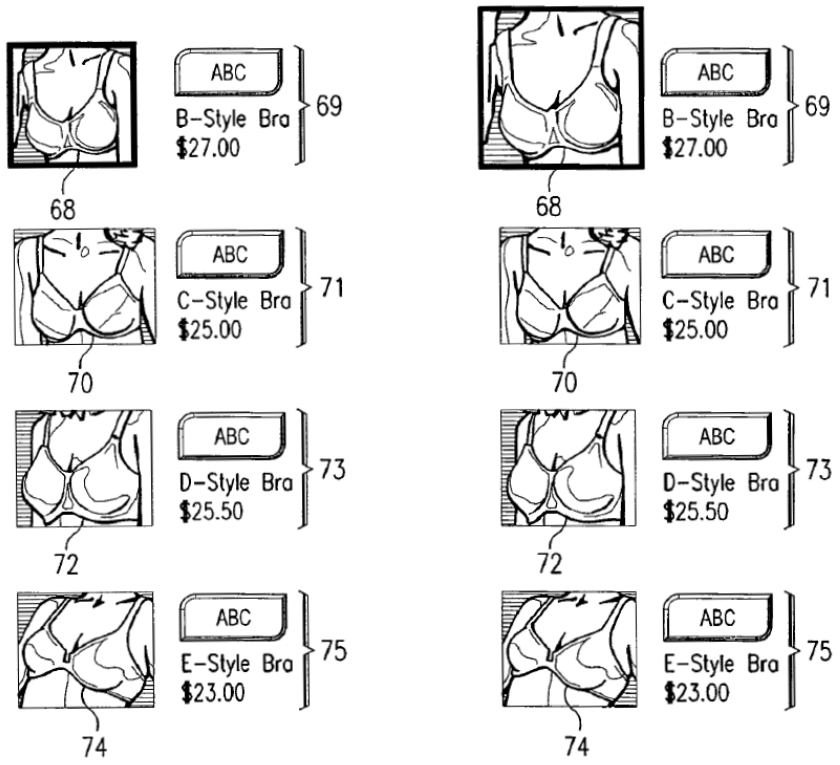


FIG. 2A FIG. 2B

Figure 2A is "a schematic drawing illustrating a display field containing graphical objects" and Figure 2B is "a schematic drawing illustrating an alternative embodiment display field." Ex. 1001, 2:34–36. These two figures show different embodiments of a "distinctive characteristic" to identify selected undergarment 68 within display field 66 (as shown in Figure 2). *See id.* at 4:53–5:16. For example, the embodiment shown in Figure 2A uses "shading" to distinguish selected undergarment 68 from non-selected undergarments 70, 72, and 74. *See id.* at 5:2–4. In the embodiment shown in Figure 2B, selected undergarment 68 is shown larger than non-selected undergarments 70, 72, and 74. *See id.* at 5:7–10.

Figure 3 is reproduced below:

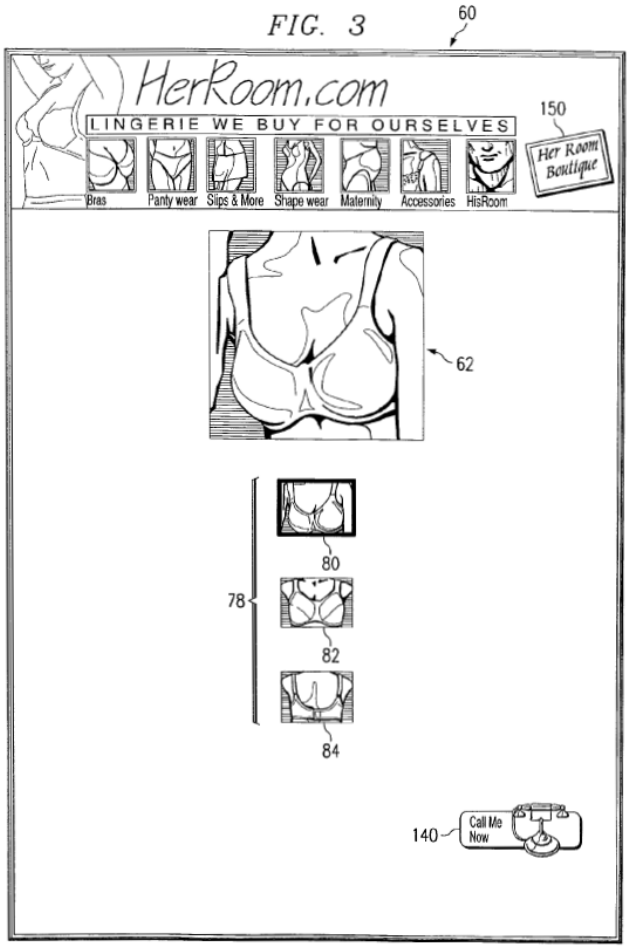


Figure 3 is "a schematic drawing illustrating an alternative embodiment of the virtual showroom" in Figure 2. Ex. 1001, 2:38–39. In the embodiment shown in Figure 3, field 78 includes electronic thumbnail images 80, 82, and 84, with each thumbnail image "representing a different view of the same article." *Id.* at 5:31–34. Discussing Figures 2 and 3 together, the '498 patent describes one possible user experience:

> In a particular embodiment, when an article is selected from field 66 to be displayed in master display field 62, a default command may cause a front view of the selected article to be displayed within master display field 62. A user may then view various other views of the same article by clicking upon thumbnail images 80, 82 and 84 in order to gain a more thorough

> perspective of the product. In practice, a user may select electronic thumbnail image 82 which portrays a rear view of a particular product, and the rear view of that product will be displayed within master display field 62.

Id. at 5:45–54; *see also id.* at 6:1–21 (also describing a possible user experience). After a particular view is selected, that thumbnail image—such as thumbnail image 80 in Figure 3—can include a "distinctive characteristic" to indicate selection. *See id.* at 5:54–67.

C. Challenged Claims

Petitioner challenges claims 1, 2, 5–8, and 11, of which claims 1, 7, and 11 are independent. Claims 2, 5, and 6 depend from claim 1, and claim 8 depends from claim 7. The independent claims are reproduced below, with bracketed letters added to identify each clause:

> 1. A method of displaying an article within a virtual showroom associated with a network server, comprising:
>
> [A] providing, by a processor, a plurality of thumbnail images of said article, [B] each image comprising an icon and representing a respective perspective view of said article, [C] allowing a user of said network server to select one of said plurality of thumbnail images for display in a master display field [D] wherein each respective perspective view represents a different perspective view of the same said article, [E] each respective perspective view being selected from the group consisting of front, rear, side, and isometric views;
>
> [G] providing a distinctive characteristic to said one of said plurality of thumbnail images selected by said user; and
>
> [I] displaying said selected one of said plurality of thumbnail images in said master display field.

Ex. 1001, 11:27–42.[2]

> 7. A method of displaying a plurality of articles within a virtual showroom associated with a network server, comprising:
>
> [A] providing, by a processor, a plurality of thumbnail images, [B] each thumbnail image comprising an icon and corresponding to one of said plurality of articles, [C] allowing a user of said network server to select one of said plurality of thumbnail images for display within a master display field [D] wherein each respective perspective view represents a different perspective view of the same said article, [E] each respective perspective view being selected from the group consisting of front, rear, side, and isometric views;
>
> [G] providing a distinctive characteristic to said one of said plurality of thumbnail images selected by said user; and
>
> [I] displaying said selected one of said plurality of thumbnail images in said master display field.

Ex. 1001, 12:9–25.

> 11. A method of displaying an article within a virtual showroom associated with a network server, comprising:
>
> [A] providing, by a processor, a first thumbnail image [B] representing a first perspective view of an article, [D] wherein the first perspective view is selected from the group consisting of front, rear, side, and isometric views;
>
> [F.i] providing, by the processor, a second thumbnail image comprising an icon and

[2] We adopt Petitioner's designations for the clauses of the challenged claims. *See* Pet. 26–29.

> representing a second perspective view of the same article, wherein the second perspective view is from a different perspective than the first perspective view and [F.ii] is selected from the group consisting of front, rear, side, and isometric views;
>
> [H] providing an interface operable to allow a user of a network to select one of the first or second thumbnail images for display in a master field; and
>
> [I] displaying the selected one of the first or second thumbnail images in the master display field in response to the user's selection.

Ex. 1001, 12:38–55.

D. Asserted Grounds of Unpatentability

Petitioner challenges claims 1, 2, 5–8, and 11 of the '498 patent on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 5–8, 11	103(a)	VS Webpages[3]
1, 2, 5–8, 11	103(a)	Rao,[4] Vertex[5]

[3] Declaration of Christopher Butler (Office Manager at the Internet Archive), dated April 23, 2020, and attached printouts of archived webpages from www.victoriassecret.com (Ex. 1031, "VS Webpages").

[4] Ramana Rao et al., *The Information Grid: A Framework for Information Retrieval and Retrieval-Centered Applications*, UIST '92: Proceedings of the 5th Annual ACM Symposium on User Interface Software and Technology 23 (1992) (Ex. 1034, "Rao").

[5] Business Wire, Inc., *The Vertex Opens Virtual Doors as VRML Forum; VRML 2.0 Users Exchange Ideas and Original Models Online* (Oct. 24, 1996) (Ex. 1038, "Vertex).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 5–8, 11	103(a)	Smith,[6] Salas[7]

Petitioner supports its challenge with a declaration from Mr. Glenn Weadock (Ex. 1003, "Weadock Decl.").

II. DISCUSSION

A. The Level of Ordinary Skill in the Art

The level of ordinary skill in the art is "a prism or lens" through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The person of ordinary skill in the art is a hypothetical person presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, 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." *Id.* (internal quotation marks and citation omitted).

Petitioner contends that one of ordinary skill in the art at the time of the invention would have had either "(1) a Bachelor's degree in Computer Science or other engineering or technical field, with at least two years of experience in World Wide Web design, as well as at least a passing

[6] International Publication No. WO 98/55949, published December 10, 1998 (Ex. 1039, "Smith").

[7] International Publication No. WO 99/61977, published December 2, 1999 (Ex. 1040, "Salas").

understanding of photography, drafting, and/or graphic design, or (2) equivalent experience." Pet. 31 (citing Weadock Decl. ¶¶ 19–23).

Patent Owner does not offer an alternative definition of the level of ordinary skill in the art, but disagrees with Petitioner's alternative definitions for various reasons. *See* Prelim. Resp. 7–10. For example, Patent Owner argues that Petitioner "fails to provide relational thresholds comparing the alleged 'equivalent experience' to any of the educational, web-design, or 'passing understanding' aspects of the proposed definition" and that "Petitioner's ambiguous requirement directed to a so-called 'passing understanding' fails to articulate a meaningful threshold." Prelim. Resp. 7.

For the reasons asserted by Patent Owner, we agree as to the ambiguous nature of (1) the "passing understanding" requirement in the first alternative definition proposed and (2) the "equivalent experience" requirement in the second alternative definition. *See* Prelim. Resp. 7. Further undermining Petitioner's first alternative definition, as noted by Patent Owner, Petitioner's declarant, Mr. Weadock, does not include the "passing understanding" requirement in his definition of the level of ordinary skill in the art. *See* Weadock Decl. ¶ 20, *cited at* Pet. 31.

For these reasons, we adopt the definition of the level of ordinary skill in the art proposed by Petitioner with the ambiguous aspects removed. For purposes of this Decision only, one of ordinary skill in the art at the time of the invention in the '498 patent would have had a Bachelor's degree in

Computer Science or another engineering or technical field, with at least two years of experience in World Wide Web design.[8]

B. Claim Construction

In *inter partes* reviews, the Board interprets claim language using the district-court-type standard, as described in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b). Under that standard, we generally give claim terms their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1313–14. Although extrinsic evidence, when available, may also be useful when construing claim terms under this standard, extrinsic evidence should be considered in the context of the intrinsic evidence. *See id.* at 1317–19.

Petitioner proposes constructions for several claim terms: (1) "perspective view"; (2) "front," "side," and "rear" views; (3) "isometric" view; (4) "thumbnail image[s]"; (5) "master display field"; (6) "icon"; (7) "a distinctive characteristic [to said one of said plurality of thumbnail images]"; and (8) "article." Pet. 32–40. Patent Owner responds by addressing those claim terms. Prelim. Resp. 10–25. We do not discern a need to construe explicitly any of the claim language discussed in this section or any other claim terms because doing so would have no effect on the analysis below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d

[8] Although we do not adopt Petitioner's definition in its entirety, we decline Patent Owner's invitation to deny the Petition on this basis alone. *See* Prelim. Resp. 9. Rather, because we adopt Petitioner's expert's definition and the Petition relies on this testimony throughout, we examine the merits of the Petition.

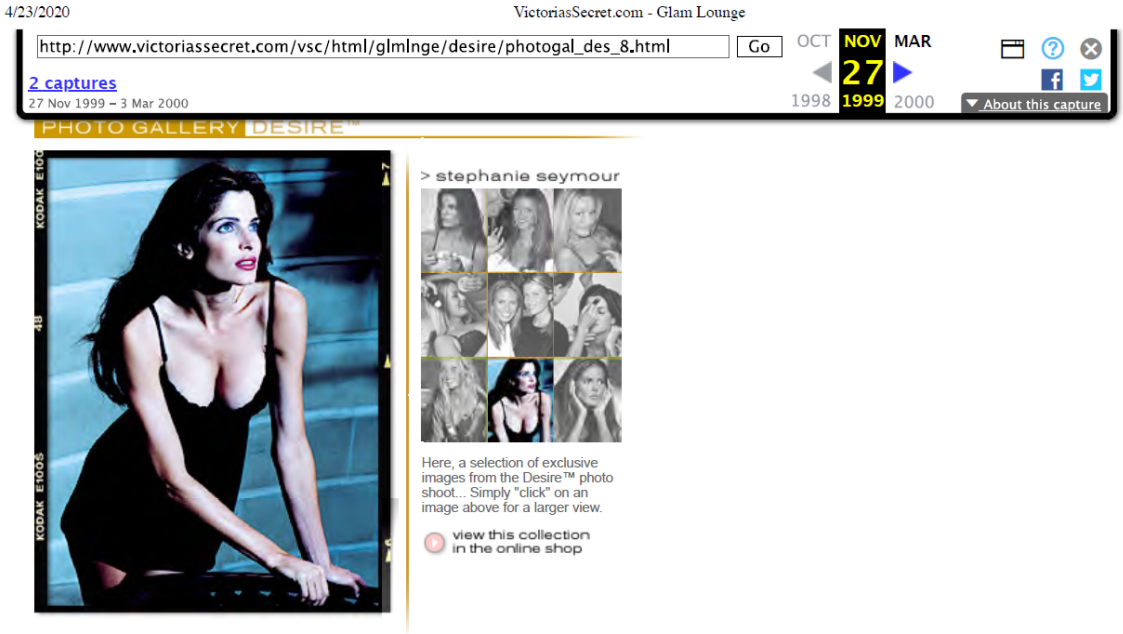
1013, 1017 (Fed. Cir. 2017) (stating that "we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy'") (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. Asserted Obviousness of Claims 1, 2, 5–8, and 11 Based on VS Webpages

Petitioner asserts that claims 1, 2, 5–8, and 11 of the '498 patent are unpatentable under 35 U.S.C. § 103(a) based on VS Webpages. Pet. 40, 51–67. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 27–36. We first summarize aspects of VS Webpages.

1. VS Webpages

VS Webpages includes two printouts of the Internet Archive's records of portions of Petitioner's own webpages as of the end of November 1999. *See* Ex. 1031, at 1 (Declaration of Office Manager at the Internet Archive describing the format of Exhibit A), 3–4. The upper portion of one of the two printouts is reproduced below:



This printout—which we will refer to as Printout A—depicts the Internet Archive interface showing aspects of www.victoriasecret.com as of November 27, 1999. Ex. 1031, at 3. More specifically, Printout A shows a 3-by-3 grid of 9 different images of female models off to the right, with the bottom, middle image in color and the rest in black and white. *Id.* Underneath the grid, Printout A provides: "Here, a selection of exclusive images from the Desire™ photo shoot . . . . Simply 'click' on an image above for a larger view." *Id.* Off to the left is a larger version of the image in color in the bottom, middle of the grid. *See id.*; *see also* Ex. 1032 (video showing operation of the webpages shown in Exhibit 1031).

The upper portion of the other printout is reproduced below:

This printout—which we will refer to as Printout B—depicts the Internet Archive interface showing aspects of www.victoriasecret.com as of November 28, 1999. Ex. 1031, at 4. More specifically, Printout B shows a 3-by-3 grid of 9 different images of female models off to the right, similar to Printout A, but with the upper, right image in color and the rest in black and

white. *Id.* Off to the left is a large area similar to that in Printout A, but Printout B has a broken image icon rather than an image. *Id.*

2. Analysis

a. Independent Claims 1, 7, and 11

For independent claims 1, 7, and 11, Petitioner contends that VS Webpages, as modified, satisfies each of the limitations. Pet. 52–63. Patent Owner asserts (among other arguments) that VS Webpages, as modified, does not satisfy the requirement, in each independent claim, of providing thumbnail images of an "article." *See* Prelim. Resp. 30–32. For the reasons below, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that claims 1, 7, and 11 would have been obvious based on VS Webpages.

Clause A of each of the three independent claims (when considered in light of each claim's respective preamble) requires providing at least one thumbnail image of an "article." Ex. 1001, 11:27–30 (claim 1), 12:9–12 (claim 7), 12:38–40 (claim 11). As to this requirement, Petitioner highlights the 3-by-3 grid off to the right of Printout A in VS Webpages and states: "In each of the thumbnails, the models displayed are the 'articles' as claimed by the '498 Patent." Pet. 52–53; *see also id.* at 52 (addressing the preambles and stating: "The VS Webpages are . . . designed to show one or more models ('articles') to a user . . . .").[9]

[9] Even in the context of the *alternative* reliance on other prior art (such as Vertex) for this asserted ground, to modify VS Webpages with "different views of a single article" (Pet. 58), Petitioner continues to rely on human beings as the "article[s]." *See* Pet. 58–59 (discussing the alternative reliance on Vertex as to clause D), 60 (discussing clause E).

Patent Owner argues that "Petitioner errs in mapping a *female model* onto the claimed 'article.'" Prelim. Resp. 30. We agree. As argued by Patent Owner, the record does not support Petitioner's position that the scope of the term "article" (or "articles" in parts of claim 7) includes human beings. *See id.* at 30–32. As an initial matter, as noted by Patent Owner, Petitioner does not explain why a human being allegedly falls within the scope of the term "article." *See* Prelim. Resp. 31 ("There simply is no argument or evidence set forth in the Petition to support the interpretation that the 'article' term recited in claim 1 encompasses a person."). And although Petitioner notes the parties' agreement, in the Texas District Court, that "article" means "item" (*see* Pet. 40), Petitioner does not explain why a human being allegedly falls within the scope of the term "item."

Petitioner does not identify any aspect of the claim language itself that supports Petitioner's position as to the scope of the term "article." And, as argued by Patent Owner, the Specification strongly supports the contrary view. *See* Prelim. Resp. 30–31. The Specification consistently frames an "article" as an *inanimate* object that is, for example, "offered for purchase" and has a "price" as well as a "manufacturer" and "supplier." *See, e.g.*, Ex. 1001, 1:48–52 (describing the "present invention" as "a network server with enhanced graphics and improved methods for displaying *articles offered for purchase*, to allow a purchaser to fully evaluate the article while shopping 'on-line'" (emphasis added)), 4:10–11 (discussing the "price of the articles or products"), 6:28–29 (discussing "an analysis of a particular article from the manufacturer, supplier, network operator and/or any other clothing professional"), 6:41–42 (discussing "[i]nformation regarding the manufacturer of a particular article"), 8:49–52 (discussing how, "each time *a*

user purchases a particular article, the user's information and profile of the particular article may be stored within a database" (emphasis added)), 9:1–5 (discussing the possibility of "receiving notification from the manufacturer and/or supplier, that a particular article will be discontinued or unavailable in the future").

Further, as argued by Patent Owner, the Specification frequently uses "article" and "product" interchangeably. *See, e.g.*, Ex. 1001, 5:45–51 (discussing how "[a] user may then view various other views *of the same article* by clicking upon thumbnail images 80, 82 and 84 in order to gain a more thorough perspective *of the product*" (emphasis added)), *cited at* Prelim. Resp. 30; *see also* Ex. 1001, 11:3–8 ("The *articles and products* described within this specification have been primarily limited to undergarments and complementary articles, such as outer garments. It will be recognized by those of ordinary skill in the art that *any product or article* may be displayed within master display field 62, within the teachings of the present invention." (emphasis added)), 1:37–41 (discussing "provid[ing] a virtual showroom which allows a user to more thoroughly evaluate *articles and products* for potential purchase" (emphasis added)), 3:47–50 (discussing "virtual showroom 60 containing *product information and electronic images of these various articles*" (emphasis added)). In line with this understanding, the Specification groups "articles" with "products, . . . , garments, undergarments, outer wear *and other tangible items*" that could be "contained within web pages and, more specifically, a virtual showroom." *Id.* at 3:52–55 (emphasis added); *see also ClearCorrect Operating, LLC v. Int'l Trade Comm'n*, 810 F.3d 1283, 1290 (Fed. Cir. 2015) (defining the term "articles" as used in 19 U.S.C. § 1337(a) in the context of ITC

proceedings as "material things," which did not include "electronic transmission of digital data").

In addition, as argued by Patent Owner, the Specification *expressly* distinguishes between depictions of an "article" and a human being:

> In another embodiment, an actual photograph or other depiction of a human may be used within display field 62, to illustrate a partic[ular] article (i.e., undergarment 68).

Ex. 1001, 4:49–52, *cited at* Prelim. Resp. 31; *see also* Ex. 1001, 11:11–14 (discussing displaying a "suitable depiction of an article being worn by a human"). For these reasons, we determine that the record does not support Petitioner's position that the scope of the term "article" includes human beings. Accordingly, based on the current record, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that independent claims 1, 7, and 11 would have been obvious based on VS Webpages.

b. Claims 2, 5, 6, and 8

Claims 2, 5, and 6 depend from claim 1, and claim 8 depends from claim 7. This asserted ground as to claims 2, 5, 6, and 8 includes the same deficiency discussed in the prior section addressing independent claims 1, 7, and 11 (*see supra* § II.C.2.a). *See* Pet. 63–65. Thus, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that claims 2, 5, 6, and 8 would have been obvious based on VS Webpages.

D. Asserted Obviousness of Claims 1, 2, 5–8, and 11 Based on Rao and Vertex

Petitioner asserts that claims 1, 2, 5–8, and 11 of the '498 patent are unpatentable under 35 U.S.C. § 103(a) based on Rao and Vertex. Pet. 40–

41, 67–80. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 36–44. We first summarize aspects of Rao and Vertex.

1. Rao

Rao discloses a system known as "[t]he Information Grid (InfoGrid)" to be used as a "framework for building information access applications that provides a user interface design and an interaction model." Ex. 1034, at 1.[10] According to Rao, using the InfoGrid framework, the authors built a number of applications, including a system to manage documents in a shared database, a browser for a database of lab members, an encyclopedia browser, and a personal/workgroup electronic file cabinet. *See id.*

Figures 2 and 3 of Rao are reproduced below:

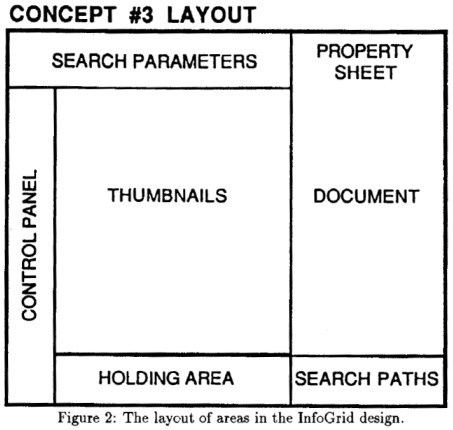


Figure 2: The layout of areas in the InfoGrid design.

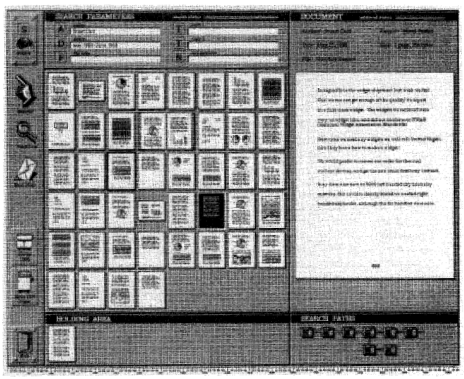


Figure 3: Design mockup of InfoGrid

Figures 2 and 3 depict a generalized schematic and a specific example, respectively, of the overall screen design of the system. Ex. 1034, at 2. In both Figures, the upper left portion of the screen includes an area for

[10] We cite to the page numbering added by Petitioner prior to filing rather than the native page numbering in Rao. The same will apply to citations for any *other* documents (such as Smith and Salas) with both native and Petitioner-added sets of page numbers.

a user to input search parameters to identify desired documents. *Id.* (disclosing a "search parameters area containing a property sheet that the user fills in to specify desired documents"). The middle left portion of the screen includes an area to display thumbnails of all documents responding to the input search parameters. *Id.* (disclosing "a browser area where the system displays a visualization of the documents that matched the query"). The right side of the screen includes an area to display larger versions of a document selected from the thumbnails area. *Id.* ("Individual documents can be viewed in the document area, which contains an image or textual view of the document's content and a property sheet view of its description.").

Figure 5 is reproduced below:

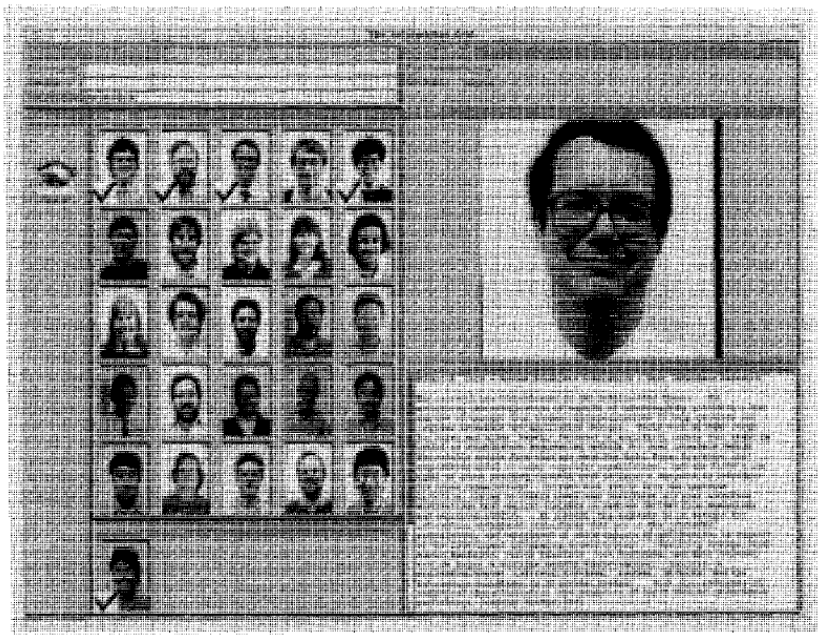


Figure 5: The Biography Retrieval application.

Figure 5 depicts an application of the InfoGrid framework that allows retrieval of pictures and biographies of the authors' research lab. Ex. 1034,

at 6. Building on the example shown in Figure 3, Rao discloses that, in the Figure 5 embodiment, "[e]ach person is treated as a document that can be retrieved by matching against name, research area, and/or words from their textual biography." *Id.* "Small greyscale pictures are used as thumbnails" whereas "[t]he document area displayed a large picture of [a selected] person as well as their biography." *Id.*

2. Vertex

Vertex is a document appearing to announce the launch of a website known as "Vertex," which is "dedicated to ***Virtual*** Reality Modeling Language (VRML) 2.0 information and model exchange." Ex. 1038. Vertex discloses: "The ***Vertex*** library also holds a full range of models and objects, including animals, buildings, furniture and machinery. When browsing the library, users can view a model with four thumbnail images from different angles, which they can download for personal use." *Id.*

3. Analysis

a. Independent Claims 1, 7, and 11

For independent claims 1, 7, and 11, Petitioner contends that the proposed combination of Rao and Vertex satisfies each of the limitations. Pet. 67–79. Patent Owner asserts (among other arguments) (1) that Petitioner has failed to establish that Vertex qualifies as a prior art printed publication under 35 U.S.C. § 311(b) and (2) that one of ordinary skill in the art at the time of the invention would not have modified Rao with Vertex, as proposed. *See* Prelim. Resp. 25–27, 40–44. For the reasons below, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that claims 1, 7, and 11 would have been obvious based on Rao and Vertex.

(1) Status of Vertex as a Printed Publication

A petitioner in an *inter partes* review may challenge the claims of a patent "*only* on the basis of prior art consisting of patents or printed publications." 35 U.S.C. § 311(b) (emphasis added). "[A]t the institution stage, the petition must identify, with particularity, evidence sufficient to establish a reasonable likelihood that [a] reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication." *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential).[11]

Petitioner's summary of Vertex, including the alleged basis for its status as a prior art printed publication, provides:

> The *Vertex* reference is an October 24, 1996 press release from *Business Wire* entitled "The Vertex Opens Virtual Doors as VRML Forum; VRML 2.0 Users Exchange Ideas and Original Models Online." (E[x.] 1038.) The *Vertex* publication bears a copyright symbol indicating copyright protection via authorship accrued in 1996. (*Id.*) Accordingly, the *Vertex* reference is prior art under §102(b) (pre-AIA). ([Weadock Decl. ¶ 101].)

Pet. 47.

Patent Owner argues that Petitioner has failed to meet its burden to establish that Vertex qualifies as a prior art printed publication. *See* Prelim. Resp. 25–27, 38–39. More specifically, Patent Owner argues that, "Petitioner did not even attempt—*in its curt paragraph reproduced above* [in the prior block quote]—to meet its burden to establish with supportive evidence that the nonpatent Vertex reference was 'publicly accessible' . . . ."

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[11] The decision in *Hulu* was designated precedential on December 20, 2019, over four months before the filing of the Petition in this proceeding.

Id. at 25–26 (citing *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348 (Fed. Cir. 2016)); *see also id.* at 38–39 (summarizing these arguments as "threshold matters of procedure" in the context of discussing the asserted ground of Rao and Vertex). For the reasons below, we agree with Patent Owner that the Petition does not satisfy the requirement to "identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent." *Hulu*, Paper 29 at 13.

Public accessibility "has been called the touchstone in determining whether a reference constitutes a 'printed publication' bar under 35 U.S.C. § 102(b)." *Blue Calypso*, 815 F.3d at 1348 (quoting *In re Hall*, 781 F.2d 897, 898–99 (Fed. Cir. 1986)). In *Hulu*, the Precedential Opinion Panel ("POP") rejected the petitioner's argument that a reference necessarily meets "the standard for institution where the reference bears conventional markers of publication, such as a copyright date, edition identifiers, publication by a commercial publisher, and the assignment of an ISBN number." *Hulu*, Paper 29 at 17. The POP stated: "We do not hold that any particular indicia per se is sufficient at the institution stage. Rather, the indicia on the face of a reference, such as printed dates and stamps, are considered as part of the totality of the evidence." *Id.* at 17–18 (citing *Nobel Biocare Servs. AG v. Instradent USA, Inc.*, 903 F.3d 1365, 1377 (Fed. Cir. 2018)).

Here, Petitioner relies *solely* on the text "Copyright 1996 Business Wire, Inc." near the top of Vertex as the basis for printed publication status, stating: "Vertex bears a copyright symbol indicating copyright protection via authorship accrued in 1996. *Accordingly*, Vertex is prior art under §102(b) (pre-AIA)." Pet. 47 (emphasis added) (citation omitted) (citing Ex. 1038;

Weadock Decl. ¶ 101). As argued by Patent Owner, the Petition did not include *any* additional evidence supporting Petitioner's implicit position that Vertex was publicly accessible prior to the critical date of the claimed invention.[12] *See* Prelim. Resp. 26 (arguing that "there is no proffered evidence as to whether, how, and when [Vertex] was allegedly made publicly accessible"). Moreover, the paragraph in the Weadock Declaration relied upon by Petitioner essentially echoes the language in the Petition and does not include any useful testimony in support of Petitioner's contention. *Compare* Weadock Decl. ¶ 101, *with* Pet. 47 (first full paragraph).

Numerous Board decisions have held that copyright dates *alone* are not sufficient at the institution stage to demonstrate public accessibility. *See, e.g.*, *In-Depth Geophysical, Inc. v. ConocoPhillips Co.*, IPR2019-00849, Paper 14 at 10–11 (PTAB Sept. 6, 2019) (informative in relevant part) (stating that a "copyright notice" "sheds virtually no light on whether the document was publicly accessible"); *Microsoft Corp. v. Corel Software, LLC*, IPR2016-01083, Paper 14 at 13–14, 15 (PTAB Dec. 1, 2016) ("The copyright notice, alone, however, sheds virtually no light on whether the document was publicly accessible as of that date, therefore additional evidence is typically necessary to support a showing of public

[12] Petitioner sought authorization to file a reply to the Preliminary Response and provide additional evidence to address Patent Owner's arguments regarding the status of Vertex as a printed publication. *See* Ex. 3001. Determining that Petitioner had not shown good cause for a pre-institution reply, we denied Petitioner's request. *See* Paper 11. Petitioner did not argue that the additional evidence was not available at the time of filing the Petition; rather, Petitioner argued that additional evidence was not necessary to establish the status of Vertex as a prior art printed publication. *See id.* at 3.

accessibility. . . . Collectively, all of the information provided by Petitioner shows only a copyright notice date and that, alone, is insufficient to support a threshold showing of public accessibility for QuarkXPress."); *see also Laird Techs. Inc. v. A.K. Stamping Co.*, IPR2017-02038, Paper 6 at 10 (PTAB Mar. 14, 2018); *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, IPR2017-01975, Paper 9 at 12–14 (PTAB Mar. 12, 2018); *Stryker Corp. v. Karl Storz Endoscopy-Am., Inc.*, IPR2015-00677, Paper 15 at 18–19 (PTAB Sept. 2, 2015) (discussing how a copyright notice "does not establish when a document was publicly accessible under patent law").

In response to questioning from the panel during a conference call related to Petitioner's request for authorization to file a reply to the Preliminary Response to address the status of Vertex as a printed publication (*see supra* note 10), Petitioner identified three Board decisions that allegedly demonstrate that a copyright notice *alone* may be sufficient to show public accessibility. *See* Ex. 3002, at 1. In two of these decisions, however, the panels highlighted *other* evidence, aside from simply a copyright notice, supporting public accessibility. *See Ford Motor Co. v. Cruise Control Techs. LLC*, IPR2014-00291, Paper 44 at 9–10 (PTAB June 29, 2015) (Final Written Decision) (discussing the copyright notice *and* declaration testimony as bases for the determination that a document was shown to be a printed publication); *CIM Maint. Inc. v. P & RO Sols. Grp., Inc.*, IPR2017-00516, Paper 8 at 18–20 (PTAB June 22, 2017) (Decision on Institution) (discussing how a copyright notice, ISBN number, *and* a statement of printing by The McGraw-Hill Companies in a textbook excerpt are sufficient to meet the institution threshold as a printed publication). And although in

one decision, the panel viewed a copyright notice on a software user's guide as adequate evidence that the guide "was published and accessible to users of the corresponding product" as of the relevant date, the panel then proceeded to deny institution on the merits. *See Int'l Bus. Machs. Corp. v. Intellectual Ventures II LLC*, IPR2014-00681, Paper 11 at 13–14, 16 (Decision Denying Institution) (PTAB Oct. 30, 2014). Moreover, all three of these decisions precede the decision in *Hulu*.

On the particular facts here, we determine that Petitioner has not satisfied the standard set forth in *Hulu* as to the alleged public accessibility of Vertex. Accordingly, on the current record, the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that independent claims 1, 7, and 11 would have been obvious based on Rao and Vertex. In the next section, we address an additional basis for this overall conclusion.

(2) The Proposed Combination of Rao and Vertex

In the discussion of this asserted ground, Petitioner relies on Rao to address most of the limitations of the independent claims. *See* Pet. 69–79. In the context of the discussion of clauses D (for claims 1 and 7) and F.i (for claim 11), Petitioner states that, although Rao "does not expressly disclose that each thumbnail displayed is a different perspective view of the same article, implementing these elements in the system described by Rao would not require any additional experimentation or alteration of the Rao architecture." Pet. 74 (citing Weadock Decl. ¶ 150). According to Petitioner, "[t]he only change [to Rao] required would be to alter the corpus of 'documents' displayed by the InfoGrid system such that the thumbnails displayed embody different views of a single article, such as what is

described in the Vertex disclosure." *Id.* Petitioner states that it would have been obvious to one of ordinary skill in the art at the time of the invention to have "combine[d] the teachings of Rao with the teachings of the Vertex disclosure, which teaches that users can view 'a model with four thumbnail images from different angles.'" *Id.* at 75 (citing Ex. 1038; Weadock Decl. ¶ 152). In describing the proposed modification, Petitioner also states:

> For example, [one of ordinary skill in the art] could start with the design mockup as disclosed in Figure 3 of Rao, but rather than having the thumbnails displayed be generated from a set of separate documents or images, [one of ordinary skill in the art] would instead understand from the teachings of Vertex to generate the thumbnails from a set of images solely comprising different views of a single object.

Pet. 68 (citing Weadock Decl. ¶ 140).

Patent Owner contends that Petitioner does not establish a reasonable likelihood with respect to this asserted ground because the proposed modification would render Rao inoperable for its intended purpose. *See* Prelim. Resp. 40–44. Specifically, Patent Owner states that "Petitioner and its declarant characterize Rao as allegedly disclosing that its thumbnail sketches, displayed as a result of a user query, are 'generated from a set of ***separate*** documents or images'" (Prelim. Resp. 41 (quoting Pet. 68, with emphasis added)), and asserts that it is therefore "undisputed . . . that Rao is *purposefully designed* to display its various documents retrieved from a query as 'fixed-size thumbnail sketches that are generally laid out in a grid (hence, the name InfoGrid)'" (*id.* (quoting Ex. 1034, at 4)[13]). According to

[13] Patent Owner cites the native page numbering in Rao. *See, e.g.*, Prelim. Resp. 41 (citing "p. 26" of Rao). As noted above, we cite the page numbering added by Petitioner prior to filing. *See supra note* 10.

Patent Owner, the proposed modification would render Rao inoperable for its intended purpose because the modified system "could not return searches to queries by populating the InfoGrid with thumbnail sketches of *distinct documents*" as proposed. *Id.* at 43. Patent Owner argues that, "under the proposed modification, Rao's entire 'corpus' of documents would have to be completely repopulated with entirely different (and potentially irrelevant) information; and then all queries would, instead, return what Petitioner ambiguously refers to as 'different views' of a *singular* document." *Id.*

We agree with Patent Owner. Where a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, the proposed modification may not have been obvious. *See In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). As argued by Patent Owner, the purpose of the InfoGrid system in Rao is to allow a user to search a set of *different* items (such as documents) using queries to cull those items down to a smaller set, and then display the smaller set as a series of thumbnails, each of which can be selected for closer review. *See* Prelim. Resp. 41; Pet. 46 ("The InfoGrid framework provides a user the opportunity to identify a plurality of items via search queries, which can then be examined through perusal of thumbnail images." (citing Weadock ¶ 99; Ex. 1034, at 2); *see also supra* § II.D.1 (summarizing Rao); Ex. 1034, at 4 ("The user specifies an initial query by supplying values for various fields in the search parameter area. . . . The results of the query are displayed in the results area as some kind of visualization. Currently, retrieved documents are shown as fixed-size thumbnail sketches that are generally laid out in a grid (hence, the name InfoGrid).").

As argued by Patent Owner, the proposed modification—replacing the set of *different* items in Rao (e.g., documents) with images of different views of the *same* item (*see, e.g.*, Pet. 68, 74–76)—would render Rao unsatisfactory for the intended purpose discussed above. *See* Prelim. Resp. 43 ("Petitioner suggests that no modification would need to be made to the querying technique disclosed in Rao, which is expressly designed to locate and display multiple *distinct* documents pertaining to the query."). This provides an additional basis for the overall conclusion reached above (*see supra* § II.D.3.a(1)) that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that independent claims 1, 7, and 11 would have been obvious based on Rao and Vertex.

b. Claims 2, 5, 6, and 8

Claims 2, 5, and 6 depend from claim 1, and claim 8 depends from claim 7. This asserted ground as to claims 2, 5, 6, and 8 includes the same deficiencies discussed in the prior section addressing independent claims 1, 7, and 11 (*see* § II.D.3.a). *See* Pet. 79–80. Thus, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that claims 2, 5, 6, and 8 would have been obvious based on Rao and Vertex.

E. Asserted Obviousness of Claims 1, 2, 5–8, and 11 Based on Smith and Salas

Petitioner asserts that claims 1, 2, 5–8, and 11 of the '498 patent are unpatentable under 35 U.S.C. § 103(a) based on Smith and Salas. Pet. 41, 80–96. Patent Owner provides arguments addressing this asserted ground. Prelim. Resp. 44–50. We first summarize aspects of Smith and Salas.

1. Smith

Smith discloses a graphical user interface for configuring and ordering office furniture. Ex. 1039, code (57). Figure 12 of Smith is reproduced below:

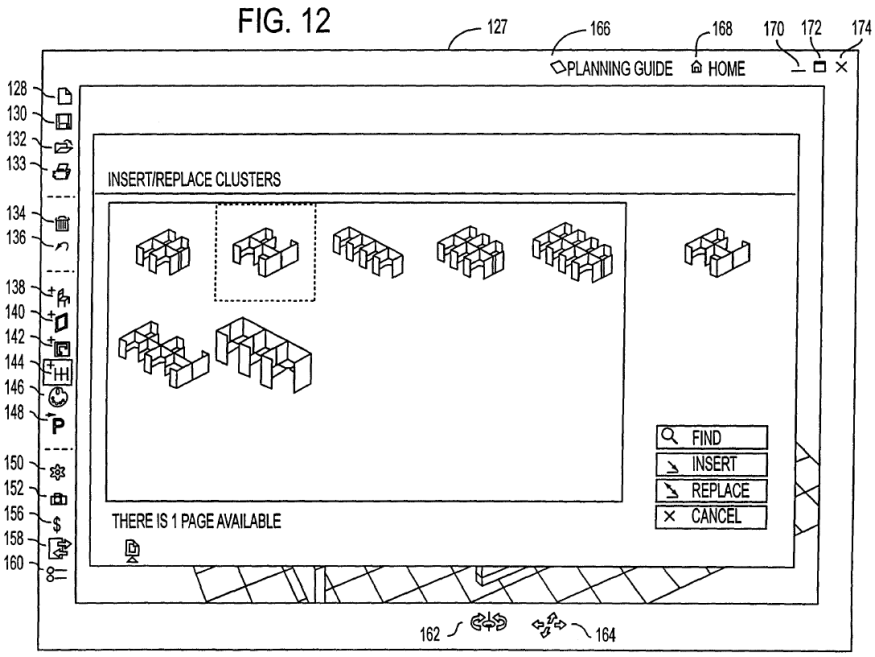


Figure 12 depicts a user interface allowing the user to select from one of the displayed clustering options. Ex. 1039, p. 32, ll. 2–7. In the depicted user interface, the user has selected one of the seven clustering options displayed within a rectangle, with the selected option surrounded by a dotted line. *Id.*, Fig. 12. A copy of the selected option is also displayed off to the right of the rectangle. *Id.*

Figure 13 is reproduced below:

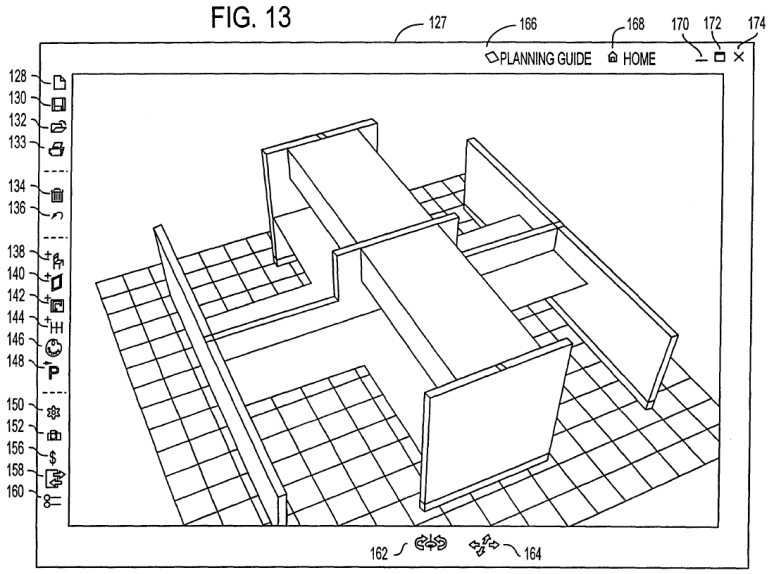


Figure 13 depicts a user interface presenting to the user the selected cluster of "typicals." Ex. 1039, p. 32, ll. 16–18. To the selected configuration, a user can add other detached items, such as chairs (as discussed below). *Id.* at p. 32, ll. 19–20. Figure 14 is reproduced below:

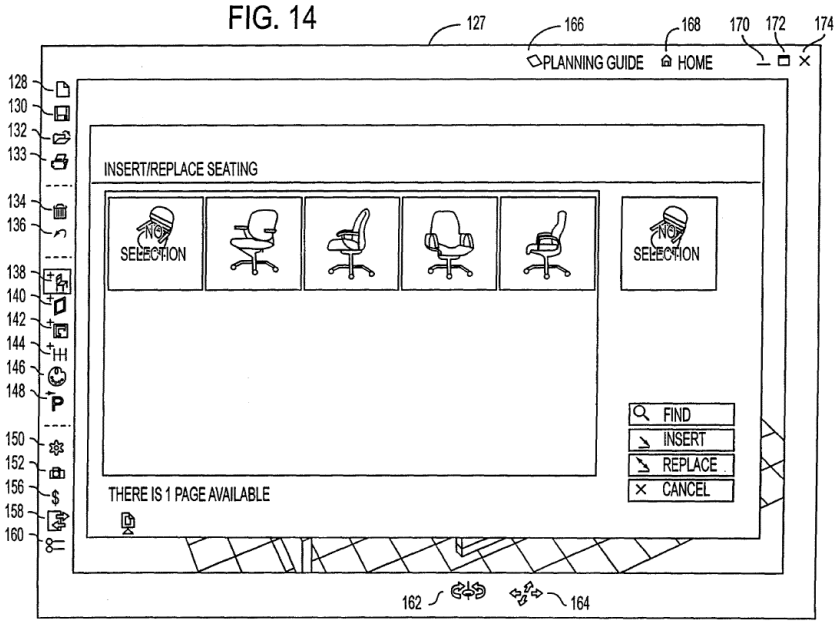


Figure 14 depicts a user interface presenting to the user a display of chairs. Ex. 1039, p. 32, ll. 22–24. Using the interface in Figure 14, a user

can select one of the different chairs displayed for placement in the current cluster or typical. *Id.* at p. 32, ll. 20–26.

2. Salas

Salas discloses a system "for producing a computer-generated display that permits visualization of one or more items in a user-provided environment." Ex. 1040, code (57). Figure 7 of Salas is reproduced below:

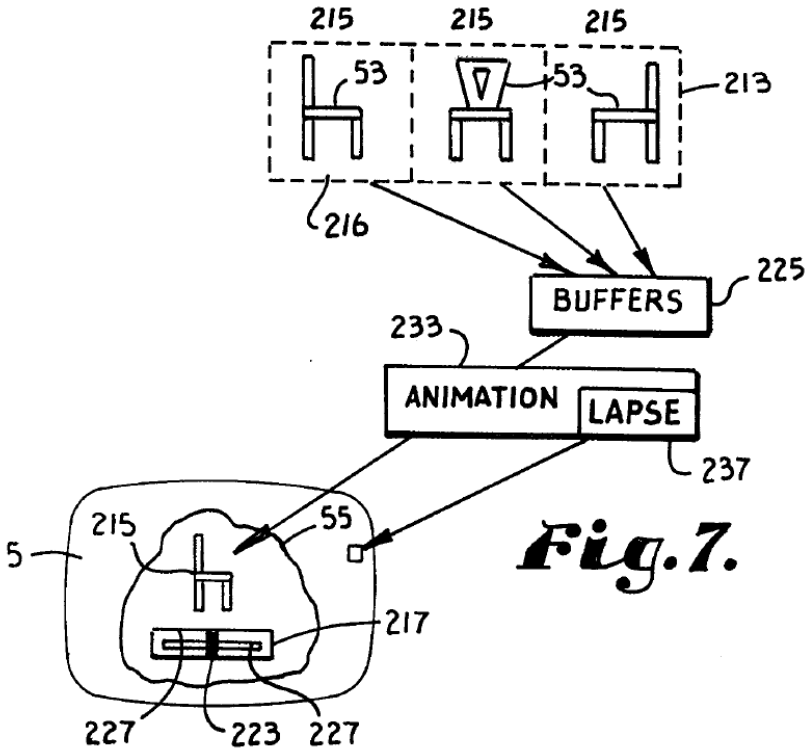


Fig. 7.

Figure 7 "is a schematic representation of the system for visualizing items in a user-provided environment, illustrating features for viewing item images of an item from various perspectives." Ex. 1040, p. 8, ll. 27–28. As shown at the top of Figure 7, the system includes "a plurality of the sub-image objects 215 of the set 213 [that] comprise a series of views of an item 53," depicted as a chair in this example. *Id.* at p. 21, ll. 32–37. Sub-image objects 215 are "taken from different perspectives for use in conjunction with an image of a selected environment," such as background image 55

shown in screen 5 at the bottom left portion of Figure 7. *Id.* at p. 21, ll. 32–37; p. 23, ll. 3–7.

3. Analysis

a. Independent Claims 1, 7, and 11

For independent claims 1, 7, and 11, Petitioner contends that the proposed combination of Smith and Salas satisfies each of the limitations. Pet. 83–95. Patent Owner asserts (among other arguments) that the proposed combination does not satisfy the requirement, in each independent claim, of *simultaneously* providing thumbnail images of at least two views of the *same* "article." *See* Prelim. Resp. 49–50. For the reasons below, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that claims 1, 7, and 11 would have been obvious based on Smith and Salas.

We first discuss why each of the independent claims includes a requirement for *simultaneously* providing thumbnail images of at least two views of the *same* "article," starting with claim 1. As to the *same* requirement, clause A of claim 1 recites providing "a plurality of thumbnail images of said article" and then, in clauses B and D, makes clear that each of those "images" represents a "different perspective view *of the same said article.*" Ex. 1001, 11:29–31, 11:35–37 (emphasis added). In addition, clauses C and G in claim 1 support the *simultaneously* requirement in that, for a user to "select one of said plurality of images for display" or to "provid[e] a distinctive characteristic to said one of said plurality of thumbnail images selected by said user," at least two images must be shown *simultaneously*. *See id.* at 11:33–35, 11:39–41. This understanding of claim 1 aligns with the embodiment in Figure 3. *See, e.g.*, Ex. 1001, 5:31–34

(discussing "field 78 including electronic thumbnail images 80, 82 and 84, each thumbnail image representing a different view of the same article" as shown in Figure 3); *see also* Pet. 24 (including Figure 3 in the overview of the '498 patent).

Turning to claim 7, the preamble and clause B could be viewed, out of context, as supporting the understanding that the "thumbnail images" need not be of the *same* article in that both the preamble and clause B expressly recite a "plurality of articles." Ex. 1001, 12:9–11, 12:13–14. Clause D, however, recites that "each respective perspective view represents a different perspective view *of the same said article*." *Id.* at 12:17–19 (emphasis added). Considering claim 7 as a whole, we view clause D as limiting the "plurality of thumbnail images" to images of the *same* "article." In support of this view, Petitioner takes the position that the independent claims include "nearly identical elements." Pet. 26. In addition, clauses C and G in claim 7 closely align with clauses C and G in claim 1 and thus support the *simultaneously* requirement for the same reasons discussed above with respect to claim 1. This understanding of claim 7 is supported by the embodiment in Figure 3.

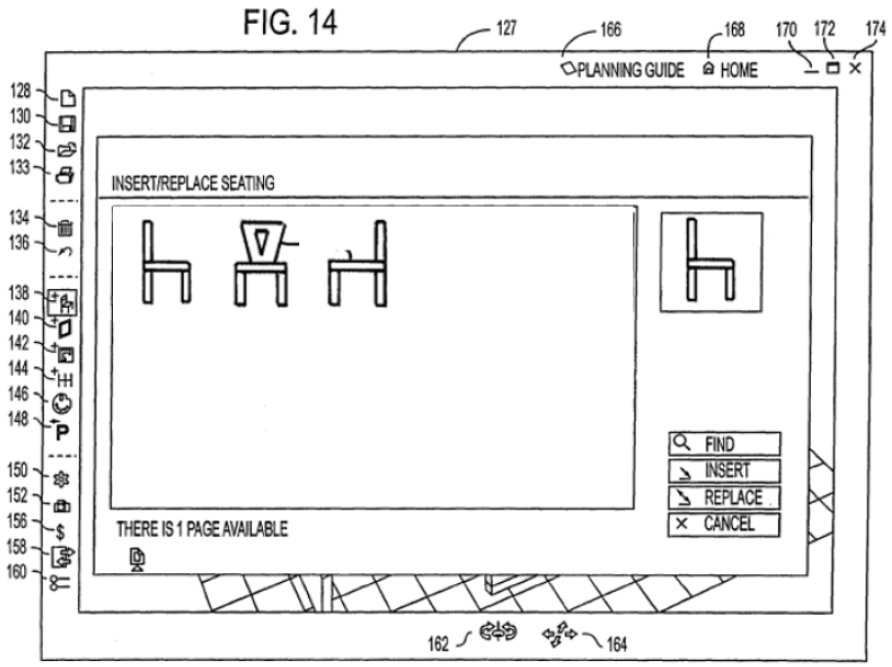
Turning to claim 11 and the *same* requirement, clauses A and B together require providing "a first perspective view of an article" and then clause F.ii requires providing "a second perspective view *of the same article*." Ex. 1001, 12:40–41, 12:44–48 (emphasis added). In addition, clause H supports the *simultaneously* requirement in that, for a user to "select one of the first or second thumbnail images for display," at least two images must be shown *simultaneously*. *See id.* at 12:50–52. This understanding of claim 11 also aligns with the embodiment in Figure 3.

We now summarize Petitioner's position as to why the proposed modified system allegedly satisfies the requirements discussed above. We first explain the proposed modification of Smith based on Salas and then turn to Petitioner's discussion of the requirements at issue. Petitioner states that one of ordinary skill in the art "could start with the graphical user interface disclosed by Smith showing a display of varying articles *of different categories*, and supplement it with the multiple views *of a single particular article* as disclosed by Salas." Pet. 81 (emphasis added) (citing Weadock Decl. ¶ 162). According to Petitioner, "[t]he element taught by Salas (e.g., multiple views of a single article) is a well-known element that can easily be implemented with other systems." *Id.* (citing Weadock Decl. ¶ 162). Discussing the proposed modification, Petitioner also states that one of ordinary skill in the art:

> would know to combine the object selection interface of Smith with the use of multiple views of a single object from varying angles as taught by Salas, in order for a user to easily select a desired orientation of a particular object for manipulation on the desired workplace configuration previously selected, particularly when multiple versions of the same article (such as a chair) are desired to be displayed in different orientations on the same workspace configuration.

Pet. 91 (citing Weadock Decl. ¶ 177).

Petitioner also provides the following modified version of Figure 14 of Smith:



Pet. 92. Figure 14 of Smith, prior to modification, depicted a user interface presenting to the user a display of chairs. Ex. 1039, p. 32, ll. 16–18. According to Petitioner, this version of Figure 14 of Smith is "modified to include the multiple views of a chair from Salas." *Id.* at 91; *see also* Ex. 1040, Fig. 7 (upper portion – showing set of image objects 213 of item 53, in the form of a chair).

Petitioner addresses the *same* and *simultaneously* requirements in the context of the joint discussion of clause D in claims 1 and 7, and clause F.i in claim 11. *See* Pet. 90–92. Specifically, Petitioner states that, although "Smith does not expressly disclose that each thumbnail displayed is a different perspective view of the same article, Salas discloses the use of different perspective views of the same article." *Id.* at 90. According to Petitioner, Salas "discloses a 'pseudo-translational improvement,' which

provides 'item images' of the 'image objects being displayed on the screen with quasi-three-dimensional viewing and movement characteristics.'" *Id.* (citing Ex. 1040, at 7). Petitioner quotes Salas's statement that "[v]arious software products are presently available that allow a user to view images of an item from different angles . . . ." Ex. 1040, p. 22, ll. 7–8, *quoted at* Pet. 91.

Patent Owner argues that "Petitioner's suggestion that Salas *simultaneously* provides the user a showroom with 'multiple views of a single particular article' is misleading and overlooks explicit disclosure in Salas to the contrary." Prelim. Resp. 49 (citing Pet. 90). According to Patent Owner, "Salas'[s] sub-image objects 215 [shown at the top] of Figure 7 are not simultaneously shown side-by-side as thumbnails, as Petitioner suggests, but rather they are shown individually, one at time." *Id.* at 50. The record supports Patent Owner's understanding of Salas.

As highlighted by Patent Owner, in the discussion of Figure 7, Salas discloses that a user selection causes only "[a] *first or initial one* of the plurality of sub-image objects 215 of the object image set 213 . . . to be displayed on the screen, such as the sub-image object 215 designated by the numeral 216 in Fig. 7." Ex. 1040, p. 22, ll. 23–26 (emphasis added), *quoted at* Prelim. Resp. 49; *see also* Ex. 1040, p. 22, ll. 33−35 ("When selecting an image object 25 having ingredients providing characteristics that utilize the movable 3D improvement 33, the first sub-image object 216 in the sequence of the plurality of sub-image objects 215 of the image object set 213 is displayed on the background image 55."), *cited at* Prelim. Resp. 49. Salas also discloses, as noted by Patent Owner, that:

> By clicking and dragging a slider portion 223 of the control image 217, the sub-image object 215 displayed on the screen 5 can be removed and replaced with the next preceding or succeeding sub-image object 215 in the sequence of associated sub-image objects 215 by appropriately moving the slider portion 223 from side to side of the control image 217.

Ex. 1040, p. 23, ll. 4–7, *quoted, in part, at* Prelim. Resp. 49. Taken together, these disclosures indicate that the three different sub-image objects 215 of item 53 at the top of Figure 7 of Salas are never displayed *simultaneously* on screen 5. Instead, *only one* of the sub-image objects 215 is displayed on screen 5 at a particular time (as shown, for example, in the bottom left portion of Figure 7). *See* Ex. 1040, p. 22, ll. 23–26, *cited at* Prelim. Resp. 49. Instead, based on a user's manipulation of slider portion 223, the currently displayed sub-image object 215 is "*removed and replaced* with the next preceding or succeeding sub-image object 215," thereby flipping through each stored sub-image object 215 *one at a time*. *See* Ex. 1040, p. 23, ll. 4–7 (emphasis added), *cited at* Prelim. Resp. 49. Thus, the version of Figure 14 of Smith modified to show multiple sub-image objects 215 from Figure 7 of Salas *simultaneously* displayed on display screen 127 of Smith—allegedly characterizing the proposed modification (*see* Pet. 92)—does not accurately portray the relied-upon teachings of Salas. As discussed above, in Salas, *only one* sub-image object 215 is displayed at a time. For the reasons above, we determine, based on the current record, that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that independent claims 1, 7, and 11 would have been obvious based on Smith and Salas.

b. Claims 2, 5, 6, and 8

Claims 2, 5, and 6 depend from claim 1, and claim 8 depends from claim 7. This asserted ground as to claims 2, 5, 6, and 8 includes the same deficiency discussed in the prior section addressing independent claims 1, 7, and 11 (*see* § II.E.3.a). *See* Pet. 95–96. Thus, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to the contention that claims 2, 5, 6, and 8 would have been obvious based on Smith and Salas.

III. CONCLUSION

For the reasons above, we determine that the Petition does not show a reasonable likelihood that Petitioner would prevail with respect to at least one of challenged claims 1, 2, 5–8, and 11 of the '498 patent.

IV. ORDER

For the reasons above, it is:

ORDERED that the Petition is denied as to all challenged claims, and no *inter partes* review is instituted.

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