

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIVINT, INC.,
Petitioner,

v.

SB IP HOLDINGS LLC,
Patent Owner.

IPR2022-00810
Patent 8,139,098 B2

Before JAMESON LEE, KARL D. EASTHOM, and
JON M. JURGOVAN, *Administrative Patent Judges*.

EASTHOM, *Administrative Patent Judge*.

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

I. INTRODUCTION

Vivint, Inc., Petitioner, filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–10 and 13–21 (“challenged claims”) of U.S. Patent No. 8,139,098 B2 (Ex. 1001, the “’098 patent”). Pet. 6. SB IP Holdings LLC, Patent Owner, did not file a preliminary response.

After the Institution Decision (Paper 7, “Inst. Dec.”), Patent Owner filed a Response (Paper 10, “PO Resp.”), and Petitioner filed a Reply (Paper 12). Patent Owner did not file a sur-reply. Neither party requested an oral argument. *See* Paper 14. For the reasons set forth in this Final Written Decision pursuant to 35 U.S.C. § 318(a), we determine that Petitioner demonstrates by a preponderance of evidence that the challenged claims are unpatentable.

II. BACKGROUND

A. *Real Parties in Interest*

The parties identify themselves as real parties in interest. Pet. 1; Paper 4, 1. Petitioner also states that it “is an indirect subsidiary of Vivint Smart Home, Inc., which is merely a holding company.” Pet. 1.

B. *Related Matters*

The parties identify the following proceedings as related matters involving the ’098 patent: *SB IP Holdings LLC v. Vivint Smart Home, Inc.*, No., 4:21-cv-00912 (E.D. Tex.); *Vivint, Inc. v. SBIP Holdings, LLC.*, No. 8:22-cv-00034 (C.D. Cal.) (declaratory judgment action without invalidity assertion). *See* Paper 4, 1–2; Pet. 1–2.

Patent Owner identifies the following *inter partes* reviews as involving related patents challenged by Petitioner: IPR2022-00811, IPR2022-00812, IPR2022-00813, and IPR2022-00814. Paper 4, 1.

C. The '098 Patent

The '098 patent relates to using an exterior video camera, microphone, and speaker in “a door answering system for receiving a person at a home or office . . . capable of controlling access to the home or office.”

Ex. 1001, 6:43–45. Figure 1 follows:

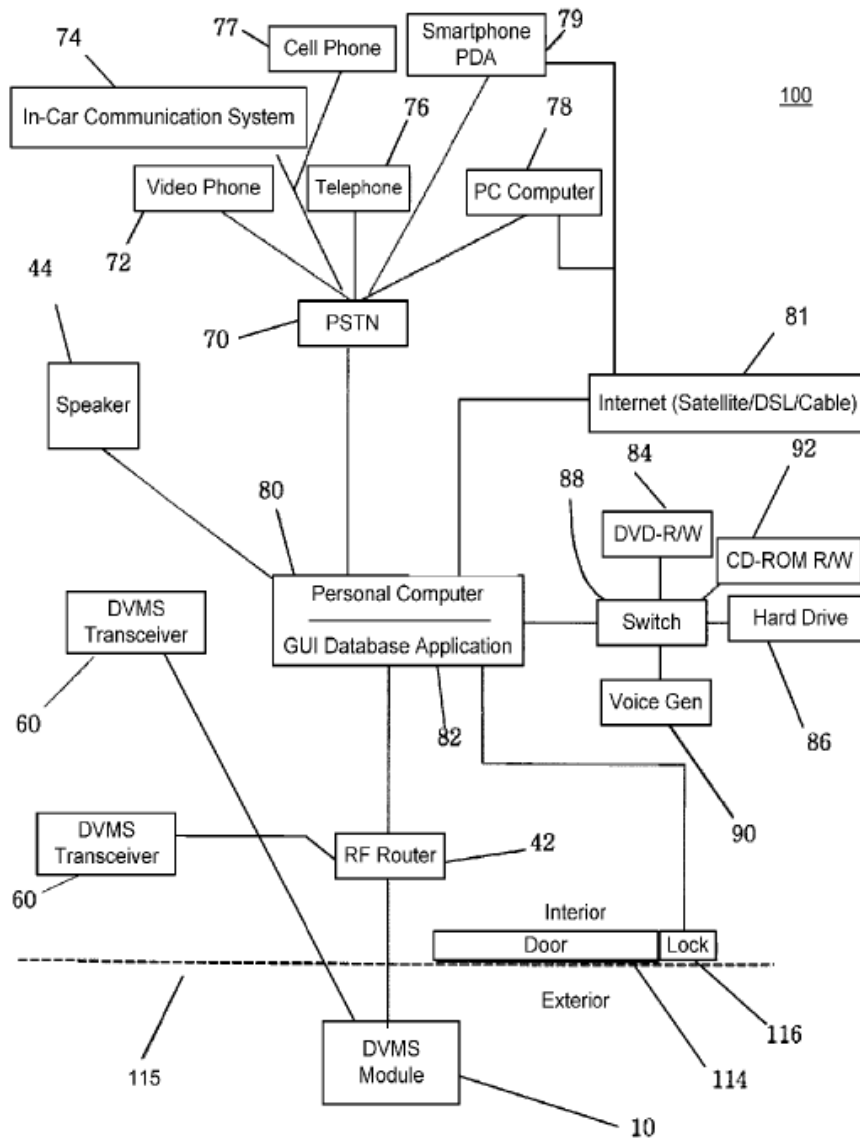


FIG. 1

Figure 1 depicts system 100 with Module 10 that includes a video camera, proximity sensor, speakers, and microphone, for receiving and

detecting visitors at an exterior wall 115 of a home or office, proximate to door 114 with lock 116, and connected to personal computer 82 for viewing the video of visitors and transferring same, along with voice communications, to remote peripheral devices 72, 74, 76, 77, 78, 79. *See* Ex. 1001, 6:40–50, 7:60–65, 8:61–9:3. “The proximity sensor 26 activates the camera 22 upon detection of movement, which in turn relays an image or streaming video to the personal computer 80[,] where it is saved by the personal computer 80 in a database in association with a timestamp.” *Id.* at 7:60–64.

A disclosed method involves detecting the presence of a person at an entrance to a building, recording the person with a video camera, transmitting the video to a computer, and providing a graphical user interface (GUI) to a peripheral remote device where a user is able to view the video. *See id.* at code (57).

D. Illustrative Claim

Independent claim 1, the sole independent claim, follows:

1. A method for receiving a person at an entrance, comprising the steps of:
 - (a) detecting the presence of a person at the entrance;
 - (b) transmitting, to a computerized controller running a software application, video of the person at the entrance recorded using a camera located proximate the entrance; and
 - (c) providing, with the application software running at the computerized controller, a graphic user interface to a remote

peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance.

E. Asserted Grounds of Unpatentability

Petitioner contends that claims 1–10 and 13–21 are unpatentable as follows:¹

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 3–6, 13, 15, 17, 18, 20, 21	102 (a, b)	Vaios ²
1, 3–6, 13–18, 20, 21	103(a)	Vaios, Menard ³
2	103(a)	Vaios, Menard, Olson, ⁴ Klein ⁵
7–10	103(a)	Vaios, Menard, Knudson, ⁶ Jacob ⁷
19	103(a)	Vaios, Menard, Courtney ⁸
1–6, 15, 17, 21	102(e)	Klein ⁹

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’098 patent’s effective filing date is before the March 16, 2013 effective date of the applicable AIA amendment, the pre-AIA versions of §§ 102, 103 apply.

² U.S. Patent No. 6,271,752 B1, issued Aug. 7, 2001 (Ex. 1003).

³ PCT Pub. No. WO 01/093230 A1, published Dec. 6, 2001 (Ex. 1004).

⁴ U.S. Patent No. 7,023,469 B1, published Apr. 4, 2006, filed Apr. 15, 1999 (Ex. 1015).

⁵ U.S. Pub. No. 2004/0080615 A1, published Apr. 29, 2004, filed Aug. 21, 2003 (Ex. 1006).

⁶ U.S. Pub. No. 2003/0167176 A1, published Sept. 4, 2003, filed Mar. 22, 2001 (Ex. 1022).

⁷ U.S. Patent No. 5,781,108, issued July 14, 1998 (Ex. 1023).

⁸ U.S. Patent No. 6,385,772 B1, issued May 7, 2002 (Ex. 1010).

⁹ U.S. Pub. No. 2004/0080615, published Apr. 29, 2004, filed Aug. 21, 2003 (Ex. 1006).

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–6, 15, 17, 21	103(a)	Klein
13, 14, 16, 21	103(a)	Klein, Menard
7–10	103(a)	Klein, Knudson, Jacob
18–20	103(a)	Klein, Courtney
1, 3–6, 17–21	102(e)	Naidoo-068 ¹⁰
1, 3–6, 17–21	103(a)	Naidoo-068, Vaios
2	103(a)	Naidoo-068, Olson, Klein
7–9	103(a)	Naidoo-068, Vaios, Knudson
10	103(a)	Naidoo-068, Vaios, Knudson, Jacob
13–16	103(a)	Naidoo-068, Vaios, Naidoo-091 ¹¹

Petitioner supports its Petition with the Declaration of Dr. Bertrand Hochwald. Ex. 1002. Patent Owner has not submitted declaration testimony of any technical expert.

III. ANALYSIS OF THE GROUNDS

A. Legal Standards

Anticipation under 35 U.S.C. § 102 requires finding each and every element in a claim, arranged as recited in the claim, in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed.

¹⁰ U.S. Patent No. 8,520,068 B2, issued Aug. 27, 2013, filed Sept. 18, 2001, (Ex. 1007).

¹¹ U.S. Patent No. 6,658,091 B1, issued Dec. 2, 2003, filed Feb. 1, 2002 (Ex. 1005).

Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). The anticipation inquiry accounts for the literal teachings of the prior art reference, and the inferences the ordinarily skilled person draws from it. *Eli Lilly & Co. v. Los Angeles Biomedical Res. Inst. at Harbor-UCLA Med. Ctr.*, 849 F.3d 1073, 1074–75 (Fed. Cir. 2017); *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1368 (Fed. Cir. 2003); *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991). “[T]he reference need not satisfy an *ipsissimis verbis* test.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *In re Bond*, 910 F.2d 831, 832–33 (Fed. Cir. 1990)).

Obviousness under 35 U.S.C. § 103(a)

forbids issuance of a patent when “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 at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007). “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 50–51 (1966)). The question of obviousness involves resolving 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 if asserted (not here), (4) objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Determining whether an invention would have been obvious under 35 U.S.C. § 103 requires resolving the level of ordinary skill in the pertinent art at the time of the effective filing date of the claimed invention. *Graham*, 383 U.S. at 17. The person of ordinary skill in the art is a hypothetical person who knows the relevant art. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors in determining the level of ordinary skill in the art include the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* One or more factors may predominate. *Id.*

Relying on the Hochwald Declaration (Ex. 1002), Petitioner contends as follows:

A person of ordinary skill in the art (“POSITA”) for the ’098 patent is generally one who has a Bachelor’s degree in computer science, electrical engineering, or a related field, with two years of experience in audio and/or video processing, networked communication systems, sensor systems, and/or remote monitoring systems.

Pet. 8 (citing Ex. 1002 ¶¶ 21–24). Patent Owner responds that “Petitioner and its expert rely on conclusory statements regarding a person of ordinary skill in the art” such that Dr. “Hochwald’s conclusory opinion should be given no weight.” PO Resp. 4–5 (citing Ex. 1002 ¶¶ 21–24).

Notwithstanding Patent Owner’s arguments, Dr. Hochwald declares that “[a]ll of the opinions contained in this declaration are based on the documents I have reviewed and my professional judgment, as well as my education, experience, and professional knowledge.” Ex. 1002 ¶ 17. Such documents include the “’098 patent (EX1001), the prosecution history of the ’098 patent (EX1017), the prior art references cited herein, and other

exhibits I have cited in this declaration.” *Id.* ¶ 18. In other words, Dr. Hochwald bases his proposed level of ordinary skill on the relevant documents.

Moreover, Patent Owner does not offer a proposed level of ordinary skill in the art or even argue that a different level would result in a different analysis by Dr. Hochwald or any other declarant. *See id.*

Based on a review of the record, we adopt Petitioner’s proposed level of ordinary skill in the art because it is consistent with the evidence of record, including the asserted prior art and ’098 patent specification. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (the applied prior art may reflect an appropriate level of skill).

C. 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) (2020). Under this standard, claim terms have 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.

Petitioner generally relies on the plain and ordinary meaning under *Phillips*. *See* Pet. 7–8. The parties disagree over whether the preamble is limiting. *Compare* PO Resp. 2–3 (arguing the preamble is limiting), *with* Reply 2–3 (arguing that “‘for receiving a person at an entrance’ clearly states an intended purpose of the invention”). As the analysis of the grounds

shows below, even if the preamble is limiting, Petitioner shows that the prior art renders the claims unpatentable.

Patent Owner also notes that “Petitioner argues that no claim constructions are required for any term,” but contends that “Petitioner . . . improperly construe[s] certain claim terms in order to argue anticipation and obviousness.” PO Resp. 4 (citing Pet. 7–8). Based on this contention, Patent Owner argues that “[t]he Board should disregard any such improper construction, particularly without the required showing of necessity.” *Id.* Patent Owner fails to point to a specific term that Patent Owner regards as including an “improper construction.” The Board determines there is none for purposes of this trial.

Patent Owner raises a claim construction issue with claim 1, step 1a, “detecting the presence of a person at the entrance.” Specifically, Patent Owner asserts that Petitioner “agrees that the plain and ordinary meaning of ‘detecting the presence of a person at the entrance’ means detecting the presence of a person before they have entered or at what the ’098 patent refers to as the ‘exterior.’” *See* PO Resp. 30 (citing Pet. 12–13; Ex. 1001, Fig. 1, 6:40–50). Patent Owner quotes the ’098 patent’s description of Figure 1 as follows: “In FIG. 1, the exterior of the home or office is differentiated from the interior by demarcation line 115, which represents a wall or other similar structure.” *Id.* (quoting Ex. 1001, 6:40–50). But Patent Owner does not specify if “before [persons] have entered” refers to entry of a home or office. *See id.* The abstract of the ’098 patent generally describes “receiving a person at an entrance” and “using a camera located proximate an entrance” without necessarily tying the entrance to a building or office. *See* Ex. 1001, code (57).

To support its claim construction, Patent Owner relies on descriptions in the '098 patent that relate to solving problems associated with receiving visitors “at a home or office” (Ex. 1001, 1:20–21 (emphasis added)), as “including” detection “at the exterior of the home or office,” where problems arise if detection occurs “after the door is open.” *See* PO Resp. 49–50 (citing Ex. 1001, 10:1–15; 1:20–47), 30–31 (citing Ex. 1001, 6:40–50, Fig. 1); Ex. 1001, 1:20–47).

In any event, even if we generally adopt what Patent Owner refers to as an agreed upon plain and ordinary meaning and construe “detecting a person at the entrance” as limited to “detecting a person at an exterior,” and further construe “exterior” as referring to the exterior of an area defined by some type of a “demarcation line” according to the '098 patent’s description of Figure 1 (*see* Ex. 1001, 6:40–50), the Petitioner persuasively shows that the prior art teaches the limitation (including when the “demarcation line” defines the exterior of a building), as discussed further below. Accordingly, it is not necessary to explicitly construe the limitation any further or to construe any other claim terms, because any construction would not impact the analysis of Petitioner’s asserted grounds. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 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))).

D. Priority Date and Prior Art

For purposes of this *inter pares* review, Petitioner asserts that the earliest effective filing date of the challenged claims of the '098 patent “might be . . . October 9, 2003,” (Pet. 6), based on the '098 patent’s

continuation-in-part status to U.S. Patent No. 7,193, 644 (application filed Oct. 9, 2003) (*id.* at 4). Petitioner asserts that the challenged claims “are not entitled to their alleged [Oct. 15,] 2002 priority date because they are not supported by Provisional Application 60/418,384” (the “’384 provisional”). Pet. 4 (citing Ex. 1021).

Petitioner points out that “[t]o benefit from an earlier application’s filing date, ‘each application in the chain leading back to the earlier application must comply with the written description requirement.’” Pet. 4 (quoting *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1571 (Fed. Cir. 1997)). In addition, “[t]he earlier application must convey to skilled artisans the subject matter later claimed.” *Id.* (citing *Martin v. Mayer*, 823 F.2d 500, 505 (Fed. Cir. 1987)).

Petitioner alleges that claim 1, step 1c, lacks written description support in the ’384 provisional. Pet. 4–5. Claim 1 is the sole independent challenged claim. Step 1c follows: “providing, with the application software running at the computerized controller, a graphic user interface [‘GUI’] to a remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance.”

According to Petitioner, the ’384 provisional does not provide support for “providing . . . a [GUI] to a remote peripheral device . . . to view the video,” because

the ’384 provisional discloses only that “computer 500 includes an operation system (OS) which provide [sic] a windowing GUI (Graphical User Interface) for receiving user commands and data,” and that the “GUI is typically provided by interaction of the application modules with a windows shell, both operating under the OS.”

Pet. 5 (quoting Ex. 1021, 14:19–20, 15:3–4).¹² According further to Petitioner, “the ’384 provisional is silent as to *a remote peripheral device being provided* the [GUI],” and “while the ’384 provisional discloses a GUI ‘for receiving user commands and data,’ at no point does it describe a GUI *for viewing a video* of a person at an entrance.” *Id.* (quoting Ex. 1021, 14:20). Petitioner also argues that “[r]egarding ‘a remote peripheral device [to] view the video,’” as step 1c requires, “while the ’384 provisional discloses conveying voice messages to the owner and various other features . . . it is silent as to any remote peripheral device presenting a video for viewing.” *Id.* at 5–6 (citing Ex. 1021, 17:1–5, 17:19–21, 18:2; Ex. 1002 ¶¶ 41–42).

In the Institution Decision, we preliminarily agreed with Petitioner and determined that that the ’384 provisional does not provide written description support for step 1c. Inst. Dec. 8–10 (finding that “the earliest effective filing date of the challenged claims of the ’098 patent is Oct. 9, 2003”). We reasoned as follows in the Institution Decision (including the footnote):

For purposes of institution on this limited record, Petitioner’s showing sufficiently shows that the ’384 provisional does not provide written description support for step 1c. In particular, on this limited record, the [’384 provisional] does not describe providing a remote peripheral device with a GUI, viewing video at a remote peripheral device, or providing a GUI while the application software runs at a computer. *See* Ex. 1021, 14–15 (describing computer 500 with a GUI), 15 (stating “peripheral devices 530 may include . . . laptop computers, cellular phones, pagers, PDAs or the like” without describing a GUI, a GUI for viewing video, or providing a GUI while the

¹² Citations refer to original page numbers of the document instead of the page numbers at the bottom of each page entered by Petitioner.

application software runs at a computer), 17 (stating generally that “the owner would use the preferred peripheral device 530[] to communicate with the computer 500,” without more).

Accordingly, for purposes of institution on this limited record, we determine that the earliest effective filing date of the challenged claims of the ’098 patent is Oct. 9, 2003.¹³

Inst. Dec. 9.

Patent Owner responds that the ’384 provisional “discloses ‘a communication link between the control computer and the remote devices’ and that the ‘peripheral devices may include, but are not limited to, **laptop computers, cellular phones, pagers, PDA’s or the like.**” PO Resp. 11 (quoting Ex. 1021, 6). Patent Owner notes that the ’384 provisional discloses that the “control computer is preferably connected to . . . an Internet service provider (ISP) for communication to the peripheral devices.” *Id.* (quoting Ex. 1021, 15). Patent Owner also notes that the ’384 provisional discloses “‘a [] camera for digitally recording an image of the moving object’ and ‘a transmitter and receiver’ to communicate with the centralized control computer.” *Id.* (alteration by Board to conform to the provisional) (quoting Ex. 1021, 7:5, 16:5). Patent Owner also contends that “the provisional discloses ‘another option[] . . . [will] be to have . . . the [exterior] monitoring [Unit 534] digitally record the visitor to the computer’s

¹³ This preliminary determination only impacts the prior art status of the U.S. Patent Application Publication to Klein (filed Aug. 21, 2006) (Ex. 1006)—i.e., prior art under 35 U.S.C. § 102(e) based on our preliminary determination. In other words, all the asserted prior art references listed in Petitioner’s grounds except Klein are prior art even if the challenged claims of the ’098 patent have an effective filing date of October 15, 2002 based on the ’384 provisional. *See* Pet. 2–3 (listing filing and/or publication dates for the asserted prior art references).

[500] memory for later review.” *Id.* at 12 (alteration by Board to conform to the provisional) (quoting Ex. 1021, 17:9–11). Patent Owner also notes “one of the objects of some embodiments of the invention: ‘to provide an improved door answering system which sensing an approaching object and digitally records the same for later viewing.’” *Id.* (quoting Ex. 1021, 9:7–8). Patent Owner contends that the provisional describes transmitting “data . . . ‘us[ing] electrical, electromagnetic or optical signals that carry digital data streams,’” for communicating “data streams” to the “remote peripheral devices.” *Id.* (alteration in original) (quoting Ex. 1021, 14:6; citing Ex. 1021, 6, 15, 20 (claim 1)).

However, Patent Owner does not point to any passage in the ’384 provisional that describes providing a GUI (graphical user interface) for viewing video at a peripheral device, which the Petition asserts, and the Institution Decision explains, is a deficiency for asserted written description and priority purposes. *See* PO Resp. 9–15; Inst. Dec. 9–12; Pet. 4–6. Patent Owner acknowledges that “Petitioner and its expert” assert that the ’384 provisional does not describe “providing . . . a graphic user interface . . . to a remote peripheral device,” or “a remote peripheral device as being capable of or actually presenting video from a video camera.” PO Resp. 14 (quoting Ex. 1002 ¶¶ 40, 42). Patent Owner describes this cited testimony of Dr. Hochwald as “conclusory,” because “the remote peripheral devices disclosed in the provisional explicitly include[s] laptops and PDAs connected to the centralized control computer via the Internet.” *Id.*

Dr. Hochwald’s testimony is not conclusory, and it is unrebutted. For example, at cited paragraph 42, Dr. Hochwald testifies that “a [person of ordinary skill in the art] would not understand any of [certain] disclosures from the ’384 provisional to describe a remote peripheral device as being

capable of or actually presenting video from a video camera for viewing by the end user.” Ex. 1002 ¶ 42. As Dr. Hochwald explains, “the ’384 provisional discloses connecting computer 500 to peripheral devices 530 and conveying voice messages to the owner, and also discloses a ‘peripheral device’ that can ‘respond with various keypad entries,’ ‘communicate with the computer,’ ‘permit access to the visitor,’ and ‘send an alarm signal.’” *Id.* (quoting Ex. 1021, 17:1–5, 19–21, 18:2).

Dr. Hochwald further explains that “[t]here is no indication or reference to any type of video that is received at and presented at a peripheral device.” *Id.* Dr. Hochwald further explains that “[t]his concept [of viewing video at a remote peripheral device] was added into the later-filed application(s) and was not present in the ’384 provisional.” *Id.* As Dr. Hochwald, testifies, “the only mention of ‘video’ in the ’384 provisional appears to be in reference the ‘exterior video monitoring terminal’ or ‘external video monitoring system,’ which a [person of ordinary skill in the art] would understand to refer to the monitoring device including the camera.” *Id.*; see Ex. 1021, 6:5 (describing an “exterior video monitoring terminal”), 7:3 (“The exterior video monitoring system generally comprises a proximity sensor . . . , a digital video camera . . . , a transmitter and receiver, and a battery.”)

The record supports Dr. Hochwald’s credible testimony. No passage in the ’384 provisional cited by Patent Owner describes receiving or viewing video at a remote peripheral device, let alone viewing it using a GUI. See PO Resp. 9–15. And even if viewing (or merely receiving) video at a remote peripheral device implicitly somehow describes providing the claimed GUI to a remote peripheral device (i.e., “providing, with the application software running at the computerized controller, a graphic user

interface [“GUI”] to a remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance”), Patent Owner does not point to anything in the ’384 provisional showing that the remote peripheral devices even receives video of the person at the entrance from the centralized control computer.

Rather, Patent Owner argues as follows:

Not only does the provisional application explicitly describe recording a visitor using a video camera and communicating that data to the centralized control computer, but the provisional further *describes communicating data* from the centralized control computer to remote peripheral devices (e.g., laptops and PDA’s) for the purpose of screening and permitting visitors from a remote location, which is furthered by viewing the recorded video camera data of the visitor.

PO Resp. 13–14 (citing Ex. 1021, Abstract) (emphasis added).

This argument, even if supported, does not contradict Petitioner’s position. Recording a visitor with a video camera, sending the video to the control computer, and then “communicating [generic] *data* to the remote peripheral devices, for the purpose of screening and permitting visitors from a remote location” (even if described), does not describe communicating *video data* to the remote peripheral devices. *See id.* (emphasis added). Even assuming for the sake of argument that claim 1 is broad enough to contemplate the mere capability of viewing the “video of the person at the entrance” at the peripheral device, merely describing the sending of generic data, without more, is not possession of the capability of sending this *specific video data* as claimed.

And even if “the purpose of screening and permitting visitors from a remote location . . . is furthered by viewing the recorded video camera data of the visitor” as Patent Owner argues, this also does not describe sending

(or the capability of sending) video data to a peripheral device. As Petitioner persuasively argues, “the provisional’s abstract makes clear that the inventors contemplated accomplishing this [avowed purpose] by communicating voice messages and/or verbal dialogue between the resident and visitor.” Reply 9 (citing Ex. 1021, Abstract); Ex. 1021, Abstract (“In addition to playing messages to and recording messages from visitors, *the system also broadcasts to the inside their responses to predetermined queries, thereby permitting a resident to screen visitors in secret.*” (emphasis added)).

Patent Owner also asserts that “[t]o satisfy their burden to show a lack of written description, Petitioner and its expert would need to demonstrate that laptops and PDAs at the time of the provisional application were **incapable** of providing a GUI to a user and presenting video from a video camera.” PO Resp. 14. Patent Owner also contends that Petitioner’s written description and priority arguments regarding the ’384 provisional “directly contradict[] their invalidity position that . . . ‘a [person of ordinary skill in the art] would understand that the local computer system 12 of Vaios provides a graphic user interface to a remote peripheral device by which a user of the remote peripheral device may view video data.’” *Id.* at 14–15 (quoting Ex. 1002 ¶ 157).

Contrary to these arguments, as Petitioner argues, Patent Owner bears the burden of production to show priority to the ’384 provisional based on Petitioner’s initial showing here. *See* Reply 16. As Petitioner also notes, “Petitioner always has the burden of persuasion.” *Id.* (citing *Dynamic Drinkware, LLC v. Nat’l Graphics Inc.*, 800 F.3d 1375, 1379–80 (Fed. Cir. 2015); *Vivint Inc. v. SB IP Holdings LLC*, IPR2022-00812, Paper 8, 14 (PTAB Nov. 2, 2022) (noting shifted burden of production). But in

satisfying its burden of persuasion, Petitioner need not necessarily show that any disclosed peripheral laptops or PDAs in the '384 provisional “were **incapable** of providing a GUI . . . and presenting video from a video camera” in the abstract. *See* Reply Br. 7–8 (quoting PO Resp. 14).

Here, to satisfy its burden of persuasion, Petitioner persuasively shows that the '384 provisional does not contemplate transmitting “video of the person at the entrance” to a “remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance,” using “a graphic user interface,” as claim step 1c requires. Disclosure in the '384 provisional of a generic laptop or other remote peripheral device that may be capable of viewing video in isolation is not possession of the claimed invention. In other words, as Petitioner persuasively shows, “[c]ommunication of actual video to the remote peripheral device was not countenanced in the provisional, and [Patent Owner] fails to identify evidence to the contrary.” *Id.* at 9. That is, as Petitioner also argues, “[w]ritten description support is not established simply by identifying peripheral devices such as PDAs and laptop[s] in the provisional and arguing that such devices were ‘capable of’ displaying video, nor by the provisional’s disclosure of ‘communications’ between the central computer and said peripheral devices.” *Id.* at 8–9 (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1331–32 (Fed. Cir. 2008)).

Under the rationale and holding of *Tech. Licensing Corp.*, even if “a person skilled in the art might conclude” that the '384 provisional’s disclosed system is capable of performing the same function of viewing the particular video at a remote peripheral device, this is not enough to show adequate written description. *See id.* at 1334 (“This evidence persuaded the trial court that a person skilled in the art might conclude that R21 and R26

[as described in the earlier-filed '323 application] would have the effect of establishing a level shifted signal [as recited in the '250 patent claims at issue], but that was all,” and that evidence is insufficient to satisfy written description for a level shifted signal), 1333–34 (“The pertinent question is not whether a person skilled in the art could look at both Figure 3 [from the earlier-filed '323 application] and Figure 16 [from the '250 patent at issue] and determine that the resistors in the former perform a similar function to the resistors in the latter. Rather, the issue is whether a person skilled in the art would understand from the earlier application alone, without consulting the new matter in the '250 patent, that the inventor had possession of the claimed ‘other circuit’ in 1992 when the '323 application was filed.”).

Even if there is a disclosure in the '384 provisional of a *system* that merely is *capable* of providing for the viewing of live streaming or recorded video at the remote peripheral device of “the person at the entrance,” this still is not sufficient written description for claim 1, step 1c. Rather, claim 1 requires “a graphic user interface” (which facilitates and controls the viewing) at “the remote peripheral device,” because it requires “providing a [GUI] to a remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance.”¹⁴ There is no disclosure in the '384 provisional for providing a GUI to a remote peripheral device. *See* Inst. Dec. 9 (indicating a lack of showing as to the claimed

¹⁴ We address GUI requirements further as argued by the parties in analyzing the grounds below.

GUI); Reply 8–9 (arguing there is no written description for claim step 1c and citing the Institution Decision).¹⁵

Accordingly, based on a review of the record and as summarized above, Petitioner shows by a preponderance of evidence that the '384 provisional does not support step 1c. Accordingly, Klein (Ex. 1006) is prior art. *See supra* note 13.

E. Hochwald Declaration (Ex. 1002)

Patent Owner argues that the “Petition[] violates 37 C.F.R. § 42.6(a)(3) by citing Dr. Hochwald’s declaration, which includes pages of arguments and evidence that are not in the Petition,” thereby avoiding the word limits of § 42.6(a)(3) by improper incorporation by reference of the testimony. PO Resp. 26. Patent Owner also argues this alleged rule violation shows that “Petitioner has not provided its obviousness analysis” such that “the Board should afford the testimony no weight” and “deny the Petition.” *Id.* at 27. To support this line of argument, Patent Owner provides a single example: “For example, Petitioner relies almost exclusively on Dr. Hochwald’s declaration for why Vaios would be obvious on its own without providing analysis in the Petition.” *Id.* (citing Pet. 15). At page 15, which Patent Owner relies upon to support its argument, the Petition states as follows: “Alternatively, as noted previously (*supra*, 10–11), it was obvious for video camera 10 to be positioned to monitor an entrance and detect an approaching person.” Pet. 15 (citing Ex. 1002 ¶ 147).

Patent Owner does not explain how this is an improper reliance “without analysis” on the Hochwald Declaration, how it is an improper

¹⁵ Based on our determination here, we need not decide if “providing, with the software running at the computerized controller, a graphic user interface,” requires providing a GUI from the recited software.

incorporation by reference, or how it fails to provide a proper obviousness analysis. The statement, by itself, includes “articulated reasoning with some rational underpinning”—articulating that positioning a video camera near an entrance to monitor the entrance allows for “detect[ing] an approaching person.” *See In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (“[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”); *KSR*, 550 U.S. at 418 (“[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does.”). There is no reasonable dispute on this record that an artisan of ordinary skill would have known that placing a video camera at a certain location provides a perspective for capturing video from that location. *See, e.g., Ex. 1006* ¶ 38 (“The user may then adjust the camera viewing angle to include areas of interest for monitoring, such as a cash register or an entry door.”).

Moreover, cited pages 10–11 of the Petition provide further analysis. *See* Pet. 15 (citing Pet. 10–11); Pet. 10–11 (providing further obviousness analysis for using Vaio’s camera at an exterior entry location). Patent Owner does not address the analysis on pages 10–11 of the Petition. For the reasons explained above, the Petition at page 15 provides persuasive articulated rationale, including its incorporation of findings and rationale from pages 10–11.

Patent Owner also argues that “the entirety of Dr. Hochwald’s declaration is an extended version of the Petition itself, full of attorney argument without more,” and lacking in “technical support or evidence.” PO Resp. 28. Patent Owner fails to provide an example to support this argument. *See id.* The Hochwald Declaration cites to or reproduces record

evidence, or provides reasoned analysis, throughout. *See, e.g.*, Ex. 1002 ¶¶ 27–38, 53–160.

Based on the foregoing discussion, there is insufficient reason on this record identified by Patent Owner to discount the weight of the Hochwald Declaration or dismiss the Petition.

F. The Grounds

1. Vaios, or Vaios and Menard

Petitioner asserts that Vaios anticipates claims 1, 3–6, 13, 15, 17, 18, 20, and 21 “under 35 U.S.C. § 102 (a) and/or § 102(b),” or alternatively, claims 1, 3–6, 13–18, 20, and 21 would have been obvious under 35 U.S.C. § 103(a) based on the combined teachings of Vaios and Menard. Pet. 8–29.¹⁶

a) Vaios

Vaios discloses a “multi-access remote system having a security surveillance area [and] a plurality of end user locations.” Ex. 1003, code (57). “The security surveillance area” includes “a local computer system, a camera with motion sensor, and a network interface. When the motion sensor detects an obstruction the camera starts recording and the local computer system notifies a remote individual” *Id.* Vaios’s “multi-access remote system” includes “viewing of . . . a house entrance.” *Id.* at 9:49–53; *see also id.* at 8:36–38, Fig. 4.

¹⁶ Although the Petition generally indicates anticipation of 1, 3–6, 13–18, 20, and 21 (Pet. 8), it is apparent that Petitioner’s specific showing relies on the combined teachings of Vaios and Menard to reach claims 14 and 16. *See* Pet. 25 (concluding that “Vaios with Menard teach Claim 14”), 26 (concluding that “Vaios with Menard teaches Claim 16”).

b) Menard

Menard “relates generally to communication and control systems, and in particular, to a wireless, modular, system suitable for . . . premises security and personal safety.” Ex. 1004, 1:6–10.

c) Claim 1

The preamble of claim 1 recites “[a] method for receiving a person at an entrance, comprising the steps of.” Petitioner asserts that the “preamble should not be limiting,” but if it is, Vaios discloses it or the combined teachings of Vaios and Menard render it obvious. Pet. 9, 9–11.

In particular, Petitioner cites Vaios’s security monitoring system as including a “‘multi-access remote system’ that can be arranged to ‘control viewing of . . . a house entrance.’” Pet. 10 (quoting Ex. 1003, 9:49–53; citing *id.* at 8:36–53, Fig. 4). Under an obviousness alternative, Petitioner contends that it would have been

obvious to position Vaios’ camera/motion sensor to receive people at an entrance in view of Vaios’ teaching that “remotely controllable cameras can be positioned at any location or scenic lookout” and listing a plethora of examples including “viewing . . . a conference room, a baby crib, a house entrance, or a computer terminal.”

Id. (quoting Ex. 1003, 9:50–61; Ex. 1002 ¶ 122). Petitioner adds that it would have been “obvious for video camera 10 to be positioned to monitor an entrance and detect an approaching person.” *Id.* at 15 (citing Ex 1002 ¶ 147).

Under another obviousness alternative, Petitioner relies on Menard’s security system, which includes an “‘exterior module 200D’ that is ‘installed at an entry door 260 of a residence’ and includes a ‘proximity detector’ comprising a ‘video camera.’” See Pet. 10 (quoting Ex. 1004,

6:14–15, 21:1–5). Petitioner explains that Menard’s “‘video camera’ detects the ‘arrival of the caller.’” *Id.* (quoting Ex. 1004, 21:13–15).

Petitioner asserts that “[a person of ordinary skill in the art] was motivated to combine Vaios and Menard to provide a simple, predictable, and effective manner for receiving persons at an entrance, establishing their motives, and providing selective access.” Pet. 11 (citing Ex. 1002 ¶¶ 127–129). Petitioner also asserts that “[t]his combination would have been achieved simply by positioning Vaios’ video cameras 10 (and corresponding equipment) proximate an entrance and utilizing the same network connections and system functions described in both Vaios and Menard to detect and receive a person at the entrance.” *Id.* (citing Ex. 1002 ¶¶ 125–126).

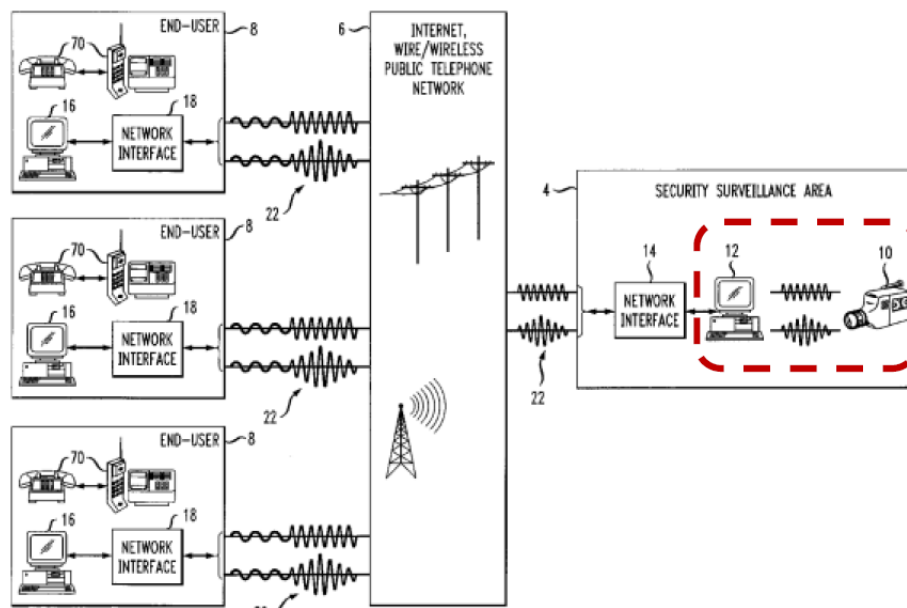
Claim step 1a recites “detecting the presence of a person at the entrance.” Petitioner relies on Vaios’s “video camera 10” as including a “motion sensor” that “detects an obstruction” to cause the camera to start recording. Pet. 12 (quoting Ex. 1003, code (57), 3:24–30). As further evidence, Petitioner relies on “Vaios’[s] disclosure that ‘a monitoring site can be created to control viewing of . . . a house entrance’ ([Ex 1003,] 9:49–53) and that the cameras provide a ‘door view’ (*id.*, 7:62–8:4).” *Id.*

Petitioner also relies on Menard’s disclosure of an “‘exterior module 200D’ that is ‘installed at an entry door 260 of a residence’ and includes a ‘video camera’ to detect the ‘arrival of the caller.’” Pet. 12–13 (quoting Ex. 1004, 6:14–15, 21:1–14); *see also* Ex. 1004, Fig 8 (depicting exterior module 200D mounted on door 260). Based on this disclosure, Petitioner alternatively contends that “it was obvious in view of Menard to position video camera 10 and its associated motion sensor to monitor a house entrance and thereby detect the presence of a person at the entrance

responsive to detecting movement of that person.” *Id.* (citing Ex. 1002 ¶ 134). Petitioner generally contends that implementing Menard’s detection teachings with Vaios’s system “provide[s] a simple, predictable, and effective manner for receiving persons at an entrance, establishing their motives, and providing selective access.” *Id.* at 11 (Ex. 1002 ¶¶ 127–129).

Step 1b recites “transmitting, to a computerized controller running a software application, video of the person at the entrance recorded using a camera located proximate the entrance.”

To address this limitation, Petitioner annotates Vaios’s Figure 1, as follows:



Petitioner annotates Vaios’s Figure 1 with red-dashed lines as illustrated above to highlight how step 1b reads on local computer system 12 and camera 10. *See* Pet. 14. Petitioner explains that “[l]ocal computer system 12 is a ‘computerized controller running a software application.’” *Id.* at 14 (citing Ex. 1002 ¶¶ 141–142). Petitioner quotes Vaios as follows: “[L]ocal computer system 12 includes various components, among them . . . are fixed storage means 109, and operating system software 111 to provide

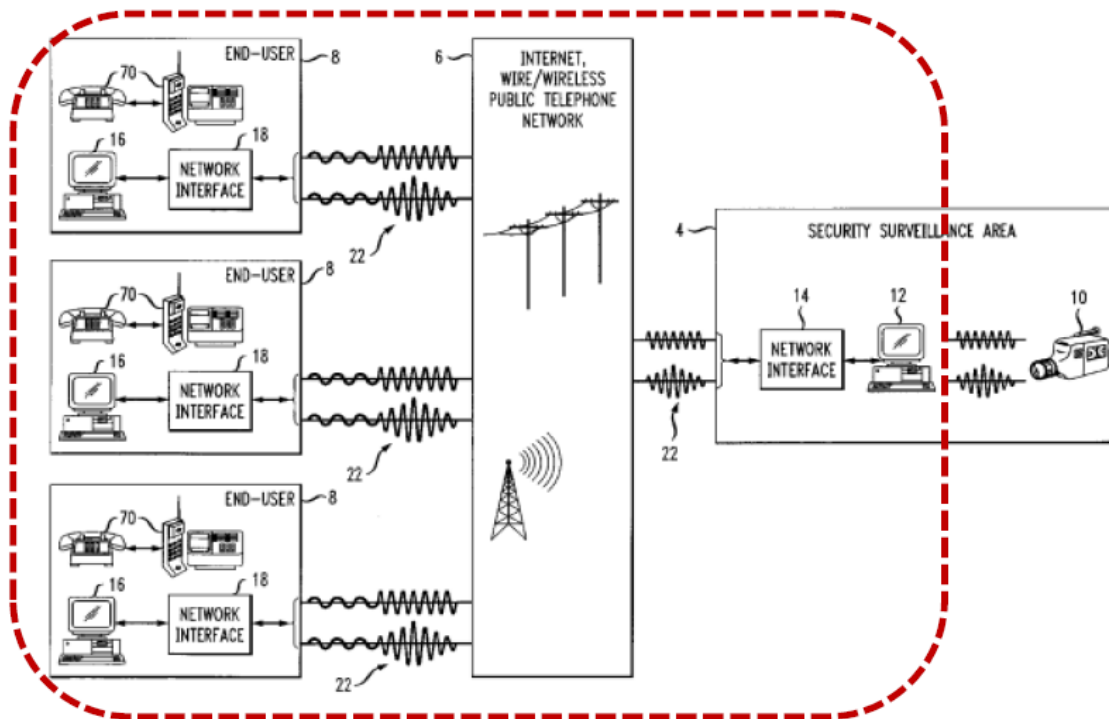
basic resource allocation and computational mechanisms.” *Id.* (alteration in original) (quoting Ex. 1003, 3:37–41). Petitioner notes that “Vaio[s]” claims likewise refer to the ‘local computer system’ as a ‘controller module.’” *Id.* (quoting Ex. 1003, claim 1). “The local computer system . . . comprises application software 136 to handle customized tasks unique to each embodiment of the multi-access system, and browser software 138 for display control and management.” *Id.* at 14–15 (quoting Ex. 1003, 3:65–4:1).

Noting that Vaio locates video camera 10 proximate an entrance to monitor it based in its showing as summarized above in connection with the preamble and limitation 1(a), Petitioner further notes that Vaio states that “[l]ocal computer system 12 is coupled via a camera adapter 116 (FIG. 2) to video camera 10 so that video, sound, and motion sensor data can be transmitted from the camera to the local computer system.” Pet. 15 (alterations in original) (quoting Ex. 1003, 3:27–32; citing Ex. 1002 ¶¶ 143–146); Ex 1003, 8:1–4 (“window view” and “door view”), 9:51–53 (“monitoring . . . to control viewing of . . . a house entrance”).

Petitioner alternatively cites its previous obvious rationale for the related recitations in the preamble and step 1a (citing Pet. 10–11), and summarizes by asserting that “it was obvious for video camera 10 to be positioned to monitor an entrance and detect an approaching person.” Pet. 15 (citing Ex. 1002 ¶ 147). “Upon detection of motion caused by the person, video camera 10 would transmit video of the person to the local computer system as described in Vaio, thereby satisfying this limitation.” *Id.*

Step 1c recites “providing, with the application software running at the computerized controller, a graphic user interface to a remote peripheral

device by which a user of the remote peripheral device may view the video of the person at the entrance.” To address this limitation, Petitioner annotates Vaios’s Figure 1, as follows:



Petitioner annotates Vaios’s Figure 1 with red-dashed lines as illustrated above to highlight how step 1c reads on Vaios’s remote peripheral devices, including “remote computer system 16” and/or “communicative devices 20,” such as “telephone, beeper, fax, e-mail, or wireless device,” associated with “end user locations 8”) that are communicatively coupled to “local computer system 12” across “network interface 14” and “communications network 6.” Pet. 16 & n.2 (noting that Figure 1 erroneously specifies numeral “70” instead of “20”).

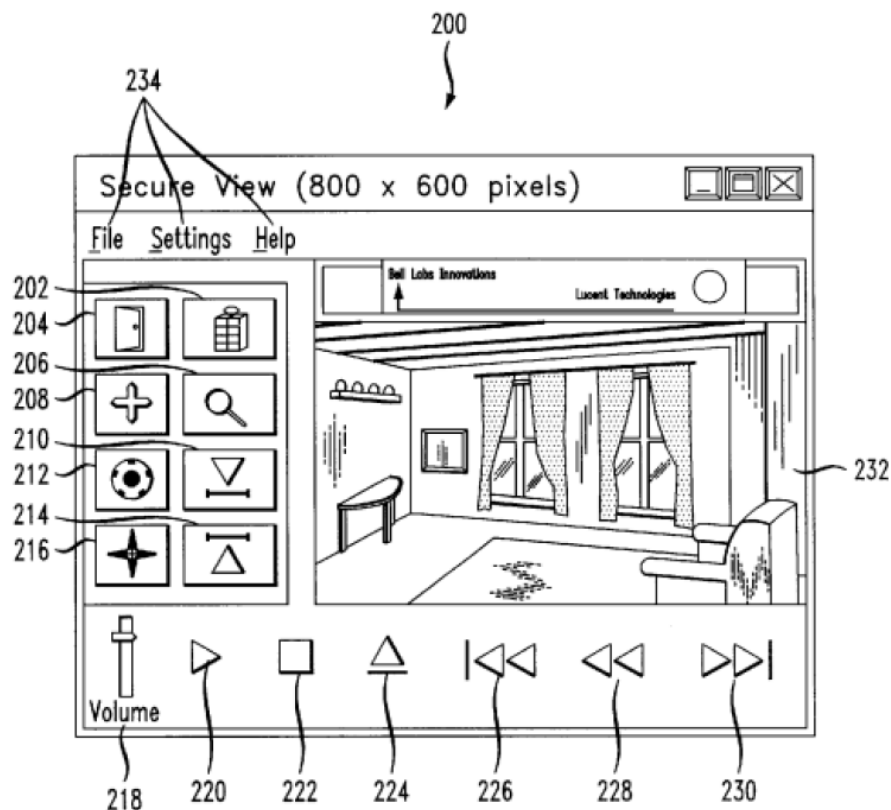
Addressing step 1c’s “providing a . . . [GUI],” Petitioner relies on Vaios’s statement that ““local computer system 12’ includes an ‘[i]nterface layer 102 [that] comprises high-level end-user software, such as browser and

application software’ and ‘acts as a display interface for the remote user.’”

Pet. 17 (alterations in original) (quoting Ex. 1003, 5:22–23, 6:35–40).

Petitioner also notes that “Vaios’[s] claim 1 further recites a ‘user interface unit . . . for providing visual display to . . . said users.’” *Id.* (quoting Ex. 1003, 10:34–38).

Further addressing the claimed GUI, Petitioner reproduces Vaios’s Figure 3, which follows:



According to Petitioner, “Figure 3 of Vaios [above] depicts an example user interface provided via ‘application specific Internet browser 200.’” Pet. 18. Vaios describes Figure 3 and the relied-upon Internet browser as follows: “A popular user interface used with the Internet is a browser software. . . . According to one embodiment of the present invention, the interface layer may preferably include an application specific Internet browser 200 (FIG. 3) as a controller module for visual interface

communication between the end-user locations and the surveillance area.”
Ex. 1003, 7:39–48. Vaios further describes Figure 3 as “show[ing] the display screen of browser 200, *as would be seen on an output device*, such as a computer monitor, configured according to an application of one embodiment of the invention.” *Id.* at 7:51–54.

Petitioner adds that “Vaios also discloses that ‘the remote individual can . . . communicate with the local computer system *Employing the browser software . . . , the remote individual can . . . retrieve additional video.*’” Pet 17 (emphasis added) (quoting Ex. 1003, 8:65–9:5). In addition, Vaios’s “local computer system . . . transmits [video] to the remote user who subsequently plays the downloaded image.” *Id.* (quoting Ex. 1003, 2:35–38). Based on these disclosures and others, Petitioner submits that “[t]his video is presented on such remote peripheral devices via a graphical user interface provided by application software running at local computer system 12.” *Id.* (citing Ex. 1002 ¶¶ 154–158). At cited paragraph 156, Dr. Hochwald quotes Vaios as follows:

The “application specific Internet browser 200” acts as “a controller module for visual interface communication between the end-user locations and the surveillance area. Through the use of plugins, APIs, and hypertext transport protocol (HTTP), browser 200 can incorporate application specific functions such as video display, and remote operation of video camera 10.”

Ex. 1002 ¶ 156. Dr. Hochwald also explains that Vaios’s claim 10 “further demonstrate[s] that the end user accesses audio-video data using a graphical user interface presented by the devices of the end user,” because Vaios’s claim 10 recites “said controller module further comprises a browser software for *interfacing said controller module with an end-user at said end-*

user location, said browser software further providing, said user interface.”
Id. ¶ 157 (emphasis added).

Patent Owner argues that Petitioner fails to show how Vaios “describes ‘receiving a person at an entrance,’” as recited in the preamble, which recites “[a] method for receiving a person at an entrance.” PO Resp. 29. According to Patent Owner, Vaios describes a “‘surveillance system’ . . . that can detect an ‘intruder,’” but in “contrast, the ’098 patent describes [and claims] . . . ‘receiving visitors’ such as a ‘delivery or repair person.’” PO Resp. 30 (quoting Ex. 1001, 1:20–47).

As Petitioner persuasively argues, however, “[t]he identity or intent of a person is irrelevant to whether the system ‘receives’ them,” and the ’098 patent “acknowledges that ‘[s]ome visitors may be unwelcome’ and a ‘threat.’” Reply 14 (quoting Ex. 1001, 1:31–34). As Petitioner also persuasively argues, “in operation, both Vaios’ and the ’098 [p]atent’s systems would similarly receive both ‘intruders’ as well as ‘delivery’ and ‘repair persons.’” *Id.* As discussed further below in relation to detecting step 1a, Petitioner persuasively shows that Vaios also discloses monitoring a house entrance, which also satisfies the preamble (even if it is limiting). *See* Pet. 10 (arguing that “Vaios’ system performs the claimed ‘method for receiving a person at an entrance’ when implemented to control viewing of a house entrance as contemplated therein” (citing Ex. 1003, 8:36–38, 9:49–59, Fig. 4; Ex. 1002 ¶ 121)).

Turning to related step 1a, Patent Owner argues that Vaios does not describe “detecting the presence of a person at the entrance.” PO Resp. 30. Patent Owner explains that Petitioner “focuses only on the camera purportedly being placeable at the entrance *or at the exterior* but ignores that Vaios discloses the local computer system also must be included in Vaios’

security surveillance system.” *Id.* at 32 (emphasis added) (citing Pet. 12). Patent Owner further explains that Vaios’s local computer includes browser 133 that “allows the user to view the video, but it would not make sense for the user to view the video on a browser located at the entrance or the exterior, and Vivint does not attempt to explain otherwise.” *Id.* (citing Ex. 1003, Figs. 2, 3). Patent Owner also contends that claim step 1b, which recites, that the “camera is located proximate the entrance,” “distinguishes between the location of the camera and the computerized controller,” which Figure 1 of the ’098 patent further supports. *Id.*

These arguments do not meaningfully relate to claim 1 or Petitioner’s showing. As Petitioner argues, step 1a does not require a “specific location for the local computer system,” because “it merely requires that the ‘*person* [be] at the entrance.’” Reply 15. Similar remarks apply to claim step 1b because it does not quantify “proximate” or specify a location for the recited computerized controller. In summary, contrary to Patent Owner’s arguments, claim 1 does not specify a location for the recited computerized controller relative to the recited camera.

Similarly, Vaios’s security surveillance area 4 is not a single room or even a single building. *See* Ex. 1003, Fig. 1, code (57), 1:27–28 (describing prior art video surveillance technologies wherein “one security guard can even monitor multiple buildings”). Vaios generally describes “local computer system 12 . . . coupled . . . to a video camera having a motion sensor” for transmitting “video, sound, and motion sensor data . . . from the camera to the local computer system,” without a specified limit on the coupling/transmitting distance within security surveillance area 4. *See* Ex. 1003, 3:24–30, Fig. 1; Pet. 14–15 (quoting Ex. 1003, 3:27–32 and describing Fig. 2). And as Petitioner argues and as discussed further below, “Vaios

explicitly contemplates” exterior “views and camera placements.” Reply 15–16 (citing Ex. 1003, 7:62–8:12, 9:31–35, 9:59–60).

Patent Owner also argues that Vaios describes a camera that provides “window view 202,” and “door view 204,” so “video camera 10 as disclosed in Vaios cannot be at the entrance or at the exterior as claimed,” because “the same camera could not provide both a window view and a door view, as disclosed and as shown in Fig. 3.” PO Resp. 34–35 (citing Ex. 1003, Fig. 3, 7:62–8:12); *see supra* (reproducing Vaios’s Fig. 3). Although Patent Owner concedes that Vaios describes “monitoring a ‘house entrance,’” Patent Owner argues this disclosure relates to a “completely different and distinct alternative embodiment than what [Petitioner] is relying on.” *Id.* at 35. Patent Owner also argues that “[b]y relying on Vaios’ reference to monitoring a house entrance, [Petitioner] is trying to combine distinct embodiments to show anticipation. And [Petitioner] is doing so without even trying to show the two embodiments can be combined or that a [person of ordinary skill in the art] would know they could be combined.” *Id.*

With regard to Vaios’s specific teaching of a “house entrance” for monitoring, Petitioner persuasively explains that “it is just one of many locations that Vaios discloses for using its monitoring system (i.e., the same system described in Figs. 1–4 and the accompanying text of the specification)” and these different explanations for monitoring “any location” “are not mutually exclusive embodiments.” Reply 16–17 (citing Ex. 1002 ¶¶ 132–133; Ex. 1003, 9:49–64). As the Petition states, “Vaios’ ‘multi-access remote system’ can be arranged to ‘control viewing of . . . a house entrance.’” Pet. 10 (quoting Ex. 1003, 9:49–53; citing Ex. 1003, 8:36–38, Fig. 4; Ex. 1002 ¶ 121). (As also noted above in connection with the preamble, the Petition also explains that “Vaios’ system performs the

claimed ‘method for receiving a person at an entrance’ when implemented to control viewing of a house entrance as contemplated therein.” *Id.*)

The record supports Petitioner’s persuasive showing that Vaios contemplates employing its “remote system” to monitor “any location,” including a “house entrance” within security surveillance area 4. *See* Ex. 1003, 9:49–53, Fig. 1. As Petitioner argues, Vaios contemplates using the camera at a house entrance using the same system it uses to monitor an entry door and windows such that Petitioner is not relying on diverse embodiments. Reply 16 (citing Ex. 1003, 7:62–8:12, 9:31–35, 9:59–60); Pet. 10, 13; Ex. 10002 ¶ 110.

Moreover, Patent Owner does not provide a citation to Vaios supporting its argument that Vaios’s disclosure of different camera views relate to distinct embodiments in Vaios. *See* PO Resp. 35 (citing nothing in Vaios). At column 9, which Petitioner cites for “monitoring . . . a house entrance (Pet. 12 (citing Ex. 1003, 9:49–53)), Vaios describes “alternative embodiments” in which “*the multi-access remote system can be configured to function other than as a security surveillance area*”—indicating that Vaios contemplates that the previously described “multi-access remote system” of the embodiment(s) of Figures 1–4 (which Petitioner relies upon) retains its described function as a security surveillance area—even with the added features of the “alternative embodiments.” *See* Ex. 1003, 9:49–51 (emphasis added). As an example, Vaios describes an alternative embodiment’s feature “where a person may be called to control a video camera” including at a “house entrance” using “the multi-access remote system,” which refers to the same “multi-access remote security system” that pertains to Figures 1–4 (upon which Petitioner generally relies). *See* Pet. 9–19 (reproducing Figs. 1, 3); Ex. 1003, 9:49–57, 2:66 (“FIG. 1 illustrates the

end-to-end architecture of the multi-access remote system according to one embodiment of the present invention”), 3:8–9 (describing “the multi-access remote system” with respect to Figure 4’s flow diagram), 7:8–42 (describing Figure 2’s interface layer and Figure 3’s browser and application system as “integrated with the system of this invention”), 7:39–8:35 (generally describing using browser icons as illustrated in Figure 3 for use in a security surveillance application which “may be modified as needed for other embodiments”).

Moreover, notwithstanding Patent Owner’s discussion of Vaio’s “window view 202” and “door view 204” of Figure 3 as indicating a failure to satisfy limitation 1a because the “same camera could not provide both a window view and a door view” (PO Resp. 34–35), an artisan of ordinary skill reasonably would have recognized that these separate views necessarily individually include capturing video of moving visitors outside the window or open (or glass) door.¹⁷ See Ex. 1003, 3:23–30 (describing video camera

¹⁷ An entry door necessarily opens or closes, and an artisan of ordinary skill would have immediately envisioned that the limited genus of doors includes the prominent example of a glass door (especially for an office building). See Ex. 1003, 1:23–26 (“Businesses can now successfully monitor an entire building using only one security guard.”); *Bristol-Myers Squibb Co. v. Ben Venue Labs, Inc.*, 246 F. 3d 1368, 1380 (Fed. Cir. 2001) (“[T]he disclosure of a small genus may anticipate the species of that genus even if the species are not themselves recited.”)); *VirnetX Inc. v. Apple Inc.*, 665 F. App’x 880, 888 (Fed. Cir. 2016) (“Substantial evidence supports the PTAB’s finding that Wesinger’s disclosure of the genus ‘computer’ encompasses the ‘notebook computer’ species.”); *In re Preda*, 401 F.2d 825, 826 (CCPA 1968) (“[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.”).

with a motion sensor), 8:1–15 (discussing door and window view icons), Fig. 4 (steps 304, 306, video camera starts capturing a moving object based on a motion sensor).

An “entrance” as claimed includes a window (or an open or glass door) in the context of the claimed invention, because although the ’098 patent describes separate goals, one goal is preventing “unwelcome” visitors from gaining access through an entrance, and another is leaving a message for visitors such as delivery persons. *See* PO Resp. 50 (citing Ex. 1001, 10:1–15, 20–47); Ex. 1001, 1:20–47 (describing a need to improve prior art methods for receiving visitors). Although the ’098 patent describes a problem with prior art systems as providing for the discovery of a threat by “unwelcome visitors” “after a door is open,” the challenged claims do not require a door for an “entrance” and do not preclude detection of a person at an entrance through a window or an open door. *See* Ex. 1001, 1:20–34.

In any event, as Petitioner also persuasively argues, “Vaios further indicates that its system may include ‘multiple cameras or multiple surveillance areas’ and contemplates exterior placement of cameras—‘cameras can be positioned at any location or scenic lookout.’” Reply 16 (quoting Ex. 1003, 9:31–35, 9:59–60). In context, Vaio states that “the present invention is not limited to the embodiments as described hereinabove,” and two sentences later describes using “multiple cameras or multiple surveillance areas.” Ex. 1003, 9:27–32. And Vaio states at the outset, that even in prior art systems that use video surveillance, “[b]usinesses can now successfully monitor an entire building using only one security guard.” *Id.* at 1:23–26. Therefore, Vaio supports Petitioner’s showing that Vaio discloses placing cameras (with motion sensors) exterior to an entrance *or anywhere within a security surveillance area* for its

disclosed invention (which may include multiple buildings as discussed above), including at the exterior of any door in that area.

In other words, as Petitioner persuasively shows, Vaios discloses the disputed preamble and step 1a. Petitioner also persuasively shows that Vaios, either with or without Menard, renders the recitations obvious. Notwithstanding Patent Owner's arguments regarding the sufficiency of Petitioner's obviousness rationale (PO Resp. 36, 40–46), as Petitioner also persuasively argues, it would have been “obvious for video camera 10 to be positioned to monitor an entrance” in order to “detect an approaching person.” Pet. 15 (citing Ex. 1002 ¶ 147). Petitioner relies on Vaios's teaching that “[l]ocal computer system 12 is coupled via a camera adapter 116 (FIG. 2) to video camera 10 so that video, sound, and motion sensor data can be transmitted from the camera to the local computer system.” *Id.* (quoting Ex. 1003, 3:27–32). Petitioner also contends that “it was obvious to position Vaios' camera/motion sensor to receive people at an entrance in view of Vaios' teaching that ‘remotely controllable cameras can be positioned at any location or scenic lookout’ and listing a plethora of examples including ‘viewing . . . a conference room, a baby crib, a house entrance, or a computer terminal.’” *Id.* at 10 (quoting Ex. 1003, 9:50–61).

For these reasons and for the reasons as discussed further below, the record does not support Patent Owner's arguments that “there is no explanation provided for how to adapt Vaios' to implement Menard's ‘suggestion’” and that Petitioner's obviousness showing is conclusory. *See* PO Resp. 36. It also does not support Patent Owner's similar arguments, including that the combination destroys “many key features and the very operation of Vaios” and Petitioner's showing is on “an improper reliance on hindsight.” *Id.* at 41, 42; *see also id.* 40–46 (alleging improper hindsight

based, *inter alia*, on an alleged improper incorporation by reference of Dr. Hochwald's testimony, and alleged conclusory, formulaic statements in the Petition and testimony).¹⁸

Patent Owner does not state what key features or operation the combination of Vaios and Menard destroys. *See* PO Resp. 41 (listing purported "inside-the-residence" features without further explanation but which relates to Patent Owner's similar argument addressed above). In any event, as Petitioner argues, "the Petition combined with Dr. Hochwald's testimony provide[s] the required 'reasoning' with 'rational underpinning' for justifying the combination of Vaios and Menard." Reply 20. The Petition explains that it would have been "obvious to use Vaios' video camera 10 and associated motion sensor to detect the presence of a person at the entrance in a similar manner as taught in Menard." *See* Pet. 12–13 (explaining that "Menard discloses an 'exterior module 200D' that is 'installed at an entry door 260 of a residence' and includes a "video camera" to detect the 'arrival of the caller' (quoting Ex. 1004, 6:14–15, 21:2–15)). Placing familiar camera and motion detector items in similar locations "amounts to the combination of known elements performing their routine, expected functions is merely a straightforward application of Vaios' system given Menard's suggestion to detect the arrival of a caller using a video camera/motion sensor," as Petitioner argues. *Id.* at 13. Petitioner explains "how" to combine the references teachings further: "This combination would have been achieved simply by positioning Vaios' video cameras 10

¹⁸ Above, we address arguments directed to an alleged improper incorporation by reference and alleged lack of support for Dr. Hochwald's testimony and similar arguments. *See supra* § III.E (addressing Patent Owner's arguments at pages 26–27 of the Response).

(and corresponding equipment) proximate an entrance and utilizing the same network connections and system functions described in both Vaios and Menard to detect and receive a person at the entrance.” *Id.* at 11. Petitioner also explains “why” to combine the references teachings: To “provide a simple, predictable, and effective manner for receiving persons at an entrance, establishing their motives, and providing selective access.” Reply 20 (quoting Pet. 11); Pet. 11 (citing Ex. 1002 ¶¶ 119–130).

Based on the discussion and findings above, Petitioner shows that Menard and Vaios address the same problem of detecting and receiving a person at an entrance using similar techniques and devices. *See* Pet. 9–11, 13; *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380–81 (Fed. Cir. 2023) (“That [two prior art references,] Kabemoto and Baumam[,] address the same problem and that Bauman’s cache was a known way to address that problem is precisely the reason that there’s a motivation to combine under *KSR* and our precedent.”). In addition, based on Menard’s manner of receiving a person at an entrance using exterior module 200D (with video camera/motion sensor) installed exterior to a residence at entry door 260 (Ex. 1004, Figs. 7, 8) to detect the arrival of a caller and provide selective access (Pet. 12–13 (citing Ex. 1004, 6:14–15, 21:2–15)), a skilled artisan would have recognized that it would improve Vaios’s similar system or device in the same way (by installing Vaios’s camera and motion detector exterior to an entry door as Menard teaches as a “suitable option”), “using the prior art elements according to their established functions.” *See Intel Corp.*, 61 F.4th at 1380–81 (reversing Board’s finding of no motivation to combine where the references addressed the same cache-coherency issue and one reference provided a “suitable option” even in the absence of an “‘improvement’ in a categorical sense”). As Petitioner argues, Patent Owner “ignores the reasoning” (e.g., including

the benefit of providing for selective access and entry) as outlined in the Petition. Reply 20.

Moreover, to an artisan of ordinary skill, using a video camera at a different location to provide a different perspective for video capture is using that “item[]” for its “primary purpose[]”—i.e., an “obvious use[]”—given that a “familiar item” used “beyond the[] primary purpose[]” “may” indicate an “obvious use[.]” *See id.* at 420 (“Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” (emphasis added)). “A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *Id.* at 421.¹⁹

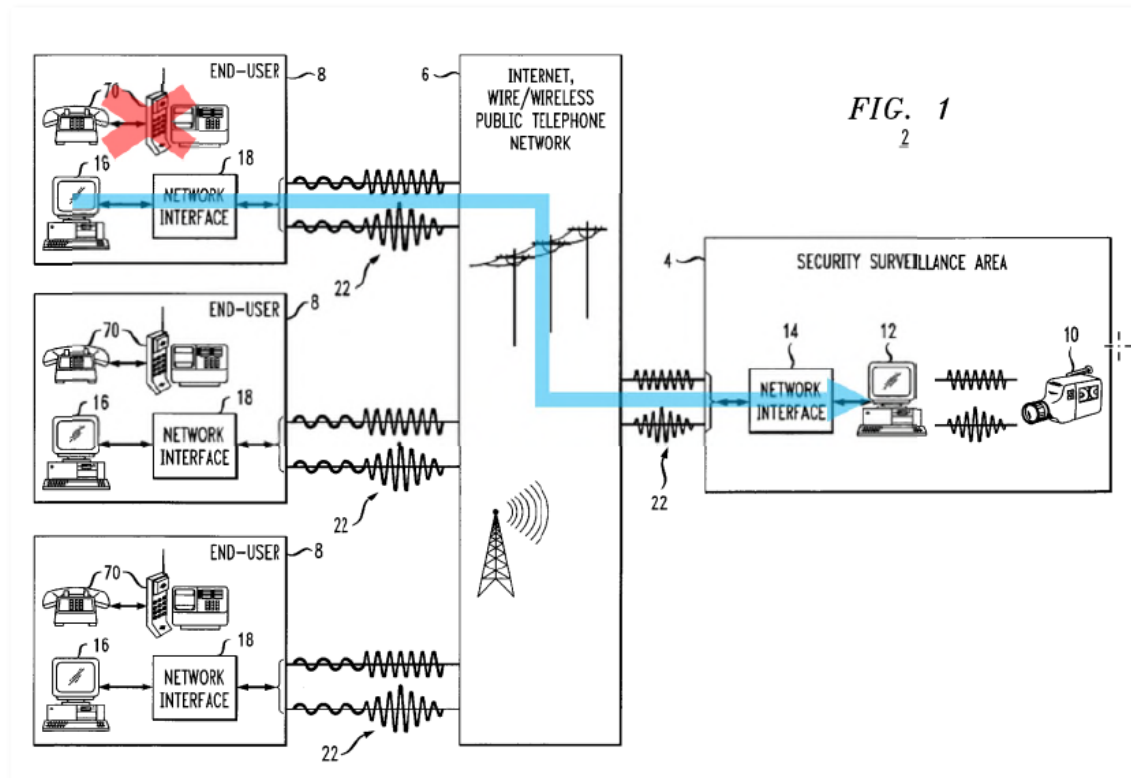
Turning to step 1b, Patent Owner also argues that Vaios does not disclose “transmitting, to a computerized controller running a software application, video of the person at the entrance recorded using a camera located proximate the entrance.” PO Resp. 37. Patent Owner is not specific, but appears to rely on its claim construction argument addressed

¹⁹ This “familiar item” rationale under *KSR*, and the “suitable option” rationale under *Intel Corp.* as discussed above, both apply to combining allegedly distinct embodiments in Vaios (i.e., even if they are distinct embodiments), which results in moving the video camera’s location or employing multiple cameras in Vaios, in order to use the camera for its intended purpose of capturing video at a desired location, because Vaios uses the same video camera and system across its embodiments, as discussed above. *See* Pet. 10 (arguing “it would have been obvious to position Vaios’ camera/motion sensor to receive people at an entrance in view of Vaios’ teaching that ‘remotely controllable cameras can be positioned at any location or scenic lookout’ and listing a plethora of examples including ‘viewing . . . a conference room, a baby crib, a house entrance, or a computer terminal’” (quoting Ex. 1003, 9:50–61; citing Ex. 1002 ¶ 122)).

above with respect to step 1a, arguing that Vaios does not disclose providing video of “the person *at the entrance*.” *See id.* However, for the reasons outlined above, Vaios discloses or renders obvious using a camera located proximate an entrance and detecting and recording moving persons exterior thereto. Regarding obviousness, as Petitioner shows, “using a camera located proximate the entrance” would have “provide[d] a simple, predictable, and effective manner for receiving persons at an entrance, establishing their motives, and providing selective access” with a reasonable expectation of success. *See* Reply 20 (quoting Pet. 11); Pet. 11 (citing Ex. 1002 ¶¶ 125–126).

Turning to step 1c, Patent Owner also argues that Vaios does not disclose “providing, with the application software running at the computerized controller, a graphic user interface to a remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance.” PO Resp. 37. Again, Patent Owner essentially relies on its arguments addressed above with respect to steps 1a and 1b that Vaios does not disclose “video of a person *at the entrance*.” *See id.* For the reasons outlined above, this latter argument is not persuasive. In addition, Petitioner persuasively shows that Vaios or Vaios with Menard renders capturing “video of the person at the entrance” obvious as discuss above. *See* Pet. 10–11, 15.

Further with respect to step 1c, Patent Owner also argues that Vaios’s communicative devices 20 do not provide viewing of any video (let alone video from a person proximate the entrance). PO Resp. 37–38. According to Patent Owner, “Vaios discloses no network interface between the communicative devices 20 and the local computer 12.” *Id.* at 40. Patent Owner annotates Vaios’s Figure 1 as follows to illustrate this point:



Patent Owner’s annotation of Vaios’s Figure 1 above indicates that communicative devices [2]0 (with a red X) at end user (peripheral) locations 8 lack any connection to network 6 and/or security surveillance area 4. *See id.* at 39–40.²⁰

These arguments, which focus exclusively on communicative devices 20, fail to address Petitioner’s showing, which relies on “‘remote computer 16’ and/or ‘communicative devices 20’” at Vaios’s end user locations 8 as reading on the claimed remote peripheral device in step 1c. *See* Pet. 16 (emphasis added) (quoting Ex. 1003, 4:6–7; citing Ex. 1003, code (57), 2:17–33, 3:32–36, 4:5–20, 8:55–9:9; Ex. 1003 ¶ 250). As the Petition also

²⁰ As the Petition notes, communicative devices 20 are “[e]rroneously depicted as ‘70’ in Figure 1.” *See* Pet. 16, n.2.

shows, Vaios discloses that “communicative devices” 20 include “wireless device[s].” Pet. 16 (quoting Ex. 1003, 4:5–20).

As Petitioner argues, with respect to either remote computer 16 or communicative devices 20, Vaios does not support Patent Owner’s arguments. Reply 18–19. Rather, “Vaios . . . states that ‘[u]sing an end user location, having a remote computer system . . . and one or more communications devices, *the remote individual can . . . view video images.*’” Reply 18–19 (emphasis added) (quoting Ex. 1003, code (57)); Pet. 17 (same). As the Petition also shows, “Vaios also discloses that ‘the remote individual can . . . communicate with the local computer system *Employing the browser software . . . , the remote individual can . . . retrieve additional video.*” Pet. 17 (emphasis added) (quoting Ex. 1003, 8:65–9:5). By referring to a “remote individual” and/or “end user location,” Vaios conveys that such an individual may access any device at the remote end-user location 8 for viewing video from the surveillance area or otherwise communicating with local computer 12, i.e., either remote computer 16 and/or optional communicative devices 20. *See* Ex. 1003, code (57), 8:65–9:5, Fig. 1, Fig. 4 (steps 312, 314).

Patent Owner does not address these relied-upon passages from Vaios and other descriptions related to the browser/GUI software associated with Figure 3’s video control and viewing application. *See* PO Resp. 37–46; Pet. 16–18 (citing Ex. 1003, 5:22–23, 6:35–40, 7:39–43, 10:34–38.²¹ In other words, Petitioner persuasively shows that “based on Vaios’ description of its

²¹ Other than asserting that a remote user cannot view video of a person proximate an entrance, Patent Owner does not argue specifically that Vaios does not disclose providing the claimed GUI, which the Petition persuasively shows as summarized above.

system and ‘end user locations 8,’ a [person of ordinary skill in the art] would understand that the ‘remote individual’ uses either of remote computer system 16 or communicative devices 20/70 (e.g., a ‘wireless device’) to view video from cameras 10” showing video of person proximate an entrance using the claimed GUI. *See id.* at 16 (citing Ex. 1002 ¶ 153), 18 (“When a person approaches an entrance at which video camera 10 is positioned, Vaios’ graphic user interface would provide video of the person at the entrance, thereby satisfying this limitation.”); 17 (citing Vaios’s claim 1, which recites a “user interface . . . for providing visual display to each one of said users, . . . comprising a plurality of control icons . . . configured to activate one or more of a plurality of functions” (citing and partially quoting Ex. 1001, 10:34–38)).

After considering Petitioner’s and Patent Owner’s arguments and evidence as summarized above, we find and determine that the record supports Petitioner’s showing as to claim 1. *See* Pet. 9–19. Accordingly, we find and determine that Petitioner shows by a preponderance of evidence that Vaios anticipates claim 1, and alternatively, that Petitioner shows by a preponderance of evidence that claim 1 would have been obvious over Vaios alone or the combined teachings of Vaios and Menard.

d) Dependent claims 3–6, 13–18, 20, and 21

Claims 3–6, 13–18, and 21 depend directly from independent claim 1. Claim 20 depends from dependent claim 18. Petitioner contends that Vaios anticipates claims 3–6, 13, 15, 17, 18, 20, and 21, and that Vaios and Menard would have rendered claims 3–6, 13–18, 20, and 21 obvious. Pet. 19–29. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references’ teachings in Vaios and/or Menard. *Id.* Petitioner persuasively maps the limitations of 3–6, 13–18, 20, and 21 to the

asserted prior art, and as necessary for obviousness, provides reasons sufficiently supported by factual underpinnings to combine the references' teachings with a reasonable expectation of success. *See id.* We adopt and incorporate Petitioner's showing as our own. *See id.*

Patent Owner relies on its arguments for claim 1 in asserting that Vaios does not anticipate claims 3–6, 13–18, 20, and 21. PO Resp. 40. Patent Owner does not present separate arguments for claims 3–6, 13–18, 20, and 21 with respect to Petitioner's obviousness showing. PO Resp. 40 (arguing "Vaios does not anticipate claims 3-6, 13–18, 20, and 21 of the '098 Patent for the same reasons it does not anticipate Claim 1 because these claims all depend from Claim 1"), 40–46 (arguing improper hindsight with respect to claim 1).

Based on the Petitioner's showing and the record evidence, we find and determine that Petitioner shows by a preponderance of evidence that Vaios anticipates claims 3–6, 13, 15, 17, 18, 20, and 21, and alternatively, that Petitioner shows by a preponderance of evidence that claims 3–6, 13–18, 20, and 21 would have been obvious over Vaios alone or the combined teachings of Vaios and Menard.²² *See* Pet. 19–29; *see* note 2 *supra*.

2. *Vaios, Menard, Olson, and Klein*

Petitioner asserts that claim 2, which depends from claim 1, would have been obvious over the combined teachings of Vaios, Menard, Olson, and Klein. *See* Pet. 30–32. Claim 2 recites "saving, in accordance with the application software running at the computerized controller, the video of the person at the entrance in a database in association with a timestamp."

²² Even if Patent Owner's arguments with respect to claim 1 apply to these dependent claims, for the reasons explained in connection with claim 1 above, Patent Owner's arguments do not undermine Petitioner's showing.

Petitioner asserts that Vaios’s “‘video camera . . . transmits the video data to the local computer system for storage’ where it is ‘store[d] . . . for later retrieval.’” Pet. 30 (quoting Ex 1003, 8:50–58). Petitioner asserts that “‘Vaios’[s] local computer system operates in accordance with a combination of hardware and software: ‘various components of local computer system 12 define a four-layer system 102–108 that collectively form the relevant communication software and hardware structure of multi-access system 2.’” *Id.* (quoting Ex. 1003, 5:22–25).

Petitioner relies on Olson and Klein as teaching saving video to a database with a timestamp. Pet. 31 (citing Ex. 1002 ¶ 251; Ex. 1015, 1:36–43, 7:45–56, 9:40–56, 11:49–53; Pet. 47–48 (arguing Klein anticipates claim 2 (citing Ex. 1006 ¶¶ 8, 23, 24, 44))). Petitioner contends that using time stamps for video storage provides the advantage “that an operator can rapidly identify the events of interest within a time frame of interest, and can quickly and easily review those events.” *Id.* (quoting Ex. 1015, 11:49–53).

Patent Owner does not present separate arguments for claim 2. *See* PO Resp. 40 (not mentioning claim 2 or Ground 2 but arguing “Vaios does not anticipate claims 3–6, 13–18, 20, and 21 of the ’098 Patent for the same reasons it does not anticipate Claim 1 because these claims all depend from Claim 1”).

Based on the Petitioner’s showing and the record evidence, we determine that Petitioner shows by a preponderance of evidence that claim 2 would have been obvious over the combined teachings of Vaios, Olson, Klein, and optionally Menard.

3. Vaios, Menard, Knudson, and Jacob

Petitioner asserts that claims 7–10, which depend from claim 1, would have been obvious over the combined teachings of Vaios, Menard, Knudson,

and Jacob. *See* Pet. 32–39. These claims generally relate to providing recorded greetings, including by a remote user with a GUI on a peripheral device. Petitioner relies on Knudson’s technique of providing greetings via a GUI, and contends that “the combination would have provided the motivating advantage of enabling a property owner to convey additional information to a visitor upon the visitor’s approach to a property” and to customize greetings to suit particular visitors. *See* Pet. 36, 33–39 (citing Ex. 1002 ¶¶ 276–280; Ex. 1022 ¶¶ 135, 137, 142). Petitioner also cites Jacob’s teaching of a property owner providing additional information to a visitor for evidence to show “a high probability of success” in combining Knudson’s technique. *See id.* at 33 (citing Ex. 1023, 2:41–52 (“The alarm system is set, please step away from my home.”)).

Petitioner also relies on Jacob to address dependent claim 10’s recitation, “the recorded greetings are seasonal greetings,” contending that the combination amounts to “a simple substitution of Jacob’s seasonal (holiday) greetings for Knudson’s recorded greetings [that] would have been easily implemented by simply changing the language/music of the greeting.” Pet. 38–39 (citing Ex. 1023, code (57), 9:38–44; Ex. 1002 ¶¶ 287–290).

Patent Owner does not present separate arguments for claims 7–10 and instead relies on its arguments for claim 1. *See* PO Resp. 40 (not mentioning claims 7–10 but arguing “Vaio does not anticipate claims 3–6, 13–18, 20, and 21 of the ’098 Patent for the same reasons it does not anticipate Claim 1 because these claims all depend from Claim 1”).

Based on the Petitioner’s showing and the record evidence, we determine that Petitioner shows by a preponderance of evidence that claims 7–10 would have been obvious over the combined teachings of Vaio, Jacob, and optionally Menard.

4. *Vaios, Menard, and Courtney*

Petitioner asserts that claim 19, which depends directly from claim 18 and indirectly from claim 1, would have been obvious over the combined teachings of Vaios, Courtney, and optionally Menard (via claim 18's dependency from claim 1). *See* Pet. 11, 39–41. Claim 19 recites “remotely actuating the camera includes zooming an image of the person at the entrance.”

Petitioner asserts that “Courtney teaches a ‘monitoring apparatus (10) [that] includes a video camera (12) . . . that permits remote control of the camera.” Pet. 39 (alteration in original) (quoting Ex. 1010, code (57); citing *id.* at Fig. 1). Petitioner also relies on Figure 3 of Courtney, which illustrates icon zoom functions (85, 86) for a portable unit, and Petitioner notes that a “person can . . . use the portable unit [46] to remotely control . . . the video camera.” *Id.* at 40 (alterations in original) (quoting Ex. 1010, code (57)). Petitioner reasons that “Vaios . . . already enables remote actuation of a camera,” and “the combination would have provided the motivating advantage of providing a close-up view of detected persons, thus aiding in identification and analysis of surveilled areas.” Pet. 41 (citing Ex. 1002 ¶¶ 297–299).

Patent Owner does not present separate arguments for claim 19. *See* PO Resp. 40 (not addressing claim 19 and arguing “Vaios does not anticipate claims 3–6, 13–18, 20, and 21 of the ’098 Patent for the same reasons it does not anticipate Claim 1 because these claims all depend from Claim 1”).

Based on the Petitioner’s showing and the record evidence, we determine that Petitioner shows by a preponderance of evidence that claim

19 would have been obvious over the combined teachings of Vaios, Courtney, and optionally Menard.

5. Klein

Petitioner asserts that Klein anticipates claims 1–6, 15, 17, and 21 under 35 U.S.C. § 102(e), or alternatively, these claims would have been obvious over Klein under 35 U.S.C. §103(a). Pet. 41.

a) Klein

Klein generally relates to a “digital video security system” in which “[v]ideo images [and sound] . . . may be delivered in near real-time or at a later time.” Ex. 1006, code (57), ¶¶ 21, Fig. 1). Klein’s system includes a “method of motion detection” and “method of maintaining surveillance of a surveillance area.” *Id.* ¶ 9.

Figure 1 of Klein follows:

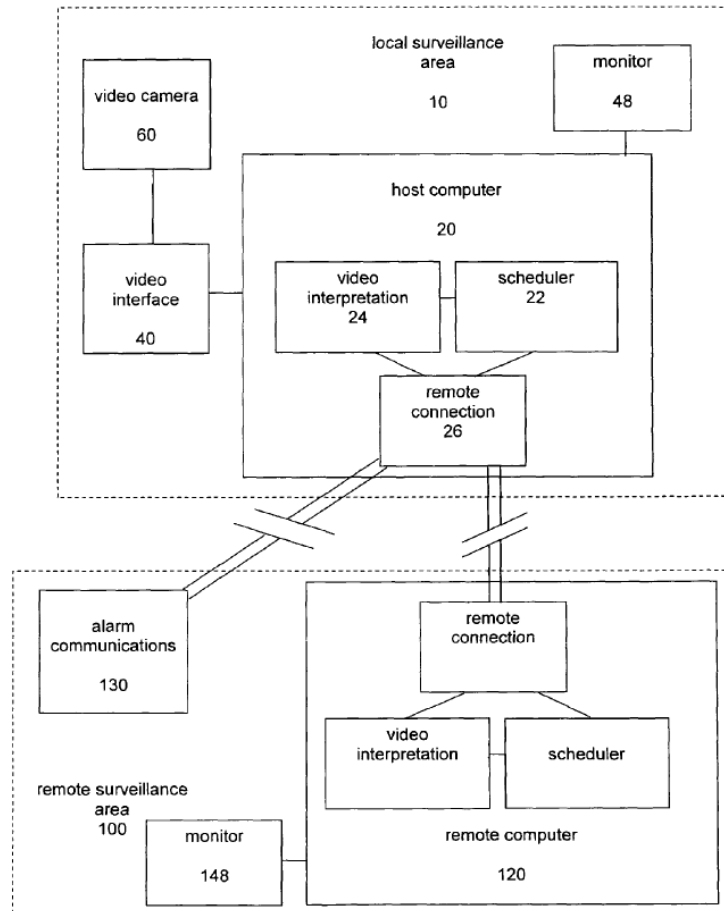


Figure 1 above illustrates Klein's system, which includes "video camera 60 . . . mounted [at a local] surveillance area 10." Ex. 1006 ¶ 17. Camera 60 "communicates . . . with a video interface 40, which . . . is connected to a host computer 20." *Id.* "[C]amera 60" also monitors "an entry door." *Id.* ¶ 38. The system "respond[s] to a motion detection at an entry door," which "trigger[s] an alarm event . . . causing the module 22 to direct the video module 24 to record video." *Id.* ¶ 42. Klein's system monitors for "intruder[s]" and allows the user to "view the intruder at the local surveillance area 10" and also "speak to the intruder" via an undepicted "speaker system." *Id.* ¶ 35. In response to "a change in the local surveillance area 10," the system "generate[s] an alarm" and "send[s] an electronic mail message to the remote computer 120 in order to advise a

remote user of a possible break and enter in the local surveillance area 10.”

Id. A “user may . . . adjust the camera 60 viewing angle to include areas of interest for monitoring, such as a cash register or an entry door.” *Id.* ¶ 38.

b) Claim 1

The preamble of claim 1 recites a “method for receiving a person at an entrance, comprising the steps of.” Related claim step 1a recites “detecting the presence of a person at the entrance.” Petitioner relies on Klein’s disclosure that “video camera 60 communicates . . . with a video interface 40, which . . . is connected to a host computer 20.” Pet. 43 (quoting Ex. 1006 ¶ 17). Petitioner notes that Klein discloses that “‘camera 60’ monitors ‘an entry door.’” *Id.* (quoting Ex. 1006 ¶ 38). And “[t]he system ‘respond[s] to a motion detection at an entry door,’ which ‘trigger[s] an alarm event . . . causing the module 22 to direct the video module 24 to record video.’” *Id.* (quoting Ex. 1006 ¶ 42). Petitioner also asserts that “Klein’s system allows the user to ‘view the intruder at the local surveillance area 10’ and also ‘speak to the intruder.’” *Id.* (quoting Ex. 1006 ¶ 35).

Petitioner explains that Klein’s “[m]otion detection unit 47’ is included in ‘video interpretation unit 24’ of ‘host computer 20.’” Pet. 44 (quoting Ex. 1006 ¶¶ 20, 21). Petitioner further explains that “Klein’s ‘motion detection unit 47 comprises an image analyzer that detects motion by comparing the current video frame with the preceding video frame or a video frame history.’” *Id.* at 43–44 (quoting Ex. 1006 ¶ 26). Based on these findings, Petitioner asserts that Klein’s camera detects the presence of a person at the entrance. *See id.* at 43–44.

Step 1b recites “transmitting, to a computerized controller running a software application, video of the person at the entrance recorded using a camera located proximate the entrance.” According to Petitioner, “Klein’s

‘video camera 60’ communicates with and transmits video data to a computerized controller (‘host computer 20’).” Pet. 44 (quoting Ex. 1006 ¶ 17, Fig. 1; citing Ex. 1002 ¶¶ 313–316). And “[h]ost computer 20’ includes a ‘rendering unit 44 [that] receives a [video] feed from the video camera 60 via video interface 40.’” *Id.* (quoting Ex. 1006 ¶ 21).

With respect to step 1b’s “software application,” Petitioner asserts that Klein’s “host computer 20 includes software to control the recording, interpretation and reaction of the security system.” Pet. 45 (quoting E1006, Ex. ¶ 18). Petitioner notes that Klein’s “control software comprises” “a video interpretation module 24, a task scheduler and event generation module 22, and a remote communication module 26,” and these software modules “interact with one another to permit full control over the surveillance system.” *Id.* (quoting Ex. 1006 ¶ 18). Accordingly, Petitioner submits that “host computer 20 is a ‘computerized controller’ running a ‘software application,’” as step 1b requires. *Id.* (citing Ex. 1002 ¶¶ 312–317).

Step 1c recites “providing, with the application software running at the computerized controller, a graphic user interface to a remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance.”

As summarized above with respect to step 1b, Petitioner alleges that Klein’s video camera 60 provides video of the person at the entrance to host computer system 20. *See* Pet. 44–45. Petitioner further explains that “the user . . . [at remote computer 120] view[s] the video camera output as a video stream” from host computer system 20. *Id.* at 45 (quoting Ex. 1006 ¶ 20; citing *id.* at ¶¶ 19, 21).

To address the claimed GUI of step 1c, Petitioner explains that “Klein’s host computer 20 includes a ‘rendering unit 44 [that] receives a feed from the video camera 60 via the video interface 40.’” Pet. 46 (quoting Ex. 1006 ¶ 21). Petitioner then relies on Klein’s disclosure of its remote computer 120 receiving this video feed from host computer 20 with “full functional access to the [host] software”:

[R]emote communication module 21 . . . permits a remote connection from a remote computer 120 to the host computer 20 such that the user of the remote computer 120 has full functional access to the software, including viewing the video camera output as a video stream; the ability to edit and add alarm events; and the ability to review and change task scheduler entries.

Id. (second alteration in original) (quoting Ex. 1006 ¶ 20). Petitioner also quotes Klein as disclosing “a software management system with *a graphical user interface* to provide control and direction of the security system to the user.” *Id.* (quoting Ex. 1006 ¶ 37). According further to Petitioner, this and other disclosures show that Klein’s “[h]ost computer 20 thus includes a software application that provides a graphical user interface that enables a user to view video at remote computer 120 from video cameras 60 (including video of a person at the entrance) and provide user inputs (e.g., alarm event and task entry edits/additions).” *Id.* (citing Ex. 1002 ¶¶ 319–321). Petitioner explains that “[a] [person of ordinary skill in the art] would recognize that the software comprises a graphical user interface at least because it provides graphical images and enables user inputs.” *Id.* (citing Ex. 1006 ¶ 322).

To further support its showing, Petitioner adds that “Klein’s system includes ‘a software management system with a graphical user interface to provide control and direction of the security system to the user.’” Pet. 46

(quoting Ex. 1006 ¶ 37). Based partly on this disclosure, and disclosures directed to the ability to provide user inputs including alarm event and task entry edits, Petitioner explains that Klein teaches that an end user at the peripheral device uses the GUI “to provide control and direction.” *See id.* (citing Ex. 1002 ¶ 322). At the cited paragraph, Dr. Hochwald testifies that “a [person of ordinary skill in the art] would recognize that the software application provided from host computer 20 facilitates a graphical user interface given that the interface/mechanism on which the video feed is provided to the remote computer 120 includes graphical images and enables a user to provide inputs.” 1002 ¶ 322. Dr. Hochwald supports this testimony as follows: “Klein discloses that the ‘security system is provided with a software management system with a graphical user interface to provide control and direction of the security system to the user’ and that a ‘user may connect remotely to the host computer 20 to view the video feed.’” *Id.* (quoting Ex. 1006 ¶¶ 37, 43).

Alternatively, Petitioner contends that it would have been “obvious to provide video at remote computer 120 via a graphical user interface given the generally standardized use and simple implementation of such interfaces at the time.” Pet. 47 (citing Ex. 1002 ¶ 323). Dr. Hochwald testifies that a “[person of ordinary skill in the art] would also understand that such a graphical user interface would advantageously be made available to the local and remote user equally” and “[s]uch an interface would allow consistent control and direction of the surveillance system irrespective of the location of the user.” Ex. 1002 ¶ 322.

Patent Owner argues that Klein is not prior art. This argument rests on the premise that the ’384 provisional is a priority document for the ’098 patent based on providing written description support for claim 1 as

discussed above. *See supra* § III.D; PO Resp. 9–15. As determined above, Petitioner shows persuasively that the ’384 provisional is not a priority document for the ’098 patent because it does not provide written description support for claim step 1c. *See supra* § III.D; Reply 5–9.

Similar to its arguments with respect to Vaio, Patent Owner also argues that Klein does not teach “detecting the presence of a person at the entrance” as step 1a recites. PO Resp. 46–50. Patent Owner acknowledges that Klein discloses that a “user may . . . adjust the camera 60 viewing angle to include areas of interest for monitoring, such as a cash register or an entry door.” PO Resp. 49 (quoting Ex. 1006 ¶ 38). Patent Owner also acknowledges that Klein teaches “motion detection at an entry door.” *Id.* (quoting Ex. 1006 ¶ 42). According to Patent Owner, “[t]o believe [Petitioner] that Klein anticipates or renders obvious this limitation is to believe that Klein discloses a system where a user puts a camera, computer, and monitor outside of the entrance to their home or business,” and then “the user then goes outside the entrance to ‘view the video feed from the camera,’” which “does not make any sense.” PO Resp. 49.

Notwithstanding Patent Owner’s arguments, Petitioner does not rely on “the user then go[ing] outside the entrance to ‘view the video feed from the camera.’” *See* PO Resp. 49. Rather, as Petitioner explains, because of wireless and wired technologies, “Klein’s host computer 20 and monitor need not be located exterior to an entrance alongside the camera given that data could be transferred to a host computer located inside via the ‘wire or wireless means.’” Reply 21 (quoting Ex. 1006 ¶ 17).

Patent Owner also argues that Klein’s “intruder, by definition, is already inside the entry or in the ‘interior’ as opposed to detecting the person

at the entrance, as claimed.” PO Resp. 49. According to Patent Owner, Klein only “detects motion after entry, not at the entrance.” *Id.* at 49.

Contrary to these arguments, Klein’s system does not limit motion detection to “after entry.” The “entrance” as claimed reads on areas inside Klein’s local surveillance areas. As Petitioner argues, “the term ‘intruder’ includes someone who is in any space or situation (including an exterior location) where they are not wanted.” Reply 22–23 (citing Ex. 1031; Ex. 1032). Therefore, Petitioner asserts, “an ‘intruder’ may have climbed a fence or broken through a gate before approaching a door’s exterior.” *Id.*

As Petitioner shows and as summarized above, Klein’s system “respond[s] to a motion detection at an entry door.” *See* Pet. 43 (quoting Ex. 1006 ¶ 42). Klein does not limit this “detection at an entry door” to monitoring the interior of the entry door. As discussed above in connection with Patent Owner’s claim construction (§ III.C), Patent Owner argues that “the plain and ordinary meaning of ‘detecting the presence of a person *at the entrance*’ [as claimed] means detecting the presence of a person before they have entered.” PO Resp. 30 (emphasis added). This argument suggests that “detection *at an entry door*” as Klein describes conveys a similar plain and ordinary meaning. *See* Ex. 1006 ¶ 42 (emphasis added).

Klein’s disclosure supports this meaning. Klein describes that in response to “a change in the local surveillance area 10,” the system “generate[s] an alarm” and “send[s] an electronic mail message to the remote computer 120 in order to advise a remote user of a possible break and enter in the local surveillance area 10.” Ex. 1006 ¶ 38. Given that Klein’s system detects “a possible break and enter *in the local surveillance area 10*” (emphasis added) (Ex. 1006 ¶ 35) and monitors “areas of interest . . . such as a cash register or an entry door” (*id.* ¶ 39), an artisan of ordinary

skill would have recognized that Klein contemplates monitoring anything in the “area of interest,” including an exterior side of an entry door in monitoring area 10.

In addition, as discussed in connection with Vaios above, there are only two possibilities (species) at issue, namely monitoring/viewing either the interior or exterior side of an entry door (genus). For this separate reason, Klein’s discloses monitoring the exterior of an entry door. *See Bristol-Myers Squibb Co.*, 246 F. 3d at 1380 (“[T]he disclosure of a small genus may anticipate the species of that genus even if the species are not themselves recited.”); *VirnetX Inc.*, 665 F. App’x at 888 (“Substantial evidence supports the PTAB’s finding that Wesinger’s disclosure of the genus ‘computer’ encompasses the ‘notebook computer’ species.”).

In other words, Klein contemplates a monitored entry location (e.g., window, fence, door) inside local surveillance area 10 (Ex. 1006, at Fig. 1), because Klein discloses that “local surveillance area 10 . . . *includes* the specific area intended to be kept under surveillance,” and “video camera 60 is mounted in the local surveillance area 10 *in the desired viewing location*” in order to monitor anything within that area. *See* PO Resp. 48 (emphasis added) (quoting Ex. 1006 ¶¶ 16–17). Patent Owner acknowledges that Klein’s “user may . . . adjust the camera 60 viewing angle to include areas of interest for monitoring, *such as a cash register or an entry door.*” *Id.* at 49 (emphasis added) (quoting Ex. 1006 ¶ 38). Klein’s monitored cash register and entry are each inside the monitored surveillance area, and Klein does not otherwise limit the viewing angle or camera location for either one. *See* Ex. 1006 ¶¶ 16, 17, 35, 38. It follows that Klein contemplates monitoring the presence of an intruder at the interior or exterior of an entry door by “mount[ing]” “the video camera” “in the desired viewing location” inside

the “specific area [within local surveillance area 10] intended to be kept under surveillance.” *See* Ex. 1006 ¶ 17; Ex. 1032 (defining an intruder as “a person who enters a building, grounds, etc. without permission). *Preda*, 401 F.2d at 826 (“[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.”).

Even if an artisan of ordinary skill would consider Klein’s discussion of monitoring an entry door as somehow limited to monitoring the inside of an entry door in local surveillance area 10 (*see* Ex. 1006, Fig. 1), when an intruder kicks the door in or otherwise “break[s] and enter[s]” through it (*id.* ¶ 38), Klein’s motion detection system still is able to detect the presence of the intruder prior to entry through the door based on movement of the monitored door and/or movement of the intruder just prior to entry through the open door. *See* Ex. 1006 ¶¶ 17, 35 (describing “generat[ing] an alarm event in response to a change in the local surveillance area 10”), 38 (describing adjusting the camera angel to view “areas of interest for monitoring” and “advising of a possible break and enter in the local surveillance area 10”); Ex. 1032 (providing sentences using “intruder” including “mistaking officers for intruders” because they “broke down her apartment door in the middle of the night”).

Based on the foregoing discussion, Petitioner’s showing that Klein discloses the preamble (even if it is limiting), steps 1a and 1b is persuasive. Patent Owner does not specifically address Petitioner’s showing as to the preamble and step 1b. *See* PO Resp. 47–51.

Turning to step 1c, Patent Owner argues that Klein does not teach “providing . . . a graphic user interface to a remote peripheral device by

which a user of the remote peripheral device may view the video of the person at the entrance.” PO Resp. 50–52 (alteration in claim 1 by Patent Owner). Patent Owner points to Klein’s disclosure that “[i]f a user is stationed at a remote computer 120, *then the rendering unit 44 delivers the video feed to the monitor 148 associated with the remote computer 120 by means of the remote communication module 26.*” PO Resp. 51 (quoting Ex. 1006 ¶ 21). Based on this disclosure in Klein, Patent Owner asserts that “the fact that a remote user can use a remote computer to view video from the camera does not mean that it has a graphical user interface.” *Id.* at 51–52. Patent Owner also asserts that Klein also does not disclose that the graphical user interface is provided “with the application software running at the computerized controller” as claimed. *Id.* at 52.

Patent Owner’s arguments focus on isolated disclosures in Klein and do not address Petitioner’s reliance on numerous teachings in Klein, as summarized above. Specifically, Patent Owner does not address Petitioner’s reliance on Klein’s disclosure that “the security system is provided with a software management system with a graphical user interface to provide control and direction of the security system to the user.” Pet. 46 (quoting Ex. 1006 ¶ 37). Patent Owner also does not address Petitioner’s reliance on Klein’s disclosure that “remote communication module 21. . . permits a remote connection from a remote computer 120 to the host computer 20 such that the user of the remote computer 120 has full functional access to the software, including viewing the video camera output as a video stream.” *Id.* (emphasis added) (quoting Ex. 1006 ¶ 20). As the Petition explains, these disclosures (supplemented by the testimony of Dr. Hochwald), show that “Klein teaches that user inputs (‘to provide control and direction’) are submitted via a graphical user interface.” *Id.*

Based on these disclosures and others, and testimony of Dr. Hochwald, Petitioner shows persuasively that “[h]ost computer 20 thus includes a software application that provides a graphical user interface that enables a user to view video at remote computer 120 from video cameras 60 (including video of a person at the entrance) and provide user inputs (e.g., alarm event and task entry edits/additions).” Pet. 46 (citing Ex. 1002 ¶¶ 319–320). Given Klein’s additional teaching of providing “full functional access to the software” on host computer 20 (including the GUI) by a remote user, Petitioner shows persuasively that Klein’s software, including its GUI, reads on “providing, with the application software running at the computerized controller, a graphic user interface to a remote peripheral device by which a user of the remote peripheral device may view the video of the person at the entrance.”²³ *See id.* (citing Ex. 1002 ¶¶ 319–322). Based on the foregoing discussion and record as summarized above, Petitioner’s showing of anticipation for limitation 1c is persuasive.

Patent Owner does not address Petitioner’s showing of obviousness for the GUI limitation of step 1c as summarized above. *See* Reply 1 (asserting Patent Owner “fails to address the Petition’s substantive assertions regarding the obviousness of [c]laims 1–6, 15, 17, and 21 over Klein”); PO Resp. 46–52 (addressing anticipation by Klein). Petitioner’s obviousness

²³ Patent Owner argues that Klein fails to “disclose that the graphical user interface is provided ‘with the application software running at the computerized controller’ as claimed,” and argues that Petitioner “does not explain otherwise.” PO Resp. 52. Contrary to the arguments, Petitioner shows otherwise as explained herein. Also, Patent Owner only argues that Klein does not disclose the noted feature as characterized by Patent Owner, but Patent Owner does not explain what it encompasses or why Klein does not disclose it. *See id.* at 51–52.

showing, supplemented by the testimony of Dr. Hochwald, as summarized above, with respect to the claimed GUI, is persuasive. *See* Pet. 47 (citing Ex. 1002 ¶ 322). At the cited paragraph, after detailing how Klein’s teachings relate to claim step 1c (Ex. 1001 ¶¶ 318–321; *see also* Pet. 46 (citing ¶¶ 319–322 in an overlapping anticipation analysis), Dr. Hochwald credibly testifies that that “[a] person would also understand that such a graphical user interface would advantageously be made available to the local and remote user equally,” and “[s]uch an interface would allow consistent control and direction of the surveillance system irrespective of the location of the user.” Ex. 1002 ¶ 322. In the next paragraph, Dr. Hochwald credibly testifies that it would have been obvious for Klein’s host computer 20 to provide a GUI for video viewing at remote computer 120, where Klein provides video viewing at the remote computer 120, and where GUIs were known standardized software interfaces that eliminate hardware controls. *Id.* ¶ 323. Based on the foregoing discussion and the record as summarized above, Petitioner provides persuasive reasons supported by factual underpinnings to implement a graphical user interface in Klein’s system with a reasonable expectation of success.

After considering Petitioner’s and Patent Owner’s arguments and evidence as summarized above, we find and determine that the record supports Petitioner’s showing as to claim 1. *See* Pet. 41–47. Accordingly, we find and determine that Petitioner shows by a preponderance of evidence that Klein anticipates claim 1, and alternatively, that Petitioner shows by a preponderance of evidence that claim 1 would have been obvious over Klein.

c) Claims 2–6, 15, 17, 21

Claims 2–6, 15, 17, and 21 depend directly from independent claim 1. Petitioner contends that Klein anticipates and alternatively would have rendered obvious these claims. Pet. 47–54. Petitioner persuasively maps the limitations of 2–6, 15, 17, and 21 to Klein, and as necessary for obviousness, provides reasons supported by factual underpinnings to combine the references’ teachings with a reasonable expectation of success. *See* Pet. 47–54. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to Klein. *Id.* We adopt and incorporate Petitioner’s showing as our own. *See id.*

Patent Owner does not present arguments for claims 2–6, 15, 17, and 21. *See* PO Resp. 46–51 (addressing anticipation of claim 1); Reply 1 (asserting Patent Owner “fails to address the Petition’s substantive assertions regarding the obviousness of [c]laims 1–6, 15, 17, and 21 over Klein”). Based on the Petitioner’s showing and the record evidence, we find and determine that Petitioner shows by a preponderance of evidence that Klein anticipates claims 2–6, 15, 17, and 21 and would have rendered claims 2–6, 15, 17, and 21 obvious.

6. Klein and Menard

Petitioner asserts that claims 13, 14, 16, and 21, which depend from claim 1, would have been obvious over the combined teachings of Klein and Menard. *See* Pet. 54–57.

Petitioner persuasively maps the limitations of 13, 14, 16, and 21 to the asserted prior art Klein and provides reasons supported by factual underpinnings to combine the references’ teachings with a reasonable expectation of success. *See* Pet. 54–57. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references’

teachings. *Id.* We adopt and incorporate Petitioner’s showing as our own. *See id.*

Patent Owner does not present arguments for claims 13, 14, 16, and 21. *See* PO Resp. 46–51 (addressing anticipation of claim 1). Based on the Petitioner’s showing and the record evidence, we determine that Petitioner shows by a preponderance of evidence that the combined teachings of Klein and Menard would have rendered claims 13, 14, 16, and 21 obvious.

7. Klein, Knudson, and Jacob

Petitioner asserts that claims 7–10, which depend directly or indirectly from claim 1, would have been obvious over the combined teachings of Klein, Knudson, and Jacob. *See* Pet. 57–58.

For claims 7–9, Petitioner relies on Knudson to teach the added limitations thereof, as summarized above with respect to the ground based on Knudson and Vaios (*supra* § III.F.3), asserting that it would have been “obvious to combine these teachings of Knudson with Klein for the same reasons discussed above for combining Knudson with Vaios.” *Id.* at 57 (citing Pet. 32–38; Ex. 1002 ¶ 412).

For claim 10, Petitioner relies on Knudson and Jacob to teach the added limitations thereof, as summarized above with respect to the ground based on Knudson, Jacob, and Vaios (*supra* § III.F.3), asserting that it would have been “obvious to combine these teachings of Knudson and Jacob with Klein for the same reasons discussed above for combining Knudson and Jacob with Vaios.” Pet. 58 (citing Pet. 39–40; Ex.1002 ¶ 413).

Petitioner persuasively maps the limitations of 7–10 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the references’ teachings with a reasonable expectation of success. *See* Pet. 32–40, 57–58. In support, Petitioner relies

on the testimony of Dr. Hochwald and provides citations to the references' teachings. *Id.* We adopt and incorporate Petitioner's showing as our own. *See id.*

Patent Owner does not present arguments for claims 7–10. *See* PO Resp. 46–51 (addressing anticipation of claim 1). Based on the Petitioner's showing and the record evidence, we determine that Petitioner shows by a preponderance of evidence that the combined teachings of Klein, Knudson, and Jacob would have rendered claims 7–10 obvious.

8. *Klein and Courtney*

Petitioner asserts that claims 18–20, which depend directly or indirectly from claim 1, would have been obvious over the combined teachings of Klein and Courtney. *See* Pet. 58–60 (citing Pet. 40–41). In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references' teachings in Klein and/or Courtney. *Id.*

Petitioner persuasively maps the limitations of claims 18–20 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the references' teachings with a reasonable expectation of success, including relying on its rationale for combining Courtney with Klein for claims 19 and 20. *See id.* at 40–41, 60. We adopt and incorporate Petitioner's showing as our own. *See id.*

Patent Owner does not present arguments for claims 18–20. *See* PO Resp. 46–51 (addressing anticipation of claim 1). On the current record, we determine that Petitioner shows by a preponderance of evidence that claims 18–20 would have been obvious over the combined teachings of Klein and Courtney.

9. *Naidoo-068, or Naidoo-068 and Vaios*

Petitioner asserts that Naidoo-068 anticipates claims 1, 3–6, and 17–21 under 35 U.S.C. § 102(e), or alternatively, these claims would have been obvious under 35 U.S.C. § 103(a) based on the combined teachings of Naidoo-068 and Vaios. Pet. 61–73.

Petitioner contends that Naidoo-068’s video monitoring security system, which detects “if a person walks across a monitored area,” satisfies the preamble and detecting step 1a of claim 1. *See* Pet. 61–63 (quoting Ex. 1007, 8:7–8; citing *id.* at 6:50, 7:38–45, 7:65–67, 14:22–23, 7:57–8:9). Petitioner alternatively contends that it would have been it “obvious for Naidoo’s video camera 112 and sensors 105 to be positioned to monitor an entrance and thereby detect a person approaching the entrance.” *Id.* at 64 (citing Ex. 1002 ¶ 454–460).

Regarding “transmitting” step 1b, Petitioner contends that Naidoo-068’s security system server 131 is a computerized controller that runs a software application, and that “security gateway 115 captures video (usually through an attached video camera 112) of the target site, and sends the video to security system server 131.” Pet. 64 (quoting Ex. 1007, 6:51–54; citing *id.* at Fig. 1; Ex. 1002 ¶¶ 455–456).

Regarding “providing” step 1c, Petitioner relies on Naidoo-068’s messaging interface 738 as the provided GUI. *See* Pet. 65–70. Petitioner quotes Naidoo-068 as follows: “‘Messaging interface 738’ provides ‘remote clients 155 with the ability to view and edit account information, arm and disarm their security system 100, and view live and recorded media from their home, all through a network-based interface.’” *Id.* at 65–66 (quoting Ex. 1007, 18:30–33, 20:14–19). Petitioner also alternatively contends that it would have been “obvious in view of Vaios to use a [GUI] to enable remote

viewing of video on a remote peripheral device.” *Id.* at 66 (citing Ex. 1002 ¶¶ 464–466). According to Petitioner, using Vaios’s GUI in Naidoo-068’s system “would have merely involved a simple incorporation of GUI-enabling software (such as that in Vaios) in system server 131 of Naidoo, which would have been predictably and successfully implemented, particularly given the proficiencies of POSITAs with such GUIs in the early 2000s.” *Id.* at 67 (citing Ex. 1002 ¶¶ 464–466).

Given Petitioner’s reliance on Vaios’s GUI teachings as discussed further below, there is no need to reach whether Naidoo-068 discloses a GUI. However, Petitioner’s showing is persuasive as to all other claim 1 limitations. In that regard, we adopt and incorporate this showing, summarized above, as our own, to the extent it relates to Petitioner’s obviousness showing, discussed further below. *See* Pet. 61–67.²⁴

Addressing Petitioner’s obviousness showing for claim 1, Patent Owner contends that “Petitioner seeks to use the Vaios graphical user interface in Naidoo-68’s system,” but “this combination [is] based entirely upon improper hindsight bias.” PO Resp. 52. Patent Owner generally argues that Petitioner’s showing is “conclusory” and “formulaic.” *See id.* at 52–55. Patent Owner contends that “[t]he only rational[e] provided by Petitioner and its expert is that ‘the proposed combination would provide a simple, predictable, and effective manner for receiving persons at an entrance by detecting their presence, establishing their motives, and

²⁴ In companion case IPR2022-00811, we did not reach a similar issue of whether Naidoo-068 discloses a GUI. *See* IPR2022-00811, Paper 16, § III.E.6.b.

providing selective access through the corresponding entrance.” *Id.* at 54 (quoting Ex. [1]002 ¶ 127).

This argument alleging Petitioner’s “only rational[e]” is not the “rationale” that Petitioner articulates to support its showing for step 1c, the step Patent Owner argues. *See* Pet. 52–55 (addressing step 1c). Rather, as summarized above, and as Patent Owner recognizes, Petitioner contends that it would have been “obvious in view of Vaios to use a graphical user interface to enable remote viewing of video on a remote peripheral device.” PO Resp. 53 (quoting Pet. 66; Ex. 1002 ¶¶ 464–466). As Patent Owner also recognizes, Petitioner further explains that

[u]se of such a graphical user interface in the system of Naidoo-068 would have merely involved a simple incorporation of GUI-enabling software (such as that in Vaios) in system server 131 of Naidoo, which would have been predictably and successfully implemented, particularly given the proficiencies of [a person of ordinary skill in the art] with such GUIs in the early 2000s.

PO Resp. 53 (quoting Pet. 66–67).

Contrary to Patent Owner’s arguments, Petitioner’s showing explains “how” to combine the teachings (providing GUI software in Naidoo’s server using known software and techniques to obtain a predictable outcome) and “why” to combine the teachings (to provide remote video viewing). *See* PO Resp. 55 (citing *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1368 (Fed. Cir. 2012)). The record supports Petitioner’s persuasive rationale, supported by factual underpinnings, for combining the references’ teachings with a reasonable expectation of success, rendering claim 1 obvious.

Patent Owner does not dispute Petitioner’s showing on this record that artisans of ordinary skill would have known that GUIs enable video control

and viewing. *See, e.g., supra* §§ III.1.c, III.5.b (discussing GUIs); PO Resp. 52–55. In addition, at the cited paragraphs, Dr. Hochwald’s un rebutted testimony explains, *inter alia*, that GUIs were “easily and predictably implemented” standardized software applications/APIs, that “the ability to view video, and edit and add alarm events would have been naturally implemented with such an interface,” and making the GUI available to both the local and remote users “would allow consistent and convenient control and direction of the surveillance system irrespective of the location of the user.” *See* Ex. 1002 ¶¶ 465–466. Therefore, Petitioner’s showing persuasively includes a showing of a reasonable expectation of success with “some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *Kahn*, 441 F.3d at 988.

Patent Owner also contends that Petitioner fails to explain “why a [person of ordinary skill in the art] would “pick out [Vai[os] and Menard] and combine them to arrive at the claimed invention.” PO Resp. 55 (citing *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993–94 (Fed. Cir. 2017)). Patent Owner also argues that the Petition only explains that an artisan of ordinary skill “could” have combined the references, which is deficient. *Id.* (quoting *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017)).

These arguments also are not germane to the ground at issue here. They relate to Petitioner’s obviousness showing related to another ground, namely Ground 1, which includes “Vai[os] and Menard.” *See* PO Resp. 55. And as noted above, the alleged “only rationale provided by Petitioner” (PO Resp. 54) is not a rationale that Petitioner relies upon in its obviousness showing based on the ground (Naidoo-068 and Vaivos) and claim limitation (GUI) at issue here, as discussed above. *Compare* Pet. 61–67 (relying on

Naidoo-068, and alternatively, Naidoo-068 and Vaios), *with* PO Resp. 55 (addressing arguments related to “Vai[os] and Menard”; citing Ex. [1]002 ¶ 127 (articulating reasons (e.g., “selective access”) for combining “Vaios and Menard” to monitor an exterior of an entry)). In any event, to the extent these arguments track Patent Owner’s other arguments as addressed above, Petitioner’s showing for claim 1 is persuasive as indicated above.

After considering Petitioner’s and Patent Owner’s arguments and evidence as summarized above, we find and determine that the record supports Petitioner’s showing as to claim 1. *See* Pet. 41–47. Accordingly, we determine that Petitioner shows by a preponderance of evidence that claim 1 would have been obvious over the combined teachings of Naidoo-068 and Vaios. We do not reach whether claim 1 is anticipated by Naidoo-068.

Petitioner also reads claims 3–6 and 17–21, which depend directly or indirectly from claim 1, on specific disclosures in Naidoo-068. Pet. 68–73. Claims 3–6 and 17–21 depend directly or indirectly from independent claim 1. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references’ teachings in Naidoo-068. *Id.* Petitioner persuasively maps the limitations of claims 3–6 and 17–21 to Naidoo-068 and provides reasons supported by factual underpinnings to combine the references’ teachings with a reasonable expectation of success. *See id.* We adopt and incorporate Petitioner’s showing as our own. *See id.*

Patent Owner does not present separate arguments for dependent claims 3–6 and 17–21. *See* PO Resp. 52–55 (addressing obviousness with respect to claim 1).

Accordingly, we also determine that Petitioner shows by a preponderance of evidence that claims 3–6 and 17–21 would have been

obvious over the combined teachings of Naidoo-068 and Vaios. We do not reach whether Naidoo-068 anticipates these claims.

10. Naidoo-068, Olson, and Klein

Claim 2 depends from claim 1. Petitioner asserts that “[c]laim 2 is obvious over Naidoo-068 with Klein and/or Olson (and optionally Menard) under 35 U.S.C. §103(a).” Pet. 73. As we found in the Institution Decision, this statement conflicts with the heading as reproduced above from the Petition. *See id.*; Inst. Dec. 28. Specifically, despite the Petition’s statement and heading, there is no reliance on any teaching from Vaios or Menard in the Petition for the ground at issue here. Therefore, the Petition actually asserts a ground here based only on Naidoo-068, Olsen, and Klein. *See id.* at 73–74.

Petitioner persuasively maps the limitations of claim 2 to the asserted prior art and provides reasons supported by factual underpinnings to combine the references’ teachings with a reasonable expectation of success, including relying on its rationale for combining Olson and Klein with Vaios for claims 19 and 20. *See id.* at 30–31, 73–74; *supra* § III.F.2. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references’ teachings in Naidoo-68, Klein, and Olson. *Id.* at 30–31, 73–74 (citing Pet. 30–31). We adopt and incorporate Petitioner’s showing as our own. *See* Pet. 30–31, 73–74.

Patent Owner does not present separate arguments for dependent claim 2. *See* PO Resp. 52–55 (addressing obviousness with respect to claim 1 based on Naidoo-068 and Vaios, which is not applicable to the ground at issue here).

Accordingly, we determine that Petitioner shows by a preponderance of evidence that claim 2 would have been obvious over the combined teachings of Naidoo-068, Olson, and Klein.

11. Naidoo-068, Vaios, Knudson, and Jacob

Petitioner asserts that claims 7–9, which depend directly or indirectly from claim 1, would have been obvious over the combined teachings of Naidoo-068, Knudson, and optionally Vaios. Pet. 74–75. Petitioner asserts that claim 10, which depends indirectly from claim 1 via claim 8, would have been obvious over the combined teachings of Naidoo-068, Knudson, Jacob, and optionally Vaios. *Id.* at 75. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references’ teachings. *Id.* at 32–38, 73–74 (citing Pet. 32–38). Petitioner asserts that Knudson teaches the added limitations of claims 7–9, and the combined teachings of Knudson and Jacob teach the added limitations of claim 10. *Id.* at 75. Petitioner persuasively maps the limitations of claims 7–10 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the references teachings with a reasonable expectation of success, including relying on its rationale for combining Knudson with Vaios for claims 7–9, and Knudson and Jacob with Vaios for claim 10. *See id.* at 30–31, 73–74 (citing Pet. 30–31); *supra* § III.F.3. We adopt and incorporate Petitioner’s showing as our own. *See* Pet. 32–39, 74–75.

Patent Owner does not present separate arguments for dependent claims 7–10. *See* PO Resp. 52–55 (addressing obviousness with respect to claim 1). Accordingly, we determine that Petitioner shows by a preponderance of evidence that claims 7–9 would have been obvious over the combined teachings of Naidoo-068, Knudson, and optionally Vaios, and

claim 10 would have been obvious over the combined teachings of Naidoo-068, Knudson, Jacob, and optionally Vaio.

12. Naidoo-068, Vaio, and Naidoo-091

Petitioner asserts that claims 13–16, which depend from claim 1, would have been obvious over the combined teachings of Naidoo-068, Naidoo-091, and optionally Vaio. *See* Pet. 75–78. In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the references’ teachings. *Id.* at 23–26, 75–78 (citing Pet. 23–26). Claims 13–16 require the “remote peripheral device” of claim 1 to “comprise” a “cell phone,” “video phone,” “computer,” and “PDA” (personal digital assistant), respectively. Petitioner persuasively maps the added limitations of claims 13–16 to Naidoo-091, and provides reasons sufficiently supported by factual underpinnings to combine the references’ teachings with a reasonable expectation of success, including relying on its rationale for combining Menard with Vaio for claims 13, 14, and 16. *See id.* at 23–25, 75–78 (citing Pet. 23–25). We adopt and incorporate Petitioner’s showing as our own. *See id.* at 23–25, 75–78.

Patent Owner does not present separate arguments for dependent claims 13–16. *See* PO Resp. 52–55 (addressing obviousness with respect to claim 1). Accordingly, we determine that Petitioner shows by a preponderance of evidence that claims 13–16 would have been obvious over the combined teachings of Naidoo-068, Naidoo-091, and/or Vaio.

IV. CONCLUSION

For the reasons discussed above, Petitioner has shown by a preponderance of the evidence that claims 1–10 and 13–21 of the ’098 patent are unpatentable as summarized in the table below.

Claims	A. 35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 3–6, 13, 15, 17, 18, 20, 21	102(a, b)	Vaios	1, 3–6, 13, 15, 17, 18, 20, 21	
1, 3–6, 13– 18, 20, 21	103(a)	Vaios, Menard	1, 3–6, 13–18, 20, 21	
2	103(a)	Vaios, Menard, Olson, Klein	2	
7–10	103(a)	Vaios, Menard, Knudson, Jacob	7–10	
19	103(a)	Vaios, Menard, Courtney	19	
1–6, 15, 17, 21	102(e)	Klein	1–6, 15, 17, 21	
1–6, 15, 17, 21	103(a)	Klein	1–6, 15, 17, 21	
13, 14, 16, 21	103(a)	Klein, Menard	13, 14, 16, 21	
7–10	103(a)	Klein, Knudson, Jacob	7–10	
18–20	103(a)	Klein, Courtney	18–20	
1, 3–6, 17– 21	102(e)	Naidoo-068		
1, 3–6, 17– 21	103(a)	Naidoo-068, Vaios	1, 3–6, 17–21	
2	103(a)	Naidoo-068, Olson, Klein	2	
7–9	103(a)	Naidoo-068, Vaios, Knudson	7–9	

10	103(a)	Naidoo-068, Vaios, Knudson, Jacob	10	
13–16	103(a)	Naidoo-068, Vaios, Naidoo-091	13–16	
Overall Outcome			1–10, 13–21	

V. ORDER

In consideration of the foregoing, it is hereby

ORDERED that Petitioner establishes by a preponderance of evidence that challenged claims 1–10 and 13–21 are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.²⁵

²⁵ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. §§ 42.8(a)(3), (b)(2).

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