

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIVINT, INC.,
Petitioner,

v.

SB IP HOLDINGS LLC,
Patent Owner.

IPR2022-01449
Patent 7,193,644 B2

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

EASTHOM, *Administrative Patent Judge*.

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

I. INTRODUCTION

Vivint, Inc., Petitioner, filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1, 3, 7, 11–15, 17–20, and 23 of U.S. Patent No. 7,193,644 B2 (Ex. 1001, the “’644 patent”). Pet. 4. SB IP Holdings LLC, Patent Owner, did not file a preliminary response.

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020). Institution of an *inter partes* review requires that “the information presented in the petition and . . . any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). For the reasons set forth below, we determine that there is a reasonable likelihood that Petitioner will prevail with respect to at least one challenged claim. Accordingly, we institute an *inter partes* review of the ’644 patent.

II. BACKGROUND

A. *Real Parties in Interest*

The parties identify themselves as real parties in interest. Pet. 1; Paper 5, 1. Petitioner also notes that “Vivint, Inc. is an indirect subsidiary of Vivint Smart Home, Inc., . . . a holding company.” Pet. 1.

B. *Related Matters*

The parties identify the following district court proceedings as related matters involving the ’644 patent or related patents: *SB IP Holdings LLC v. Vivint Smart Home, Inc.*, No. 4:21-cv-00912 (E.D. Tex.); *SB IP Holdings v. Vivint Smart Home, Inc.*, No. 4:20-cv-00886 (E.D. Tex.); *Vivint, Inc. v. SB IP Holdings, LLC*, No. 8:22-cv-00034 (C.D. Cal.) (declaratory judgment action without invalidity assertion); *SimpliSafe v. SkyBell Tech., Inc. et al.*,

No. 1:20-cv-12288 (Mass.); *Arlo Tech. Inc. v. SkyBell Tech. et al.*, No. 3:21-cv-00218 (S.D. Cal. (declaratory judgment action)). *See* Paper 5, 3; Pet. 1.

The parties identify the following *inter partes* reviews as involving related patents challenged by Petitioner: IPR2022-00810, IPR2022-00811, IPR2022-00812, IPR2022-00813, IPR2022-00814, IPR2022-01352, IPR2022-01364, and IPR2022-01365. Paper 5, 2; Pet. 1.

C. The '644 Patent

The '644 patent relates to an “audio-video communication” system having a wireless DVMS module that includes a video camera and audio functionality located on an interior or exterior of a business or residence for viewing an image from the video camera and interacting with a visitor for security purposes.¹ Ex. 1001, code (57), 1:12–21, 8:58–60, Fig. 1.

¹ The '644 patent does not state what “DVMS” signifies.

Figure 1 follows:

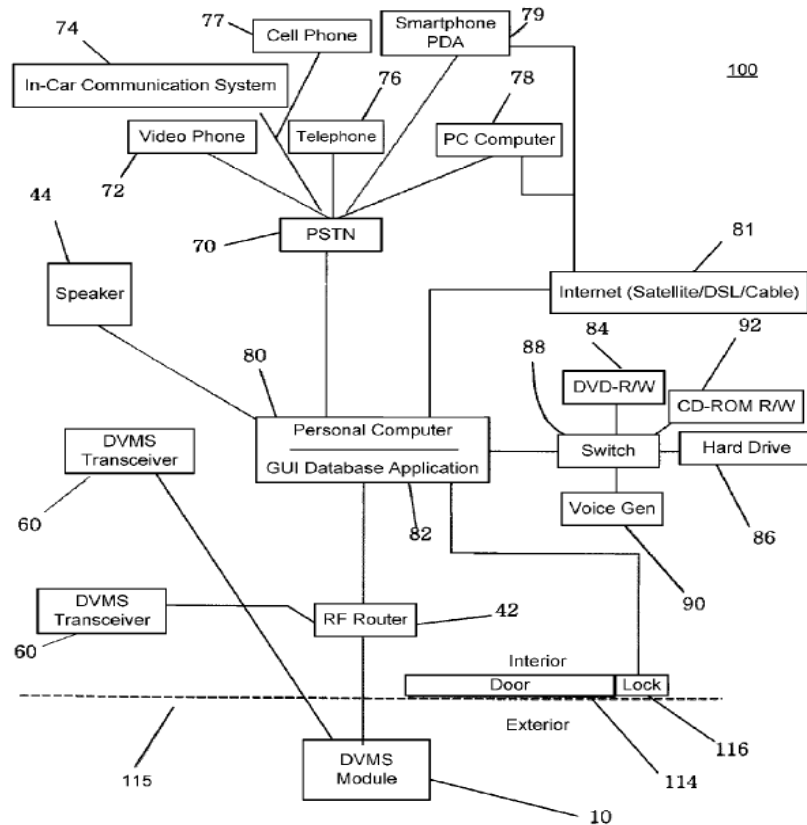


FIG. 1

Figure 1 depicts a schematic diagram of system 100 with wireless DVMS module 10 (bottom) located proximate door 114 at the exterior side of a home or office, with PC (personal computer) 80 (middle) in the interior of the home or office, and peripheral devices (top), which include video phone 72, cell phone 76, PC computer 78, etc., and which communicate with PC 80 via public switching telephone network (PSTN) connection 70 or broadband connection 81. Ex. 1001, 8:40–50, 9:17–26.

In a preferred embodiment, wireless DVMS module 10 includes camera 22, speakers 12, proximity sensor 26, microphone 20, LCD display 16, quick connect electrical receptacle 24, locking mechanism 28, and

RF FM receiver/transmitter 18. Ex. 1001, 9:30–42, Fig. 2. Wireless DVMS module 10 communicates with wireless router 42. *Id.* at 8:58–60, Fig. 1.

D. Illustrative Claim

Independent claim 1 is illustrative of the challenged claims, and follows:

1. An audio-video communication and answering system, said system comprising:
 - (a) at least one wireless exterior module having a proximity sensor, a video camera, a microphone, a speaker, an RF transmitter, and an RF receiver;
 - (b) a computerized controller running a software application;
 - (c) a wireless router, wherein the wireless router enables communication between the exterior module and the computerized controller;
 - (d) a recording component that records video and audio communication that is transmitted to and from the exterior module; and
 - (e) a playing component that plays video and audio communication recorded by the recording component;
 - (f) wherein the software application includes a graphic user interface that enables a user to view images and streaming video from the camera, and
 - [(g)] that enables the coordination of multiple communication devices and user defined responses to prompts and events.²

² The Petition adds “(g)” to address separately a latter portion of limitation 1(f) from the initial portion thereof. *Compare* Ex. 1001, 11:2–21 (limitation 1(f)), *with* Pet. 25 (designating the latter portion of limitation 1(f) as 1(g)).

E. Asserted Grounds of Unpatentability

Petitioner contends that claims 1–13 and 16–20 are unpatentable as follows:³

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 3, 7, 11, 13–15, 23 ⁴	103(a)	Jae, ⁵ Menard, ⁶ Monroe, ⁷ Vaio ⁸
12	103(a)	Jae, Menard, Monroe, Vaio, and Ellis ⁹
17	103(a)	Jae, Menard, Monroe,

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103, effective March 16, 2013, which is after the filing date of ’612 patent, October 9, 2003 (Ex. 1001, code (63)). Therefore, the pre-AIA version of § 103 applies for purposes of institution.

⁴ Claim 20 depends from claim 18. The Petition mistakenly lists claim 20 as challenged in Grounds 1, 5, 9, and 12. However, on this preliminary record, because of the dependency of claim 20 from claim 18, it appears that, but for a harmless typographical or book-keeping error, the Petition actually challenges claim 20 based on the same references included in Petitioner’s challenge to claim 18 in Grounds 4, 8, 11, and 14, respectively, as reflected in this Table (with Grounds 1–14 identified in order as listed). The parties will have the opportunity to discuss this issue during trial.

⁵ English Translation of Korean Pub. No. TEUK2001-0084277, published Sept. 6, 2001. Ex. 1011.

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

⁷ US Patent No. 6,970,183 B1, issued Nov. 29, 2005, filed Jan. 24, 2000. Ex. 1038.

⁸ US Patent No. 6,271,752 B1, issued Aug. 7, 2001. Ex. 1003.

⁹ US Patent No. 7,506,020 B2, issued Mar. 17, 2009, filed Aug. 24, 2001. Ex. 1041.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
		Vaios, Naidoo ¹⁰
18–20	103(a)	Jae, Menard, Monroe, Vaios, Nykerk, ¹¹ Jacob ¹²
1–3, 7, 11, 13–15, 23	103(a)	Jae, Menard, Monroe, Vaios, Lands ¹³
12	103(a)	Jae, Menard, Monroe, Vaios, Lands, Ellis
17	102(e)	Jae, Menard, Monroe, Vaios, Lands, Naidoo
18–20	103(a)	Jae, Menard, Monroe, Vaios, Lands, Nykerk, Jacob
1, 3, 7, 11, 13–15, 17, 23	103(a)	Naidoo, Menard, Lands, Jae
12	103(a)	Naidoo, Menard, Lands, Jae, Ellis
18–20	103(a)	Naidoo, Menard, Lands, Jae, Nykerk, Jacob
1, 3, 7, 11, 13–15, 17, 23	103(a)	Naidoo, Menard, Lands, Jae, Monroe, Vaios
12	103(a)	Naidoo, Menard, Lands, Jae, Monroe, Vaios, Ellis
18–20	103(a)	Naidoo, Menard, Lands, Jae, Monroe, Vaios, Nykerk, Jacob

¹⁰ US Patent No. 6,658,091 B1, issued Dec. 2, 2003, filed Feb. 1, 2002. Ex. 1005.

¹¹ US Patent No. 4,897,630, issued Jan. 30, 1990. Ex. 1013.

¹² US Patent No. 5,781,108, issued Jan. 14, 1998. Ex. 1023.

¹³ PCT Pub. No. WO 00/38174, published June 29, 2000. Ex. 1014.

Petitioner supports its Petition with the Declaration of Dr. Bertrand Hochwald. Ex. 1002.

III. ANALYSIS OF THE GROUNDS

A. Legal Standards

“Section 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) (quoting 35 U.S.C. § 103(a)). The obviousness question 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 when presented (not so 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.*

Petitioner contends as follows:

A person of ordinary skill in the art (“POSITA”) for the ’644 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. 5 (citing Ex. 1002 ¶¶ 21–24).

Based on a review of the preliminary record, for purposes of the Institution Decision, 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 ’644 patent specification.

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 relies on the plain and ordinary meaning under *Phillips*. *See* Pet. 6. At this stage, it is not necessary to explicitly construe any 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. The Obviousness Grounds

1. Jae, Menard, Monroe, and Vaios (Ground 1)

Petitioner asserts that claims 1, 3, 7, 11, 13–15, and 23 would have been obvious under 35 U.S.C. § 103(a) based on the combined teachings of Jae, Menard, Monroe, and Vaios. *See* Pet. 6; *supra* note 4 (discussing claim 20).

a) Jae

Jae relates to “a remote access security system,” including “an outdoor terminal for visitors, installed at the entrance door of offices, etc.” Ex. 1011, 1. The system generally addresses prior art concerns by allowing for security monitoring of “offices, factory development rooms, and corporate executive rooms . . . when no one is in the office.” *See id.* at 3. The system generally allows access by visitors using a mobile phone who communicate with a “user’s (access controller’s) mobile phone.” *Id.* at 3.

In addition, when an intruder breaks into the entrance space where this system is installed, the moving image information about the intruder captured by the surveillance camera automatically calls the user’s mobile phone to inform that there is an intruder in the space, and at the same time, the moving image information of the site is displayed on the user’s mobile phone.

Ex. 1011, 3.

Also, “all elements related to access that occur in the absence of the user are automatically transmitted to the user’s main server computer so that the moving image information is recorded.” *Id.*

Jae's Figure 1 follows:

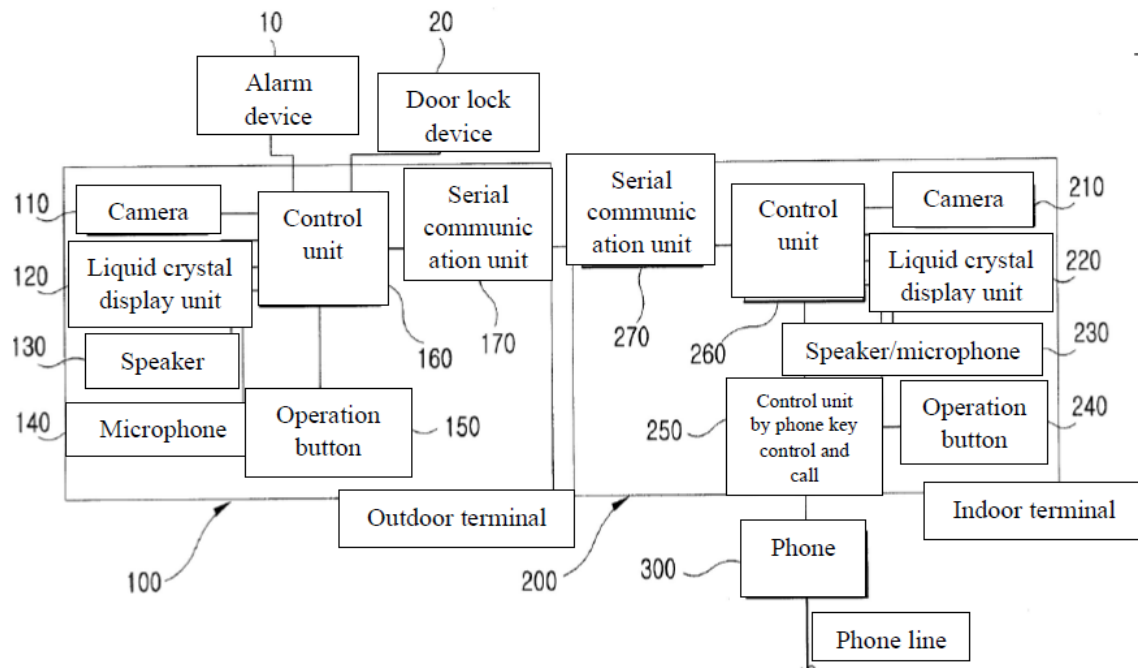


Figure 1 “is a block diagram of a remote access monitoring system according to [Jae’s] present invention,” including outdoor terminal 100 (on the left) for visitors and indoor terminal 200 (on the right) for users. Ex. 1011, 4. Jae describes its system as including the following:

an outdoor terminal 100 for visitors, installed on a door and equipped with a camera 110, a liquid crystal display unit 120, a speaker 130, a microphone 140, and various operation buttons 150, to enable visitors to make calls and realize audio and video calls, and to remotely control the door alarm system and door lock device by controlling the user’s mobile phone or indoor terminal; and an indoor terminal for users 200, wherein by calling the outdoor terminal 100, audio and video two-way communication with the outdoor terminal is performed, and according to the selection, when a visitor calls, the mobile phone and the outdoor terminal 100 are automatically connected to control the visitor confirmation and communication and door opening/closing through the mobile phone.

Control unit 260 of indoor terminal 200 controls the overall operation of indoor terminal 200 that connects the outdoor terminal 100 and audio and video conversation and automatically connects the user's mobile phone to the outdoor terminal 100 when the outdoor terminal 100 is called by selecting the mobile phone connection function, and outputs control signals of the door lock device 20 and the alarm device 10 to the outdoor terminal 100 by selection of a mobile phone or a function button; and a serial communication unit 270 for communication connection between the control unit 260 of the indoor terminal 200 and the outdoor terminal 100.

Id.

In general, “indoor terminal [200]. . . display[s] the visitor image captured by . . . outdoor terminal [100], connects audio/video calls, and enables the control of door opening and closing and two-way communication between the outdoor terminal and a remote mobile phone by automatically connecting audio/video communication with the user's mobile phone when a visitor calls.” Ex. 1001, 1.

Jae's Figure 2 follows:

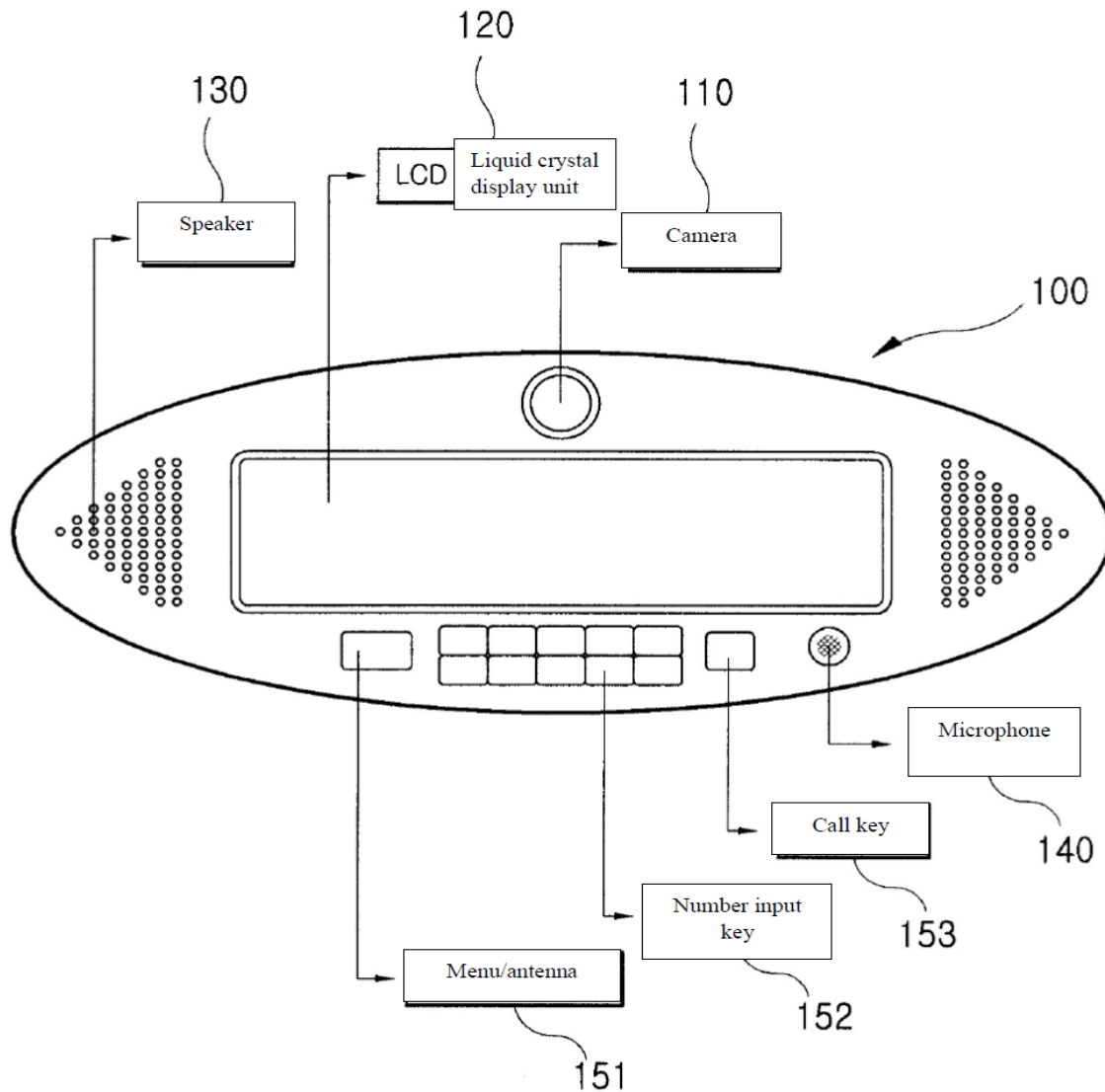


Figure 2 illustrates outdoor terminal 100 comprising camera 110 for taking an image of a visitor; a liquid crystal display unit 120 for displaying an indoor terminal 200 or a pre-stored image or text message, etc.; a speaker 130 and a microphone 140 for making an audio call; an operation button 150 equipped with a menu/guide key 151 for selecting to display a menu and a guide message of the outdoor terminal 100, [and] a number input key 152 for entering a number, and a call key 153 for indoor or mobile phone calls.

Ex. 1011, 4.

Jae's Figure 3 follows:

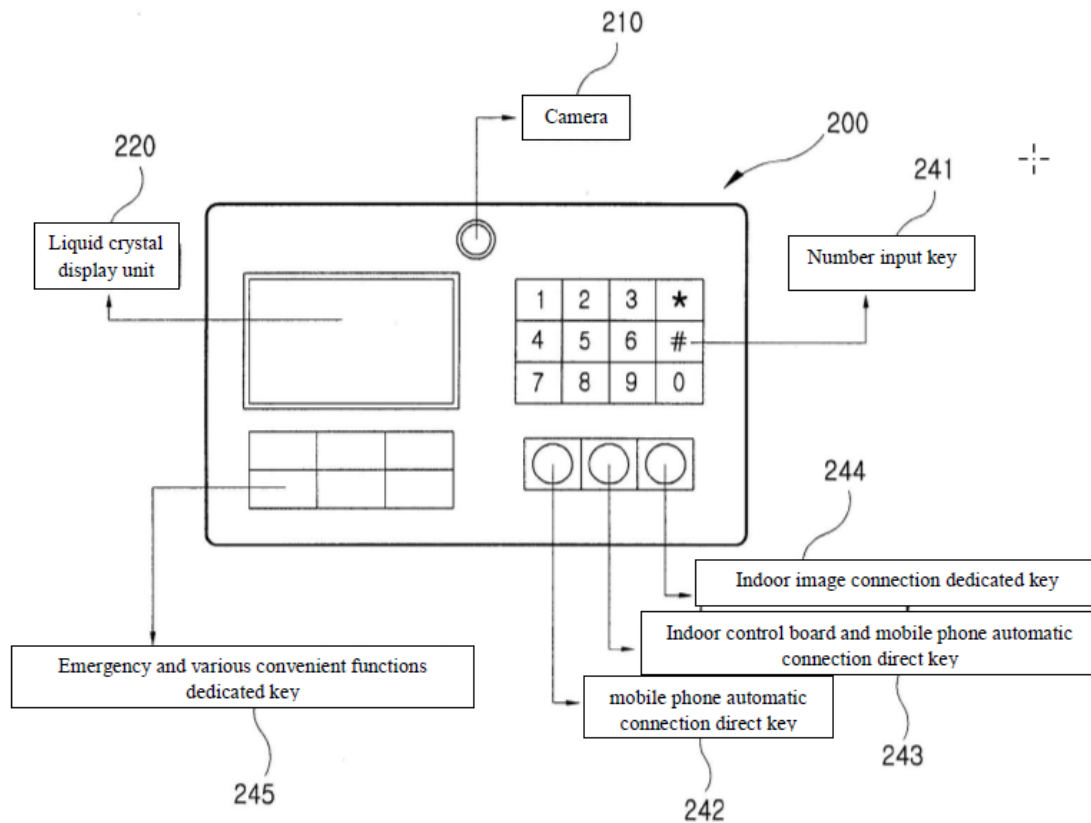


Figure 3 illustrates indoor terminal 200 comprising

a camera 210 for two-way image transmission with the outdoor terminal 100; a liquid crystal display unit 220 for displaying images and text messages transmitted from the outdoor terminal 100; a speaker/microphone 230 for audio calls; an operation button 240 equipped with number input keys 241, a mobile phone automatic connection direct key 242, an indoor control board and mobile phone automatic connection direct key 243[,] an indoor image connection dedicated key 244, and emergency and various convenient functions dedicated key 245.

Ex. 1011, 4.

“When there is a user indoors, the indoor terminal 200 and the outdoor terminal 100 may operate as a general intercom function”

Ex. 1011, 6. In this situation, “when the visitor presses the call button, the image captured by the camera 110 of the outdoor terminal 100 is displayed on the liquid crystal display 220 of the indoor terminal 200, so that audio conversation through the speaker/microphone is made possible, and control of the opening of the door is enabled by pressing the access approval button.” *Id.* A user also can control the indoor terminal intercom functionality via an external telephone. *Id.* at 5–6.

In summary, Jae’s “invention is a remote control security system that enables a two-way audio/video conversation with a visitor by automatically connecting a phone call to the user’s (access controller’s) mobile phone when a visitor calls.” Ex. 1011, 3.

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. Menard’s system includes a wireless exterior module 200 or 200D mounted on the exterior of a residence’s door comprising a transceiver, detection sensor, and camera for transmitting video. *Id.* at 12–14, 21, Fig. 8.

c) Monroe

Monroe relates to “a wireless multimedia surveillance and monitoring system provid[ing] a combination of megapixel digital camera capability with full motion video surveillance” in a network of workstations and servers. Ex. 1038, code (57). Monroe’s system includes wireless routers (e.g., gateways 1, 2, 3) that enable communication between wireless cameras W1-20, W1-22, servers 46, and monitoring stations 28. *See id.* at 1038, Fig. 7, 18:62–19:33, 17:30–35.

d) 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 . . . house entrance.” *Id.* at 9:49–53; *see also id.* at 8:36–38, Fig. 4.

e) Claim 1

The preamble of claim 1 recites “[a]n audio-video communication and answering system, said system comprising.” Petitioner asserts that Jae discloses the preamble. Pet. 6–7. In particular, Petitioner points to Jae’s disclosure of a “remote access security system, composed of an outdoor terminal for visitors, installed at the entrance door . . . , equipped with a camera, a . . . display screen, a speaker, a microphone, and . . . operation buttons to enable the visitor to . . . make audio and video calls.” *Id.* at 6 (quoting Ex. 1011, 1). Petitioner also relies on Jae’s disclosure of its system “enabl[ing] . . . two-way audio/video conversation with a visitor by automatically connecting a phone call to the user’s . . . mobile phone.” *Id.* (quoting Ex. 1011, 3).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for the preamble (even if it is limiting) based on the teachings of Jae is sufficient for institution purposes.

Limitation 1(a) recites a “wireless exterior module having a proximity sensor, a video camera, a microphone, a speaker, an RF transmitter, and an RF receiver.” Petitioner relies on the combined teachings of Jae and Menard to address limitation 1(a). Pet. 8–9.

First, Petitioner relies on Jae’s disclosure of “a wireless exterior module (‘outdoor terminal 100’) having a video camera (‘camera 110’), a microphone (‘microphone 140’), and a speaker (‘speaker 130’). Pet. 7 (quoting Ex. 1011, 4; citing Ex. 1011, 1, 2, Fig. 2; Ex. 1002 ¶¶ 96–104). Petitioner contends that Jae “discusses wireless transmission of data.” Pet. 8 (citing Ex. 1011, 6, 7, 8, Figs. 8–9; Ex. 1002, ¶¶ 103–104).

Next, Petitioner relies on Menard’s security system’s wireless exterior module 200D with video camera 370 “mounted on the exterior of [a] residence . . . proximate to entry door 260.” Pet. 8 (quoting Ex. 1004, 19:30–20:2; citing *id.* at Figs. 7, 8). Petitioner contends that Menard’s video camera 370 transfers images to personal data units (PDUs) 400A, 400B and base 250A. *Id.* (citing Ex. 1004, 22:17–19). Petitioner contends that “[e]xterior module 200D has ‘an intercom 330’ for conducting ‘audio communication functions,’ which includes ‘a speaker and a microphone.’” *Id.* at 9 (quoting Ex. 1004, 22:20–23). Petitioner also contends that the recited “RF transmitter,” “RF receiver,” and “proximity sensor” read on Menard’s exterior module 200D’s Bluetooth transceiver 150 and proximity detector and descriptions thereof. *See* Pet. 9–10 (citing Ex. 1004, 5:31–6:1, 6:14–15, 14:25–15:30, 20:22, 21:6–7, 21:11–18, 34:21–24, claim 25).

Then, based on the combined teachings of Jae and Menard, Petitioner contends it would have been obvious to employ Menard’s wireless module functionality teachings in Jae’s similar security system to create a single module that is “more user-friendly, convenient, and easily installable” for a

monitoring system, to create an “improved installation convenience for Jae’s system by, e.g., eliminating the need for hardwiring and increased communication range,” and to “enable[] detection of a person at the entrance without any required action by that person, thereby providing increased security and corresponding notifications to a remote user, and triggering corresponding actions, further conserving system resources.” *See* Pet. 12 (citing Ex. 1002 ¶¶ 122–125; Ex. 1003, code (57); Ex. 1004, 4:16–18, 30:22–25). According to Petitioner, this “substitution would have yielded predictable results with a reasonable expectation of success given that the devices were used in a similar manner for a similar purpose (i.e., to monitor and control access to an entryway) and perform similar functions using similar components and data processing techniques.” *Id.* at 10 (citing *KSR*, 550 U.S. at 416).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(a) based on the teachings of Jae and Menard is sufficient for institution purposes.

Limitation 1(b) recites “a computerized controller running a software application.” Petitioner reads limitation 1(b) onto Jae’s server system and software, contending that Jae’s “server system” is “also called a ‘server computer.’” Pet. 12 (quoting Ex. 1011, 3; citing Ex. 1002 ¶¶ 127–133; Ex. 1011, 1, 3, 4, 7, claim 4). At the cited paragraphs, Dr. Hochwald testifies that Jae’s server system provides access and control through connection to Jae’s PC and other system components. *See* Ex. 1002 ¶¶ 131–133 (citing Ex. 1011, 7, claim 4).

Petitioner states that “Jae’s remote access security system is ‘automatically connected to the server system through the Internet, so that the user can have video/audio conversation with the visitor on the

website, and also allow access control.” Pet. 13 (quoting Ex. 1011, 1; citing Ex. 1011, 3, 7). Petitioner states that “Jae’s ‘server system records and stores [image and audio] information for management’ and provides a ‘website’ from which users can observe this information, conduct video and audio calls with the visitor via outdoor terminal 100, and control access.” *Id.* (quoting Ex. 1011, 3, 7; citing Ex. 1011, claim 4). Based on these teachings, Petitioner asserts that Jae’s server system/computer uses a software application/program and satisfies limitation 1(b). *Id.* (citing Ex. 1002 ¶¶ 130–131; Ex. 1011, 4 (last paragraph describing a “program”), claim 4).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(b) based on the teachings of Jae is sufficient for institution purposes.

Limitation 1(c) recites “a wireless router, wherein the wireless router enables communication between the exterior module and the computerized controller.” Petitioner relies on the combined teachings of Jae, Menard, and Monroe to address limitation 1(c). Pet. 13–16. Petitioner refers to its showing with respect to limitation 1(a), which relies on the combined teachings of Jae and Menard to render obvious a wireless exterior module, “wirelessly communicate using, e.g., IEEE 802.11 (WiFi), Bluetooth, or other RF protocols.” Pet. 13–14 (citing Ex. 1002 ¶ 136).

Petitioner contends that “Jae’s server system (i.e., a ‘computerized controller’) is located remotely from and connected to Jae’s remote access security system (e.g., outdoor terminal 100, indoor terminal 200) via the Internet.” Pet. 14 (citing Ex. 1011, 3, 4, 7, claims 4–5). Relying on Monroe, Petitioner contends that “[w]ireless routers were widely used at the time, including with monitoring systems, to facilitate routing of data across such

diverse networks.” *Id.* (citing Ex. 1002 ¶¶135, 139–146; Ex. 1038, 17:30–35, 18:62–19:10).

Petitioner explains that “Monroe’s system includes a wireless router (e.g., gateways 1, 2, 3) that enables communication between wireless cameras W1-20, W1-22, etc., and computerized controllers (e.g., server 46, monitoring stations 28).” Pet. 14 (citing Ex. 1002 ¶ 139; Ex. 1038, Fig. 7, 18:62–19:33, 17:30–35). Petitioner notes that “Monroe discloses a ‘wireless multimedia surveillance and monitoring system . . . adapted for transmitting event data, video and/or image monitoring information [and] audio signals . . . over a LAN, wireless LAN, Intranet or Internet for . . . assessment and response.’” *Id.* (quoting Ex. 1038, code (57)).

Therefore, Petitioner asserts that it would have been obvious to “incorporate[e] aspects of Monroe’s system architecture and wireless router usage in Jae’s system so as to facilitate communications between a local wireless network connecting outdoor terminal 100 (and other wireless components of Jae’s system such as surveillance cameras and potentially indoor terminal 200) and the Internet to which the server system is connected.” Pet. 15–16 (citing Ex. 1002 ¶¶ 145–147). Petitioner asserts that the combined system “had the known benefit of improving installation convenience for associated systems, eliminating the need for hardwiring, providing varied communication protocol options (including short and long range), and remote monitoring.” *Id.* (citing Ex. 1002 ¶¶ 143, 145–151).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(c) based on the teachings of Jae, Menard, and Monroe is sufficient for institution purposes.

Limitation 1(d) recites “a recording component that records video and audio communication that is transmitted to and from the exterior module.” Petitioner contends that Jae’s server system discloses or renders obvious limitation 1(d). Pet. 17–18.¹⁴ Petitioner asserts that “Jae’s system enables video and audio communication between an exterior module (outdoor terminal 100) and remote devices such as mobile phones or personal computers.” *Id.* at 17 (Ex. 1011, 1, 3, 6, 7; Ex. 1002 ¶¶ 155–156). As an example, Petitioner notes that “Jae’s system provides ‘audio/video communication’ with the user’s mobile phone to enable two-way communication between the outdoor terminal and the remote mobile phone.’” *Id.* (quoting Ex. 1011, 3). In addition, “[w]hen the visitor presses the call button of [outdoor terminal 100], . . . the visitor’s image and audio are transmitted to the user’s mobile phone by the camera and microphone [of] outdoor terminal 100.” *Id.* (alteration in original) (quoting Ex. 1011, 7). And “[v]ideo from Jae’s camera 110 also may be transmitted to a ‘video phone.’” *Id.* (quoting Ex. 1011, 6).

Petitioner relies further on Jae’s remote access security system that “connects to the server system . . . and automatically transmits visit record

¹⁴ Petitioner contends that “Patent Owner asserts that this limitation requires only the recording of audio transmitted to [and from] the exterior module.” Pet. 59 (citing Ex. 1039). Exhibit 1039 is a copy of an email from Patent Owner stating that Patent Owner “disagree[s] that] claim element 1(d) of the ’644 patent requires video to be transmitted to the exterior module.” Ex. 1039. Rather, Patent Owner “believe[s] the phrase ‘that is transmitted to and from the exterior module’ only modifies ‘audio communication,’ not ‘video’ as [Petitioner] assert[s].” *Id.* The parties will have the opportunity during trial to address whether Patent Owner’s apparent claim construction via email presents a material issue with respect to any of the asserted grounds.

information (image and audio) and emergency monitoring situation information regarding visitors, so that the server system records and stores the information.” Pet. 17 (quoting Ex. 1011, 7). Petitioner also relies on Jae’s explanation that “by connecting to a server system that automatically stores information about visitors, it is possible to check the visitor records stored in the server system from a remote location.” *Id.* (quoting Ex. 1011, 8). Petitioner notes that “Jae’s server system . . . ‘record[s] and store[s] the information in the server system, and manage[] it.’” *Id.* (alteration by Board) (quoting Ex. 1038, 8; citing Ex. 1011, claim 4).¹⁵

Based on these teachings, Petitioner asserts that

the components of the server system record and store video and audio captured by outdoor terminal 100 as well as the video and audio calls with outdoor terminal 100 that the server system manages, and thus “record video and audio communication that is transmitted to and from the exterior module,” as claimed.

Pet. 18 (citing Ex. 1002 ¶¶ 158–159).

Petitioner alternatively asserts that it would have been “obvious for Jae’s server system to record any of the audio or video information being transmitted to or managed by the server system, including audio and video calls.” Pet. 18 (citing Ex. 1002 ¶ 159). Petitioner reasons that Jae’s server system “has access to and can record such information using the same components (e.g., hardware/software) that it uses to record other information Jae teaches as being recorded.” *Id.* (citing Ex. 1002 ¶ 159). Petitioner further reasons that such a modification would have been “predictable,” and

¹⁵ In relation to Figure 6, after discussing “the visitor’s image and audio” transmitted information in relation to a telephone call, Jae refers to “such a long-distance audio/video call with the visitor,” implying on this preliminary record that Jae’s system interchanges video and image information. *See* Ex. 1011, 7.

a person of ordinary skill in the art “would have had a reasonable expectation of success” and “would have been motivated to record such information to enable later playback or review of such information for numerous purposes including security, entertainment, or system management.” *Id.* at 19 (citing Ex. 1002 ¶¶ 159, 164).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(d) based on the teachings of Jae and Menard is sufficient for institution purposes.

Limitation 1(e) recites “a playing component that plays video and audio communication recorded by the recording component.” Relying on similar disclosures as discussed in connection with limitation 1(d), Petitioner contends that “Jae’s server system facilitates the playing of recorded video and audio via PCs or mobile phones.” Pet. 29 (citing Ex. 1011, 5–7). Petitioner relies on the following disclosure in Jae as showing access of recorded information from a mobile phone:

The user . . . calls the remote access security system . . . to drive the outdoor terminal 100, and may confirm the images and audio transmitted by the outdoor terminal 100 through the mobile phone; in addition, by connecting to a server system that automatically stores information about visitors, it is possible to check the visitor records stored in the server system from a remote location.

Pet. 20 (quoting Ex. 1011, 8).

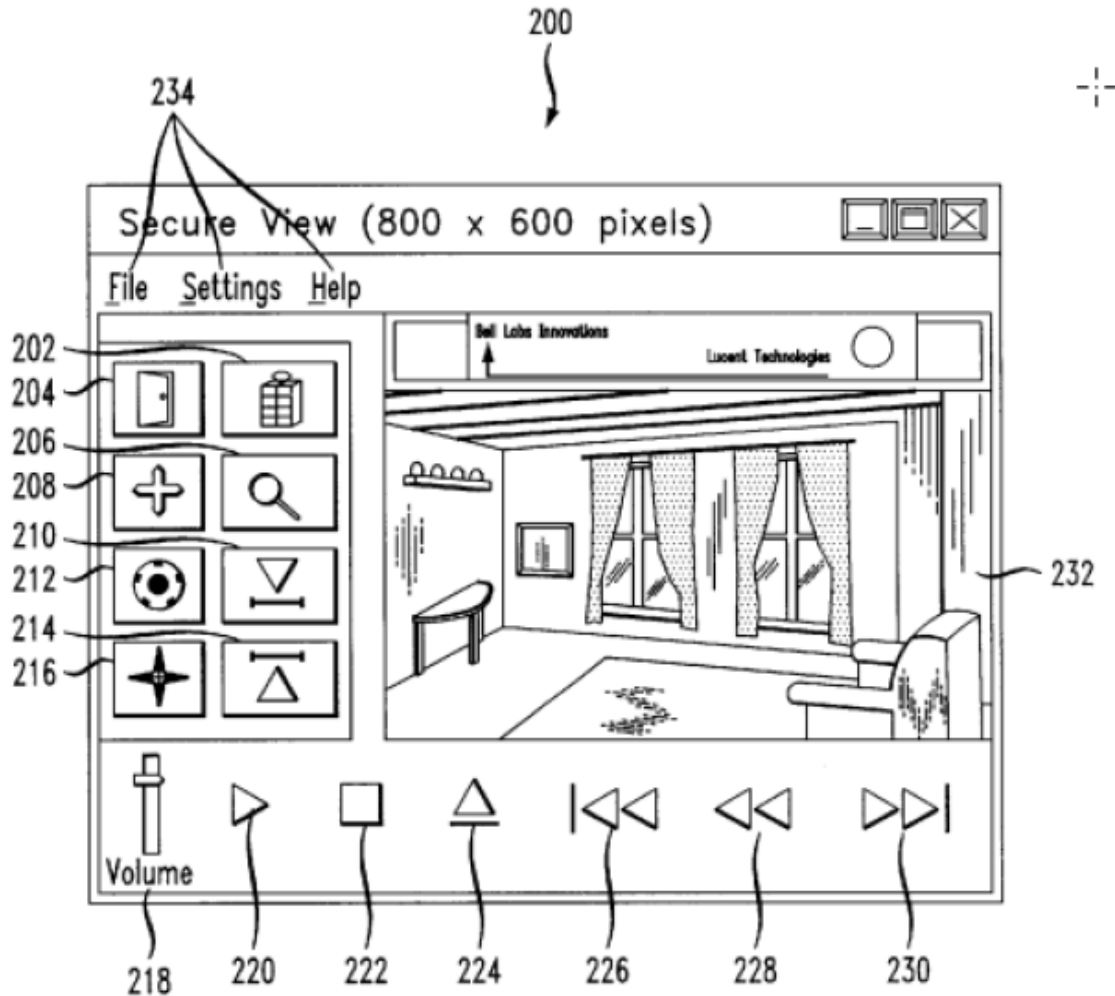
Petitioner alternatively contends that a user may use Jae’s PC to access recorded information on Jae’s server and its website. Pet. 20 (citing Ex. 1002 ¶ 171; Ex. 1011, 7). Based on Jae’s teachings as largely summarized above, Petitioner contends that “any of Jae’s mobile phones, PCs, or server system constitutes a playing component that plays video and audio communications that were recorded and stored by Jae’s server

system.” *Id.* at 19–20 (citing Ex. 1002 ¶ 172). Referring to its related showing as discussed in connection with limitation 1(f) below, Petitioner alternatively contends that it would have been obvious to view recorded information on Jae’s PC as modified to include Vaios’s GUI, which allows viewing of information. *Id.* at 20 (citing Ex. 1002 ¶ 171; Ex. 1011, 7).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(e) based on the teachings of Jae or Jae and Vaios is sufficient for institution purposes.

Limitation 1(f) recites “wherein the software application includes a graphic user interface that enables a user to view images and streaming video from the camera.” Petitioner relies on the combined teachings of Jae and Vaios to address limitation 1(f). Pet. 20–25. Referring to its showing with respect to limitations 1(b), 1(d), and 1(e), Petitioner contends that “Jae’s server system uses a software application to provide a website on which a user may view images/video from camera 110 and perform control actions from a mobile phone or PC.” *See id.* at 20–21. Petitioner notes that Jae states that “users can have video/audio conversations with visitors on the website.” *Id.* at 21 (quoting Ex. 1011, 4). Petitioner also notes that Jae states that “a user can “control video and audio calls with . . . outdoor terminal 100 and access through the website of the server system.” *Id.* (quoting Ex. 1011, 9 (claim 4)). Therefore, according to Petitioner, the software application associated with the website provided by Jae’s server system includes a ‘graphic user interface’ (GUI) at least because it enables a user to view graphic data (e.g., video images) and provide inputs (e.g., to control video/audio calls and access).” *Id.* (quoting Ex. 1002 ¶¶ 175–178).

Petitioner alternatively relies on Vaios as teaching and suggesting a GUI in Jae's system. Vaios's Figure 3 follows:



Petitioner contends that Vaios's "Figure 3 depicts an example GUI provided via 'application specific Internet browser 200.'" Pet. 22 (quoting Ex. 1003, 6:44–45). Petitioner notes that Vaios's display as depicted above includes "icons for controlling the recording and playing of video and audio captured by cameras 10 (e.g., 'volume icon 218,' 'play icon 220,' 'stop icon 222,' 'record icon 224')." *Id.* at 23–24 (quoting Ex. 1003, 8:1–18). Petitioner contends that "[t]his GUI is presented across the Internet via 'browser and application software.'" *Id.* at 22 (quoting Ex. 1003, 7:39–43). Petitioner

quotes Vaios’s description of Figure 3 as follows: “[B]rowser 200 can incorporate application specific functions such as video display, and remote operation of video camera 10. FIG. 3 shows the display screen of browser 200 [which comprises] a video display area 232 . . . where all video images and recordings are visibly displayed.” *Id.* at 23 (alteration in original) (quoting Ex. 1003, 7:40–59).

Petitioner contends that it would have been obvious to add Vaios’s GUI functionality to Jae’s system “to take advantage of the additional playback and recording features specifically included in Vaios’ GUI, thereby providing additional user control and functionality in Jae’s system, as well as improved aesthetics, flexibility, and adaptability.” *Id.* at 24–25 (quoting Ex. 1002 ¶¶ 190–192). Petitioner notes that Vaios teaches “‘live low-quality video streaming,’ and that such video may include a ‘live data stream.’” *Id.* at 21–22 (quoting Ex. 1003, 9:22–25, 9:37–38; citing Ex. 1003, 3:24–30, 9:35–38). Based on this teaching, Petitioner asserts that it would have been obvious “to use streaming to provide faster/real-time playback, without needing to wait for download of an entire video file, and a smooth, continuous playback experience.” *Id.* at 25 (citing Ex. 1002 ¶193; Ex. 1042, 1:14–28). Petitioner also contends that using a GUI similar to that of Vaios in Jae’s mobile phones and PCs “simply combines known elements (e.g., Vaios’ GUI and manner of playing video/audio on a mobile device/remote computing system with Jae’s system) or substitutes use of a GUI for Jae’s interface type in a manner that would have yielded a predictable result with a reasonable expectation of success.” *Id.* at 24 (citing Ex. 1002 ¶¶ 188–189).

After a review of the preliminary record as summarized above, we determine that Petitioner's showing for limitation 1(f) based on the teachings of Jae and Vaios is sufficient for institution purposes.

Limitation 1(g) recites "wherein the software application includes a graphic user interface . . . that (g) enables the coordination of multiple communication devices and user defined responses to prompts and events." Similar to its showing as discussed in connection with limitation 1(f) above, Petitioner asserts that "Jae's server system/website (and associated software/GUI) enable coordination of multiple communication devices." Pet. 25 (citing Ex. 1002 ¶¶ 196–203). That is, Petitioner relies on using multiple cell phones and/or the PC in Jae's system, quoting Jae as follows: "When the visitor presses the call button . . . , it is automatically connected to a designated user's mobile phone among actual users of the space This enables communication with one designated person or, in some cases, all of a plurality of users." *Id.* at 25–26 (alterations in original) (quoting Ex. 1011, 7:29–34).

Petitioner notes that Jae's Figures 6 and 8 show use of multiple cell phone users exchanging audio/video through Jae's remote access security system with a visitor, and multiple cameras 1–3 transmitting video information through Jae's remote access security to cell phones of users 1–3, respectively. *See* Pet. 26–27 (reproducing Ex. 1011, Figs. 6, 8). Based on these teachings and the testimony of Dr. Hochwald (who relies on and cites similar and additional teachings in Jae), Petitioner asserts that "given that Jae's website enables multiple users (via their respective devices) to conduct an audio/video conversation with a visitor via outdoor terminal 100 and view images from multiple surveillance cameras, Jae's website provides a GUI

that ‘enables the coordination of multiple communication devices.’” *Id.* at 27–28 (quoting Ex. 1002 ¶ 202; citing Ex. 1002 ¶¶ 201–203); Ex. 2002 ¶ 202 (testifying that “Jae describes enabling ‘automatic connection to [the] server system through the Internet so that users can have video/audio conversations with visitors on the website and control access.’” (alteration in original) (quoting Ex. 1011, 3:21–22)).

Petitioner also relies on Vaios’s GUI as discussed above in connection with limitation 1(f). Pet. 28–31. For example, Petitioner asserts that

Vaios’ GUI and corresponding software receives video from multiple cameras and enables its viewing from multiple remote devices and further enables the user to selectively control cameras, recordings, playback, etc., in response to the detection of an alarm event and the provision of corresponding prompts such as an alarm notification.

Id. at 30. Petitioner supports this assertion by noting that Vaios’s GUI (*see* Ex. 1003, Fig 3) allows different “users [to] ‘manipulate video camera 10, adjust the image quality, or alter what is seen on video display area 232’ using ‘icons 202–230.’” *Id.* at 29 (quoting Ex. 1003, 7:62–64). In other words, according to Petitioner,

Vaios’ GUI and corresponding software receives video from multiple cameras and enables its viewing from multiple remote devices and further enables the user to selectively control cameras, recordings, playback, etc., in response to the detection of an alarm event and the provision of corresponding prompts such as an alarm notification. This satisfies the limitation that “the software applications includes a graphic user interface...that enables the coordination of multiple communication devices and user defined responses to prompts and events”

Pet. 30 (citing Ex. 1002 ¶¶ 208–215).

According to Petitioner, modifying Jae’s system to include functionality of Vaios’s GUI would have allowed Jae’s users “to submit

commands for controlling cameras, controlling recordings, [and] submitting messages to a visitor, etc.” Pet. 30–31 (citing Ex. 1002 ¶¶ 216–218).

Petitioner contends “[t]his modification would have been predictably and successfully implemented with straightforward software and/or hardware modifications to Jae’s server system given . . . [that persons of ordinary skill in the art] . . . were capable of implementing software and providing software applications/APIs (including GUIs) across networks.” *Id.* at 31 (citing Ex. 1002 ¶ 216–218). In addition to providing selective control by users as noted above, Petitioner also asserts that “the combination offered motivating advantages . . . including the ability to provide user notifications in several ways.” *Id.* (citing Ex. 1002 ¶ 218).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(g) based on the teachings of Jae and Vaio is sufficient for institution purposes.

As summarized above, the preliminary record supports Petitioner’s obviousness showing for purposes of institution. Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contention that claim 1 would have been obvious over Jae, Menard, Monroe, and Vaio.

f) Dependent claims 3, 7, 11, 13–15, and 23

Claims 2–4, 7–10, 12, 13–15, and 23 depend directly or indirectly from independent claim 1. Petitioner contends that these claims would have been obvious over Jae, Menard, Monroe, and Vaio. *See* Pet. 31–45; *supra* note 4 (discussing claim 20). In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.* On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claims 3, 7, 11, 13–15, and 23 to the asserted prior

art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success.

See id.

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claims 3, 7, 11, 13–15, and 23 would have been obvious over Jae, Menard, Monroe, and Vaios.

2. Vaios, Menard, Monroe, Vaios, and Ellis (Ground 2)

Petitioner asserts that claim 12 would have been obvious over Jae, Ellis, Menard, Monroe, and Vaios. Pet. 42–43. On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claim 12 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.*

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claim 12 would have been obvious over Jae, Ellis, Menard, Monroe, and Vaios.

3. Jae, Menard, Monroe, Vaios, and Naidoo (Ground 3)

Petitioner asserts that claim 5 would have been obvious over Jae, Menard, Monroe, Vaios, and Naidoo. Pet. 44–45. On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claim 12 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* In support,

Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.*

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claim 12 would have been obvious over Jae, Menard, Monroe, Vaio, and Naidoo.

4. Jae, Menard, Monroe, Vaio, Nykerk and/or Jacob (Ground 4)

Petitioner asserts that claims 18–20 would have been obvious over Jae, Menard, Monroe, Vaio, with Nykerk and/or Jacob. *See* Pet. 45–48; *supra* note 4 (discussing claim 20). On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claims 18 and 19 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.*

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claims 18–20 would have been obvious over Jae, Menard, Monroe, Vaio, with Nykerk and/or Jacob.

5. Jae, Menard, Monroe, Vaio, and Lands (Ground 5)

Petitioner asserts that claims 1–3, 7, 11, 13–15, and 23 would have been obvious over Jae, Menard, Monroe, Vaio, and Lands. *See* Pet. 48–51; *supra* note 4 (discussing claim 20). On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claims 1–3, 7, 11, 13–15, and 23 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* In support, Petitioner relies on

the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.*

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claims 1–3, 7, 11, 13–15, and 23 would have been obvious over Jae, Menard, Monroe, Vaios, and Lands.

6. Jae, Menard, Monroe, Vaios, Lands, and Ellis (Ground 6)

Petitioner asserts that claim 12 would have been obvious over Jae, Menard, Monroe, Vaios, Lands, and Ellis. Pet. 51. On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claim 12 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* (citing Pet. 42–43). In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.* (citing Pet. 42–43).

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claim 12 would have been obvious over Jae, Menard, Monroe, Vaios, Lands, and Ellis.

7. Jae, Menard, Monroe, Vaios, Lands, and Naidoo (Ground 7)

Petitioner asserts that claim 17 would have been obvious over Jae, Menard, Monroe, Vaios, Lands, and Naidoo. Pet. 51. On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claim 17 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* (citing Pet. 44–

45). In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.* (citing Pet. 44–45).

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claim 12 would have been obvious over Jae, Menard, Monroe, Vaio, Lands, with Nykerk and/or Jacob.

8. *Jae, Menard, Monroe, Vaio, Lands, Nykerk, and Jacob (Ground 8)*

Petitioner asserts that claims 18–20 would have been obvious over Jae, Menard, Monroe, Vaio, Lands, with Nykerk and/or Jacob. *See* Pet. 51–52; *supra* note 4 (discussing claim 20). On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claims 17–20 to the asserted prior art and provides reasons sufficiently supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success. *See id.* (citing Pet. 45–48). In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.* (citing Pet. 45–48).

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claims 18–20 would have been obvious over Jae, Menard, Monroe, Vaio, Lands, with Nykerk and/or Jacob.

9. *Naidoo, Menard, Lands, and Jae (Ground 9)*

Petitioner asserts that claims 1, 3, 7, 11, 13–15, 17, and 23 would have been obvious over Naidoo, Menard, Lands, and optionally Jae. *See* Pet. 52–71; *supra* note 4 (discussing claim 20).

a) *Naidoo*

Naidoo discloses a method for remote monitoring of a premises. Ex. 1005, code (57).

Figure 1 of Naidoo follows:

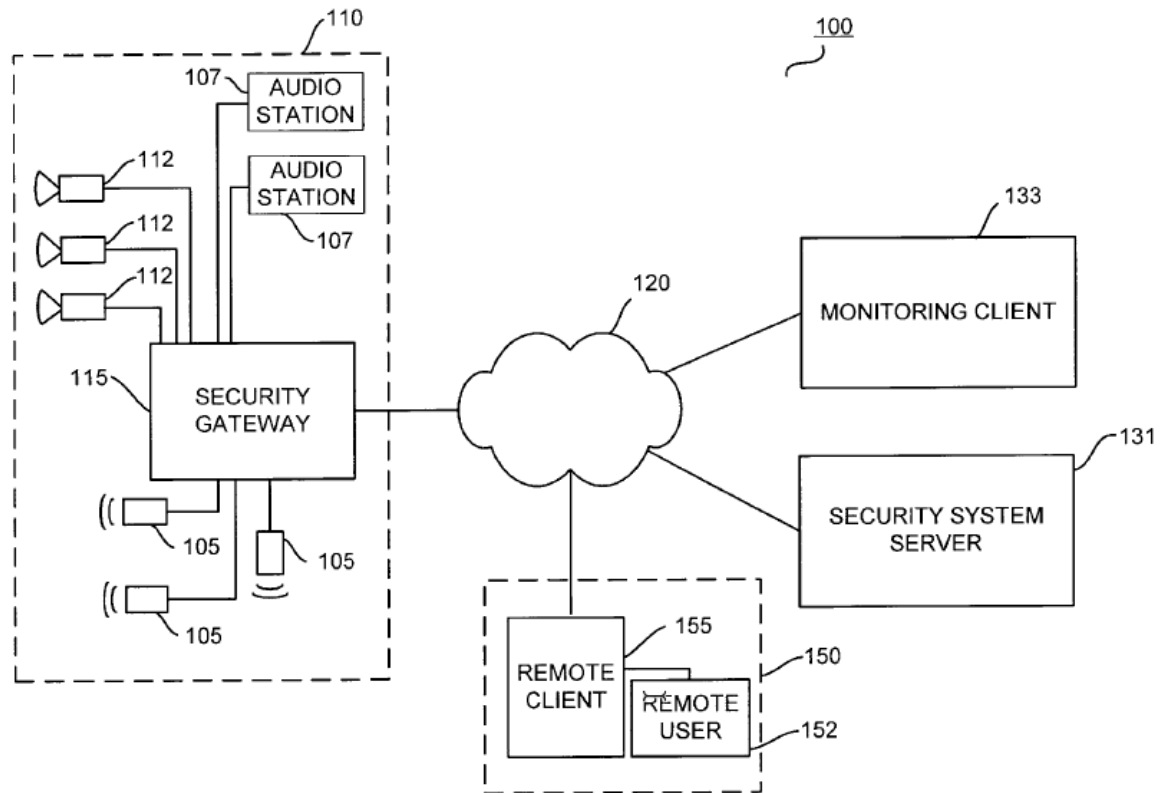


Figure 1 above is a block diagram of “[s]ecurity system 100 [that] comprises security gateway 115, which is typically located at premises 110.” Ex. 1005, 6:20–24. Security system 100 further comprises monitoring client 133 operatively coupled to security gateway 115 through network 120. *Id.* at 6:25–27. Security system 100 further comprises security system server 131 operatively coupled to security gateway 115 through network 120. *Id.* at 6:27–30. Security gateway 115 detects and relays alarm conditions at premises 110 and captures information relating to such alarm conditions. *Id.* at 6:50–52. Upon triggering of an alarm, security gateway 115 sends cached, stored, and live information from pre-event, pre-alarm, and post-alarm segments to security system server 131 for verification and response. *Id.* at 6:52–56.

Security gateway 115 is “operatively coupled to security sensors 105, audio stations 107, and video cameras 112 which are located at premises 110” (“indoors as well as outdoors”). Ex. 1005, 6:59–65. Video cameras 112 and audio stations 107 capture video data and audio data, respectively, from premises 110. *Id.* at 7:32–34. Audio stations 107 may include microphones and speakers that provide two-way communication and a signal for alerting occupants of the premises that communication is occurring. *Id.* at 7:36–40. Naidoo states that “[t]he present invention provides the advantage of using the security system as a platform for two-way audio and video communication.” *Id.* at 4:23–25

b) Claim 1

The preamble of claim 1 recites “[a]n audio-video communication and answering system, said system comprising.” Petitioner asserts that Naidoo discloses the preamble. Pet. 52. In particular, Petitioner points to Naidoo’s disclosure of a “system . . . for the remote monitoring of a premises” using “a platform for two-way audio and video communication.” *Id.* (quoting Ex. 1005, 1:9–11, 4:23–25). Petitioner also relies on Naidoo’s disclosure of its “security gateway operably coupled to at least one camera . . . and . . . at least one audio station at the premises.” *Id.* (quoting Ex. 1005, code (57), 6:64–7:3. *Id.* (quoting Ex. 1011, 3). Petitioner also notes that “Naidoo’s system ‘allow[s] remote user 152 to view audiovisual content from security gateway 115’ and ‘initiate a two-way audio connection with the security gateway 115 so that remote user 152 can communicate through . . . audio stations.’” Pet. 52 (quoting Ex. 1005, 17:64–66, 18:15–20).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for the preamble (even if it is limiting) based on the teachings of Naidoo is sufficient for institution purposes.

Limitation 1(a) recites a “wireless exterior module having a proximity sensor, a video camera, a microphone, a speaker, an RF transmitter, and an RF receiver.” Petitioner relies on the combined teachings of Naidoo and Menard to address limitation 1(a). Pet. 53–56. Petitioner asserts that Naidoo’s “cameras 112 and audio stations 107. . . capture video data and audio data, respectively, from premises 110.” *Id.* at 53 (quoting Ex. 1005, 7:33–35, Fig. 1). Petitioner also relies on Naidoo’s audio sensors 105, which “detect[] certain events” and “include . . . magnetic contact switches, audio sensors, infrared sensors, motion detectors, . . . and carbon monoxide sensors.” *Id.* at 54 (quoting Ex. 1005, 7:13–23). According to Petitioner, [s]ensors 105 and cameras 112 may be wirelessly connected to security gateway 115, which requires RF communications and corresponding RF transmission/reception components.” *Id.* (citing Ex. 1005, 7:22–24, 12:52–53, 15:25–31; Ex. 1002 ¶ 362).

Similar to its showing above in Ground 1, Petitioner also relies on Menard as disclosing “a wireless exterior module (‘exterior module 200D’) including a video camera (‘video camera 370’), proximity sensor (‘proximity detector’), microphone ([‘]intercom 330’), speaker (‘intercom 330’), and RF transmitter and RF receiver (‘transceiver 150’).” Pet. 55 (citing Pet. 8–10); Ex. 1002 ¶ 364).

Petitioner contends it would have been obvious in view of Menard’s teachings to employ its wireless exterior module or “to combine at least some of Naidoo’s cameras, audio stations, sensors, and RF transmitters/receivers within a single device” in Naidoo’s systems for similar reasons to those advanced with respect to Jai and Menard as summarized above. *See* Pet. 55; *supra* § III.D.1.e. Petitioner adds that the combination “would have provided a convenient package for monitoring an entrance and

interacting with visitors” and would “enable a more user friendly, convenient, and easily installable monitoring system (e.g., requiring installation and maintenance of and interaction with a single device instead of multiple devices).” *Id.* at 55–56 (citing Ex. 1002 ¶¶ 368–369).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(a) based on the teachings of Naidoo and Menard is sufficient for institution purposes.

Limitation 1(b) recites “a computerized controller running a software application.” Petitioner contends that “[b]oth Naidoo’s ‘security system server 131’ and ‘monitoring center 133’ constitute a ‘computerized controller running a software application.’” Pet. 55 (quoting Ex. 1005, 45–62, Fig. 1–2, 4; Ex. 1002 ¶¶ 371–377). Petitioner quotes Naidoo as “explain[ing] that ‘components of . . . security system server 131 . . . and . . . central monitoring station 136’ are ‘software programs executable on processor-based devices’ or ‘devices operating under the Microsoft® Windows NT™ operating system.’” *Id.* (quoting Ex. 1005, 15:46–55; citing Ex. 1005, 15:58–63). Petitioner also contends that “[m]onitoring client 133 is a component of ‘central monitoring station 136’ and comprises or is integrated into a ‘software program.’” *Id.* (quoting Ex. 1005, 7:4–5, 16:13–17; citing Ex. 1005, Fig. 12).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(b) based on the teachings of Naidoo is sufficient for institution purposes.

Limitation 1(c) recites “a wireless router, wherein the wireless router enables communication between the exterior module and the computerized controller.” Petitioner contends that “Naidoo discloses a wireless router (‘security gateway 115’/‘network 120’) that enables communication between

the exterior module (cameras 112, audio stations 107, and sensors 105 as combined above [in connection with limitations 1(a) and 1(b)] and the computerized controller (security system server 131 or monitoring client 133).” Pet. 56–57 (quoting Ex. 1005, 6:25–28; citing Ex. 1005, 14:13–17; Ex 1002 ¶¶ 379–390). Petitioner explains that “[b]oth security system server 131 and monitoring client 133 are ‘operatively coupled to security gateway 115 through . . . network 120,’” and “[n]etwork 120 may be the Internet or other networks.” *Id.* at 57 (quoting Ex. 1005, 6:25–29; citing Ex. 1005, 6:30–38). Petitioner further explains that

security gateway 115 is a router at least because it routes data received from multiple local devices (e.g., cameras, audio stations, sensors) via a local network to remote devices across a different external network (e.g., the Internet) and managed network address associations and directed traffic between these network addresses.

Id. (citing Ex. 1002 ¶¶ 386–387). To further support its showing, Petitioner submits that Monroe “confirms that such a gateway is . . . a router.” Pet. 57 (citing Ex. 1002 ¶¶ 388–390; Ex. 1038, 17:30–35, 18:62–19:10).

Petitioner also contends that “[s]ecurity gateway 115 facilitates wireless communications, and thus is equivalent to a ‘wireless router’ (Pet. 57 (quoting Ex. 1002 ¶ 386)), where Naidoo states that “communications interface 340” serves as the gateway to “communications networks [including] wireless networks” (*id.* (quoting Ex. 1005, 14:13–17; citing Ex. 1005, Fig. 3)).¹⁶

¹⁶ The ’644 patent states that “[i]t is important . . . that *the claims be regarded as including . . . equivalent constructions* in so far as they do not depart from the spirit and scope of the present invention.” Ex. 1001, 7:31–34 (emphasis added).

After a review of the preliminary record as summarized above, we determine that Petitioner's showing for limitation 1(c) based on the teachings of Naidoo and Monroe is sufficient for institution purposes.

Limitation 1(d) recites "a recording component that records video and audio communication that is transmitted to and from the exterior module." Petitioner contends that Naidoo's server system discloses or renders obvious limitation 1(d) based further on teachings in Land and/or Jae. *See* Pet. 58–61. Petitioner reads the claimed "recording component" onto Naidoo's "video module 320 and audio module 330 (and associated memory to which recorded audio and video is stored) as well as media handler 415, which each record video and audio transmitted from exterior modules." Pet. 58 (citing Ex. 1005, 6:45–50, 7:50–54, 13:25–14:12; Ex. 1002 ¶¶ 396–407).

Petitioner relies on Naidoo's statements that "[v]ideo module 320 [is] configured to record video, or portions thereof," and "audio signals detected by microphone(s) 334 are recorded through audio module 330." Pet. 58 (alterations in original) (quoting Ex 1005, 13:36–37, 14:4–7; citing Ex. 1005, 13:52–59). Petitioner also contends that media handler 415 of security system server 131 "receives and stores video and audio data associated with alarm conditions from security gateway 115." *Id.* at 58–59 (quoting 16:64–66).

Petitioner contends that it would have been obvious to use "these same recording components to record data (including both audio and video) transmitted to an exterior module" based on teachings in Lands for reasons similar to those advanced with respect to the grounds based on Jae and Lang. *See* Pet. 59 (citing Ex. 1002 ¶ 408); 17–18 (providing reasons for combining Jae and Lang); 49–50 (same), 59–60 (providing reasons for combining Naidoo and Lang (citing Ex. 1002 ¶¶ 408–409; Pet. 49–50)); *supra*

§ III.D.1.e. As an example, Petitioner contends that “the combination offered motivating advantages including allowing for later review/playback of such recordings and alarm verification.” *Id.* at 60.

Noting that Patent Owner “asserts that this limitation requires only the recording of audio transmitted to the exterior module,” Petitioner contends that “Naidoo discloses two-way audio communications between audio stations 107 or security gateway 115 and either remote users 152 (via remote clients 155) or monitoring client 133.” Pet. 59 (citing Ex. 1005, 4:23–26, 7:36–39, 14:50–59, 16:13–17, 18:15–24; Ex. 1002 ¶¶ 397–399; Ex. 1039); *see also supra* note 14 (discussing Ex. 1039). Petitioner also contends that Lands teaches recording two-way radio communications. *Id.* (citing Pet. 48–49).

Petition also asserts that even “[i]f this limitation is interpreted as requiring the recording of audio and video transmitted to the exterior module, this was further obvious in view of Jae and Lands,” where “Naidoo and suggest two way video communication,” and Jae “teaches two-way audio and video communication.” Pet. 60 (citing Ex. 1005, 3:53–55; Ex. 1002 ¶¶ 411, 414–415; Pet. 17). To support this showing, Petitioner contends that “Jae’s ‘server system’ provides an interface by which users can ‘control video and audio calls with the outdoor terminal 100.’” *Id.* (citing Ex. 1011, 9:31–39, claim 4; 1, 3, 4; Ex. 1002 ¶ 131). Petitioner also relies on Jae as teaching that with the interface, “users can have video/audio conversations with visitors on the website.” *Id.* (quoting Ex. 1011, 3).

Petitioner contends that it would have been obvious “to modify Naidoo’s system to enable similar video calls as taught in Jae and to record such calls in view of Land’s teaching of recording two-way calls.” Pet. 60 (citing Ex. 1002 ¶¶ 411, 416–417). Petitioner contends

[t]his modification would have yielded predictable results with a reasonable expectation of success given that no more than routine engineering work and known devices (e.g., incorporation of video calling components such as a video phone or PC for the remote client 155 and a camera/display in the exterior module) would be required to implement video calling and recording.

Pet. 61 (citing ¶¶ 412–413, 416). Petitioner asserts that using video calling in the combination would have “provide[d] a more personally engaging conversation that improves communication and to allow remote users to better interpret the intentions of a visitor,” and recording of same “would have enabled later playback or review of such information for a variety of purposes including for security reasons, entertainment reasons, or system management reasons.” *Id.* (citing Ex. 1002 ¶ 417).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(d) based on the teachings of Naidoo and Menard and optionally, Lands and/or Jae, is sufficient for institution purposes.

Limitation 1(e) recites “a playing component that plays video and audio communication recorded by the recording component.” Petitioner asserts that Naidoo discloses a playing component (e.g., any of web interface 432 and/or application server 434 of security system server 131, remote client 155, monitoring client 133) that plays video and audio communication recorded by the recording component.” Pet. 61–62 (citing Ex. 1002 ¶¶ 419–429; Ex. 1005, 7:10–32, 5:6–15, 6:2–10).

To support this showing, Petitioner quotes Naidoo as stating that “[w]eb interface 432 provides . . . remote users 152 with the ability to . . . view and hear live and recorded media from premises 110.” Pet. 62 (second and third alterations in original) (quoting Ex. 1005, 17:29–33; citing

Ex. 1005, 17:29–41, 17:64–18:9 (“application server 434 . . . allow[s] remote client 152 to view audiovisual content from security gateway 115 [and] access features [such as] reviewing alarms and recordings”; Ex. 1002 ¶ 422)). Petitioner contends that clients 155 include interface 432, further noting that Naidoo states that “remote client 155 includes a web browser-based video client for accessing audio and video data.” *Id.* at 62 (quoting Ex. 1005, 10:18–20; citing Ex. 1005, 17:29–41, 17:64–18:9).

Petitioner additionally relies on Naidoo’s monitoring client 133 as playing video and audio communications recorded by security gateway 115. Pet. 62 (citing Ex. 1005, 16:13-67; Ex. 1002 ¶¶ 425–428).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(e) based on the teachings of Naidoo is sufficient for institution purposes.

Limitation 1(f) recites “wherein the software application includes a graphic user interface that enables a user to view images and streaming video from the camera.” Petitioner contends that this limitation reads on software running on Naidoo’s security system server 131 and/or monitoring client 133. Pet. 63–65.

With respect to security server 131, Petitioner contends that “Naidoo’s security system server 131 includes ‘web interface 432,’ which ‘provides . . . remote users 152 with the ability to view and edit account information, arm and disarm security system 100, and view and hear live and recorded media from premises 110, all through a network-based interface’ such as an Internet website.” Pet. 63 (quoting Ex. 1005, 17:29–35; citing Ex. 1005, 18:57–37). Petitioner contends that Naidoo’s “[a]pplication server 434’ of security system server 131 ‘provides and/or facilitates the features available

to remote client 155 through web interface 432.” *Id.* (quoting Ex. 1005, 17:35–37). Petitioner explains further as follows:

“Application server 434” and “web interface 432” are software programs of security system server 131. *See id.*, 15:45–55; EX1002, ¶432. Security system server 131 thus includes a software application that provides a GUI via web interface 432, given that web interface 432 enables a user to view graphics (e.g., “live and recorded media”) and allows a user to provide inputs (e.g., to edit account information and arm/disarm security system 100). EX1002, ¶¶432–436.

Pet. 63. Petitioner also relies on Naidoo’s system as allowing clients to view images and streaming video from cameras as further evidence of a GUI for facilitating such viewing and control:

For example, “application server 434 . . . allow[s] remote client 152 to view audiovisual content from security gateway 115.” EX1005, 17:64–66, 18:11–14. “Cameras 112 and audio stations 107 continuously transmit audiovisual data to security gateway 115 for . . . streaming to a remote user 152 or security system server 131.” *Id.*, 7:50–54 (emph. added); *see also id.*, claims 29, 48.

Pet. 63–64.

Petitioner relies on similar evidence with respect to monitoring clients to show that Naidoo implicitly discloses the claimed GUI:

“Monitoring client 133 . . . comprises a software program . . . to display . . . information provided by security gateway 115.” EX1005, 7:4–6. “Security system server 131 . . . transmits . . . alarm notification and audiovisual information . . . to . . . monitoring clients 133, where such information and video may be displayed for a monitoring operator to determine if an alarm condition exists.” *Id.*, 12:12–17; *see also id.*, 8:37–49. “Monitoring client 133 . . . display[s] video and images transmitted from security gateway 115 in real-time.” *Id.*, 16:13–17. Thus, images and video from Naidoo’s cameras are displayed to individuals at monitoring client 133. EX1002, ¶¶437–439. Providing real-time video to monitoring client 133

includes streaming video. *Id.*, ¶439; *see also* EX1005, 16:40–45, 13:46–49, claims 29, 48. Alternatively, it was obvious for the real-time video displayed by monitoring client 133 to be streamed for the reasons discussed above. *Supra*, 36–37.

In addition to displaying video, monitoring client 133 allows users to “submit control messages (for selecting cameras, microphones, and speakers . . .).” EX1005, 16:33–45; *see also id.*, 17:14–29. Accordingly, the software application associated with monitoring client 133 provides a “graphic user interface” at least because it allows users to view graphic data (e.g., video images) and allows users to provide inputs (e.g., submit control messages). EX1002, ¶437.

Pet. 64–65.

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(d) based on the teachings of Naidoo is sufficient for institution purposes.

Limitation 1(g) recites that the GUI “enables the coordination of multiple communication devices and user defined responses to prompts and events.” Similar to its showing for limitation 1(f), Petitioner contends that limitation 1(g) reads on Naidoo’s “[s]oftware applications/GUIs of each of security system server 131 and monitoring client 133.” Pet. 65 (citing Ex. 1002 ¶¶ 449–464). Petitioner contends that Naidoo’s system provides for coordinating multiple users 152 and/or multiple monitoring clients 133 and their respective devices 155 via their control of, including viewing of video from, multiple cameras through software distributed by security gateway 115 and security system server 131. *See id.* at 66–70 (citing Ex. 1005, 5:33–43, 6:57–7:3, 7:33–40, 9:41–10:14, 10:63–11:25, 12:12–17, 16:14–17, 16:33–45, 17:14–29, Fig. 1; Ex 1002 ¶¶ 458–463.).

Petitioner quotes Naidoo’s description of control of video viewing by one of the plurality of monitoring clients as follows: “[I]n response to an

occurrence of an alarm condition, . . . monitoring personnel at said monitoring client have control over said . . . cameras and/or said . . . audio stations.” Pet. 70 (alterations except first in original) (quoting Ex. 1005, claim 51). Petitioner also contends that monitoring clients 133 include a GUI interface for two-way communications and control. *See id.* 70–71 (citing Ex. 1005, 14:50–59, 59, 17:9–22 (“[M]edia handler 415 may relay control and configuration data destined for security gateways 115 [which] may originate . . . from an operator . . . through monitoring client 133.”), 17:64–18:24). In other words, Petitioner contends that monitoring clients 133 “submit control messages (for selecting cameras, microphones, and speakers . . .)” and “for arming and disarming partitions” and “bypassing zones” via an implicit GUI. *Id.* at 71 (quoting Ex. 1005, 16:41–43, 17:20–21; citing Ex. 1005, 16:33–46, 17:14–28).

After a review of the preliminary record as summarized above, we determine that Petitioner’s showing for limitation 1(g) based on the teachings of Naidoo is sufficient for institution purposes.

As summarized above, the preliminary record supports Petitioner’s obviousness showing for purposes of institution. Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claim 1 would have been obvious over Naidoo, Menard, Lands, and optionally Jae.

c) Claims 3, 7, 11, 13–15, 17, and 23

Petitioner asserts that claims 3, 7, 11, 13–15, and 23 would have been obvious over Naidoo, Menard, Lands, and optionally Jae. *See* Pet. 72–79; *supra* note 4 (discussing claim 20). On this preliminary record, for purposes of institution, Petitioner sufficiently maps the limitations of claims 1–3, 7, 11, 13–15, and 23 to the asserted prior art and provides reasons sufficiently

supported by factual underpinnings to combine the reference teachings with a reasonable expectation of success.¹⁷ *See id.* In support, Petitioner relies on the testimony of Dr. Hochwald and provides citations to the reference teachings. *Id.*

Accordingly, we determine that Petitioner shows a reasonable likelihood that it would prevail with respect to its contentions that claims 1–3, 7, 11, 13–15, and 23 would have been obvious over Naidoo, Menard, Lands, and optionally Jae.

10. Grounds 10–14

Given our decision to institute on at least one claim, it is not necessary to discuss Grounds 10–14 further on this preliminary record.¹⁸

IV. CONCLUSION

After considering the evidence and arguments of record, we determine that Petitioner has demonstrated a reasonable likelihood of success with respect to at least one of the challenged claims. Accordingly, an *inter partes* review of all of the claims and all of the grounds presented in the Petition is hereby instituted. *See* 37 C.F.R. § 42.108(a).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claims or any underlying factual or legal issues. The final determination will be based on the record as developed during the *inter partes* review.

¹⁷ For the reasons discussed above (note 4), the Petition implicitly challenges claim 20 with its ground challenging claim 18, i.e., Ground 11. *See* Pet. 77, 79–80.

¹⁸ For the reasons discussed above (note 4), the Petition implicitly challenges claim 20 with its ground challenging claim 18, i.e., Ground 14. *See* Pet. 82–83.

V. ORDER

In consideration of the foregoing, it is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of the challenged claims of the '644 patent is instituted with respect to all grounds set forth in the Petition;

FURTHER ORDERED that Petitioner shall review the grounds as stated in the Table for this Institution Decision and notify the Board and Patent Owner within seven (7) calendar days of any error, to include, in the opinion of Petitioner, any missing or omitted ground of unpatentability. Such notice should be filed as a Paper titled "Corrected Grounds of Unpatentability" showing a complete table listing all challenge grounds and highlighting any correction. The notice should further indicate where the correction is supported in the Petition; and,

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '644 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

PETITIONER:

Michael R. Houston
Nicholas Lagerwall
FOLEY & LARDNER LLP
mhouston@foley.com
nlagerwall@foley.com

PATENT OWNER:

Gary R. Sorden
COLE SCHOTZ P.C.
gsorden@coleschotz.com