

**UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

ROKU, INC.,
Petitioner,

v.

ECOLINK INTELLIGENT TECHNOLOGY, INC.,
Patent Owner.

Case IPR2023-00792
Patent No. 10,692,340

PATENT OWNER'S RESPONSE

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Exhibit No.	Description
2001	U.S. Patent App. Pub. No. 2013/0257611
2002	USPTO Assignment Record for U.S. Patent App. Pub. No. 2013/0257611
2003	Declaration of James Parker in Support of Patent Owner's Response
2004	Transcript of the January 25, 2024 Deposition of Bruce McNair

I. INTRODUCTION

Petitioner Roku, Inc. (“Petitioner”) has petitioned for *Inter Partes* Review of Claims 1-2, 6, 11-12, and 16 (the “Claims”) of U.S. Pat. No. 10,692,340 (“the ‘340 patent”), which is owned by Patent Owner Ecolink Intelligent Technology, Inc. (“PO”). The Board should confirm the patentability of the Claims because Petitioner has failed to meet its burden of proving that the Claims are unpatentable as obvious.

First, the Petition applies an incorrect construction of the term “alarm signal,” which appears in each of the Claims.

Second, Petitioner has failed to show that the asserted prior art references, either alone or in combination, disclose, teach, or suggest every limitation of the Claims.

Third, Petitioner has failed to identify sufficient reasons why a person of ordinary skill in the art (“POSITA”) would have been motivated to combine the asserted references to arrive at the claimed inventions.

Fourth, Petitioner has failed to support its obviousness positions with the testimony of a POSITA.

PO respectfully requests that the Board confirm the patentability of the Claims.

II. BACKGROUND

A. The '340 Patent And The Claims.

The '340 patent, entitled "Smart Barrier Alarm Device," was issued on June 23, 2020 from U.S. Patent Application No. 16/200,172 (filed November 16, 2018). (EX1001, [21], [22], [45], [54].)

The '340 patent and the Claims generally relate "to a barrier alarm device that helps reduce the occurrences of false alarms." (*Id.*, 1:16-18.) According to the '340 patent, "[o]ne problem with [prior art] security systems is the relatively frequent occurrence of false alarms." (*Id.*, 1:44-45.) "Often times, occupants forget that the security system is armed, and when they open a door or a window, a false alarm is triggered. These false alarms sometimes cause a response by police or fire personnel, wasting valuable public resources. ... Further, occupants are often startled if a local siren is triggered inside the home, because the siren is deliberately designed to be very loud." (*Id.*, 1:49-57.) The '340 patent recognized the need for "a security system that allows occupants to open doors or windows while the security system is in an armed, 'home' mode of operation, without triggering an immediate, startling, audible alarm caused by a local siren." (*Id.*, 1:58-62.)

The '340 patent created "a barrier alarm device" that comprises "a human detection device that detects the presence of a human being in proximity to the barrier alarm device, either inside or outside of monitored premises." (*Id.*, 4:7-10.)

If a home's occupant "opens a monitored door or window while [the] security system is armed, an alarm will not immediately be triggered if the barrier alarm device senses the [occupant is] inside the structure in proximity to the barrier that was opened." (*Id.*, 4:11-16.) "Instead, a timed alarm signal is generated by the barrier alarm device and transmitted to a security panel which, in response, start[s] a countdown timer that allows a person to cancel a security response from occurring if a certain action is taken before the countdown timer expires." (*Id.*, 4:16-20.) "This new barrier alarm device operates on the principle that if a door or window is opened and a person is detected nearby the barrier alarm device on the inside of the premises, it is assumed that the person is authorized to be inside the premises, and a security response should not be immediately generated when the door or window is opened, allowing an authorized person time to cancel the security response." (*Id.*, 4:21-27.)

The '340 patent also created "a central security panel ... comprising a communication interface for receiving signals from a barrier alarm device..." (*Id.*, 2:22-24.) The central security panel "receive[s] a first alarm signal from [the] barrier alarm device ... indicative of [a] barrier being opened and that a human being is inside the monitored premises and in proximity to the barrier..." (*Id.*, 2:28-32.) In response to receiving the first alarm signal, the central security panel "begin[s] monitoring an elapsed time from when the first alarm signal was received..." (*Id.*, 2:33-34.) If the elapsed time exceeds a certain period of time, the central security

panel “generate[s] a security response, and provide[s] the security response to a receiver via the communication interface.” (*Id.*, 2:34-39.)

Claims 1 and 11 are directed to a barrier alarm device comprising a barrier status detection device and a human detection device. (*Id.*, claims 1 and 11.) When the barrier status detection device indicates that a barrier monitored by the barrier alarm device has been opened, the barrier alarm device responds by determining whether the human detection device indicates that a person is inside the monitored premises in proximity to the barrier. (*Id.*) The barrier alarm device will transmit a timed alarm signal to a receiver associated with a security panel only when it is determined that a person is inside the premises in proximity to the barrier. (*Id.*)

Dependent Claims 2 and 12, which depend on Claims 1 and 11, respectively, specify that the barrier alarm device transmits an immediate alarm signal to the security panel when a barrier monitored by the barrier alarm device has been opened and a human has not been detected inside the premises in proximity to the barrier. (*Id.*, claims 2 and 12.)

Claims 6 and 16 are directed to a central security panel comprising a communication interface for receiving signals from a barrier alarm device that monitors a barrier of the premises. (*Id.*, claims 6 and 16.) The central security panel receives a first alarm signal from the barrier alarm device indicating that a barrier of the premises has been opened, and responds to the first alarm signal by determining

whether a person has been indicated to be inside the premises in proximity to the barrier. (*Id.*) When a measured elapsed time exceeds a predetermined period of time (or, alternatively, when a countdown timer expires), the central security panel initiates a security response and provides the security response to a receiver via the communication interface. (*Id.*)

B. The Level Of Ordinary Skill In The Art.

Petitioner asserts that “a POSITA would have had a bachelor’s degree in computer science, in electrical engineering, or a related field, and approximately two or more years of experience or equivalent study in sensor systems.” (Petition, 12.)

Petitioner’s definition of a POSITA is wrong. The ‘340 patent expressly states that the “present application relates to the field of home and business security.” (EX1001, 1:15-16; EX2004, 12:14-16; EX1003, ¶ 50.) Petitioner’s definition of a POSITA does not reference the appropriate field of art and encompasses individuals that have experience with sensor systems for completely different applications or for only a single component of a security or alarm system. (EX2003, ¶ 31.)¹ An individual with experience in sensors systems for speech recognition applications, for example, would not have been considered a POSITA with respect to the ‘340 patent. (*Id.*)

¹ A sensor is merely one input or component of a security or alarm system. (*Id.*)

Considering the '340 patent's field of art and the sophistication of the disclosed technology, a POSITA would have had at least a bachelor's or equivalent degree in electrical or electronic engineering or an equivalent field, and three or more years of commercial design and development experience in residential or business *security and alarm systems*. (*Id.*, ¶ 34.)

C. Petitioner's Asserted Prior Art References.

1. U.S. Patent App. Pub. No. 2016/0247370 ("Lamb")

Lamb is generally directed to a "barrier alarm device for reducing the number of false alarms that may occur in a home security system." (EX1009, Abstract.) The "barrier alarm device, such as a door or window sensor, determines whether a barrier, such as a door or a window, has been opened, [and] determines whether a human being is in proximity to the door or window inside a monitored premises." (*Id.*) If a door or window is opened and a person is detected near the barrier alarm device on the inside of the premises, the barrier alarm device assumes that the person is authorized to be inside the premises and sends a bypass signal or does nothing. (*Id.*; *see also id.*, [0018].) Petitioner concedes that Lamb does not disclose or suggest "a timed alarm signal," "measuring of an elapsed time from when [a] first alarm signal was received," and "starting a countdown timer." (Petition, 6.)

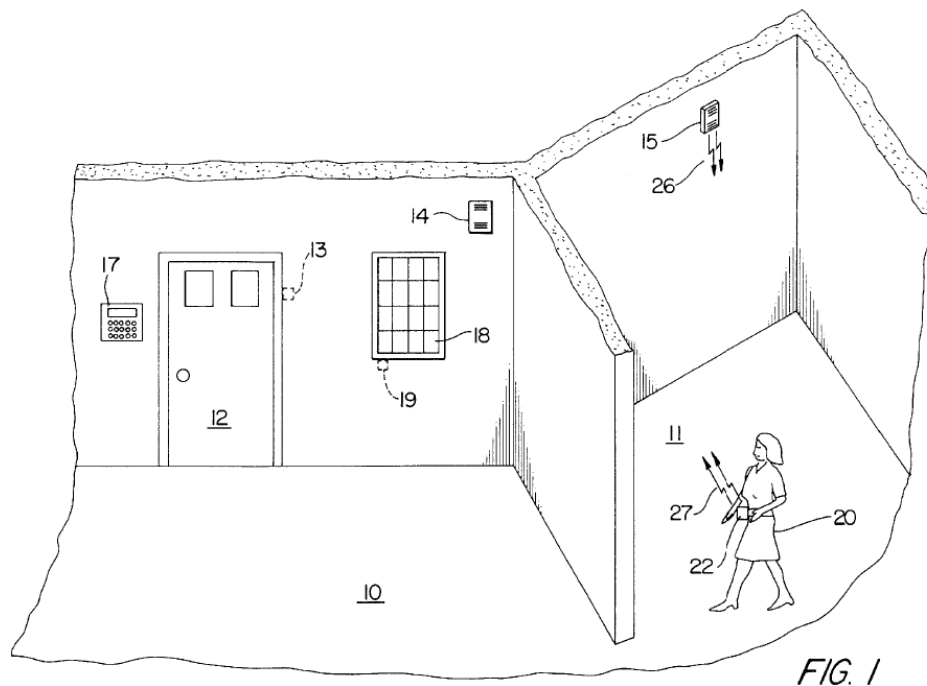
2. U.S. Patent No. 6,057,764 ("Williams")

Williams is generally directed to "an alarm system [that] includes one or more motion detectors dispersed in diverse parts of a secure space, each sensor having a

receiver associated therewith.” (EX1010, 1:54-57.) To “permit[] free utilization of the space by authorized persons and pets, while retaining security against intruders,” Williams devised a “portable device” to be worn by authorized users (including pets) “within the secure space when the alarm system is on.” (*Id.*, 1:44-53, 1:57-59, 2:25-38.) The “portable device” may be a badge, collar, bracelet, clip-on, etc. (*Id.*, 1:62-63, 2:25-34.)

According to Williams, “each activation of a motion detector causes a corresponding transceiver to inquire, by an electromagnetic transmission, whether or not there is an authorized user in the space.” (*Id.*, 1:64-67.) Assuming the motion detector is activated by an authorized person (or pet) carrying William’s “portable device,” the “portable device” responds to the electromagnetic inquiry by transmitting an “authorization code.” (*Id.*, 2:1-2, 2:25-31.) “[R]eceipt of an authorization code from one of the personal devices will negate treating the triggering of the motion detector as a violation of the secure space.” (*Id.*, 1:60-62.)

Figure 1 of Williams, which is reproduced below, illustrates “a pair of rooms in a house including an alarm system according to the present invention” (*id.*, 2:45-47):



(*Id.* at FIG. 1.)

When motion detector 15 senses motion of person 20, “an interrogation by electromagnetic radiation or acoustic vibrations, as indicated by the arrows 26, will be received by the portable device 22.” (*Id.*, 3:9-13.) The portable device 22 “in turn will respond with electromagnetic radiator or acoustic vibrations in like kind with the transmission of the motion detector 15, the transmission from the device 22 including a code to authenticate the authority of the user to be within the secure space while the alarm is on.” (*Id.* 3:13-18.)

3. Lamb And Williams Are Fundamentally Different.

Lamb and Williams are fundamentally different. Several of these fundamental differences are discussed in detail below.

First, Lamb's and Williams' systems operate in fundamentally different ways. Lamb discloses a barrier alarm device that receives and processes *two device inputs* (*i.e.*, inputs from a human detection device and a barrier status detection device) and responds in *different ways* depending on the two received inputs. (EX1009, FIG. 5, [0030], [0033]-[0035]; EX2003, ¶ 149.) When the barrier alarm device receives and processes a signal indicating that a barrier (*e.g.*, a window) has been opened, the barrier alarm device will process a signal received from the human detection device to determine whether a person is inside the premises in proximity to the barrier. (*Id.*, FIG. 5, [0037].) If a person is determined to be inside the premises in proximity to the barrier, the barrier alarm device will either do nothing or will transmit a bypass signal to the security panel. (*Id.*, [0038], [0040].) If, however, a person is not determined to be inside the premises in proximity to the barrier, the barrier alarm device will transmit an alarm signal to the security panel. (*Id.*, [0037], [0041].)

Williams, on the other hand, discloses an alarm system that comprises alarm switches (13, 19), motion detectors (14, 15), and a control panel (17). (EX1010, FIG. 1, 2:66-3:6.) In Williams, each activation of an alarm switch or motion detector will cause an inquiry signal to be transmitted to determine if there is an authorized personal device in the space. (*Id.*, FIG. 2, 1:64-2:3, 3:9-24, 3:34-38, 3:60-67; EX2003, ¶ 150.) Unlike Lamb's barrier alarm device, Williams' alarm system does not receive and process two device inputs and respond in different ways

depending on the two received device inputs. Rather, Williams' alarm system responds to a *single device input* (i.e., any activation of an alarm switch or motion detector) in the *same way* (i.e., by transmitting an inquiry signal). (*Id.*)

Lamb discloses a barrier alarm device that “operates on the principle that if a door or window is opened and a person is detected nearby the barrier alarm device on the inside of the premises, it is assumed that the person is authorized to be inside the premises, and an alarm signal should not be generated when the door or window is opened.” (EX1009, [0018]; *see also id.*, [0029].) Thus, in Lamb's system, an authorized user does not need to do anything to prevent false alarms because the system will automatically refrain from sending an alarm signal (or will send a bypass signal) when a door or window is accidentally opened. (*Id.*; EX2003, ¶ 151)

In Williams' system, on the other hand, a user must wear a “personal device 22” to prevent a false alarm from being triggered. (EX1010, 1:54-2:10, 2:25-34; EX2003, ¶ 152.) If, for example, the user forgets to wear the “personal device 22” or the “personal device 22” runs out of battery, then there is nothing to prevent a false alarm from being triggered. (*Id.*)

Second, Lamb's and Williams' systems operate under fundamentally different assumptions. Lamb discloses that its “barrier alarm device operates on the principle that if a door or window is opened and a person is detected nearby the barrier alarm device on the inside of the premises, it is assumed that the person is authorized to be

inside the premises, and an alarm signal should not be generated when the door or window is opened.” (EX1009, [0018]; *see also id.*, [0029].) Williams, on the other hand, discloses that any movement inside the premises is treated as a potential alarm. (EX1010, 1:64-2:3, 3:9-38.) Lamb’s system operates under the assumption that motion detected inside a premises is indicative of a person *authorized* to be inside the premises, while Williams’ system operates under the assumption that any motion detected inside a premises is indicative of a person that is *unauthorized* to be inside the premises unless, and until, a “personal device 22” indicates otherwise. (EX2003, ¶ 154; EX1009, [0018], [0029]; EX1010, 1:64-2:3, 3:9-38.)

Third, Lamb’s and Williams’ systems are intended to accomplish fundamentally different goals. Lamb expressly discloses that its goal is to provide “a barrier alarm device that helps reduce the occurrences of false alarms.” (EX1009, [0002].) Williams, on the other hand, discloses that its goal is to provide “greater security.” (EX1010, 1:46-53.) It was well known that attempts to “increase the security” of an alarm system, whether successful or not, typically resulted in an increased occurrence of false alarms. (EX2003, ¶ 156.) Williams’ goal of providing “greater security” directly conflicts with Lamb’s goal of reducing false alarms. (*Id.*)

4. U.S. Patent No. 7,696,873 (“Sharma”)

Sharma is generally directed to a method and apparatus for automatically disarming a security system to prevent false alarms. (EX1011, [54], 1:7-9.)

Sharma's security system 100 includes door sensing units 104-108 configured to monitor doors 112-116, and window sensors 142 and 144 configured to monitor windows 156 and 158. (*Id.*, 3:1-20.) A first door sensing unit 104 has an RF transceiver 170, a door contact 172, a motion detector 174, a memory 173, and a processor 175. (*Id.*, 4:50-58.)

Sharma's security system 100 can be set to an "Armed Stay Mode" that protects the premises "from unwanted persons coming in from the outside while still allowing people to leave the facility without generating a false alarm." (*Id.*, 7:26-37.) In the "Armed Stay Mode," the motion detector 174 of the first door sensing unit 104 "monitors the area within the perimeter 140 proximate to the inside of the first door 112 for motion." (*Id.*, 7:47-49.) If the first door 112 is opened, the processor 175 of the first door sensing unit 104 "determines whether the motion detector 174 has detected motion within the perimeter 140." (*Id.*, 7:52-58.)

If motion is detected within the perimeter 140 when the first door 112 is opened, a "door open signal is not sent to the system control panel 102 and an alarm is not generated." (*Id.*, 8:1-5.) Instead, the system 100 "may enter a Timed Exit Mode for a predetermined amount of time" wherein the processor 175 of the first door sensing unit 104 "may ignore the door control signal and/or disable the door contact 172." (*Id.*, 8:10-15.) "The Timed Exit Mode allows people to leave the house or facility without having to interact with the system 100." (*Id.*, 8:19-21.)

Sharma's Figure 5 is a flowchart showing the "Armed Stay Mode":

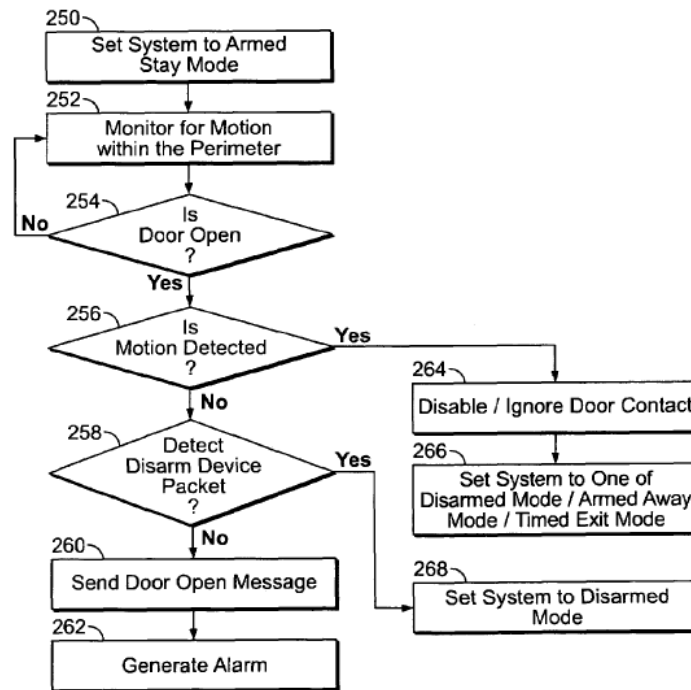


FIG. 5

(*Id.*, FIG. 5.)

III. LEGAL STANDARDS

In an *Inter Partes* Review, the Petitioner bears the burden of persuasion to prove unpatentability by a preponderance of the evidence. *Dynamic Drinkware, LLC v. Natl. Graphics, Inc.*, 800 F.3d 1375, 1379 (Fed. Cir. 2015). To establish a *prima facie* case of obviousness, the petitioner must show “how the prior art references, either alone or in combination, teach or suggest the claimed invention.” *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993). The petitioner must also demonstrate “that a skilled artisan would have had reason to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would

have had a reasonable expectation of success from doing so.” *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, 676 F.3d 1063, 1068-69 (Fed. Cir. 2012).

The Board “will not consider arguments and information that are not presented and developed in the Petition...” *See DIRECTV, LLC v. Qurio Holdings, Inc.*, Case IPR2015-02007, Paper No. 6 at 14 (PTAB April 4, 2016). “[T]he Board is not bound by any findings made in its Institution Decision.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016).

IV. CLAIM CONSTRUCTION

A. “[timed / first] alarm signal.”

Claims 1 and 11 recite a “timed alarm signal,” and Claims 6 and 16 recite a “first alarm signal.” (EX1001, claims 1, 6, 11, 16.) As demonstrated below, the Petition and the Institution Decision (“ID”) apply incorrect, overbroad constructions of the term “[timed / first] alarm signal.”

1. Petitioner’s And The Board’s Constructions Of “timed alarm signal” And “first alarm signal” Are Incorrect.

Petitioner’s and the Board’s constructions of “timed alarm signal” and “first alarm signal” are incorrect because they render the term “alarm” superfluous, are overbroad, and are inconsistent with the evidence.

Petitioner asserts that the term “timed alarm signal” should be construed as a signal for initiating a timer associated with a security panel. (Petition, 29-30, 42, 48.)

In the ID, the Board preliminarily construed the term “alarm signal” as a “signal[] transmitted by an alarm device,” construed the term “timed alarm signal” as “a signal in an alarm system ‘for initiating a timer associated with the security panel,’” and construed the term “first alarm signal” as “a signal in an alarm system that is ‘indicative of the barrier being opened.’” (ID, 9, 11, 14.)

It is well-settled that “claim language should not be treated as meaningless.” *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 951 (Fed. Cir. 2006); *see also Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc.*, 214 F.3d 1302, 1305-07 (Fed. Cir. 2000). A construction that “reads out” limitations from the claim is overbroad and incorrect. *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1369 (Fed. Cir. 2005).

Here, Petitioner’s construction of “timed alarm signal” reads out and renders meaningless the term “alarm.” When the part of Petitioner’s construction that relates to the term “timed” is removed (*i.e.*, initiating a timer associated with a security panel), all that remains is the term “signal.” Thus, Petitioner’s construction transforms the limitation “alarm signal” into simply a “signal,” which improperly reads out and renders meaningless the term “alarm.” *See Callicrate*, 427 F.3d at 1369. Other than asserting that an “alarm signal” is a “signal,” the Petition fails to

ascribe any meaning to the term “**alarm** signal.” Thus, Petitioner’s construction of the term “[timed / first] alarm signal” is incorrect.

Like Petitioner’s construction of “timed alarm signal,” the Board’s preliminary constructions of “alarm signal,” “timed alarm signal,” and “first alarm signal” also render the term “alarm” superfluous. The Claims already expressly recite that the claimed “timed alarm signal” and the claimed “first alarm signal” are signals transmitted by a “barrier alarm device” to a “security panel” in an alarm system. (EX1001, claim 1 (“A barrier alarm device, comprising: ... a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel”); *id.*, claim 6 (“A central security panel, comprising: ... receive a first alarm signal from a barrier alarm device”); *see also id.*, claims 11, 16.)²

Under the Board’s preliminary constructions of “alarm signal,” “timed alarm signal,” and “first alarm signal,” the meaning of the Claims would be no different if the claims simply recited a “timed signal” (or “first signal”) instead of a “timed **alarm** signal” (or “first **alarm** signal”). Thus, the Board’s preliminary constructions

² The Claims also already expressly recite that the “timed alarm signal” is “for initiating a timer associated with the security panel” and that the “first alarm signal” is “indicative of the barrier being opened.” (EX1001, claims 1, 6, 11, 16.)

of “alarm signal,” “timed alarm signal,” and “first alarm signal” render the term “alarm” superfluous.

Additionally, the Board’s preliminary constructions of “alarm signal,” “timed alarm signal,” and “first alarm signal” are incorrect because they are overbroad. As noted above, the Board construed the term “alarm signal” in the ID as a “signal[] transmitted by an alarm device.” (ID, 9.) The specification discloses several types of signals that are transmitted by the ‘340 patent’s barrier alarm device, including, *inter alia*, a “status signal” and a “bypass signal.” (EX1001, FIG. 5B, 8:20-26, 10:59-61, 11:23-30, 11:33-12:3, 12:58-63, 13:41-64, 27:20-25.) The Board’s broad preliminary construction of “alarm signal” (*i.e.*, a signal transmitted by an alarm device) thus incorrectly encompasses these other types of signals (*i.e.*, a “bypass signal” and a “status signal”). Importantly, the specification ***expressly distinguishes*** an “alarm signal” from a “status signal” and a “bypass signal.” (*Id.*, FIGS. 5A-B, 8:15-26, 10:53-67, 11:23-30, 11:33-12:3, 12:58-63, 13:41-64, 27:20-25.) Because the Board’s preliminary construction of “alarm signal” encompasses signals that are not “alarm signals,” the Board’s preliminary construction of “alarm signal” cannot be correct.

The Board’s preliminary constructions of “alarm signal,” “timed alarm signal,” and “first alarm signal” are also incorrect because they are inconsistent with the specification. The specification is clear that an “alarm signal” is more than just

a “signal transmitted by an alarm device.” The specification teaches that an “alarm signal” is a signal that indicates that an alarm condition exists. (*See, e.g.*, EX1001, 4:52-54, 5:52-54, 10:14-21.) The specification also teaches that an “alarm signal” instructs the security panel to initiate a security response. (*Id.*, Abstract, 2:28-39, 2:50-59, 4:10-20, 6:2-10, 16:64-17:4, 17:8-51, 21:13-35.) Accordingly, the Board’s broad preliminary construction of “alarm signal” (*i.e.*, a signal transmitted by an alarm device) is inconsistent with the intrinsic evidence.

2. A Status Signal Is Not A “[timed / first] alarm signal.”

In the ID, the Board preliminarily held that status signals “could be alarm signals for at least the reason that they are signals within an alarm system.” (ID, 29; *see also* Petition, 47 (Petitioner asserting that a status signal is an alarm signal).) As noted above, the Board’s broad preliminary construction of “alarm signal” (*i.e.*, a signal transmitted by an alarm device) is incorrect, overbroad, and inconsistent with the intrinsic evidence. Consistent with the intrinsic evidence, a POSITA would not consider a status signal³ to be a “[timed / first] alarm signal.” (EX2003, ¶ 58.)

³ In the context of alarm and security systems, the plain and ordinary meaning of a status signal is a signal that indicates the state of a sensor (*e.g.*, motion detected). (EX2003, ¶ 58; EX1001, ‘340 patent, 8:60-64, 9:45-58; EX2004 at 106:2-18, 107:10-12.)

First, the specification supports that a POSITA would not consider a status signal to be a “[timed / first] alarm signal.” The specification repeatedly and consistently distinguishes a status signal from a “[timed / first] alarm signal.” The ‘340 patent describes an embodiment where the barrier alarm device “does not make determinations as to when to transmit an alarm signal.” (EX1001, 11:33-35.) Instead of transmitting an “alarm signal,” the barrier alarm device transmits to the security panel “a barrier status signal” and/or “a human status signal” when a change in the state of the barrier status detection device or the human detection device occurs, respectively. (*Id.*, 11:35-40.) The “barrier status signal” indicates whether the monitored barrier is open or closed, and the “human status signal” indicates whether a person is, or is not, detected in proximity to the monitored barrier. (*Id.*, 11:52-65; *see also id.*, 10:61-64.) The security panel “receives these status signals and determines whether a local alarm condition exists and whether to transmit an alarm signal to one or more remote devices 406 of interested parties and/or to a remote monitoring station 124.” (*Id.*, 11:40-45; *see also id.*, 11:58-12:3.)⁴

The specification also states that rather than transmitting “an indication of an alarm condition being sensed” to the central security panel, the barrier alarm device

⁴ Petitioner’s expert confirmed PO’s description of this embodiment. (EX2004, 132:5-134:9.)

instead transmits “raw data” to the central security panel from which the central security panel can determine “whether a local alarm condition has occurred” and generate one or more security responses. (EX1001, 5:49-64.)

The specification further discloses a “barrier alarm device” comprising a “barrier status detection device” and a “human detection device.” (EX1001, FIGS. 5A and 10, 8:60-64, 9:45-10:21, 12:12-19, 12:64-67, 15:66-16:20, 16:54-63.) The “barrier status detection device” and “human detection device” send status signals—specifically, signals indicating that a monitored barrier has been opened or that a person is inside the premises in proximity to the barrier—to a processor in the “barrier alarm device.” (*Id.*) Depending on the status signals received from the “barrier status detection device” and the “human detection device,” the “barrier alarm device” may respond by transmitting an “alarm signal” to a security panel. (*Id.*) Thus, the specification supports that a status signal is used by the “barrier alarm device” to determine whether to transmit an “alarm signal,” but a status signal is not an “alarm signal.” (*Id.*)

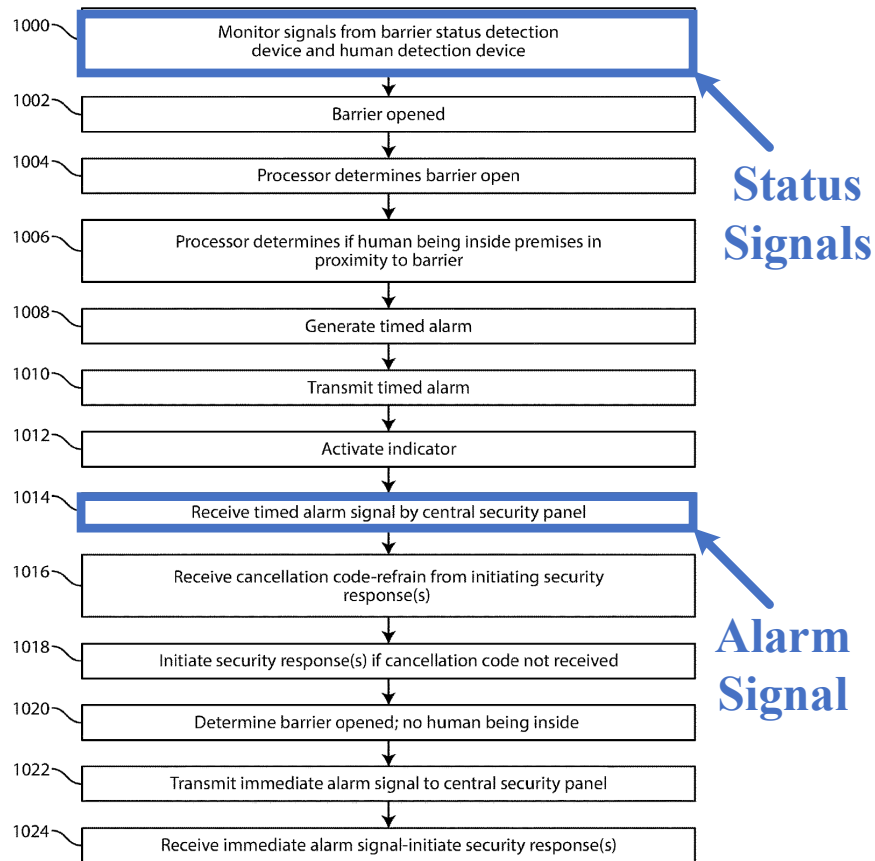


FIG. 10

(*Id.* at FIG. 10 (annotated).)

Second, the prosecution history supports that a POSITA would not consider a status signal to be a “[timed / first] alarm signal.” “Included within an analysis of the file history may be an examination of the prior art cited therein.” *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). “[P]rior art cited in a patent or cited in the prosecution history of the patent constitutes intrinsic evidence.” *Kumar v. Ovonic Battery Co., Inc.*, 351 F.3d 1364, 1368 (Fed. Cir. 2003).

Here, U.S. Patent App. Pub. No. 2013/0257611 to Lamb et al. (“Lamb-611”), which is owned by PO (*see generally* EX2002), was cited by the applicant in an IDS during the prosecution (EX1002, 80), was cited by the Examiner in a non-final office action and used to formulate an obviousness rejection of the then-pending claims (*id.*, 168, 175, 208, 321), and is cited on the face of the ‘340 patent as prior art that was cited by the Examiner (EX1001, [56]).

Like the ‘340 patent, Lamb-611 expressly distinguishes a “local alarm signal” from a “status message.” (EX2001, [0027], [0058], [0071]-[0072], [0102]-[0103], [0110].) Lamb-611 discloses that, instead of transmitting a “local alarm signal,” the barrier alarm may alternatively transmit a “status message” or “raw data” to the central controller 116. (*Id.*, [0027], [0058], [0110].) The central controller 116 processes the “status message” or “raw data” to determine whether a local alarm condition exists. (*Id.*) In other words, the central controller 116 uses the “status message” or the “raw data” to determine whether a local alarm condition exists. (*Id.*) When a “local alarm signal” is sent, however, the central controller 116 need not make this same determination because the “local alarm signal” itself indicates that a local alarm condition exists and instructs the central controller 116 to initiate a system alarm. (*Id.* [0058], [0072], [0103], [0110].)

Third, the Claims support that a POSITA would not consider a status signal to be a “[timed / first] alarm signal.” Claims 1 and 11 recite a “barrier alarm device”

comprising a “barrier status detection device” and a “human detection device.” (EX1001, claims 1, 11.) The “barrier status detection device” and the “human detection device” each send status signals—specifically, signals indicating that a monitored barrier has been opened or that a person is inside the premises in proximity to the barrier—to a processor in the “barrier alarm device.” (*Id.*) Depending on the status signals received from the “barrier status detection device” and the “human detection device,” the “barrier alarm device” may respond by transmitting a “timed alarm signal” to a security panel. (*Id.*) Thus, the Claims also support that a status signal is used by the “barrier alarm device” to determine whether to transmit an “alarm signal,” but is not an “alarm signal.” (*Id.*)

Fourth, the claims of U.S. Patent No. 9,940,797 (“the ‘797 patent”) and U.S. Patent No. 10,497,230 (“the ‘230 patent”), both of which are related to the ‘340 patent and are cited on the face of the ‘340 patent (*see* EX1001, [60]), support that a POSITA would not consider a status signal to be a “[timed / first] alarm signal.” Related patents may “inform the construction of a claim term and are appropriately treated as intrinsic evidence.” *See E.I. du Pont De Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1070 (Fed. Cir. 2019); *see also Omega Engr., Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003) (“the same claim term in the same patent or related patents carries the same construed meaning”); *CCS Tech., Inc. v. Panduit Corp.*, 778 Fed. Appx. 947, 949 (Fed. Cir. 2019) (“The principle that the same

limitation in different claims of the same patent or related patents should carry the same construed meaning is a strong one”).

Here, the ‘797 patent claims an “alarm signal” and a “status signal” in different claims. (*Compare* EX1007, claims 1-2, 4, 10-11, 13 *with id.*, claims 7, 16.) The ‘230 patent claims both an “alarm signal” and a “status signal” in the same claims. (*See* EX1005, claims 8, 19; *see also id.*, claims 1-3, 5, 9, 12-14, 16.) Thus, the claims of the ‘797 and ‘230 patents further confirm that a status signal and a “[timed / first] alarm signal” have different meanings. *See, e.g., Applied Med. Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 n. 3 (Fed. Cir. 2006) (“the use of two terms in a claim requires that they connote different *meanings*”) (emphasis in original); *Tandon Corp. v. U.S. Intern. Trade Commn.*, 831 F.2d 1017, 1023 (Fed. Cir. 1987) (“There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims.”).

3. Each Of A Bypass Signal And A Signal That Causes An Alarm System To Be Disarmed Is Not A “[timed / first] alarm signal.”

In the ID, the Board preliminarily held that a bypass signal or a signal that causes an alarm system to be disarmed could be a “timed alarm signal.” (ID, 37-38.) However, consistent with the intrinsic evidence, a POSITA would not consider

each of a bypass signal⁵ and a signal that causes an alarm system to be disarmed to be a “[timed / first] alarm signal.” A POSITA would understand that the “[timed / first] alarm signal” has an entirely different meaning than both a bypass signal and a signal that causes an alarm system to be disarmed. (EX2003, ¶ 73; EX2004, 117:18-21, 126:12-15.)

First, the specification supports that a POSITA would not consider each of a bypass signal and a signal that causes an alarm system to be disarmed to be a “[timed / first] alarm signal.” The specification expressly and repeatedly distinguishes a “[timed / first] alarm signal” from a bypass signal and a signal that disarms the alarm system. (EX1001, 8:15-26, 10:53-61, 11:23-35, 12:58-63, 13:29-34, 13:45-61, FIGS. 5A-B.)

The specification also teaches that an “alarm signal” instructs the security panel to initiate a security response (*e.g.*, an audible alert). (EX1001, Abstract, 2:28-39, 2:50-59, 4:10-20, 6:2-10, 16:64-17:4, 17:8-51, 21:13-35.) When a “timed alarm signal” is transmitted, a security response will be initiated if the alarm system is not

⁵ In the context of alarm and security systems, the plain and ordinary meaning of a bypass signal is an instruction to ignore future alarm signals or barrier status signals generated by a barrier alarm device. (*See, e.g.*, EX2003, ¶ 69; EX1001, 8:20-25; EX2004, 116:12-17, 119:16-120:4, 127:15-17.)

disarmed within a predetermined time. (*Id.*, 17:8-34; *see also* EX1003, ¶ 32 (“this [timed alarm signal] starts with a countdown timer, and upon the expiration of the timer, the system will trigger a security response.”); EX2004, 81:21-82:5.) The specification teaches that an “alarm signal” ***will not be sent*** when an authorized person opens a monitored barrier to prevent a false alarm from occurring. (*Id.*, 8:4-20, 10:53-59, 11:23-28, 12:58-63, 13:41-45.) The specification supports that a bypass signal and a signal that disarms the alarm system are not a “[timed / first] alarm signal” because a bypass signal and a signal that disarms the alarm system do not instruct a security response to be initiated (and, in fact, prevent a security response from being initiated). (EX2003, ¶¶ 74-75.)

Second, the prosecution history supports that a POSITA would not consider each of a bypass signal and a signal that causes the alarm system to be disarmed to be the “[timed /first] alarm signal.” Lamb-611, which is cited on the face of the ‘340 patent as prior art that was cited by the Examiner, distinguishes transmitting a “local alarm signal” from placing the alarm system in a “bypass mode.” (EX2001, [0058]-[0059], [0072]-[0075], [0103]-[0105], [0107]-[0111].) When a “local alarm signal” is transmitted the system will, for example, sound an audible alarm. (*Id.*) When the alarm system is placed in “bypass mode,” on the other hand, the alarm system will temporarily ignore local alarm signals. (*Id.*)

Third, the Claims support that a POSITA would not consider each of a bypass signal and a signal that causes the alarm system to be disarmed to be the “[timed /first] alarm signal.” Claims 2, 6, 12, and 16 teach that the purpose of the claimed “alarm signal” is to instruct the security panel to initiate a security response. (EX1001, claims 2 and 12 (“an immediate alarm signal ... for causing a security response to be initiated”); *id.*, claims 6 and 16 (“receiv[e/ing] a first alarm signal ... generat[e/ing] a security response”).) The Claims support that a bypass signal and a signal that disarms the alarm system are not the “[timed / first] alarm signal” because a bypass signal and a signal that disarms the alarm system do not instruct a security response to be initiated (and, in fact, prevent a security response from being initiated). (EX2003, ¶ 76.)

Fourth, the claims of the related ‘797 and ‘230 patents support that a POSITA would not consider each of a bypass signal and a signal that causes the alarm system to be disarmed to be the “[timed /first] alarm signal.” The ‘797 patent claims both an “alarm signal” and a “bypass signal” in the same claims. (EX1007, claims 1, 10; *see also id.*, claims 2, 4, 11, 13.) Likewise, the ‘230 patent claims both an “alarm signal” and a “bypass signal” in the same claims. (EX1005, claims 2, 13; *see also id.* at claims 1, 12.) Thus, the claims of the ‘797 and ‘230 patents further confirm that a bypass signal and a “[timed / first] alarm signal” have different meanings. (EX2003, ¶ 78.)

B. “immediate alarm signal.”

Claims 2 and 12 each recite transmitting “an immediate alarm signal.” (EX1001, claims 2, 12.) In view of the specification and the Claims, the plain and ordinary meaning of the term “immediate alarm signal” is an alarm signal that instructs the security panel to initiate a security response *immediately*. (*Id.*, 17:46-51 (“At block 1024, central security panel 116 receives the immediate alarm signal via receiver 906 from barrier alarm device 600 and, in response, immediately initiates one or more security responses, as described above, i.e., within 5 seconds, or some other short time period on the order of seconds, of receipt of the immediate alarm signal.”); *id.*, 19:58-61, 26:65-27:2; *id.*, claims 1-2, 11-12 (distinguishing a “timed alarm signal,” which instructs the security panel to initiate a security response after a predetermined period of time, from an “immediate alarm signal,” which instructs the security panel to initiate a security response immediately); EX2003, ¶ 79.)

In the ID, the Board stated “we do not construe claims 2 and 12 as requiring an immediate security response.” (ID, 13.) Instead, the Board “preliminarily determine[d] that the claims do not preclude other ways that the alarm signal could be ‘immediate.’” (*Id.*) The Board held that an “immediate alarm signal” could be an alarm signal that is transmitted immediately after the determinations that a barrier has been opened and that a person is not near the barrier. (*Id.*, 32-33.) The Board’s

preliminary construction of “immediate alarm signal” is inconsistent with the specification and the Claims.

First, the Board’s preliminary construction of “immediate alarm signal” is inconsistent with the Claims. None of the Claims specify or require any particular amount of time to elapse between when the claimed determinations are made and when the “alarm signals” are transmitted. (EX1001, claims 1-2, 6, 11-12, 16.) The Claims do not preclude the “timed alarm signal” or the “first alarm signal” from being transmitted immediately after the preceding determinations. (*Id.*) Practically speaking, it would make no sense to delay the transmission of the claimed “timed alarm signal” or the claimed “first alarm signal.” (EX2003, ¶ 81.) The Claims use the terms “timed alarm signal” and “immediate alarm signal” to distinguish how the security panel reacts to the received alarm signal—not to specify the amount of time that must elapse between when the claimed determinations are made and when the claimed alarm signals are transmitted. (EX1001, claims 1-2, 11-12.)

Second, the Board’s preliminary construction of “immediate alarm signal” is inconsistent with the specification. The specification consistently and repeatedly uses the terms “immediate” and “immediate alarm signal” to specify *when a security response should be initiated* (*i.e.*, immediately). (See, e.g., EX1001, FIG. 11B, 1:58-62, 4:21-33, 17:35-51, 18:47-51, 18:58-19:9, 19:55-61, 20:17-28, 20:61-21:4, 21:19-22, 24:41-44, 25:10-14, 25:39-41, 26:50-27:11.) On the other hand, the

specification never discloses that an “immediate alarm signal” is an alarm signal that is transmitted immediately. (*Id.*) Indeed, the specification contains no disclosure regarding how much time elapses between when the determination(s) that a barrier has been opened and/or that a person is (or is not) near the barrier are made and when a “[timed / first / immediate] alarm signal” is transmitted. (*Id.*)

V. PETITIONER HAS FAILED TO SHOW THAT THE CLAIMS ARE UNPATENTABLE AS OBVIOUS UNDER 35 U.S.C. § 103.

A. Ground 1: Petitioner Has Failed To Show That Lamb In View Of Williams Renders Claims 1-2, 6, 11-12, And 16 Obvious.

1. Petitioner Has Failed To Show That Lamb In View Of Williams Discloses, Teaches, Or Suggests Every Limitation Of Claims 1-2, 6, 11-12, And 16.

(a) Petitioner Has Failed To Show That Lamb In View Of Williams Discloses Or Teaches “transmitting a timed alarm signal to a receiver associated with a security panel” (Claim 1), “processor-executable instructions that cause the barrier alarm device to: ... transmit, via the transmitter, the timed alarm signal to the receiver [associated with the security panel] only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier” (Claim 1), And “transmitting by the barrier alarm device a timed alarm signal to the central security panel ... only when it is determined that the human detection device indicates that the human being is in inside the premises and in proximity to the barrier” (Claim 11) (Collectively, The “Timed Alarm Signal Limitations”).

Petitioner has failed to show that Lamb in view of Williams discloses or teaches the Timed Alarm Signal Limitations of Claims 1 and 11. According to the

Timed Alarm Signal Limitations, the barrier alarm device transmits a “timed alarm signal” to a security panel only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier. (EX1001, claims 1 and 11.)

In the Petition, Petitioner does not assert that Lamb discloses or teaches a “timed alarm signal.” (Petition, 28.)⁶ Rather, Petitioner and its expert assert that Williams teaches a “timed alarm signal” and that Williams provides the “timed alarm signal” in the proposed combination with Lamb. (Petition, 28; *see also id.*, 29 (“Williams discloses a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel”); *id.*, 41 (“Williams discloses transmitting the timed alarm signal to the receiver”); EX2004, 175:19-21 (“Williams is what’s giving

⁶ Petitioner and its expert concede that Lamb does not disclose or teach a “timed alarm signal.” (Petition, 6; EX2004, 51:18-21, 153:3-8, 160:13-17, 177:5-12.) Lamb also does not disclose transmitting an “alarm signal” when the human detection device indicates that a person is inside the premises in proximity to the barrier. Rather, Lamb discloses that the barrier alarm device either transmits a “bypass signal” or does nothing when the human detection device indicates that the human being is inside the premises in proximity to the barrier. (EX1009, FIG. 5, [0029], [0040], [0050], [0060], claims 2 and 13.)

us the timed alarm signal to initiate a timer.”); *id.*, 51:10-17, 152:17-153:2, 156:1-6, 159:6-12, 176:7-177:4.)

Petitioner cannot show that Lamb in view of Williams discloses or teaches the claimed “timed alarm signal” because the Petition applied an incorrect, overbroad construction of the term “timed alarm signal” and Petitioner has presented no evidence that Lamb in view of Williams discloses or teaches a “timed alarm signal” under the correct construction.

First, Petitioner has applied an incorrect, overbroad construction of the term “timed alarm signal.” According to Petitioner, the claimed “timed alarm signal” is simply a signal “‘for initiating a timer’ associated with the security panel.” (Petition, 29-30.) However, as demonstrated in Section IV(A)(1), *supra*, Petitioner’s construction of “timed alarm signal” (*i.e.*, a signal for initiating a timer associated with a security panel) is incorrect at least because it reads out and renders meaningless the term “alarm.” (See Section IV(A)(1), *supra*.)

Because Petitioner ascribed no meaning to the term “alarm” in the limitation “timed **alarm** signal,” Petitioner cannot demonstrate that Lamb in view of Williams discloses or teaches the Timed Alarm Signal Limitations for this reason alone. *See, e.g., Ebates Performance Marketing, Inc. v. International Business Machines Corp.*, Case IPR2022-00438, Paper 34 at 24-25 (PTAB Oct. 2, 2023) (holding that petitioner failed to demonstrate that any claims were unpatentable where “the

Petition fail[ed] to adequately set forth how the claim term ‘interactively’ should be construed and how that aspect of the overall ‘wherein the ordering and annotation function is executed’ limitation is satisfied in the articulated combination”).

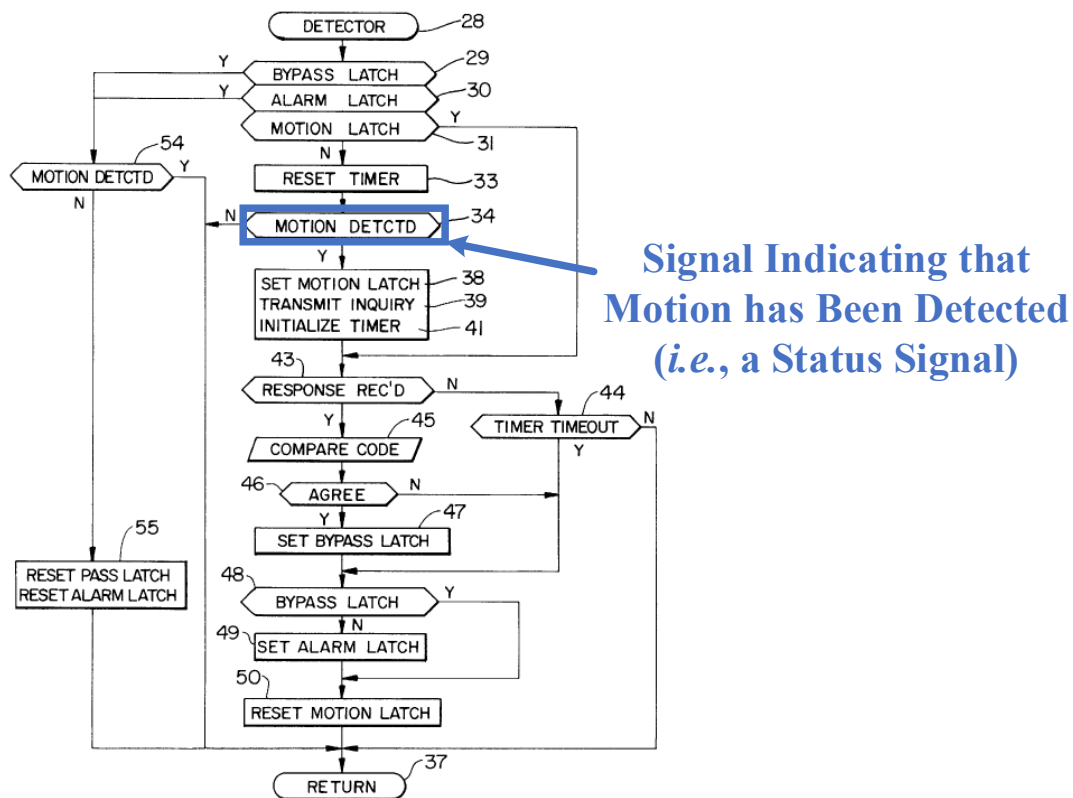
Additionally, as discussed above, a status signal is also not the “timed alarm signal.” (See Section IV(A)(2), *supra*; see also EX2004, 110:19-111:13, 112:6-113:5, 126:1-6 (Petitioner’s expert confirming that an “alarm signal” is different than a status signal).) However, Petitioner and its expert have failed to show (and cannot show) that the alleged “timed alarm signal” is anything more than a status signal. (See, generally, Petition, 28-34, 41-42; EX1003, ¶¶ 66, 69-71, 83, 85-86.)

As noted in the ID, the Petition relies on Williams’ Figures 2 and 2A and their corresponding disclosures as teaching the claimed “timed alarm signal.” (Petition, 29-33; ID, 17-18.) Williams’ Figure 2 discloses a “test 34” that “determines if the corresponding motion detector has detected motion.” (EX1010, 3:56-58; see also *id.*, FIG. 2.) “[I]f motion has been detected, an affirmative result of test 34 will reach a step 38 to set the motion latch...” (*Id.*, 3:61-62.) “Then, a step 39 causes an inquiry signal to be transmitted” and “a step 41 initializes a timer.” (*Id.*, 3:64-4:3.)

To the extent any signal is transmitted to the control panel in response to test 34, this signal is nothing more than a signal indicating that motion has been detected (*i.e.*, a status signal). (EX2003, ¶¶ 87-88; EX1010, FIG. 2, 3:56-62; Petition, 29 (“For example, as shown in Fig. 2, Williams discloses that in response to a

determination that motion has been detected (test 34) ... Accordingly, Williams discloses that in response to receiving a signal that a human has been detected..."); EX1003, ¶ 71; EX1001, 11:33-12:3 (distinguishing an alarm signal from status signals indicating that a barrier has been opened or that a person has been detected).)

As shown below in Williams' Figure 2, test 34 simply asks whether motion has been detected. (EX1010, FIG. 2; EX2003, ¶ 88.) If motion is detected, then a timer is initialized in step 41. (*Id.*)



(EX1010, FIG. 2 (annotated).)

Because a status signal is not a “timed alarm signal” (*see* Section IV(A)(2), *supra*), Petitioner has not shown (and cannot show) that Lamb in view of Williams discloses or teaches the Timed Alarm Signal Limitations of Claims 1 and 11.

(b) Petitioner Has Failed To Show That Lamb Discloses “processor-executable instructions that causes the central security panel to: receive a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened” (Claim 6) And “receiving a first alarm signal from a barrier alarm device that monitors a barrier of a premises, the first alarm signal indicative of the barrier being opened” (Claim 16) (Collectively, The “First Alarm Signal Limitations”).

Petitioner has failed to show that Lamb discloses the First Alarm Signal Limitations of Claims 6 and 16.

The First Alarm Signal Limitations require that the central security panel receive a “first alarm signal” from the barrier alarm device. (EX1001, claims 6 and 16.)

According to the Petition, Lamb discloses a central security panel that receives a “first alarm signal” from a barrier alarm device. (Petition, 47.) Petitioner asserts that Lamb’s “barrier status signal” is the claimed “first alarm signal.” (*Id.*, 46-47.)

Petitioner cannot show that Lamb discloses the First Alarm Signal Limitations because, as discussed in Section IV(A)(2), *supra*, a “barrier status signal” is not a “first alarm signal.” (*See* Section IV(A)(2), *supra*; *see also* EX2004, 110:19-111:13,

112:6-113:5, 126:1-6 (Petitioner's expert confirming that an "alarm signal" is different than a status signal).) Not only do the claims, specification, and prosecution history expressly distinguish a "barrier status signal" from an "alarm signal" (*see, e.g.*, EX1001, 11:33-12:3), but Lamb also expressly distinguishes a "barrier status signal" from an "alarm signal." (EX1009, [0043], claim 19; *see also* EX2004, 110:19-111:13, 112:6-113:5, 126:1-6; EX2003, ¶ 92.) Indeed, the only paragraph of Lamb that Petitioner and its expert cite to for the First Alarm Signal Limitations is the paragraph that expressly distinguishes a "barrier status signal" from an "alarm signal." (Petition, 47 (citing only EX1009, [0043]); EX1003, ¶¶ 105-106 (same).)

Because a "barrier status signal" is not the "first alarm signal" (*see* Section IV(A)(2), *supra*), Petitioner has not shown (and cannot show) that Lamb discloses the claimed "first alarm signal" of Claims 6 and 16.

(c) Petitioner Has Failed To Show That Lamb In View Of Williams Discloses Or Teaches "determine whether the elapsed time has exceeded a predetermined time" And "generate a security response when it is determined that the elapsed time has exceeded the predetermined time."

Petitioner has failed to show that Lamb in view of Williams discloses or teaches "determine whether the elapsed time has exceeded a predetermined time" and "generate a security response when it is determined that the elapsed time has exceeded the predetermined time," as recited in Claim 6.

Claim 6 recites a central security panel that must: (i) begin measuring an elapsed time from when a first alarm signal was received; (ii) determine whether the elapsed time has exceeded a predetermined time; and (iii) generate a security response when it is determined that the elapsed time has exceeded the predetermined time. (EX1001, claim 6.)

In the Petition, Petitioner does not assert that Lamb discloses or teaches a central security panel that begins measuring an elapsed time or determines whether an elapsed time has exceeded a predetermined time. (Petition, 48-49; *see also id.*, 6 (Petitioner conceding that Lamb does not disclose or suggest measuring an elapsed time or starting a countdown timer).) Rather, Petitioner asserts that “Williams discloses that a countdown timer is initialized upon determination of a potential alarm ... and so discloses the control panel processor configured to begin measuring an elapsed time.” (Petition, 49.) Petitioner also asserts that “Williams discloses that a ‘time-out of the timer’ or ‘timer timeout’ is determined.” (*Id.*, 51.) Petitioner proposes combining Lamb with Williams’ “countdown timer” and asserts that this proposed combination teaches the limitations of Claim 6. (*Id.*, 49-53.)

Petitioner cannot show that Lamb in view of Williams discloses or teaches “determine whether the elapsed time has exceeded a predetermined time” and “generate a security response when it is determined that the elapsed time has

exceeded the predetermined time” because Williams does not disclose determining that an elapsed time has exceeded a predetermined time, as the claim requires.

As Petitioner concedes, Williams discloses a countdown timer “to establish a period of time (perhaps a second or fraction thereof) within which an authorized response [to an inquiry signal] must be received.” (EX2003, ¶ 98; Petition, 49-51; EX1010, FIGS. 2-2A, 3:64-4:3.) “[I]f no response is received prior to time-out of the timer,” an alarm latch will be set. (EX1010, 4:32-36; *see also id.*, 4:4-8, FIGS. 2-2A; *see also* Petition, 51 (“the central security panel initializes a timer that, upon expiration, sets an alarm.”).)

To the extent Williams’ countdown timer measures an elapsed time, the measured elapsed time *never exceeds* the predetermined time. (EX2003, ¶ 99.) Rather, the measured elapsed time will always be *less than or equal to* the predetermined time. (*Id.*; *see also* EX1010, 3:64-4:3 (“a period of time (perhaps a second or fraction thereof) within which an authorized response must be received”).)

In Williams, if the predetermined time is set to a second, Williams’ countdown timer, once initiated, begins counting down from one second. (EX2003, ¶ 100; EX1010, 4:32-36; *id.*, 3:64-4:8, FIGS. 2-2A.) Williams’ countdown timer—like all countdown timers—stops measuring the elapsed time when the timer times-out (*i.e.*, reaches zero). (*Id.*) Countdown timers do not continue to measure elapsed time beyond the timer reaching zero, and there is no evidence that Williams’ countdown

timer operates differently. (*Id.*) Indeed, the Petition simply asserts that Williams discloses a “timer timeout” with no explanation or analysis of how Williams discloses determining that an elapsed time has exceeded a predetermined time, as claimed. (Petition, 50-51.) Accordingly, the measured elapsed time in Williams’ countdown timer is at most equal to the predetermined time. (EX2003, ¶ 100.)

Additionally, “there is [] a presumption that two independent claims have different scope when different words or phrases are used in those claims.” *Seachange Intern., Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005) (internal citation omitted). Here, Claim 6 recites “begin a measuring of an elapsed time” and “determin[ing] whether the elapsed time has exceeded a predetermined time,” while Claim 16 recites “starting a countdown timer” and “determining whether the countdown timer has expired.” (EX1001, claims 6, 16.) The different claim language used in Claims 6 and 16 further supports that Williams does not determine whether an elapsed time has exceeded a predetermined time. (EX2003, ¶ 101.) At most, Williams determines whether its countdown timer has expired. (*Id.*)

Despite the clear and substantial differences between Claims 6 and 16—and the presumption that “determin[ing] whether the elapsed time has exceeded a predetermined time” means something different than “determining whether the countdown timer has expired”—Petitioner failed to provide independent analyses for these claims and limitations. (Petition, 55-56.) Again, the Petition fails to

provide any explanation or analysis as to how Williams discloses determining that an elapsed time has exceeded a predetermined time, as the claim requires. (*Id.*, 51-53 (Petitioner merely asserting that Lamb in view of Williams “initializes a timer that, upon expiration, sets an alarm.”); *id.*, 55-56 (Petitioner relying on this same position for Claim 16).)

(d) Petitioner Has Failed To Show That Lamb In View Of Williams Discloses “instructions that cause the barrier alarm device to transmit, via the transmitter, an immediate alarm signal” (Claim 2) And “transmitting by the barrier alarm device an immediate alarm signal” (Claim 12) (Collectively, The “Immediate Alarm Signal Limitations”).

Petitioner has failed to show that Lamb in view of Williams discloses the Immediate Alarm Signal Limitations of Claims 2 and 12.

The Immediate Alarm Signal Limitations require that the “barrier alarm device” transmit an “immediate alarm signal” to the “security panel.” (EX1001, claims 2, 12.)

According to the Petition, Lamb discloses a barrier alarm device that sends an “alarm signal” to a central security panel 116 when the barrier alarm device determines that a door is open and that a human is not inside the premises in proximity to the door. (Petition, 42-43 (citing EX1009, [0037], [0041], [0051]-[0053], FIG. 5); EX1003, ¶¶ 88-90 (same).)

As discussed in Section IV(B), *supra*, the claims and specification support that an “immediate alarm signal” is an alarm signal that instructs a security response to be initiated “immediately.” (See, e.g., EX1001, 17:46-51, 26:65-27:2; see also EX2004, 151:2-7 (Petitioner’s expert agreeing that an “immediate alarm signal” is an alarm signal that instructs a security response to be initiated “immediately”); *id.*, 52:4-15, 130:6-18, 147:13-22; EX2003, ¶ 104.) Notably, however, neither Petitioner nor its expert explains how Lamb’s “alarm signal” is an “*immediate* alarm signal” (*i.e.*, an alarm signal that instructs a security response to be initiated “immediately”). (Petition, 42-43.)

2. Petitioner Has Failed To Show That A POSITA Would Have Been Motivated To Modify Lamb In View Of Williams To Arrive At The Claimed Inventions.

Petitioner has failed to show that Lamb in view of Williams renders Claims 1-2, 6, 11-12, and 16 obvious because Petitioner has failed to show (and cannot show) that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed inventions.

It is well-settled that “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007). The petitioner must demonstrate that a POSITA would have been motivated to pick out the references relied upon and combine them in the manner claimed. *Personal Web Techs., LLC v. Apple, Inc.*, 848

F.3d 987, 993-94 (Fed. Cir. 2017). It is not enough to merely show that a POSITA, “once presented with the two references, would have understood that they *could* be combined.” *Id.* at 993 (emphasis in original).

“Fundamental differences between the references are central to [the] motivation to combine inquiry.” *Adidas AG v. Nike, Inc.*, 963 F.3d 1355, 1359-60 (Fed. Cir. 2020) (affirming finding of no motivation to combine where petitioner failed to reconcile references’ “fundamental differences in seaming techniques”). A proposed modification is inappropriate when the modification would change a prior art reference’s basic principle of operation or would frustrate the prior art reference’s intended purpose. *Plas-Pak Industries, Inc. v. Sulzer Mixpac AG*, 600 Fed. Appx. 755, 758-59 (Fed. Cir. 2015). When assessing motivation to combine, “the benefits, both lost and gained, should be weighed against one another.” *See Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 & n.8 (Fed. Cir. 2000).

Here, Petitioner has proposed modifying Lamb in view of Williams in three ways.

First, Petitioner has proposed modifying Lamb’s barrier alarm device to transmit a “timed alarm signal” to a security panel, as allegedly taught in Williams. (Petition, 17, 28, 41; *see also* EX2004, 175:19-21.)

Second, Petitioner has proposed modifying Lamb’s security panel to initialize a countdown timer, as allegedly taught in Williams. (Petition, 28, 49, 51-53.)

Third, Petitioner has proposed modifying Lamb's system to include "a device configured to transmit an authentication code" (*i.e.*, Williams' user-worn "personal device"). (*Id.*, 17-19.)⁷

Petitioner has identified only one reason why a POSITA would have modified Lamb in view of Williams as proposed. That reason is to "enhance security" by verifying that a potential alarm is indeed caused by an authorized person, and not an unauthorized person. (Petition, 17-18, 28, 41, 49 (citing EX1010, 2:35-38).)

Petitioner has failed to show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed inventions because: (i) Petitioner cannot explain why a POSITA would have been motivated to modify Lamb in view of Williams in the specific manner of the claimed inventions; (ii) the sole alleged benefit of Petitioner's proposed modifications to Lamb is outweighed by the proposed modifications' significant drawbacks; (iii) Petitioner's proposed modifications to Lamb would change Lamb's basic principle of operation; (iv) Petitioner's proposed modifications to Lamb would frustrate Lamb's intended purpose; and (v) Lamb and Williams are fundamentally different.

⁷ The Claims do not recite a device configured to transmit an authentication code or anything remotely similar to Williams' "personal device." (EX1001, claims 1-2, 6, 11-12, and 16.)

(a) Petitioner Cannot Explain Why A POSITA Would Have Been Motivated To Modify Lamb In View Of Williams In The Specific Manner Of The Claimed Inventions.

Petitioner cannot explain why a POSITA would have been motivated to modify Lamb in view of Williams in the specific manner of the claimed inventions for at least two reasons.

First, each of Claims 1-2 and 11-12 recites or requires (i) responding to a barrier status detection device indicating that a barrier has been opened by determining whether a human detection device indicates that a human being is inside the premises in proximity to the barrier; and (ii) transmitting a timed alarm signal to a security panel only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier. (EX1001, claims 1-2, 11-12.) Claims 6 and 16 also recite a security panel that responds to a first alarm signal indicative of a barrier being opened by determining whether a human being has been indicated to be inside the premises in proximity to the barrier. (*Id.*, claims 6, 16.)

In Lamb, the purpose of the human detection device and the step of determining whether a human being is inside the premises in proximity to the barrier is to verify that an authorized person has opened the barrier. (EX1009, Abstract, FIG. 5, [0018], [0029]; *see also id.*, [0037], [0040]-[0043], [0050]; EX2003, ¶ 113.) If a barrier is opened and a human is detected inside the premises in proximity to the

barrier, Lamb's system assumes the person that opened the barrier is authorized to be inside the premises. (*Id.*)

In Petitioner's proposed modifications to Lamb, however, Petitioner asserts that a "device configured to transmit an authentication code" (*i.e.*, Williams' "personal device") is used to verify that an authorized person has opened a barrier. (EX1010, 1:6-10, 1:54-62, 3:64-4:3; Petition, 18-19, 28, 41, 49.)

In Petitioner's proposed modifications to Lamb, the "device configured to transmit an authentication code" (*i.e.*, Williams' "personal device") ***performs the exact same function*** as Lamb's human detection device and Lamb's step of determining whether a human being is inside the premises in proximity to the barrier (*i.e.*, verifying that an authorized person has opened a barrier). (EX2003, ¶ 115.) The only difference, according to Petitioner, is that the "device configured to transmit an authentication code" allegedly "actually verif[ies] authorization," while Lamb is "simply making an assumption about the person" using the human detection device and the step of determining whether a human being is inside the premises in proximity to the barrier. (Petition, 18.)

Therefore, in Petitioner's proposed modifications to Lamb, Lamb's human detection device and Lamb's step of determining whether a human being is inside the premises in proximity to the barrier are rendered ***superfluous, redundant, and unnecessary***, as the "device configured to transmit an authentication code" performs

the same function of verifying that an authorized person has opened a barrier in an allegedly better way. (EX2003, ¶ 116.)

Assuming a POSITA would have been motivated to modify Lamb in view of Williams in the first place, a POSITA would have *eliminated* Lamb's superfluous, redundant, and unnecessary human detection device and step of determining whether a human being is inside the premises in proximity to the barrier. (*Id.*, ¶ 117.) By doing so, a POSITA would have significantly reduced the cost, complexity, and processing requirements of Lamb's modified system while providing practically the same functionality as Lamb's unmodified system. (*Id.*)

There is no evidence in the record that a POSITA would have retained Lamb's human detection device and Lamb's step of determining whether a human being is inside the premises in proximity to the barrier in Lamb's modified system. (*Id.*) Petitioner has failed to identify any function that Lamb's human detection device and Lamb's step of determining whether a human being is inside the premises in proximity to the barrier would have in Lamb's modified system. (Petition, 17-19.) Petitioner has also failed to identify any reason why a POSITA would have retained Lamb's human detection device and Lamb's step of determining whether a human being is inside the premises in proximity to the barrier in Lamb's modified system. (*Id.*)

Crucially, eliminating Lamb's superfluous human detection device and step of determining whether a person is inside the premises—which, again, is what a POSITA would have done if a POSITA were to modify Lamb in view of Williams as Petitioner has proposed—would **not** have resulted in the claimed inventions, as each of the Claims recites or requires a human detection device and/or determining whether a human is inside the premises in proximity to the barrier. (EX1001, '340 patent, claims 1-2, 6, 11-12, 16; EX2003, ¶ 118.)

Second, each of Claims 1-2 and 11-12 recites or requires transmitting a “timed alarm signal” from a barrier alarm device to a security panel for the purpose of initiating a timer associated with the security panel. (EX1001, claims 1-2, 11-12.) Claims 6 and 16 also recite a security panel that, in response to receiving a “first alarm signal” from a barrier alarm device, “begin[s] a measuring of an elapsed time” or “start[s] a countdown timer,” respectively. (*Id.*, claims 6, 16.)

However, Petitioner's sole proposed rationale for modifying Lamb (*i.e.*, to enhance security by verifying that a potential alarm was caused by an authorized person) is not logically connected to Petitioner's proposed modifications to Lamb that are relevant to the Claims (*i.e.*, modifying Lamb's barrier alarm device to transmit a “timed alarm signal” to a security panel and modifying Lamb's security panel to initialize a timer). (EX2003, ¶ 120.)

Williams' system verifies that detected motion was caused by an authorized person using a user-worn "personal device 22" that transmits an authorization code. (EX1010, 1:6-10, 1:54-2:38.) Williams' system does not use a timer to verify that a potential alarm was caused by an authorized person. (EX2003, ¶ 121.) While Petitioner's sole proposed rationale for modifying Lamb in view of Williams may be relevant to incorporating Williams' user-worn "personal device," such a device is not a claimed feature of the Claims. (*Id.*)

Williams also discloses several alternatives to transmitting a signal from a motion detector to a security panel that causes a timer in the security panel to be initiated. (EX2003, ¶¶ 122-124.) Williams discloses that each motion detector may itself interrogate the "personal device" and initiate its own timer whenever motion is detected. (EX1010, FIG. 2, 1:54-67, 3:24-26, 3:67-4:3.) Williams also discloses that, rather than transmitting a signal from a motion detector that causes a timer to be initiated, the "personal device" can instead transmit an authorization code periodically to bypass the motion detectors. (*Id.*, Abstract, 2:3-8, 2:25-34, 6:23-53, 7:59-63, 8:21-39.) In this embodiment, the transmission of an authorization code from the "personal device"—not a signal from a motion detector—causes a timer to be initiated. (*Id.*)

Petitioner does not explain why the goal of verifying that a potential alarm is caused by an authorized person—a goal that each of Williams' embodiments

allegedly accomplishes—would have led a POSITA to select the particular embodiment that Petitioner has applied to Lamb. (EX2003, ¶ 125.) Williams discloses that the embodiment where the “personal device” periodically transmits an authorization code is “much simpler,” yet Petitioner completely ignores this embodiment. (*Id.*; EX1010, 6:23-26, 7:64-65, 8:33-39.)

(b) The Alleged Benefit Of Petitioner's Proposed Modifications Is Outweighed By The Proposed Modifications' Drawbacks.

Petitioner also cannot show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed inventions because the sole alleged benefit of Petitioner's proposed modifications to Lamb is outweighed by the proposed modifications' numerous drawbacks.

Petitioner and its expert have identified only one alleged benefit of their proposed modifications to Lamb (*i.e.*, “enhanced security” by only negating a potential alarm when an authorized person is detected). (Petition, 17-18; EX1003, ¶¶ 52-53.) However, Petitioner and its expert have provided *no evidence* that their proposed modifications would actually “enhance security” in Lamb's system.

The Petition and the supporting declaration provide no analysis or evaluation of how (or by how much) the proposed modifications would “enhance security” in Lamb's system. (Petition, 18 (citing EX1010 at 2:31-38, 5:63-66); EX1003, ¶ 53.)

Instead, the Petition and the supporting declaration simply reproduce quotations from Williams stating that Williams' system provides "greater security." (*Id.*)

Petitioner's and its expert's reliance on Williams' statements to demonstrate an alleged improvement over Lamb is misplaced. Williams discloses that its system provides greater security than: (i) prior art systems that did not have a way to prevent false alarms in an armed stay mode (*i.e.*, where the system is armed while the premises is occupied), and (ii) prior art systems that used a "smart badge" that transmits ID numbers for tracking the whereabouts of personnel in a facility. (EX1010, 1:13-53.) But Lamb's system does not fit into either of the above categories because Lamb's system *does* address preventing false alarms in an armed stay mode and Lamb's system *does not* use a "smart badge." (EX1009, Abstract, [0002], [0005]-[0007].) Accordingly, Williams' statements do not demonstrate that the proposed modifications would "enhance security" vis-à-vis Lamb's system. (EX2003, ¶ 129.)

Petitioner and its expert assert that Williams actually verifies that a potential alarm was triggered by an authorized person, while Lamb is simply making an assumption about the person. (Petition, 18; EX1003, ¶ 53.) Petitioner and its expert are wrong. Williams' system *is* making an assumption, namely, that a barrier was opened by an authorized person if Williams' "personal device" is present. (EX1010, Abstract, 1:46-2:3, 2:25-38; EX2003, ¶ 130.) Williams' assumption is not fool

proof. For example, if the user leaves his or her “personal device” in a room (or if a pet with the “personal device” is in or near the room) and an intruder opens a door or window to the room, Williams’ system will assume (incorrectly) that the door or window was opened by an authorized person due to the presence of the “personal device.” (EX2003, ¶ 131.)

Conversely, Petitioner and its expert do not explain why Lamb’s assumption (*i.e.*, that if a barrier is opened and a person is detected inside the premises in proximity to the barrier it is assumed that the person is authorized to be inside the premises) is unreasonable or does not make sense. (Petition, 18; EX1003, ¶ 53.) Nor can they. When an intruder attempts to enter a premises by opening a barrier, Lamb’s system will correctly generate an alarm because the intruder is not yet inside the premises. (EX2003, ¶ 132; EX1009, FIG. 5, [0021], [0029], [0037].)

Accordingly, Petitioner has failed to show that the proposed modifications to Lamb would provide *any benefit*. On the other hand, the proposed modifications to Lamb have numerous drawbacks, which are discussed below.

One drawback of the proposed modifications is that the user must wear, or carry around, Williams’ “personal device” when the user is inside the premises while the system is armed. A user would have found the need to carry around a “personal device” in his or her own home to be a major inconvenience, particular where the

vast majority of security and alarm systems do not require the user to carry such a “personal device.” (EX2003, ¶ 134.)

Moreover, if the user forgets or loses his or her “personal device,” or if the “personal device” is broken or is not working properly, this will lead to undesirable false alarms. (*Id.*, ¶ 135.) Further exacerbating this issue is the fact that a user typically places his or her alarm system into the armed stay mode at night when he or she is tired, which increases the likelihood that the user will forget his or her “personal device” when he or she goes to open a door or window. (*Id.*) Even if an instruction or warning to remember the “personal device” is included in the device instructions and/or on the device itself, this will not (and cannot) prevent a user from forgetting or losing the “personal device.” (*Id.*) At the very least, false alarms are an inconvenience. (*Id.*, ¶ 136.) At worst, a false alarm could cause a real alarm to be incorrectly treated as a false alarm. (*Id.*) Even worse still, if a “personal device” is stolen, an intruder could enter a premises with no alarm being triggered at all. (*Id.*)

Williams’ system also does not take into account visitors and guests. To work properly, each visitor or guest would need to be provided with his or her own “personal device.” (*Id.*, ¶ 137.) But visitors and guests, due to their lack of familiarity with the alarm system, are more likely to misplace or forget their “personal device.” (*Id.*) The need for an increased number of “personal devices” in

a household increases the likelihood that a “personal device” will be lost, stolen, or left somewhere it should not be (*e.g.*, in a monitored room). (*Id.*)

Williams discloses that its “personal device” is: (i) an active device; or (ii) a passive RFID device. (EX1010, 1:67-2:10, 6:18-22.) Both device types have their own technical and practical downsides. (EX2003, ¶ 138.)

An active device actively receives and sends signals (*e.g.*, radiofrequency (“RF”) signals or acoustic signals). (*Id.*, ¶ 139.) This process consumes more power compared to passive devices, which do not require internal power sources for operation. (*Id.*) The need for an internal power source in an active device means that active devices are larger and heavier than passive devices, and thus even more of an inconvenience for the user to carry. (*Id.*) Additionally, the need for an internal power source means that the “personal device” will not work (and a false alarm will be triggered) if the “personal device” runs out of battery. (*Id.*)

Implementing a system that relies on active communication for security purposes is also technologically complex. (*Id.*, ¶ 140.) This complexity would translate into higher costs for development, production, and maintenance of the devices, making it less practical, especially for widespread consumer applications. (*Id.*) For example, the need for active transmission and reception by the “personal device” would lead to issues with signal interference and range limitations, both of which would negatively impact user convenience and system reliability. (*Id.*)

Further, an active “personal device” must continuously be ready to receive an inquiry signal and to transmit an authorization code in response, which contributes to higher power consumption. (*Id.*, ¶ 141.) The requirement for the active “personal device” to function as both a transmitter and a receiver impacts its battery life. (*Id.*) Ensuring sufficient battery life in such a device would necessitate either larger, higher-capacity batteries, or more frequent re-charging or replacement of the batteries. (*Id.*) Either case would affect user convenience and the practicality of the device. (*Id.*)

A device with larger batteries must in turn be larger and heavier, which is very inconvenient and undesirable for a user to carry around. (*Id.*, ¶ 142.) A device that requires frequent re-charging or replacement of the batteries places a greater burden on the user to prevent the device from running out of battery, and thus increases the likelihood that the user will accidentally let the device die or will leave the device on the charging stand (both of which would lead to increased false alarms). (*Id.*)

An active “personal device”-based system would also require a transceiver to be placed in every monitored room to transmit an inquiry signal and to receive a response from the “personal device” when a barrier is opened. (*Id.*, ¶ 143.) Transceivers are relatively expensive and have greater power requirements than a receiver (or transmitter) alone. (*Id.*) The need for numerous transceivers in a premises, and to have each transceiver communicate with the central security panel,

would increase the cost and complexity of the resulting system. (*Id.*) Such a system would also require FCC approval. (*Id.*)

The passive RFID version of Williams' "personal device" is simply not feasible. (*Id.*, ¶ 144.) Passive RFID technology inherently suffers from limited read ranges. (*Id.*) Typically, passive RFID systems can only be read from a few centimeters or inches away from the reader. (*Id.*) This limitation stems from the fact that passive RFID tags rely on the reader's signal for power, which significantly restricts their operational range. (*Id.*) The limited range would be impractically short and would be a critical drawback in security applications where broader coverage is necessary to ensure seamless and convenient access control within larger spaces. (*Id.*)

Additionally, notwithstanding the extremely limited range of passive RFID tags, a passive RFID-based security system would require a higher density of readers, installed at numerous points within a premises (*i.e.*, at every barrier to be monitored). (*Id.*, ¶ 145.) The overall system cost would increase due to the need for more RFID readers to be installed in a given area (as opposed to one transceiver per room in a system that uses active "personal devices"). (*Id.*) This not only increases the initial setup cost but also the complexity and maintenance expenses over time. (*Id.*)

Further, the reliability of passive RFID systems can be affected by environmental factors and physical obstacles. (*Id.*, ¶ 146.) Metals and liquids, for example, can interfere with RFID signals, leading to potential issues in detecting the “personal device” consistently. (*Id.*) In a security context, where reliability is paramount, these interference issues could result in unauthorized access or, conversely, prevent legitimate access due to failed detections. (*Id.*) The inconsistency in performance, depending on environmental conditions, poses a significant challenge. (*Id.*)

In view of the numerous drawbacks to Petitioner’s proposed modifications to Lamb, and the fact that Petitioner has failed to show that the proposed modifications to Lamb would provide any benefit, a POSITA would not have modified Lamb in view of Williams as Petitioner has proposed. (*Id.*, ¶ 147.)

(c) Petitioner’s Proposed Modifications Would Change Lamb’s Basic Principle Of Operation.

Petitioner cannot show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed inventions because Petitioner’s proposed modifications to Lamb would change Lamb’s basic principle of operation.

Lamb expressly discloses that its barrier alarm device “operates on the principle that if a door or window is opened and a person is detected nearby the barrier alarm device on the inside of the premises, it is assumed that the person is authorized to be inside the premises, and an alarm signal should not be generated

when the door or window is opened.” (EX2003, ¶ 159; EX1009, [0018], [0029].) That is, Lamb’s system assumes that motion detected inside a premises is indicative of a person **authorized** to be inside the premises. (*Id.*) Accordingly, a user of Lamb’s system does not need to do anything to prevent false alarms—the system will automatically refrain from sending an alarm signal (or will send a bypass signal) when a door or window is accidentally opened. (*Id.*)

Williams’ system, however, operates on the principle that any motion detected inside a premises is indicative of a person that is **unauthorized** to be inside the premises. (EX2003, ¶ 160; EX1010, 1:64-2:3, 3:9-38.) Unlike Lamb’s system, a user of Williams’ system must wear a “personal device 22” to prevent a false alarm from being triggered. (EX1010, 1:54-2:10, 2:25-34.) If Williams’ user forgets to wear the “personal device 22,” or if the “personal device 22” runs out of battery, then there is nothing to prevent a false alarm from being triggered. (EX2003, ¶ 160.)

Petitioner’s proposed modifications to Lamb—which incorporate “a device configured to transmit an authentication code” (*i.e.*, Williams’ user-worn “personal device”) (Petition, 17-19)—would fundamentally alter Lamb’s basic principles of operation in two ways.

First, the proposed modifications would change Lamb from a system that operates on the principle that motion detected inside a premises is indicative of an **authorized** person to a system that operates on the principle that motion detected

inside the premises is indicative of an *unauthorized* person. (EX1009, [0018], [0029]; EX1010, 1:54-2:10, 2:25-34, 3:9-38; EX2003, ¶ 162.)

Second, the proposed modifications would change Lamb's system from one where the user does not need to do anything to prevent false alarms to one where the user must carry or wear "a device configured to transmit an authentication code" (*i.e.*, Williams' user-worn "personal device") to prevent false alarms. (EX2003, ¶ 163.)

Petitioner fails to explain why a POSITA would have been motivated to modify Lamb in ways that would fundamentally alter Lamb's basic principles of operation. (Petition, 17-18.) Indeed, a POSITA would not have done so—particularly in view of the numerous drawbacks of the proposed modifications. (EX2003, ¶ 164.)

(d) Petitioner's Proposed Modifications Would Frustrate Lamb's Intended Purpose.

Petitioner also cannot show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed inventions because Petitioner's proposed modifications to Lamb would frustrate Lamb's intended purpose.

Lamb's intended purpose is to provide "a barrier alarm device that helps reduce the occurrences of false alarms." (EX1009, [0002].) In Lamb, the user does not need to do anything to prevent false alarms because Lamb's system

automatically refrains from sending an alarm signal (or will send a bypass signal) when a door or window is accidentally opened. (*Id.*, [0018], [0029]; EX2003, ¶ 166.)

In the proposed modifications to Lamb, however, the user must have in his or her possession “a device configured to transmit an authentication code” (*i.e.*, Williams’ user-worn “personal device”) to prevent false alarms. (Petition, 17-19; EX1010, 1:54-2:10, 2:25-34.) A POSITA would have recognized that introducing “a device configured to transmit an authentication code” (*i.e.*, Williams’ user-worn “personal device”) into Lamb would *increase* the number of false alarms because a false alarm would occur, for example, every time the user forgets the “personal device,” or if the “personal device” runs out of battery, breaks, or is lost/misplaced. (EX2003, ¶ 167.) Again, no such issues exist in Lamb’s (unmodified) system because the user of Lamb’s system does not need to do anything to prevent false alarms. (*Id.*) Thus, the proposed modifications would frustrate Lamb’s intended purpose of reducing the occurrences of false alarms. (*Id.*)

(e) Petitioner’s Proposed Modifications Fail To Account For The Fundamental Differences Between Lamb And Williams.

Petitioner cannot show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed inventions because, as demonstrated in Section II(C)(3), *supra*, Lamb and Williams are fundamentally different. (Section II(C)(3), *supra*; EX2003, ¶¶ 148-156.)

Petitioner does not make any attempt to address (let alone rectify) Lamb's and Williams' fundamental differences. (Petition, 17-19.) Indeed, a POSITA would not have modified Lamb in view of Williams in view of the references' significant, fundamental differences. (EX2003, ¶ 157.)

B. Ground 2: Petitioner Has Failed To Show That Sharma, Alone, Renders Claims 1 And 11 Obvious.

1. Petitioner Has Failed To Show That Sharma, Alone, Discloses The Timed Alarm Signal Limitations.

Petitioner has failed to show that Sharma, alone, discloses the Timed Alarm Signal Limitations of Claims 1 and 11. According to the Timed Alarm Signal Limitations, the barrier alarm device must transmit a “timed alarm signal” to a security panel. (EX1001, claims 1 and 11.)

Petitioner asserts that Sharma discloses a barrier alarm device (*i.e.*, door sensing unit 104) that transmits signals to a system control panel 102 to enter a “Timed Exit Mode,” and that Sharma's signal to enter the “Timed Exit Mode” is the claimed “timed alarm signal.” (Petition, 67, 76.)

Petitioner cannot show that Sharma, alone, discloses the Timed Alarm Signal Limitations because Petitioner cannot demonstrate that Sharma's signal to enter the “Timed Exit Mode” is the claimed “timed alarm signal.”

As Petitioner concedes, Sharma's “Timed Exit Mode” is a mode where Sharma's door sensing unit 104 ignores door control signals and/or disables the door

contact 172 so that occupants of a house or facility may leave within a predetermined amount of time without triggering an alarm. (EX1011, 8:6-21, FIG. 5; Petition, 67, 76; EX2003, ¶ 171.) Thus, Sharma's "Timed Exit Mode" causes Sharma's system to be disarmed or bypassed for a predetermined amount of time. (*Id.*)

As demonstrated in Section IV(A)(3), *supra*, a bypass signal, as well as a signal that causes an alarm system to be disarmed, ***are both not the claimed "timed alarm signal."*** (Section IV(A)(3), *supra*; EX2004, 117:18-21, 126:12-15 (Petitioner's expert confirming that an "alarm signal" is different than a bypass signal).) Sharma's signal to enter the "Timed Exit Mode" (*i.e.*, the alleged "timed alarm signal") cannot be the claimed "timed alarm signal" because it is a signal that causes Sharma's system to be disarmed or bypassed and prevents an alarm from being triggered. (EX2003, ¶ 172; EX1011, 8:6-21; Petition, 67-68.) A POSITA would not have considered Sharma's "Timed Exit Mode" signal that causes Sharma's system to be disarmed or bypassed to be a "timed alarm signal" (*id.*), and nothing in the Petition or supporting declaration demonstrates otherwise. (Petition, 67-68, 76; EX1003, ¶¶ 181, 183, 194-195.)

C. Petitioner's Expert's Testimony Should Be Given Little To No Weight.

Petitioner's expert's testimony should be given little to no weight because Petitioner's expert is not qualified as a POSITA. It is an abuse of discretion to admit expert testimony "on any issue that is analyzed through the lens of an ordinarily

skilled artisan” (e.g., invalidity) where the expert “does not have ordinary skill in the art.” *Kyocera Senco Indus. Tools Inc. v. Intl. Trade Commn.*, 22 F.4th 1369, 1377-78 (Fed. Cir. 2022); *Avail Medsystems, Inc. v. Teladoc Health, Inc.*, Case IPR2022-00444, Paper 10 at 26 (PTAB Jul. 21, 2022).

A POSITA would have had at least three or more years of commercial design and development experience in residential or business security and alarm systems. (EX2003, ¶ 34.) Petitioner’s expert, Mr. McNair, does not meet this definition of a POSITA. Mr. McNair’s only experience is in the field of security and alarm systems is installing a security system for personal use. (*Id.*, ¶ 12; EX2004, 182:8-185:7.) This does not qualify Mr. McNair as a POSITA in the field of security and alarm systems. (EX2003, ¶ 34.) Indeed, Mr. McNair confirmed during his deposition that he has never worked or consulted for a security or alarm system company. (EX2004 at 184:10-15.)

Unlike Mr. McNair, PO’s expert has many years of experience designing and developing residential and business security and alarm systems in a commercial setting. (EX2003, ¶¶ 5-11.) The Board should give Petitioner’s expert’s testimony little to no weight, and should give PO’s expert’s testimony substantial weight.

VI. CONCLUSION

PO respectfully requests that the Board confirm the patentability of the Claims.

Respectfully submitted,

Dated: February 6, 2024

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CERTIFICATE OF COMPLIANCE

This paper complies with the requirements of 37 C.F.R. § 42.24 and contains 13,999 words (exclusive of the table of contents, the table of exhibits, the certificate of service, and this certification).

This paper complies with the typeface requirements of 37 C.F.R. § 42.6 and has been prepared in 14 point Times New Roman proportionally spaced typeface with normal spacing.

Respectfully submitted,

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