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 PRELIMINARY RESPONSE

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2001	U.S. Patent App. Pub. No. 2013/0257611
2002	USPTO Assignment Record for U.S. Patent App. Pub. No. 2013/0257611

In response to the Petition filed by Roku, Inc. ("Petitioner") requesting *inter partes* review of Claims 1-2, 6, 11-12, and 16 ("Challenged Claims") of U.S. Pat. No. 10,692,340 ("the '340 patent"), Patent Owner Ecolink Intelligent Technology, Inc. ("Patent Owner") submits this Preliminary Response in accordance with 35 U.S.C. § 313 and 37 C.F.R. § 42.107. Patent Owner timely filed this Preliminary Response under 37 C.F.R. § 42.107(b) within three months of the mailing date of the Notice of Filing Date Accorded to Petition and Time for Filing Patent Owner Preliminary Response.

I. INTRODUCTION

The Petition seeks review of Challenged Claims 1-2, 6, 11-12, and 16 of the '340 patent based on two obviousness grounds. The Board should decline to institute *inter partes* review of the '340 patent for at least four reasons.

First, every Challenged Claim of the '340 patent recites or requires an "alarm signal." The Petition applies an incorrect, overbroad construction of the term "alarm signal" and Petitioner has failed to demonstrate that the Challenged Claims are obvious under its incorrect construction.

Second, notwithstanding Petitioner's incorrect construction of the term "alarm signal," Petitioner has failed to show that the asserted prior art references, either alone or in combination, disclose, teach, or suggest every limitation of the Challenged Claims. The Petition pieces together disparate words and phrases from

the asserted prior art references—oftentimes located pages away from each other—to make it appear that the references disclose or teach things that they do not. In some instances, the Petition makes no attempt to demonstrate that the asserted prior art references disclose, teach, or suggest certain claim limitations.

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 invention.

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

Accordingly, Patent Owner respectfully requests that the Board decline to institute an *inter partes* review of the '340 patent.

II. BACKGROUND

A. The '340 Patent And The Challenged 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 at [21], [22], [45], [54].)

The '340 patent and the Challenged Claims generally relate "to a barrier alarm device that helps reduce the occurrences of false alarms." (*Id*. at 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*. at 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*. at 1:49-57.) Thus, 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*. at 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*. at 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*. at 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*. at 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*. at 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*. at 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*. at 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*. at 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*. at 2:34-39.)

Independent Challenged Claims 1, 6, 11 and 16 of the '340 patent are reproduced below:

> 1. A barrier alarm device, comprising:
>
> a barrier status detection device for indicating that a barrier monitored by the barrier alarm device has been opened;

> a human detection device for indicating that a human being is inside a premises in proximity to the barrier;
>
> a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel, the timed alarm signal for initiating a timer associated with the security panel;
>
> a memory having processor-executable instructions stored thereon; and
>
> a processor coupled to the barrier status detection device, the human detection device, the transmitter, and the memory, for executing the processor-executable instructions that cause the barrier alarm device to:
>
> respond to the barrier status detection device indicating that the barrier has been opened by determining whether the human detection device indicates that the human being is inside the premises in proximity to the barrier; and
>
> transmit, via the transmitter, the timed alarm signal to the receiver only when it is determined that the human detection device indicates that the human being is inside the premises in proximity to the barrier.

(*Id*. at claim 1.)

> 6. A central security panel, comprising:
>
> a communication interface for receiving signals from a barrier alarm device;
>
> a memory for storing processor-executable instructions; and
>
> a processor coupled to the communication interface and the memory, for processing the 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;
>
> respond to the first alarm signal by determining whether a human being has been indicated to be inside the premises and in proximity to the barrier;
>
> begin a measuring of an elapsed time from when the first alarm signal was received when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;
>
> determine whether the elapsed time has exceeded a predetermined time;
>
> generate a security response when it is determined that the elapsed time has exceeded the predetermined time; and
>
> provide the generated security response to a receiver via the communication interface.

(*Id*. at claim 6.)

> 11. A method, comprising:
>
> in response to a barrier status detection device associated with a barrier alarm device indicating that a barrier being monitored by the barrier alarm device has been opened, determining whether a human detection device associated with the barrier alarm device indicates that a human being is inside a premises monitored by a central security panel in proximity to the barrier; and
>
> transmitting by the barrier alarm device a timed alarm signal to the central security panel for the purpose of initiating a timer associated with 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.

(*Id*. at claim 11.)

> 16. A method performed by a central security panel, comprising:
>
> 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;
>
> responding to the first alarm signal by determining whether a human being has been indicated to be inside the premises in proximity to the barrier;
>
> starting a countdown timer when it is determined that the human being has been indicated to be inside the premises in proximity to the barrier;
>
> determining whether the countdown timer has expired;
>
> in response to determining that the countdown timer has expired, generating a security response; and
>
> providing the generated security response to a receiver via a communication interface.

(*Id*. at claim 16.)

As shown above, Challenged Claims 1 and 11 of the '340 patent are directed to a barrier alarm device comprising a barrier status detection device and a human detection device. (*Id*. at 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 human being 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 human being is inside the premises in proximity to the barrier. (*Id*.)

Dependent Challenged Claims 2 and 12, which depend on Challenged 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*. at claims 2 and 12.)

Challenged Claims 6 and 16 of the '340 patent 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*. at 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 human being has been indicated to be inside the premises in proximity to the barrier. (*Id*.) When a measured elapsed time exceeds a 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 at 12.) Petitioner's definition of a POSITA is overbroad.

The '340 patent expressly states that the "present application relates to the field of home and business security." (EX1001 at 1:15-16.) Petitioner's definition of a POSITA, on the other hand, encompasses individuals that have experience with ***any*** sensor systems for ***any application***. Petitioner does not explain how or why an individual with experience in sensors systems for speech recognition applications, for example, would have been considered a POSITA with respect to the '340 patent.

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 at 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 does nothing. (*Id*.; *see also id*. at [0018].) As Petitioner has conceded, Lamb does not disclose or suggest any subject matter

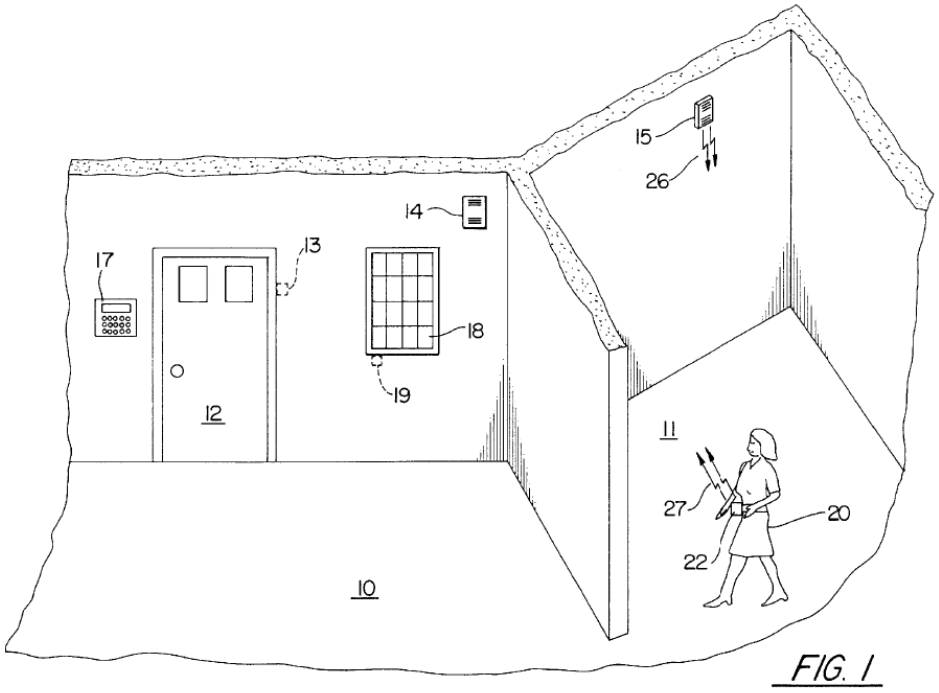
related to "a timed alarm signal," "measuring of an elapsed time from when [a] first alarm signal was received," or "starting a countdown timer." (Petition at 6.)

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 at 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*. at 1:44-53, 1:57-59, 2:25-38.) The "portable device" may be a badge, collar, bracelet, clip-on, etc. (*Id*. at 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*. at 1:64-67.) Assuming the motion detector was 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*. at 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*. at 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*. at 2:45-47):



(*Id*. at FIG. 1.)

As shown above, 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*. at 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*. at 3:13-18.)

3. 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 at [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*. at 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*. at 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*. at 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*. at 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*. at 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*. at 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*. at 8:10-15.) "The Timed Exit Mode allows people to leave the house or facility without having to interact with the system 100." (*Id*. at 8:19-21.)

Sharma's Figure 5, which is reproduced below, is a flowchart illustrating the "Armed Stay Mode":

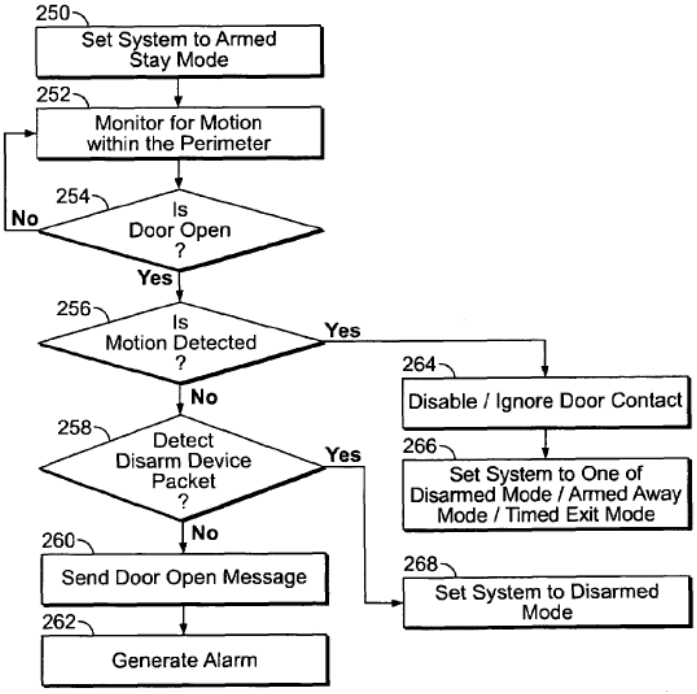


FIG. 5

(*Id*. at FIG. 5.)

III. LEGAL STANDARDS

"The Director may not authorize an *inter partes* review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable

likelihood that the petition would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a).

In an *Inter Partes* Review, the Petitioner bears the burden of persuasion to prove unpatentability by a preponderance of the evidence. *See 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." *See In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993); *see also Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (petitioner must persuasively explain how the references would be combined to arrive at the claimed invention). 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); *see also Orexo AB v. Actavis Elizabeth LLC*, 903 F.3d 1265, 1271 (Fed. Cir. 2018) (holding that a finding of obviousness requires a showing "that a person of ordinary skill would have selected and combined and modified the subject matter of the references in the manner of the claimed invention, with a reasonable expectation of success.").

IV. CLAIM CONSTRUCTION

A. "[timed / immediate / first] alarm signal"

Each of the Challenged Claims of the '340 patent recites an "alarm signal." Specifically, Challenged Claims 1 and 11 recite a "timed alarm signal," Challenged Claims 2 and 12 recite an "immediate alarm signal," and Challenged Claims 6 and 16 recite a "first alarm signal." (EX1001 at claims 1-2, 6, 11-12, and 16.)

The proper construction of the term "timed alarm signal" is a signal that itself indicates an alarm condition and instructs to initiate a security response after a period of time.

The proper construction of the term "immediate alarm signal" is a signal that itself indicates an alarm condition and instructs to immediately initiate a security response.

The proper construction of the term "first alarm signal" is a signal that itself indicates an alarm condition and instructs to initiate a security response.

As discussed in detail below, the intrinsic evidence supports that these are the proper constructions of the "[timed / immediate / first] alarm signal" terms.

1. The Challenged Claims Support Patent Owner's Proposed Constructions.

First, the Challenged Claims support Patent Owner's proposed constructions. Each of the Challenged Claims recites an "alarm signal." (EX1001 at claims 1-12, 6, 11-12, and 16.) As Challenged Claims 2, 6, 12, and 16 make clear, the purpose

of the claimed "alarm signal" is to instruct the security panel to initiate a security response. (*Id*. at claims 2 and 12 ("an immediate alarm signal … for causing a security response to be initiated"); *id*. at claims 6 and 16 ("reciev[e/ing] a first alarm signal … generat[e/ing] a security response").)

The Challenged Claims also specify that the "alarm signal" may instruct when the security response should be initiated. According to Challenged Claims 1 and 11, a "***timed*** alarm signal" instructs the security panel to initiate a security response after a period of time has elapsed, as measured by a timer associated with a security panel. (*Id*. at claims 1 and 11.) Conversely, according to Challenged Claims 2 and 12, an "***immediate*** alarm signal" instructs the security panel to initiate a security response immediately. (*Id*. at claims 2 and 12.)

2. The Specification Supports Patent Owner's Proposed Constructions.

Second, the specification supports Patent Owner's proposed constructions. The specification teaches that an "alarm signal" is a signal that itself indicates that an alarm condition exists. (*See, e.g.,* EX1001 at 4:52-54 ("reed switch assembly 110 transmits a message to central security panel 116 indicative of a local alarm condition"), 5:52-54 ("central security panel 116 receiving an indication of an alarm condition being sensed by one or more barrier alarm devices/sensors in the security system."), 10:14-21 ("if processor 300 determines that a local alarm condition has occurred, an alarm signal is provided to transmitter 308 for transmission to a remote

location, such as central security panel 116 or a gateway. In one embodiment, the alarm signal comprises a notification to central security panel 116 that a local alarm condition has been detected at a particular door or window being monitored by the barrier alarm device.").)

The specification also teaches that the "alarm signal" instructs the central security panel to initiate a security response. (EX1001 at Abstract ("the barrier alarm device transmits a timed alarm signal to a central security panel, causing a security response to be generated by the central security panel…"), 5:58-60 ("When a local alarm condition is detected, central security panel 116 generates a system alarm which may comprise taking one or more security responses"), 17:35-51 ("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"); *see also id*. at 2:28-39, 2:50-59, 4:10-20, 6:2-10, 16:64-17:4, 17:8-34, 21:13-35.)

Additionally, the specification teaches that the "alarm signal" may instruct when the security response should be initiated. For example, the specification teaches that a "***timed*** alarm signal" instructs the security panel to initiate the security response after a period of time has elapsed. (EX1001 at 4:16-20 ("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."); *see also id*. at Abstract, 2:7-9, 2:45-47, 6:2-10, 16:64-17:17, 19:16-18, 20:33-38.) An "***immediate*** alarm signal," on the other hand, instructs the security panel to initiate the security response immediately. (*Id*. at 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."); *see also id*. at 19:58-61, 26:65-27:2.)

Crucially, the specification of the '340 patent expressly distinguishes the claimed "alarm signal" from other signals or data that are sent from the barrier alarm device to the security panel (*i.e.*, a "status signal" or "raw data"). For example, in one embodiment the barrier alarm device "does not make determinations as to when to transmit an alarm signal." (EX1001 at 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 state of the barrier status detection device or the human detection device occurs, respectively. (*Id*. at 11:35-40.) The "barrier status signal" indicates whether the monitored barrier is open or closed, and the "human status signal" indicates whether a human is or is not detected in proximity to the monitored barrier. (*Id*. at 11:52-65; *see also id*. at 10:61-

64.) According to the specification, 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*. at 11:40-45; *see also id*. at 11:58-12:3.)

In a similar example, the specification teaches that rather than transmitting "an indication of an alarm condition being sensed" to the central security panel, the barrier alarm device 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 at 5:49-64.)

In both of the above examples, the security panel uses the "status signal(s)" or "raw data" to determine that an alarm condition exists and that a security response should be generated. (EX1001 at 5:55-58, 11:40-42, 11:58-12:3.)

With the claimed "alarm signal," however, the security panel need not make this same determination because the "alarm signal" itself indicates that an alarm condition exists and instructs the security panel to initiate a security response. (*Id*. at 4:52-54, 5:52-54, 10:14-21.) By distinguishing "status signals" and "raw data"—which are used by the security panel to determine that an alarm condition exists—from an "alarm signal" that itself (i) indicates that an alarm condition exists and (ii) instructs a security response to be initiated (*see, e.g., id*. at 11:33-45), the

specification confirms that an "alarm signal" is a signal that itself ***indicates*** that an alarm condition exists and ***instructs*** a security response to be initiated.[1]

3. The Prosecution History Supports Patent Owner's Proposed Constructions.

Third, the prosecution history supports Patent Owner's proposed constructions. "Included within an analysis of the file history may be an examination of the prior art cited therein." *Vitronics Corp. v. Conceptronic, 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 Patent Owner (*see generally* EX2002), was cited by the applicant in an IDS during the prosecution of the '340 patent (EX1002 at 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*. at 168, 175, 208, 321), and is cited on the face of the '340 patent as prior art that was cited by the Examiner (EX1001 at [56]).

[1] The specification and claims of the '340 patent teach that an "alarm signal" may, in addition to indicating that an alarm condition exists, also indicate that a barrier has been opened. (*See, e.g.,* EX1001 at 10:18-21, 21:13-16, claim 6, claim 16.)

Like the '340 patent, Lamb-611 discloses a barrier alarm that may send a "local alarm signal" to a central controller 116. (EX2001 at [0058], [0072], [0103], [0110].) The "local alarm signal" itself indicates that a local alarm condition exists and instructs the central controller 116 to initiate a system alarm (*e.g.*, sounding one or more audible alerts). (*Id*.; *see also id*. at [0027] ("When a local alarm condition is detected, central controller 116 generates a system alarm which may comprise taking one or more actions, such as notifying remote monitoring station 124 that a local alarm condition has occurred, illuminating one or more lights, sounding one or more audible alerts, etc."), [0059] ("When central controller 116 is in the 'armed' state, it will generate a system alarm event if one or more barrier alarms indicate that a local alarm condition has occurred.").)

Additionally, like the '340 patent, Lamb-611 expressly distinguishes a "local alarm signal" from a "status message" or "raw data." (*Id*. at [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*. at [0027], [0058], [0110].) The central controller 116 processes the "status message" or "raw data" to determine whether a local alarm condition exists. (*Id*.) Said differently, the central controller 116 uses the "status message" or the "raw data" to determine that 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].)

Thus, by distinguishing a "status message" and "raw data"—which the central controller 116 uses to determine whether a local alarm condition exists and to initiate a system alarm—from a "local alarm signal" that itself indicates to the central controller 116 that a local alarm condition exists and instructs the central controller 116 to initiate a system alarm (*see, e.g., id*. at [0027], [0058], [0110]), Lamb-611 further confirms that an "alarm signal" is a signal that itself ***indicates*** that an alarm condition exists and ***instructs*** a security response to be initiated.

4. Petitioner's Apparent Construction Of "[timed / immediate / first] alarm signal" Is Incorrect.

The Petition asserts that no express constructions are necessary for any limitations of the Challenged Claims. (Petition at 13.) However, in Petitioner's analysis, Petitioner asserts that the claimed "timed alarm signal" is a signal for only initiating a timer associated with a security panel. (*Id*. at 29-30; *see also id*. at 42 ("The signal causing the control panel to initiate this timed process is a timed alarm signal."); *id*. at 68 ("the claimed 'timed alarm signal' is only 'for initiating a timer' associated with the security panel.").) Petitioner's construction of "timed alarm signal" is overbroad and incorrect, and confirms that Petitioner has misconstrued the term "alarm signal."

It is well-settled that "claim language should not treated as meaningless." *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 951 (Fed. Cir. 2006). A construction that "reads out" limitations from the claim is overbroad and incorrect. *See Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1369 (Fed. Cir. 2005) (holding that a construction that read out the term "preformed" from the limitation "preformed endless loop" was too broad because it "transform[ed] the limitation into simply an "endless loop."); *see also Playtex Products, Inc. v. Procter & Gamble Co.*, 400 F.3d 901, 908 (Fed. Cir. 2005).

Here, Petitioner's construction of "timed alarm signal" (*i.e.*, a signal for initiating a timer associated with a security panel) 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, it is clear the Petition has applied an incorrect, overbroad construction of the term "alarm signal."

V. PETITIONER HAS FAILED TO SHOW THAT THERE IS A REASONABLE LIKELIHOOD THAT THE CHALLENGED CLAIMS OF THE '340 PATENT ARE UNPATENTABLE.

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

(a) Petitioner Has Failed To Show That 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]" (Claim 1), And "transmitting by the barrier alarm device a timed alarm signal to the central security panel" (Claim 11) (Collectively, The "Timed Alarm Signal Limitations").

Petitioner has failed to show that Williams discloses or teaches the Timed Alarm Signal Limitations of Challenged 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 at claims 1 and 11.)

In the Petition, Petitioner does not assert that Lamb discloses or teaches transmitting a "timed alarm signal" from a barrier alarm device to a security panel. (Petition at 28; *see also id*. at 6 (Petitioner conceding that Lamb does not disclose or suggest "a timed alarm signal").) Instead, Petitioner asserts that "a POSITA would have been motivated to modify Lamb to transmit a timed alarm signal for initiating

a timer when the barrier alarm device detects that the barrier has been opened and that a human is inside the premises, ***as taught by Williams***." (*Id*. (emphasis added); *id*. at 41 (same); *see also id*. at 29 ("Williams discloses a transmitter for transmitting a timed alarm signal to a receiver associated with a security panel"); *id*. at 41 ("Williams discloses transmitting the timed alarm signal to the receiver").)

Petitioner has failed to show that Williams discloses or teaches transmitting a "timed alarm signal" from a barrier alarm device to a security panel, as claimed, because: (i) Petitioner has applied an incorrect, overbroad construction of the term "timed alarm signal" and has presented no evidence that Williams discloses or teaches a "timed alarm signal" under the correct construction; and (ii) Petitioner has failed to demonstrate that Williams discloses or teaches transmitting ***any*** signal—let alone a "timed alarm signal"—from a barrier alarm device to a security panel.

First, Petitioner has applied an incorrect, overbroad construction of the term "timed alarm signal." According to the Petition, the claimed "timed alarm signal" is a signal "'for initiating a timer' associated with the security panel." (Petition at 29-30.) Petitioner's construction of "timed alarm signal" (*i.e.*, a signal for initiating a timer associated with a security panel) is incorrect because it reads out and renders meaningless the term "alarm." (*See* Section IV(A)(4), *supra*.) Because Petitioner ascribed no meaning to the term "alarm" in the limitation "timed ***alarm*** signal," Petitioner cannot demonstrate that Williams discloses or teaches the Timed Alarm

Signal Limitations for this reason alone. *See, e.g., Intel Corp. v. PACT XPP Schweiz AG*, Case IPR2020-00532, Paper 12 at 16, 20, 24 (PTAB Sept. 10, 2020) (declining to institute review where "Petitioner's articulated challenges [were] premised on its incorrect implied construction" that read out limitations from the claims); *Fellowes, Inc. v. Treefrog Developments, Inc.*, Case IPR2020-00869, Paper 16 at 2 (PTAB Oct. 29, 2020) ("we find that Petitioner advances an incorrect construction of Claim 28 and, therefore, is not reasonably likely to prevail at trial in showing that the claim is unpatentable.").

Additionally, as discussed above, the proper construction of the term "timed alarm signal" is a "signal that itself indicates an alarm condition and instructs to initiate a security response after a period of time." (*See* Section IV(A), *supra*.) However, the Petition and supporting declaration contain no analysis or evidence demonstrating that Williams discloses or teaches a "timed alarm signal" under the proper construction. (*See, generally*, Petition at 28-34, 41-42; EX1003, ¶¶ 66, 69-71, 83, 85-86.)

For example, neither Petitioner nor its expert assert that Williams' alleged "timed alarm signal" ***itself indicates*** that an alarm condition exists. (*Id*.) Rather, at the very most, Petitioner and its expert assert that the alleged "timed alarm signal" is "a signal that a human has been detected." (Petition at 29; EX1003, ¶ 71.) But, as discussed above, the specification and prosecution history of the '340 patent are

clear that a signal that merely indicates that a human has been detected (*e.g.*, a "human status signal," "raw data" from a human detection device, etc.) ***is not a "timed alarm signal."*** (*See* Section IV(A)(2)-(3), *supra*.)

Further, neither Petitioner nor its expert assert that Williams' alleged "timed alarm signal" itself instructs to initiate a security response after a period of time. (*See, generally*, Petition at 28-34, 41-42; EX1003, ¶¶ 66, 69-71, 83, 85-86.) Instead, Petitioner and its expert merely assert that, in response to receiving the alleged "timed alarm signal," Williams' control panel initializes a timer that "sets an alarm" upon timing out. (Petition at 29-30; EX1003, ¶¶ 66, 71.) Petitioner and its expert do not explain what "setting an alarm" means, how "setting an alarm" purportedly reads on a "security response" (if at all), or how the alleged "timed alarm signal" instructs that an alarm should be "set" when a timer times out. (*Id*.)

Second, the Petition fails to demonstrate that Williams discloses or teaches transmitting ***any*** signal—let alone the claimed "timed alarm signal"—from a barrier alarm device to a security panel. According to the Petition, Williams' "control panel" is a "security panel" and Williams' "motion detector" is a "barrier alarm device." (Petition at 28-29.) However, the only signals transmitted to or from Williams' control panel (*i.e.*, the alleged "security panel") that are disclosed or taught in Williams are:

- A "code" that is transmitted from the control panel ***to the occupant's personal device 22*** for the purpose of setting an authorization code into

the personal device (EX1010 at 2:11-16, 5:11-13, 5:22-32, 7:64-8:1, claim 1);

- An "inquiry" or "interrogation" for an authorization code that is transmitted from the control panel ***to the occupant's personal device 22*** (*id*. at 3:19-24, 3:31-34); and

- An "authorization code" that is received by the control panel ***from the occupant's personal device 22*** in response to an "inquiry" or "interrogation" (*id*. at 3:19-24, 8:18-24).

Notably, Petitioner does not assert that Williams' personal device 22 is a barrier alarm device and does not assert that a "code," an "inquiry," an "interrogation," or an "authorization code" is a "timed alarm signal." (*See, generally* Petition at 28-34, 41-42.)

Further, none of the portions of Williams that are reproduced or cited in the Petition and supporting declaration disclose or teach a signal transmitted from Williams' motion detector to Williams' control panel. (Petition at 16-17, 28-34, 41-42 (citing EX1010 at Abstract, FIGS. 2 and 2A, 1:64-2:8, 2:11-18, 2:35-38, 2:66-3:38, 3:49-4:39, 5:3-5, 7:43-63, claims 1, 5, and 8); EX1003, ¶¶ 51, 66, 70, 71, 83 (same).) Indeed, the only signals transmitted to or from Williams' control panel that are mentioned in the cited portions of Williams are between the control panel ***and the personal device 22***—not between the control panel and the motion detector. (*Id*.)

Additionally, Petitioner's and its expert's assertion that Williams discloses "a motion detector providing, via electromagnetic radiation to a control panel, a 'violation signal indicative of a potential alarm in response to sensing a motion

within a space'" is based on a cobbling together of disparate words and phrases located pages away from each other and further confirms that Petitioner's arguments are unsupported. (Petition at 29; EX1003, ¶ 66.)

For instance, the only times Williams mentions "electromagnetic radiation" is with respect to the "inquiry" for an authorization code sent ***to the occupant's personal device 22***, and the responsive transmission of the authorization code ***from the occupant's personal device 22***. (EX1010 at 1:64-2:10, 3:9-18, 3:39-48.) At no point does Williams disclose or teach that the motion detector provides anything to the control panel "via electromagnetic radiation." (*Id*.) Similarly, the only times Williams mentions a "violation signal" is in claims 1, 5, and 8, and none of these claims disclose or teach that a "violation signal" is transmitted ***anywhere***—let alone to the control panel, as Petitioner incorrectly asserts. (EX1010 at claims 1, 5, and 8.) These claims also do not disclose or teach that a "violation signal" causes a timer to be initiated. (*Id*.; *see also* EX1001 at claims 1 and 11 (reciting that the "timed alarm signal" causes a timer associated with a security panel to be initiated).)

Accordingly, Petitioner has failed to show that Williams discloses or teaches the Timed Alarm Signal Limitations.

(b) Petitioner Has Failed To Show That Williams Discloses Or Teaches "initiating a timer associated with the security panel" (Claim 1) And "initiating a timer associated with the central security panel" (Claim 11) (Collectively, The "Timer Limitations").

Petitioner has also failed to show that Williams discloses or teaches the Timer Limitations of Challenged Claims 1 and 11. The Timer Limitations state that the "timed alarm signal" causes a timer associated with a security panel (or central security panel) to be initiated. (EX1001 at claims 1 and 11.)

In the Petition, Petitioner does not assert that Lamb discloses or teaches a timer or initiating a timer associated with a security panel. (Petition at 28; *see also id*. at 6 (Petitioner conceding that Lamb does not disclose or suggest a timer).) Instead, Petitioner asserts that Williams "***discloses*** … initiating a timer associated with" a "control panel." (*Id*. at 29 (emphasis added); *see also id*. ("Williams discloses that … 'control panel' initializes a timer").)

Petitioner has failed to show that Williams discloses or teaches the Timer Limitations because Petitioner has failed to show that Williams discloses or teaches a timer associated with the control panel.

According to Petitioner and its expert, Williams' Figures 2 and 2A and their corresponding disclosures teach a "control panel" that "initializes a timer." (Petition at 17, 29 (citing EX1010 at 3:49-4:39, 5:3-5, FIGS. 2 and 2A); EX1003, ¶¶ 51, 71 (same).) However, neither Figures 2 and 2A nor their corresponding disclosures

even mention a "control panel"—let alone that the timer is associated with the "control panel." (*See, generally* EX1010 at 3:49-5:10, FIGS. 2 and 2A.) Notably, Williams discloses that Figures 2 and 2A illustrate a "***detector routine***," not a routine for the "control panel." (*Id*. at 3:49.)

Accordingly, Petitioner has failed to show that Williams discloses or teaches the Timer Limitations.

(c) 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 Challenged 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 at 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 at 46-47.) The Petition specifically reads Lamb's "barrier status signal" on the claimed "first alarm

signal." (*Id*. at 47 ("barrier alarm device 106 transmits a barrier status signal to … central security panel 116").)

Lamb's "barrier status signal" is not a "first alarm signal" under ***any construction*** of the term "first alarm signal" because both the '340 patent and Lamb itself ***expressly distinguish*** a "barrier status signal" from an "alarm signal." (EX1001 at 11:33-12:3; EX1009 at [0043], claim 19.) 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 at 47 (citing only EX1009 at [0043]); EX1003, ¶¶ 105-106 (same).) Neither Petitioner nor its expert explain why a POSITA would have considered a "barrier status signal" to be a "first alarm signal." (*Id*.) Thus, regardless of how the term "first alarm signal" is construed, there can be no doubt that Lamb's "barrier status signal" is not an "alarm signal." (*Id*.)

Additionally, as discussed above, the correct construction of the term "first alarm signal" is a "signal that itself indicates an alarm condition and instructs to initiate a security response." (*See* Section IV(A), *supra*.) However, neither the Petition nor supporting declaration assert that Lamb's "barrier status signal" itself indicates that an alarm condition exists or instructs to initiate a security response. (Petition at 47; EX1003, ¶¶ 105-106.) Instead, the Petition and supporting

declaration merely assert that a "barrier status signal" indicates that a barrier has been opened. (*Id*.)

Thus, Petitioner has failed to show that Lamb discloses the First Alarm Signal Limitations.

(d) Petitioner Has Failed To Show That Williams Discloses Or Teaches "processor-executable instructions that causes the central security panel to: … begin a measuring of an elapsed time from when the first alarm signal was received" (Claim 6) And "A method performed by a central security panel, comprising: … starting a countdown timer" (Claim 16).

Petitioner has failed to show that Williams discloses or teaches "processor-executable instructions that causes the central security panel to: … begin a measuring of an elapsed time from when the first alarm signal was received" and a "method performed by a central security panel, comprising: … starting a countdown timer" as recited in Challenged Claims 6 and 16, respectively.

Challenged Claim 6 requires that the central security panel begin measuring an elapsed time from when a first alarm signal is received. (EX1001 at claim 6.) Challenged Claim 16 requires that the central security panel start a countdown timer. (*Id*. at claim 16.)

In the Petition, Petitioner does not assert that Lamb discloses or teaches a central security panel that begins measuring an elapsed time or starts a countdown timer. (Petition at 48-49; *see also id*. at 6 (Petitioner conceding that Lamb does not

disclose or suggest measuring an elapsed time or starting a countdown timer).) Instead, Petitioner asserts that "a POSITA would have been motivated to modify Lamb to initiate a timer associated with the central security panel, ***as taught by Williams***." (*Id*. at 49 (emphasis added); *see also id*. ("Williams discloses a central security panel configured to being a measuring of an elapsed time").)

Like the Timer Limitations of Challenged Claims 1 and 11, Petitioner's assertion that Williams teaches "a timer associated with the central security panel" is unsupported and incorrect.

Again, Petitioner and its expert assert that Williams' Figures 2 and 2A and their corresponding disclosures teach a "control panel" that "initializes a timer." (Petition at 49 (citing EX1010 at 3:49-4:39, 5:3-5, FIGS. 2 and 2A); EX1003, ¶¶ 112, 114 (same).) However, as discussed above, neither Figures 2 and 2A nor their corresponding disclosures ***even mention a "control panel"***—let alone that the timer is associated with the "control panel." (*See, generally* EX1010 at 3:49-5:10, FIGS. 2 and 2A.) The additional disclosures of Williams that Petitioner and its expert cite to likewise fail to disclose or teach a timer associated with a "control panel." (*Id*. at Abstract, 1:64-2:8, 2:11-18, 3:9-38, 7:43-63, claims 1, 5, and 8.)

Accordingly, Petitioner has failed to show that Williams discloses or teaches "processor-executable instructions that causes the central security panel to: … begin a measuring of an elapsed time from when the first alarm signal was received" and

a "method performed by a central security panel, comprising: … starting a countdown timer."

(e) Petitioner Has Failed To Show That Lamb In View Of Williams Renders Dependent Challenged Claims 2 And 12 Obvious.

Petitioner has failed to show that Lamb in view of Williams renders dependent Challenged Claims 2 and 12 obvious in view of their dependency on Challenged Claims 1 and 11, respectively. Challenged Claims 2 and 12 depend from Challenged Claims 1 and 11, respectively, and thus incorporate each and every limitation of those claims. *See* 35 U.S.C. § 112(d). Because Petitioner has failed to show that Lamb in view of Williams renders Challenged Claims 1 and 11 obvious, Petitioner has likewise failed to show that Lamb in view of Williams renders Challenged Claims 2 and 12 obvious.

Additionally, Petitioner has failed to show that Lamb in view of Williams renders Challenged Claims 2 and 12 obvious because Petitioner has failed to show that Lamb discloses "instructions that cause the barrier alarm device to transmit, via the transmitted, an immediate alarm signal" (Challenged Claim 2) and "transmitting by the barrier alarm device an immediate alarm signal" (Challenged Claim 12) (collectively, the "Immediate Alarm Signal Limitations").

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 at 42-43 (citing EX1009 at [0037], [0041], [0051]-[0053], FIG. 5; EX1003, ¶¶ 88-90 (same).)

Notably, however, neither Petitioner nor its expert explains how Lamb's "alarm signal" reads on the claimed "***immediate*** alarm signal." (*Id*.) As discussed in Section IV(A), *supra*, the claims and specification of the '340 patent are clear that an "immediate alarm signal" is a signal that itself instructs a security response to be initiated "immediately." (*See, e.g.,* EX1001 at 17:46-51, 26:65-27:2.) But Petitioner does not even assert that Lamb's "alarm signal" instructs (or in any way causes) a security response to be initiated "immediately." (Petition at 42-43.) Indeed, Petitioner's analysis of the Immediate Alarm Signal Limitations reads out the term "immediate" from the claimed "***immediate*** alarm signal." (*Id*.)

Accordingly, Petitioner has failed to show that Lamb discloses the Immediate Alarm Signal Limitations.

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 Invention Of The '340 Patent.

Petitioner has also failed to show that there is a reasonable likelihood that Lamb in view of Williams renders Challenged Claims 1-2, 6, 11-12, and 16 obvious because Petitioner has failed to show that a POSITA would have been motivated to

modify Lamb in view of Williams to arrive at the claimed invention of the '340 patent.

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). Specifically, 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. *Plas-Pak Industries, Inc. v. Sulzer Mixpac AG*, 600 Fed. Appx. 755, 758-59 (Fed. Cir. 2015); *see also In re Ratti*, 270 F.2d 810, 813 (CCPA 1959).

Here, Petitioner has proposed modifying Lamb in view of Williams in two ways that are relevant to the Challenged Claims.

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 at 17, 28, 41.)

Second, Petitioner has proposed modifying Lamb's security panel to initialize a timer, as allegedly taught in Williams. (*Id*. at 28, 49, 51-53.)[2]

The Petition identifies only one reason why a POSITA would have modified Lamb in view of Williams: "to 'provide[] significantly greater personal protection to individuals occupying a secure space' by verifying that the potential alarm is indeed caused by an authorized person, and not an unauthorized person." (*Id*. at 28 (citing EX1010 at 2:35-38); *see also id*. at 18, 41, 49 (same).)

As discussed in detail below, Petitioner has failed to show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed invention of the '340 patent because (i) Petitioner's rationale for modifying

[2] Petitioner also proposes modifying Lamb's system to include Williams' user-worn "personal device" that transmits an authorization code. (Petition at 17-19.) However, the Challenged Claims do not recite a "personal device" or anything remotely similar to Williams' "personal device." (EX1001 at claims 1-2, 6, 11-12, and 16.)

Lamb lacks a rational underpinning; and (ii) Petitioner's proposed modifications to Lamb would change Lamb's basic principle of operation.

(a) Petitioner's Rationale For Modifying Lamb Lacks A Rational Underpinning.

Petitioner's rationale for modifying Lamb (*i.e.*, to verify that a potential alarm was caused by an authorized person) lacks a rational underpinning because it is not logically connected to Petitioner's proposed modifications to Lamb (*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). *See, e.g., ActiveVideo Networks, Inc. v. Verizon Commun., Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (holding that testimony that "bears no relation to any specific combination of prior art elements … fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does*.") (emphasis in original).

Petitioner does not explain (and cannot explain) how transmitting a "timed alarm signal" to a security panel or initializing a timer associated with a security panel "verifies that a potential alarm was caused by an authorized person." (Petition at 17-18.) Rather, as Petitioner admits, 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 at 1:6-10, 1:54-2:38; *see also* Petition at 17 ("waits for a reception of an authorization code from an authorized personal

device.").) Indeed, Williams attributes its alleged improvement to "personal protection" to this "personal device 22." (*Id*.)

Accordingly, Petitioner has identified ***no reason*** why a POSITA would have modified Lamb in view of Williams ***in the specific manner claimed***. *Personal Web Techs.*, 848 F.3d at 993-94. Verifying that a potential alarm was caused by an authorized person is not a claimed feature of the Challenged Claims, and the Challenged Claims do not recite or require anything like Williams' "personal device 22." (*See generally* EX1001 at claims 1-2, 6, 11-12, and 16.)

(b) Petitioner's Proposed Modifications Would Change Lamb's Basic Principle Of Operation.

Petitioner has also failed to show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed invention of the '340 patent because Petitioner's proposed modifications to Lamb would change Lamb's basic principle of operation.

Lamb expressly discloses that its goal is to provide "a barrier alarm device that helps reduce the occurrences of false alarms." (EX1009 at [0002].) Lamb's "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 an alarm signal should not be generated when the door or window is opened." (*Id*. at [0018]; *see also id*. at [0029].) Thus, 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*.)

In Williams, on the other hand, ***any movement*** inside the premises is treated as a potential alarm. (EX1010 at 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. (*Id*. at 1:54-2:10, 2:25-34.) Notably, if Williams' user forgets to wear the "personal device 22," if the "personal device 22" runs out of battery, etc., then there is nothing to prevent a false alarm from being triggered. (*Id*.)

Accordingly, Lamb's and Williams' systems operate on two fundamentally different underlying assumptions. Lamb's system assumes that motion detected inside a premises is indicative of a person ***authorized*** to be inside the premises. (EX1009 at [0018], [0029].) Williams' system, however, assumes 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. (EX1010 at 1:64-2:3, 3:9-38.)

Petitioner's proposed modifications to Lamb—which incorporate Williams' user-worn "personal device" that transmits an authorization code to negate potential alarms (Petition at 17-19)—would fundamentally change Lamb's basic principle of operation in two ways.

First, the proposed modifications would change Lamb from a system that assumes that motion detected inside a premises is indicative of an ***authorized*** person to a system that assumes that motion detected inside the premises is indicative of an ***unauthorized*** person. (EX1009 at [0018], [0029]; EX1010 at 1:54-2:10, 2:25-34, 3:9-38.)

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 wear a "personal device" to prevent false alarms. (*Id*.)

Similarly, Petitioner's proposed modifications to Lamb would frustrate Lamb's intended purpose of "reduc[ing] the occurrences of false alarms." (EX1009 at [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. (EX1009 at [0018], [0029].) In the proposed modifications to Lamb, however, the user must have in their possession Williams' "personal device" to prevent false alarms. (Petition at 17-19; EX1010 at 1:54-2:10, 2:25-34.) As a matter of common sense, the proposed modifications to Lamb would ***increase*** the number of false alarms because a false alarm would occur, for example, every time the user forgets the "personal device," if the "personal device" runs out of battery or breaks, etc.

Simply put, the Petition fails to reconcile the fundamental differences between Lamb and Williams, fails to address the fundamental change in Lamb's basic principle of operation that the proposed modifications would create, and fails to provide any explanation why a POSITA would have pursued "enhanced security" at the cost of Lamb's express goal of reducing false alarms. (Petition at 17-19.) Thus, Petitioner has failed to show that a POSITA would have been motivated to modify Lamb in view of Williams to arrive at the claimed invention of the '340 patent.

B. Ground 2: Petitioner Has Failed To Show That There Is A Reasonable Likelihood That Sharma, Alone, Renders Challenged Claims 1 And 11 Obvious.

1. Petitioner Has Failed To Show That Sharma, Alone, Discloses, Teaches, Or Suggests Every Limitation Of Challenged Claims 1 And 11.

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

Petitioner has failed to show that Sharma, alone, discloses he Timed Alarm Signal Limitations of Challenged 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 at claims 1 and 11.)

In the Petition, 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." (Petition at 67, 76.) Petitioner asserts that the signal to enter the "Timed Exit Mode" is the claimed "timed alarm signal." (*Id*.)

Petitioner has failed to show that Sharma, alone, discloses transmitting a "timed alarm signal" from a barrier alarm device to a security panel, as claimed, because: (i) Petitioner cannot demonstrate that Sharma's alleged signal to enter the "Timed Exit Mode" is a "timed alarm signal" under any reasonable construction; and (ii) Petitioner has presented no evidence that Sharma discloses transmitting a signal to enter the "Timed Exit Mode" to the system control panel 102.

First, Petitioner cannot demonstrate that Sharma's alleged signal to enter the "Timed Exit Mode" is a "timed alarm signal" under any reasonable construction. As Petitioner admits, 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 at 8:6-21, FIG. 5; Petition at 67, 76.) Thus, as Petitioner admits, Sharma's "Timed Exit Mode" causes Sharma's system to be ***disarmed*** for a predetermined amount of time. (*Id*.)

Sharma's alleged signal to enter the "Timed Exit Mode" cannot be a "timed alarm signal" under any reasonable construction because the '340 patent ***expressly distinguishes*** a signal that causes the system to be disarmed (*i.e.*, a "bypass signal") from the claimed "timed alarm signal." (EX1001 at 8:20-26, 10:53-61, 11:23-35, 12:58-63, 13:29-34, 13:45-61.) Nothing in the Petition or supporting declaration explains why a POSITA would have considered Sharma's alleged "Timed Exit

Mode" signal that causes Sharma's system to be ***disarmed*** to be a "timed ***alarm*** signal." (Petition at 67-68, 76; EX1003, ¶¶ 181, 183, 194-195.) Instead, the Petition simply repeats Petitioner's incorrect, overbroad construction of the term "timed alarm signal" (*i.e.*, "a signal for initiating a timer associated with the security panel") that reads out and renders meaningless the term "alarm." (Petition at 67-68.)

Further, as discussed above, the correct construction of the term "timed alarm signal" is a "signal that itself indicates an alarm condition and instructs to initiate a security response after a period of time." (*See* Section IV(A), *supra*.) However, the Petition and supporting declaration contain no analysis or evidence demonstrating that Sharma discloses a "timed alarm signal" under the correct construction. (*See, generally*, Petition at 67-71, 76; EX1003, ¶¶ 181, 183, 194-195.) Most notably, neither Petitioner nor its expert assert that Sharma's alleged "timed alarm signal" in any way indicates an alarm condition. (*Id*.) Rather, as Petitioner admits, Sharma's alleged "timed alarm signal" does the ***opposite***—it causes Sharma's system to be disarmed and prevents an alarm from being triggered. (EX1011 at 8:6-21; Petition at 67-68.)

Second, the Timed Alarm Signal Limitations require that the "timed alarm signal" be transmitted from a barrier alarm device to a security panel (EX1001 at claims 1 and 11). The Petition fails to demonstrate that Sharma discloses transmitting a signal to enter a "Timed Exit Mode" (*i.e.*, the alleged "timed alarm

signal") from door sensing unit 104 (*i.e.*, the alleged "barrier alarm device") to system control panel 102 (*i.e.*, the alleged "security panel").

According to Sharma, if a door is opened and motion is detected inside the premises near the door, Sharma's system may be configured to respond in one of several ways. (EX1011 at 7:52-8:21, FIG. 5.) In one option, the processor 175 of the door sensing unit 104 "may send a signal to the system control panel 102 to set the system 100 to Disarmed Mode." (*Id*. at 8:6-7.) "Alternatively, the system 100 may enter a Timed Exit Mode for a predetermined amount of time." (*Id*. at 8:10-13.) Notably, Sharma does ***not*** disclose or teach that the door sensing unit 104 sends a signal to the system control panel 102 to enter the "Timed Exit Mode." (*Id*.) A signal is mentioned only with respect to the "Disarmed Mode" (*id*. at 8:6-7), and Petitioner ***does not assert*** that the signal to enter a "Disarmed Mode" is the claimed "timed alarm signal." (Petition at 67.)

Accordingly, Petitioner has failed to show that Sharma, alone, discloses the Timed Alarm Signal Limitations.

(b) Petitioner Has Failed To Show That Sharma, Alone, Discloses The Timer Limitations.

Petitioner has also failed to show that Sharma, alone, discloses the Timer Limitations of Challenged Claims 1 and 11. The Timer Limitations require that the "timed alarm signal" transmitted from the barrier alarm device to the security panel

cause a timer associated with a security panel to be initiated. (EX1001 at claims 1 and 11.)

According to the Petition, Sharma discloses transmitting a signal to enter a "Timed Exit Mode" (*i.e.*, the alleged "timed alarm signal") from a door sensing unit 104 (*i.e.*, the alleged "barrier alarm device") to a system control panel 102 (*i.e.*, the alleged "security panel"), and that this signal allegedly initiates a timer associated with the system control panel 102. (Petition at 67-68, 76.)

Petitioner has failed to show that Sharma, alone, discloses the Timer Limitations because Petitioner has failed to show that Sharma discloses that system control panel 102 receives a signal that initiates a timer associated with the system control panel 102.

First, as discussed above, Sharma does not disclose that a signal to enter a "Timed Exit Mode" is ever transmitted from the door sensing unit 104 to the system control panel 102. (EX1011 at 8:6-21.) Thus, Petitioner cannot demonstrate that Sharma discloses a signal that is transmitted from the door sensing unit 104 to the system control panel 102 that causes a timer associated with the system control panel 102 to be initiated. (*Id*.)

Second, Sharma makes no mention of a "timer." (*See, generally* EX1011.) To the extent Sharma discloses that any of its devices function to keep track of time, Sharma does so only with respect to the first door sensing unit 104 and the first

disarm device 150. (*Id*. at 6:26-43, 8:13-15, 8:33-51.) At no point does Sharma disclose that system control panel 102 has a "timer" or functions to keep track of time, and Petitioner has failed to identify any such disclosure. (Petition at 67-68, 76.)

Accordingly, Petitioner has failed to show that Sharma, alone, discloses the Timer Limitations.

C. Petitioner Failed To Support Its Petition With The Testimony Of A POSITA.

Petitioner has also failed to show that there is a reasonable likelihood that any of the Challenged Claims of the '340 are unpatentable because Petitioner has failed to support its Petition with the testimony of a POSITA.

The Federal Circuit has held that 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). Claims are properly held valid where the party asserting invalidity fails to offer testimony from one of skill in the art. *See Creative Compounds, LLC v. Starmark Laboratories*, 651 F.3d 1303, 1313-14 (Fed. Cir. 2011) (citing *Schumer v. Laboratory Computer Systems, Inc.*, 308 F.3d 1304, 1315 (Fed. Cir. 2002)).

Here, Petitioner's expert asserts that he has experience with:

- Amateur radio (EX1003, ¶ 7);

- Speech recognition (*id.*, ¶¶ 8-10); and
- Cryptography (*id.*, ¶¶ 8, 10, 11).

However, as discussed above, the '340 patent expressly "relates to the field of home and business security" and more specifically "to a barrier alarm device that helps reduce the occurrences of false alarms." (EX1001 at 1:15-18.) Petitioner fails to explain how Petitioner's expert's experience with amateur radio, speech recognition, and cryptography would qualify Petitioner's expert as a POSITA. (Petition at 12-13.) At best, Petitioner's expert provides the conclusory, unsupported statement that his "level of skill in the art was at least that of a person of ordinary skill." (EX1003, ¶ 40.) But such conclusory testimony is not entitled to consideration. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

Accordingly, Petitioner has failed to establish that its expert has ordinary skill in the art, Petitioner's expert's opinions are inadmissible, and Petitioner has failed to support its Petition with the requisite testimony of a POSITA. *See Kyocera*, 22 F.4th at 1377-78.

VI. CONCLUSION

Accordingly, for at least the foregoing reasons, Patent Owner respectfully requests that the Board refuse to institute an *inter partes* review because Petitioner has failed to establish a reasonable likelihood that any of the Challenged Claims of the '340 patent will be found unpatentable.

Respectfully submitted,

Dated: August 3, 2023

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CERTIFICATE OF COMPLIANCE

This paper complies with the requirements of 37 C.F.R. § 42.24 and contains 11,281 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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The undersigned hereby certifies that on the below date, I caused the forgoing to be served by electronic mail to the following:

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