

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RESIDEO TECHNOLOGIES, INC. and
CENTRAL SECURITY GROUP – NATIONWIDE, INC.,¹
Petitioners,
v.
UBIQUITOUS CONNECTIVITY, LP,
Patent Owner.

Case IPR2019-01335

Patent 8,064,935 B2

PATENT OWNER’S SURREPLY

¹ Central Security Group – Nationwide, Inc., who filed a petition in IPR2019-01609, has been joined as a petitioner in this proceeding.

Table of Contents

I.	Claim Construction	1
A.	“Microcontroller” (Claims 3, 14, 18, and 21)	1
II.	The Proposed Invalidity Grounds Based on Oinonen and Whitley Fail	5
A.	Petitioners Fail to Establish the Combination of Oinonen and Whitley	5
1.	Petitioners Fail to Identify any Relevant Failing of Oinonen Prompting a POSITA to Turn to Whitley	5
2.	Petitioners Fail to Identify Adequate Motivation to Combine Oinonen and Whitley Relevant to the Challenged Claims.....	5
B.	Ground 1A Fails: Claim 1-3, 7, 11-15, 17-19, and 21 are Not Unpatentable Over Oinonen and Whitley	6
1.	Neither Oinonen nor Whitley Enables a Base Unit to Send and Receive SMS Messages.....	6
2.	Claim 3	7
3.	Claim 11	7
4.	Claims 12.....	7
5.	Claim 14	8
6.	Claim 18	8
7.	Claim 21	11
C.	Ground 1B: Claims 4-6 and 16 are Not Unpatentable Over Oinonen, Whitley, and Sears	12
D.	Ground 1D: Claims 9 and 10 are Not Unpatentable Over Oinonen, Whitley, Antila, and Ehlers	12
E.	Ground 1E: Claims 20 and 22 are Not Unpatentable Over Oinonen, Whitley, and Menard	14
III.	The Proposed Grounds of Invalidity Based on Bielski and Wu Fail ...	17

A. Petitioners Fail to Properly Establish the Proposed Combination of Bielski and Wu.....	17
1. Petitioners Fail to Identify Adequate Motivation to Combine Bielski and Wu.....	17
2. Petitioners Fail to Explain Any Other Relevant Failing of Bielski that Would Prompt a POSITA to Turn to Wu.....	18
B. Ground 2A: Claims 1-4, 7-9, 11-15, 17-19, and 21 are Not Unpatentable over Bielski and Wu.....	19
1. Claim 1	19
2. Claim 3	22
3. Claim 4	22
4. Claim 11	23
5. Claim 12	23
6. Claim 18	23
7. Claim 21	25
C. Ground 2B: Claims 5, 6, and 16 are Not Unpatentable over Bielski, Wu, and Sears	25
D. Ground 2D: Claims 20 and 22 are Not Unpatentable over Bielski, Wu, and Menard	26
IV. Conclusion	26

TABLE OF AUTHORITIES

Cases

<i>Ariosa Diagnostics v. Verinata Health</i> , 805 F.3d 1359 (Fed. Cir. 2015).....	7
<i>Ericsson v. Intellectual Ventures II</i> , IPR2014-00915, Paper 37, 2015 U.S. Pat. App. LEXIS 12600 (Dec. 7, 2015)...	10
<i>Ex Parte Pant</i> , Appeal 2014-006165, 2016 Pat. App. LEXIS 1556 (Apr. 1, 2016).....	10
<i>Globespanvirata v. Tex. Instruments</i> , No. 03-2854, 2005 U.S. Dist. LEXIS 5744 (D.N.J. Apr. 6, 2005).....	10
<i>Merial v. VIRBAC</i> , IPR2014-01279, Paper 13, 2015 Pat. App. LEXIS 4035 (Jan. 22, 2015).....	10
<i>Trintec Indus. v. Top-U.S.A.</i> , 295 F.3d 1292 (Fed. Cir. 2002).....	19
<i>VirtualAgility v. Salesforce.com</i> , 759 F.3d 1307 (Fed. Cir. 2014).....	11

Statutes and Rules

Fed. R. Evid. 201(b).....	11
---------------------------	----

Patent Owner's Current Index of Exhibits

Exhibit No.	Description	Previously Submitted
2001	U.S. Patent No. 7,031,663 ("Heinonen")	Yes
2002	U.S. Patent Publication No. 2004/0092282 ("Kim")	Yes
2003	Declaration of Daniel A. Kent in Support of Patent Owner's Motion for the <i>Pro Hac Vice</i> Admission of Daniel A. Kent	Yes
2004	Declaration of Ivan Zatkovich in Support of Patent Owner's Preliminary Response	No
2005	Curriculum Vitae of Ivan Zatkovich	No
2006	Excerpts from Microsoft Computer Dictionary, Fifth Edition	No
2007	Excerpts from the Comprehensive Dictionary of Electrical Engineering, Second Edition	No
2008	Supermicro Article (https://www.supermicro.com/newsroom/news/articles/news051704.cfm)	No
2009	Logitech Microcontroller (https://www.tweaktown.com/reviews/8028/logitech-g213-prodigy-rgb-gaming-keyboard-review/index4.html)	No
2010	Nokia Q4 2004 Disclosure (https://www.nokia.com/system/files/files/q4-2004-earnings-release-pdf.pdf)	No
2011	Nokia Q4 2003 Disclosure (https://www.nokia.com/system/files/files/q4-2003-presopdf.pdf)	No
2012	Fortune Article (https://money.cnn.com/magazines/fortune/fortune_archive/2005/01/24/8234055/index.htm)	No
2013	NY Times Article (https://www.nytimes.com/2004/10/15/technology/nokia-profit-off-in-quarter-handset-price-cuts-cited.html)	No
2014	Gnokii FAQ (https://web.archive.org/web/20040110222318/http://www.gnokii.org/faq.shtml)	No
2015	Deposition of Petitioners' Expert, Dr. Kevin Jeffay (May 7, 2020)	No

Ubiquitous Connectivity (“Patent Owner”) submits this Surreply to the Petitions filed by Resideo Technologies and Central Security Group – Nationwide regarding U.S. Patent No. 8,064,935.

I. Claim Construction

A. “Microcontroller” (Claims 3, 14, 18, and 21)

A POSITA would have understood the term “microcontroller,” as claimed in the ’935 patent, to mean “a special-purpose computing device including at least a CPU, main memory, timing circuits, and I/O circuitry designed for a minimal quantity of chips and then programmed to handle a particular task.” Ex. 2004, ¶48.

In accusing Patent Owner of overreliance on extrinsic evidence, Petitioners ignore Patent Owner’s analysis of the specification, which shows that the “microcontroller” of the ’935 patent’s exemplary base unit is consistent with this construction. Specifically, Patent Owner’s expert opined that a POSITA would have understood, for example, that the exemplary base unit’s microcontroller includes I/O circuitry components to interact with the subsystems given that no external I/O circuitry is illustrated between the microcontroller and the subsystems. Figure 4 also does not show memory or timing circuits separate from the microcontroller. This is consistent with the typical microcontroller of that timeframe, which included onboard main memory and timing circuits as reflected in Patent Owner’s construction. Ex. 2004, ¶¶45-46. Petitioners provide no

meaningful rebuttal to this analysis of the disclosed embodiment's microcontroller.

Petitioners also effectively render the term "microcontroller" devoid of its meaning by asserting that the claimed "microcontroller" need only include a microprocessor or the like to process a message and send a command. Reply, 3-4. Not only does this ignore the ordinary meaning of "microcontroller" (PO Response at 7-9), it also ignores that other claims of the '935 patent recite a "controller" instead of a "microcontroller." Petitioners provide no justification for departing from the general principle that different claims terms have different meanings. Patent Owner's expert explained that a POSITA would understand that a "microcontroller" and a "microprocessor" each has its own advantages and disadvantages when utilized in a system like that claimed in the '935 patent. A microcontroller would be preferable in some scenarios and a microprocessor would be preferable in others—they are not the same thing. PO Response at 5-7. Petitioners therefore render the specific use of the term "microcontroller" meaningless by ignoring the distinction between "microcontroller" and "controller."

Petitioners accuse Patent Owner of "cherry-picking" by citing two dictionaries in support of its proposed construction, yet they now (for the first time) cite a single dictionary for their interpretation. But their own expert did not cite this dictionary. Moreover, during his deposition, Petitioners' expert agreed that

a microcontroller has a more specific meaning than Petitioners' new dictionary definition. Dr. Jeffay testified that a microcontroller "is a small, you know, embedded processor and memory and I/O, a little teeny computer." Ex. 2015 at 55:9-18. Dr. Jeffay further testified that he agreed that "in addition to a CPU, a microcontroller typically includes memory, timing circuits, and I/O circuitry." *Id.* at 74:21-75:2. Dr. Jeffay specifically referred to I/O circuitry as "a central component" of a microcontroller. *Id.* at 73:19-74:8. Petitioners' expert further testified that microcontrollers "typically are programmed to handle a narrowly-defined task," consistent with Patent Owner's construction (and not Petitioners'). *Id.* at 64:22-65:16.

Petitioners' expert also contrasted microcontrollers from microprocessors, saying that a microprocessor only becomes a computer (and therefore a microcontroller) when associated with memory and I/O circuitry. *Id.* at 68:68:3-18. Further, Petitioners' expert testified that "the microcontroller is more of a system, a small system, whereas the microprocessor would be just a component of the system." *Id.* at 55:9-56:14. This agrees with Patent Owner's assertion, reflected in its proposed construction, that unlike a microprocessor, a microcontroller is a computer unto itself. But Petitioners' expert contradicts Petitioners' proposed construction, which does not require that the "microcontroller" include memory and I/O circuitry.

In short, Petitioners' expert agreed that a microcontroller and a microprocessor are not the same thing, confirming Patent Owner's assertion. Petitioners make no effort to reconcile the conflict between their own expert's admissions and the definition they now cite. And even their definition notes that a "microcontroller" is used for "*precise* process control." Ex. 1039 at 14. This agrees with Patent Owner's assertion (and Petitioners' expert's admission) that a "microcontroller," unlike a microprocessor, is programmed to handle a particular task.

Petitioners abuse the facts in asserting that the opinion of Patent Owner's expert conflicts with his opinions in unrelated proceedings. Petitioners point to Mr. Zatkovich's testimony in another proceeding that "the disclosure of a microcontroller clearly provides support for the claimed microprocessor.... *For purposes of the '838 Patent, and in the context of how 'microcontroller' and 'microprocessor' are used therein*, these terms can be accepted as essentially synonymous." Ex. 1042, 27. As this passage expressly states, and as Mr. Zatkovich explained during his deposition, the question presented in the previous proceeding was whether the disclosure of a microcontroller supported the term "microprocessor" in the claims. It did, because, as Patent Owner's construction here reflects, a microcontroller contains, *inter alia*, a CPU (e.g., a microprocessor).

While a microcontroller provides support for a microprocessor, the reverse

(that a generic microprocessor necessarily discloses a microcontroller) does not follow. The disclosure of a pencil would provide support for a graphite shaft, but the disclosure of a graphite shaft would not, alone, disclose a pencil.²

II. The Proposed Invalidity Grounds Based on Oinonen and Whitley Fail

A. Petitioners Fail to Establish the Combination of Oinonen and Whitley

1. Petitioners Fail to Identify any Relevant Failing of Oinonen Prompting a POSITA to Turn to Whitley

Petitioners provide no rebuttal to Patent Owner's argument that, under the Board's case law, Petitioners' combination of Oinonen and Whitley fails because Petitioners did not explain what Oinonen fails to disclose or why a POSITA would turn to Whitley.

2. Petitioners Fail to Identify Adequate Motivation to Combine Oinonen and Whitley Relevant to the Challenged Claims

Petitioners provide only conclusory (and therefore insufficient) rebuttals to

² Petitioners also cite another unrelated proceeding in which Mr. Zatkovich opined that a provisional application's disclosure of a microprocessor provided support for certain claim language in a later related application. Since the claim language from the later application did not include the term "microcontroller," it is irrelevant. Ex. 1043 at 9-10.

Patent Owner's argument that Petitioners failed to establish the proposed combination of Oinonen and Whitley because they identified no motivation for combining the *claimed elements* as required by the Board's case law.

B. Ground 1A Fails: Claim 1-3, 7, 11-15, 17-19, and 21 are Not Unpatentable Over Oinonen and Whitley

1. Neither Oinonen nor Whitley Enables a Base Unit to Send and Receive SMS Messages

Patent Owner's Response explained that Oinonen and Whitley do not enable the recited SMS-capable base unit recited in claim 1. In reply, Petitioners argue that the '935 patent is likewise not enabling. While Patent Owner disagrees, the enablement of the '935 patent is not at issue in this proceeding.

Petitioners' only other argument is that obviousness references are not required to be enabling but qualify as prior art for whatever they disclose. What Petitioners overlook, however, is that the petition asserts that Oinonen and Whitley each discloses *every* element of the relevant claims (independent claims 1 and 11). Since they have applied Oinonen and Whitley as anticipating references, they absolutely need to enable the claimed functionality. Petitioners cannot do an end run simply by (inaccurately) couching their argument as based in obviousness. Further, as discussed above, Petitioners have failed to show that Oinonen and Whitley can be properly combined (or even what aspects of the references need to be combined). Finally, both Oinonen and Whitley fail to enable an SMS-capable

base unit. Thus, taking each reference for what it teaches fails to cure the problem because the combination, individually and as a whole, does not enable a POSITA to practice the claimed invention.

2. Claim 3

Oinonen and Whitley do not teach claim 3's "microcontroller" for the reasons discussed regarding independent claim 18.

3. Claim 11

Similar to claim 1, independent claim 11 recites a base unit capable of sending and receiving SMS messages. Neither Oinonen nor Whitley enable this functionality for the reasons discussed regarding claim 1.

4. Claims 12

Petitioners present an entirely new invalidity theory regarding claim 12 and their arguments should therefore be disregarded. Patent Owner's Preliminary Response did not present independent arguments regarding claim 12, and Patent Owner's Response echoed the Board's Institution Decision in noting Petitioners' failure to show a likelihood that claim 12 is invalid. In reply, Petitioners present new arguments relying on new aspects of the cited references. Since these arguments were not presented in the petition, nor are they responsive to arguments made in Patent Owner's Preliminary Response or Response, they should not be considered. *See Ariosa Diagnostics v. Verinata Health*, 805 F.3d 1359, 1367 (Fed. Cir. 2015). To give Petitioners a second bite at the apple would be doubly unfair

since Patent Owner is not permitted to introduce new evidence in surreply.

In any case, Petitioners' new arguments fail. They now argue that Oinonen and Whitley disclose cell networks, which contain wires "in the central office" and that "Whitley further discloses a variety of wireless networks." Reply at 31. That is the sum total of their analysis. They quote no specific disclosure of Oinonen or Whitley stating that it uses a non-wireless connection to *interface* between two wireless connections. Merely containing wires does not satisfy the claim language.

5. Claim 14

Neither Oinonen nor Whitley discloses claim 14's "microcontroller" as discussed regarding claim 18.

6. Claim 18

a) Neither Oinonen nor Whitley teaches the claimed "microcontroller"

Patent Owner's Response argued that neither Oinonen's microprocessor nor its ASIC constitutes a microcontroller as the petition asserted. PO Response at 26-29.³ In reply, Petitioners newly assert that Oinonen must disclose a microcontroller

³ While Petitioners assert in a footnote that they argued that the combination of Oinonen's microprocessor and ASIC could constitute a microcontroller, nothing in the petition or their expert declaration discusses these components in combination. Regardless, the combination of a microprocessor and an ASIC fails to constitute a

simply because its Figure 3 includes a component (element 1) labeled “MCU.” But Oinonen does not describe this element as a microcontroller. Instead, it refers to it as “a processor 1, such as a microprocessor.” Ex. 1016, 7:13-16, 7:21-26. As Patent Owner’s expert testified, a POSITA would understand this passage to indicate that element 1 is a processor (such as a microprocessor) rather than specifically a microcontroller. Ex. 1041, 98:10-99:10.

Patent Owner’s expert also explained during his deposition that Oinonen’s Figure 3 shows various components external to the processor 1 that would be incorporated into processor 1 were it actually a microcontroller. *Id.* at 131:15-134:3. Specifically, Patent Owner’s expert testified that “[g]iven all the components contained in Fig. 3, I do not believe that component 1 would conform to a microcontroller.” *Id.* at 131:10-12. He went on to explain that the fact that Figure 3 shows the following components external to the processor 1 indicates that Oinonen’s processor 1 is not a microcontroller: a memory, a serial connection, a wireless transceiver, and an ASIC. *Id.* at 131:10-132:14. These components would be internal to element 1 were it actually a microcontroller because a microcontroller, unlike Oinonen’s processor 1, is a computer unto itself.

Ignoring Oinonen’s express teaching that element 1 is a processor such as a

microcontroller for the same reasons discussed in Patent Owner’s Response.

microprocessor, Petitioners cite an unrelated patent using “MCU” as an abbreviation for microcontroller. But they provide no evidence that a POSITA would understand that “MCU” always refers to a microcontroller. Tellingly, Petitioners’ expert did not opine or testify that the MCU label proves that Oinonen discloses a microcontroller—even when challenged in his deposition regarding his opinion regarding Oinonen. Nor does Petitioners’ expert submit a declaration to that effect in connection with Petitioners’ Reply. That is for good reason. The Board’s own jurisprudence reveals that “MCU” is also used as an abbreviation for “microprocessor control unit.” *Ex Parte Pant*, Appeal 2014-006165, 2016 Pat. App. LEXIS 1556, at *3 (Apr. 1, 2016); *see also Globespanvirata v. Tex. Instruments*, No. 03-2854, 2005 U.S. Dist. LEXIS 5744, at *92-*93 (D.N.J. Apr. 6, 2005) (discussing U.S. Patent No. 5,596,204, which discloses a “microprocessor control unit” working with RAM on a separate chip, indicating it is not a “microcontroller”); U.S. Patent No. 5,090,780⁴ at Fig. 1, 3:20-32 (abbreviating

⁴ The Board may take official notice of this patent because “its accuracy is immediately capable of verification given that it is a public record.” *Merial v. VIRBAC*, IPR2014-01279, Paper 13, 2015 Pat. App. LEXIS 4035, at *16 (Jan. 22, 2015); *Ericsson v. Intellectual Ventures II*, IPR2014-00915, Paper 37, 2015 U.S. Pat. App. LEXIS 12600, at *20 n.9, n.10, n.12 (Dec. 7, 2015) (taking official

“microprocessor control unit” as “MCU” and identifying the Motorola M68000—a well-known microprocessor—as one example of such a “microprocessor unit”). Understanding “MCU” as short for “microprocessor control unit” is particularly fitting here given that Oinonen describes element 1 as “a processor 1, such as a microprocessor.” Thus, Petitioners’ new argument fails.

Petitioners also provide no rebuttal to Patent Owner’s arguments that Oinonen’s ASIC does not constitute a microcontroller. Nor do they rebut Patent Owner’s arguments that Whitley does not disclose a microcontroller. Thus, the cited combination fails to disclose the claimed microcontroller.

**b) Neither Oinonen nor Whitley Enables SMS
Messaging Between the Base Unit and Remote Unit**

As discussed regarding claim 1, neither Oinonen nor Whitley enables a POSITA to implement the SMS-capable base unit recited in claim 18.

7. Claim 21

Oinonen and Whitley do not disclose the claimed microcontroller as discussed regarding the “microcontroller” element of claim 18.

notice of various patents); *see also VirtualAgility v. Salesforce.com*, 759 F.3d 1307, 1312-13 (Fed. Cir. 2014); Fed. R. Evid. 201(b).

**C. Ground 1B: Claims 4-6 and 16 are Not Unpatentable Over
Oinonen, Whitley, and Sears**

Petitioners' argument that claim 4's requirement of "custom programmability" is satisfied by any application not typically found on standard telephones—regardless of whether that app has anything to do with the functionality of the claimed remote unit—ignores the contrary testimony of their own expert. Dr. Jeffay testified that the only custom programmability the '935 patent discloses is the ability to "communicate application data on SMS between the remote control units and the base control unit." As he also testified, the '935 patent discloses implementing this disclosed custom programmability in Java (or J2ME), as recited in dependent claims 5 and 6. Ex. 2015, 180:7-182:19. Thus, the context provided by the specification establishes that the "custom programmability" recited in claim 4-6 and the similar limitation of claim 16 provides the ability to communicate application data on SMS between the remote control units and the base control unit. Petitioners provide no response to the specification's context or their expert's corresponding admission.

Petitioners do not argue their proposed combination satisfies claims 4-6 or 16 under this proper understanding of the custom-programmability limitations.

**D. Ground 1D: Claims 9 and 10 are Not Unpatentable Over
Oinonen, Whitley, Antila, and Ehlers**

Petitioners dispute, without citing evidence, that Ehlers' user interface was

designed for screens larger than 2004-era mobile devices provided. Perhaps recognizing the inadequacy of this bare attorney argument in the face of the contrary opinion by Patent Owner's expert, Petitioners next assert that a POSITA could have cherry-picked a few elements from Ehlers' user interface and stuffed them onto the user interface of a 2004-era mobile device. This is the epitome of improper hindsight—using Patent Owner's claims and disclosure as a guide to dissect and reassemble a Frankenstein device from multiple prior-art references. Petitioners offer no reason why a POSITA would have been motivated to select a couple of icons from Ehlers' user interface—while ignoring the rest of the surrounding detail in the user interface that provided context for using those icons—and implement it in a standard 2004-era mobile device such as those disclosed in Oinonen and Whitley.

Moreover, Petitioners do not rebut Patent Owner's argument, supported by expert opinion, that a POSITA would have had a very difficult time modifying the software compiler that produced applications and associated icons for those phones so that the software compiler produced an application and icons associated with specific functions within that application. The relatively crude software-development tools available for early mobile phones would have made such modifications either very difficult or impossible for a POSITA because the POSITA would have lacked any information about the compiler's internal

structure. Ex. 2004, ¶¶118-120. Thus, a POSITA would not have known how to modify the software compiler to implement monitored-condition-specific icons rather than program-specific icons. Accordingly, the POSITA would not have had a reasonable chance of success and therefore would not have been motivated to pursue such a path. *Id.* ¶121. Petitioners’ reply does not address (or rebut) these technical issues that would have motivated a POSITA *against* trying to combine Ehlers’ user interface with the mobile devices disclosed in Oinonen or Whitley.

E. Ground 1E: Claims 20 and 22 are Not Unpatentable Over Oinonen, Whitley, and Menard

Claim 20 recites, *inter alia*, “a transmitter operatively associated with the controller for sending a second wireless message to the remote unit, wherein the second wireless message includes information indicating that the command has been executed.” Ex. 1001, 16:1-4. The “command” referenced in this claim element is “a command for the environmental device.” *Id.* at 15:32-39. Claim 22 similarly recites that the base unit is configured to “send [a] control command to the environmental device via the controller” and to “send a status message indicating execution of said control information to the remote device.” Ex. 1001, 16:37-38.

Petitioners do not assert that Oinonen or Whitley discloses this claim element but instead assert that it is taught by Menard. *See* Petition at 47. Patent Owner’s Response explained that Menard’s alarm-monitoring service does not

teach these recitations of claims 20 or 22 because, *inter alia*, it does not disclose sending notifications based on a command or control information for an environmental device being executed as recited in claims 20 or 22.

Petitioners devote only a footnote to addressing the requirement of claims 20 and 22 that the message indicate that the command (or control information) to the *environmental device* has been executed. *See* Reply at 15 n.9. There, they say that Menard discloses an alarm system where an alarm signal is communicated directly or indirectly to a user. This new argument, which should be disregarded since it is presented for the first time in Petitioners' Reply, is misplaced. An alarm (i.e., a message that a security alarm has been triggered) could be an example of the message recited in claim 19: "a wireless message including the current status of the environmental device." Such an alarm is not, however, a message indicating that the alarm system has executed a command/control information from the remote unit as claims 20 and 22 require. Instead, a message indicating that a command/control information for the alarm system has been executed would be, for example, a message indicating that the alarm system executed a command from the remote unit to arm (i.e., activate) the alarm system. In short, merely sending a message indicating that a burglar alarm is going off does not satisfy the plain language of the claims requiring a "wireless message indicating that the command has been executed" (as recited in claim 20) or "a status message indicating

execution of said control information” (as recited in claim 22).

Petitioners also note in the same footnote that Menard discloses the alarm-monitoring service notifying responsible parties regarding the outcome of the processing. Reply at 16 n.9 (citing Patent Owner Response at 43). As Patent Owner’s Response described, however, Menard only describes the alarm-monitoring service sending notifications regarding what *responsible parties or the alarm-monitoring service* did. Menard does not disclose a base unit sending a message confirming that an *environmental device* (e.g., an alarm system) has executed a command from the remote unit. Patent Owner does not rebut this basic failure of Menard. Nor do Oinonen or Whitley teach this requirement of claims 20 and 22, so the obviousness combination fails.

Petitioners also fail to show that Menard’s “system,” shown in Menard’s Figure 1, is a “base unit” as recited in claims 20 and 22. Menard discloses a third-party alarm monitoring service and refers to the “system” shown in Figure 1 as a “central station.” Ex. 1020, ¶[0054]. Petitioners miss the point in arguing that the claimed base unit need not be located within a home but could instead be located elsewhere on the home’s property (e.g., when monitoring a house gate on a multi-acre property). As Patent Owner’s expert testified, the term “base unit” is used in the specification and in the relevant industry to refer to a local device. Ex. 1040, 150:18-151:11. In their hypothetical example regarding a gate on a multi-acre

property, the “base unit” is still associated with the home being monitored and is therefore a local device. In contrast, Menard’s third-party monitoring service—involving a “central station”—is not a local device. Therefore, as Patent Owner’s expert opined, a POSITA would not understand a third-party alarm-monitoring service to constitute a “base unit” as recited in claims 20 and 22. Ex. 2004, ¶126.

III. The Proposed Grounds of Invalidity Based on Bielski and Wu Fail

A. Petitioners Fail to Properly Establish the Proposed Combination of Bielski and Wu

1. Petitioners Fail to Identify Adequate Motivation to Combine Bielski and Wu

Patent Owner’s Response, supported by the opinion of its expert and the testimony of Petitioners’ own expert, explained that a POSITA would not have been motivated to modify Bielski to send SMS messages from its mobile unit using the gnokii driver disclosed in Wu for several reasons, including (1) the per-message fee commonly associated with SMS messaging during the relevant time period (Ex. 2015, 147:15-148:7; Ex. 2004, ¶139); (2) the gnokii driver was specifically designed for Nokia mobile phones (Ex. 2014), which was rapidly losing market share during the relevant time period (Ex. 2012; Ex. 2013); (3) a POSITA would not have been motivated to design a “smart” climate-control system, alarm system, or the like such that it could only be controlled by a limited set of phones (Ex. 2004, ¶142; Ex. 1003, ¶499), particularly given that Bielski itself expresses a desire to operate using standard—not manufacturer-specific—

protocols (Ex. 1017, Bielski ¶¶[0030], [0057]); and (4) gnokii was written in the “C” programming language, which Petitioners’ expert testified would have been disadvantageous for various reasons, including posing a significant security risk (Ex. 2015, 187:5-189:13; Ex. 2004, ¶143).

Petitioners respond to only one of these points, asserting that there were a handful of other phones that could run the gnokii driver disclosed by Wu. Patent Owner noted as much in its Response. PO Response, 47 n.5. But Petitioners do not dispute that the gnokii driver worked only with a very limited subset of phones and therefore do not meaningfully rebut Patent Owner’s argument: a POSITA would not have been motivated to use a driver that did not work with all phones, especially given all the other reasons counseling against gnokii (including Petitioners’ expert’s admission that its programming language posed a major security risk).

2. Petitioners Fail to Explain Any Other Relevant Failing of Bielski that Would Prompt a POSITA to Turn to Wu

Patent Owner’s Response explained that, under the Board’s case law, Petitioners’ combination of Bielski and Wu fails because Petitioners did not sufficiently explain what Bielski fails to disclose or why a POSITA would turn to Wu. Petitioners provide no rebuttal to that argument. In fact, they continue to maintain that Bielski discloses all elements of the independent claims (except the last element of claims 20 and 22, for which they rely on Menard rather than Wu).

B. Ground 2A: Claims 1-4, 7-9, 11-15, 17-19, and 21 are Not Unpatentable over Bielski and Wu

1. Claim 1

- a) The proposed combination does not render obvious sending an SMS message from a remote unit to a base unit**

Petitioners concede that Bielski does not expressly disclose sending SMS messages from the mobile terminal (which they equate to the claimed remote unit) to the check and communication unit (which they equate to the claimed base unit). Ex. 2015, 114:14-115:2. Instead, they assert that Bielski's SMS messaging "necessarily work[s] bi-directionally" because Bielski allegedly discloses that a single "means" is responsible for communications from the mobile terminal to the check and communications unit and vice-versa. Reply at 14, citing Ex. 1017, ¶¶ [0005] and [0069]. This argument falls short fails because the "means" is not described in the cited passages. The mere word "means" does not tell a POSITA what the "means" includes. Thus, Petitioners' argument is based in inherency. And it is basic law that a prior-art reference inherently discloses a feature only if it is the necessary result of the reference's disclosure. *See Trintec Indus. v. Top-U.S.A.*, 295 F.3d 1292, 1297 (Fed. Cir. 2002) ("Inherency does not embrace probabilities or possibilities").

Petitioners have not established that Bielski necessarily uses the same communication technique to send messages from the check and communication

unit to the remote unit as is used to send messages from the remote unit to the check and communication unit. In fact, Bielski discloses a technique by which a user can submit commands to the check and communication unit from his or her mobile unit without SMS. Bielski explains that the user enters by commands by “enter[ing] the dialing number of the check and communication unit 20, which is assigned to the building 10, into their mobile phone or press[ing] the corresponding symbol on the display.” Ex. 1017, ¶[0064]. The reference to entering the dialing number would indicate to a POSITA that Bielski relied on known techniques for pressing telephone keys to send DTMF audio signals to a controller over a phone connection. Ex. 2004, ¶147. Such techniques are identified in the ’935 patent’s Background section as something the ’935 patent improves upon. Ex. 1001, 7:3-8. That Bielski is referring to such DTMF audio signals when it talks about sending commands via a phone without the use of the Internet is reinforced by Bielski’s statement that this can be done “by means of the ... direct mobile communications or land line connection.” Ex. 1017, Bielski ¶[0064]. A POSITA would understand that a land-line connection cannot be used to send SMS messages; thus, Bielski’s disclosure *must* be referring to the DTMF audio signals that the ’935 patent’s claimed solution improved upon. Ex. 2004, ¶147. This shows that Bielski’s “means” does not necessarily use SMS to send messages from the check and communication unit to the mobile unit.

While Petitioners object that the term “dial tones” is not used in Bielski, Patent Owner’s expert opined that a POSITA would understand that Bielski’s reference to dialing a number refers to utilizing DTMF dial tones as described in the ’935 patent. *Id.* As he explained in his deposition, “A number is not dialed by the user” when sending an SMS message and “an SMS message would never refer to [a phone number] as dialing number. It would refer to it as a destination number. . . . Because, again, you don’t dial the number to send the SMS. You program that number into the header of the SMS message to send.” Ex. 1041, 89:10-90:2. Petitioners provide no support for their assertion that a POSITA would consider Bielski’s reference to entering the dialing number to disclose SMS messaging—it is mere attorney argument. They also do not explain how Bielski could be referring to sending SMS messages from the mobile unit given that Bielski refers in this paragraph to utilizing a *land-line connection* (which could be used to send SMS messages). Ex. 2004, ¶147. Thus, at a minimum, Bielski does not *necessarily* disclose sending an SMS message from its mobile unit to its check and communication unit, and therefore it does not inherently disclose this feature as Petitioners argue.

While Petitioners cite Wu as also disclosing SMS messaging from a remote unit to a base unit, a POSITA would not have been motivated to combine Bielski and Wu for the reasons discussed above. Therefore, Wu cannot cure Bielski’s

deficiency. *Id.* ¶148.

b) The proposed combination does not enable the recited SMS-capable base unit

As discussed regarding Oinonen and Whitley, Petitioners respond to Patent Owner's argument that Bielski does not enable the recited SMS-capable base unit by arguing that the '935 patent is likewise not enabling. While Patent Owner disagrees with this assertion, the enablement of the '935 patent is not at issue in this proceeding.

As also discussed regarding Ground 1A, Petitioners' argument that obviousness references are evaluated for whatever they teach overlooks that Petitioners argued that Bielski satisfies *all* elements of claim 1. Therefore, it needs to enable the relevant functionality. Further, as discussed above, Bielski cannot properly be combined with Wu. Thus, taking Bielski for what it does disclose, Petitioners still do not identify a proper obviousness combination that cures Bielski's failure to provide an enabling disclosure.

2. Claim 3

Neither Bielski nor Wu discloses the microcontroller recited in claim 3 for the reasons discussed regarding independent claim 18.

3. Claim 4

Petitioners provide only a conclusory denial to Patent Owner's arguments that Bielski and Wu do not render claim 4 obvious.

4. Claim 11

For the reasons discussed regarding claim 1, Bielski does not disclose a base unit capable of sending and receiving SMS messages as recited in claim 11. Nor would a POSITA have been motivated to combine Bielski and Wu.

5. Claim 12

As discussed regarding Ground 1A, Petitioners' reply regarding claim 12 relies entirely on improper new arguments and should be ignored.

In any case, Petitioners still fail to establish invalidity. They now argue that Bielski's check and communication unit constitutes a "non-wireless connection interfacing between the first wireless connection and the second wireless connection." However, they quote to no specific disclosure of Bielski stating that it uses a non-wireless connection to *interface* between two wireless connections.

6. Claim 18

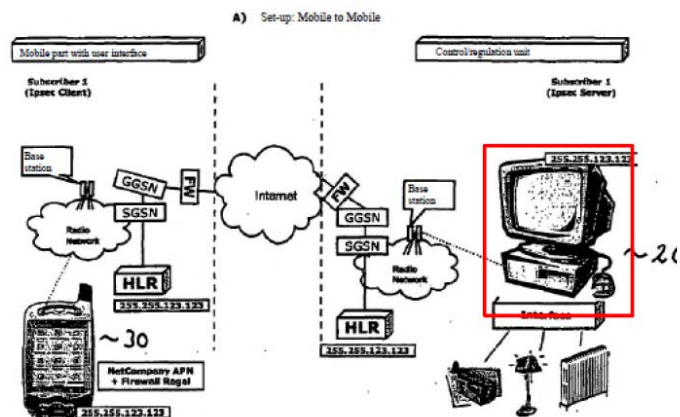
a) Bielski and Wu do not disclose the claimed "microcontroller"

As discussed above, Patent Owner's proposed construction for "microcontroller" reflects the meaning of the term in the art, consistent with the admissions of Petitioners' expert: "a special-purpose computing device including at least a CPU, main memory, timing circuits, and I/O circuitry designed for a minimal quantity of chips and then programmed to handle a particular task."

Petitioners fall short in arguing that Bielski discloses the claimed

“microcontroller” because it states that its “check and communication unit can be embodied as a computer, such as an embedded PC.” While Petitioners hang their hat on Bielski’s reference to an embedded PC, they do not dispute that Bielski’s computer is a standard desktop computer from its era. As Dr. Jeffay admitted, Bielski discloses only “a computer includ[ing] a processor.” Ex. 1003, ¶678. Petitioners do not argue that the processor contained in Bielski’s PC is a computer unto itself, programmed for a particular task and containing main memory, timing circuits, and I/O circuitry. Therefore, Bielski’s processor is not a microcontroller.

Petitioners find no support in Mr. Zatkovich’s testimony that a microcontroller “in and of itself can be an embedded system.” Ex. 1041, 95:21-96:3. Petitioners provide no support for their assertion that every microprocessor used within a PC somehow becomes a “microcontroller” simply because the PC is utilized (i.e., embedded) in a larger system having some specific function. *Id.* 91:6-13. Their assertion ignores the plainly understood distinction between a “microprocessor” and a “microcontroller.” PO Response at 4-7. Bielski’s reference to an embedded PC is talking about the computer as a whole, as illustrated in Bielski’s Figure 4, not to a microcontroller within the PC. Petitioners do not dispute this.



The undisputed facts are that Bielski discloses a traditional microprocessor in a standard personal computer. The microprocessor contained in Bielski's PC is not a computer unto itself. Bielski's processor does not include, for example, built-in memory and I/O circuitry, which their own expert admitted a microcontroller would include. Ex. 2015 at 55:9-18. Thus, by their own expert's admission, neither Bielski's PC nor the microprocessor it contains constitutes the claimed microcontroller.

Nor do Petitioners rebut Patent Owner's arguments that Wu does not disclose a microcontroller. Thus, the combination of Bielski and Wu does not disclose a base unit comprising a microcontroller.

b) The Proposed Combination Does Not Enable SMS Messaging Between the Base Unit and Remote Unit

For the same reasons discussed regarding claim 1, Bielski does not enable a base unit capable of sending and receiving SMS messages as recited in claim 18. Nor would a POSITA have been motivated to combine Bielski with Wu.

7. Claim 21

Neither Bielski nor Wu discloses the claimed microcontroller for at least the reasons discussed regarding the "microcontroller" element of claim 18.

C. Ground 2B: Claims 5, 6, and 16 are Not Unpatentable over Bielski, Wu, and Sears

Claims 5, 6, and 16 are not unpatentable over Bielski, Wu, and Sears for the same reasons discussed regarding Ground 1B.

D. Ground 2D: Claims 20 and 22 are Not Unpatentable over Bielski, Wu, and Menard

Petitioners do not assert that Bielski or Wu teaches the final element of claim 20 but instead rely on Menard. The proposed combination, including Menard, does not teach the final element of claims 20 or 22 for the same reasons discussed with respect to Petitioner's Ground 1E.

IV. Conclusion

For the foregoing reasons, Patent Owner respectfully requests that the Board deny Petitioners' petitions with respect to all challenged claims.

Respectfully submitted,

Date: September 2, 2020

/Cortney S. Alexander/
Cortney S. Alexander
Reg. No. 54,778
KENT & RISLEY LLC
5755 N Point Pkwy Ste 57
Alpharetta, GA 30022
Phone: 404-855-3867
Fax: 770-462-3299
Email: cortneyalexander@kentrisley.com

CERTIFICATE OF WORD COUNT UNDER 37 C.F.R. § 42.24(D)

I hereby certify that the foregoing Patent Owner's Surreply contains 5,595 words, as measured by the word-processing software used to prepare the document, in compliance with 37 C.F.R. § 42.24(d).

Date: September 2, 2020

/Cortney S. Alexander/
Cortney S. Alexander
Reg. No. 54,778
KENT & RISLEY LLC
5755 N Point Pkwy Ste 57
Alpharetta, GA 30022
Phone: 404-855-3867
Fax: 770-462-3299
Email: cortneyalexander@kentrisley.com

CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4) and 42.205(b), the undersigned certifies that on September 2, 2020, a copy of Patent Owner's Surreply, Certificate of Word Count, and Patent Owner's Index of Exhibits were provided via electronic service to the Petitioner by serving the correspondence addresses of record as follows:

S. Benjamin Pleune (ben.pleune@alston.com)
Christopher T.L. Douglas (christopher.douglas@alston.com)
Adam J. Doane (adam.doane@alston.com)
Alston & Bird LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel: 704.444.1000
Fax: 704.444.1111

Joshua Griswold
Bret Winterle
Fish & Richardson P.C.
3200 RBC Plaza
60 South Sixth Street
Minneapolis, MN 55402
Tel: 202-783-5070
Fax: 877-769-7945
griswold@fr.com
winterle@fr.com
PTABInbound@fr.com
IPR41313-000001IP1@fr.com

Anita M. C. Spieth
Peter A. Flynn
Stephanie Schonewald
Choate Hall & Stewart
Two International Place
Boston, MA 02110
Tel: (617) 248-5000

Fax: (617) 248-4000
aspieth@choate.com
pflynn@choate.com
sschonewald@choate.com

/Cortney S. Alexander/
Cortney S. Alexander
Reg. No. 54,778
Kent & Risley LLC
5755 N Point Pkwy Ste. 57
Alpharetta, GA 30022
Phone: 404-855-3867
Fax: 770-462-3299
Email: cortneyalexander@kentrisley.com