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Paper 9
Entered: March 2, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

MULLEN INDUSTRIES LLC,
Patent Owner.

Case IPR2022-01389
Patent 11,190,633 B2

Before JEFFREY S. SMITH, BARBARA A. PARVIS, and NATHAN A. ENGELS, *Administrative Patent Judges.*

SMITH, *Administrative Patent Judge.*

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

I. INTRODUCTION

Apple Inc. ("Petitioner") filed a Petition to institute an *inter partes* review of claims 1–39 of U.S. Patent No. 11,190,633 B2 ("the '633 patent," Ex. 1001). Paper 1 ("Pet."). Mullen Industries LLC ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp.").

Institution of an *inter partes* review is authorized by statute when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314; *see* 37 C.F.R. § 42.4. Upon consideration of the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has established a reasonable likelihood of prevailing with respect to the unpatentability of claims 1–39 of the '633 patent. Accordingly, we grant the Petition and institute an *inter partes* review.

A. Related Proceedings

The parties state that the '633 patent is the subject of civil action in the United States District Court for the Northern District of California (Case. No. 3:23-cv-00437) ("parallel district court litigation"). Pet. 71; Prelim. Resp. 2; Paper 4, 1.

B. The '633 patent

The '633 patent "relates to cellular notifications." Ex. 1001, 1:18.[1] According to the '633 patent, "[t]raditional incoming call notification devices for cellular phones are deficient because they exist physically on the cellular phone." *Id.* at 1:18–22. The '633 patent explains that "mobile

[1] Unless otherwise noted, citations are to the original pagination of each exhibit, and not the pagination added by the parties.

phones, and devices capable of receiving wirelessly transmitted calls, generally have two schemes of notifying a user of incoming calls" when the phone is stored: a sound or a tactile signal. *Id.* at 1:23–29. The '633 patent states that these notification methods originate physically from the cell phone and may not be observed by a user. *Id.* at 1:30–38.

Fig. 1 of the '633 patent, shown below, illustrates a non-wireless remote cell phone notification device and cell phone. *Id.* at 2:56–58.

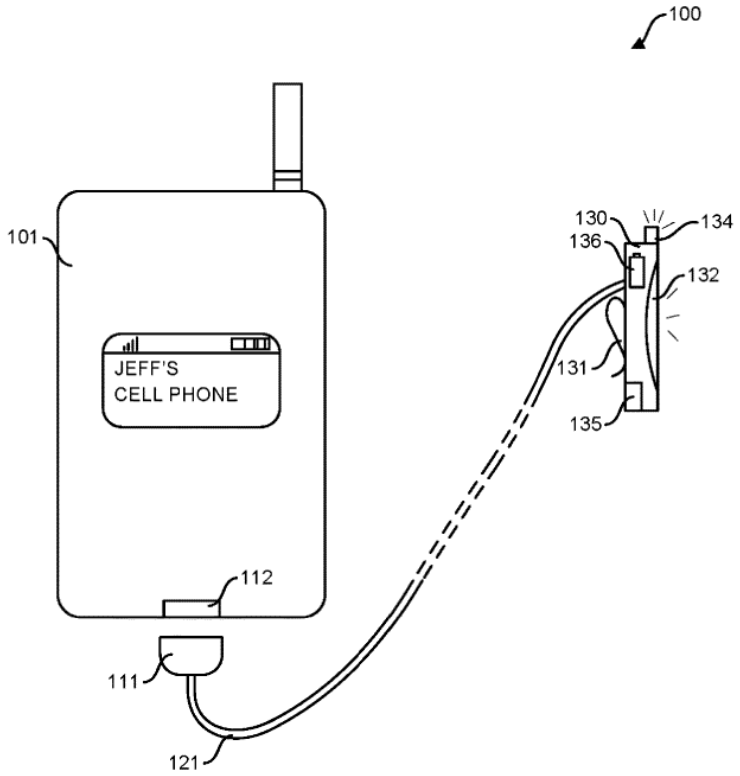


FIG. 1

Cell phone 101 includes communication device 112 and remote notification device 130 includes communication device 111. *Id.* at 3:9–11. The '633 patent describes remote notification device 130 as responding to signals from communication device 112 and alerting "a user of a cell phone activity or event," such as "when cell phone 101 receives an incoming call, a calendar notification occurs, a reminder occurs, a missed call occurs, a new

voice or text message is received, or any other cell phone activity." *Id.* at 3:11–18.

The '633 patent states that "[c]ommunication devices 112 may be, for example, the headset (e.g. headphone) output, input/output connection, speaker, or vibrational output of cell phone 101," "communication device 112 may be the speaker or vibration device of cellular phone 101," and "communications device 111 may detect the audible signals or vibrations that emanate from cell phone 101." *Id.* at 3:19–21, 3:31–34. Further, remote notification device 130 can receive communication signals from cell phone 101 and "send communication signals to cell phone 101 (e.g. a signal to pick up the phone, voice signals to talk via cell phone 101)." *Id.* at 3:34–41.

Fig. 2 of the '633 patent, shown below, depicts a wireless remote cell phone notification device and cell phone. *Id.* at 2:59–61.

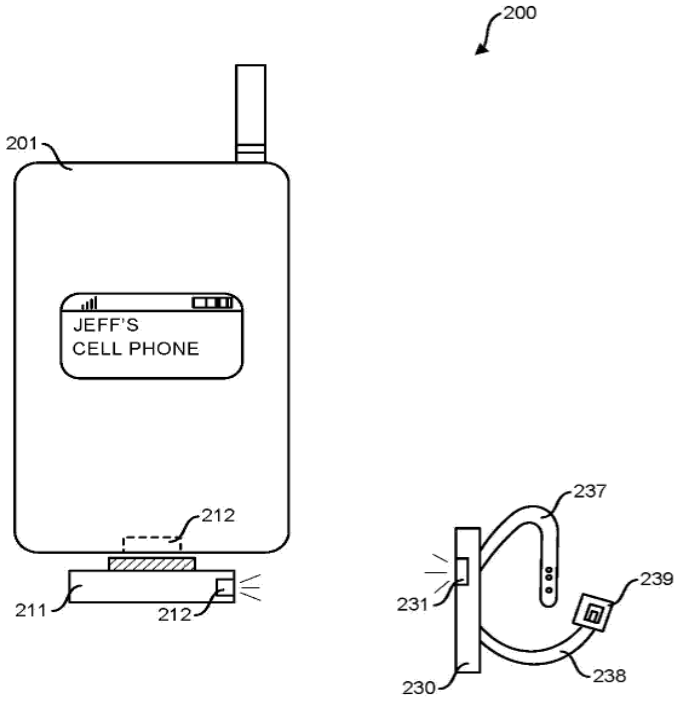


FIG. 2

The ’633 patent explains that “[r]emote notification device 230 includes wireless communications device 231 that can communicate with a wireless communications device located on cell phone 201.” *Id.* at 3:62–65. Communications device 211 may be connected to cell phone 201 and used “to transmit/receive signals wirelessly to/from remote notification device 230 through communications port 212.” *Id.* at 3:65–4:2. According to the ’633 patent, “[r]emote notification device 230 may be embedded into a device that is commonly used by users (e.g., a watch, glasses, clothing) and may attach to a user by a variety of devices (e.g., bands 237 and buckle 239).” *Id.* at 4:13–16.

C. Challenged Claims

Petitioner challenges claims 1–39 (“the challenged claims”) of the ’633 patent. Claim 1 is illustrative of the challenged claims and is reproduced below.

> 1. A watch for use with a mobile telephonic device that provides notification of an incoming call, said watch comprising:
>
> a watch band;
>
> a second watch band;
>
> a buckle, wherein said buckle is coupled to said second watch band; and
>
> a device operable to receive first wireless communication signals associated with a first event and second wireless communication signals associated with a second event from said mobile telephonic device, wherein said first event and second event are different, said device includes a battery, said device includes motion sensing operable to distinguish between a plurality of different types of motion, said device is operable to provide first user-perceivable notification signals that are dependent upon said received first communication signals, and said device is operable to provide second user perceivable

> notification signals that are dependent upon said second communication signals.

Id. at 6:48–67.

D. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–39 on the following grounds:

Reference(s)	Basis	Challenged Claims
Narayanaswami,[2] Vock,[3]	§ 103	1–18, 22, 27, 29, 35
Narayanaswami, Vock, Nokia 8890 User Guide[4]	§ 103	19–21, 23–26, 28, 30–34, 36–39
Fujisawa,[5] Vock	§ 103	1–10, 13, 16, 18, 19, 22–27, 35–39
Fujisawa, Vock, Nokia 8890 User Guide	§ 103	11, 12, 14, 15, 17, 20, 21, 28–34

Petitioner relies on the Declaration of Dr. Harry V. Bims ("the Bims Declaration," Ex. 1003) in support of its contentions.

II. ANALYSIS

A. Discretionary Denial under 35 U.S.C. § 314(a)

In its Preliminary Response, Patent Owner argued that we should exercise our discretion under 35 U.S.C. § 314(a) and not institute trial, given the state of the parallel district court litigation. Prelim. Resp. 6–21. Patent Owner subsequently stated that the "parties agree that the arguments

[2] US Patent No. 6,477,117 B1, issued Nov. 5, 2002 ("Narayanaswami," Ex. 1005).
[3] US Patent No. 6,539,336 B1, issued Mar. 25, 2003 ("Vock," Ex. 1007).
[4] Nokia 8890 User Guide ("Nokia 8890 User Guide," Ex. 1008). Petitioner asserts that Nokia 8890 User Guide states it was printed in May 2000 and that Nokia 8890 User Guide was captured by the Wayback Machine on February 3, 2002. Pet. 20 (citing Ex. 1008, 3; Ex. 1009).
[5] US Patent Pub. No. 2002/0115478 A1, published Aug. 22, 2002 ("Fujisawa," Ex. 1006).

presented [in Patent Owner's Preliminary Response] with respect to Fintiv are now moot given the transfer of the corresponding litigation to the Northern District of California." Ex. 3001. Because the parties agree that this issue is moot, we decline to exercise our discretion under § 314(a) to deny the Petition.

B. Level of Ordinary Skill in the Art

Petitioner argues that a person having ordinary skill in the art at the time of the '633 patent "would have had at least a Bachelor of Science degree in computer science, computer engineering, electrical engineering or a similar degree with one or two years of experience with operating system and application software in mobile devices, such as cell phones, personal digital assistants, and smart watches" and that "[a]dditional practical experience would substitute for lack of a formal degree." Pet. 11–12 (citing Ex. 1003 ¶¶ 60–61). Patent Owner does not dispute Petitioner's definition of a person having ordinary skill in the art. *See generally* Prelim. Resp.

Petitioner's description of a person of ordinary skill appears commensurate with the subject matter before us. For purposes of this Decision, we apply Petitioner's statement as our definition of a person of ordinary skill in the art.

C. Claim Interpretation

We apply the same claim construction standard applied in civil actions under 35 U.S.C. § 282(b), which is articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). 37 C.F.R. § 42.100(b); *see also Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (applicable to *inter partes* reviews filed on or after November 13,

2018). Under *Phillips*, claim terms are afforded "their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312. "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1313.

Petitioner asserts that "[n]one of the claim terms of the '633 Patent need be construed by the Board." Pet. 12. However, in its obviousness challenges, Petitioner contends that the claim term "wherein said first event and second event are different" does not require events of different types, but rather, encompasses two occurrences of the same event, such as a phone call occurring twice. Pet. 29, 51. Patent Owner contends that this claim term, read in light of the specification, means that the first event and second event are associated with different types of alerts, such as an alert for an incoming call and an alert for a calendar notification. Prelim. Resp. 5.

We do not need to resolve this dispute, because even under Patent Owner's narrower construction, Petitioner has shown a reasonable likelihood of success that at least one claim is unpatentable, as discussed below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'"). To the extent necessary to address the parties' unpatentability arguments, construction of additional claim terms is addressed below in the context of the unpatentability analysis.

D. Overview of the Prior Art

1. Narayanaswami

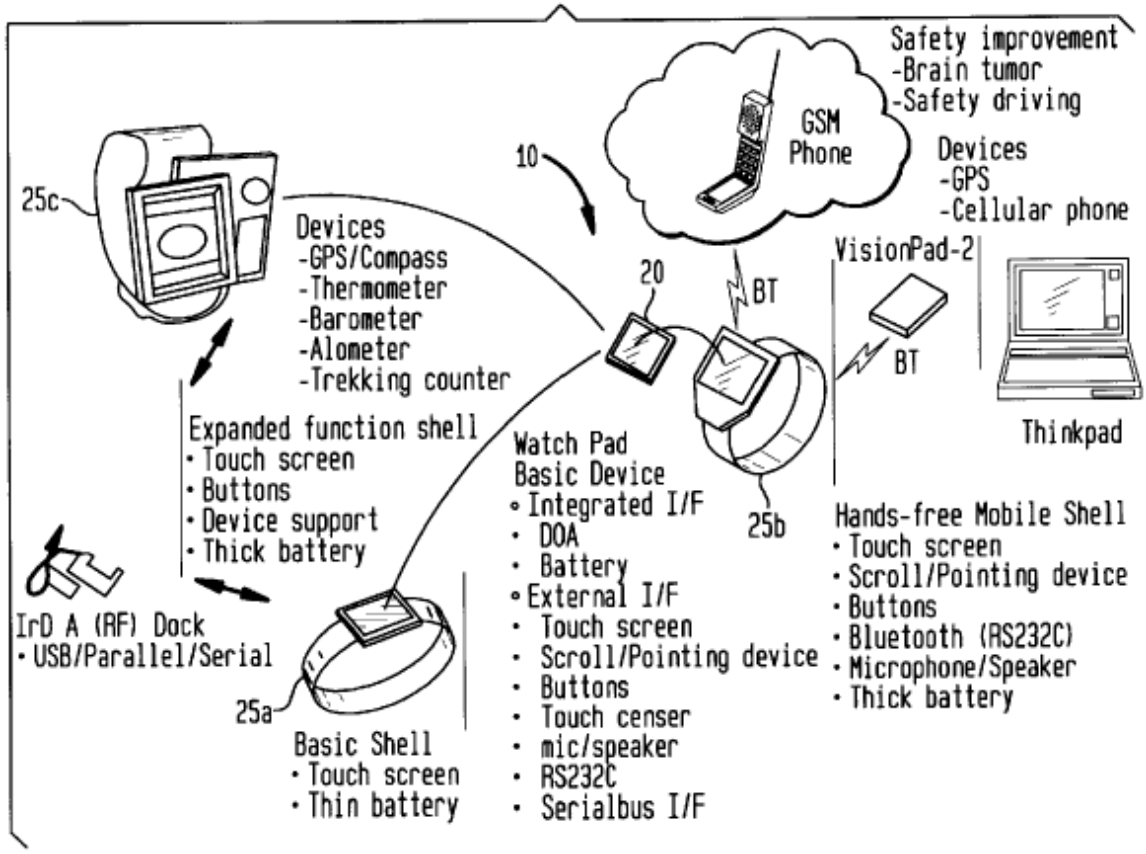
Narayanaswami:

> relates generally to mobile computing devices such as personal digital assistants (PDAs), cellular phones, pagers, and the like, and more specifically, to a wearable device/appliance (a wrist watch) capable of wirelessly accessing information and equipped with an interactive user interface that is used to efficiently interact with alarms and notifications on the watch.

Ex. 1005, 1:5–11.

Fig. 1 of Narayanaswami, shown below, illustrates a wearable information access wrist watch device. *Id.* at 2:62–63.

FIG. 1



Narayanaswami explains that its wrist watch system 10 "looks like a regular watch but is capable of receiving information from adjunct devices such as a

PC, a mobile computer, other pervasive devices being carried by the user and directly from a network via a wireless communications mechanism." *Id.* at 3:27–33. Narayanaswami describes system 10 as including motherboard or base card 20 that may be used in various shells 25a, 25b, 25c to enable various functions. *Id.* at 3:34–40. Narayanaswami explains that basic shell 25a provides "desktop like functionality via a touch screen display." *Id.* at 3:40–42. Hands-free mobile shell 25b further provides "a communications interface with GPS and mobile phone communications capability etc." *Id.* at 3:42–45. Expanded function shell 25c provides a "touch screen, buttons and support for various devices such as GPS/compass, thermometer, barometer, altimeter, etc." *Id.* at 3:47–50.

Narayanaswami further describes synchronizing data between the wrist watch device and other devices. *Id.* at 7:3–5. For instance, the wrist watch can receive data and operate with an application to decode the data and update data for the application, such as to provide an update for a calendar event. *Id.* at 7:5–9. Narayanaswami describes displaying caller ID information on the wrist watch's display when a cell phone rings. *Id.* at 8:3–5. Further, an alarm may come from another source, such as a user's PC that maintains a list of appointments, so that "the watch may subsequently activate the alarm at the programmed time." *Id.* at 9:29–30.

Narayanaswami also describes an embodiment in which "sensors may be attached to the Wrist Watch device over an interface," such as "additional tilt and motion (velocity, direction, speed) sensors, environment sensors such as thermal sensors, pressure sensors, health monitoring sensors such as blood pressure, etc." *Id.* at 6:15–21.

2. Vock

Vock "relates generally to monitoring and quantifying sport movement (associated either with the person or with the vehicle used or ridden by the person), including the specific parameters of 'air' time, power, speed, and drop distance." Ex. 1007, 1:17–21.

Fig. 38 of Vock, shown below, illustrates a power watch. *Id.* at 21:17–18.

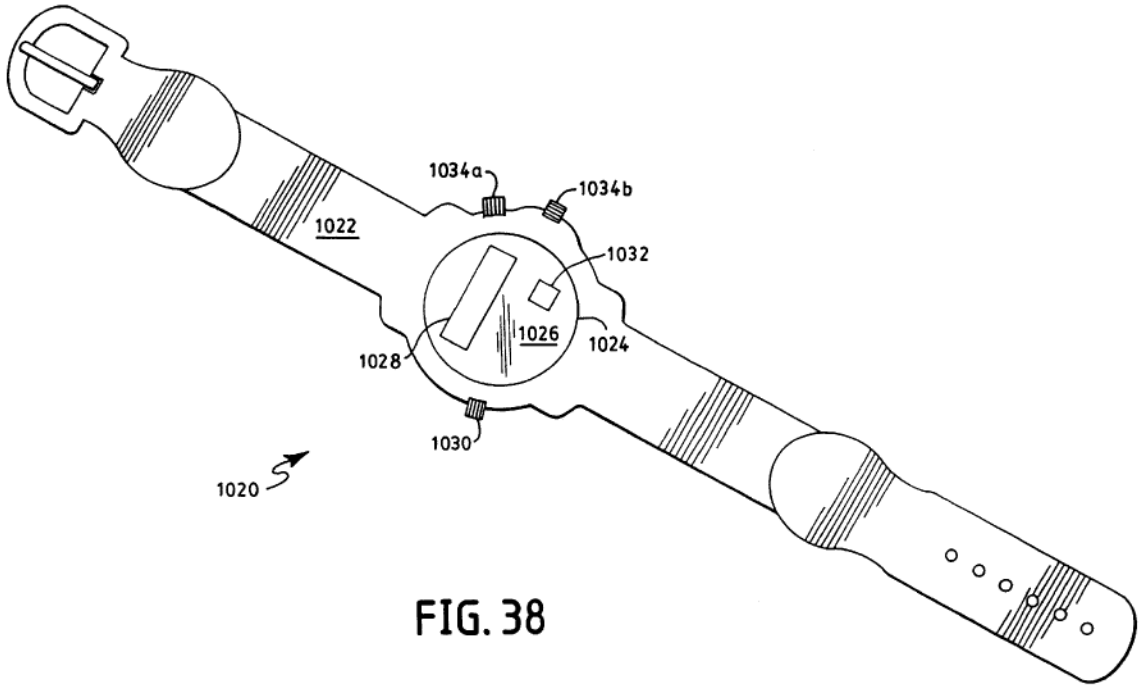


FIG. 38

Power digital watch 1020 includes band 1022 that secures watch 1020 to a user's wrist so watch face 1024 can be viewed. *Id.* at 44:26–29. Power digital watch 1020 further includes power sensor unit 1032. *Id.* at 44:33–34. In another embodiment, Vock explains that the watch's display may inform a user of the watch's power via a power sensing unit, processor, and circuitry. *Id.* at 44:53–57. Further, Vock describes the use of an altimeter to inform a user of drop distance, which can be displayed. *Id.* at 44:66–45:3.

3. Nokia 8890 User Guide

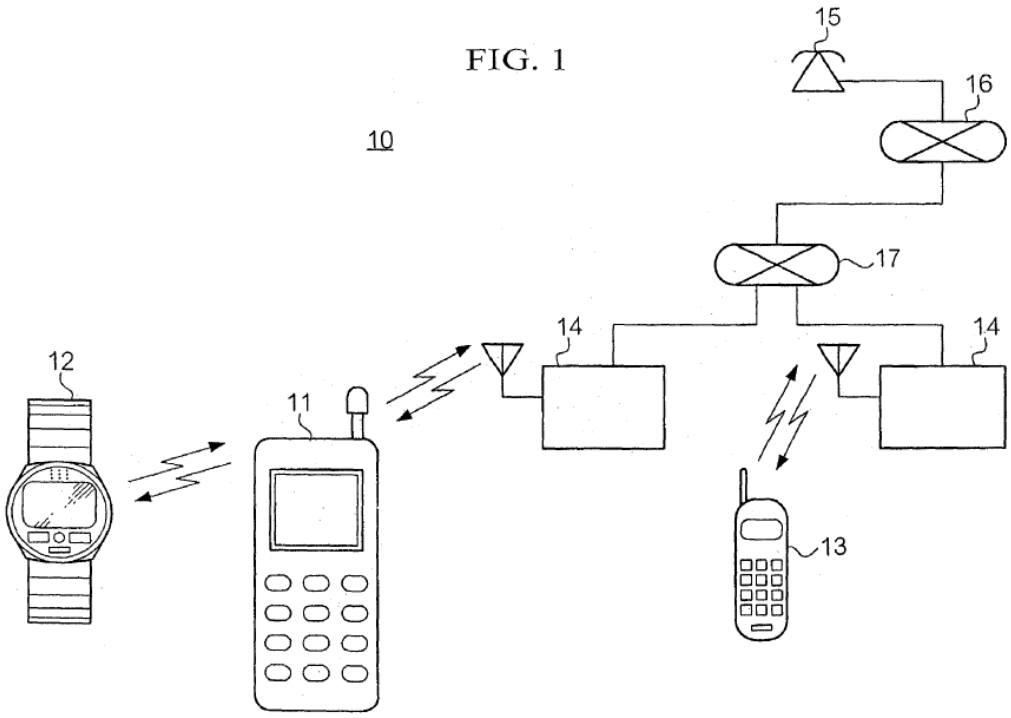
Nokia 8890 User Guide is a manual describing various functions for the Nokia 8890 mobile phone. Ex. 1008, 12. For instance, Nokia User Guide describes the 8890 mobile phone providing an alert when a call is received or "beeping, displaying an icon on the screen, or showing a text message" when a voice message is received. *Id.* at 28, 44. Nokia 8890 User Guide describes the phone displaying "Message received," displaying an indicator, and making a sound when a text message is received. *Id.* at 90. Further, a "calendar keeps track of reminders, calls you need to make, meetings, and birthdays" and "can even sound an alarm when it's time for you to make a call or go to a meeting." *Id.* at 96. Nokia 8890 User Guide also describes creating groups of naming in the phone's phone book and assigning a ring tone to different groups. *Id.* at 63.

4. Fujisawa

Fujisawa "relates to a mobile telephone and to a radio communication device that can carry out local and bidirectional radio communication with the mobile telephone." Ex. 1006 ¶ 1.

Figure 1 of Fujisawa, shown below, illustrates a mobile telephone system. *Id.* ¶ 91.

FIG. 1



Fujisawa describes mobile telephone system 10 that includes mobile telephones 11, 13 and watch-shaped information processing device 12 that "performs bidirectional radio communication with the mobile telephone 11." *Id.* ¶¶ 127–128. System 10 further includes "mobile network 17 and a plurality of radio base stations 14 that are connected with the mobile network 17." *Id.* ¶ 128.

Fujisawa describes watch-shaped information processing device 12 as receiving an incoming call notification signal that is demodulated into data that "includes information to the effect that there is an incoming call, an ID number NID of the watch-shaped information processing device 12, and a telephone number of the caller." *Id.* ¶ 155. Fujisawa states that a user is notified of the incoming call via "a buzzer sound or an electronic sound," a vibration, or a "blink light emitting device such as an LED." *Id.* ¶ 156. Also, the telephone number of the caller is displayed on the device's display unit. *Id.*

E. Obviousness over Narayanaswami and Vock

Petitioner contends that claims 1–18, 22, 27, 29, and 35 are unpatentable as obvious over Narayanaswami and Vock. Pet. 26–42.

The preamble of claim 1 recites a "watch for use with a mobile telephonic device that provides notification of an incoming call." Petitioner contends that Narayanaswami discloses the preamble in describing that caller identification information is displayed on the wrist watch display when the cell phone that belongs to that person rings. Pet. 27 (citing Ex. 1005, Abstract, 8:3–5; Ex. 1003 ¶ 99). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Narayanaswami discloses the features recited in the preamble of claim 1[6].

Claim 1 recites "a watch band; a second watch band; a buckle, wherein said buckle is coupled to said second watch band." Petitioner contends that the combination of Narayanaswami and Vock teaches a smart watch with two bands and a buckle. Pet. 27–28 (citing Ex. 1005, Fig. 2; Vock Figs. 38, 39; Ex. 1003 ¶ 100). Petitioner contends that it would have been obvious to incorporate the two band strap with a buckle disclosed in Vock with the watch of Narayanaswami because this is how watches have functioned for decades. *Id*.

Patent Owner contends that Vock is not analogous to Narayanaswami. Prelim. Resp. 22. However, the proper inquiry for analogous art is whether Vock is "within the field of the *inventor's* endeavor" or "reasonably

[6] We need not resolve whether the preamble is limiting at this stage because Petitioner shows sufficiently for purposes of institution that the prior art satisfies the recitation in the preamble.

pertinent to the particular problem with which the *inventor* was involved." *In re Wood*, 599 F.2d 1032, 1036 (CCPA 1979) (emphasis added); *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). "If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports the use of that reference in an obviousness rejection." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). The purpose of the bands and buckle in the claimed invention is to attach a watch to a wrist. Ex. 1001, 4:13–16 ("Remote notification device 230 . . . may attach to a user by a variety of devices (e.g., bands 237 and buckle 239)."). Similarly, Vock discloses that, "[a]s in normal watches, a band 1022 [including a buckle as shown in Figure 38] secures the watch 1020 on a user's wrist." Ex. 1007, 44:28–29. Vock further discloses, with respect to Figure 39, that, "[a]s above [in the description of Figure 38], the watch 1042 is made to mount over the user's wrist." *Id*. at 44:49–50. A person having ordinary skill in the art would have reasonably expected to solve the problem of securing a watch to a wrist by considering a reference that does so using bands and buckle. Therefore, Vock is analogous art to the invention.

Patent Owner contends that the "field of endeavor of Narayanaswami is wearable computing devices with display screens and alarm clock and wireless communication capabilities." Prelim. Resp. 23. Narayanaswami discloses that the "invention relates generally to . . . cellular phones . . . and more specifically, to a wearable device/appliance (a wrist watch) capable of wirelessly accessing information and equipped with an interactive user interface that is used to efficiently interact with alarms and notifications on the watch." Ex. 1005, 1:6–12. Similarly, the '633 patent relates to a user signaling device, such as a watch, that provides remote notifications for

cellular phones. Ex. 1001, Title, Abstract, 2:3–12, 2:19–21, 4:13–22. Narayanaswami is within the field of endeavor of the '633 patent. Therefore, Narayanaswami is analogous art to the invention.

Patent Owner contends that Vock does not disclose the watch band limitations. Prelim. Resp. 42. In particular, Patent Owner contends that Figure 38 of Vock shows a single band with a buckle, and Figure 39 does not mention a buckle nor multiple bands. *Id*. at 44. According to Patent Owner, the band shown in Figure 39 could be a single band of elastic, rubber, or some other material, and may use Velcro instead of a buckle to attach the watch to a user. *Id*. at 47–48. However, Vock discloses that the watch shown in Figure 39, "[a]s above, . . . is made to mount over the user's wrist." Ex. 1007, 44:48–50. The watch described "above" is shown in Figure 38, and is made to mount "the watch 1020 on a user's wrist" using a buckle that fastens two ends of a band together. *Id*. at Fig. 38, 44:28–29. Vock does not describe any other way "above," such as elastic, rubber, or Velcro, to mount the watch on the user's wrist.

Patent Owner contends that Petitioner has not provided a reason for combining the teachings of Narayanaswami and Vock. Prelim. Resp. 33–37. In particular, Patent Owner contends that the Petition does not explain why the wrist band of Narayanaswami would not be adjustable. *Id*. at 37. However, Narayanaswami is silent on whether the wrist band is adjustable, and is also silent on any other detail of the band. Petitioner contends that "it had been well known for decades to have two watch bands extending from a watch with a buckle to connect the bands to one another as that provides a band that is adjustable for users having different sized wrists." Pet. 22. On this record, we agree with Petitioner that a person of ordinary skill would

have used adjustable bands and a buckle as taught by Vock when attaching the watch of Narayanaswani to a user's wrist to yield the benefit of adjusting the band to fit on a user's wrist.

Further, the Supreme Court has held that "[t]he obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007); *see id.* at 415. Engagement with the question of obviousness requires an "expansive and flexible approach" where "a court *must* ask whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 415, 417 (emphasis added). The Petition and supporting evidence persuasively show that the '633 "patent simply arranges old elements (bands attached to a watch and a buckle attached to an end of a band) with each performing the same function it had been known to perform (mounting a watch to a user's wrist) and yields no more than one would expect from such an arrangement (a wrist watch)," therefore, "the combination is obvious." *Id*. at 417. Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that the combination of Narayanaswami and Vock teaches this limitation of claim 1, and that a person of ordinary skill would have had a sufficient reason to combine the teachings in the manner claimed.

Claim 1 recites "a device operable to receive first wireless communication signals associated with a first event and second wireless communication signals associated with a second event from said mobile telephonic device, wherein said first event and second event are different." Petitioner contends that Narayanaswami discloses this limitation in

describing caller ID information received from a cell phone when the cell phone rings, which corresponds to the claimed first event, and an update to a calendar event received from the cell phone, which corresponds to the claimed second event. Pet. 28–31 (citing Ex. 1005, 4:60–5:1, 6:53–55, 7:3–9, 8:3–5, 9:23–31; Ex. 1003 ¶¶ 101–105).

Patent Owner contends that the Petition and Dr. Bims do not support their assertion, that a cell phone would be capable of executing a calendar application, with any evidence. Prelim. Resp. 51. At this stage, we disagree. Dr. Bims, relying on the calendar application described in the Nokia 8890 User Guide, testifies that a person of ordinary skill would have been aware that calendar applications were commonly available on mobile phones. Ex. 1003 ¶¶ 92, 93, 105, 142. Dr. Bims testifies that Narayanaswami describes that the calendar application was also available in watches. Ex. 1003 ¶¶ 93, 105. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that both a mobile phone with a calendar application and a watch with a calendar application would have been known to a person of ordinary skill at the time of invention.

Patent Owner contends that, in asserting that it would have been obvious to receive the calendar information from the wireless phone, the Petition focuses on what a skilled artisan would have been able to do, rather than what a skilled artisan would have been motivated to do. Prelim. Resp. 52–53. At this stage, we disagree. Narayanaswami discloses a watch that wirelessly communicates with other devices such as cell phones (Ex. 1005, 1:5–12, 3:44–45, 4:53–58, 8:3–5). Narayanaswami discloses a synchronization manager that synchronizes data between the watch and the

other devices, and updates the data for the application receiving the data. *Id*. at 7:3–8. "An example of this would be a calendar event." *Id*. at 7:8–9. We are sufficiently persuaded that the watch of Narayanaswami, when synchronizing data with a cell phone that has a calendar application, would have received an update to a calendar event from the cell phone. Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Narayanaswami discloses this limitation of claim 1.

Claim 1 recites "said device includes a battery." Petitioner contends that Narayanaswami discloses this limitation in describing a battery. Pet. 31 (citing Ex. 1005, Fig. 1; Ex. 1003 ¶ 106). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Narayanaswami discloses this limitation of claim 1.

Claim 1 recites "said device includes motion sensing operable to distinguish between a plurality of different types of motion." Petitioner contends that Narayanaswami discloses this limitation in describing a base card that provides support for devices such as an altimeter and a GPS, and in describing additional sensors such as tilt and motion sensors that may be attached to the watch over an interface. Pet. 31– 32 (citing Ex. 1005, 3:40–50, 6:15–19; Ex. 1001, 5:13–15; Ex. 1003 ¶¶ 107–108).

Patent Owner contends that the Petition does not explain why a person of ordinary skill would have combined the motion sensors of Vock with the watch of Narayanaswami, especially when Narayanaswami discloses motion sensors. Prelim. Resp. 33–37. However, the Petition relies on the motion

sensors of Narayanaswami alone to teach this limitation of claim 1. Pet. 31–32.

Patent Owner contends that claim 1 recites the "device includes motion sensing," but the altimeter and GPS of Narayanaswami are external devices that are not included in the watch. Prelim. Resp. 54. At this stage, we disagree. On this record, Figure 1 of Narayanaswami appears to show the GPS and altimeter in shell 25c as part of the watch. Ex. 1005, Fig. 1, 4:40–50.

However, even if the GPS and altimeter of Narayanaswami are external to the watch, we are sufficiently persuaded for purposes of institution that Narayanaswami teaches this limitation. Claim 1 recites that the device includes "motion sensing," not a motion sensor. The specification of the '633 patent discloses multiple embodiments where the motion sensor is external to the watch. Ex. 1001, 3:31–34 ("In this manner, communication device 112 may be the . . . vibration device of cellular phone 101. Thus, communication device 111 [which is external to watch 130] may detect . . . vibrations that emanate from cell phone 101"), 4:49–5:26, Fig. 1, Fig. 3 (showing vibration sensor 352 on autonomous device 350, not on watch 330). If "said device includes motion sensing" were interpreted to exclude a motion sensor located outside of the device, several "embodiment[s] in the specification would not fall within the scope of the patent claim. Such an interpretation is rarely, if ever, correct and would require highly persuasive evidentiary support, which is wholly absent in this case." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). The scope of "said device includes motion sensing," read in light of

the specification, encompasses a device that receives motion sensing signals from an external device.

Patent Owner contends that the Petition has not explained how a GPS device or an altimeter sense motion. Prelim. Resp. 55. At this stage, we disagree. When a user moves from one location to another, the GPS, by sensing and displaying a different location, indicates that the user has moved to a different location. Similarly, when a user's altitude changes, the altimeter, by sensing and displaying a different altitude, indicates that the user has moved to a different altitude.

Patent Owner contends that the Petition does not explain how a GPS or an altimeter "distinguish between different types of motion" as recited in claim 1. Prelim. Resp. 55–56. At this stage, we disagree. The altimeter senses vertical movement, and the GPS senses horizontal movement, which are "different types of motion" within the meaning of claim 1.

Patent Owner contends that Narayanaswami's disclosure of attaching tilt and motion sensors to the watch over an interface do not describe "said device includes motion sensing" as claimed. Prelim. Resp. 56. At this stage, we disagree. On this record, we are sufficiently persuaded for purposes of institution that attaching tilt and motion sensors to a watch as disclosed by Narayanaswami means that the watch "includes" motion sensors. Further, even if the sensors are external to the watch, the watch still "includes motion sensing" by receiving motion signals from the sensors, as we explained above.

Patent Owner contends that the Petition does not explain how a tilt sensor and a motion sensor "distinguish between a plurality of different types of motion" as claimed. Prelim. Resp. 56–58. At this stage, we

disagree. The tilt sensor measures the motion of the device into a tilt, or sloping position, and the motion sensor measures the velocity of the device. Tilt and velocity are "a plurality of different types of motion" within the meaning of claim 1. Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Narayanaswami discloses this limitation of claim 1.

Claim 1 recites "said device is operable to provide first user-perceivable notification signals that are dependent upon said received first communication signals." Petitioner contends that Narayanaswami discloses this limitation in describing caller ID information displayed on the watch when the cell phone rings. Pet. 32 (citing Ex. 1005, 8:3–5; Ex. 1003 ¶ 109). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Narayanaswami discloses this limitation of claim 1.

Claim 1 recites "said device is operable to provide second user perceivable notification signals that are dependent upon said second communication signals." Petitioner contends that Narayanaswami discloses this limitation in describing an alarm activated at the time of a calendar event. Pet. 32–33 (citing Ex. 1005, 9:23–31; Ex. 1003 ¶ 110). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Narayanaswami discloses this limitation of claim 1.

Based on this preliminary record, Petitioner has demonstrated a reasonable likelihood that claim 1 would have been obvious over the combination of Narayanaswami and Vock. Petitioner has set forth contentions regarding dependent claims 2–18, 22, 27, 29, and 35. Pet. 33–

42. Patent Owner does not set forth additional arguments for these dependent claims at this stage. We find Petitioner's contentions sufficiently persuasive for purposes of institution that claims 2–18, 22, 27, 29, and 35 would have been obvious over the combination of Narayanaswami and Vock.

F. Obviousness over Narayanaswami, Vock, and Nokia 8890 User Guide

Petitioner argues that claims 19–21, 23–26, 28, 30–34, and 36–39 are unpatentable as obvious over Narayanaswami, Vock, and Nokia 8890 User Guide. Pet. 42–48. Petitioner contends that Narayanaswami and Vock disclose integrating features of a mobile phone into a watch, and that a person of ordinary skill would have looked to the features of a mobile phone disclosed in the Nokia 8890 User Guide to identify and integrate features into the watches of Narayanaswami and Vock. Pet. 23 (citing Ex. 1006 ¶ 5; Ex. 1007, 40:38–45; Ex. 1009, 64). Petitioner contends that the limitations of dependent claims 19–21, 23–26, 28, 30–34, and 36–39 that are not taught by the combination of Narayanaswami and Vock were common features in mobile phones at the time of invention and are taught by the combination of Narayanaswami, Vock, and the Nokia 8890 User Guide. Pet. 42–48.

Patent Owner does not set forth additional arguments for these dependent claims at this stage. We find Petitioner's contentions sufficiently persuasive for purposes of institution that claims 19–21, 23–26, 28, 30–34, and 36–39 would have been obvious over the combination of Narayanaswami, Vock, and Nokia 8890 User Guide.

G. Obviousness over Fujisawa and Vock

Petitioner argues that claims 1–10, 13, 16, 18, 19, 22–27, and 35–39 are unpatentable as obvious over Fujisawa and Vock. Pet. 48–60.

The preamble of claim 1 recites a "watch for use with a mobile telephonic device that provides notification of an incoming call." Petitioner contends that Fujisawa discloses the preamble in describing a mobile phone that sends an incoming call notification signal to a watch. Pet. 48–49 (citing Ex. 1006, Abstract, Fig. 1; Ex. 1003 ¶ 151). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Fujisawa discloses the features recited in the preamble of claim 1[7].

Claim 1 recites "a watch band; a second watch band; a buckle, wherein said buckle is coupled to said second watch band." Petitioner contends that the combination of Fujisawa and Vock teaches this limitation. Pet. 49–50 (citing Ex. 1006, Fig. 6; Vock Figs. 38, 39; Ex. 1003 ¶ 152). Patent Owner contends that Vock is not analogous to the claimed invention, and that Vock does not disclose a two piece watch band with a buckle. Prelim. Resp. 27–31, 42–50. At this stage, we disagree with Patent Owner for the reasons given in our analysis of this limitation with respect to the combination of Narayanaswami and Vock above.

Patent Owner contends that Fujisawa is not analogous to the claimed invention. Prelim. Resp. 25–27. At this stage, we disagree. The inventor of the '633 patent is involved with the particular problem of how to answer a mobile phone when the phone is located in a bag. Ex. 1001, 1:18–38, 4:44–48. Fujisawa is reasonably pertinent to this problem. Ex. 1006 ¶¶ 1–5. Therefore, Fujisawa is analogous art to the claimed invention. Based on the

[7] We need not resolve whether the preamble is limiting at this stage because Petitioner shows sufficiently for purposes of institution that the prior art satisfies the recitation in the preamble.

evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that the combination of Fujisawa and Vock teaches this limitation of claim 1, and that a person of ordinary skill would have had a sufficient reason to combine the teachings in the manner claimed.

Claim 1 recites "a device operable to receive first wireless communication signals associated with a first event and second wireless communication signals associated with a second event from said mobile telephonic device, wherein said first event and second event are different." Petitioner contends that Fijusawa discloses this limitation in describing a first incoming call notification signal, and second recorded voice message signal. Pet. 50–51 (citing Ex. 1006 ¶¶ 155, 237–238, 266, 270, 272; Ex. 1003 ¶¶ 153–154). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Fujisawa discloses this limitation of claim 1.

Claim 1 recites "said device includes a battery." Petitioner contends that Fujisawa discloses this limitation in describing a battery that supplies power to components of the watch. Pet. 51 (citing Ex. 1006 ¶ 137; Ex. 1003 ¶ 155). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Fujisawa discloses this limitation of claim 1.

Claim 1 recites "said device includes motion sensing operable to distinguish between a plurality of different types of motion." Petitioner contends that Vock discloses motion sensors in describing a power sensing unit that includes a microphone or an accelerometer and a drop distance sensing unit that includes an altimeter. Pet. 52 (citing Ex. 1007, 6:15–17,

44:33–34, 44:55–56, 44:66–45:5; Ex. 1003 ¶ 156). Petitioner contends that a person of ordinary skill would have incorporated the sensors and corresponding software of Vock into the watch of Fujisawa to yield the benefit of a watch that appeals to athletes desiring to monitor performance in a convenient manner. *Id*. at 24–25 (citing Ex. 1003 ¶ 95).

Patent Owner contends that the Petition does not explain how the power sensing unit senses motion. Prelim. Resp. 59. At this stage, we disagree. Petitioner contends that Vock's power sensing unit includes a microphone or accelerometer, and quotes Vock's disclosure that the "power sensing unit [] provides a measure of the intensity or how 'hard' the user played during an activity." Pet. 52 (citing Ex. 1007, 10:15–17).[8] Vock discloses that the "components of this power distance sensing unit can include one or more microphones or accelerometers *to sense vibrations or 'jerk' of the user.*" Ex. 1007, 10:17–20 (emphasis added). We are sufficiently persuaded that Vock's power sensing unit senses motion using microphones or accelerometers to sense vibrations or jerk of the user.

Patent Owner contends that the altimeter of Vock senses power, not motion. Prelim. Resp. 60 (citing Ex. 1007, 45:1–5). However, the section of Vock cited by Patent Owner discloses that "an altimeter can also be placed in the watch . . . so that the user is informed of drop distance," and that a button enables control of the unit "so that one of drop distance, or power, is displayed. . . . This [is] a dual drop distance and power watch embodiment." Ex. 1007 44:66–45:5. Thus, this disclosure of Vock describes adding an altimeter to a watch that already measures power, so that

[8] Although the Petition cites to Ex. 1007, 6:15–17, the actual quote is found at Ex. 1007, 10:15–17.

either drop distance or power can be displayed to a user. We are sufficiently persuaded that the altimeter of Vock senses drop distance, and that drop distance is a type of motion. *Id*.; *see id*. at 11:57–59, 20:44–46, 34:39–43, 43:29–37, 44:14–17 ("Since the skier is limited by inertia and kinematics (the basic laws of motion) the rate of altimeter change is not high by signal processing standards.").

Patent Owner contends that the Petition "fails to explain or cite any further evidence as to how [Vock] relates to 'motion sensing' and 'distinguish[ing] between a plurality of different types of motion,'" and that the testimony of Dr. Bims is conclusory and not adequately supported. Prelim. Resp. 59–61 (citing Ex. 1003 ¶ 157). At this stage, we disagree. On this record, we are persuaded that the accelerometer, which senses an increase in speed, the altimeter, which senses drop distance, along with the sensors for airtime and speed, as disclosed by Vock, provide "motion sensing operable to distinguish between different types of motion" within the scope of claim 1. *See* Ex. 1007, Abstract ("The invention detects the loft time, speed, power and/or drop distance . . . *during activities of moving and jumping*.").

Patent Owner contends that Petitioner has not provided a reason to combine the motion sensors of Vock with the watch of Fujisawa. Prelim. Resp. 40. In particular, Patent Owner contends that the reason provided by Petitioner and Dr. Bims, that a person of ordinary skill would have incorporated the sensors and corresponding software of Vock into the watch of Fujisawa to yield the benefit of a watch that appeals to athletes desiring to monitor performance in a convenient manner, is not supported by evidence. Prelim. Resp. 40–41 (citing Pet. 24–25). In support of its reason to combine,

the Petition cites to Vock, which discloses that "the user can look at the watch 744 (nearly during some sporting activities) to monitor performance data in near real-time." Pet. 24 (citing Ex. 1007, 40:38–45); *see* Ex. 1007, 4:45–62; 12:13–16; 18:6–17; 40:38–62, 44:41–47. We find that evidence of Petitioner's reason to combine the references flows from Vock itself. *See Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000) (Evidence of a motivation to combine prior art references "may flow from the prior art references themselves.").

Patent Owner contends that the Petition does not adequately identify which specific disclosures in Vock would have been obvious to combine with Fujisawa. Prelim. Resp. 39–40. At this stage, we disagree. The Petition and Dr. Bims cite to the power sensing unit, which may include a microphone or an accelerometer, and to the altimeter of Vock, as well as to the corresponding software describe by Vock. Pet. 52 (citing Ex. 1007, 10:15–17, 44:33–34, 44:55–56, 44:66–45:5); Ex. 1003 ¶ 95.

Patent Owner contends that the prior art does not provide guidance for a skilled artisan to incorporate the motion sensor of Vock into the watch of Fujisawa. Prelim. Resp. 41–42. In particular, Patent Owner contends that the specific sensors and software, the extent of any modifications, the reasons for the modifications, and why there would have been a reasonable expectation of success are not adequately identified or supported. Prelim. Resp. 42. Patent Owner's contention ignores that Vock describes the specific functions that the software associated with the power and drop distance sensors need to achieve. Ex. 1007, 44:33–45:5. Normally, once the functions to be performed by software have been identified, writing code to achieve such functions is within the skill of the art. *Fonar Corp. v. Gen.*

Elec. Co., 107 F.3d 1543, 1549 (Fed. Cir. 1997). Further, it "is well-established that a determination of obviousness based on teachings from multiple references does not require an actual, physical substitution of elements." *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012) (citing *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (noting that the criterion for obviousness is not whether the references can be physically combined, but whether the claimed invention is rendered obvious by the teachings of the prior art as a whole)). At this stage, we find Petitioner has shown sufficiently for purposes of institution that the combination of Fujisawa and Vock teaches the claimed "motion sensing operable to distinguish between a plurality of different types of motion," and that a person of ordinary skill would have had a sufficient reason to combine the teachings in the manner claimed.

Claim 1 recites "said device is operable to provide first user-perceivable notification signals that are dependent upon said received first communication signals." Petitioner contends that Fujisawa discloses this limitation in describing a buzzer, a vibrator, and a light emitting device to notify a user of an incoming call, as well as a display of the caller's telephone number. Pet. 52–53 (citing Ex. 1006 ¶ 156; Ex. 1003 ¶ 157). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Fujisawa discloses this limitation of claim 1.

Claim 1 recites "said device is operable to provide second user perceivable notification signals that are dependent upon said second communication signals." Petitioner contends that Fujisawa discloses this limitation in describing that the watch displays a message indicating that the

caller is recording a voice message. Pet. 53 (citing Ex. 1006 ¶¶ 156, 272; Ex. 1003 ¶ 158). Based on the evidence and arguments currently of record, for purposes of institution, we find that Petitioner has demonstrated that Fujisawa discloses this limitation of claim 1.

Based on this preliminary record, Petitioner has demonstrated a reasonable likelihood that claim 1 would have been obvious over the combination of Fujisawa and Vock. Petitioner has set forth contentions regarding dependent claims 2–10, 13, 16, 18, 19, 22–27, and 35–39. Pet. 53–60. Patent Owner does not set forth additional arguments for these dependent claims at this stage. We find Petitioner's contentions sufficiently persuasive for purposes of institution that claims 2–10, 13, 16, 18, 19, 22–27, and 35–39 would have been obvious over the combination of Fujisawa and Vock.

H. Obviousness over Fujisawa, Vock, and Nokia 8890 User Guide

Petitioner argues that claims 11, 12, 14, 15, 17, 20, 21, and 28–34 are unpatentable as obvious over Fujisawa, Vock, and Nokia 8890 User Guide. Pet. 61–65. Petitioner contends that Fujisawa and Vock disclose integrating features of a mobile phone into a watch, and that a person of ordinary skill would have looked to the features of a mobile phone disclosed in the Nokia 8890 User Guide to identify and integrate features into the watches of Fujisawa and Vock. Pet. 25–26 (citing Ex. 1006 ¶ 5; Ex. 1007, 40:38–45; Ex. 1009, 64. Petitioner contends that the limitations of dependent claims 11, 12, 14, 15, 17, 20, 21, and 28–34 that are not taught by the combination of Fujisawa and Vock were common features in mobile phones at the time of invention and are taught by the combination of Fujisawa, Vock, and the Nokia 8890 User Guide. *Id*. at 61–65.

Patent Owner does not set forth additional arguments for these dependent claims at this stage. We find Petitioner's contentions sufficiently persuasive for purposes of institution that claims 11, 12, 14, 15, 17, 20, 21, and 28–34 have been obvious over the combination of Fujisawa, Vock, and Nokia 8890 User Guide.

III. CONCLUSION

Based on the arguments in the Petition and the Preliminary Response, and the evidence of record, we determine that Petitioner has established a reasonable likelihood that it would prevail on its challenges that claims 1–39 patent are unpatentable.

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that the Petition is granted;

FURTHER ORDERED that *inter partes* review of claims 1–39 of the '633 patent is hereby instituted on all grounds stated in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), inter partes review of the '633patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

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