

Filed: March 6, 2024

Filed on behalf of **Masimo Corporation**

By: Ted M. Cannon (Reg. No. 55,036)
Jarom D. Kesler (Reg. No. 57,046)
Philip M. Nelson (Reg. No. 62,676)
Irfan A. Lateef (Reg. No. 51,922)
Jeremy A. Anapol (Reg. No. 75,686)
KNOBBE, MARTENS, OLSON & BEAR, LLP
2040 Main Street, Fourteenth Floor
Irvine, CA 92614
Tel.: (949) 760-0404
Fax: (949) 760-9502
Email: MasimoIPR-352@knobbe.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MASIMO CORPORATION,
Petitioner

v.

APPLE INC.,
Patent Owner

Case No. IPR2023-00664
Patent No. 11,106,352

**PETITIONER'S OPPOSITION TO
PATENT OWNER'S CONTINGENT MOTION TO AMEND**

TABLE OF CONTENTS

	Page No.
I. INTRODUCTION	1
II. THE SUBSTITUTE CLAIMS ARE NOT PATENT ELIGIBLE	2
A. Legal Standard for Patent Eligibility.....	4
B. The Independent Claims Are Not Patent Eligible.....	4
1. <i>Alice</i> Step One.....	5
a. Claims to Organizing and Displaying Information Are Abstract.....	6
b. Humans Organize and Display Information on Paper.	7
c. The Claims Do Not Improve Computer Technology.	8
2. <i>Alice</i> Step Two	9
C. The Substitute Claims Are Not Patent-Eligible.	10
D. Any Component Alleged to Be Unconventional at <i>Alice</i> Step Two Is Unsupported Under § 112.....	11
III. THE SUBSTITUTE CLAIMS WOULD HAVE BEEN OBVIOUS.....	12
A. Dascola Discloses The Amended Limitations Of Substitute Claims 25-36, 38, and 39	14
1. Wearable Electronic Watch (Substitute Claims 25, 28, and 35).....	14
2. Tactile Outputs (Substitute Claims 26 and 38).....	15
3. Workout Sensors (Substitute Claim 27)	15

TABLE OF CONTENTS
(cont'd)

	Page No.
4. Optical Sensor (Substitute Claims 28 and 32).....	16
5. Radio Frequency Circuitry (Substitute Claims 30, 33, and 38).....	16
6. Menu Button (Substitute Claim 30).....	17
7. Audio Circuitry (Substitute Claim 31).....	18
8. Duplicative Features (Substitute Claims 30 and 36)	18
a. Hardware Components	18
b. User Interfaces	19
c. Power Saving State	20
9. Substitute Claims 29, 34, and 39	21
B. Substitute Claim 37 Would Have Been Obvious.....	21
IV. PO FAILS TO SHOW THAT THE SUBSTITUTE CLAIMS HAVE WRITTEN DESCRIPTION SUPPORT FOR THEIR FULL SCOPE.....	22
A. PO's String Cites Fail to Satisfy the Burden of Production.....	22
B. PO's Disclosure of a Smart Phone Camera Does Not Support Claims That Seek to Capture Pulse Rate and Oxygen Sensors.....	23
C. The Patent Application Fails to Disclose Any "Interface Provided in the Power-Saving State."	25
V. CONCLUSION.....	25

TABLE OF AUTHORITIES

	Page No(s).
<i>Affinity Labs of Texas, LLC v. DIRECTV, LLC</i> , 838 F.3d 1253 (Fed. Cir. 2016)	5, 11
<i>B.E. Tech., L.L.C. v. Google, Inc.</i> , No. 2015-1827, 2016 WL 6803057 (Fed. Cir. Nov. 17, 2016)	23, 24
<i>Elec. Power Grp., LLC v. Alstom S.A.</i> , 830 F.3d 1350 (Fed. Cir. 2016)	6, 11
<i>Hawk Tech. Sys., LLC v. Castle Retail, LLC</i> , 60 F.4th 1349 (Fed. Cir. 2023)	5
<i>Int’l Bus. Machines Corp. v. Zillow Grp., Inc.</i> , 50 F.4th 1371 (Fed. Cir. 2022)	6
<i>Int’l Bus. Machines Corp. v. Zillow Grp., Inc.</i> , No. 2022-1861, 2024 WL 89642 (Fed. Cir. Jan. 9, 2024)	8
<i>Interval Licensing LLC v. AOL, Inc.</i> , 896 F.3d 1335 (Fed. Cir. 2018)	6, 8
<i>In re Killian</i> , 45 F.4th 1373 (Fed. Cir. 2022)	7
<i>Lippert Components, Inc. v. Days Corp.</i> , IPR2018-00777, Paper 28 (PTAB Sept. 24, 2019)	23
<i>LizardTech v. Earth Resource Mapping, Inc.</i> , 424 F.3d 1336 (Fed. Cir. 2005)	24
<i>Move, Inc. v. Real Est. All. Ltd.</i> , 721 F. App’x 950 (Fed. Cir. 2018)	6
<i>SAP Am., Inc. v. InvestPic</i> , LLC, 898 F.3d 1161 (Fed. Cir. 2018)	9, 11

TABLE OF AUTHORITIES
(cont'd)

Page No(s).

<i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 921 F.3d 1084 (Fed. Cir. 2019)	8
<i>Trading Techs. Int'l, Inc. v. IBG LLC</i> , 921 F.3d 1378 (Fed. Cir. 2019)	8

OTHER AUTHORITIES

37 C.F.R. § 42.121	22
--------------------------	----

I. INTRODUCTION

The fifteen Substitute Claims that Patent Owner (“PO”) proposes are unpatentable under 35 U.S.C. §§ 101, 103, and 112. The Substitute Claims are directed to an abstract idea and recite conventional computer components. The Substitute Claims are all dependent claims that add nothing more than conventional hardware features of prior-art smartphones or smartwatches. Finally, PO fails to establish written-description support for the Substitute Claims.

Regarding § 101, the patent purports to disclose an advance in how categories of information content are organized in a user interface. The problem the patent purports to solve is that information may be “displayed in a confusing manner” and navigating between different information “may also be confusing.” EX1001, 1:39-51. Navigating through poorly organized information “may take longer than necessary, thereby wasting energy.” *Id.* The patent notes that improved ways of organizing information allow users to quickly access information they want. *Id.* at 1:55-61.

Claims directed to better-organized information are not patent eligible. They are abstract. Because the Substitute Claims are abstract and add only conventional computer components, they fail to satisfy § 101.

Regarding § 103, the Petition established that the original claims for navigating between user-interface screens would have been obvious. Further,

Apple’s own prior-art, published patent application to Dascola establishes that a POSITA would have found it obvious, and would have been motivated, to implement the user-interface limitations in devices having the added hardware limitations (such as a “watch”) of the Substitute Claims.

Regarding § 112, PO merely string cites portions of the specification for support. Both the Board and the Federal Circuit have held that such string citations are inadequate. Further, with respect to Substitute Claims 28, 29, and 32, PO’s reliance on a *camera* fails to show written description of the full scope of “an optical sensor located on a back side of the watch.” With respect to Substitute Claim 36, PO fails to show written description of “an interface provided in the power-saving state of the display generation component” because the specification teaches that the display is off when in a power-saving state.

Accordingly, the Board should deny the Contingent Motion to Amend.

II. THE SUBSTITUTE CLAIMS ARE NOT PATENT ELIGIBLE

Each of Substitute Claims 25-39 is dependent on one of the original independent claims: claim 1 (method), claim 9 (system), and claim 17 (computer-readable storage medium). MTA at 3-8. Each of the independent claims recites three user interfaces: a “wake screen user interface,” a “home screen user interface,” and a “widget screen user interface.” EX1001, claims 1, 9, 17. The claims distinguish between these user interfaces based on their information

content. Specifically, the “widget screen user interface” includes “a plurality of user interface objects [containing] application content from [a corresponding] application.” *E.g., id.* at 87:18-27. The “home screen user interface” includes “a plurality of application icons.” *E.g., id.* at 87:3-5. The wake screen user interface may contain any content, so long as it is “different from” the home screen user interface. *E.g., id.* at 87:1-3. For example, the wake screen may contain “one or more notifications.” *E.g., id.* at 2:34-35.

Each independent claim further recites switching between screens in response to a user’s movements. The home screen is displayed in response to a movement “in a first direction,” and the widget screen is displayed in response to a movement “in a second direction that is different from the first direction.” *E.g., id.* at 86:64-87:2, 87:10-17. Thus, all independent claims recite switching between three sets of content (wake screen, home screen, and widget screen content) in response to a user’s movements.

Humans have long organized information into sets and used different movements to access the different sets of information. And humans routinely do this today with paper documents—shuffling piles of documents on a desk, flipping through folders in a filing cabinet, or thumbing through sections in a binder.

The ’352 patent merely applies this familiar information-organizing idea to conventional user interfaces on a generic computer system. And because the

Substitute Claims depend from the original independent claims, they too are focused on this information-organizing idea. The Substitute Claims merely lengthen the list of conventional electronic components appended to that idea. For example, Substitute Claim 25 adds a requirement that the computer system is a “wearable electronic watch.” *E.g.*, MTA at 3.

A. Legal Standard for Patent Eligibility

The Supreme Court’s two-step *Alice* framework governs whether computer-based patent claims are impermissibly abstract under § 101. *Alice*, 573 U.S. at 217-227. At step one, the Board must determine whether the claims are directed to an abstract idea. *Id.* at 217-18. At step two, the Board must determine whether the other claim elements beyond the abstract idea, individually or collectively, add “significantly more” to the abstract idea—something “inventive”—that transforms the claimed abstract idea “into a patent-eligible application.” *Alice*, 573 U.S. at 217-22. Implementing an abstract idea with “well-understood,” “routine,” or “conventional” computer functionality contributes nothing inventive. *Id.*

B. The Independent Claims Are Not Patent Eligible

This opposition first addresses independent claims 1, 9, and 17 because all Substitute Claims depend on one of them. These independent claims all recite essentially the same limitations, except that claim 1 is a method, claim 9 is a

system, and claim 17 is a computer-readable medium. This difference is immaterial. *Alice*, 573 U.S. at 226.

1. *Alice* Step One

The Board must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to” an abstract idea. *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). This inquiry focuses “on the language of the asserted claims, considered in light of the specification.” *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, 60 F.4th 1349, 1356 (Fed. Cir. 2023).

Here, the ’352 patent specification alleges the following problem in the prior art: “user interfaces for accessing notifications, and methods of navigating to and from such interfaces, are cumbersome and inefficient.” EX1001 at 1:44-46. “For example, the notifications may be displayed in a confusing manner, and navigation to and from interfaces that contain notifications may also be confusing. These methods take longer than necessary, thereby wasting energy.” *Id.* at 1:46-49. To solve this alleged problem, the specification purports to disclose user interfaces that “reduce the number, extent, and/or nature of the inputs from a user” to make the interface more efficient. *Id.* at 1:59-61. In short, the patent purports to make information more organized (less “confusing”) so humans can access it more

easily. The claims organize information content into three screens that a user can reach by moving in different directions. These claims are abstract.

a. Claims to Organizing and Displaying Information Are Abstract.

Claims that focus on merely “organizing information” and “displaying the information” through a user interface are directed to an abstract idea. *E.g., Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018). Such information-focused claims are abstract even when the information is “limited to particular content.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *see also id.* at 1351 (claims required “sub-second, time stamped synchronized phasor measurements,” among other specific types of information).

Here, the independent claims focus on organizing information into three screens, each of which is identified by the particular content it contains. *Supra*, pp. 2-4. These claims are indistinguishable from many user-interface claims the Federal Circuit has held abstract. *E.g., Int’l Bus. Machines Corp. v. Zillow Grp., Inc.*, 50 F.4th 1371, 1378 (Fed. Cir. 2022) (“IBM”) (claims to “limiting and coordinating the display of information”); *Move, Inc. v. Real Est. All. Ltd.*, 721 F. App’x 950, 954 (Fed. Cir. 2018) (“collecting and organizing information about available real estate properties and displaying [it]”); *Interval Licensing*, 896 F.3d at 1345 (“non-interfering display of two information sets”); *Elec. Power*, 830 F.3d at

1355 (“concurrent visualization”). Because the claims focus on organizing and displaying information, they are directed to an abstract idea.

b. Humans Organize and Display Information on Paper.

Courts frequently recognize that claims are directed to an abstract idea because they focus on steps that “can be performed in the human mind, or by a human using a pen and paper.” *In re Killian*, 45 F.4th 1373, 1382 (Fed. Cir. 2022). The information-organizing idea on which the ’352 patent’s independent claims are focused can be performed by a human with stacks of papers, folders in a filing cabinet, or sections in a binder.

For example, consider a patent examiner with three stacks of paper on a desk. The first stack contains patent-issuance notifications from the USPTO’s Official Gazette. The second stack contains patent applications. And the third stack is a docket report containing certain content from those patent applications, such as filing dates or inventor names. After starting work, the examiner reads the first stack of papers (comprising notifications). Then, the examiner uses one movement to reach for the second stack (comprising applications), or another movement to reach for the third stack (comprising selected application content). Like the patent claims recite, the examiner uses different movements to access these different sets of information. Because the claims are directed to an information-organizing idea that humans can perform on paper, they are abstract at

Alice step one. *See Interval Licensing*, 896 F.3d at 1344 (analogizing a claimed user-interface feature to the “nontechnical human activity of passing a note to a person who is in the middle of a meeting”).

c. The Claims Do Not Improve Computer Technology.

The ’352 patent purports to disclose user interfaces that are easy for users to navigate. EX1001, 1:44-61. Any argument that this purported ease of use is sufficient to satisfy § 101 would be meritless. The Federal Circuit has repeatedly explained that “improving a user’s experience while using a computer application is not, without more, sufficient to render the claims patent-eligible at step one.” *Int’l Bus. Machines Corp. v. Zillow Grp., Inc.*, No. 2022-1861, 2024 WL 89642, at *3 (Fed. Cir. Jan. 9, 2024) (internal quotations omitted).

For example, the Federal Circuit invalidated claims directed to a graphical user-interface display in *Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1084, 1087, 1092-93 (Fed. Cir. 2019). Although the claimed display purportedly “assist[ed] traders in processing information more quickly,” the Federal Circuit held that the claims were focused on abstract steps of merely “receiving information” and “displaying that information.” *Id.*; *see also Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1378, 1381, 1384–85 (Fed. Cir. 2019) (holding that claims “focused on providing information to traders in a way that helps them process information more quickly” were not patent-eligible).

2. *Alice* Step Two

Apart from the information-organizing idea on which they are focused, the independent claims of the '352 patent recite only conventional computer components and processes. Masimo's expert, Dr. Rosenberg, explains that all of the computer technology recited in the independent claims was well-known long before the patent. EX1054 ¶¶130-131. The '352 patent does not even allege that any of the computer components are new. *See SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1170 (Fed. Cir. 2018) (components that are "not even asserted to be an invention" cannot supply an inventive concept at *Alice* step two).

All of the computer components recited in the independent claims can be found in any electronic device with a touchscreen display, such as a smartphone. EX1054 ¶¶130-131. Electronic devices with touchscreen displays existed long before the '352 patent. *E.g.*, EX1003 ¶¶ 56-61; EX1007 (Android). Indeed, the patent references "known software components for rendering and displaying graphics on touch-sensitive display system[s]." EX1001 at 16:64-66.

The processing steps recited by the independent claims are also wholly conventional. Each of the asserted claims recite the following: (1) detecting an input that meets display-waking criteria; (2) displaying a user interface; (3) detecting an input directed to a portion of the screen that includes movement; (4) determining that an input meets criteria requiring the input to be in a specific

direction; and (5) navigating to a different user interface screen. EX1054 ¶132. These processes, both individually and in combination, were well-understood, routine, and conventional before 2017. EX1054 ¶¶131-136; EX1003 ¶¶ 56-61.

Because the independent claims of the '352 patent add nothing inventive to the abstract idea on which they are focused, they are unpatentable under § 101.

C. The Substitute Claims Are Not Patent-Eligible.

The additional limitations of the Substitute Claims are immaterial to patent eligibility. For example, Substitute Claims 25, 28, 30, and 35 recite that the claimed computer system is a “wearable electronic watch” or a “watch comprising ... one or more processors”—in other words, a smartwatch. *E.g.*, MTA at 3-8. But the '352 patent does not allege that smartwatches were new. While the patent spans more than 300 pages, it includes only two passing references to watches—with no explanation of how to build them. EX1001 at 2:3-4, 19:5-6. Electronic watches were well-known before 2017. EX1054 ¶131.

The remaining Substitute Claims recite various conventional features of smartwatches that were also well-known and widespread before the '352 patent, such as “tactile outputs,” a “workout sensor,” an “optical sensor,” a “speaker,” and a wireless “communication system.” *Id.* ¶131. Again, these features were old and conventional in 2017. Indeed, these conventional smartwatch features were included in the original Apple Watch that launched in 2015—years before the '352

patent. *Id.* These features are documented, for example, in *Apple Watch (Idiot’s Guides)*, by Dwight Spivey (DK Publishing 1st ed. 2015) (“Idiot’s Guide”). *E.g.*, EX1053 at 15 (optical heart rate sensor), 16 (electronic watch with processor), 24-25 (physical push buttons), 57 (widgets), 106-107 (Bluetooth wireless), 124-25 (waking), 150 (tactile output), 171 (audio), 253-54 (plurality of graphical user interfaces), 278, 281-82, 285 (workout sensor).

The Substitute Claims’ recitations of conventional smart watches and watch components merely “confine the abstract idea to a particular technological environment,” which cannot make them patent eligible. *See Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258–59 (Fed. Cir. 2016) (confining abstract idea of the environment of “cellular telephones” did not satisfy § 101); *see also Elec. Power*, 830 F.3d at 1354 (“limiting the claims to the particular technological environment of power-grid monitoring” was not enough). Thus, the Substitute Claims are unpatentable under § 101.

D. Any Component Alleged to Be Unconventional at *Alice* Step Two Is Unsupported Under § 112.

The ’352 patent’s disclosure of the electronic components recited in the Substitute Claims is cursory. For example, the patent includes only one sentence that mentions “workout sensors.” EX1001 at 19:5-6. Such cursory disclosure makes sense because such components were well-understood, routine, and conventional before the ’352 patent. But if PO argues that any of these

components, or any combination of such components, was unfamiliar to a person of ordinary skill, then the Substitute Claims would be unpatentable under § 112. The '352 patent does not provide disclosure sufficient to enable a person of ordinary skill to use any allegedly unconventional sensors, output devices, or communication systems. Nor does the '352 patent provide written-description support for any such components that PO may allege to be unconventional.

III. THE SUBSTITUTE CLAIMS WOULD HAVE BEEN OBVIOUS

The original claims are unpatentable for the reasons provided in the Petition and Dr. Rosenberg's Declaration (Ex. 1003). The Substitute Claims merely add well-known and/or duplicative computer components and processes. Indeed, U.S. Patent Publication No. 2017/0046024 A1 ("Dascola," Ex. 1051), a prior-art Apple patent application, contains much of the same exact disclosure that Apple cites as written description support for its amended limitations.

Dascola published on February 16, 2017, before the '352 patent's earliest effective filing date of May 16, 2017. Thus, Dascola is prior art to the '352 patent under 35 U.S.C. § 102(a)(1). No exception under § 102(b)(1) applies because William Tyler, the sole inventor of the '352 patent, is not an inventor of Dascola.

As stated in its "Technical Field" section, Dascola relates to "electronic devices with touch-sensitive surfaces that detect inputs for manipulating user interfaces." EX1051 ¶2. It aims to improve on existing methods for manipulating

user interfaces that are “cumbersome and inefficient.” *Id.* ¶6. Like the ’352 patent, Dascola discloses a wake screen (¶242), home screen (¶303), and widget screen (¶309). Thus, Dascola is in the same field of endeavor as, and presents the same alleged technical solution of, the ’352 patent and the prior art identified in the Petition (Chae, Narendra, etc.). EX1054 ¶¶44.

A POSITA would have been motivated to combine and would reasonably have expected success in combining Dascola with the prior art identified in the Petition. *Id.* ¶¶44-45, 49-52, 93-96, 115-117. Dascola discloses that a wake screen, home screen, and widget screen—such as those disclosed in the prior art identified in the Petition—can be implemented on various known hardware. EX1051 ¶8. For example, these screens may be implemented on a desktop computer, portable computer, or wearable electronic watch. *Id.* Further, the screens may be implemented on devices including RF and audio circuitry, different types of sensors, and input/output controllers, such as shown in Figure 1A. *Id.* Fig. 1A.

Thus, a POSITA would have understood that the user-interface screens and associated navigational methods disclosed in the prior art identified in the Petition could be implemented on the known hardware embodiments disclosed in Dascola. EX1054 ¶¶49-50, 93-94, 115-116. A POSITA would have been motivated to implement the user-interface screens and navigational methods on as many different available hardware platforms to make them accessible to the different

users of those platforms. *Id.* ¶45. Further, a POSITA would have understood that such a combination would yield predictable results, because the combination would amount to simply migrating a user interface from one known touchscreen environment (a smartphone) to another (a smartwatch). *Id.* ¶¶44, 52, 96, 117. A POSITA would further understand that a smartphone and smartwatch are similar devices, at least concerning touchscreen user interface navigation. *Id.* ¶¶ 50, 94, 116. A POSITA would have understood that the primary difference between devices is the size of the screen. *Id.* ¶¶ 51, 94, 116. A POSITA would have understood how to implement the user-interface screens and navigational methods on the smaller size of a smartwatch screen without significant technical obstacles. *Id.* Thus, implementing the known user-interface screens and associated navigational methods to a different hardware platform such as a smartwatch would not prove significantly more challenging or unpredictable than implementing them in another device, such as a smartphone. *Id.* ¶¶ 52, 96, 117.

A. Dascola Discloses The Amended Limitations Of Substitute Claims 25-36, 38, and 39

1. Wearable Electronic Watch (Substitute Claims 25, 28, and 35)

Substitute Claims 25, 28, and 35 include new limitations reciting that the computer system is or includes a “wearable electronic watch.” Dascola discloses that “[i]n some embodiments, the device is a personal electronic device (e.g., *a wearable electronic device, such as a watch*).” EX1051 ¶8 (emphasis added).

Dascola ¶8 is identical to APPLE-2001 ¶7, which PO cites as written-description support for the amended features of Substitute Claims 25, 28, and 35.

2. Tactile Outputs (Substitute Claims 26 and 38)

Substitute Claims 26 and 38 add the limitation “generating, by the wearable electronic watch, one or more tactile outputs in response to an occurrence of an event of interest.” Dascola discloses “tactile output generator(s) 167 [] produce tactile outputs . . . in response to user interactions with device 100.” EX1051 ¶123. A POSITA would have understood that a user interaction with the device is an “event of interest” that causes generation of a tactile output. EX1054 ¶54.

3. Workout Sensors (Substitute Claim 27)

Substitute Claim 27 adds limitations related to workout sensors. Specifically, the new limitations recite calibrating the sensors, receiving data from the sensors, and storing, displaying, and transmitting the data.

Dascola discloses that the device may include a “workout support module,” which “includes executable instructions to create workouts (e.g., with time, distance, and/or calorie burning goals); *communicate with workout sensors (in sports devices and smart watches); receive workout sensor data; calibrate sensors used to monitor a workout*; select and play music for a workout; and *display, store and transmit workout data.*” EX1051 ¶150 (emphasis added).

Dascola ¶150 is identical to APPLE-2001 ¶103, which PO cites as written-description support for the amended features of Substitute Claim 27.

4. Optical Sensor (Substitute Claims 28 and 32)

Substitute Claims 28 and 32 add limitations reciting “an optical sensor located on a back side of the watch, opposite to a touch screen display of the display generation component on a front side of the watch.”

Dascola discloses “an optical sensor is located on the back of device 100, opposite touch-sensitive display system 112 on the front of the device.” EX1051 ¶108. Dascola ¶108 is identical to APPLE-2001 ¶61, which PO cites as written-description support for the amended features of Substitute Claims 28 and 32.

5. Radio Frequency Circuitry (Substitute Claims 30, 33, and 38)

Substitute Claims 30, 33, and 38 add limitations related to radio frequency circuitry. Substitute Claim 30 recites “a watch comprising . . . radio frequency circuitry” and that “the radio frequency circuitry is configured to transmit and receive on or more wireless signals.” Dascola discloses that “[d]evice 100 includes . . . RF circuitry 108” and that the radio frequency circuitry “communicates with networks, such as the Internet . . . an intranet and/or a wireless network, such as . . . a wireless local area network . . . and other devices by wireless communication. EX1051 ¶¶93, 99. A POSITA would have understood that communicating with a wireless network or with other devices by wireless communication would require

the radio frequency circuitry to be configured to transmit and receive wireless signals. EX1054 ¶68. Further, Dascola paragraphs 93 and 99 are identical to APPLE-2001 paragraphs 43 and 52, respectively, which PO cites as written-description support for the amended features of Substitute Claim 30.

Substitute Claims 33 and 38 add that the radio frequency circuitry is configured to transmit “one or more wireless signals to a communication system, the communication system comprising one of a Bluetooth system, a Wireless Fidelity system, or a Long Term Evolution system.” Dascola discloses that the radio frequency circuitry’s “wireless communication optionally uses any of a plurality of communications standards, protocols and technologies, including . . . long term evolution (LTE) . . . Bluetooth, Wireless Fidelity (Wi-Fi).” EX1051 ¶99. Dascola ¶99 is identical to APPLE-2001 ¶52, which PO cites as written-description support for the amended features of Substitute Claims 33 and 38.

6. Menu Button (Substitute Claim 30)

Substitute Claim 30 recites that “the one or more input devices comprise a physical push button that is configured as a menu button.” Dascola discloses a menu button and that in some embodiments, “the menu button is a physical push button” EX1051 ¶164. Dascola ¶164 is identical to APPLE-2001 ¶117, which PO cites as written-description support for the amended features of Substitute Claim 30.

7. Audio Circuitry (Substitute Claim 31)

Substitute Claim 31 adds the limitations “receiving, using audio circuitry of the watch, audio data,” “converting the audio data to an electrical signal,” and “transmitting the electrical signal to a speaker.” Dascola discloses that “[a]udio circuitry 100 receives audio data from peripheral interface 118, converts the audio data to an electrical signal, and transmits the electrical signal to speaker 111.” EX1051 ¶100. Dascola ¶100 is identical to APPLE-2001 ¶53, which PO cites as written-description support for the amended features of Substitute Claim 31.

8. Duplicative Features (Substitute Claims 30 and 36)

Substitute Claims 30 and 36 add new limitations which are duplicative of features recited in the original claims. EX1054 ¶¶61, 69, 82.

a. Hardware Components

Substitute Claim 30 recites “a watch comprising the one or more processors, the display generation component, the one or more input devices . . . and one or more sensors.” Claim 30 also recites that “the one or more sensors are configured to detect a contact on the display generation component, detect the input that meets the display-waking criteria, detect the first input that is directed to the portion of the wake screen user interface.”

The original claims already recited “a display generation component and one or more input devices.” EX1001, claims 1, 9, and 17. As explained in the Petition,

Chae discloses that its mobile terminal “comprises a touch screen” and can be unlocked “in response to a touch made on the touch screen.” EX1005 ¶10, Fig. 4(a). Thus, Chae’s touch screen is a “display generation component” and an “input device.” EX1003 ¶75. Chae also discloses detecting an input directed to the display generation component. *See id.* Fig. 3 (determining a direction of touch at step S240). A POSITA would have understood that detecting such an input would be performed by “one or more sensors” and would comprise detecting contacts on the display generation component. EX1054 ¶69.

Dascola also discloses that “the device has a touch-sensitive display[.]” EX1051 ¶8. “In some embodiments, the user interacts with the GUI primarily through stylus and/or finger contacts and gestures on the touch-sensitive surface.” *Id.* Dascola ¶8 is identical to APPLE-2001 ¶7, which PO cites as allegedly providing support for the amended features of Substitute Claim 30.

b. User Interfaces

Substitute Claim 30 also recites that “the display generation component is configured to display a plurality of graphical user interfaces including the home screen user interface and the widget screen user interface.” As explained in the Petition, Chae discloses displaying a home screen user interface and a widget screen user interface. Pet. at 42-56; EX1005 Figs. 4(b), 6(b). As Chae’s figures show, and as a POSITA would have understood, the home screen and widget

screen user interfaces are displayed via the touch screen—a display generation component. *Id.*; EX1054 ¶61. Dascola also discloses displaying a home screen user interface (EX1051 ¶303) and widget screen user interface (EX1051 ¶309).

c. Power Saving State

Substitute Claim 36 recites “wherein the input that meets the display-waking criteria while the computer system is in the power saving state, is detected when the display generation component is in a display-off state, the display-off state being a power-saving state of the display generation component.” As explained in the Petition, Chae discloses waking up a mobile device. Pet. at 36-41; EX1005, Fig. 3. A POSITA would have understood that the process of waking up a mobile device includes turning on the previously sleeping display so the device can be operated. EX1054 ¶83. Android (EX1007) also shows a mobile device waking up from a power-saving state, with its display turning on. EX1007 at 0:24-0:28.

Substitute Claim 36 also recites “wherein displaying the wake screen user interface in response to the input comprises transitioning the display generation component from the display-off state to a display-on state such that the wake screen user interface replaces an interface provided in the power-saving state of the display generation component.” As explained in the Petition, Chae discloses waking up a mobile device and displaying a wake screen user interface. Pet. at 36-41; EX1005, Figs. 3, 4(a). Dascola also discloses that a “wake screen user

interface 5002 [] is displayed when device 100 is activated from a screen-off state (e.g., a sleep state) to a screen-on state (e.g., a wake state).” EX1051 ¶242.

9. Substitute Claims 29, 34, and 39

Substitute Claims 29, 34, and 39 are identical to original claims 8, 16, and 24, respectively, except that they now depend on Substitute Claims instead of original claims. The limitations of Substitute Claims 29, 34, and 39 are disclosed by the prior art identified in the Petition for original claims 8, 16, and 24, together with the prior art identified above for the claims from which they depend (namely, Substitute Claims 8, 33, and 38).

B. Substitute Claim 37 Would Have Been Obvious

Substitute Claim 37 adds the limitations “determining that a time during which no input has been detected by the device increases beyond a threshold duration” and “controlling the display generation component to transition from a screen-on state associated with the wake screen user interface to a screen-off state that is a power-saving state of the display generation component.”

As explained in the Petition, during periods of inactivity, mobile devices commonly went into a “sleep” or power-saving mode in which the display was turned off to save power. *See, e.g.*, EX1019 at 4:39-64. A POSITA would have understood that the process of transitioning into a sleep state would involve “determining that a time during which no input has been detected by the device

increases beyond a threshold duration,” such as a “timeout” duration. *Id.*, Fig. 5 (transition from display-on state 516 to display-off state 510 when “activity timer expired”); *see also id.* at 4:57-60 (one-second delay before entering sleep state 510); EX1054 ¶88. Thus, if original claim 21 is found obvious over the prior art in the Petition, then Substitute Claim 37 is obvious over the same prior art.

Alternatively, Zanella (EX1052) discloses these limitations. Zanella discloses a wrist device, such as a watch, that includes hardware components and can detect gestural inputs. EX1052 ¶¶24-32. Thus, Zanella is in the same field of endeavor as the ’352 patent, Dascola, and the prior art identified in the Petition. EX1054 ¶89. POSITA would have been motivated to combine Zanella with the other references for the same reasons provided above regarding Dascola. *Id.*

Zanella describes “the provision of a limit time at the end of which the modality of standby takes over” with “periodic reawakening.” EX1052 ¶34. Thus, it would have been obvious to turn off a display after a period of inactivity.

Thus, each of the Substitute Claims is unpatentable under 35 U.S.C. § 103.

IV. PO FAILS TO SHOW THAT THE SUBSTITUTE CLAIMS HAVE WRITTEN DESCRIPTION SUPPORT FOR THEIR FULL SCOPE

A. PO’s String Cites Fail to Satisfy the Burden of Production.

PO has failed to meet its burden to show that the Substitute Claims have support in the original disclosure of the ’352 patent. 37 C.F.R. §§ 42.121(b), 42.121(d)(1). PO merely provides string citations to support the new claims.

MTA 13-17. PO does not explain how the cited sections provide support for the new limitations. Both the Board and Federal Circuit have held that “mere string citations to an original application’s disclosure without explanation are insufficient to meet a patent owner’s burden of production.” *Lippert Components, Inc. v. Days Corp.*, IPR2018-00777, Paper 28 at 52 (PTAB Sept. 24, 2019); *see also B.E. Tech., L.L.C. v. Google, Inc.*, No. 2015-1827, 2016 WL 6803057 at *7 (Fed. Cir. Nov. 17, 2016) (affirming Board’s decision that string citations did not meet PO’s burden). Thus, PO’s motion should be denied.

B. PO’s Disclosure of a Smart Phone Camera Does Not Support Claims That Seek to Capture Pulse Rate and Oxygen Sensors.

Substitute Claims 28, 29, and 32 recite “an optical sensor located on a back side of the watch.” The only optical sensor disclosed in PO’s patent application “receive[s] light from the environment, projected through one or more lens, and converts the light to data representing an image.” APPLE-2001 ¶61. In other words, it is a *camera* sensor. It works “[i]n conjunction with imaging module 143 (also called a camera module)” and may “capture still images and/or video.” *Id.*

This camera sensor may be “located on the back” or “on the front” of a user’s device. *Id.* When the sensor is on the front, it can be used “for selfies” or “for videoconferencing while the user views the other video conference participants on the touch screen.” *Id.* And the representative figure on the cover the ’352 patent depicts sensor 164 as a front-facing camera on a smartphone. *Id.*,

p.1. This disclosure would convey to a POSITA only that the inventor possessed a conventional camera typically used in smartphones. EX1054 ¶¶118-119.

Placing a camera on the back of a smartphone, “opposite touch-sensitive display system 112 on the front of the device,” makes perfect sense because “the touch screen is enabled for use as a viewfinder for still and/or video image acquisition.” APPLE-2001 ¶61. But placing a camera on the back of a smartwatch makes no sense. The user’s wrist would block the camera and prevent it from capturing any images. EX1054 at ¶¶118-119. Thus, a POSITA would *not* understand from the patent application’s camera-sensor disclosure that the inventor possessed any optical sensor on the back of a watch. *Id.*

The Substitute Claims’ reference to “an optical sensor located on a back side of the watch” is a transparent attempt to cover a PPG sensor for measuring pulse rate or oxygen saturation. *See* EX1054 ¶120. A PPG sensor is used to detect light transmitted through a user’s tissue. *Id.* While smartwatches now include such sensors on their back side, the specification does not convey that the inventor possessed such sensors as part of the invention. *Id.* ¶121. Thus, the patent application does not support the claim scope that PO seeks to capture. *See LizardTech v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1346 (Fed. Cir. 2005).

C. The Patent Application Fails to Disclose Any “Interface Provided in the Power-Saving State.”

Substitute Claim 36 recites “an interface provided in the power-saving state of the display generation component.” PO identifies ¶376 as allegedly supporting the new limitation. However, that paragraph only mentions that “wake screen user interface 504 [] is displayed *upon the display transitioning from a display-off state to a display-on state*,” rather than an interface provided in the power-saving state. APPLE-2001 ¶376 (emphasis added). Indeed, both ¶376 and Substitute Claim 36 itself recite that the power-saving state is a display-off state. How “an interface” could be provided when the display is off is unclear.

Thus, PO failed to meet its burden to show that these Substitute Claims have support in the original disclosure.

V. CONCLUSION

Petitioner respectfully requests that the Board deny Patent Owner’s Contingent Motion to Amend because the Substitute Claims are unpatentable as patent-ineligible, lacking written-description support, and obvious.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: March 6, 2024

By: /Ted M. Cannon/
Ted M. Cannon (Reg. No. 55,036)
Customer No. 64,735
Attorney for Petitioner
(949) 760-0404

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to 37 C.F.R. § 42.6(e) and with the agreement of counsel for Patent Owner, a true and correct copy of **PETITIONER'S OPPOSITION TO PATENT OWNER'S CONTINGENT MOTION TO AMEND** is being served electronically on March 6, 2024, to the e-mail addresses shown below:

W. Karl Renner Fish & Richardson P.C. 60 South Sixth Street, Suite 3200 Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR50095-0146IP1@fr.com	Roberto J. Devoto Craig A. Deutsch Grace Kim Andrew Patrick Fish & Richardson P.C. 60 South Sixth Street, Suite 3200 Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR50095-0146IP1@fr.com
---	---

Dated: March 6, 2024

/Ted M. Cannon/
Ted M. Cannon (Reg. No. 55,036)
Customer No. 64,735

Attorney for Petitioner
Masimo Corporation
(949) 760-0404