

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MASIMO CORPORATION,
Petitioner,

v.

APPLE INC.,
Patent Owner.

Case IPR2023-00664
Patent 11,106,352

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

TABLE OF CONTENTS

I.	THE OPPOSITION FAILS THE PARTICULARITY REQUIREMENT	1
II.	THE OPPOSITION FAILS TO ESTABLISH A LEGALLY SUFFICIENT RATIONALE TO COMBINE THE PRIOR ART	2
III.	THE OPPOSITION FAILS TO ESTABLISH OBVIOUSNESS OF THE ADDITIONAL ELEMENTS OF CLAIMS 25-27, 30-32, AND 35-37	3
	A. Masimo fails to show that Tu discloses or renders obvious a “tilt angle threshold” and “determining that the computer system is tilted at an angle”	3
	B. Masimo improperly relies on multiple different embodiments from Tu without combining them.....	4
	C. Masimo fails to show a motivation to combine the Petition’s prior art with Tu.....	5
IV.	THE OPPOSITION FAILS TO ESTABLISH OBVIOUSNESS OF THE ADDITIONAL ELEMENTS OF CLAIMS 28-29, 33-34, AND 38-39	7
	A. Masimo fails to show that Dascola and Brinda disclose or render obvious “sliding the wake screen user interface in the longitudinal direction from a lower edge of the display” and displaying “an underlying user interface that was covered by the wake screen user interface”	7
	B. Masimo fails to show a motivation for adding Dascola and Brinda	8
	C. Masimo fails to show obviousness based on Dascola and Lee	9
V.	APPLE SATISFIED ITS BURDEN OF SHOWING WRITTEN DESCRIPTION SUPPORT.....	9
	A. String cites are sufficient to show written description support	9
	B. The ’352 specification provides written description support for claims 26, 31, and 36	10
	C. The ’352 specification provides written description support for claims 27, 32, and 37	10

VI.	THE SUBSTITUTE CLAIMS ARE DEFINITE	11
A.	Substitute claims 26, 31, and 36 are definite.....	11
B.	Substitute claims 29, 34, and 39 are definite.....	12
C.	Substitute claims 27, 32, and 37 are definite.....	12

EXHIBITS

APPLE-2001	U.S. Patent Publication No. 2020/0333935 (“Tyler”)
APPLE-2002	U.S. Provisional Application No. 62/507,181
APPLE-2003	Declaration and CV of Dr. Andy Cockburn
APPLE-2004	Deposition Transcript of Dr. Craig Rosenberg
APPLE-2005	Transcript of Second Deposition of Dr. Craig Rosenberg
APPLE-2006	U.S. Patent Application No. 15/715,005
APPLE-2007	U.S. Patent Application No. 16/915,971
APPLE-2008	U.S. Provisional Application No. 62/507,181
APPLE-2009	Deposition Transcript of Dr. Craig Rosenberg (June 6, 2024)
APPLE-2010	Second Declaration of Dr. Andy Cockburn

I. THE OPPOSITION FAILS THE PARTICULARITY REQUIREMENT

In an IPR, petitioner must “identif[y]...with particularity...the grounds on which the challenge to each claim is based.” 35 U.S.C. § 322(a)(3). Masimo contravenes this important requirement in the voluminous grounds of unpatentability it presents, and the specificity and indefinite scope of those grounds.

For independent claims 1, 9, and 17, the Petition advances no fewer than 8 distinguishable prior art combinations based on Chae, Narendra, Hong, and/or Android. For portions of substitute claims 25-29 that retain all features of corresponding original dependent claims, Petitioner adds either Shuttleworth or Karunamuni to the combinations—effectively resulting in at least 16 distinct prior art combinations for each dependent claim. Moreover, for portions of each substitute claim that include amended claim features, the Opposition adds two more references to the combinations—constituting no fewer than 24 distinct prior art combinations—all while failing to explain why or how a POSITA would have combined the numerous references thereby placing an undue burden on both the Board and Apple to decipher which combinations are being asserted and how. *Adaptics Ltd. v. Perfect Co.*, IPR2018-01596, Paper 20, 18-19, 24 (PTAB Mar. 6, 2019) (informative). This numerosity of interwoven, vague combinations is worsened by Masimo’s failure to engage in a proper obviousness analysis.

Indeed, the Opposition does not even explain which reference modifies

another reference for all the combinations, or how and why certain features of a particular reference would have been combined with other features of another reference. For example, there is no explanation of how Tu, Tsukamoto, and/or Le Grand would be combined with the 16 prior art combinations set forth in the Petition to render obvious substitute claims 25-27, 30-32, and 35-37. Throughout the Opposition, Masimo fails to clearly articulate how the cited references render obvious the substitute claims, what modifications are being proposed, a description of the combined/modified system, or why such modifications would have been obvious to a POSITA. For at least these reasons, the Opposition is deficient.

II. THE OPPOSITION FAILS TO ESTABLISH A LEGALLY SUFFICIENT RATIONALE TO COMBINE THE PRIOR ART

The Opposition's broad motivation-to-combine section alleges that enhancing "ease-of-use and user-friendliness" would have provided a general motivation to combine the prior art references. Opp., 2-3. The Federal Circuit has found such general motivations to be insufficient. *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327-28 (Fed. Cir. 2012) (rejecting motivations "to build something better," "more efficient, cheaper, or... had more features," or "more attractive to customers"); *TQ Delta, LLC v. Cisco Systems Inc.*, 942 F.3d 1352, 1360 (Fed. Cir. 2019) (rejecting testimony that "fail[ed] to explain why a person of ordinary skill in the art would have combined elements...").

Masimo further contends that the references would have been combined simply because they are “compatible with and additive of each other.” Opp., 2. It is insufficient to simply show that the alleged modification “*could*” be done, “Petitioner also needs to sufficiently explain why a person skilled in the art *would* have done that, and why, when... so modified, the [device] would still perform the function [it was intended to perform].” *IBM Corp. v. Rieggen & Co., Inc.*, IPR2020-00496, Paper 10, 22 (PTAB Aug. 7, 2020); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). Masimo has not provided the required analysis of explaining, based on facts and evidence, why a POSITA would have been motivated to make the suggested modification, how the asserted combination would have worked, and why it would have been an obvious combination to a POSITA. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); *PersonalWeb Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017).

III. THE OPPOSITION FAILS TO ESTABLISH OBVIOUSNESS OF THE ADDITIONAL ELEMENTS OF CLAIMS 25-27, 30-32, AND 35-37

A. Masimo fails to show that Tu discloses or renders obvious a “tilt angle threshold” and “determining that the computer system is tilted at an angle”

Masimo relies on Tu’s disclosure of detecting a tilt using accelerometer data. Opp., 3-5. However, Tu’s accelerometer provides gravitational acceleration data a_x , a_y , and a_z that are between -1 g and 1 g. EX1065, [0065] (“the accelerometer readings

include gravitational acceleration (1 g, in a direction that depends on the orientation of the device).”). The accelerometer data is measured in “g’s” not angles, and thus Tu does not describe using a “tilt angle threshold.” EX2010, ¶6. Indeed, Masimo’s expert conceded that Tu fails to disclose accelerometer readings that include any angle measurement for determining that the device is “tilted at an angle” greater than a “tilt angle threshold.” EX2009, 17:21-18:12 (“a specific number of degrees associated with a threshold...no. Tu doesn’t describe it in that way.”).

Masimo cites Gao, Moto 360¹, Tsukamoto, Le Grand, and Dascola for various limitations of these claims, but does not rely on them for a “tilt angle threshold” and “determining that the computer system is tilted at an angle.” Accordingly, Masimo fails to show that any combination with Tu satisfies the requirements of claims 25-27, 30-32, and 35-37.

B. Masimo improperly relies on multiple different embodiments from Tu without combining them

Masimo relies on Tu’s FIG. 4 embodiment, which relates to detecting “raise

¹ Masimo fails to provide sufficient evidence that Moto 360 satisfies all requisite characteristics of a “printed publication.” *See Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29, 8-11 (PTAB Dec. 20, 2019) (precedential); Paper 34.

gestures” associated with a *focus pose*. Opp., 3-5; EX1065, [0009], [0018]. Masimo then inexplicably shifts to FIG. 13, which is directed to detect a “*loss-of-focus* event” for the “tilted at an angle that is greater than the tilt angle threshold” limitation. Opp., 5-6; EX1065, [0027], [0129]. Masimo does not set forth a motivation to combine the two incongruous embodiments that would not be combined with one another by a POSITA as they are directed to entirely different purposes and results. EX2010, ¶¶7-9. Indeed, Tu’s FIGS. 4 and 13 are directed to different embodiments because detecting a raise gesture requires a different algorithm and different response (e.g., early vs. delayed detection) than detecting a loss of focus. EX1065, [0152] (“early detection of preheat and waking” for raise gesture), [0180] (“activate the user interface at an earlier stage” for raise gesture), [0137] (“delayed detection of a loss-of-focus event (and deactivating the display)”). Masimo admits that FIG. 13’s “loss of focus” would not “activate the display” (Opp., 6), as required by the limitation “transitioning the computer system from a screen-off state to a screen-on state.” Masimo cannot demonstrate obviousness “merely by demonstrating that each of [the patent] elements was, independently, known in the prior art.” *KSR*, 550 U.S. at 418. Thus, Masimo fails to show that any combinations of Tu satisfies the requirements of claims 25-27, 30-32, and 35-37.

C. Masimo fails to show a motivation to combine the Petition’s prior art with Tu

As Masimo admits, Chae discloses a button press to wake up a smartphone. Opp., 8. Masimo, however, does not sufficiently explain why “tilt-to-wake” would promote power efficiency and improve ease-of-use, convenience, and user-friendliness over a button press. Considering Tu’s early (and more false positives) raise gesture detection (EX1065, [0152], [0180]), implementing Tu’s “tilt-to-wake” would consume more power than a button press, and the device would wake up when placed upright in a pocket or purse leading to faster battery depletion and more frequent charging. EX2010, ¶10. Because Chae “already provides for” the features and benefits that is Masimo’s alleged motivation to combine, and because Chae’s smartphone button would eliminate the needless power consumption associated with false positive raise gesture detection, Masimo has a burden to show “why” Chae would have been modified to include Tu’s teachings and why the alleged modification to Chae “would have been an improvement on what [the primary system] already provides.” *Microsoft Corp. v. Koninklijke Philips N.V.*, IPR2018-00026, Paper 7, 15 (PTAB April 27, 2018). Indeed, the law mandates an “especially strong” inference of “nonobviousness” where the primary reference undermines the reason being proffered as to why the primary reference should be modified. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1326 (Fed. Cir. 2009).

Masimo alleges that Tu’s “raise gestures could be implemented on other devices.” Opp., 8. But it is insufficient to simply show that the alleged modification

“*could*” be done, “Petitioner also needs to sufficiently explain why a person skilled in the art *would* have done that,” which Masimo has failed to do. *IBM*, at 22.

IV. THE OPPOSITION FAILS TO ESTABLISH OBVIOUSNESS OF THE ADDITIONAL ELEMENTS OF CLAIMS 28-29, 33-34, AND 38-39

A. Masimo fails to show that Dascola and Brinda disclose or render obvious “sliding the wake screen user interface in the longitudinal direction from a lower edge of the display” and displaying “an underlying user interface that was covered by the wake screen user interface”

Masimo’s analysis regarding Dascola is defective. Masimo does not explain how Dascola’s wake screen covers the control UI and slides up to reveal the control UI. *See Opp.*, 15. Rather, Dascola’s control UI is revealed by sliding up to partially cover a wake screen that is fixed in position. EX1051, [0400]-[0401], FIGS. 6A-6D; EX2009, 53:2-6 (“revealing what was hidden... off the display”); EX1011, [0015] (“partially overlays and obscures content that was being displayed prior”); EX2010, ¶¶11-12.

Masimo implicitly admits Dascola’s defect by relying on Brinda, which does not cure the failure of Dascola. Masimo does not explain how Brinda’s protection and original layers correspond to the claimed wake screen and underlying user interface. Brinda’s protection layer slides down into the lower edge (EX1072, 4:65-67, 6:35-38), whereas the claims require the wake screen to slide up “from a lower edge of the display generation component.” EX2010, ¶13. Masimo also does not

explain how Brinda’s protection layer (that slides down) and original layer (that is fixed) correspond to Dascola’s wake screen (that is fixed) and control UI (that slides up) or what that combination would even look like. *PersonalWeb Techs.*, 848 F.3d at 994 (“nowhere clearly explained, or cited evidence showing, *how* the combination of the two references was supposed to work”); *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016) (“how or why the references would be combined”).

B. Masimo fails to show a motivation for adding Dascola and Brinda

Masimo relies on Karunamuni for the control panel UI limitations of claims 28, 33, and 38. Pet., 82-87. Like Dascola, Karunamuni discloses “a control center interface... that at least partially overlays and obscures content that was being displayed prior to the control center interface’s invocation.” EX1011, [0015]; EX2010, ¶14. Because Karunamuni “already provides for” the features and benefits that is Masimo’s alleged motivation to combine, Masimo has a burden to show “why” Karunamuni would have been modified to include Dascola’s and Brinda’s teachings and why the alleged modification to Karunamuni “would have been an improvement on what [the primary system] already provides.” *Microsoft* at 15. Indeed, the law mandates an “especially strong” inference of “nonobviousness” where the primary reference’s original solution undermines the very reason being proffered as to why the primary reference should be modified. *DePuy Spine*, 567 F.3d at 1326. But Masimo offers only one specific motivation for adding Dascola

and Brinda—“to improve the aesthetics.” Opp., 16. As discussed above, the Federal Circuit has found such motivations to be insufficient. *ActiveVideo Networks*, 694 F.3d at 1327-28. Masimo’s remaining arguments simply assert that the alleged modification could be done, which as explained above, does not satisfy Masimo’s burden. *IBM*, at 22.

C. Masimo fails to show obviousness based on Dascola and Lee

Claims 29, 34, and 39 depend on claims 28, 33, and 38, respectively, and Masimo fails to show obviousness of claims 28, 33, and 38 for the same reasons discussed above. EX2010, ¶15. Further, Masimo’s alleged motivations “to allow easier access,” to improve “the user experience,” and that “this was a common element” (Opp., 20) are insufficient. *ActiveVideo Networks*, 694 F.3d at 1327-28.

V. APPLE SATISFIED ITS BURDEN OF SHOWING WRITTEN DESCRIPTION SUPPORT

A. String cites are sufficient to show written description support

More recently, the Board has stated that:

We decline to adopt a *per se* rule that string citations, in general, are not sufficient for Patent Owner to meet its burden under 37 C.F.R. § 42.121(b). The underlying question at issue is factual in nature, namely, whether “[t]he amendment seeks to ... introduce new subject matter” (37 C.F.R. § 42.121(a)(2)(ii))—i.e., whether there is written description support under 35 U.S.C. § 112, first paragraph. In some cases, written description support may be apparent simply by identification of the

relevant disclosure. Other cases may require further explanation.

PEAG LLC v. Varta Microbattery GMBH, IPR2020-01213, Paper 26, 6 (PTAB July 21, 2021). Here, Apple provided citations to specific paragraphs and figures of the applications for each claim, and Masimo challenges written description support of only two elements, which Apple shows below are without merit.

B. The '352 specification provides written description support for claims 26, 31, and 36

Masimo ignores that the '352 specification explicitly describes an example that is almost word-for-word the claim language “determining whether the computer system is tilted from a position in which the computer system is substantially horizontal to a position in which the computer system is substantially vertical,” specifically, “the device determines whether the device has been rotated by more than a threshold angle (...such as tilted from a position in which the device is substantially horizontal to a position in which the device is substantial vertical).” EX2007, [00162]; EX1001, 37:67-38:5. Masimo’s reliance on another example described in the specification does not establish that there is no written description support. EX2010, ¶16.

C. The '352 specification provides written description support for claims 27, 32, and 37

Masimo argues that the claim language “controlling the display generation component to not be activated” entails an affirmative step such as sending a signal

to cause the display not to activate. Opp., 22. Masimo provides no support for this implied claim construction. The '352 specification states that “[b]ecause a tilt angle of the device has not increased above a threshold tilt angle in Figure 5A2, the display is not activated.” EX2007, [00162]. A POSITA understood that a display can be controlled to not be activated in several different ways, including, e.g., by programming a device to not be activated under certain circumstances or controlling a display’s power supply not to provide power unless certain conditions are satisfied. EX1065, [0240]; EX2009, 9:1-5; EX2010, ¶¶17-18.

VI. THE SUBSTITUTE CLAIMS ARE DEFINITE

A. Substitute claims 26, 31, and 36 are definite

“Claim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention.” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014). The claim is definite if the specification provides examples or teachings that can be used to measure a degree even without a precise numerical measurement (e.g., a figure that provides a standard for measuring the meaning of the term of degree). *Id.* at 1371-72; MPEP § 2173.05(b)(I). Here, the '352 specification and figures provide examples of “substantially horizontal” and “substantially vertical.” EX2009, 34:8-35:2, 36:8-12. The '352 specification discloses that in FIG. 5A1, “the device display is substantially horizontal” and in FIG. 5A4, “the display 112 is

substantially vertical.” EX2007, [00162]; EX1001, 37:67-38:5. Additionally, a POSITA understood that “substantially” indicates that physical perfection is unnecessary. EX1064, [0192]; EX2009, 21:10-18; EX2010, ¶19.

B. Substitute claims 29, 34, and 39 are definite

The claim language recites “while displaying the wake screen user interface and while two or more notifications remains displayed on the wake screen user interface, detect a third input, at a power button of the computer system, for dismissing the wake screen user interface.” It is irrelevant whether any claims recite initially displaying notifications. A POSITA reading the claim language would have understood that “detect a third input” occurs “while two or more notifications remains displayed,” e.g., the notifications have not been dismissed. EX2010, ¶20.

C. Substitute claims 27, 32, and 37 are definite

Claims 27, 32, and 37 do not recite that “determining that the change in the orientation of the computer system does not satisfy the tilt angle threshold” and “controlling the display generation component to not be activated” is part of “detecting the input that meets display-waking criteria,” and thus is not a part of “detecting the input that meets display-waking criteria,” as Masimo alleges. Specifically, the phrase “detecting the input that meets display-waking criteria comprises” is present in claims 25, 30, and 35 while being clearly absent from claims 27, 32, and 37. EX2010, ¶21.

Respectfully submitted,

Date: June 24, 2024

/Kim H. Leung/

W. Karl Renner, Reg. No. 41,265

Andrew Patrick, Reg. No. 63,471

Kim Leung, Reg. No. 64,399

Usman Khan, Reg. No. 70,439

Fish & Richardson P.C.

60 South Sixth Street

Minneapolis, MN 55402

Attorneys for Patent Owner

CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e), the undersigned certifies that on June 24, 2024, a complete and entire copy of this Patent Owner's Reply To Petitioner's Opposition To Patent Owner's Revised Contingent Motion To Amend were provided via email, to the Petitioners by serving the correspondence addresses of record as follows:

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 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

E-mail: MasimoIPR-352@knobbe.com

/Crena Pacheco/
Crena Pacheco
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
pacheco@fr.com