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Paper 29
Date: May 15, 2026

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA MOBILITY LLC and GOOGLE LLC,
Petitioner,

v.

MULTIFOLD INTERNATIONAL INCORPORATED PTE. LTD.,
Patent Owner.

IPR2025-00038
Patent 8,836,842 B2

Before KRISTEN L. DROESCH, ARTHUR M. PESLAK, and BRIAN P. MURPHY, *Administrative Patent Judges.*

DROESCH, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

II. INTRODUCTION

We have authority to hear this *inter partes* review under 35 U.S.C. § 6, and this Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, Petitioner has established by a preponderance of the evidence that claims 1–7, 10–13, 16, 17, 19, and 20 of U.S. Patent No. 8,836,842 B2 (Ex. 1001, "'842 Patent") are unpatentable.

A. Background and Procedural History

Motorola Mobility LLC and Google LLC (collectively, "Petitioner") filed a petition (Paper 1, "Pet." or "Petition") requesting *inter partes* review of claims 1–7, 10–13, 16, 17, 19, and 20 of the '842 Patent. Multifold International Incorporated Pte. Ltd. ("Patent Owner") timely filed a preliminary response. Paper 7.

Upon review of the parties' arguments and supporting evidence, we instituted review with respect to all grounds and claims set forth in the Petition. Paper 8 ("Inst. Dec." or "Institution Decision").

Patent Owner filed a Response to the Petition (Paper 13, "PO Resp." or "Response"), to which Petitioner filed a Reply (Paper 18, "Pet. Reply" or Reply), and Patent Owner filed a Sur-reply (Paper 22, "PO Sur-reply").

In support of the Petition, Petitioner relies upon a declaration of Jeffrey J. Rodriguez, Ph.D. Ex. 1003. In support of the Response, Patent Owner relies upon a declaration of Rajeev Surati, Ph.D. Ex. 2002. The parties filed transcripts of depositions of Dr. Rodriguez (Ex. 2011) and Dr. Surati (Ex. 1015).

An oral hearing was held on February 25, 2026, and a transcript of the hearing is included in the record. Paper 28.

B. Real Parties-In-Interest

Petitioner indicates that the real parties-in-interest are Motorola Mobility LLC and Google LLC. *See* Pet. 3. Patent Owner indicates that Multifold International Incorporated Pte. Ltd. is the real party-in-interest. *See* Paper 5, 1.

C. Related Matters

The parties indicate that the '842 Patent is or was the subject of the following district court proceedings: *Multifold International Incorporated Pte. Ltd. v. Motorola Mobility LLC*, No. 1:23-CV-1173 (D. Del.); *Multifold International Incorporated Pte. Ltd. v. Google LLC*, No. 1:23-CV-01323 (D. Del.); and *Multifold International Incorporated Pte. Ltd. v. Samsung Electronics Co., Ltd. et al.*, 2:21-cv-00371 (E.D. Tex.). *See* Pet. 3–4; Paper 5, 1.

D. The '842 Patent (Ex. 1001)

The '842 Patent is directed to "[m]ethods and devices for selectively presenting a user interface in a dual screen device," that "include[] a change in the display mode . . . while the device is in an image capture mode" and "may present different information on the two screens based on several factors including the mode of the image capture feature, the orientation of the device, and/or the state of the device." Ex. 1001, code (57); *see id.* at 1:45–2:3.

Figure 1A of the '842 Patent is reproduced below.

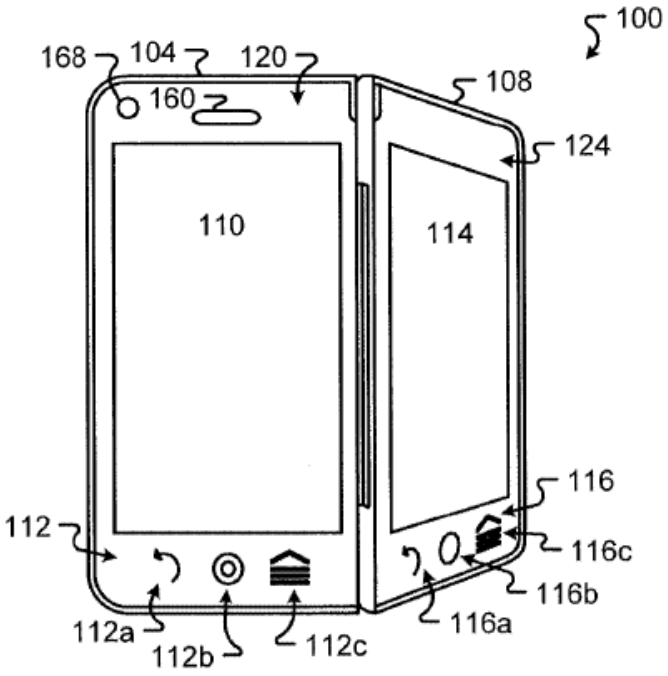


Figure 1A illustrates multi-screen device 100 including primary screen 104 with touch sensitive display 110, configurable area 112 for specific inputs, and gesture capture area 120, and secondary screen 108 with touch sensitive display 114, configurable area 116 for specific inputs, and gesture capture area 124. *See* Ex. 1001, 5:18–19, 7:17–56. Touch sensitive displays 110 and 114 display information to the user, but gesture capture areas 120 and 124 are not capable of rendering displayed images. *See id.* at 7:26–30, 7:60–67. Screens 104 and 108 are connected together with a hinge and "device 100 may have different functionalities depending on the relative positions of screens 104 and 108." *Id.* at 8:1–11. Device 100 also includes camera 168 and two position sensors (not shown) used to determine the relative positions of screens 104, 108. *Id.* at 8:65–9:2.

Figure 13 of the '842 Patent is reproduced below.

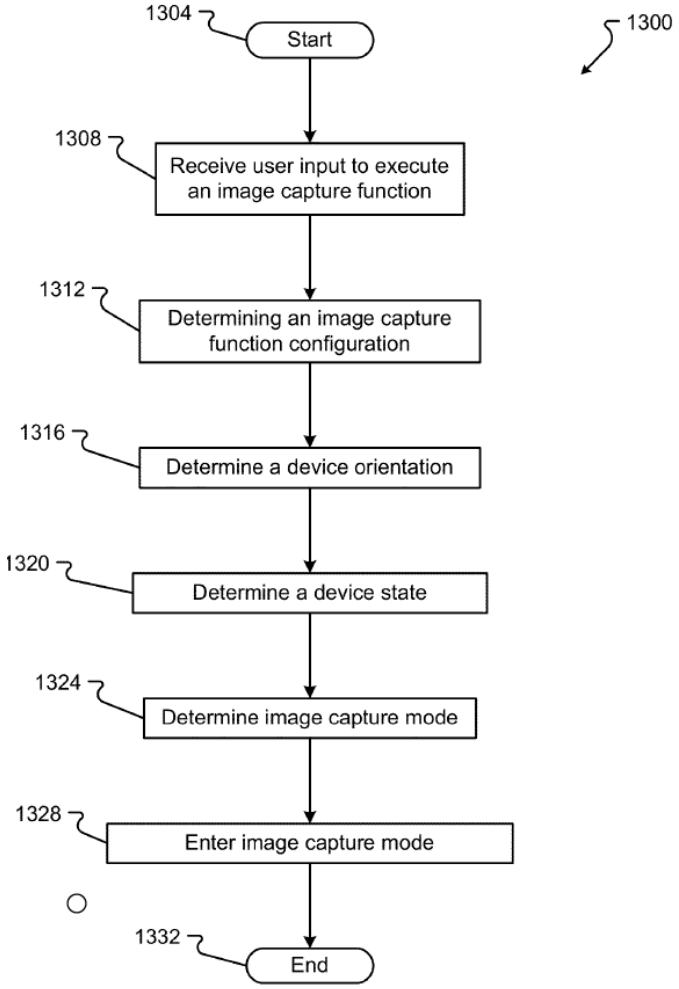


Figure 13 is a flowchart of method 1300 for providing an image capture function. *See* Ex. 1001, 6:39–40, 32:61–33:6. Method 1300 begins at step 1304, followed by step 1308 in which multi-screen device 100 receives an input from a user requesting execution of an image capture function. *See id.* at 33:7–15. Device 100 determines an image capture function configuration based on the device state and display mode in step 1312. *See id.* at 33:15–17. Device 100 determines a device orientation in step 1316, a device state in step 1312, and an image capture mode in step 1324. *See id.* at 33:17–20. Based on the determined orientation, state, and image capture

mode, device 100 enters the image capture mode in step 1328. *See id.* at 33:20–22.

Figures 15A and 15B of the '842 Patent are reproduced below.

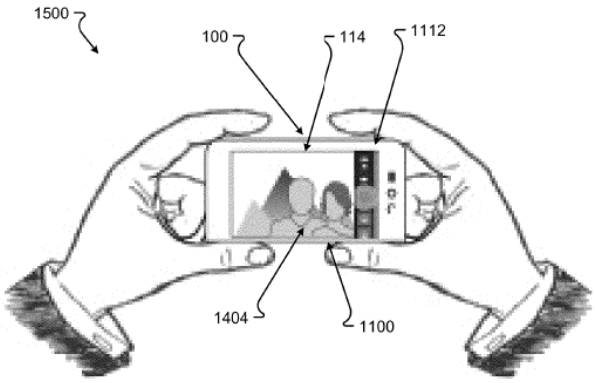


Fig. 15A

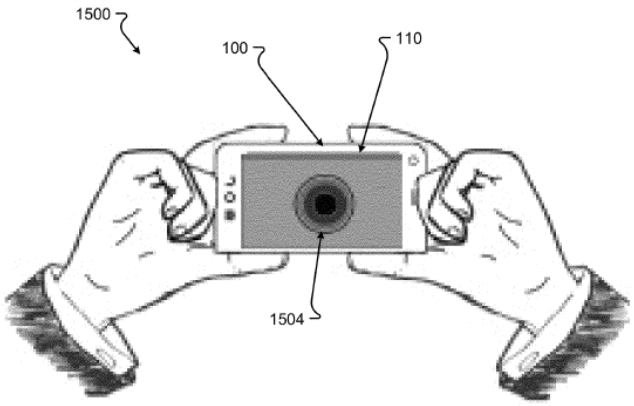


Fig. 15B

Figures 15A and 15B illustrate exemplary user interfaces for an image capture function. *See* Ex. 1001, 6:45–48. Device 100 is in a closed state and landscape orientation, second screen 114 facing the user shows preview 1404 of the scene in front of the user, and image 1504 that looks like a camera lens is displayed on first screen 110. *See id.* at 33:38–42, 33:45–46; 33:54–59. "Thus, the party in the scene to be captured is presented with a visual indicia that indicates a picture or image is being taken." *Id.* at 33:59–61.

E. Illustrative Claim

Claims 1, 11, and 16 are independent, and claims 2–7, 10, 12, 13, 17, 19, and 20 depend directly or indirectly therefrom. *See* Ex. 1001, 39:26–41:5. Claim 1 is illustrative and reproduced below:

1. A method, comprising:

providing a device having at least first and second screens;

> receiving user interface input to execute an image capture function;
>
> determining one or more of an image capture function configuration, a device orientation, and a device state; and
>
> based on one or more of the image capture function configuration, the device orientation, and the device state, entering one of one or more image capture modes, wherein in each image capture mode a display on the first or second screen is different.

Id. at 39:26–37.

F. Patentability Challenges and Asserted Prior Art

Petitioner challenges claims 1–7, 10–13, 16, 17, 19, and 20 on the following grounds of unpatentability (Pet. 6–7):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–7, 10–13, 16, 17, 19, and 20	102[1]	Chin[2]
1–7, 10–13, 16, 17, 19, and 20	103	Chin
1–7, 11	102	Whitehorn[3]
1–7, 11	103	Whitehorn

III. ANALYSIS

A. Claim Construction

In an *inter partes* review proceeding, the Board applies the same claim construction standard as that applied in federal courts in a civil action under 35 U.S.C. § 282(b), which is generally referred to as the *Phillips*

[1] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. §§ 102 and 103 effective March 16, 2013. Because the '842 Patent claims an effective filing date prior to the effective date of the applicable AIA amendment, we refer to the pre-AIA version of §§ 102 and 103.
[2] US 2009/0190295 A1, published July 30, 2009 (Ex. 1004).
[3] US 2005/0078211 A1, published Apr. 14, 2005 (Ex. 1005).

standard. *See* 37 C.F.R. § 42.100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). Under the *Phillips* standard, "words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips* 415 F.3d at 1312.

Petitioner points out the express definitions for the terms "screen" and "display" set forth in the '842 Patent. *See* Pet. 16–17 (citing Ex. 1001, 2:63–65, 3:28–29; Ex. 1003 ¶¶ 55–56). Petitioner does not propose constructions for any other claim term. *See id.*

Independent claims 1, 11, and 16, each recite "wherein in each image capture mode a display on the first or second screen is different." Ex. 1001, 39:36–37, 40:9–11, 40:53–55. Patent Owner contends that this claim phrase "means 'a different display on the first screen between image capture modes or a different display on the second screen between image capture modes.'" PO Resp. 10–11 (citing Ex. 2005, 45; Ex. 2002 ¶ 70).[4] Patent Owner asserts that its proposed construction is consistent with its construction of related terms in related district court proceedings between the parties. *See id.* at 11 (citing Ex. 2005, 45; Ex. 2002 ¶ 70). Patent Owner further explains: (1) "[t]he different image capture modes have a different display on the first screen and/or a different display on the second screen of the device;" (2) "a single screen changes its display between image capture modes;" and (3) "the same screen must present different displays between image capture modes." *Id.* (citing Ex. 2002 ¶¶ 70–71), *id.* at 13 (citing Ex. 2002 ¶¶ 73–74). Patent Owner asserts that its proposed claim construction is supported by the

[4] Patent Owner's citation to Exhibit 2005 are to the document page number, not the exhibit page number.

claim language, multiple embodiments disclosed in the '842 Patent Specification, and the prosecution history. *See id.* at 12–22.

In the Reply, Petitioner asserts that, in the Institution Decision, "[t]he Board correctly found construction of this phrase unnecessary." *See* Pet. Reply 2 (citing Inst. Dec. 9). Petitioner asserts that the prior art discloses or renders obvious this limitation under Patent Owner's construction or any other possible understanding of this limitation. *See id.* at 3. In the Sur-reply, Patent Owner reiterates its proposed construction and asserts that Petitioner does not dispute the proposed construction. *See* PO Sur-reply 1 (citing PO Resp. 10–11, 13–21, 25, 34; Pet. Reply 1–3).

We agree with Petitioner that claim construction is unnecessary. As demonstrated in the analysis provided below addressing this claim limitation in view of the prior art, we need not explicitly construe "wherein in each image capture mode a display on the first or second screen is different." *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). Similarly, we need not construe any other claim terms or phrases to resolve the controversy between the parties.

B. Level of Ordinary Skill in the Art

Petitioner asserts that

> [a] person of ordinary skill in the art . . . ('POSITA') would have had at least a bachelor's degree in electrical engineering, computer engineering, computer science, or a related field plus at least two years of work or post-graduate experience in image capture, image processing, image display, user interfaces, or a

> related field. Additional education could offset a lesser amount of experience and vice versa.

Pet. 16. Patent Owner accepts Petitioner's definition. *See* PO Resp. 25.

We adopt Petitioner's undisputed definition of a person of ordinary skill in the art because it is consistent with the level of skill reflected by the '842 Patent Specification and the asserted prior art.

C. Principles of Law

"Under 35 U.S.C. § 102 a claim is anticipated 'if each and every limitation is found either expressly or inherently in a single prior art reference.'" *King Pharm., Inc. v. Eon Labs, Inc.*, 616 F.3d 1267, 1274 (Fed. Cir. 2010) (quoting *Celeritas Techs. Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1360 (Fed. Cir. 1998)). In order to anticipate, a prior art reference must "disclose all elements of the claim within the four corners of the document," and it must "disclose those elements 'arranged as in the claim.'" *NetMoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level

of skill in the art; and (4) if in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).[5]

D. Challenges to Claims 1–7, 10–13, 16, 17, 19, and 20 Based on Chin

1. Overview of Chin (Ex. 1004)

Chin is directed to a "portable information terminal including a first panel, a second panel and a connecting unit having a button unit." Ex. 1004 ¶ 13. "The first and second panels are rotatably connected to the connecting unit for movement between first and second folded orientations or states." *Id.*

Figure 1 of Chin is reproduced below.

FIG. 1

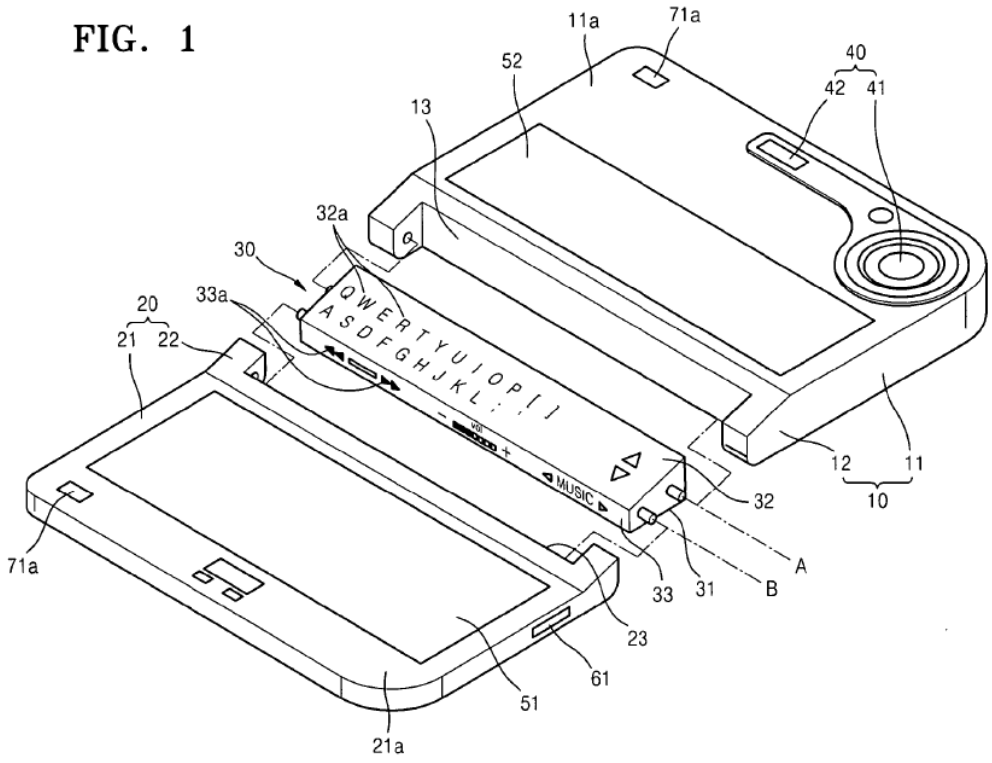


Figure 1 is a partially exploded perspective view of a portable information terminal. *See* Ex. 1004 ¶¶ 28, 40. The portable information terminal

[5] The parties do not present evidence or arguments related to secondary considerations of nonobviousness.

includes first panel 10, second panel 20 rotatably/hingedly connected to connecting unit 30. *See id.* ¶ 41. First panel 10 includes flat board unit 11, second display 52, and digital camera 40 on first generally planar surface 11a of flat board unit 11. *See id.* ¶¶ 42, 44, 45. Second panel 20 includes second flat board unit 21 and first display unit 51 configured on first generally planar surface 21a of second flat board unit 21. *See id.* ¶¶ 42, 45. Sensor unit 71 including sensors 71a are employed "for detecting positions of the first panel 10 and the second panel 20," such as "when the portable information terminal is in a second folded closed state or orientation." *Id.* ¶ 50. Chin also discloses a controlling unit that detects positions of the panels through sensor unit 71 "so as to control (e.g., enable or disable)" the button units, digital camera, and display units of the portable information terminal. *See id.* ¶ 54.

Figure 9 of Chin is reproduced below.

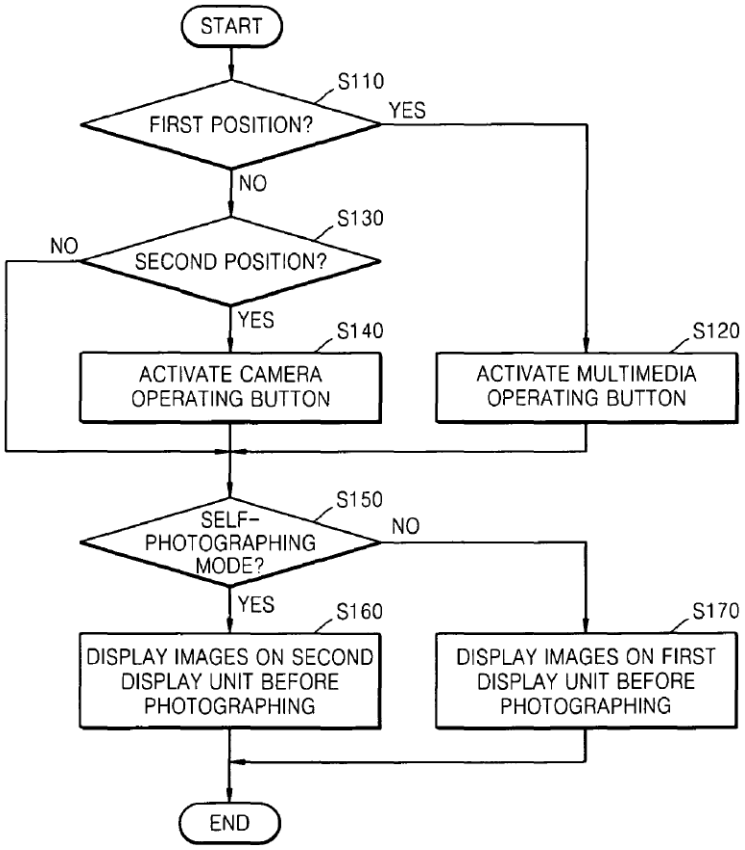


Figure 9 depicts a flowchart of a method for controlling the portable information terminal. *See* Ex. 1004 ¶¶ 36, 74. A controlling unit of the portable information terminal in step S110 determines whether the first and second panels are in the first position based on a result from sensor unit 71, and if the terminal is in the first position, it activates the multimedia operating button in step S120. *See id.* ¶¶ 75, 76. If, in step S110, the controlling unit determines that first and second panels are not in the first position, then the controlling unit determines whether the first and second panels are in a second position in step S130. *See id.* ¶ 76. If the first and second panels are in the second position in step S130, the camera activating button is activated in step S140. *See id.* In step S150, the controlling unit determines whether the portable information terminal is in a self-

photographing mode, and, if yes, preview images are displayed on the second display unit in step S160. *See id.* ¶¶ 77, 78. If the controlling unit determines in step S150 that portable information terminal is not in the self-photographing mode, preview images are displayed on the first display unit in step S170. *See id.* ¶ 79.

2. Analysis of Claim 1

a. Undisputed Limitations

Petitioner contends that, if the preamble is limiting, Chin discloses "[a] method" based on Chin's disclosure of controlling the portable information terminal device of Figure 9. *See* Pet. 17–18 (reproducing Ex. 1004, Fig. 9; citing Ex. 1004 ¶¶ 36, 74–79). Petitioner asserts that Chin discloses "providing a device having at least first and second screens" based on Chin's disclosure of a portable information terminal having two hingedly connected panels 10, 20 for moving between first and second folded states, where panels 10, 20 further include one or more display units 51, 52, and digital camera 40. *See* Pet. 18–20 (reproducing Ex. 1004, Fig. 1 (with Petitioner's annotations added); citing Ex. 1003 ¶¶ 96–100; Ex. 1004 ¶¶ 3, 22, 24–27, 45, 46, 61). Petitioner contends that Chin discloses "receiving user interface input to execute an image capture function" based on Chin's disclosure of the portable information terminal having digital camera 40 and a camera operating button. *See* Pet. 20–21 (reproducing Ex. 1004, Fig. 1 (with Petitioner's annotations added), Fig. 2 (with Petitioner's annotations added); citing Ex. 1003 ¶¶ 101–107; Ex. 1004 ¶¶ 44, 48, 52, 53).

Petitioner asserts that Chin discloses "determining one or more of an image capture function configuration, . . . and a device state" based on Chin's disclosures of determining whether or not the device is configured to

be used in self-photographing mode, and determining the physical configuration and positions of the first and second panels 10, 20 (i.e., folded in a first or second position). *See* Pet. 21–27 (reproducing Ex. 1004, Figs. 3, 5, 9 (with Petitioner's annotations added); citing Ex. 1003 ¶¶ 108–121; Ex. 1004 ¶¶ 30, 32, 36, 50, 54, 75–77, 79). Petitioner contends that Chin discloses "based on one or more of the image capture function configuration, . . . and the device state, entering one of one or more image capture modes" based on Chin's portable information terminal entering the self-photographing mode based on the image capture configuration that is manually entered by a user or automatically entered when the device state is closed in a second position and entering a second image capture mode where the portable information terminal displays images on first display unit 51 before an outward-facing photograph is taken. *See* Pet. 27–29 (citing Ex. 1003 ¶¶ 122–129; Ex. 1004 ¶¶ 30, 32, 50, 54, 56, 62, 75–77, 79, Figs. 3, 5, 9; Pet. 33–34).

Patent Owner does not address Petitioner's showing for the preamble and the foregoing limitations of claim 1. *See generally* PO Resp. In any event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Based on the entire record developed during trial, we determine that Petitioner demonstrates by a preponderance of the evidence that Chin discloses the preamble and aforementioned undisputed limitations of claim 1.

b. Disputed Limitation - Anticipation

Petitioner asserts that Chin discloses "wherein in each image capture mode a display on the first or second screen is different." Petitioner relies

on Chin's disclosure of the self-photographing mode and the mode designed to take an outward-facing image. Pet. 29–33 (reproducing Ex. 1004, Figs. 5, 6, 9 (with Petitioner's annotations added); citing Ex. 1003 ¶¶ 130–135; Ex. 1004 ¶¶ 68, 78, 79). According to Petitioner, "*both* the first and second screens have different displays in the two image capture modes, because which screen displays the preview or images changes between the two modes." Pet. 30 (citing Ex. 1003 ¶¶ 134, 135); *see* Pet. 55 (similar argument, citing Ex. 1004 ¶¶ 78, 79, Fig. 9).

Patent Owner contends that "Chin does not disclose[] that the *same screen* presents different displays depending on the display mode." PO Resp. 35 (citing Ex. 2002 ¶ 142); *see id.* at 40 (citing Ex. 2002 ¶ 156). Patent Owner asserts that Chin discloses a self-photographing first image capture mode in Figure 5 in which the portable terminal displays preview images on second display 52 before the photograph is taken. *See id.* at 36 (reproducing Ex. 1004, Fig. 5 (with Petitioner's annotations added), Ex. 1004, Fig. 5 (with Patent Owner's annotations added)). *See id.* (citing Ex. 1004 ¶¶ 69, 78; Ex. 2002 ¶¶ 144–145; Pet. 31). Patent Owner notes, however, that "Chin does not disclose what is displayed by the first display unit 51 on the other side of the device in the self-photograph mode." *Id.* at 37 (citing Ex. 1004 ¶¶ 68–69, 77–78, Figs. 5, 9; Ex. 2002 ¶ 147); *see id.* at 40 (similar argument), 41 (similar argument, citing Ex. 2002 ¶ 157). Patent Owner further asserts that Chin discloses an outward-facing photograph second image capture mode in which the terminal displays preview images on a first display 51 before a photograph is taken. *See id.* at 37–38 (reproducing Ex. 1004, Fig. 6 (with Petitioner's annotations added), Fig. 6 (with Patent Owner's annotations)). According to Patent Owner, however, "Chin does not disclose what is displayed by the second

display 52 on the other side of the device in the outward-facing photograph mode." *Id.* at 38 (citing Ex. 1004 ¶¶ 68–69, 79, Figs. 6, 9; Ex. 2002 ¶ 152); *see id.* at 40 (similar argument), 41 (similar argument, citing Ex. 2002 ¶ 157). Patent Owner asserts that, as a result, Chin does not anticipate the claimed invention. *See id.* at 41 (citing *NetMoneyIN*, 545 F.3d at 1371; Ex. 2002 ¶ 158). Patent Owner further points out that Petitioner does not argue that Chin inherently meets this limitation. *See id.* (citing Pet. 29–33; Ex. 2002 ¶ 159; Ex. 2011, 65:10–17). Patent Owner asserts that, in any event, "there can be no disclosure by inherency because it is not necessarily the case that the display in first screen 51 differs between modes or that the display in second screen 52 differs between modes." *Id.* at 43 (citing *Par Pharm. v. TWI Pharm., Inc.*, 773 F.3d 1186, 1194–96 (Fed. Cir. 2014); Ex. 2002 ¶¶ 160–162).

In the Reply, Petitioner asserts that Chin's Figure 9 and corresponding description "removes any doubt that the image preview is *not* displayed on both screens in both modes, and a POSITA would understand the same." Pet. Reply 8 (citing Ex. 1003 ¶ 135); *see id.* at 9 (reproducing Ex. 1004, Fig. 9 (with Petitioner's annotations added)). Petitioner asserts that it is not plausible that both screens are always displaying previews regardless of being in the self-portrait or outward-facing mode because "[i]t would render the decision point **S150** in Figure 9 meaningless." *Id.* at 10. According to Patent Owner, "[i]t would have made no sense for Chin to explicitly teach that a different display unit displays an image in the two modes if Chin really meant to say that both display units always displayed previews in both modes." *Id.* Petitioner asserts that "[i]t would be immediately apparent to a POSITA that both screens in Chin do not both display an image preview in

both modes." *Id.* at 11; *see id.* at 10 (citing *Kennametal Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015)).

Patent Owner contends that Petitioner's arguments relying on *Kennametal* are improperly presented for the first time in the Reply. *See* PO Sur-reply 3. Patent Owner asserts that *Kenneametal*'s application of an "envisage" inquiry does not apply to the facts before us. *See id.* at 3–4. According to Patent Owner, "[t]he Federal Circuit has rejected the 'envisage' test where the issue is whether the reference is missing a claim limitation." *Id.* at 4 (citing *UCB, Inc. v. Actavis Labs. UT*, 65 F.4th 679, 688–689 (Fed. Cir. 2023)).

We agree with Patent Owner that Petitioner's arguments relying on *Kennametal* are belated. A "[p]etitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g. to make out a prima facie case of unpatentability." Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019)[6] at II.I. Thus, we need not consider Petitioner's belated argument raised for the first time in the Reply. In any event, we agree that *Kenneametal* is inapplicable for the purpose of supplying a claim limitation missing from Chin's disclosure. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 851 F.3d 1270, 1274 (Fed. Cir. 2017) ("*Kennametal* does not stand for the proposition that a reference missing a limitation can anticipate a claim if a skilled artisan viewing the reference would 'at once envisage' the missing limitation."). Chin's disclosure is silent regarding what is or is not displayed on first display 51 when images are displayed on second display 52 in self-photographing mode, and similarly silent regarding what is or is not

[6] Available at www.uspto.gov/patents/ptab/trial-practice-guide.

displayed on second display 52 when images are displayed on first display 51 in outward-facing mode. *See generally* Ex. 1004.

In the Reply, Petitioner further contends that even if its position "is viewed as an inherency argument, the limitation is met," because "[f]or example, in Chin's self-photographing mode, the second screen necessarily would not show the same thing as the first screen" as "the reference would make no sense and it would read out the disclosures of Figure 9." Pet. Reply 11 (citing *Par. Pharm.*, 773 F.3d at 1195–96). According to Petitioner, "*even if* Chin's device were to display a preview on both screens in both image capture modes, the 'display' on Chin's first screen would be different between the two modes—changing from a self-photographing preview to an outward facing preview." *Id.* at 14–15. Petitioner explains that Chin's device has one camera, and both displays would display what that camera detects. *See id.* at 14 (citing Ex. 1015, 57:7–11, 57:15–22).[7]

In the Sur-reply, Patent Owner asserts that Petitioner made no inherency argument in the Petition, and thus waived that argument. *See* PO Sur-reply 9 (citing PO Resp. 41). Patent Owner further contends that, even if inherency was considered on the merits, the limitation is not inherently met "because a POSITA would understand that display unit 52 of Chin (alleged 'first screen') could display a preview in the outwardly-facing mode" and "[d]isplay unit 51 could display a preview in the self-photograph mode." *Id.* at 10 (citing PO Resp. 41–43). Patent Owner points out that its Declarant Dr. Surati provides unrebutted testimony on both of these points. *See id.* (citing Ex. 2002 ¶¶ 160–162; Pet. Reply 6–15). Patent Owner further

[7] Petitioner's citations to Exhibit 1015 are to the document page numbers, not the exhibit page numbers.

contends that Petitioner engages in speculation regarding what the Chin device is displaying on both screens in the self-photographing and outward facing modes. *See id.* (citing Pet. Reply 14). According to Patent Owner, "[a]nticipation cannot be established by 'probabilities or possibilities,' and the fact a limitation 'may result' from the reference is not enough." *Id.* (citing *In re Robertson*, 169 F.3d 743 (Fed. Cir. 1999)).

We agree with Patent Owner that the theory of inherency was not raised in the Petition and is therefore waived. *Compare* Pet. 29–33, *with* Pet. Reply 11–15. In any event, we also agree that Petitioner's speculation regarding the disclosure of Chin is insufficient to support a theory of inherency. *See* Pet. Reply 11–15. As explained above, Chin's disclosure is silent regarding what is or is not displayed on first display 51 when images are displayed on second display 52 in self-photographing mode, and similarly silent regarding what is or is not displayed on second display 52 when images are displayed on first display 51 in outward-facing mode. *See* Ex. 1004. Speculation regarding the possibilities and probabilities of what is displayed on first display 51 in self-photographing mode, and what is displayed on second display 52 in outward-facing mode are insufficient to establish inherency. *See In re Robertson*, 169 F.3d at 745.

For the forgoing reasons and based on the entire record developed during trial, the preponderance of the evidence does not support Petitioner's showing that Chin discloses "wherein in each image capture mode a display on the first or second screen is different." Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's showing that Chin anticipates claim 1.

c. Disputed Limitation – Obviousness

Petitioner also asserts that "wherein in each image capture mode a display on the first or second screen is different" "would have been obvious to a POSITA in view of Chin." Pet. 55. According to Petitioner,

> Because Chin specifies that the preview is shown on one screen or the other, and not on both screens in both modes, it is at least suggested and would have been obvious to a POSITA that the display on each of the screens changes between modes. Indeed, a POSITA would have understood that the screen not described as showing the preview would either be on or off. . . . And a POSITA would have been motivated to turn off (disable) that other screen, as the screen would not be facing the user and doing so would save power and avoid inadvertent inputs on the other touch screen during the image capture process. . . . Turning off power to one screen in a multi-screen device was a known design option and well within the ability of a POSITA.

Id. (citing Ex. 1003 ¶¶ 257, 258).

In Response, Patent Owner contends that Petitioner's arguments fail because Petitioner proposes a combination of Chin with a feature not established as being within the general knowledge in the art, and also because Petitioner fails to establish that each claim limitation is found in a prior art patent or prior art printed publication. *See* PO Resp. 56 (citing 35 U.S.C. § 311(b); 37 C.F.R. § 42.104(b)(4), Ex. 2002 ¶¶ 196–197); PO Sur-reply 17 (citing Pet. Reply 18–23), 18. More specifically, Patent Owner asserts that neither Petitioner nor Petitioner's expert Dr. Rodriguez cites any evidence that it was known in the art to turn off or disable a screen that is not facing a user. *See* PO Resp. 55 (citing Ex. 1003 ¶ 258; Pet. 55); PO Sur-reply 16 (citing Pet. Reply 18–23). Patent Owner asserts that Dr. Rodriguez's testimony is pure *ipse dixit*, is not entitled to weight, and cannot be used to supply a missing claim limitation. *See* PO Resp. 55 (citing

Ex. 1003 ¶ 258; Ex. 2002 ¶ 193); PO Sur-reply 16 (similar argument). Patent Owner also faults Petitioner's expert Dr. Rodriguez for not asserting that any of the extrinsic references cited in his Declaration teach turning off/disabling a screen because it is not facing the user. *See* PO Resp. 55–56 (citing Ex. 1003 ¶¶ 62–66; Exs. 1006, 1009, 1010, 1011, 1012; Ex. 2002 ¶ 194; Ex. 2011, 43:20–48:4); PO Sur-reply 17 (citing PO Resp. 55–56).

Patent Owner asserts that "[t]here was no general knowledge in the art teaching a POSITA to turn off/disable a screen based on whether the screen was facing a user." PO Resp. 55–56 (citing Ex. 2009 ¶¶ 4–5, 73, 75); PO Sur-reply 17 (citing PO Resp. 55; Pet. Reply 18–23), 18; Ex. 2011, 43:20–48:4). According to Patent Owner, "the state of the art at the time was that a camera-type device (e.g., an iPhone or digital camera) would continue to provide a preview after a screen pointing towards a user was pointed away from the user." PO Resp. 55 (citing Ex. 2009 ¶¶ 4–5, 73, 75). Patent Owner argues that "[f]or example, the original iPhone did not turn off or disable a screen providing a preview when that screen was pointed away from the user." *Id.* at 56 (citing Ex. 2002 ¶¶ 196–197).

In the Reply, Petitioner asserts that "a POSITA would understand Chin as disclosing two options: the screen can be either on or off." Pet. Reply 18–19 (citing Ex. 1015, 52:6–11; 84:20–85:4). Petitioner further contends that a "POSITA would also be highly motivated to exercise the option to turn the screen off." *Id.* at 19. According to Petitioner,

> Dr Rodriguez explains why it was known to disable a screen that was not facing the user (and therefore not in use): "[i]n or around 2011, battery capacity was limited and turning off power to one screen in a multi-screen device was a known design option and well within the ability of a POSITA" and further, this modification "would have made intuitive sense to a POSITA" because showing a preview on a non-visible screen

> would not be worth the power it would consume and because a user may want to avoid inadvertent inputs to the outward-facing screen.

Id. (citing Ex. 1003 ¶ 258) (alteration in original). Petitioner asserts that Patent Owner's expert Dr. Surati confirmed the same. *See id.* (citing Ex. 1015, 85:12–16, 86:11–16).

We do not agree with Patent Owner's arguments because they focus on turning off or disabling Chin's screen "because it is not facing [a] user" while overlooking Petitioner's identification of Chin's screen to be turned off or disabled as "the screen not described as showing a preview" because "doing so would save power." PO Resp. 55–57; Pet. 55. We also do not agree with Patent Owner's suggestion that 37 C.F.R. § 42.104(b)(4) requires each and every limitation to be explicitly taught in the prior art. A claim can be unpatentable as obvious in light of a single prior art reference if it would have been obvious to modify that reference to arrive at the claimed invention. *See, e.g., Perfect Web Techs. Inc. v. InfoUSA, Inc.*, 587 F.3d 1324 (Fed. Cir. 2009) (use of common sense to supply missing limitation to single prior art reference). Moreover, turning off or disabling an unused element (e.g., a display screen) of a battery-operated device to conserve battery power is akin to the commonplace knowledge of applying modern electronics to older mechanical devices and applying the use of the Internet to existing electronic processes that have been endorsed by our reviewing court. *See Leapfrog Enters. Inc. v Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1327 (Fed. Cir. 2008).

We also do not agree that Dr. Rodriguez's testimony amounts to *ipse dixit*. PO Resp. 55. Dr. Rodriguez's cited testimony provides a reasoned

analysis supported by the following undisputed facts: (1) "a POSITA would have understood that the screen *not* described as showing the preview would have one of two states: either on or off," (Ex. 1003 ¶ 257); (2) "[i]n or around 2011, battery capacity was limited and turning off power to one screen in a multi-screen device was a known design option and well within the ability of a POSITA." (*id.* ¶ 257). We credit Dr. Rodriguez's aforementioned testimony as evidence of the knowledge, creativity, and common sense of the person of ordinary skill that may be utilized in an obviousness inquiry. *See KSR*, 550 U.S. at 418–421. Patent Owner's expert Dr. Surati generally agrees with the aforementioned facts set forth in Dr. Rodriguez's testimony. *See* Ex. 1015, 85:20–87:16.

Patent Owner further argues that,

> a POSITA would not have reason to make the proposed modification because it would be very difficult to architect the Chin device to detect the presence of the user's face when display 52 is facing the user (as in Figure 5) and then detect the **absence** of the user's face when the screen has been rotated away from the user's face to cause display 52 to turn off/be disabled.

PO Resp. 56 (citing Ex. 2002 ¶ 199). According to Patent Owner "[a] POSITA would also understand that such a detection mechanism—if it could be implemented at all—would be very unreliable and would annoy users as the display turns on and off as the device is handled." *Id.* at 56–57 (citing Ex. 2002 ¶¶ 199–201); *see id.* at 57 (citing Ex. 2002 ¶ 202); PO Sur-reply 18. Patent Owner further asserts that Petitioner and Dr. Rodriguez do not address and do not establish the proposed modification of Chin would have a reasonable expectation of success. *See* PO Resp. 57 (citing Ex. 1003 ¶¶ 256–258; Pet. 54–55; Ex. 2002 ¶ 198); PO Sur-reply 18.

Patent Owner's arguments are misplaced because the arguments focus on a modification to the teachings of Chin not proposed by Petitioner. As pointed out by Petitioner, the proposed combination does not propose a complex modification involving facial recognition technology (e.g., detect the presence or absence of a user's face). *See* Pet. Reply 19. Petitioner further points out that Patent Owner's complex modification would not be necessary because the display on the screens in Chin is predetermined based on the image capture mode. *See id.* at 20–22 (reproducing Ex. 1004, Fig. 9; citing Ex. 1015, 39:8–13, 40:1–7, 47:4–11). Contrary to Patent Owner's arguments, Petitioner contends a POSITA would have known to turn off or disable the display screen in Chin that is not described as displaying a preview in order to save power. *See* Pet. 54–55.

Based on the entire record developed during trial, we are persuaded by a preponderance of the evidence that Petitioner provides sufficient articulated reasoning with rational underpinning to support the conclusion that it would have been obvious to a person of ordinary skill in the art to modify Chin's teachings to turn off or disable the display screen not described as showing a preview (i.e. facing away from the user in each mode) in order to save power. *See* Pet. 54–55; *KSR*, 550 U.S. at 418. Based on the entire record developed during trial, we also are persuaded by a preponderance of the evidence that a person of ordinary skill in the art would have had a reasonable expectation of success in modifying Chin's teachings to turning off or disabling the display screen not described as showing a preview (i.e. facing away from the user in each mode) in order to save power, because doing so would have been a simple modification (e.g., use of a power source switch for a display screen) well within the skill level of one with ordinary skill in the art. *See, e.g.*, Ex. 1003 ¶¶ 257–258.

For the forgoing reasons and based on the entire record developed during trial, we determine that Petitioner establishes by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Chin.

3. Analysis of Independent Claim 11

Independent claim 11 is directed to a device comprising a processor that is operable to perform steps substantially similar to the method steps recited in claim 1. *Compare* Ex. 1001, 39:60–40:11, *with* Ex. 1001, 39:26–37. Based on the entire record developed during trial, including the analysis above in Section II.D.2.b. addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's showing that Chin expressly discloses "wherein in each image capture mode a display on the first or second screen is different," as recited in independent claims 1 and 11. Accordingly, based on the entire record developed during trial, the preponderance of the evidence does not support Petitioner's contention that Chin anticipates claim 11.

For the same reasons as those explained above in Sections II.D.2.a. and II.D.2.c., addressing obviousness of the subject matter of claim 1, based on the entire record developed during trial, we determine that Petitioner demonstrates that Chin teaches, suggests, or otherwise renders obvious the limitations of claim 11 that are substantially similar to the limitations of claim 1. Pet. 54-57 (citing Ex. 1003 ¶¶ 255-270).

Claim 11, however, recites the preamble "[a] device" and includes the following additional limitations not recited in claim 1: "the first screen including a first gesture capture region," "wherein the second screen faces an opposite direction from the first screen when the device is closed, and

wherein an image capture lens is associated with the second screen; a memory; a processor in communication with the memory, the first screen, and the second screen." Ex. 1001, 39:60–40:11. We analyze below these additional limitations of claim 11 in terms of obviousness.

Petitioner contends that, if the preamble of claim 11 is limiting, Chin discloses "[a] device," based on Chin's disclosure of a portable information terminal having two hingedly connected panels 10, 20 for moving between first and second folded states. *See* Pet. 40 (citing Ex. 1004 ¶ 3). Petitioner asserts that "the 'gesture capture region' . . . would have at least been obvious to a POSITA in view of Chin." Pet. 54 (citing Ex. 1003 ¶ 255; Pet. 40–47). Petitioner asserts that Chin discloses that its display units may be liquid crystal displays that may be of a touch screen type. *See* Pet. 53 (citing Ex. 1004 ¶ 61; Ex. 1003 ¶¶ 251–252). According to Petitioner, "[a] POSITA would have understood Chin to at least suggest and render obvious a 'user interface' in the form of a touch screen and further using that touch screen to execute an image capture function." *Id.* (citing Ex. 1003 ¶¶ 251–252). Petitioner argues the following:

> By the time of the '842 patent's earliest priority date, it was well known in the art to use touch screens as a user interface for portable electronic devices, including using a touch screen input to take a picture. The '842 patent itself admits as "Background" that "[a] substantial number of handheld computing devices, such as cellular phones, tablets, and E-Readers, make use of a touch screen display not only to deliver display information to the user but also to receive inputs from user interface commands."

Pet. 53–54 (citing Ex. 1001, 1:15–19; Ex. 1003 ¶¶ 251–252). Petitioner points out that several other references also teach this functionality. *See*

Pet. 54 (citing Ex. 1009, 5:15–30; Ex. 1010 ¶¶ 68–69; Ex. 1006 ¶ 235; Ex. 1003 ¶ 254). According to Petitioner,

> [a] POSITA would have been motivated to add this [touch screen] functionality to Chin . . . as a known technique to improve Chin's device by adding another input option that some users may have deemed desirable, and a POSITA would have reasonably expected success in doing so as the modification would have just required programming Chin's device within the skill of a POSITA.

Id. (citing Ex. 1003 ¶ 254).

Petitioner further asserts that Chin discloses "a memory; a processor in communication with the memory, the first screen, and the second screen," as recited in claim 11, based on Chin's disclosure of controlling unit 70 which is embodied as a semiconductor chip including controlling software, or a circuit board including the semiconductor chip and which sends/receives signals with other device components and controls device operations, and which communicates with first and second display units 51, 52. *See* Pet. 43–45 (reproducing Ex. 1004, Fig. 2 (with Petitioner's added annotations); citing Ex. 1003 ¶¶ 171–193; Ex. 1004 ¶¶ 52–55, 60–61, 67, 75); *see also* Pet. 56–57 (arguments addressing obviousness of the portable information terminal having a memory and a processor).

Patent Owner contends that "a POSITA would not have reason to modify Chin's display units 51/52 to be a touch screen" because "[a] POSITA would recognize that the design principle of Chin is to have separate display and control functionalities, which is the reason why the control of the displays 51/52 is implemented using control buttons on the connecting unit 30 that are separate from the displays." PO Resp. 58 (citing Ex. 1004, Fig. 1; Ex. 2002 ¶¶ 206–207). According to Patent Owner, "Chin's design principle is to provide the control function separate from the

display function." *Id.* at 59 (citing Ex. 2002 ¶¶ 206–207); *see id.* at 58 (citing Ex. 1004 ¶ 9). Patent Owner further asserts that "a POSITA would not have reason to modify display units 51/52 to be touch screen interfaces because it would run contrary to Chin's principle of operation." *Id.* at 59 (citing Ex. 2002 ¶¶ 206–207; *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984); *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1354 (Fed. Cir. 2001)).

In the Reply, Petitioner asserts that Patent Owner inaccurately characterizes the proposed modification to Chin to meet the "first screen with a first gesture capture" limitation of claim 11. *See* Pet. Reply 23 (citing PO Resp. 58–59; Ex. 2002 ¶ 207). Petitioner asserts Patent Owner's arguments, that the proposed modification contradicts Chin's design principle, are unfounded because the proposed modification does not remove any existing input options disclosed by Chin, such as button 33a. *See id.* at 23–24 (citing Ex. 1003 ¶¶ 252, 254; Pet. 54). Petitioner further points out that Dr. Surati admitted that Chin's second display unit 52 is externally exposed in Figure 5 (self-photographing mode) and first display unit 51 is externally exposed in Figure 6 (outward-facing mode). *See id.* at 24 (citing Ex. 1015, 103:11–18). According to Petitioner, "Chin's 'design principle' to purportedly keep buttons separate such that they are 'externally exposed' is met with the proposed modification." *Id.*

In the Sur-reply, Patent Owner asserts that Petitioner does not dispute that Chin's design principle is to separate the display and control functions, and that in the proposed modification the display and control functions would be combined. *See* PO Sur-reply 19 (citing Pet. Reply 23–24). Patent Owner contends that Petitioner "effectively concede[s] that a POSITA

would not make the proposed modification because it is contrary to Chin's" design principle. *Id.*

We do not agree with Patent Owner's arguments. We give little weight to Dr. Surati's testimony that the design principle of Chin is to separate the display function from the control function because it is not sufficiently supported by an underlying factual basis. *See* 37 C.F.R. § 42.65(a). Dr. Surati's testimony relies on Chin's disclosure in paragraph 9, which is reproduced below:

> Also, if the portable information terminal is operated in a folded state so as not to externally expose the display apparatus, buttons disposed on a lateral surface of the display apparatus (or the second panel) are not externally exposed, and thus, are inaccessible which makes it difficult to operate the portable information terminal.

Ex. 1004 ¶ 9. Chin's paragraph 9 disclosure merely explains that it is difficult to operate the portable information terminal in the folded or closed state when the display apparatus is not externally exposed (i.e., first folded position shown in Figs. 3, 4), because the buttons on a lateral surface of the display apparatus are not externally exposed. Thus, Chin's disclosure in paragraph 9 is directed to drawbacks in operating the terminal when in the folded or closed state. Chin's paragraph 9 implicitly supplies the reason for providing additional controls apart from the buttons disposed on a lateral surface of the display apparatus in order to account for the folded or closed state of the terminal. Paragraph 9 of Chin provides no suggestion that the display functions and control functions must be separate.

Based on the entire record developed during trial, we are persuaded by a preponderance of the evidence that Petitioner provides sufficient articulated reasoning with rational underpinning to support the conclusion

that it would have been obvious to a person of ordinary skill in the art to modify Chin's LCD displays to be touch screen type LCD displays as a known technique for improving Chin's device by adding another input option that may be deemed desirable by some users. *See* Pet. 53–54; *KSR*, 550 U.S. at 418. Based on the entire record developed during trial, we also are persuaded by a preponderance of the evidence that a person of ordinary skill in the art would have had a reasonable expectation of success in making the modification to Chin's LCD displays. *See* Pet. 54 (citing Ex. 1003 ¶ 254)

For the forgoing reasons, including the reasons explained above in Sections II.D.2.a. and II.D.2.c., addressing the obviousness of the subject matter of claim 1, based on the entire record developed during trial we are persuaded by a preponderance of the evidence that Petitioner establishes that Chin discloses, teaches, or otherwise renders obvious all of the limitations of independent claim 11. Accordingly, based on the entire record developed during trial, we determine that Petitioner shows by a preponderance of the evidence that the subject matter of claim 11 would have been obvious over Chin.

4. Analysis of Independent Claim 16

Independent claim 16 is directed to a non-transitory computer readable medium having stored computer executable instructions to perform steps substantially identical to the method steps recited in claim 1. *Compare* Ex. 1001, 40:32–55, *with* Ex. 1001, 39:26–37. Based on the entire record developed during trial, including the analysis above in Section II.D.2.b. addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's contention that Chin discloses "wherein in each image capture mode a display on the first or second screen is different," as

recited in independent claims 1 and 16. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's contention that Chin anticipates claim 16.

For the same reasons as those explained above in Sections II.D.2.a. and II.D.2.c., addressing obviousness of the subject matter of claim 1, based on the entire record developed during trial, we determine that Petitioner demonstrates that Chin teaches, suggests, or otherwise renders obvious the limitations of claim 16 that are substantially similar to the limitations of claim 1.

Claim 16, however, recites the following preamble "[a] non-transitory computer readable medium having stored thereon computer readable instructions" and includes the following additional limitations not recited in claim 1: "wherein the device is in a closed state, wherein in the closed state the first and second screens face opposite direction," "wherein an image capture lens is associated with the second screen," "wherein the image capture function is configured to capture an outward facing image, wherein the device is in a landscape orientation," and "wherein the image capture mode is one of a full and disabled mode, a full and static mode, or a full and live mode." *See* Ex. 1001, 40:42–46, 40:47–48, 40:53–55. We analyze below these additional limitations of claim 16 in terms of obviousness.

Petitioner contends that, if the preamble of claim 16 is limiting, Chin discloses a "non-transitory computer readable medium having stored thereon computer readable instructions" based on Chin's disclosure of controlling unit 70 which may be embodied as a semiconductor chip including controlling software, or a circuit board including the semiconductor chip and which sends/receives signals with other device components and controls device operations. *See* Pet. 49 (citing Ex. 1003 ¶¶ 229, 230; Pet. 43–45).

Petitioner contends that Chin discloses "a second screen . . . faces an opposite direction from the first screen when the device is closed, and wherein an image capture lens is associated with the second screen," as recited in claim 16, based on Chin's disclosure of second display unit 52 and image capture lens 41 of digital camera associated with the second display unit 52, and disclosure that when the device is rotated into a closed position, the first display unit 51 faces an opposite direction from second display unit 52. *See* Pet. 42, 43 (reproducing Ex. 1004, Fig. 1 (with Petitioner's added annotations), Fig. 5 (with Petitioner's added annotations); citing Ex. 1003 ¶¶ 175–177; Ex. 1004 ¶¶ 32, 56, 63, 65, Fig 6); *see also* Pet. 50 (addressing claim 16, citing Pet. 18–21, 42–43).

Petitioner asserts that Chin discloses "wherein the device is in a closed state" and "wherein the image capture function is configured to capture an outward facing image, wherein the device is in a landscape orientation," as recited in claim 16, based on Chin's disclosure of the portable information terminal being in a closed state, in a landscape orientation, and the digital camera being configured to capture images in a mode in which the self-photographing mode is not selected so as to capture an outward facing image and display preview images on first display 51. *See* Pet. 33–37 (reproducing Ex. 1004, Fig. 6 (with Petitioner's added annotations), citing Ex. 1003 ¶¶ 136–153; Ex. 1004 ¶¶ 50, 62, 77–79, Fig. 5; Pet. 17–34), Pet. 50 (citing Pet. 33–37); *see also* Pet. 55–56 (arguments addressing obviousness of "configured to capture an outward-facing image," citing Ex. 1003 ¶ 261); Ex. 1004 ¶ 41; Pet. 17–33, 39–40, 48). Petitioner asserts that Chin discloses, teaches, or suggests "wherein the image capture mode is one of a full and disabled mode, a full and static mode, or a full and live mode," as recited in claim 16, based on Chin's disclosure that in the

outward facing image capture mode, the device displays preview images on first display 51 and does not describe enabling second display 52 or displaying an image on second display 52 and, thus, second display 52 is disabled. *See* Pet. 38–39 (citing Ex. 1003 ¶¶ 159–164; Ex. 1004 ¶¶ 77, 79), 48 (citing Ex. 1004 ¶ 79; Pet. 38–39), 51.

Patent Owner does not separately address Petitioner's showing for the preamble and the forgoing additional limitations of independent claim 16. Patent Owner's arguments address the common disputed limitation of claims 1 and 16. *See* PO Resp. 46, 59. Based on the entire record, including the reasons explained above in Sections II.D.2.a and II.D.2.c., addressing the obviousness of the subject matter of claim 1, we are persuaded that Petitioner establishes that Chin discloses, suggests, or otherwise renders obvious all of the limitations of independent claim 16. Accordingly, based on the entire record developed during trial, we determine that Petitioner establishes by a preponderance of the evidence that the subject matter of claim 16 would have been obvious over Chin.

5. Analysis of Dependent Claims 2–5, 12, 19, and 20

Claims 2–5 ultimately depend from claim 1, claim 12 depends from claim 11, and claims 19 and 20 depend from claim 16. Ex. 1001, 39:38–46, 40:13–16, 41:1–5. Due to the dependency of claims 2–5 from claim 1, claim 12 from claim 11, and claims 19 and 20 from 16, for the same reasons as those explained above in Sections II.D.2.b., II.D.3., and II.D.4., addressing anticipation of claims 1, 11, and 16, the preponderance of the evidence does not support Petitioner's showing that Chin discloses the limitations of dependent claims 2–5, 12, 19, and 20. Accordingly, based on the entire record developed during trial, the preponderance of the evidence

does not support Petitioner's contention that Chin anticipates claims 2–5, 12, 19, and 20. We analyze below the additional limitations of claims 2–5, 12, 19, and 20 in terms of obviousness.

Petitioner identifies where Chin discloses, teaches, or suggests each of the additional limitations of dependent claims 2–5, 12, 19, and 20. Pet. 33–38, 48, 51. Patent Owner does not substantively dispute Petitioner's arguments and evidence addressing dependent claims 2–5, 12, 19, and 20 apart from its arguments addressing independent claim 1, 11, and 16. *See* PO Resp. 33–59.

We have reviewed Petitioner's arguments and evidence and find that Petitioner demonstrates that Chin discloses, teaches, or suggests every limitation of dependent claims 2–5, 12, 19, and 20. *See* Pet. 33–38, 48, 51. Accordingly, based on the entire record developed during trial, including the analysis in Sections II.D.2.a., II.D.2.c., II.D.3., and II.D.4., addressing the obviousness of the subject matter of claims 1, 11, and 16, we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claims 2–5, 12, 19, and 20 would have been obvious in view of Chin.

6. Analysis of Dependent Claims 6, 7, 13, and 17

Claims 6 and 7 depend from claims 1 through 5, claim 13 depends from independent claim 11, and claim 17 depends from independent claim 16. Ex. 1001, 39:26–51, 39:60–40:11, 40:32–64. Due to the dependency of claims 6 and 7 from claim 1, claim 13 from claim 11, and claims 17 from 16, for the same reasons as those explained above in Sections II.D.2.b., II.D.3., and II.D.4., addressing anticipation of claims 1, 11, and 16, the preponderance of the evidence does not support Petitioner's

contention that Chin discloses the limitations of dependent claims 6, 7, 13, and 17. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's contention that Chin anticipates claims 6, 7, 13, and 17. We analyze below the obviousness of the subject matter of dependent claims 6, 7, 13, and 17.

Dependent claim 6 recites "wherein, in the image capture mode, the device does not display an image of a first screen and displays a preview on a second screen" and dependent claim 7 recites "wherein the first screen is disabled and does not receive user interface input while in the image capture mode." Ex. 1001, 39:46–51. Claims 13 and 17 depend respectively from independent claims 11 and 16 and recite limitations directed to "wherein in the full and disabled mode, the first screen displays a preview of an image to be captured and the second screen is disabled." Ex. 1001, 40:18–21, 40:57–59. Relying on its analysis addressing the obviousness of the subject matter of independent claims 1, 11, and 16, Petitioner asserts that, "[f]or the same reasons, the limitations . . . teaching disabling or not displaying an image on a screen at least [would] have been obvious to a POSITA in view of Chin." Pet. 55 (citing Ex. 1003 ¶ 259). Patent Owner contends that the claimed features are not obvious for the same reasons as those addressing claim 1. *See* PO Resp. 59 (citing Ex. 2002 ¶ 209; PO Resp. 54–58; Pet. 55).

For the same reasons as those explained above addressing claims 1, 11, and 16, based on the entire record developed during trial we determine that Petitioner demonstrates that Chin renders obvious the subject matter of dependent claims 6, 7, 13, and 17. *See* Pet. 54–55. Accordingly, based on the entire record developed during trial, including the analysis in Sections II.D.2.a., II.D.2.c., II.D.3., and II.D.4., we determine that Petitioner

demonstrates by a preponderance of the evidence that the subject matter of claims 6, 7, 13, and 17 would have been obvious in view of Chin.

7. Analysis of Dependent Claim 10

Claim 10 depends from claims 1 through 5. Ex. 1001, 39:26–45, 39:58–59. Due to the dependency of claim 10 from claim 1, for the same reasons as those explained above in Section II.D.2.b., addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's showing that Chin discloses the limitations of dependent claim 10. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's showing that Chin anticipates claim 10. We analyze below the obviousness of the subject matter of claim 10.

Dependent claim 10 recites "wherein, . . . one or more controls are presented on a second screen." Ex. 1001, 39:58–59. Relying on its analysis addressing the obviousness of the subject matter of independent claims 1, and 11, Petitioner asserts that, "[f]or the same reasons, . . . the 'one or more controls [] presented on a second screen' limitation of claim 10 . . . would have at least been obvious to a POSITA in view of Chin." Pet. 54 (citing Ex. 1003 ¶ 255; Pet. 40–47) (alteration in original); *see* Pet. 53. Patent Owner addresses the limitations of dependent claim 10 together with the limitations of independent claim 11. *See* PO Resp. 58–59.

For the same reasons as those explained above addressing independent claims 1 and 11, based on the entire record developed during trial we determine that Petitioner demonstrates that Chin renders obvious the subject matter of dependent claim 10. *See* Pet. 53–54. Accordingly, based on the entire record developed during trial, including the analysis in Sections

II.D.2.a, II.D.2.c., and II.D.3., we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claim 10 would have been obvious in view of Chin.

8. Conclusion

For the reasons set forth above and based on the entire record developed during trial, the preponderance of the evidence does not support Petitioner's contention that claims 1–7, 10–13, 16, 17, 19, and 20 are anticipated by Chin, but we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claims 1–7, 10–13, 16, 17, 19, and 20 would have been obvious over Chin.

E. Challenges to Claims 1–7 and 11 Based on Whitehorn

1. Overview of Whitehorn (Ex. 1005)

Whitehorn is directed to "incorporating a camera into a handheld device," such as Personal Digital Assistants (PDAs) or cell phones. *See* Ex. 1005 ¶¶ 2, 4–5.

Figure 2 of Whitehorn is reproduced below.

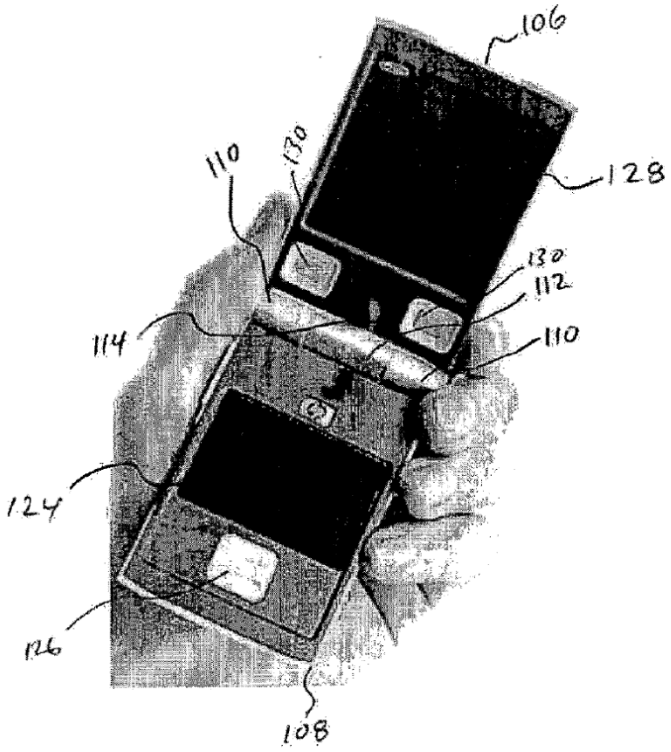


Figure 2 depicts a pictorial diagram of handheld device 102 that includes top and bottom covers 106 and 108 that rotate about a first axis defined by a hinge that includes a first end and a second end (110). Ex. 1005 ¶¶ 8, 20, 22. Top and bottom covers 106 and 108 each include large screen interface 128 and 124, respectively. *Id.* ¶¶ 23, 24. The hinge includes an image capture device located within the first end and a small screen interface located withing the second end of the hinge. *Id.* ¶ 22, Figs. 3, 4.

Figure 5 of Whitehorn is reproduced below.

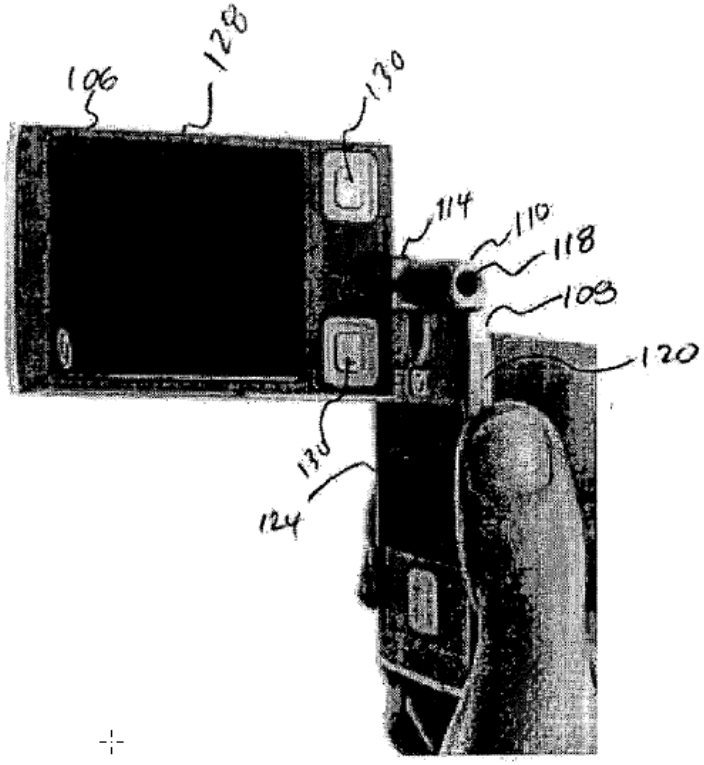


Figure 5 depicts a pictorial diagram of handheld device 102 showing top cover 106 rotated with respect to bottom cover 108 about a second axis defined by subhinge 114. Ex. 1005 ¶ 20. Also shown in Figure 5 is small screen interface 118 located within second end of the hinge. *See id.* ¶ 22. "Rotation of the top and bottom covers 106 and 108 with respect to each other automatically determines a mode in which the device 102 operates" including a "first image capture mode," and a "second image capture mode." *Id.* ¶ 21.

Figure 6 of Whitehorn is reproduced below.

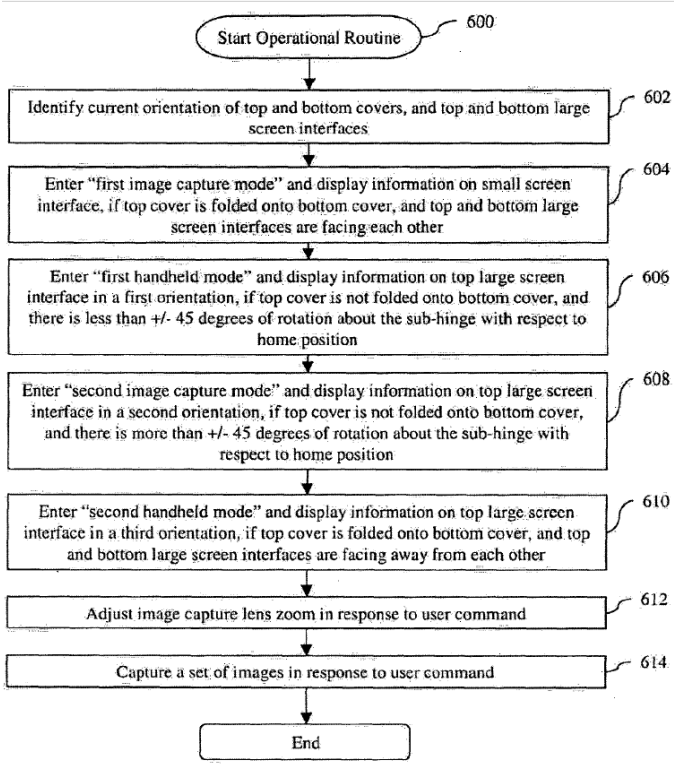


Figure 6 is a flowchart of a method of operation for the device. *See* Ex. 1005 ¶¶ 16, 26. "[I]n step 602 . . . the device 102 identifies a current orientation of top and bottom covers 106 and 108 and top and bottom large screen interfaces 128 and 124." *Id.* ¶ 26. "[I]n step 604, the device 102 enters a 'first image capture mode' and displays information on the small screen interface 118, if the top cover 106 is folded onto bottom cover 108, and top and bottom large screen interfaces 128 and 124 are facing each other." *Id.* ¶ 27; *see id.* at Figs. 1, 3, 4. "In this mode, users are capturing images with the image capture device 116 while looking through the small screen interface 118 at what is being captured." *Id.* ¶ 27.

> [I]n step 608, the device 102 enters a 'second image capture mode' and displays information on the top large screen interface 128 in a second (preferably landscape) orientation, if top cover 106 is not folded onto bottom cover 108 and there is

> more than +/- 45 degrees of rotation about the sub-hinge 114 with respect to the home position.

Id. ¶ 29; *see id.* at Fig. 5. "In this mode, users are capturing images with the image capture device 116 while looking through the top large screen interface 128 at what is being captured." *Id.* ¶ 29.

2. Analysis of Claim 1

a. Undisputed Limitations

Petitioner contends that, if the preamble is limiting, Whitehorn discloses "[a] method" based on Whitehorn's disclosure of controlling the disclosed handheld device of Figure 6. *See* Pet. 58 (reproducing Ex. 1005, Fig. 6; citing Ex. 1005 ¶¶ 16, 21, 26). Petitioner asserts that Whitehorn discloses "providing a device having at least first and second screens" based on Whitehorn's disclosure of the handheld device including a first large screen interface able to rotate about a first hinge axis with respect to a second large screen interface, capturing images aligned along the first hinge axis, and setting a mode in which the device operates in response to an orientation of the first large screen interface to the second large screen interface. Pet. 59 (citing Ex. 1005 ¶ 9; Ex. 1003 ¶¶ 273–275). Petitioner points out that Whitehorn also discloses a third small screen interface 118. *See id.* (citing Ex. 1005 ¶ 22). According to Petitioner, "[a]ny two out of the two large screen interfaces, labeled as 124 and 128 in Whitehorn's Figures, and the small screen interface 118, meet the two claimed 'screens.'" *Id.* (citing Ex. 1005 ¶¶ 23–24).

Petitioner contends that Whitehorn discloses "receiving user interface input to execute an image capture function" based on Whitehorn's disclosure of image capture device 116 which includes one or more lenses and disclosure of shutter 122 located beneath image capture device 116 that

instructs device 102 to capture one or more images using the image capture device. *See* Pet. 59 (citing Ex. 1005 ¶¶ 22–23; Ex. 1003 ¶¶ 276–279). Petitioner also asserts that Whitehorn discloses this limitation based on receiving user input commands via bottom large screen interface 124 and top large screen interface 128. *See* Pet. 59–60 (citing Ex. 1005 ¶¶ 23–24; Ex. 1003 ¶¶ 276–279).

Petitioner asserts that Whitehorn discloses "determining one or more of an image capture function configuration, a device orientation, and a device state" based on Whitehorn's disclosure of the device identifying a current orientation of top and bottom covers 106 and 108 and bottom and top large screen interfaces 124, 128, which determines both a device orientation and device state. *See* Pet. 60–65 (reproducing Ex. 1005, Fig. 5 (with Petitioner's annotations added), Fig. 6 (with Petitioner's annotations added); citing Ex. 1005 ¶¶ 20, 26–29, Figs. 1, 2; Ex. 1003 ¶¶ 280–288). Petitioner contends that Whitehorn discloses "based on one or more of the image capture function configuration, the device orientation, and the device state, entering one of one or more image capture modes," as recited in claim 1. *See* Pet. 65–66. To address the aforementioned limitation, Petitioner relies on Whitehorn's disclosure of the device entering a first image capture mode if top cover 106 is folded onto bottom cover 108 and top and bottom large screen interfaces 128 and 124 are facing each other and entering a second image capture mode if top cover 106 is not folded onto bottom cover 108 and there is more than a +/- 45 degrees of rotation about the sub-hinge 114 with respect to the home position. *See* Pet. 65–66 (citing Ex. 1005 ¶¶ 27, 29, Fig. 6; Ex. 1003 ¶¶ 288–294).

Patent Owner does not address Petitioner's showing for the preamble and the foregoing limitations of claim 1. *See generally* PO Resp. In any

event, the burden remains on Petitioner to demonstrate unpatentability. *See Dynamic Drinkware*, 800 F.3d at 1378. Based on the entire record developed during trial, we determine that Petitioner demonstrates that Whitehorn discloses the preamble and aforementioned undisputed limitations of claim 1.

b. Disputed Limitation - Anticipation

Petitioner asserts that Whitehorn discloses "wherein in each image capture mode a display on the first or second screen is different." *See* Pet. 66. According to Petitioner, in each of the first and second "image capture modes, a display on at least the top large screen interface 128 is different." *Id.* (citing Ex. 1003 ¶¶ 295–301). Petitioner asserts that, in the first image capture mode, top large screen interface 128 is not visible and does not display an image, and, in the second image capture mode, top large screen interface 128 displays an image. *See* Pet. 66–68 (reproducing Ex. 1005, Figs. 2, 3, 5 (with Petitioner's annotations added); citing Ex. 1005 ¶¶ 24, 27, 29; Ex. 1003 ¶ 297, 301); Pet. Reply 25 (citing Ex. 1005 ¶ 27).

Patent Owner contends that Whitehorn does not anticipate claim 1 because there is no express or inherent disclosure that, in the first image capture mode, the top large screen interface 128 provides no display, and therefore no disclosure that top large screen interface 128 provides a different display in the first and second image capture modes. *See* PO Resp. 61 (citing Ex. 2002 ¶ 214), 65 (citing Ex. 2002 ¶ 221); PO Sur-reply 20–21. Patent Owner asserts that Whitehorn discloses that small screen interface 118 displays a preview in the first image capture mode, but Whitehorn does not disclose what is displayed in the top large screen interface 128. *See id.* at 61–63 (citing Ex. 1005 ¶ 27; Ex. 2002 ¶¶ 216–217). According to Patent Owner, although "it is true that in this mode the top

large screen 128 is not visible, there is no disclosure by Whitehorn that top large screen 128 is not displaying an image." *Id.* at 63 (citing Ex. 1005 ¶ 27). Patent Owner asserts that "Whitehorn is completely silent on what top large screen 128 displays in this mode." *Id.* (citing Ex. 1005 ¶ 27, Fig. 6, step 604; Ex. 2002 ¶ 218); *see* PO Sur-reply 20 (citing PO Resp. 63–64). Patent Owner contends that a POSITA would appreciate that top large screen 128 could display a preview in this mode. *See* PO Resp. 63–64 (reproducing Ex. 1005, Figs. 1, 5 (with Petitioner's annotations added); citing Ex. 1005 ¶ 29; Ex. 2002 ¶¶ 219–220). Patent Owner further points out that although Petitioner does not present an inherency argument, even if one had been presented, it too would fail on its merits for the same reasons. *See* PO Resp. 64–65 (citing Pet. 66–68; Ex. 1003 ¶¶ 295–301); PO Sur-reply 21.

We agree with Patent Owner that Whitehorn does not disclose explicitly or inherently that, in the first image capture mode, top large screen interface 128 does not display an image. The disclosure of Whitehorn is silent regarding whether an image is or is not displayed on top large screen interface 128 during the first image capture mode. *See generally* Ex. 1005. Speculation as to the possibility or probability that the top large screen interface 128 is disabled or does not display in an image in the first image capture mode is insufficient to establish inherency. *See In re Robertson*, 169 F.3d at 745.

For the forgoing reasons above and based on the entire record developed during trial, the preponderance of the evidence does not support Petitioner's showing that Whitehorn discloses "wherein in each image capture mode a display on the first or second screen is different." Accordingly, based on the entire record developed during trial the

preponderance of the evidence does not support Petitioner's contention that Whitehorn anticipates claim 1.

c. Disputed Limitation – Obviousness

Petitioner also asserts that "wherein in each image capture mode a display on the first or second screen is different" "would have been obvious to a POSITA in view of Whitehorn." Pet. 82–83. According to Petitioner,

> Whitehorn discloses in the first image capture mode that "the top cover 106 is folded onto bottom cover 108, and top and bottom large screen interfaces 128 and 124 are facing each other" and shows the device as closed with the top large screen interface 128 not visible. . . . This at least suggests and would have made obvious to a POSITA that the top large screen interface 128 is not displaying anything and is turned off, and thus the display is different from the second image capture mode which displays the image being captured. Indeed, a POSITA would have understood that this screen would either be on or off. . . . And a POSITA would have been motivated to turn off (disable) this screen in the first image capture mode, because the screen would not be visible to the user. Disabling this non-usable screen would save power. . . . Turning off power to one screen in a multi-screen device was a known design option and well within the ability of a POSITA.

Pet. 83 (citing Ex. 1005 ¶ 27, Fig. 3; Ex. 1003 ¶¶ 375–376); *see* Pet. Reply 31 (similar argument).

In Response, Patent Owner contends that Petitioner's arguments fail for substantially the same reasons as Petitioner's arguments addressing Chin. *See* PO Resp. 72–73 (citing PO Resp. 54–57). Patent Owner asserts that that neither Petitioner nor Petitioner's expert Dr. Rodriguez cites any evidence that it was known in the art to turn off or disable a screen that is not facing a user. *See id.* at 73 (citing Ex. 1003 ¶ 376; Ex. 2002 ¶ 250); PO Sur-reply 27–28. Patent Owner asserts that Dr. Rodriguez's testimony is pure *ipse dixit*, is not entitled to weight, and cannot be used to supply a missing

claim limitation. *See* PO Resp. 73 (citing Ex 1003 ¶ 376; Ex. 2002 ¶ 250); PO Sur-reply 28. Patent Owner faults Petitioner's expert Dr. Rodriguez for not asserting that any of the extrinsic references cited in his Declaration teach turning off/disabling a screen that is not facing the user. *See* PO Resp. 73 (citing Ex. 1003 ¶¶ 62–66; Exs. 1006, 1009, 1010, 1011, 1012; Ex. 2002 ¶ 251; Ex. 2011. 43:20–48:4); PO Sur-reply 28 (citing Ex. 1003 ¶¶ 61–66; Ex. 2002 ¶¶ 251–252; Ex. 2011, 43:20–48:4; PO Resp. 73–74). According to Patent Owner,

> at the time of the invention it was known that a camera-type device (e.g., an iPhone or digital camera) would continue to provide a preview after a screen pointed towards the user (e.g., when operating in an outward-facing photograph mode) was turned away from the user (e.g., when used to take a "selfie"). Thus, the state of the art does not teach turning off/disabling a screen when it is facing away from the user.

PO Resp. 73 (citing Ex. 2009 ¶¶ 4–5, 73, 75; Ex. 2002 ¶ 252); *see* PO Sur-reply 28 (citing Ex. 2002 ¶¶ 251–252; PO Resp. 73–74).

In the Reply, Petitioner asserts Patent Owner's expert Dr. Surati acknowledged that Whitehorn certainly allows for the device to be modified to either display or not display information on a particular screen. *See* Pet. Reply 31 (citing Ex. 1015, 77:19–79:8).[8]

We do not agree with Patent Owner's arguments because, similar to Patent Owner's arguments addressing Chin, Patent Owner's arguments focus on turning off or disabling Whitehorn's screen "because it is not facing a user" while overlooking Petitioner's identification of Whitehorn's screen to be turned off or disabled as "not be visible to the user" because "[d]isabling

[8] Petitioner's citations to Exhibit 1015 are to the document page numbers, not the exhibit page numbers.

this non-usable screen would save power." PO Resp. 72–73; Pet. 83. For the same reasons as those explained above addressing the unpatentability challenges based on Chin, we do not agree that Dr. Rodriguez's testimony amounts to *ipse dixit*. Dr. Rodriguez's testimony provides a reasoned analysis supported by the following undisputed facts: (1) "a POSITA would have understood that a [top large screen interface 128] would have one of two states:on or off," (Ex. 1003 ¶¶ 375–376); (2) "[t]urning off power to one screen in a multi-screen device was a known design option and well within the ability of a POSITA." (Ex. 1003 ¶ 376). We credit Dr. Rodriguez aforementioned testimony as evidence of the knowledge, creativity, and common sense of the person of ordinary skill that may be utilized in an obviousness inquiry. *See KSR*, 550 U.S. at 418–421. Patent Owner's expert Dr. Surati does not disagree with the testimony on the aforementioned facts set forth in Dr. Rodriguez's testimony. *See* Ex. 1015, 77:19–79:8.

Patent Owner further contends that for the same reasons as those addressing Chin, "a POSITA would not have reason to modify Whitehorn so that it has the feature of 'turn[ing] off or disable[ing] a screen that is not facing the user.'" PO Resp. 74 (citing PO Resp. 54–57) (alterations in original). Patent Owner asserts that Petitioner and its expert Dr. Rodriguez provide no evidence that turning off or disabling a screen that is not facing the user was common knowledge at the time of the invention. *See id.* According to Patent Owner, "a POSITA would not make the modification because it would require implementing a complex and unreliable detection mechanism for the device to 'know' when the screen was facing a user and when a screen was not facing a user to cause it to disable the screen," and "users would be annoyed by a feature turning the screen on and off as they move and rotate the device." *Id.* (citing Ex. 1003 ¶¶ 375–376; Ex. 2002

¶ 253). Patent Owner asserts that "there is no reasonable expectation of success that such a modification would work reliably." *Id.* (citing Ex. 1003 ¶¶ 375–376; Ex. 2002 ¶ 253). Patent Owner also asserts that Petitioner and Dr. Rodriguez do not address reasonable expectation of success in their analysis. *See id.* (citing Ex. 1003 ¶¶ 375–376; Ex. 2002 ¶ 253; Pet. 82–83); PO Sur-reply 28 (citing PO Resp. 74; Pet. Reply 30–31).

Patent Owner's arguments are again misplaced because they focus on a modification to the teachings of Whitehorn not proposed by Petitioner. The proposed combination does not propose a modification involving a detection mechanism for determining when the screen is facing a user and not facing a user. *See* Pet. 82–83. Petitioner proposes modifying the teachings of Whitehorn to turn off the screen that is not visible in order to save power. *See* Pet. 83.

Based on the entire record developed during trial, we are persuaded by a preponderance of the evidence that Petitioner provides sufficient articulated reasoning with rationale underpinning to support the conclusion that it would have been obvious to a person of ordinary skill in the art to modify Whitehorn's teachings to turn off or disable the screen that is not visible in order to save power. *See* Pet. 82–83; *KSR*, 550 U.S. at 418. Based on the entire record developed during trial, we also are persuaded by a preponderance of the evidence that a person of ordinary skill in the art would have had a reasonable expectation of success in modifying Whitehorn's teachings to turn off or disable the screen that is not visible in order to save power because doing so would have been a simple modification (e.g., use of a power source switch for the screen) well within the skill level of one with ordinary skill in the art. *See e.g.,* Ex. 1003 ¶¶ 374–377.

For the forgoing reasons and based on the entire record developed during trial, we determine that Petitioner shows by a preponderance of the evidence that the subject matter of claim 1 would have been obvious over Whitehorn.

3. Analysis of Dependent Claims 2, 3, and 5

Claims 2, 3, and 5 ultimately depend from claim 1. Ex. 1001, 39:38–46. Due to the dependency of claims 2, 3, and 5 from claim 1, for the same reasons as those explained above in Section II.E.2.b. addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's showing that Whitehorn discloses the limitations of dependent claims 2, 3, and 5. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's contention that Whitehorn anticipates claims 2, 3, and 5. We analyze below the additional limitations of claims 2, 3, and 5 in terms of obviousness.

Petitioner identifies where Whitehorn discloses, teaches, or suggests each of the limitations of dependent claims 2, 3, and 5. Pet. 69–74. Patent Owner does not substantively dispute Petitioner's arguments and evidence addressing claims 2, 3, and 5, apart from its arguments with respect to independent claim 1. *See* PO Resp. 67–70, 75.

We have reviewed Petitioner's arguments and evidence and find that Petitioner demonstrates that Whitehorn discloses, teaches, or suggests every limitation of claims 2, 3, and 5. Pet. 69–74. Accordingly, based on the entire record developed during trial, including the analysis in Sections II.E.2.a. and II.E.2.c. addressing the obviousness of the subject matter of claim 1, we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claims 2, 3, and 5 would have been obvious in view of Whitehorn.

4. Analysis of Dependent Claim 4

Claim 4 depends from claims 1 through 3. *See* Ex. 1001, 39:38–43. Due to the dependency of claim 4 from claim 1, for the same reasons as those explained above in Section II.E.2.b. addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's contention that Whitehorn discloses the limitations of dependent claim 4. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's contention that Whitehorn anticipates claim 4. We analyze below the additional limitations of claim 4 in terms of obviousness.

Claim 4 recites "wherein the device is in a landscape or portrait orientation." Ex. 1001, 39:42–43. Petitioner asserts that Whitehorn discloses a device used in a portrait orientation in Figure 3. *See* Pet. 73 (citing Ex. 1003 ¶¶ 312–313); Pet. Reply 28–29 (reproducing Ex. 1005, Fig. 3 (with Petitioner's annotations added); citing Ex. 1015, 123:13–17; Pet. 73). Patent Owner contends that Whitehorn does not teach this limitation because the small screen interface 118 used for the display is not in a landscape or portrait orientation because it is a small circular screen. *See* PO Resp. 67–68 (reproducing Ex. 1005, Fig. 4 (with Patent Owner's annotations added); citing Ex. 1001, 3:44–52 (descriptions of landscape and portrait orientation); Ex. 2002 ¶¶ 235–237).

We agree with Petitioner's observation that claim 4 explicitly refers to the device orientation as being in portrait or landscape orientation, not the display orientation. *See* Pet. Reply 29–30. Thus, we do not agree with Patent Owner's arguments that focus on the orientation of small screen interface 118, instead of addressing the orientation of Whitehorn's handheld device.

We find that that Petitioner demonstrates that Whitehorn discloses or teaches the additional limitations of dependent claim 4. *See* Pet. 73. Accordingly, based on the entire record developed during trial, including the analysis in Sections II.E.2.a. and II.E.2.c. addressing the obviousness of the subject matter of claim 1, we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claim 4 would have been obvious in view of Whitehorn.

5. Analysis of Dependent Claims 6 and 7

Claim 6 and 7 depend from claims 1 through 5. *See* Ex. 1001, 39:26–51. Due to the dependency of claims 6 and 7 from claim 1, for the same reasons as those explained above in Section II.E.2.b. addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's contention that Whitehorn discloses the limitations of dependent claims 6 and 7. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's contention that Whitehorn anticipates claims 6 and 7. We analyze below the additional limitations of claims 6 and 7 in terms of obviousness.

Claim 6 recites "wherein, in the image capture mode, the device does not display an image of a first screen and displays a preview on a second screen" and claim 7 recites "wherein the first screen is disabled and does not receive user interface input while in the image capture mode." Ex. 1001, 39:46–51. Relying on its analysis addressing the obviousness of the subject matter of claim 1, Petitioner asserts that, "[f]or the same reasons, the limitations of claims 6 and 7 teaching disabling or not displaying an image on a screen at least [would] have been obvious to a POSITA in view of Whitehorn." Pet. 83 (citing Ex. 1003 ¶ 377). Patent Owner contends that

the features of claims 6 and 7 are not obvious for the same reasons as those addressing claim 1. *See* PO Resp. 75 (citing Ex. 2002 ¶ 255; PO Resp. 72–74).

For the same reasons as those explained above addressing claim 1, based on the entire record developed during trial we determine that Petitioner demonstrates that Whitehorn renders obvious the subject matter of dependent claims 6 and 7. *See* Pet. 82–83. Accordingly, based on the entire record developed during trial, including the analysis in Sections II.E.2.a. and II.E.2.c. addressing the obviousness of the subject matter of claim 1, we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of dependent claims 6 and 7 would have been obvious in view of Whitehorn.

6. Analysis of Independent Claim 11

Independent claim 11 is directed to a device that recites a "processor operable to" perform steps nearly identical to the method steps recited in claim 1. *Compare* Ex. 1001, 39:60–40:11, *with* Ex. 1001, 39:26–37. Based on the entire record developed during trial, including the analysis above in Section II.E.2.b. addressing anticipation of claim 1, the preponderance of the evidence does not support Petitioner's contention that Whitehorn discloses "wherein in each image capture mode a display on the first or second screen is different," as recited in independent claims 1 and 11. Accordingly, based on the entire record developed during trial the preponderance of the evidence does not support Petitioner's contention that Whitehorn anticipates claim 11.

For the same reasons as those explained above in Sections II.E.2.a. and II.E.2.c., addressing obviousness of the subject matter of claim 1, based on the entire record developed during trial, we determine that Petitioner

demonstrates that Whitehorn teaches, suggests, or renders obvious the limitations of claim 11 that are substantially similar to the limitations of claim 1.

Claim 11, however, recites the preamble "[a] device" and includes the following additional limitations not recited in claim 1: "the first screen including a first gesture capture region," and "wherein the second screen faces an opposite direction from the first screen when the device is closed, and wherein an image capture lens is associated with the second screen; a memory; a processor in communication with the memory, the first screen, and the second screen." Ex. 1001, 39:60–40:11. We analyze below these additional limitations of claim 11 in terms of obviousness.

Petitioner contends that, if the preamble of claim 11 is limiting, Whitehorn discloses "[a] device," based on Whitehorn's disclosure of a handheld device with an integral axial camera. *See* Pet. 75 (citing Ex. 1005 ¶¶ 8, 19, 20, Figs. 1–3, 5; Ex. 1003 ¶¶ 324–325). Petitioner asserts that Whitehorn discloses "a first screen . . . including a first gesture capture region," as recited in claim 11, based on Whitehorn's disclosure of bottom large screen interface 124 being capable of receiving input commands from users. *See id.* (citing Ex. 1005 ¶ 23; Ex. 1003 ¶¶ 327–328). Petitioner contends that Whitehorn also discloses "the second screen faces an opposite direction from the first screen when the device is closed," based on Whitehorn's disclosure of large top screen interface 128 that faces opposite large bottom screen interface 124 when closed. *See* Pet. 76 (citing Ex. 1005 ¶¶ 23–24, 31. Figs 1, 3, 4; Ex. 1003 ¶¶ 329–334; Pet. 59, 69–73). Petitioner asserts that Whitehorn discloses "an image capture lens is associated with the second screen" based on Whitehorn's disclosure that users capture images with the image capture device 116 while looking at what is being

captured through the top large screen interface 128. *See* Pet. 76–77 (citing Ex. 1005 ¶¶ 22, 29; Ex. 1003 ¶ 333).

Petitioner asserts that Whitehorn discloses "a memory; a processor in communication with the memory, the first screen, and the second screen," as recited in claim 11, based on Whitehorn's disclosure that handheld device 102 belongs to a class of devices known as PDAs and provides certain computing and information storage and retrieval functionalities common to the class. *See* Pet. 77 (citing Ex. 1005 ¶ 19; Ex. 1003 ¶¶ 335–337). Petitioner also points out that Whitehorn discloses modes where handheld device 102 functions as a tablet computer or laptop computer. *See* Pet. 77–78 (citing Ex. 1005 ¶¶ 24, 30, claim 4; Ex. 1003 ¶¶ 338–340). According to Petitioner, "[a] POSITA would have understood that handheld device 102 necessarily comprises the claimed 'memory' to provide such 'information storage and retrieval functionalities,'" and that

> such computing and information retrieval functionalities in a PDA (e.g., when functioning as a computer) necessarily would include a processor (a computer includes a processor) that would communicate both with the memory and the disclosed first and second screens (*e.g.*, to store and retrieve information from the memory, and to control the screens to display information).

Id. (citing Ex. 1003 ¶¶ 336, 339–340).

Specific to claim 11, Patent Owner contends that Petitioner's argument for the "image capture lens is associated with the second screen" fails because it is based on the second image capture mode of Whitehorn (Fig. 5), which conflicts with Petitioner's reliance on the first image capture mode (Fig. 1) or second handheld mode for "the second screen faces an opposite direction form the first screen when the device is closed" in the first part of the limitation. *See* PO Resp. 66–67 (citing Ex. 2002 ¶ 230;

Pet. 76–77). In the Reply, Petitioner contends that Patent Owner's arguments baselessly insert limitations into the claim by arguing that both parts of the claim limitation must be met while the device is in the same image capture mode. *See* Pet. Reply 27–28 (citing PO Resp. 67). According to Petitioner, the limitation "does not require the device being in a particular image capture mode." *Id.* at 28. Patent Owner contends that the limitation requires that the device is closed, and Petitioner's theory relies on the second image capture mode where the device is open. *See* PO Sur-reply 23 (citing Ex. 1005, Fig. 5).

We do not agree with Patent Owner's arguments. Consistent with the plain language of "wherein the second screen faces an opposite direction from the first screen when the device is closed, and wherein an image capture lens is associated with the second screen," we construe only "wherein the second screen faces an opposite direction from the first screen" as limited to the condition "when the device is closed," and we do not construe "and wherein an image capture lens is associated with the second screen" to be limited to that same condition. We find that Petitioner demonstrates that Whitehorn discloses or teaches "the second screen faces and an opposite direction from the first screen when the device is closed," and "wherein an image capture lens is associated with the second screen." *See* Pet. 76–77.

For the forgoing reasons, including the reasons explained above in Sections II.E.2.a. and II.E.2.c., addressing the obviousness of the subject matter of claim 1, based on the entire record developed during trial we are persuaded by a preponderance of the evidence that Petitioner establishes that Whitehorn discloses, teaches, or otherwise renders obvious all of the limitations of independent claim 11. Accordingly, based on the entire record

developed during trial, we determine that Petitioner establishes by a preponderance of the evidence that the subject matter of claim 11 would have been obvious over Whitehorn.

7. Conclusion

For the reasons set forth above and based on the entire record developed during trial, the preponderance of the evidence does not support Petitioner's showing that claims 1–7 and 11 are anticipated by Whitehorn, but we determine that Petitioner demonstrates by a preponderance of the evidence that the subject matter of claims 1–7 and 11 would have been obvious over Whitehorn.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner demonstrates by a preponderance of the evidence that claims 1–7, 10–13, 16, 17, 19, and 20 are unpatentable.[9] Our conclusions are summarized in the following table.

[9] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

Claim(s)	35 U.S.C. §	Reference(s)/ Basis	Claim(s) Shown Unpatentable	Claim(s) Not Shown Unpatentable
1–7, 10–13, 16, 17, 19, 20	102	Chin		1–7, 10–13, 16, 17, 19, 20
1–7, 10–13, 16, 17, 19, 20	103	Chin	1–7, 10–13, 16, 17, 19, 20	
1–7, 11	102	Whitehorn		1–7, 11
1–7, 11	103(a)	Whitehorn	1–7, 11	
Overall Outcome			1–7, 10–13, 16, 17, 19, 20	

VII. ORDER

For the foregoing reasons, it is:

ORDERED that Petitioner demonstrates by a preponderance of the evidence that claims 1–7, 10–13, 16, 17, 19, and 20 of the '842 Patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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