

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC and MOTOROLA MOBILITY LLC,
Petitioner,

v.

MULTIFOLD INTERNATIONAL INCORPORATED PTE. LTD.,
Patent Owner.

IPR2025-00059
Patent 9,141,135 B2

Before KRISTEN L. DROESCH, HYUN J. JUNG, and
BRIAN P. MURPHY, *Administrative Patent Judges*.

JUNG, *Administrative Patent Judge*.

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

I. INTRODUCTION

We have jurisdiction under 35 U.S.C. § 6 (2024). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 (2024). For the reasons that follow, we determine that Google LLC and Motorola Mobility LLC (collectively, “Petitioner”) have shown by a preponderance of the evidence that claims 1–3, 5–9, 15, 16, 19, and 20 of U.S. Patent No. 9,141,135 B2 (Ex. 1001, “the ’135 patent”) are unpatentable.

A. Background and Summary

Petitioner filed a Petition (Paper 1, “Pet.”) requesting institution of an *inter partes* review of claims 1–3, 5–9, 15, 16, 19, and 20 of the ’135 patent. Multifold International Incorporated Pte. Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). Pursuant to 35 U.S.C. § 314, we instituted an *inter partes* review of claims 1–3, 5–9, 15, 16, 19, and 20 of the ’135 patent on all presented challenges. Paper 8 (“Inst. Dec.”), 2, 23.

After institution, Patent Owner filed a Response (Paper 13, “PO Resp.”), to which Petitioner filed a Reply (Paper 22, “Pet. Reply”), and Patent Owner thereafter filed a Sur-reply (Paper 25, “PO Sur-reply”). An oral hearing in this proceeding was held on February 24, 2026; a transcript of the hearing is included in the record. Paper 31 (“Tr.”).

B. Real Parties in Interest

Petitioner identifies Google LLC and Motorola Mobility LLC as real parties in interest. Pet. 1. Petitioner also notes that the real parties in interest are subsidiaries of other entities that are not real parties in interest to this proceeding. *Id.* nn. 1, 2. Patent Owner identifies itself as a real party in interest. Paper 4 (Mandatory Notices by Patent Owner), 1.

C. Related Matters

The parties identify *Multifold International Incorporated Pte. Ltd. v. Motorola Mobility LLC*, 1:23-cv-01173-UNA (D. Del.) and *Multifold International Incorporated Pte. Ltd. v. Google LLC*, 1:23-cv-01323-UNA (D. Del.) as related matters. Pet. 1–2; Paper 4, 1.

D. The '135 Patent (Ex. 1001)

The '135 patent issued on September 22, 2015 from an application filed on September 28, 2011 and claims priority to five provisional applications, the earliest of which was filed on October 1, 2010. Ex. 1001, codes (22), (45), (60), 1:6–15.

Reproduced below is Figure 1B of the '135 patent.

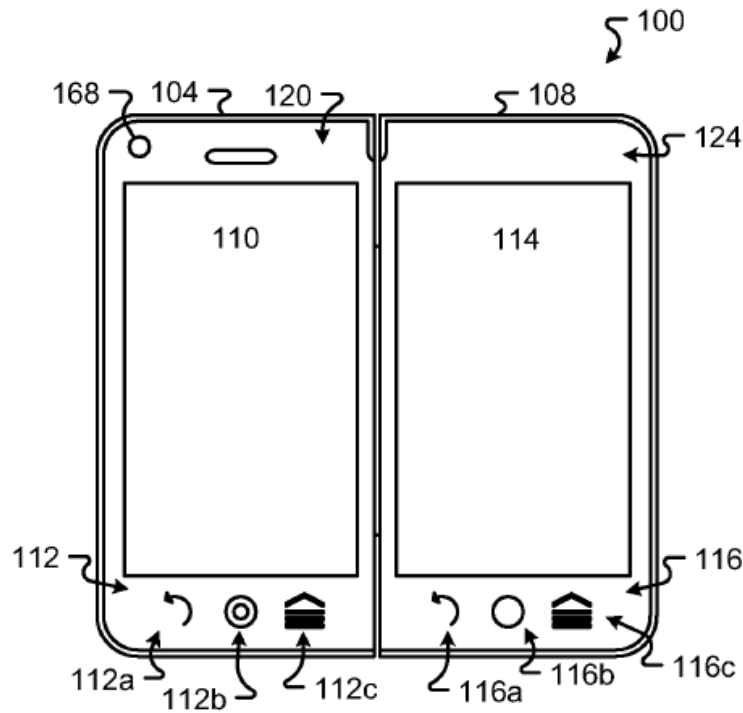


FIG. 1B

Figure 1B shows a view of a multi-screen user device. Ex. 1001, 6:34–35. Device 100 “can be positioned in a number of different ways each of which provides different functionality to a user” and includes primary

screen 104 and secondary screen 108. *Id.* at 7:62–65. Hinge 128 connects primary and secondary screens 104, 108 together, and screens 104, 108 can recognize a user’s gesture inputs. *Id.* at 8:45–46, 15:20–18:3, Figs. 1C, 4A–4H.

Primary screen 104 includes touch sensitive display 110 and configurable area 112. Ex. 1001, 8:2–3, 8:9–11. Secondary screen 108 likewise includes touch sensitive display 114 and configurable area 116. *Id.* at 8:5, 8:11–12. Both touch sensitive displays 110, 114 are sensitive to touch and can display information. *Id.* at 8:3–4. “The term ‘display’ refers to a portion of one or more screens used to display the output of a computer to a user” and “may be a single-screen display or a multi-screen display, referred to as a composite display” that “can encompass the touch sensitive display of one or more screens.” *Id.* at 4:43–48.

Configurable areas 112, 116 are configured for specific inputs when touched. Ex. 1001, 8:9–13. For example, areas 112, 116 can be configured to receive a “back” input to view previously displayed information, a “menu” input to view options from a menu, and a “home” input to view information associated with a “home” view. *Id.* at 8:13–21.

Device 100 can have various output configurations. Ex. 1001, 23:43–26:62, Figs. 6A–6J, 7, 8. In one embodiment, screens 104, 108 display desk tops D1, D2, respectively. *Id.* at 26:1–3, Fig. 7. “The term ‘desktop’ refers to a metaphor used to portray systems” and “is generally considered a ‘surface’ that typically includes pictures, called icons, widgets, folders, etc. that can activate . . . applications, windows, cabinets, files, folders, documents, and other graphical items.” *Id.* at 4:3–7.

Unitary annunciator window or display 1100 can extend continuously across screens 104, 108 and display “messages, alerts, statuses of the device,

and other information.” Ex. 1001, 26:5–12, Fig. 7. “[A] longer alert or message having greater text or data content can span across the entire annunciator window 1100, thereby temporarily masking or covering the other icons for a period of time until the alert or message is cleared by the user.” *Id.* at 26:46–50, Fig. 8.

E. Illustrative Claim

The ’135 patent includes 20 claims, of which Petitioner challenges claims 1–3, 5–9, 15, 16, 19, and 20. Of the challenged claims, claims 1 and 6 are independent, and reproduced below is claim 1.

1. A method of displaying information on a mobile multi-display device including a plurality of desktops and/or applications each having at least one window, and an annunciator window, the method comprising:

placing the multi-display device in an open state with a first display and a second display facing in a same direction;

receiving, by a processor, a first input that represents an instruction to reveal one of a first desktop or application on the first display of the multi-display device and selecting the first desktop or application to display on the first display;

receiving, by the processor, a second input that represents an instruction to reveal one of a second desktop or application on the second display of the multi-display device and selecting the second desktop or application to display on the second display;

displaying, by the processor, the selected first and second desktops or applications on the first and second displays;

displaying, by the processor, a pre-configured annunciator window having information therein showing at least one of a device status, a connectivity status, and a messaging status;

configuring, by the processor, the annunciator window to extend across a first portion of the first display and a second portion of the second display, wherein the first portion and the second portion do not degrade the display of information by the selected first and second desktops or applications; and

modifying, by the processor, the display of the annunciator window in response to a changed state of at least one of the

device status, connectivity status, and messaging status, wherein the modified display of the annunciator window displays information selectively across the annunciator window.

Ex. 1001, 29:27–61.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Bauer	US 7,996,045 B1, filed Nov. 9, 2007, issued Aug. 9, 2011	1007
Lee	US 8,265,705 B2, filed Oct. 22, 2009, issued Sept. 11, 2012	1008
Yook	US 2010/0248788 A1, filed Mar. 22, 2010, published Sept. 30, 2010	1005

Petitioner contends that each reference qualifies as prior art under at least § 102(e).¹ Pet. 5. Petitioner also provides a Declaration of Dr. Sandeep Chatterjee (Ex. 1002).

Patent Owner provides a Declaration of Rajeev Surati, Ph.D. (Ex. 2002). Deposition transcripts for Dr. Chatterjee (Ex. 2004) and Dr. Surati (Ex. 1016) were filed. Deposition transcripts for Dr. Chatterjee from related proceedings were also filed. Ex. 2005 (deposition transcript

¹ The relevant sections of the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the ’135 patent issued from an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their pre-AIA versions. *See also* Pet. 5 (stating that “[f]or purposes of this proceeding, Petitioners assume the earliest possible priority date of the ’135 patent is October, 1, 2010”); PO Resp. 17 (“Patent Owner agrees with Petitioner that the priority date of the ’135 patent is October 1, 2010.”) (citing Pet. 5).

from IPR2025-00060), Ex. 2006 (deposition transcript from IPR2025-00040).

G. Asserted Grounds

Petitioner asserts that claims 1–3, 5–9, 15, 16, 19, and 20 are unpatentable on the following grounds:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1, 5, 6, 9, 15, 20	103(a)	Yook
2, 3, 7, 8, 19	103(a)	Yook, Bauer
1, 5, 6, 9, 15, 20	103(a)	Yook, Lee
2, 3, 7, 8, 16, 19	103(a)	Yook, Bauer, Lee

Pet. 4.

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail in an *inter partes* review, the petitioner must support its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

Petitioner contends that the challenged claims of the ’135 patent are unpatentable under § 103. Pet. 1. A claim is unpatentable under § 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 said 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) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

B. Level of Ordinary Skill in the Art

Petitioner proposes that a person of ordinary skill in the art “would have had an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of work experience in the field of user interface technologies, including e.g., graphical user interface technologies, or a related field” and that “[m]ore education can supplement practical experience and vice versa.” Pet. 5–6 (citing Ex. 1002 ¶¶ 20, 21, 22–34).

We preliminarily adopted Petitioner’s proposal. Inst. Dec. 8. “For the purposes of [its] response, Patent Owner applies Petitioner’s definition.” PO Resp. 17 (citing Pet. 5–6).

Based on the full record, we maintain and affirm the level of ordinary skill adopted at institution. Pet. 5–6; Inst. Dec. 8; Ex. 1002 ¶¶ 20, 21, 22–34. We find that Petitioner’s proposed level of ordinary skill in the art is consistent with the ’135 patent and the asserted prior art.

C. Claim Construction

In an *inter partes* review, the claims are construed:

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

According to Petitioner, “the Board need not construe any terms of the challenged claims to resolve the underlying controversy, as any reasonable construction reads on the prior art.” Pet. 11 (citing Ex. 1002 ¶ 42).

Petitioner also argues how the asserted references meet the claim limitations based on interpretations from Patent Owner’s infringement allegations. *Id.* at 11–12.

At institution, we did not adopt Patent Owner’s proposed interpretation for “displaying information selectively” to mean “display[ing] information in a way that involves intentionally choosing some information to display and not others.” Inst. Dec. 9–11; *see also* PO Resp. 10–11 (describing its previous proposed interpretation and our analysis) (citing Prelim. Resp. 7–9; Inst. Dec. 9, 11). We also did not need to interpret expressly any other claim term. Inst. Dec. 12.

Patent Owner proposes the same interpretation with support from the Specification. PO Resp. 11–14 (quoting Ex. 1001, 26:1–62). Patent Owner argues that the quoted portion of the Specification provides support for both “display[ing] information selectively,” as recited by claim 1, and “masking,” as recited by claim 3. *Id.* (citing Ex. 1001, 26:18–20, 26:39–50).

Patent Owner also argues that the language of dependent claims 3, 8, and 12 indicates that “displays information selectively” is not broader than Patent Owner’s proposed interpretation, and that these claims add masking of an icon. PO Resp. 15 (citing Ex. 1001, 26:45–50). Patent Owner further argues that “masking” refers to “temporarily masking or covering the other icons,” consistent with the usage of “masking.” *Id.* at 15–16 (citing Ex. 2007). The parties provide reply arguments for Patent Owner’s proposed interpretation. Pet. Reply 1–8; PO Sur-reply 1–4.

For the reasons discussed below addressing the patentability of the claims, we agree with Petitioner that it prevails under both the plain meaning and Patent Owner’s proposed interpretation of “displays information selectively.” Pet. Reply 1 (citing Prelim. Resp. 7, 8; PO Resp. 9–10). “Patent Owner interprets all [other] claim terms in accordance with their plain and ordinary meaning consistent with the specification and file history of the ’135 Patent.” PO Resp. 10.

In view of the full record, we do not need to interpret expressly any claim term to resolve the parties’ dispute. *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)).

D. Asserted Obviousness Based on Yook

1. Yook (Ex. 1005)

Yook relates particularly “to a method and mobile terminal that can divide the screen into individual divided screen areas and simultaneously present user functions on the individual divided screen areas.” Ex. 1005 ¶ 3. Reproduced below are Figures 1 and 2 of Yook.

FIG . 2

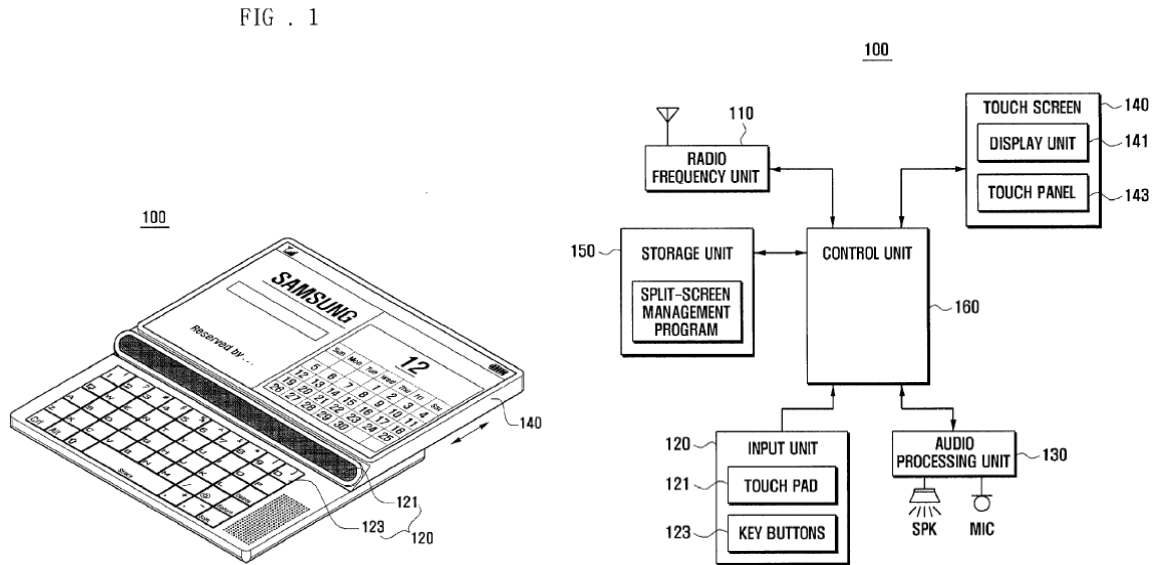


Figure 1 “illustrates an external appearance of a mobile terminal,” and Figure 2 “is an illustration of an exemplary block diagram of the mobile terminal” shown in Figure 1. Ex. 1005 ¶¶ 11, 12. Mobile terminal 100 includes touch screen 140, control unit 160, and storage unit 150, as well as radio frequency unit 110, input unit 120, and audio processing unit 130. *Id.* ¶ 25. Touch screen 140 includes display unit 141 and touch panel 143 that can be arranged in front of display unit 141. *Id.* ¶ 30.

Mobile unit 100 can activate a screen management program stored in storage unit 150 “in response to a user request,” and control unit 160 can cause display unit 141 to divide the screen into several divided screen areas and output functional view areas related to user functions to the individual divided screen areas. Ex. 1005 ¶¶ 26, 31, 37. Also, “[t]he screen area management program can be loaded on the control unit 160 in response to

activation of a particular function.” *Id.* ¶ 35. The screen management program may include:

a routine for detecting an input signal generated during execution of a user function, a routine for determining whether an input signal corresponds to a condition preset for divided screen area formation, and a routine for dividing the screen if the input signal corresponds to a condition preset for divided screen area formation.

Id. “The screen area management program can further include any of an output routine for outputting two functional view areas related to a user function and the input signal to the corresponding divided screen areas of the display unit 141.” *Id.*

[W]hen a first user function and a second user function, which are independent of each other, are activated at one of the same time and in sequence, . . . control unit 160 can control the display unit 141 to divide the screen into two areas, and cause a function view area A.App for the first user function to be displayed in one area and cause a function view area B.App for the second user function to be displayed on the other area.

Id. ¶ 38, Fig. 3.

2. *Independent Claim 1*

- a) “A method of displaying information on a mobile multi-display device including a plurality of desktops and/or applications each having at least one window, and an annunciator window, the method comprising:”

Petitioner argues that, to the extent the preamble of claim 1 is limiting, Yook discloses it. Pet. 12–21 (citing Ex. 1002 ¶¶ 44–48; Ex. 1005, code (57), ¶¶ 3, 6–8, 25–28, 30, 31, 33, 35, 37, 38–112, Figs. 1–3, 10).

We find that the portions of Yook cited by Petitioner disclose “mobile terminal 100 includes . . . touch screen 140” (Ex. 1005 ¶ 25, Fig. 1) and screen 140 displays “various information items” and can have “divided

screen areas” and “output functional view areas related to activated user functions on the individual divided screen areas” (*id.* ¶¶ 26, 27). We also find that Petitioner cites other portions of Yook with similar disclosures. *Id.* at code (57), ¶¶ 3, 6–8, 31, 35, 37.

As argued by Petitioner, we find that the cited portions of Yook disclose screen 140 divided into two screen areas with a functional view area A. App displayed in one area and a functional view area B. App displayed in the other area, when first and second user functions or application programs are activated. Ex. 1003, code (57), ¶¶ 7, 8, 26, 27, 31, 33, 37–41, 43–112 Figs. 1, 3, 4A. We also find that Petitioner cites portions of Yook that disclose “an annunciator window.” Ex. 1003, Figs. 1, 3, 10.

We credit Petitioner’s testimonial evidence regarding the preamble, because the cited portions of Yook support it. Ex. 1002 ¶¶ 44–48; Ex. 1005, code (57), ¶¶ 3, 6–8, 25–28, 30, 31, 33, 35, 37, 38–41, 43–112, Figs. 1–3, 4A, 7. We agree with Petitioner’s declarant that Yook’s disclosure is consistent with the ’135 patent’s description of “[a] single physical screen [that] can include multiple displays that are managed as separate logical displays.” Ex. 1001, 4:48–49; 4:11–14, 4:43–51, 7:60–8:8, 26:1–15, Fig. 7; Ex. 1002 ¶¶ 45, 46; Ex. 1003 ¶ 38, Fig. 3.

We also agree with Petitioner’s declarant that Yook’s disclosure is consistent with the ’135 patent’s discussion of displays and windows. Ex. 1001, 4:43–51, 5:66–6:2, 7:60–8:8, 26:1–15; Ex. 1002 ¶¶ 46, 47. We, thus, agree that Yook discloses “a plurality of desktops and/or applications each having at least one window.” Pet. 16–20.

We further agree with Petitioner’s declarant that one of ordinary skill in the art would have understood that Yook’s figures show a status bar that includes information indicating device status and those disclosures are

consistent with the '135 patent's discussion of an "annunciator window."
Ex. 1001, 26:1–27:5, Figs. 7, 8; Ex. 1002 ¶ 48; Ex. 1005, Figs. 1, 3, 10.
Patent Owner does not present an argument regarding the preamble. *See* PO
Resp.

Based on the full record, Petitioner persuades us, and we find, that
Yook teaches or suggests the preamble. In view of our finding, we do not
need to determine if the preamble is limiting.

b) *“placing the multi-display device in an open state with a first
display and a second display facing in a same direction;”*

Petitioner argues that Yook discloses the above-quoted limitations.
Pet. 21–22 (citing Ex. 1001, 9:58–59, 14:35–36; Ex. 1002 ¶¶ 49–50;
Ex. 1005 ¶¶ 3–8, 25–27, 31, 35, 37, Figs. 1, 3, 10).

We find that the portions of Yook cited by Petitioner disclose
screen 140 includes two screen areas (Ex. 1005 ¶¶ 3–8, 26, 27, 31, 35, 37,
Figs. 1, 3, 10) and mobile terminal 100 in an “open state” with the two
screen areas facing the same direction (*id.* ¶¶ 25, Fig. 1). We also credit
Petitioner's testimonial evidence regarding the above-quoted limitations,
because the cited portions of the record support it. Ex. 1001, 9:58–59,
14:35–36; Ex. 1002 ¶¶ 49–50; Ex. 1005 ¶¶ 3–8, 25–27, 31, 35, 37, Figs. 1, 3,
10. Patent Owner does not present an argument regarding the above-quoted
limitations. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that
Yook teaches or suggests “placing the multi-display device in an open state
with a first display and a second display facing in a same direction.”

- c) *“receiving, by a processor, a first input that represents an instruction to reveal one of a first desktop or application on the first display of the multi-display device and selecting the first desktop or application to display on the first display;”*

Petitioner argues that Yook discloses the above-quoted limitations. Pet. 23–26 (citing Ex. 1002 ¶¶ 51–54; Ex. 1005 ¶¶ 7, 8, 25, 26, 28, 31, 32, 35, 38–42, Figs. 2, 3), 26–27 (citing Ex. 1001, 11:63–12:10; Ex. 1005 ¶ 117), 28 (citing Ex. 1002 ¶ 54; Ex. 1005 ¶¶ 35, 36).

We find that the portions of Yook cited by Petitioner disclose (1) mobile terminal 100 includes control unit 160 (Ex. 1005 ¶ 25, Fig. 2), (2) mobile terminal 100 activates a screen management program that “in response to a user request” divides screen 140 into individual divided screens (*id.* ¶ 26), (3) user input can be provided through input unit 120 or screen 140 (*id.* ¶¶ 25, 28, 31, 32, 35), and (4) functional view areas associated with user functions that are activated sequentially and simultaneously are outputted to the divided screens areas (*id.* ¶¶ 7, 8, 26, 28, 31, 32, 35, 39–42, Fig. 3).

We also credit Petitioner’s testimonial evidence regarding the above-quoted limitations, because the cited portions of the record support it. Ex. 1002 ¶¶ 51–54; Ex. 1005 ¶¶ 7, 8, 25, 26, 28, 31, 32, 35, 38–42, Figs. 2, 3. We agree with Petitioner’s declarant that Yook’s control unit 160 discloses the recited “processor.” Ex. 1001, 11:63–12:10; Ex. 1002 ¶ 54; Ex. 1005 ¶ 117, Fig. 3. Patent Owner does not present an argument regarding the above-quoted limitations. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests “receiving, by a processor, a first input that represents an instruction to reveal one of a first desktop or application on the

first display of the multi-display device and selecting the first desktop or application to display on the first display.”

- d) *“receiving, by the processor, a second input that represents an instruction to reveal one of a second desktop or application on the second display of the multi-display device and selecting the second desktop or application to display on the second display;”*

Petitioner argues that Yook discloses the above-quoted limitations. Pet. 28–31 (citing Ex. 1002 ¶¶ 55–57; Ex. 1005 ¶¶ 7, 8, 26, 28, 31, 32, 35, 38, 58–64, Figs. 2, 3).

As discussed above, we find that Yook discloses “receiving, by a processor, a first input that represents an instruction to reveal one of a first desktop or application on the first display of the multi-display device and selecting the first desktop or application to display on the first display.” We also find that the portions of Yook cited by Petitioner disclose receiving inputs for sequentially activating first and second user functions (Ex. 1005 ¶¶ 7, 8, 26, 28, 31, 32, 35, 38, Fig. 2) and that Yook’s “processor” displays a second functional view area related to a second user function on a second divided screen area (*id.* ¶¶ 58–64, Figs. 3, 5b).

We further credit Petitioner’s testimonial evidence regarding the above-quoted limitations, because the cited portions of Yook support it. Ex. 1002 ¶¶ 55–57; Ex. 1005 ¶¶ 7, 8, 26, 28, 31, 32, 35, 38, 58–64, Figs. 2, 3, 5b. Patent Owner does not present an argument regarding the above-quoted limitations. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests “receiving, by the processor, a second input that represents an instruction to reveal one of a second desktop or application on

the second display of the multi-display device and selecting the second desktop or application to display on the second display.”

e) “*displaying, by the processor, the selected first and second desktops or applications on the first and second displays;*”

Petitioner argues that Yook discloses the above-quoted limitations. Pet. 31–32 (citing Ex. 1002 ¶ 58; Ex. 1005 ¶¶ 58–64, 77–92, 96–102, Figs. 3, 5A, 5B, 7A–8, 10, 11).

We find that the portions of Yook cited by Petitioner disclose (1) A. App and B. App shown in divided areas of display unit 141 (Ex. 1005 ¶¶ 58–62, Figs. 5A, 5B), (2) Web access view area 72 and a music file play view area 73 in divided areas (*id.* ¶¶ 77–87, Figs. 7A–7C), (3) Web access view area 81 and memo function view area 82 on split areas of display unit 141 (*id.* ¶¶ 88–92, Fig. 8), and (4) Web access function 101 and Twitter view area 102 activated on corresponding divided screen areas of display unit 141 (*id.* ¶¶ 96–102, Figs. 10, 11). Figure 3 of Yook also shows displaying first and second functional view areas in each of the divided screen areas.

As discussed above, Petitioner cites portions of Yook that we find disclose control unit 160 executing a screen area management program to divide screen 140 into two areas for displaying views related to user functions. Pet. 31–32. We further credit Petitioner’s testimonial evidence regarding the above-quoted limitations, because the cited portions of Yook support it. Ex. 1002 ¶ 58; Ex. 1005 ¶¶ 58–64, 77–92, 96–102, Figs. 3, 5A, 5B, 7A–8, 10, 11. Patent Owner does not present an argument regarding the above-quoted limitations. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests “displaying, by the processor, the selected first and second desktops or applications on the first and second displays.”

f) *“displaying, by the processor, a pre-configured annunciator window having information therein showing at least one of a device status, a connectivity status, and a messaging status;”*

Petitioner contends with reference to previous arguments that Yook discloses a status bar with information indicating battery status and signal strength status. Pet. 32–33 (citing Ex. 1002 ¶ 60; Ex. 1005, Figs. 2, 3).

We find that Figure 3 of Yook cited by Petitioner shows a status bar with information indicating battery status and signal strength status. Ex. 1005, Fig. 3. We credit Petitioner’s testimonial evidence regarding what Figure 3 shows. Ex. 1002 ¶ 59; *see also* Ex. 2002 ¶ 106 (Patent Owner’s declarant acknowledging that “a person of ordinary skill reviewing Yook may identify a status bar in, for example, Figure 3.”). We also agree with Petitioner’s declarant that one of ordinary skill in the art would have understood that the status bar would have been controlled by a program similar to the screen area management program executed by control unit 160 to control screen 140. Ex. 1002 ¶ 60; Ex. 1005, Fig. 2.

We further credit Petitioner’s testimonial evidence that it would have been obvious to implement an applet executed by control unit 160 to display the status bar. Ex. 1002 ¶¶ 22–34, 61; Ex. 1005 ¶¶ 33, 35. We agree with Petitioner’s declarant that, as known in the art, an ordinarily skilled artisan would have been motivated to pre-configure the status bar to provide updated information to the user with a reasonable expectation of success. Ex. 1002 ¶¶ 62, 63; Ex. 1007, 1:13–33. Patent Owner does not present an argument regarding the above-quoted limitations. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests “displaying, by the processor, a pre-configured annunciator window having information therein showing at least one of a device status, a connectivity status, and a messaging status.” Alternatively, Petitioner persuades us, and we determine, that one of ordinary skill in the art would have had a reason to modify Yook to implement an applet executed by control unit 160 to display the status bar with a reasonable expectation of success to arrive at the above-quoted limitations.

g) *“configuring, by the processor, the annunciator window to extend across a first portion of the first display and a second portion of the second display, wherein the first portion and the second portion do not degrade the display of information by the selected first and second desktops or applications;”*

Petitioner argues that Yook discloses its status bar extending across portions of its first and second displays but not into their functional areas in a manner consistent with the ’135 patent’s description of its annunciator window. Pet. 36–37 (citing Ex. 1001, 26:1–15, Fig. 7; Ex. 1002 ¶¶ 64–65; Ex. 1005, Fig. 3).

We find that Figure 3 of Yook cited by Petitioner shows a status bar extending across top portions of its first and second displays. Ex. 1005, Fig. 3. We also find that Yook’s status bar extends across the first and second displays in the same manner shown by the ’135 patent. *Compare id.*, with Ex. 1001, Fig. 7; *see also* Ex. 1001, 26:1–15 (describing that “annunciator display or window 1100 is shown as extending continuously across both of the screens 104 and 108” and that “the annunciator display extends across the display areas of said first and second screens for displaying at least one of a device status, a connectivity status, and a messaging status”).

We credit Petitioner's testimonial evidence regarding the above-quoted limitations, because the cited portions of Yook support it. Ex. 1002 ¶ 64; Ex. 1005, Fig. 3. Based on what Yook's Figure 3 shows, we also agree with Petitioner's declarant that Yook's status bar "do[es] not degrade the display of information by the selected first and second desktops or applications." Ex. 1002 ¶ 64. As discussed above, we further credit Petitioner's testimonial evidence that one of ordinary skill in the art would have been motivated to implement and configure Yook's status bar so that control unit 160 executing an applet would control and configure the status bar. *Id.* ¶ 65. Patent Owner does not present an argument regarding the above-quoted limitations. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests "configuring, by the processor, the annunciator window to extend across a first portion of the first display and a second portion of the second display, wherein the first portion and the second portion do not degrade the display of information by the selected first and second desktops or applications." Alternatively, Petitioner persuades us, and we determine, that one of ordinary skill in the art would have had a reason to modify Yook in the manner asserted with a reasonable expectation of success to arrive at the above-quoted limitations.

h) "modifying, by the processor, the display of the annunciator window in response to a changed state of at least one of the device status, connectivity status, and messaging status, wherein the modified display of the annunciator window displays information selectively across the annunciator window"

Petitioner argues that one of ordinary skill in the art would have implemented an applet for execution by control unit 160 for displaying the

status bar for the reasons previously asserted. Pet. 38 (citing Ex. 1002 ¶¶ 66–67). The status bar, Petitioner argues, would also have been updated dynamically. *Id.* at 38–39 (citing Ex. 1002 ¶ 67).

(1) Patent Owner’s Response

Patent Owner responds that “wherein the modified display of the annunciator window displays information selectively across the annunciator window” should be interpreted to mean that “the modified display of the annunciator window ‘displays information in a way that involves intentionally choosing some information to display and not others’ across the annunciator window.” PO Resp. 33. Patent Owner argues that this limitation of claim 1 is distinct from claim 3’s limitation of “masking at least one icon representing the device status, connectivity status, or messaging status.” *Id.* Patent Owner also argues that the Specification provides an example of masking that is the only type of masking or covering in which information can be displayed selectively, as required by claim 1. *Id.* at 33–34 (citing Ex. 1001, 26:45–50).

Patent Owner further argues that Yook does not teach or suggest “selectively displaying information in a way that involves intentionally choosing some information to display and not others.” PO Resp. 34 (citing Pet. 62; Ex. 2002 ¶¶ 103–108). According to Patent Owner, Petitioner “at most alleges that it would have been obvious to always display and dynamically update the same status bar icons to show device status (e.g., battery status) and connectivity status (e.g., signal strength status).” *Id.* at 34 (quoting Pet. 38–39). In Patent Owner’s view, Petitioner’s arguments “do not demonstrate that Yook’s status bar selects some information to display as required by the claim language” and, at most, “suggest that Yook’s status bar always displays information showing device status and connectivity

status, and that the values of this information may be dynamically updated.” *Id.* at 35 (citing Ex. 2002 ¶¶ 103–108).

According to Patent Owner, Petitioner fails to show “Yook’s status bar selects some information to display as required by the claim language” and does not argue, for example, that “Yook displays only some of the status icons but does not display other status icons.” PO Resp. 35. Patent Owner also argues that Yook does not describe the bar at the top of its Figure 3, “does not disclose any selection of the icons on that bar,” and cannot suggest selectively disclosing icons without such disclosure. *Id.* at 35–36 (citing Ex. 2002 ¶ 106; Ex. 2006, 40:3–4). Patent Owner further argues that the Institution Decision improperly addresses a ground not raised by the Petition. *Id.* at 36–37 (citing Pet. 12, 50, 62, 70; Inst. Dec. 21–22). Patent Owner, thus, argues that Yook does not teach or suggest “wherein the modified display of the annunciator window displays information selectively across the annunciator window.” *Id.* at 38 (citing Ex. 2002 ¶¶ 106, 107).

(2) Petitioner’s Reply

Petitioner replies that Patent Owner’s argument “hinges on its incorrect construction for ‘displays information selectively’” and that the limitation is disclosed or suggested under both a plain meaning and Patent Owner’s proposed construction. Pet. Reply 24.

Petitioner argues that, if Patent Owner’s construction is rejected, then “displays information selectively” would have been obvious in view of Yook under its plain and ordinary meaning, as argued in the Petition. Pet. Reply 24 (citing Pet. 38–39; PO Resp. 33–38; Ex. 1016, 60:2–8). One of ordinary skill in the art, Petitioner argues, “would have found it obvious to configure Yook’s status bar (annunciator window) to dynamically reflect updates or changes to the battery level (a device status) and signal strength

status (a connectivity status)” and such changes may be reflected in the annunciator by changes in graphics. *Id.* at 24–25 (citing Pet. 35, 38).

According to Petitioner, Patent Owner “takes no issue with the conclusion that such dynamic updates to device and connectivity status are obvious in view of Yook.” *Id.* at 25.

Under Patent Owner’s proposed interpretation that “information can be displayed selectively by choosing not to display certain information,” Petitioner argues that “it would have been obvious for Yook’s status bar to selectively display updated icons for changed statuses (and conversely, not display updated icons for unchanged statuses).” Pet. Reply 25 (citing Pet. 34–35, 38–39; PO Resp. 33–35). Petitioner also argues that Patent Owner ignores its obviousness analysis that considers more than what is expressly disclosed and shown in the figures, and that “[t]he Petition explained that it would have been obvious to update the status bar icon for a given status when that status changes, and that such behavior would be implemented through a program or applet executed by a processor” with testimonial support that one of ordinary skill in the art “would have been motivated to implement a processor controlling Yook’s status bar to display and dynamically reflect changed device status and connectivity status to selectively display updated status information to the user.” *Id.* at 25–26 (citing Pet. 34–35, 38–39; Ex. 1002 ¶¶ 62–63, 66–67).

In Petitioner’s view, its analysis is unrebutted, and the analysis shows “intentional selection” because “when Yook’s battery status changes but the connectivity status does not change, Yook modifies the status bar to ‘selectively’ display information showing a new battery status but chooses not to display information showing a new connectivity status.” Pet. Reply 26. Petitioner further argues that, “in the context of Claim 1 where a

processor displays information on a screen, it is unclear how a processor displaying information could ever fail to meet the plain language of [Patent Owner's] construction," because, if a processor displays something, it was chosen for display. *Id.* at 26–27 (citing Pet. 38).

(3) Patent Owner's Sur-Reply

Patent Owner replies that claim 1 is not unpatentable because Yook does not teach or suggest selectively displaying information. PO Sur-reply 4 (citing PO Resp. 33–38), 8. Patent Owner argues that Petitioner's declarant confirmed that Yook has no written description of the status bar and that one of ordinary skill in the art "would at most recognize the bar to be a status bar without any additional context on how information in the status bar is selected for display." *Id.* at 4–5 (citing PO Resp. 34–35; Ex. 2002 ¶ 106; Ex. 2006, 40:3–4).

Even if Patent Owner's proposed interpretation is not adopted, Patent Owner argues that "Yook does not disclose that anything is selectively displayed in any manner" and that one of ordinary skill in the art could not have concluded that Yook selectively displays icons on the status bar under any construction. PO Sur-reply 5. Patent Owner also argues that Petitioner does not dispute that Yook lacks disclosure regarding its status bar and how its icons are displayed. *Id.* at 5, 6 (citing Pet. Reply 26). With citations to a Memorandum to the Board and case law, Patent Owner further argues that testimony cannot be used to supply a missing claim limitation. *Id.* at 5–7.

(4) Petitioner Shows that Yook Teaches, Suggests, or Would have Rendered Obvious the Limitation

For the reasons discussed above, we find, and Patent Owner does not dispute, that Figure 3 of Yook discloses a status bar with information indicating battery status and signal strength status. Ex. 1002 ¶ 59. Also, as

determined above, the full record supports Petitioner’s testimonial evidence that it would have been obvious to implement an applet to display Yook’s status bar and to pre-configure the status bar to provide updated information. Ex. 1002 ¶¶ 22–34, 60–63, 66; Ex. 1005 ¶¶ 33, 35.

Because Figure 3 of Yook discloses a status bar with information indicating battery status and signal strength status, we credit Petitioner’s testimonial evidence that Yook discloses or suggests “modifying, by the processor, the display of the annunciator window in response to a changed state of at least one of the device status, connectivity status, and messaging status.” Ex. 1002 ¶ 66. The full record, thus, supports Petitioner and its declarant that, “consistent with the reasons and teachings addressed above, given that the updates of the status are dynamically reflected in the status icon(s) where the associated status has changed, Yook discloses and/or suggests ‘wherein the modified display of the annunciator window displays information *selectively* across the annunciator window.’” Pet. 38–39; Ex. 1002 ¶ 67; *see also* PO Resp. 35 (arguing that “[a]t most, [Petitioner’s] allegations suggest that Yook’s status bar always displays information showing device status and connectivity status, and that the values of this information may be dynamically updated.”).

In particular, we find that Yook teaches or suggests that, when battery status or signal strength status changes, Yook would have updated the associated status icon, shown in Figure 3 of Yook. Ex. 1002 ¶ 62. Petitioner cites a portion of Bauer that supports one of ordinary skill in the art would have known status icons, like those shown in Yook’s Figure 3, are updated or would have understood that Yook updates its status icons as known in the art. Pet. 35 (citing Ex. 1007, 1:13–33).

We find that the cited portion of Bauer discloses that “[a] mobile computing or communication device (e.g., a Smartphone, cell phone, personal digital assistant (PDA), etc.) may display status indicators,” such as, “a battery-shaped power meter that graphically depicts how much power remains in a battery included in the device; as power is consumed by the device, the power meter may change shape or character.” Ex. 1007, 1:13–20. Bauer also discloses “another example” of “an antenna-shaped graphic having a number of ‘bars’ that depict a relative strength of a signal that the device is capable of receiving from a corresponding wireless communication network” so that “a stronger signal may be associated with more bars in the antenna graphic, and a weaker signal may be associated with fewer bars in the antenna graphic.” *Id.* at 1:21–27.

We, therefore, credit Petitioner’s testimonial evidence that the ordinarily skilled artisan

would have been motivated to implement and pre-configure the status bar (including associated program(s)/applet(s)) such that device status (e.g., battery status) and connectivity status (mobile device signal strength status) dynamically reflect the battery and mobile device signal strength status (as opposed to displaying them as static icons) in order to provide updated device usage/connectivity information to the user

Ex. 1002 ¶ 62.

Because of what was known in the art regarding status icons, as evidenced by Bauer (Ex. 1007, 1:13–33), we determine that Yook teaches or suggests dynamically updating the status icons of its status bar, or would have been modified to do so, thereby rendering obvious “wherein the modified display of the annunciator window displays information selectively across the annunciator window.”

Turning to Patent Owner’s argument that Yook lacks description regarding its status bar shown in Figure 3 (PO Resp. 35–36; PO Sur-reply 4–5, 6, 8), the full record shows that status icons like the ones shown in Yook’s Figure 3 were known to be updated as power is consumed or when signal strength changes (Ex. 1007, 1:13–27). We determine that, in view of such knowledge in the art, one of ordinary skill in the art reviewing Figure 3 of Yook would have understood that Yook, at least, suggests, if not teaches, that the icons in Yook’s status bar are updated when battery status or signal strength status changes. Ex. 1002 ¶ 62.

Petitioner’s proposed modification also results in selecting updated icons to display in its status bar to provide updated information to the user, because Petitioner argues one of ordinary skill in the art “would have been motivated to implement and pre-configure the status bar . . . such that device status . . . dynamically reflect the battery and mobile device signal strength status” (Ex. 1002 ¶ 62) to yield “a pre-configured status bar dynamically reflecting device status” (*id.* ¶ 63). Patent Owner does not dispute Petitioner’s proposed modification. *See* PO Resp.; *see also* Pet. Reply 25–26 (arguing that its obviousness analysis is not addressed by Patent Owner and, thus, un rebutted).

Even if we adopted Patent Owner’s proposed interpretation of “displaying information selectively” to mean “display[ing] information in a way that involves intentionally choosing some information to display and not others,” we would still determine that Petitioner adequately shows Yook would have rendered obvious the above-quoted limitations under that interpretation, because the proposed modification to Yook would result in intentionally choosing to display an updated status icon instead of the previously shown status icon. Pet. 34–35 (arguing motivation to “implement

and pre-configure the status bar . . . such that device status . . . dynamically reflect the battery and mobile device signal strength status (as opposed to displaying them as static icons”), 38–39 (arguing that it would have been “obvious to configure the status bar such that the device status (e.g., battery status) and connectivity status (e.g., signal strength status) dynamically reflect the updates/changes of the battery level and signal strength”); Pet. Reply 25–26.

We agree with Petitioner that “in the context of Claim 1 where a processor displays information on a screen, it is unclear how a processor displaying information could ever fail to meet the plain language of [Patent Owner’s] construction,” because, if a processor displays something, it was chosen for display. Pet. Reply 26–27 (citing Pet. 38). Moreover, the fact that Yook shows a signal strength icon and battery icon in its Figure 3, but not other icons known in the art as evidenced by Bauer indicates that those icons were selected for display in a manner that meets Patent Owner’s proposed interpretation. *See* Ex. 1007, 1:29–33 (describing “a telephone shaped icon with wavy lines on either side may indicate a courtesy mode; an automobile-shaped icon may indicate a driving mode (e.g., one in which the device is configured to receive voice commands from a user)”).

Based on the full record and for the reasons stated above, Petitioner persuades us, and we determine, that Yook teaches, suggests, or would have rendered obvious “modifying, by the processor, the display of the annunciator window in response to a changed state of at least one of the device status, connectivity status, and messaging status, wherein the modified display of the annunciator window displays information selectively across the annunciator window.”

i) Objective Evidence of Nonobviousness

Patent Owner does not present any objective evidence of nonobviousness in connection with any claim. *See* PO Resp.

j) Petitioner Shows that Claim 1 is Unpatentable over Yook

“Once all relevant facts are found, the ultimate legal determination [of obviousness] involves weighing of the fact findings to conclude whether the claimed combination would have been obvious to an ordinary artisan.”

Arctic Cat Inc. v. Bombardier Recreational Prods. Inc., 876 F.3d 1350, 1361 (Fed. Cir. 2017) (quoting *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1068–69 (Fed. Cir. 2012)).

Above, based on the full record before us, we provide our factual findings regarding (1) the level of ordinary skill in the art, (2) the scope and content of the prior art, (3) any differences between the claimed subject matter and the prior art, and (4) objective evidence of nonobviousness.

In particular, we find that (1) Petitioner’s proposed level of ordinary skill in the art is consistent with the prior art of record, (2) Yook teaches or suggests all the limitations of claim 1, (3) one of ordinary skill in the art would have modified Yook in the manner asserted by Petitioner with a reasonable expectation of success, and (4) no objective evidence of nonobviousness has been asserted in connection with any claim.

Weighing these underlying factual determinations, a preponderance of the evidence persuades us that claim 1 of the ’135 patent is unpatentable over Yook. *Arctic Cat*, 876 F.3d at 1361.

3. Dependent Claim 5

Claim 5 depends from claim 1 and recites “wherein said annunciator window is located across adjacent upper or lower edges of said first and second displays.” Ex. 1001, 30:14–16. Petitioner argues that Yook

discloses the limitations of claim 5 consistent with the disclosure of the '135 patent. Pet. 39–40 (citing Ex. 1001, Fig. 7; Ex. 1002 ¶ 68; Ex. 1005, Fig. 3).

We find that Figure 3 of Yook shows an annunciator window located across adjacent upper edges of two divided screen areas. We also credit Petitioner's cited testimonial evidence, because Yook supports it. Ex. 1002 ¶ 68; Ex. 1005, Fig. 3. The full record supports the testimony that Yook's teachings are similar to the disclosure of the '135 patent. Ex. 1001, Fig. 7; Ex. 1002 ¶ 68; Ex. 1005, Fig. 3. Patent Owner does not provide an argument specifically for claim 5. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests the additional limitations of claim 5. Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 5 of the '135 patent is unpatentable over Yook. *Arctic Cat*, 876 F.3d at 1361.

4. *Dependent Claim 15*

Claim 15 depend from claim 1 and recites “wherein the first and second displays are both in a portrait mode.” Ex. 1001, 32:28–29. Petitioner argues that Yook discloses or suggests its limitations consistent with the description of portrait mode in the '135 patent. Pet. 44–46 (citing Ex. 1001, 4:56–5:4; Ex. 1002 ¶¶ 73–76; Ex. 1005 ¶¶ 55, Figs. 3, 4e, 10).

Petitioner also argues that one of ordinary skill in the art would have been motivated to configure device 100 so that its first and second displays are oriented in portrait mode “depending on the dimensions and/or natures of the image/content” and doing so would have been “one of a finite number of identified, predictable solutions for display mode configurations.” Pet. 47 (citing Ex. 1002 ¶¶ 75, 76; Ex. 1005 ¶ 34). According to Petitioner, one of ordinary skill in the art “would have had good reason to implement a portrait

mode configuration” and would have had a reasonable expectation of success in doing so. *Id.* at 47–48 (citing Ex. 1001, 4:57–5:4; Ex. 1002 ¶ 76).

a) Patent Owner’s Response

Patent Owner responds that Petitioner fails to show that Yook has an annunciator window that extends across the first and second displays “while in portrait mode.” PO Resp. 29 (citing Ex. 2002 ¶¶ 98–102). Patent Owner argues that the relied-upon Figure 4e of Yook shows a status bar at the top of a screen but does not extend across two displays. *Id.* at 29–30 (citing Pet. 45; Ex. 1005, Fig. 4e; Ex. 2002 ¶¶ 99–100).

Patent Owner also argues that Yook only describes the embodiment of Figure 4e as a “portrait mode” and not any other embodiments. PO Resp. 30–31 (citing Ex. 1005 ¶ 55, Figs. 1, 3, 4, 5, 6, 8–13; Ex. 2004, 106:9–107:5). Turning to Petitioner’s alternative argument that Figures 3 and 10 are in portrait mode, Patent Owner responds that Yook never describes those embodiments as being in portrait mode and that the relied-upon figures are not evidence of the actual proportions of features, because Yook does not disclose that the drawings are in scale. *Id.* at 31–32 (citing Pet. 46).

Patent Owner also responds that, to the extent that Petitioner is arguing that it would have been obvious to orient a display in portrait mode, the argument does not address configuring the annunciator window to extend across both first and second displays in portrait mode. PO Resp. 32 (citing Ex. 2002 ¶¶ 99–101). Patent Owner argues that every embodiment in Yook shows a status bar oriented horizontally, not vertically as would be required to extend across two portrait mode displays and that one of ordinary skill in the art would not orient the status bar in such a way, because it would be difficult to read. *Id.* (citing Ex. 2002 ¶¶ 99–101).

b) Petitioner's Reply

Petitioner replies that Yook's Figures 3 and 10 show an annunciator window extending across first and second displays in portrait mode. Pet. Reply 17 (citing Pet. 46; PO Resp. 29). Petitioner argues that Patent Owner does not dispute that "Yook discloses the annunciator extending across two displays in at least its Figure 3." *Id.* (citing Pet. 36–37). Petitioner also argues that it showed that Yook discloses its displays in portrait orientation and the annunciator window extending across those displays. *Id.* at 17–18 (citing Pet. 36–37, 46; Ex. 1005, Fig. 3).

Turning to Patent Owner's arguments, Petitioner replies that (1) Figures 3 and 10 (not Figure 4e) disclose the annunciator window extending across displays in portrait mode, (2) an obviousness analysis can rely on what figures disclose, and (3) Yook discloses an annunciator window extending across both displays. Pet. Reply 18–19 (citing PO Resp. 29–33). Petitioner argues that Figure 4e was discussed "as informing the understanding of a portrait mode (in the context of a portrait mode *screen*)" for claim 15, but Figures 3 and 10 show displays in portrait mode. *Id.* at 19 (citing Pet. 22, 32–37, 46; PO Resp. 29–31), 20 (citing Pet. 46). According to Petitioner, Patent Owner's declarant agreed that Figure 3 shows displays in portrait mode. *Id.* at 20 (citing Ex. 1016, 38:17–39:19).

Petitioner provides case law that figures can be relied upon for disclosing or suggesting portrait mode displays. Pet. Reply 20–21 (citing PO Resp. 46–48). Petitioner also argues with citations to case law that it is "relying on relative dimensions, not 'particular sizes,'" its reliance on clearly disclosed relative dimensions is not prohibited, and Patent Owner incorrectly suggests that case law requires a different standard. *Id.* at 21–22 (citing Pet. 46). Petitioner additionally argues that Yook shows in its Figure 4e that

a “portrait mode” screen is taller than it is wide and, thus, is not completely silent on the issue because it confirms that “the screen’s relative dimensions are intentionally depicted,” thereby suggesting that the dimensions of the displays on the screen are also intentionally depicted. *Id.* at 22 (citing Ex. 1005 ¶ 55, Fig. 4e).

Regarding Patent Owner’s response that the Petition does not address whether it would have been obvious to configure the annunciator window so that it extends across displays in portrait mode, Petitioner replies that the limitation is in claim 1, and, at least, Figure 3 of Yook undisputedly discloses the limitation. Pet. Reply 22 (citing Pet. 36–37; PO Resp. 32). Petitioner also argues that, if Figures 3 and 10 are determined not to show displays in portrait mode, it would have been obvious to have displays taller than they are wide, for the reasons argued in the Petition. *Id.* at 22–23 (citing Pet. 47–48).

According to Petitioner, portrait and landscape modes are two known, predictable options, different only in which dimension of the display is made smaller. Pet. Reply 23 (citing Pet. 47–48). Petitioner argues that there were reasons to use both orientations and, thus, using both orientations would have been obvious. *Id.* (citing Pet. 47–48; Ex. 1002 ¶¶ 75–76).

Petitioner also argues that Patent Owner misrepresents Petitioner’s contention to be “that the displays would be stacked vertically as shown in Yook’s Figure 4e, apparently based on Figure 4e disclosing a *screen* in portrait orientation.” Pet. Reply 23 (citing PO Resp. 30, 32). Petitioner explains that “the Petition points to Yook’s Figures 3 and 10 for the claim 15 analysis, because those figures depict portrait-mode *displays* (as claimed)” and “[t]he annunciator in Yook’s Figure 3 and 10 embodiments already

extends across both portrait-mode displays and there is no reason to depart from that configuration.” *Id.* (citing Pet. 37, 46; Ex. 1016, 22:13–16).

c) Patent Owner’s Sur-Reply

Patent Owner replies that Yook does not suggest an annunciator window that extends across first and second displays while in portrait mode. PO Sur-reply 8 (citing PO Resp. 29–33). Patent Owner argues that Petitioner does not challenge that Figure 4e of Yook fails to suggest the limitations of claim 15 for the reasons presented in the Response. *Id.* (citing PO Resp. 29–30).

According to Patent Owner, Petitioner pivots to Figures 3 and 10 of Yook, but Yook does not disclose the dimensions of the displays shown and does not disclose they are in portrait mode. PO Sur-reply 8. Patent Owner also argues that these figures cannot be relied upon for actual proportions. *Id.* at 8–9. Patent Owner further argues that Petitioner’s cited case law confirms that drawings cannot be relied on to show particular sizes. *Id.* at 9.

In Patent Owner’s view, Figure 3 of Yook shows displays with the same width and height. PO Sur-reply 9–10 (citing Ex. 1005, Fig. 3). Patent Owner argues that Yook only indicates that the screen is divided into two applications, not two portrait mode screens. *Id.* at 10. Patent Owner also argues that the relative dimensions shown in Figure 3 are ambiguous. *Id.*

To the extent that Petitioner is arguing that portrait mode displays would have been obvious, Patent Owner contends that it is arguing about the obviousness of extending an annunciator window across first and second displays in portrait mode, because Figure 4e of Yook shows an annunciator window extending across only one display. PO Sur-reply 11 (citing PO Resp. 32–33). Patent Owner also contends that every embodiment shows a status bar oriented horizontally, not vertically as would be required for the

status bar to extend across two portrait mode displays. *Id.* (citing PO Resp. 32–33). Patent Owner further contends that one of ordinary skill in the art would not have oriented the status bar vertically, because it would become difficult to read. *Id.* (citing PO Resp. 32–33). Patent Owner additionally contends that any orientation or position of the status bar not taught cannot be assumed to be obvious variants of those taught. *Id.* (citing Ex. 2002 ¶ 101).

d) Petitioner Shows that Claim 15 is Unpatentable over Yook

We find that the portions of Yook cited by Petitioner disclose and show “divided screen areas can be formed in portrait mode as illustrated in screen 445 and screen 447.” Ex. 1005 ¶ 55, Fig. 4e. The full record supports Petitioner’s testimonial evidence that one of ordinary skill in the art would have recognized that Yook’s disclosure of “portrait mode” is consistent with the description of portrait mode in the ’135 patent. Ex. 1001, 4:66–5:1 (“In the portrait mode, by contrast, the display is oriented such that the width of the display is less than the height of the display.”); Ex. 1002 ¶ 73 (quoting Ex. 1001, 4:56–5:4). We, thus, credit the testimony that Yook would have been understood to show displays in portrait mode in its Figures 3 and 10. Ex. 1002 ¶ 74; *see also* Ex. 1016, 38:17–39:19 (Patent Owner’s declarant testifying that annotated Fig. 3 of Yook at the top left of page 16 of the Petition “seems to be in portrait mode on a landscape screen”).

Because the record supports Petitioner’s testimonial evidence, we give weight to the testimony that, even if Yook does not disclose “first and second displays are both in a portrait mode,” one of ordinary skill in the art would have been motivated to configure Yook’s device 100 so that its first and second displays are oriented in portrait mode “depending on the

dimensions and/or natures of the image/content” and doing so would have been “one of a finite number of identified, predictable solutions for display mode configurations. Ex. 1001, 4:57–5:4; Ex. 1002 ¶¶ 75, 76; Ex. 1005 ¶ 34. The full record supports the testimony that one of ordinary skill in the art “would have had good reason to implement a portrait mode configuration” and would have had a reasonable expectation of success in doing so. Pet. 47–48; Ex. 1002 ¶ 76.

Turning to Patent Owner’s argument that Petitioner fails to show that Yook has an annunciator window that extends across first and second displays in portrait mode (PO Resp. 29), we find that Figures 3 and 10 show Yook’s status bar extending across the top portions of its two displays. Based on our findings from Yook discussed above, we give more weight to Petitioner’s testimonial evidence than Patent Owner’s testimonial evidence regarding whether Yook’s displays would be understood to be in portrait mode. Ex. 1002 ¶¶ 73, 74; Ex. 1016, 38:17–39:19; Ex. 2002 ¶¶ 98–100. Alternatively, Petitioner’s proposed modification of configuring the displays of Figures 3 and 10 to be in portrait mode would also result in an annunciator window extending across first and second displays “in a portrait mode.” Pet. 47–48.

Regarding Patent Owner’s argument that Figures 3 and 10 are not drawn to scale, we determine that the full record better supports Petitioner’s position that the displays of Figures 3 and 10 would have been understood to be in portrait mode. Ex. 1002 ¶¶ 73, 74; Ex. 1005 ¶ 55, Figs. 3, 4e, 19; Ex. 1016, 38:17–39:19. Even if the displays of Figures 3 and 10 were not described, shown, or understood to be in portrait mode, Petitioner proposes modifying those embodiments so that the displays are in portrait mode. Pet. 47–48. Petitioner’s cited evidence supports that one skilled in the art

would have made the proposed modification. Ex. 1002 ¶¶ 74–76; Ex. 1005 ¶¶ 34, 55, Fig. 4e; Ex. 1016, 38:17–39:19. In contrast, we find there is insufficient evidence to support Patent Owner’s argument. PO Resp. 31–33; PO Sur-reply 11; Ex. 2002 ¶¶ 99–101. Patent Owner appears to mischaracterize Petitioner’s proposed modification. Pet. 22 (arguing that Yook’s Figs. 1, 3, and 10 show first and second displays), 32–36 (arguing that Yook’s status bar in its Fig. 3 discloses the “annunciator window”), 47–48 (arguing Yook’s displays would have been configured to be in portrait mode); PO Resp. 31–33 (arguing based on Yook’s Fig. 4e).

Regarding Patent Owner’s argument that Petitioner does not address whether it would have been obvious to configure the annunciator window so that it extends across displays in portrait mode, we find Yook discloses that limitation of claim 1. Pet. 36–37; Ex. 1002 ¶¶ 64, 65; Ex. 1005, Fig. 3. We also determine that one of ordinary skill in the art would have modified Yook as shown in Figures 3 and 10, and those figures already show an annunciator window extending across two displays, and the proposed modification would have modified those displays to be in portrait mode, resulting in an annunciator window extending across two displays in portrait mode.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests the additional limitations of claim 15. Petitioner also persuades us, and we determine, that one of ordinary skill in the art would have modified Yook in the manner argued by Petitioner with a reasonable expectation of success. Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 15 of the ’135 patent is unpatentable over Yook. *Arctic Cat*, 876 F.3d at 1361.

5. *Dependent Claim 20*

Claim 20 depends from claim 1 and recites “wherein modifying the display of the annunciator window does not include changing a size of the annunciator window, and wherein the annunciator window appears to be a unitary window displayed on each of the first portion of the first display and the second portion of the second display.” Ex. 1001, 32:43–48.

Petitioner argues that Yook discloses or suggests its limitations for reasons asserted for claim 1 and it would have been obvious “to maintain the size of the status bar when updating the above-mentioned status because the display areas occupied by the status icons, as shown in Figure 3, are significantly smaller than display area occupied by the status bar.” Pet. 48 (citing Ex. 1002 ¶ 77); *see also id.* at 49 (reproducing Ex. 1005, Fig. 3). Petitioner also argues that the status bar “is a ‘unitary window’ displayed on ‘each of the first portion of the first display and the second portion of the second display.’” *Id.* at 49 (citing Ex. 1002 ¶ 78; Ex. 1005, Figs. 3, 7A–8, 10).

As argued by Petitioner, we find that Figure 3 of Yook teaches or suggests that “modifying the display of the annunciator window does not include changing a size of the annunciator window” and that “the annunciator window appears to be a unitary window displayed on each of the first portion of the first display and the second portion of the second display.” We credit Petitioner’s cited testimonial evidence that one of ordinary skill in the art would have been motivated to maintain the status bar’s size when updated and that Yook’s status bar is a unitary window in portions of the its first and second displays, because the citations to the record support it. Ex. 1002 ¶¶ 77–78; Ex. 1005, Fig. 3. Patent Owner does not provide a response specifically for claim 20. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests the additional limitations of claim 20. Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 20 of the '135 patent is unpatentable over Yook. *Arctic Cat*, 876 F.3d at 1361.

6. *Independent Claim 6*

- a) *“A non-transitory computer-readable medium having stored thereon instructions executable by a processor of a mobile multi-display device, the instructions causing the processor to execute a method, the instructions comprising:”*

Petitioner argues that, to the extent the preamble of claim 6 is limiting, Yook discloses it. Pet. 42 (citing Ex. 1002 ¶¶ 69–70). Petitioner refers to previous contentions that control unit 160 of mobile terminal 100 executes a screen management program stored in storage 150 to perform the operations recited by claim 1. *Id.* (citing *id.* at 12–21, 23–28). Petitioner also argues that one of ordinary skill in the art would have understood storage 150 is a “non-transitory computer-readable medium” that stores instructions executable by a processor. *Id.* at 42–43 (citing Ex. 1002 ¶ 69; Ex. 1005 ¶¶ 36, 117).

For the reasons discussed above for claim 1, Petitioner persuades us, and we find, that Yook’s control unit 160 discloses the “processor of a mobile multi-display device.” Ex. 1002 ¶¶ 54, 69; Ex. 1005 ¶ 117, Fig. 3. We also find that storage unit 150 would have been understood to be a “non-transitory computer-readable medium” that stores “instructions executable by a processor.” Ex. 1002 ¶ 69; Ex. 1005 ¶¶ 36, 117 (describing that Yook’s method “can be realized in . . . computer code that can be stored in a recording medium such as a CD ROM, a RAM, a floppy disk, a hard disk, or a magneto-optical disk” and “can be executed by such software using a

general purpose computer, or a special processor” and that “the computer, the processor or the programmable hardware include memory components, e.g., RAM, ROM, Flash, etc. that may store or receive software or computer code that when accessed and executed by the computer, processor or hardware implement the processing methods described herein”).

We further credit Petitioner’s testimonial evidence, because the cited portions of Yook support it. Ex. 1002 ¶ 69; Ex. 1005 ¶¶ 36, 117. Patent Owner does not provide a responsive argument specifically for claim 6. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook teaches or suggests the preamble of claim 6. In view of our finding, we do not need to determine if the preamble is limiting.

- b) *“instructions to receive a first input to reveal one of a first desktop or application on a first display of the multi-display device and to select the first desktop or application to display on the first display; instructions to receive a second input to reveal one of a second desktop or application on a second display of the multi-display device and to select the second desktop or application to display on the second display, wherein the multi-display device is in an open state with the first display and the second display facing in a same direction; instructions to display the selected first and second desktops or applications on the first and second displays; instructions to display a pre-configured annunciator window having information therein showing at least one of a device status, a connectivity status, and a messaging status; instructions to configure the annunciator window to extend across a first portion of the first display and a second portion of the second display, wherein the first portion and the second portion do not degrade the display of information by the selected first and second desktops or applications; and instructions to modify the display of the annunciator window in response to a changed state of at least one of the device status, connectivity status, and messaging status, wherein the modified display of the*

annunciator window displays information selectively across the annunciator window”

Petitioner argues that Yook teaches or suggests the remaining limitations “which recite ‘instructions’ to perform operations substantially similar to as those recited in claim 1.” Pet. 43 (citing Ex. 1002 ¶ 70).

We agree with Petitioner that Yook teaches or suggests the above-quoted limitations of claim 6 that require “instructions” to perform operations substantially similar to those recited by claim 1. Ex. 1002 ¶ 70. For the reasons discussed above for claim 1 and the preamble of claim 6, Petitioner persuades us, and we find, that Yook teaches or suggests those operations of claim 1 and the instructions to perform those operations as required by claim 6. Patent Owner does not provide responsive arguments specifically for claim 6. *See* PO Resp.

c) Petitioner Shows that Claim 6 is Unpatentable over Yook

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 6 of the ’135 patent is unpatentable over Yook. *Arctic Cat*, 876 F.3d at 1361.

7. Dependent Claim 9

Claim 9 depends from claim 6 and recites

wherein the instructions to configure the annunciator window further comprise instructions to display the annunciator window across adjacent upper or lower edges of the first and second displays, wherein the first display is on a first screen of the multi-display device, and wherein the second display is on a different second screen of the multi-display device.

Ex. 1001, 30:65–31:4.

Petitioner argues that Yook discloses the limitations of claim 9 with reference to its arguments for claim 5. Pet. 43 (citing *id.* at 39–40; Ex. 1002 ¶¶ 71–72). Petitioner also argues that, under an interpretation of a single

physical screen having multiple displays, Yook discloses the limitations for the reasons discussed for claim 1. *Id.* at 44 (citing *id.* at 21–22; Ex. 1002 ¶ 72; Ex. 1006, 31–33).

a) Patent Owner's Response

Patent Owner responds that the recited annunciator window “must be displayed across adjacent upper or lower edges of displays that are located on two different screens.” PO Resp. 18–20 (citing Ex. 1001, Figs. 6c, 7; Ex. 2002 ¶¶ 76–79). Patent Owner quotes a portion of the ’135 patent that states “screen . . . refers to a physical structure that includes one or more hardware components that provide the device with the ability to render a user interface and/or receive use input.” *Id.* at 18 (quoting Ex. 1001, 4:11–14), 21 (arguing that the quote is clear intrinsic evidence).

Patent Owner argues that Yook does not teach or suggest “displaying an annunciator window across adjacent upper or lower edges of displays on two different physical screens.” PO Resp. 20 (citing Ex. 2002 ¶¶ 80–97). Patent Owner specifically argues that Yook discloses devices with a single physical screen and, thus, cannot teach or suggest an annunciator window on two different physical screens. *Id.* (citing Ex. 2002 ¶ 81; Ex. 2004, 101:19–22, 103:22–25).

Patent Owner also argues that Petitioner misrepresents Patent Owner's litigation position and that Patent Owner has not interpreted claim 9 so that a single physical screen meets its limitations. PO Resp. 21 (citing Pet. 44). Patent Owner contends that the accused devices in related litigation are “foldable devices with two physical screens that fold along a hinge” and its “interpretation is that the foldable hinge highlights that there are two physical screens (e.g., the screens are delineable and can be oriented in relation to one another).” *Id.* (citing Ex. 1006, 31). Patent Owner also

contends that its infringement contentions are “at most extrinsic evidence of the meaning” of “screen” and cannot be relied upon to change its meaning that is clear from the intrinsic evidence. *Id.* at 21–22.

b) Reply Arguments

Petitioner replies that “the accused devices, while foldable, have just one screen,” and that Patent Owner “does not dispute that if the claim interpretation in Ground 1 based on the contentions is adopted, Claim 9 is unpatentable.” Pet. Reply 16 (citing PO Resp. 21).

Patent Owner replies that Petitioner “does not explain why a foldable screen is not two physical screens divided by a hinge” and does not address the definition in the ’135 patent. PO Sur-reply 12 (citing PO Resp. 17–20; Pet. Reply 16; Ex. 1001, 4:11–14).

c) Petitioner Fails to Show that Claim 9 is Unpatentable over Yook

Claim 9 requires “the first display is on a first screen of the multi-display device,” and “the second display is on a different second screen of the multi-display device.” Ex. 1001, 31:2–4. Patent Owner points us to a portion of the ’135 patent that states “[t]he term ‘screen’ . . . refers to a physical structure that includes one or more hardware components that provide the device with the ability to render a user interface and/or receive use input.” PO Resp. 18, 21; Ex. 1001, 4:11–14.

We agree with Patent Owner that Petitioner does not address how Yook alone teaches or suggests first and second displays each on different screens, as the term is used in the ’135 patent. Pet. 43–44; Pet. Reply 16. Petitioner relies on Patent Owner’s infringement contentions in related litigation for the meaning of the term “screen.” Pet. 44. Petitioner’s declarant also was “asked to assume that the claimed ‘wherein the first

display is on a first screen of the multi-display device, and wherein the second display is on a different second screen of the multi-display device' is met by *a single physical screen* that is divided into multiple displays.”

Ex. 1002 ¶ 72.

Petitioner does not present any other supporting evidence for its understanding that “a first screen” and “a different second screen” can be the same physical screen. Pet. 39–40, 43–44; Pet. Reply 16. Petitioner also does not address the asserted definition of “screen.” Pet. 11–12, 43–44; Pet. Reply 16. Petitioner further relies on Yook’s Figure 3 for both “the first and second displays” and “first screen” and “different second screen.” Pet. 39–40, 43–44. We, therefore, determine that insufficient evidence supports Petitioner’s position that one physical screen meets the claimed first and second screens.

For the reasons above, Petitioner does not persuade us that Yook teaches or suggests the limitations of claim 9. We, thus, determine that Petitioner does not show that claim 9 is unpatentable over Yook.

E. Asserted Obviousness Based on Yook and Bauer

1. Bauer (Ex. 1007)

Bauer particularly relates “to providing interactive alert information with a mobile computing or communication device.” Ex. 1007, 1:7–9. Figure 1 of Bauer is below reproduced.

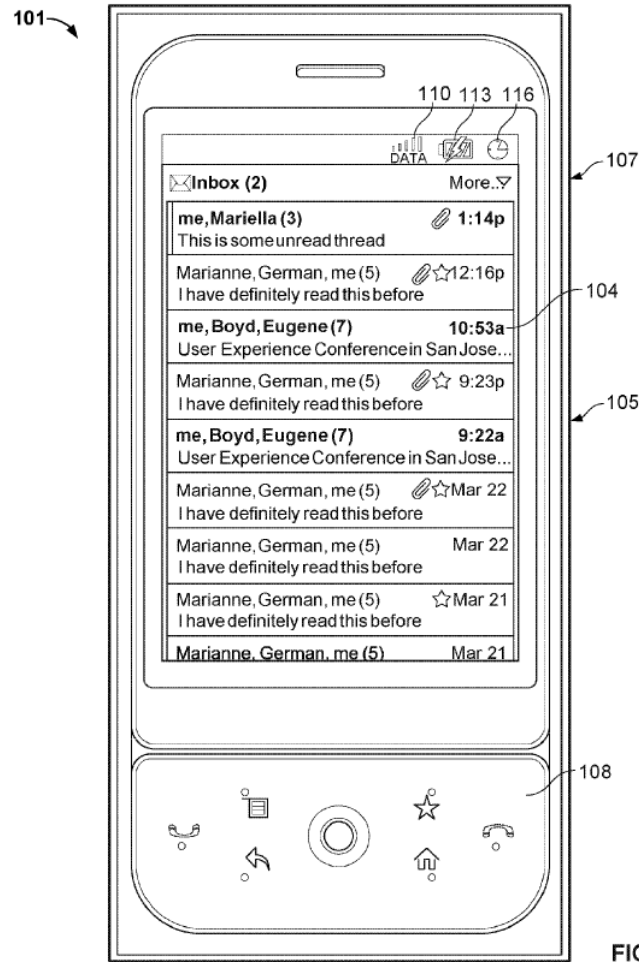


FIG. 1

Figure 1 shows “an example mobile device that can display interactive indicators.” Ex. 1007, 3:40–41. “[M]obile device 101 . . . includes a display screen 104 for displaying graphical information to the user.” *Id.* at 4:52–55. Display screen 104 can include application area 105 and status bar 107. *Id.* at 5:3–5. “[S]tatus bar 107 is a standard area where various system status information can be displayed,” such as “signal-strength indicator 110 that graphically includes four bars [that] may correspond to a detected strength of a wireless communication signal,” battery icon 113 that “may correspond to a fraction or percentage of power remaining in a battery,” and “analog clock icon 116 . . . that may apprise the user of the current time.” *Id.* at 5:12–17, 5:29–31, 5:37–38. The mobile device can include device status monitor 419

that can monitor power remaining in the battery and “cause a graphical depiction of the remaining power to be displayed” or monitor signal strength and “cause an icon to be displayed that depicts the signal strength.” *Id.* at 11:50–12:4.

Figure 2A of Bauer is below reproduced.

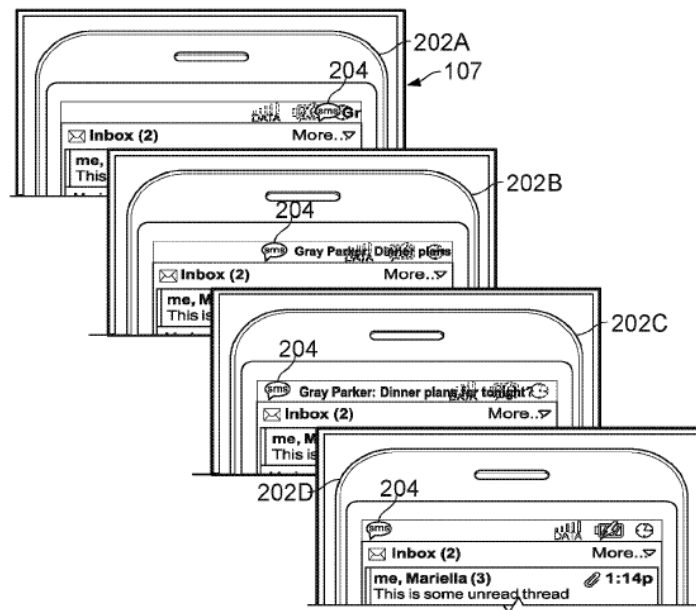


FIG. 2A

Figure 2A shows “two examples of interactive indicators that provide a first level of information.” Ex. 1007, 3:42–43. Balloon icon 204 appears at the right side of status bar 107 to announce the receipt of a short message service (“SMS”) message, and the SMS balloon scrolls to the left side of status bar 107 to show the sender and a preview of the message. *Id.* at 6:17–24. “In some implementations, while the interactive indicator 204 scrolls across the status bar 107, the prominence of other status information may be reduced,” such as reducing the intensity of “static indicators 110, 113 and 116” and imposing icon 204 and its preview over those indicators. *Id.* at 6:33–39. In a similar manner, an icon and preview can be provided when an email message is received. *Id.* at 6:47–61, Fig. 2B.

2. *Dependent Claim 2*

Claim 2 depends from claim 1 and recites

wherein modifying the display of the annunciator window includes displaying the changed state including text corresponding to at least one of a calendar notification, a phone message, an email message, or a text message, and wherein the first display and the second display are on a common first screen of the multi-display device.

Ex. 1001, 29:62–67.

Petitioner argues that Yook and Bauer would have rendered obvious claim 2 with reference to its arguments for claim 1. Pet. 50–51 (citing Pet. 21–22, 32–36, 38–39; Ex. 1002 ¶¶ 79–85; Ex. 1005, Fig. 3). Petitioner also argues that “Bauer relates to providing user interfaces on a mobile device” and discloses the limitations of claim 2. *Id.* at 51–55 (citing Ex. 1002 ¶¶ 81, 82; Ex. 1007, 4:29–40, 4:52–58, 5:3–38, 6:14–29, 6:33–42, 6:47–61, 7:22–27, 11:50–12:11, Figs. 1, 2A, 4). Petitioner further argues that one of ordinary skill in the art would have been motivated to implement Bauer in Yook so as “to implement the text preview features associated with the received messages (including providing preview of the message content and temporarily superimposing the previewed text over other status indicators/icons).” *Id.* at 53 (citing Ex. 1002 ¶ 81), 55–56 (citing Ex. 1002 ¶ 84). Petitioner additionally argues that the proposed combination would have provided benefits and would have had a reasonable expectation of success. *Id.* at 56–57 (citing Ex. 1002 ¶¶ 84, 85).

We find that the portions of Bauer cited by Petitioner teaches or suggests the limitations of claim 2. Ex. 1007, 4:29–40, 4:52–58, 5:3–38, 6:14–29, 6:33–42, 6:47–61, 7:22–27, 11:50–12:11, Figs. 1, 2A, 4. We also credit Petitioner’s testimonial evidence that one of ordinary skill in the art

would have combined Yook and Bauer in the manner argued by Petitioner for the reasons asserted by Petitioner with a reasonable expectation of success, because the cited portions of the record support the testimony.

Ex. 1002 ¶¶ 79–85; Ex. 1007, 4:29–40, 4:52–58, 5:3–38, 6:14–29, 6:33–42, 6:47–61, 7:22–27, 11:50–12:11, Figs. 1, 2A, 4. Patent Owner does not provide response specifically for claim 2. *See* PO Resp.

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 2 of the '135 patent is unpatentable over Yook and Bauer. *Arctic Cat*, 876 F.3d at 1361.

3. *Dependent Claim 3*

Claim 3 depends from claim 1 and recites

wherein modifying the display of the annunciator window further includes: displaying the changed state across a portion of the annunciator window; and masking at least one icon representing the device status, connectivity status, or messaging status, wherein the first display is on a first screen of the multi-display device, and wherein the second display is on a different second screen of the multi-display device.

Ex. 1001, 30:1–9.

Petitioner argues that, for the reasons given for claim 2, Yook and Bauer disclose or would have rendered obvious “wherein modifying the display of the annunciator window further includes: displaying the changed state across a portion of the annunciator window; and masking at least one icon representing the device status, connectivity status, or messaging status.” Pet. 57 (citing Ex. 1002 ¶¶ 86–87). For the remaining limitations of claim 3, Petitioner refers to its arguments for claim 9. *Id.* at 57–58 (citing Ex. 1002 ¶ 87).

a) Patent Owner's Response and the Parties' Reply Arguments

Patent Owner responds with reference to arguments for claim 9 that Petitioner fails to establish that Yook teaches or suggests “an annunciator window that extends across two displays on two different physical screens,” because Yook discloses only a single physical screen. PO Resp. 27–28 (citing Ex. 2002 ¶¶ 91–97).

Petitioner replies that Patent Owner makes the same arguments for claim 9, and that those arguments are unavailing for the reasons asserted above for claim 9 and in the Petition. Pet. Reply 17 (citing Pet. 70–73; PO Resp. 27–28; Pet. Reply 9–17). Patent Owner replies that claim 3 is patentable for the same reasons asserted for claim 9. PO Sur-reply 15.

b) Petitioner Fails to Show that Claim 3 is Unpatentable over Yook and Bauer

Claim 3 requires “the first display is on a first screen of the multi-display device,” and “the second display is on a different second screen of the multi-display device.” Ex. 1001, 30:6–9. As discussed above for claim 9, the '135 patent that states “[t]he term ‘screen’ . . . refers to a physical structure that includes one or more hardware components that provide the device with the ability to render a user interface and/or receive use input.” Ex. 1001, 4:11–14.

We agree with Patent Owner that Petitioner does not address how the proposed combination of Yook and Bauer teaches or suggests first and second displays each on different screens, as the term is used in the '135 patent. Pet. 27–28, 43–44; Pet. Reply 16. Petitioner's declarant also opines “under the assumption that the claimed ‘wherein the first display is on a first screen of the multi-display device, and wherein the second display is on a

different second screen of the multi-display device’ is met by *a single physical screen* that is divided into multiple displays.” Ex. 1002 ¶ 81.

Based on the full record, Petitioner does not persuade us that Yook and Bauer teach or suggest the limitations of claim 3. We, thus, determine that Petitioner does not show the claim 3 is unpatentable over Yook and Bauer.

4. *Dependent Claim 19*

Claim 19 depends from claim 1 and recites “wherein the information showing the device status and the connectivity status are in physical proximity.” Ex. 1001, 32:40–42.

Petitioner argues that Yook discloses displaying battery status and mobile device signal strength status. Pet. 59–60 (citing Ex. 1002 ¶¶ 91–94; Ex. 1005, Fig. 3). Petitioner also argues that, to the extent that Yook does not disclose the subject matter of claim 19, it would have been obvious in view of Bauer that discloses battery status and mobile device signal reception status next to each other. *Id.* at 60–61 (citing Ex. 1002 ¶¶ 91, 92; Ex. 1007, Fig. 1).

Petitioner further argues that, in addition to the reasons previously argued for why one of ordinary skill in the art would have been motivated to combine Yook and Bauer, the ordinarily skilled artisan would have been motivated “to place the icons for ‘device status’ and ‘connectivity status’ in physical proximity as it would have allowed users to view the associated status information near a single location on a display, which improves efficiency and user experience.” Pet. 61 (citing Ex. 1002 ¶ 93). According to Petitioner, one of ordinary skill in the art would have had a reasonable expectation of success, and the proposed combination would have involved

applying known technologies according to known methods to yield predictable results. *Id.* at 62 (citing Ex. 1002 ¶¶ 28–34, 94).

We find that, as argued by Petitioner, Yook discloses that “the information showing the device status and the connectivity status are in physical proximity.” Ex. 1005, Fig. 3. We also find that, as argued by Petitioner, Bauer discloses battery status and mobile device signal reception status next to each other. Ex. 1007, Fig. 1.

We also credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have been motivated to combine Yook and Bauer with a reasonable expectation of success, because the citations to the record support the testimony. Ex. 1002 ¶¶ 28–34, 91–94; Ex. 1005, Fig. 3; Ex. 1007, Fig. 1. Patent Owner does not provide a response specifically for claim 19. *See* PO Resp.

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 19 of the ’135 patent is unpatentable over Yook and Bauer. *Arctic Cat*, 876 F.3d at 1361.

5. *Dependent Claim 7*

Claim 7 depends from independent claim 6 and recites “wherein the instructions to modify the display of the annunciator window further comprise instructions to display the changed state including text corresponding to at least one of a calendar notification, a phone message, an email message, or a text message.” Ex. 1001, 30:50–55.

Petitioner argues that Yook and Bauer disclose the limitations of dependent claim 7. Pet. 58. Specifically, Petitioner argues that Yook discloses “instructions to modify the display of the annunciator window” for the reasons given for claim 6, and that the proposed combination discloses

“modify[ing] the display of the annunciator window further comprise instructions to display the changed state including text corresponding to at least one of a calendar notification, a phone message, an email message, or a text message” for the reasons given for claim 2. *Id.* (citing Ex. 1002 ¶ 88).

Based on the full record and for the reasons given above for claims 2 and 6, Petitioner persuades us, and we find, that Yook and Bauer teach or suggest the limitations of claim 7. Ex. 1002 ¶ 88. Also, for the reasons discussed for claim 2, we determine that one of ordinary skill in the art would have been motivated to combine Yook and Bauer in the manner argued by Petitioner with a reasonable expectation of success. *Id.* Patent Owner does not provide a response specifically for claim 7. *See* PO Resp.

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 7 of the '135 patent is unpatentable over Yook and Bauer. *Arctic Cat*, 876 F.3d at 1361.

6. Dependent Claim 8

Claim 8 depends from independent claim 6 and recites

wherein the instructions to modify the display of the annunciator window further comprise: instructions to display the changed state across a portion of the annunciator window; and instructions to mask at least one icon representing said device status, connectivity status, or messaging status, wherein the first display and the second display are on a common first screen of the multi-display device.

Ex. 1001, 30:56–64.

Petitioner argues that Yook discloses “instructions to modify the display of the annunciator window” for the reasons given for claim 6. Pet. 59. Petitioner also argues that one of ordinary skill in the art would have included instructions to “display the changed state across a portion of

the annunciator window” and “mask at least one icon representing said device status, connectivity status, or messaging status” for the reasons given for claim 3. *Id.* (citing Ex. 1002 ¶ 89). Petitioner further argues that Yook discloses “the first display and the second display are on a common first screen of the multi-display device” for the reasons given for claim 2. *Id.* (citing Ex. 1002 ¶ 90).

For the reasons given above for claim 6, Petitioner persuades us, and we find, that Yook discloses “instructions to modify the display of the annunciator window.” For the reasons given above for claim 3, Petitioner persuades us, and we determine, that one of ordinary skill in the art would have combined Yook and Bauer for “instructions to display the changed state across a portion of the annunciator window; and instructions to mask at least one icon representing said device status, connectivity status, or messaging status.” For the reasons given above for claim 2, Petitioner persuades us, and we find, that Yook discloses “wherein the first display and the second display are on a common first screen of the multi-display device.” Ex. 1002 ¶ 79; Ex. 1005, Fig. 3. Patent Owner does not provide response specifically for claim 8. *See* PO Resp.

Based on the full record, Petitioner persuades us, and we find, that Yook and Bauer teach or suggest the limitations of claim 8. Petitioner also persuades us, and we determine, that one of ordinary skill in the art would have combined Yook and Bauer in the manner argued by Petitioner with a reasonable expectation of success. Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 8 of the ’135 patent is unpatentable over Yook and Bauer. *Arctic Cat*, 876 F.3d at 1361.

F. Asserted Obviousness Based on Yook and Lee

1. Lee (Ex. 1008)

Lee describes a “mobile terminal including a plurality of touch screens.” Ex. 1008, code (57). Figure 6(a) of Lee is below reproduced.

FIG. 6

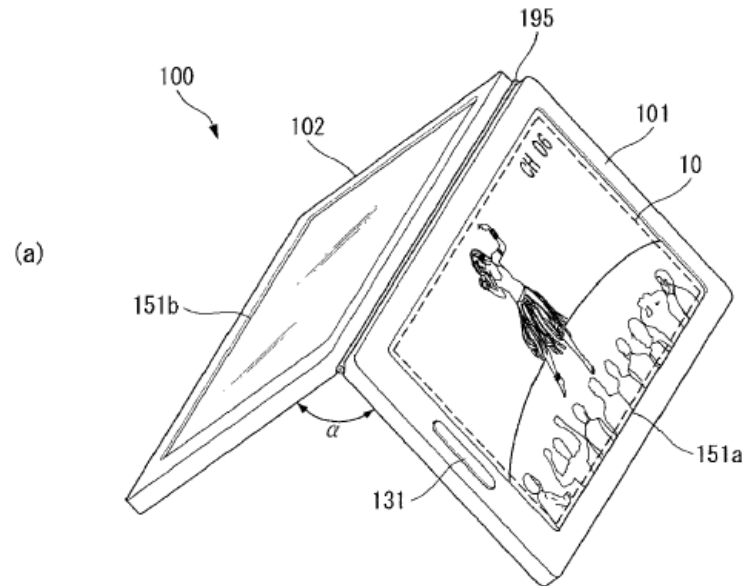


Figure 6(a) shows “exemplary images displayed on the mobile terminal.” Ex. 1008, 1:34–35. Mobile terminal 100 includes first body 101 that is connected to second body 102 through combining part 195, so that mobile terminal 100 can be folded. *Id.* at 7:5–13. First body 101 can have first touch screen 151a, and second body 102 can have second touch screen 151b. *Id.* at 7:29–31. Mobile terminal 100 can provide an application on first screen 151a, second screen 151b, or “first and second screens 151a and 151b as a single screen.” *Id.* at 8:37–48, Fig. 6(b). Mobile terminal 100 can also provide two different applications, one on each of first and second screens 151a and 151b. *Id.* at 8:49–64, Fig. 7(a).

2. *Independent Claims 1 and 6*

Petitioner argues that, to the extent that independent claims 1 and 6 require two physical screens, it would have been obvious to configure Yook in view of Lee for such features. Pet. 62 (citing Ex. 1002 ¶ 95). According to Petitioner, Lee’s terminal includes first and second bodies 101, 102 combined through combining part 195 and each body 101, 102 has touch screen 151a, 151b. *Id.* at 63–64 (citing Ex. 1002 ¶ 97; Ex. 1008, 7:5–13, 7:29–34, Figs. 3A, 3B, 4A, 4B). Petitioner also argues that bodies 101, 102 can be in a “closed status,” “half open status,” or “fully open status.” *Id.* at 64–65 (citing Ex. 1008, 7:21–28, Figs. 2A, 2B, 4A, 4B). Petitioner further argues that Lee “display[s] different applications on different displays, where each display is on a different screen.” *Id.* at 65 (citing Ex. 1002 ¶ 97; Ex. 1008, 8:37–64).

According to Petitioner, Lee, like Yook, discloses a mobile terminal with graphical user interfaces for various applications, and, thus, one of ordinary skill in the art would have been motivated to consider Lee’s dual screen feature when implementing Yook’s system or method. Pet. 63 (citing Ex. 1002 ¶ 96; Ex. 1008, code (57), 8:37–38), 65 (citing Ex. 1002 ¶ 98). Petitioner argues that one of ordinary skill in the art “would have found the dual screen feature beneficial because it would have increased the viewable area to users, allowing users to view text in larger font sizes, more or larger images, more information/detail, and/or interact with additional graphical user interfaces.” *Id.* at 65.

Petitioner also argues that both references recognize the benefits of expanding screen size on a mobile device. Pet. 65–66 (citing Ex. 1002 ¶ 98; Ex. 1005 ¶ 5; Ex. 1008, 1:18–20; Ex. 1009 ¶ 48). Petitioner further argues that Lee’s dual screen would have increased viewable area in the fully open

position without compromising portability, provided compactness in the fully closed position, and allowed viewing without holding the mobile terminal in the half open position. *Id.* at 66 (citing Ex. 1002 ¶ 99; Ex. 1008, 8:37–47, Figs. 2A, 2B, 3A, 3B, 4A, 4B, 6B).

As an example, Petitioner argues that one of ordinary skill in the art would have been motivated to implement Lee in Yook so that the combination “displays a ‘first application’ on a ‘first display’ on one of the screens and displays a ‘second application’ on a ‘second display’ on the other screen when the mobile terminal is placed in the fully open position, as this would have allowed the maximum viewable area for users.” Pet. 67–68 (citing Ex. 1002 ¶ 101; Ex. 1008, Figs. 4A, 4B). Petitioner also argues that the ordinarily skilled artisan would have been motivated to make the proposed combination so that “the status bar is displayed in a way similar to Yook’s teaching, i.e., displaying the status bar (including the status indicators/icons updated according to various status information) across ‘a first portion of the first display and a second portion of the second display’ without ‘degrad[ing] the display of information by the selected first and second desktops or applications.’” *Id.* at 68. Doing so, Petitioner argues, “would have allowed users to track various statuses associated with the mobile device and allowed additional icons indicating statuses to be displayed on the status bar across the larger viewable area comprising two screens.” *Id.* (citing Ex. 1002 ¶ 102).

Petitioner also argues that Lee discloses allowing a user to select between single and dual screen modes. Pet. 68 (citing Ex. 1008, 8:37–48, 12:27–37, Figs. 6(a), 6(b)). According to Petitioner, one of ordinary skill in the art would have been motivated to include the feature in Yook because “it would have allowed additional flexibility in operation, e.g., allowing ‘a

hands free display mode’ . . . where multiple displays are shown on a single screen[] . . . as taught in Yook.” *Id.* (citing Ex. 1002 ¶ 102). The proposed combination, Petitioner argues, discloses or suggests limitations regarding “the multi-display device” in “an open state” with first and second displays “facing in a same direction.” *Id.* at 68–69 (citing Ex. 1002 ¶ 103; Ex. 1008, 7:24–26, Figs. 4A, 4B).

Petitioner argues that one of ordinary skill in the art would have had the skills to implement Lee in Yook and a reasonable expectation of success in making the proposed combination. Pet. 67 (citing Ex. 1002 ¶ 100; Ex. 1009 ¶ 48, Figs. 6–8). In Petitioner’s view, the combination would have involved applying known technologies according to known methods to yield predictable results. *Id.*

We find that the cited portions of Lee disclose two physical screens (Ex. 1008, 7:5–13, 7:29–34, Figs. 2(a), 2(b), 3(a), 3(b), 4A, 4B) with different applications on different screens (*id.* at 7:31–33, 8:37–64) that can be in either open, half open, or closed status (*id.* at 7:21–28) with both screens facing in the same direction when fully open (*id.* at 7:24–26, Figs. 4A, 4B). The cited portions of the record support Petitioner’s declarant regarding what Lee teaches or suggests. Ex. 1002 ¶¶ 96, 97, 103, 104; Ex. 1008, code (57), 7:5–13, 7:21–34, 8:37–64, Figs. 2(a), 2(b), 3(a), 3(b), 4A, 4B.

We credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have been motivated to combine Yook and Lee in the manner argued for the reasons asserted, because the cited portions of the record support the testimony. Ex. 1002 ¶¶ 96, 98, 99, 101, 102; Ex. 1005 ¶ 5; Ex. 1008, code (57), 1:18–20, 7:24–26, 8:37–47, 12:27–37, Figs. 2(a), 2(b), 3(a), 3(b), 4A, 4B, 6(a), 6(b); Ex. 1009 ¶ 48. We also credit

Petitioner's testimonial evidence that there would have been a reasonable expectation of success in combining Yook with Lee. Ex. 1002 ¶ 100; Ex. 1009 ¶ 48, Figs. 6–8.

Patent Owner does not present a response specifically for the challenge to claims 1 and 6 based on Yook combined with Lee. *See* PO Resp. Patent Owner does present arguments for claims 1 and 6 in the challenge based on Yook alone; however, for the reasons discussed above, Petitioner persuades us by a preponderance of the evidence that claims 1 and 6 are unpatentable over Yook alone.

Weighing the underlying factual determinations, a preponderance of the evidence persuades us that claims 1 and 6 of the '135 patent are also unpatentable over Yook and Lee. *Arctic Cat*, 876 F.3d at 1361.

3. Dependent Claims 5 and 20

Petitioner argues that Yook discloses the limitations of dependent claims 5 and 20 with reference to its previous arguments. Pet. 69 (citing Ex. 1002 ¶ 105). For the reasons discussed above for the obviousness challenge based on Yook alone, we find that Yook discloses the additional limitations of claims 5 and 20. Patent Owner does not provide a response specifically for these claims. *See* PO Resp.

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claims 5 and 20 of the '135 patent are also unpatentable over Yook and Lee. *Arctic Cat*, 876 F.3d at 1361.

4. Dependent Claim 9

Petitioner argues that Yook discloses “wherein the instructions to configure the annunciator window further comprise instructions to display the annunciator window across adjacent upper or lower edges of the first and

second displays” with reference to its previous arguments for claim 9. Pet. 70. Petitioner also argues that Yook and Lee disclose or suggest “wherein the first display is on a first screen of the multi-display device, and wherein the second display is on a different second screen of the multi-display device,” because the proposed combination would have had two physical screens, each including a display for displaying an application for reasons given previously. *Id.* (citing Ex. 1002 ¶ 106).

a) Patent Owner’s Response

As summarized above for the challenge based on Yook alone, in Patent Owner’s view, Petitioner argues that Yook discloses devices with a single physical screen and, thus, cannot teach or suggest an annunciator window on two different physical screens. PO Resp. 20 (citing Ex. 2002 ¶ 81; Ex. 2004, 101:19–22, 103:22–25). Patent Owner also responds that Petitioner misrepresents its litigation position. *Id.* at 21–22 (citing Pet. 44; Ex. 1006, 31).

Patent Owner further responds that Petitioner does not explain how its proposed combination of Yook and Lee teaches or suggests an annunciator window displayed “across adjacent upper or lower edges” of two different screens. PO Resp. 22 (citing Pet. 70). Patent Owner argues that Petitioner never explains the proposed combination and, thus, fails to meet its burden. *Id.* at 22 (citing Ex. 2002 ¶¶ 82–90).

In particular, Patent Owner argues that, if Petitioner is asserting that Yook’s screen areas are displayed on both of Lee’s screens, then one of ordinary skill in the art would have understood that doing so would have resulted in Yook’s status bar being displayed on one screen, not both. PO Resp. 23–25 (citing Ex. 1005, Figs. 3, 4e; Ex. 1008, Fig. 6; Ex. 2002 ¶¶ 82–88). Patent Owner also argues that one of ordinary skill in the art would

have understood that “the placement of the status bar depends on how one might hold phones and how they may be used, so any display orientations or status bar positions not taught by Yook and Lee cannot be assumed to be obvious variants of those taught.” *Id.* at 25–26 (citing Ex. 2002 ¶ 101).

Patent Owner alternatively responds that, if Petitioner is asserting that Yook’s screen areas are displayed on one of Lee’s screens, then one of ordinary skill in the art would have understood that Yook’s status bar is not part of any screen area and would not be displayed, as confirmed by Petitioner’s declarant. PO Resp. 26 (citing Ex. 2002 ¶ 89; Ex. 2006, 46:20–47:1). Patent Owner argues that one of ordinary skill in the art would not have included a status bar in displaying Yook’s screen areas, because the status bar is not in the screen areas. *Id.* (citing Ex. 2002 ¶ 89). Patent Owner, thus, argues that Yook and Lee fail to teach or suggest a configuration resulting in a status bar extending across both screens. *Id.* at 27 (citing Ex. 2002 ¶¶ 82–90).

b) Petitioner’s Reply

Petitioner replies that, in its proposed combination, “each of Yook’s side-by-side displays is shown on one of Lee’s side-by-side screens” and Yook’s annunciator window would continue to extend across the top of the two displays when the displays are on different screens, thereby rendering obvious claim 9. Pet. Reply 9 (citing Pet. 62–69; Ex. 1014). Petitioner argues that Patent Owner does not dispute that Yook discloses an annunciator window extending across the upper edges of its two displays and does not dispute that it would have been obvious to have Yook’s displays on separate screens in view of Lee. *Id.* at 9–10 (citing Pet. 35–36, 39–40, 62; PO Resp. 22; Ex. 1001, Fig. 7).

Regarding Patent Owner’s argument that the combination is not adequately explained, Petitioner replies that “there is nothing more to explain because nothing changes in the Yook-Lee combination other than that Yook’s single two display areas are shown on two screens as disclosed by Lee.” Pet. Reply 10–11 (citing Pet. 62–64; PO Resp. 22; Ex. 1014; Ex. 1016, 27:22–29:18, 31:12–32:20). Petitioner argues that Yook’s “annunciator remains in the same place” but on different screens. *Id.* at 11 (citing Pet. 62–64). In Petitioner’s view, “[c]hanging the hardware on which the displays are shown does not otherwise change what is on the displays, how they are oriented with respect to one another, or where the annunciator is located on the displays.” *Id.*

Petitioner also replies that Patent Owner “conjures up and argues” other ways to combine Yook and Lee and ignores the combination presented in the Petition. Pet. Reply 12–13 (citing Pet. 65, 67; PO Resp. 23–25; Ex. 1014). Petitioner argues that Patent Owner “admits that ‘the placement of the status bar depends on how one might hold phones and how they may be used,’” and Yook discloses that its “phone may be held and used with the displays side-by-side so that the status bar extends across the top of the displays.” *Id.* at 13 (citing Pet. 20; PO Resp. 25). According to Petitioner, “[m]odifying Yook’s single screen with two displays in view of Lee to have two screens (one display on each screen), is a straightforward hardware swap that does not otherwise change what is shown on the displays or their orientation.” *Id.*

Petitioner further replies that Patent Owner argues nonsensically that Yook’s annunciator window would not be part of any screen and would not be displayed” in the proposed combination. Pet. Reply 13 (citing Pet. 36–37, 39–40; PO Resp. 26). Petitioner argues that Yook’s first and second

displays with annunciator window would be correspondingly rendered on the screens of the proposed combination. *Id.* at 14 (citing Pet. 15–16; 36–37; Ex. 1001, 4:11–14; Ex. 1005, Fig. 3; Ex. 1014).

Petitioner is unclear why Patent Owner believes that the annunciator window would be omitted in the proposed combination and contends that Patent Owner provides no support for removing Yook’s annunciator window when using the dual screens of the proposed combination. Pet. Reply 14–15 (citing PO Resp. 26; Ex. 2002 ¶ 89). According to Petitioner, Patent Owner’s argument conflates viewing areas 73, 76 in Yook’s Figure 7b that is not relied on by Petitioner. *Id.* at 15 (citing Pet. 21–22, 36–37; PO Resp. 26; Ex. 1005, Fig. 7b; Ex. 2002 ¶ 89).

Petitioner explains that it relies on Figures 1, 3, and 10 and Patent Owner does not dispute its mapping. Pet. Reply 16 (citing Pet. 21–22, 36–37). Petitioner argues that Patent Owner’s declarant agreed that “a display can have multiple windows on it at the same time.” *Id.* (citing Ex. 1016, 33:5–8). Petitioner, thus, argues that, “even if Yook’s annunciator window is not in the same ‘area’ as the application windows, they still share a ‘display.’” *Id.*

c) Patent Owner’s Sur-Reply

Patent Owner reiterates its argument that the display of Yook’s Figure 3 on Lee’s terminal would not have displayed a status bar across both physical screens, as required by the claim. PO Sur-reply 12 (citing PO Resp. 22–26; Ex. 1005, Fig. 3; Ex. 1008, 8:46–48, Figs. 6(b), 7).

Patent Owner also argues that “[t]he Reply presents an alternative, new theory where Yook’s single two display areas are shown on two screens as in Lee’s Figure 4A.” PO Sur-reply 13 (citing Pet. Reply 10–11). According to Patent Owner, Petitioner “ignores the fact that Lee Fig. 10

explicitly teaches that, in the mode of operation shown in Fig. 4A, the left screen is off (as denoted by the words ‘Touch Screen off’),” so that “nothing is displayed on that screen” and an annunciator window would not have been displayed across upper or lower edges of displays on two different physical screens.” *Id.* at 13–14 (citing Ex. 1008, Fig. 10(b)).

d) Petitioner Shows that Claim 9 is Unpatentable over Yook and Lee

As discussed above for claim 6 from which claim 9 depends, Petitioner persuades us that one of ordinary skill in the art would have combined Yook with Lee’s two physical screens so that the proposed combination “displays a ‘first application’ on a ‘first display’ on one of the screens and displays a ‘second application’ on a ‘second display’ on the other screen.” Pet. 67–68; Ex. 1002 ¶ 101; Ex. 1008, Figs. 4A, 4B.

Petitioner also persuades us for claim 6 that, in the proposed combination, “the status bar is displayed in a way similar to Yook’s teaching, i.e., displaying the status bar (including the status indicators/icons updated according to various status information) across ‘a first portion of the first display and a second portion of the second display’ without ‘degrad[ing] the display of information by the selected first and second desktops or applications.’” Pet. 68, 70; Ex. 1002 ¶ 106.

Petitioner also refers us to its arguments for claim 5. Pet. 43, 70. As discussed above for that claim, Petitioner persuades us, and we find, that Yook teaches or suggests an “annunciator window [that] is located across adjacent upper or lower edges of said first and second displays.” Ex. 1002 ¶ 68; Ex. 1005, Fig. 3. In view of our findings and determinations, Petitioner persuades us that Yook and Lee teach or suggest the limitations of claim 9 and that one of ordinary skill in the art would have combined these

references with a reasonable expectation of success. Ex. 1002 ¶¶ 96, 98, 99, 101, 102.

Regarding Patent Owner’s arguments that the proposed combination does not result in the subject matter of claim 9, Petitioner proposes modifying what is shown in Figure 3 of Yook so that Yook’s first and second applications are each displayed on the separate physical screens of Lee. Pet. 62–69; Pet. Reply 9. Petitioner does not modify the status bar shown in Figure 3 of Yook, and, thus, the status bar would still extend across the top portions of the first and second applications that have been modified to be on separate physical screens. Pet. 39–40, 43, 62–69; Pet. Reply 9. Patent Owner addresses other possible combinations of Yook and Lee, but not the one proposed, and clearly presented and argued, by Petitioner. PO Resp. 22–27; Ex. 2002 ¶¶ 82–90.

Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 9 of the ’135 patent is unpatentable over Yook and Lee. *Arctic Cat*, 876 F.3d at 1361.

5. *Dependent Claim 15*

Petitioner argues that Yook discloses the limitations of dependent claim 15 with reference to its previous arguments. Pet. 69 (citing Ex. 1002 ¶ 105).

a) Patent Owner’s Response and the Parties’ Reply Arguments

As summarized above, Patent Owner responds that Petitioner fails to show that Yook has an annunciator window that extends across the first and second displays “while in portrait mode” and that Yook only describes the embodiment of Figure 4e as a “portrait mode,” not any other embodiments. PO Resp. 29–31 (citing Pet. 45; Ex. 2002 ¶¶ 98–102; Ex. 1005 ¶ 55, Figs. 1, 3, 4, 5, 6, 8–13; Ex. 2004, 106:9–107:5). Patent Owner further argues that,

because Petitioner does not rely on Lee for claim 15, the proposed combination of Yook and Lee suffers the same deficiency. *Id.* at 29 (citing Pet. 69).

Patent Owner also responds that Petitioner’s obviousness argument does not address configuring the annunciator window to extend across both first and second displays in portrait mode. PO Resp. 32 (citing Ex. 2002 ¶¶ 99–101). Patent Owner argues that every embodiment in Yook and Lee shows a status bar oriented horizontally, not vertically as would be required to extend across two portrait mode displays and that one of ordinary skill in the art would not orient the status bar in such a way, because it would be difficult to read. *Id.* (citing Ex. 2002 ¶¶ 99–101).

Patent Owner also argues that, because one of ordinary skill in the art would need to consider different modes and how phones are held and used, “any display orientations or status bar positions not taught by Yook and Lee cannot be assumed to be obvious variants of those taught by Yook and Lee.” PO Resp. 22–33 (citing Ex. 2002 ¶ 101). Patent Owner, thus, argues that Yook and Lee would not have rendered obvious claim 15. *Id.* at 33. The parties’ reply arguments regarding claim 15 focus on Yook’s disclosure. Pet. Reply 17–23; PO Sur-reply 8–11.

b) Petitioner Shows that Claim 15 is Unpatentable over Yook and Lee

For the reasons discussed above for the challenge based on Yook alone, we find that Yook teaches or suggests the limitations of claim 15. Ex. 1002 ¶ 74; Ex. 1005 ¶ 55, Figs. 3, 4e, 10; Ex. 1016, 38:17–39:19. Also, for the reasons discussed above, if Yook fails to teach or suggest “first and second displays are both in a portrait mode,” we determine that one of ordinary skill in the art would have been motivated to modify Yook to have

displays in portrait mode with a reasonable expectation of success. Ex. 1002 ¶¶ 75, 76; Ex. 1005 ¶ 34

Further, for the reasons discussed above for claim 1, Petitioner persuades us that one of ordinary skill in the art would have modified Yook in view of Lee so that the combination “displays a ‘first application’ on a ‘first display’ on one of the screens and displays a ‘second application’ on a ‘second display’ on the other screen when the mobile terminal is placed in the fully open position.” Pet. 67–68 (citing Ex. 1002 ¶ 101; Ex. 1008, Figs. 4A, 4B).

Turning to Patent Owner’s arguments, as discussed above, we find Yook discloses an annunciator window extending across first and second displays, and we determine that the full record better supports Petitioner’s position that Yook’s displays would have been understood to be in portrait mode. Ex. 1002 ¶¶ 73, 74; Ex. 1016, 38:17–39:19. We alternatively determine that Petitioner’s proposed modification would result in an annunciator window extending across first and second displays “in a portrait mode.” Pet. 47–48.

Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 15 of the ’135 patent is unpatentable over Yook and Lee. *Arctic Cat*, 876 F.3d at 1361.

G. Asserted Obviousness Based on Yook, Lee, and Bauer

1. Dependent Claim 2

Petitioner argues with reference to previous contentions that, to the extent claims 1 and 6 require two physical screens, the proposed combination of Yook and Lee would have rendered obvious such features,

and that its analysis for the proposed combination of Yook and Bauer likewise applies. Pet. 70–71 (citing Ex. 1002 ¶ 107).

Petitioner also argues that “a user may select a single screen mode to allow ‘a hands free display mode,’ where multiple displays may be shown on a single screen similar to as taught in Yook” and, thus, Yook and Bauer would have rendered obvious claim 2. Pet. 71 (citing Ex. 1002 ¶ 108). In particular, Petitioner contends that Lee teaches a mobile device with two physical screens but one screen may be chosen at a given time. Pet. 71–72 (citing Ex. 1002 ¶¶ 109; Ex. 1008, 8:37–48, 12:27–37, Figs. 6(a), 6(b)). Petitioner also contends that Yook discloses the use of multiple displays on a common screen. *Id.* at 72 (citing Pet. 12–39; Ex. 1005 ¶¶ 36, 37).

Petitioner further contends that, for the same reasons discussed in the challenges based on (1) Yook and Bauer and (2) Yook and Lee, one of ordinary skill in the art would have been motivated to configure the Yook-Bauer device to have multiple screens and optionally use a single screen in view of Lee to display information in multiple displays on that single screen as taught by Yook. Pet. 72 (citing Ex. 1002 ¶ 110). According to Petitioner, the proposed combination would have provided multiple displays and allowed hands-free operation, thereby disclosing or rendering obvious the subject matter of claim 2. *Id.* at 72 (citing Pet. 62–69; Ex. 1002 ¶ 110). Petitioner argues that it would have been obvious to configure the Yook-Bauer device to include two different screens in view of Lee, and that one of ordinary skill in the art would have been motivated to operate the proposed combination using one of the screens for, as an example, hands-free mode,

or dual screen mode to provide, for example, increased viewable area.
Pet. 73 (citing Ex. 1002 ¶ 111).

For the reasons discussed above for the challenge to claim 2 based on Yook and Bauer, Petitioner persuades us that Bauer teaches or suggests the limitations of claim 2. Ex. 1002 ¶¶ 81, 82; Ex. 1007, 4:29–40, 4:52–58, 5:3–38, 6:14–29, 6:33–42, 6:47–61, 7:22–27, 11:50–12:11, Figs. 1, 2A, 4. Petitioner also persuades us that one of ordinary skill in the art would have been motivated to combine Yook, Lee, and Bauer in the manner asserted with a reasonable expectation of success. Ex. 1002 ¶¶ 79–85, 110. Patent Owner does not provide a response specifically for claim 2. *See* PO Resp.

Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 2 of the ’135 patent is unpatentable over Yook, Lee, and Bauer. *Arctic Cat*, 876 F.3d at 1361.

2. *Dependent Claim 3*

Petitioner argues that Yook and Bauer would have rendered obvious claim 3 and, to the extent that claim 1 requires two physical screens, Yook and Lee would have rendered obvious such screens. Pet. 70–71 (citing *id.* at 50–69). According to Petitioner, for reasons previously presented, “it would have been obvious in light of Lee’s teachings to configure the Yook-Bauer device to include two different screens.” *Id.* at 73.

Petitioner also argues that the analysis of the Yook and Lee combination applies likewise to the Yook and Bauer combination. Pet. 72 (citing Ex. 1005 ¶ 107). In the challenge to claim 3 based on Yook and Bauer, Petitioner argues that, for the reasons given for claim 2, Yook and Bauer disclose or would have rendered obvious “wherein modifying the display of the annunciator window further includes: displaying the changed state across a portion of the annunciator window; and masking at least one

icon representing the device status, connectivity status, or messaging status.” Pet. 57 (citing Ex. 1002 ¶¶ 86–87), 73. For the remaining limitations of claim 3, Petitioner refers to its arguments for claim 9. *Id.* at 57–58 (citing Ex. 1002 ¶ 87). Petitioner presents additional arguments for claim 3 together with its arguments for claim 2. *Id.* at 70–73.

a) Patent Owner’s Response and the Parties’ Reply Arguments

Patent Owner responds with reference to previous arguments that Petitioner fails to establish that Yook and Lee teach or suggest “an annunciator window that extends across displays on two different physical screens,” because one of ordinary skill in the art would have understood that (1) displaying Yook’s screen areas on both of Lee’s screens would result in the alleged annunciator window being displayed on only one, not both, of Lee’s screens or (2) displaying each of Yook’s screen areas on one of Lee’s screens would result in the alleged annunciator window not being displayed. PO Resp. 28 (citing Ex. 2002 ¶¶ 92–93).

Patent Owner also responds that Bauer is relied on only for “displaying preview(s) of received SMS and/or email messages,” not for two or more physical screens. PO Resp. 28 (citing Pet. 54–55). Patent Owner argues that Bauer discloses only a single physical screen 104, and, thus, the proposed combination would not have an annunciator window displayed across displays on two different physical screens. *Id.* (citing Ex. 2002 ¶¶ 91–97).

Petitioner replies that Patent Owner makes similar arguments for claim 9, and those arguments are unavailing for the reasons previously asserted and above summarized. Pet. Reply 17 (citing Pet. 70–73; PO

Resp. 27–28; Pet. Reply 8–17). Patent Owner replies that claim 3 is patentable for the same reasons asserted for claim 9. PO Sur-reply 15.

b) Petitioner Shows that Claim 3 is Unpatentable over Yook, Lee, and Bauer

For the reasons given for the challenge to claim 2 based on Yook and Bauer, we find that Bauer teaches or suggests “wherein modifying the display of the annunciator window further includes: displaying the changed state across a portion of the annunciator window,” as recited by claim 3. Ex. 1007, 4:29–40, 4:52–58, 5:3–38, 6:14–29, 6:33–42, 6:47–61, 7:22–27, 11:50–12:11, Figs. 1, 2A, 4. We also find that Bauer teaches or suggests “masking at least one icon representing the device status, connectivity status, or messaging status,” as recited by claim 3. Ex. 1007, 6:14–29, 6:33–42, Fig. 2A.

For the reasons given above for the challenge based on Yook and Bauer, we determine that one of ordinary skill in the art would have combined Yook and Bauer so as “to implement the text preview features associated with the received messages (including providing preview of the message content and temporarily superimposing the previewed text over other status indicators/icons)” with a reasonable expectation of success. Ex. 1002 ¶¶ 79–85. Further, for the reasons given above for the challenge to claim 1 based on Yook and Lee, we determine that one of ordinary skill in the art would have combined Yook and Lee so that “the first display is on a first screen of the multi-display device” and “the second display is on a different second screen of the multi-display device,” as required by claim 3. Ex. 1002 ¶¶ 96, 98, 99, 101, 102.

Regarding Patent Owner’s arguments, for the reasons given above for the challenge to claim 9 based on Yook combined with Lee, those arguments

do not show that Petitioner fails to carry its burden of showing that claim 9 is unpatentable. As discussed above, Petitioner proposes modifying what is shown in Figure 3 of Yook so that Yook's first and second applications are each displayed on the separate physical screens of Lee and does not modify Yook's status bar. Pet. 62–69; Pet. Reply 9. The status bar would, thus, extend across the top portions of the first and second applications that have been modified to be on separate physical screens. Pet. 39–40, 43, 62–69; Pet. Reply 9. Patent Owner's arguments address other possible combinations of Yook and Lee, not the one proposed. PO Resp. 22–27; Ex. 2002 ¶¶ 82–90.

Moreover, Petitioner's showing for claim 3 also supports our determination that claim 1 is unpatentable even under Patent Owner's proposed interpretation of “displaying information selectively” to mean “displays information in a way that involves intentionally choosing some information to display and not others.” PO Resp. 10; Tr. 21:15–21 (Patent Owner's counsel agreeing that the “masking” of claim 3 is “a form of choosing”).

Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 3 of the '135 patent is unpatentable over Yook, Lee, and Bauer. *Arctic Cat*, 876 F.3d at 1361.

3. Dependent Claims 7 and 8

Petitioner presents arguments for claims 7 and 8 together with its arguments for claim 2. Pet. 70–73.

For the reasons discussed above for the challenge to claims 7 and 8 based on Yook and Bauer, Petitioner persuades us that Bauer teaches or suggests the limitations of claims 7 and 8. Ex. 1002 ¶¶ 79, 88; Ex. 1005, Fig. 3. Petitioner also persuades us that one of ordinary skill in the art would

have been motivated to combine Yook, Lee, and Bauer in the manner asserted with a reasonable expectation of success. Ex. 1002 ¶¶ 79–85, 110. Patent Owner does not provide a response specifically for claims 7 and 8. *See* PO Resp.

Weighing our underlying factual determinations, a preponderance of the evidence persuades us that claims 7 and 8 of the '135 patent are unpatentable over Yook, Lee, and Bauer. *Arctic Cat*, 876 F.3d at 1361.

4. *Dependent Claim 16*

Claim 16 depends from claim 3 and recites “further comprising a hinge configured to connect the first screen with the second screen.” Ex. 1001, 32:30–31. Petitioner argues that Lee discloses a hinge to connect separate screens. Pet. 73–74 (citing Ex. 1008, 14:22–25). Petitioner also argues that one of ordinary skill in the art would have been motivated to configure the Yook-Bauer-Lee device so that its two screens are connected by one or more hinges “to facilitate efficient and user-friendly use of the multiple display device” consistent with Lee’s disclosure. *Id.* at 74 (citing Ex. 1002 ¶ 112; Ex. 1008, 7:21–28, 14:22–25, Figs. 2(a), 2(b), 3(a), 3(b), 4A, 4B). Petitioner further argues that there would have been a reasonable expectation of success in making the proposed combination and would have involved the application of known technologies according to known methods to yield a predictable result. *Id.* at 74–75 (citing Ex. 1002 ¶ 113; Ex. 1009 ¶ 28).

We find that the portions of Lee cited by Petitioner teaches or suggests the limitations of claim 16. Ex. 1008, 14:22–25. We also credit Petitioner’s testimonial evidence that one of ordinary skill in the art would have combined Yook, Lee, and Bauer in the manner argued by Petitioner for the reasons asserted by Petitioner with a reasonable expectation of success,

because the cited portions of the record support the testimony. Ex. 1002 ¶¶ 112, 113; Ex. 1008, 7:21–28, 14:22–25, Figs. 2(a), 2(b), 3(a), 3(b), 4A, 4B; Ex. 1009 ¶ 28. Patent Owner does not provide a response specifically for claim 16. *See* PO Resp.

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 16 of the '135 patent is unpatentable over Yook, Lee, and Bauer. *Arctic Cat*, 876 F.3d at 1361.

5. *Dependent Claim 19*

Petitioner argues that Yook and Bauer disclose or suggest the limitations of claim 19 for the reasons previously asserted. Pet. 76 (citing *id.* at 50–62). Petitioner also argues that one of ordinary skill in the art would have been motivated to implement similar features in the proposed combination of Yook, Bauer, and Lee for the reasons previously asserted “given that Lee’s teachings associated with implementing separate screen features would not have affected [the] rationale for modifying the Yook-Bauer combination’s teachings relevant to the features discussed above for claim 19.” *Id.* (citing *id.* at 50–62; Ex. 1005 ¶ 114).

For the reasons discussed above for the challenge to claim 19 based on Yook and Bauer, Petitioner persuades us, and we find, that Yook and Bauer teach or suggest the limitations of claim 19. Ex. 1005, Fig. 3; Ex. 1007, Fig. 1. Petitioner also persuades us, and we determine, that one of ordinary skill in the art would have combined Yook, Lee, and Bauer in the manner argued with a reasonable expectation of success. Ex. 1002 ¶¶ 28–34, 91–94, 114. Patent Owner does not provide a response specifically for claim 19. *See* PO Resp.

Based on the full record, weighing our underlying factual determinations, a preponderance of the evidence persuades us that claim 19 of the '135 patent is unpatentable over Yook, Lee, and Bauer. *Arctic Cat*, 876 F.3d at 1361.

III. CONCLUSION²

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 5, 6, 9, 15, 20	103(a)	Yook	1, 5, 6, 15, 20	9
2, 3, 7, 8, 19	103(a)	Yook, Bauer	2, 7, 8, 19	3
1, 5, 6, 9, 15, 20	103(a)	Yook, Lee	1, 5, 6, 9, 15, 20	
2, 3, 7, 8, 16, 19	103(a)	Yook, Bauer, Lee	2, 3, 7, 8, 16, 19	
Overall Outcome			1–3, 5–9, 15, 16, 19, 20	

² Should Patent Owner wish to pursue amendment of the challenged claim 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).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–3, 5–9, 15, 16, 19, and 20 of U.S. Patent No. 9,141,135 B2 have been shown, by a preponderance of the evidence, to be unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, the 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.

IPR2025-00059
Patent 9,141,135 B2

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