

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MOTOROLA MOBILITY LLC and GOOGLE LLC
Petitioner,

v.

MULTIFOLD INTERNATIONAL INCORPORATED PTE. LTD.,
Patent Owner.

IPR2025-00040
Patent 9,134,756 B2

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

MURPHY, *Administrative Patent Judge.*

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

I. INTRODUCTION

A. *Background and Summary*

Motorola Mobility LLC and Google LLC (collectively “Petitioner”) filed a Petition pursuant to 35 U.S.C. § 311 requesting institution of *inter partes* review of claims 1–9 of U.S. Patent No. 9,134,756 B2 (Ex. 1001, “the ’756 patent”). Paper 1 (“Pet.”). Multifold International Incorporated Pte. Ltd. (“Patent Owner”) timely filed a Patent Owner Preliminary Response. Paper 7. On May 21, 2025, we instituted *inter partes* review of claims 1–9 pursuant to 35 U.S.C. § 314 based on the challenges in the Petition. Paper 10. Subsequent to institution, Patent Owner filed a Response. Paper 15 (“Resp.”). Petitioner filed a Reply, and Patent Owner filed a Sur-Reply. Paper 19 (“Reply”); Paper 22 (“Sur-Reply”).

We have jurisdiction under 35 U.S.C. § 6. This is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of claims 1–9 of the ’756 patent. We conclude Petitioner has demonstrated by a preponderance of the evidence that claims 1–9 of the ’756 patent are unpatentable.

B. *Real Parties in Interest and Related Matters*

Motorola Mobility LLC and Google LLC identify themselves as real parties in interest. Pet. 1–2. Petitioner notes “Motorola Mobility LLC is a direct, wholly owned subsidiary of Motorola Mobility Holdings LLC, which is indirectly a wholly-owned subsidiary of Lenovo Group Ltd.,” both of which are not real parties-in-interest to this proceeding. *Id.* at 2 n.1. Petitioner also notes “Google LLC is a subsidiary of XXVI Holdings Inc., which is a subsidiary of Alphabet Inc.,” and “XXVI Holdings Inc. and Alphabet Inc. are not real parties-in-interest to this proceeding.” *Id.* n.2. Patent Owner, Multifold International Incorporated Pte. Ltd., identifies itself as a real party in interest. Paper 5, 1.

The parties identify *Multifold Int'l Incorporated Pte. Ltd. v. Motorola Mobility LLC*, No. 1:23-CV-1173-UNA (D. Del.) (filed October 17, 2023) and *Multifold Int'l Incorporated Pte. Ltd. v. Google LLC*, No. 1:23-CV-01323-UNA (D. Del.) (filed November 17, 2023) as related matters. Pet. 2; Paper 5, 1.

Petitioner notes “[t]he ’756 patent was previously asserted in *Multifold International Incorporated Pte. Ltd. v. Samsung Electronics Co., Ltd. et al*, Case No. 2:21-cv-00371 (E.D. Tex.), which was dismissed on June 2, 2022, with the court’s grant of a joint motion to dismiss.” Pet. 2–3.

C. The ’756 Patent

The ’756 patent, titled “Dual Screen Application Visual Indicator,” issued on September 15, 2015 from a patent application filed on September 28, 2011 that claims priority to five provisional applications, the earliest of which was filed on October 1, 2010. Ex. 1001, codes (22), (45), (54), (60), 1:7–16.

Figure 1B of the ’756 patent is reproduced below:

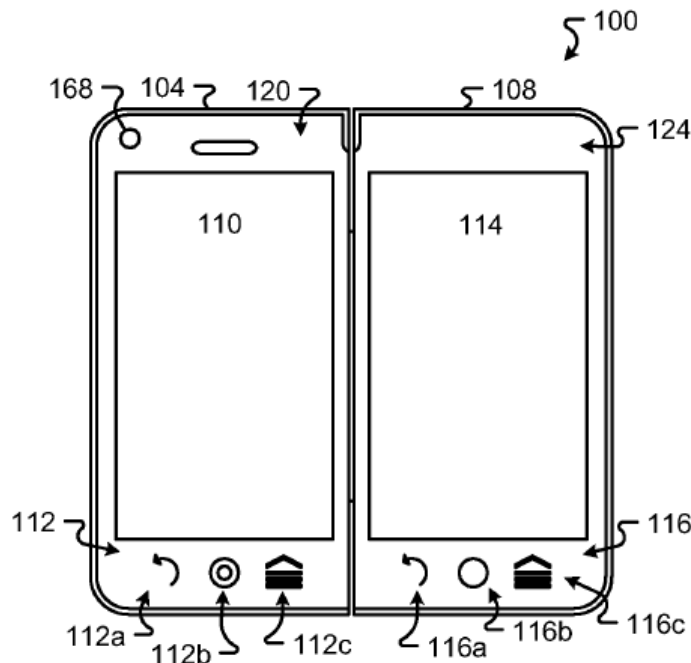


FIG. 1B

Figure 1B depicts user device 100, such as a cellular telephone, with primary screen 104 and secondary screen 108. Ex. 1001, 6:58–59, 8:38–39. Device 100 “can be positioned in a number of different ways each of which provides different functionality to a user.” *Id.* at 8:48–53.¹ Screens 104 and 108 can recognize a user’s gesture inputs, and a hinge connects screens 104 and 108 together. *Id.* at 9:23–39, 16:6–18:56, Figs. 1C, 4A–4H. Primary screen 104 includes touch sensitive display 110 and configurable area 112, and secondary screen 108 similarly includes touch sensitive display 114 and configurable area 116. *Id.* at 8:56–67. Touch sensitive displays 110, 114 can display information. *Id.* at 8:56–60. Configurable areas 112, 116 are configured for specific inputs when touched and can include, for example, 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 8:63–9:7.

The ’756 patent further describes “[a] determined number of desktops and/or running applications can be selectively displayed on dual screen displays conditioned upon inputs received and the state of the device.” *Id.* at Abstract (code 57); *see also id.* at 4:28–32 (“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.”). The ’756 patent defines a “screen” or “touch screen” as “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 user input.” *Id.* at 4:36–39. “The term ‘display’ refers to a portion of one or more screens used to display the output of a

¹ Quotations from patent documents may omit or de-emphasize bold numerals.

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 5:1–6.

For example, a first desktop or application may be displayed on primary screen display 104, 110, and a second desktop or application may be displayed on secondary screen display 108, 114, as shown below in Figure 10A:

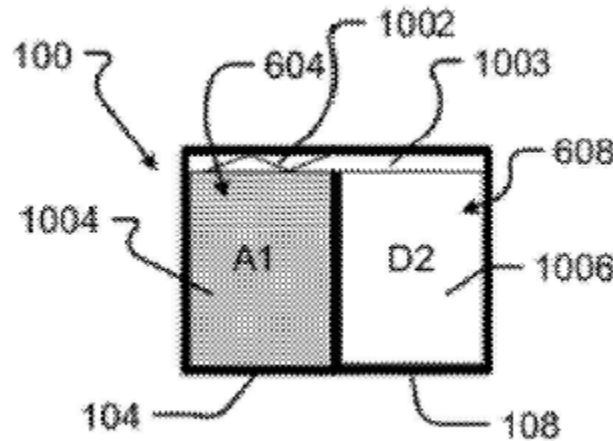
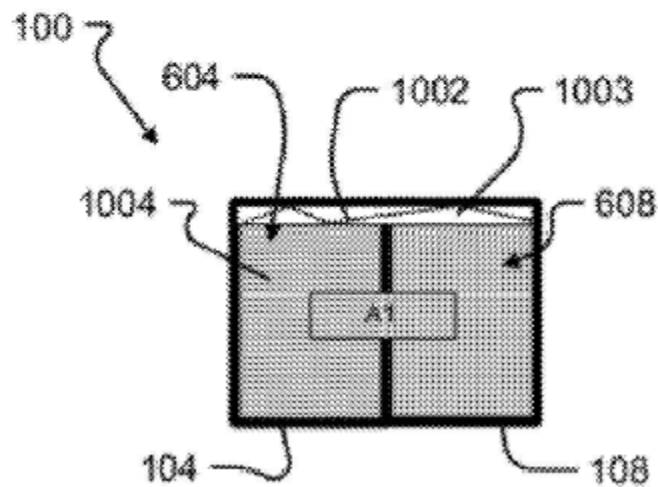
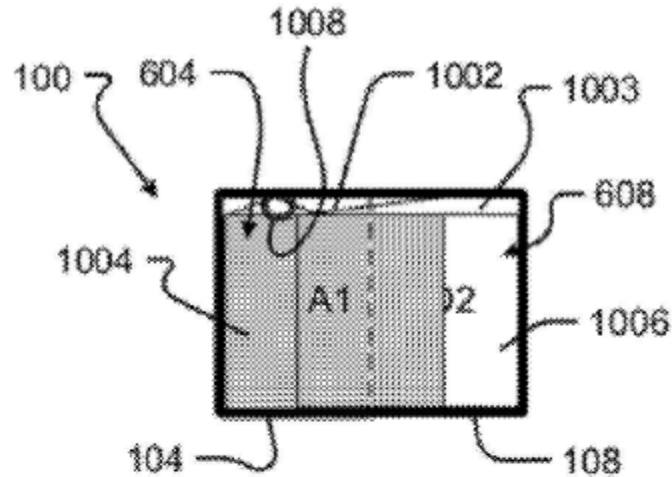


FIG. 10A

Id. at 31:16–23. In Figure 10A above, indicator 1002 in annunciator window 1003 is a “wave shape” and “signifies that a user can maximize the application A1 in its current minimized state.” *Id.* at 31:23–31. In response to a user gesture, “such as a tap or long hold gesture on the visual indicator 1002,” application A1 may be “maximized for viewing on both the first and second screens,” as depicted below in Figures 10B and 10C:



Id. at 31:43–56. In Figure 10B, above, user gesture 1008 causes application A1 to expand onto secondary screen display 108, and Figure 10C shows application A1 “now fully occupies both the primary and secondary screens.” *Id.*

D. Illustrative Claim

Petitioner challenges claims 1–9 of the '756 patent. Claims 1 and 7 are the challenged independent claims. Claims 2–6 depend, directly or indirectly, from claim 1. Claims 8 and 9 each depend directly from claim 7. Claim 1, reproduced below with bracketed identifiers as used in the Petition, illustrates the claimed subject matter:

1[P] A method of displaying a plurality of desktops and/or applications, each having at least one window, on a multi-display device, comprising:

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

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

1[C] receiving, by the processor, a third input that represents an instruction to maximize a selected one of the first or second desktops or applications resulting in the selected one being displayed on both of the first and second displays; and displaying, by the processor, the selected one of the first or second desktops or applications in a maximized condition.

Ex. 1001, 35:23–45.

E. Prior Art and Asserted Grounds

Petitioner asserts claims 1–9 of the '756 patent are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–4, 6–9	102(a) ²	Yook ³
1–9	103(a)	Yook
1–3, 6, 7, 9	102(b)	Lee ⁴
1–3, 6, 7, 9	103(a)	Lee
1–3, 6, 7, 9	102(e)	Aguilar ⁵
1–3, 6, 7, 9	103(a)	Aguilar
1–3, 6, 7, 9	102(b)	Purcell ⁶
1–9	103(a)	Purcell, Yook

Petitioner relies on the declaration of Dr. Jeffrey J. Rodriguez, Ph.D. (Ex. 1003) in support of the Petition. Patent Owner relies on the declaration of Dr. Rajeev Surati, Ph.D. (Ex. 2002) in support of its Response.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art (“POSITA”) “would have had an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of experience in the field of user interface technologies, including e.g., graphical user interface technologies, or a related field.” Pet. 20–21 (citing Ex. 1003 ¶ 42).

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), includes revisions to 35 U.S.C. §§ 102 and 103 that became effective after the filing of the application that led to the challenged patent. Hence, this *inter partes* review is governed by the pre-AIA provisions of 35 U.S.C. §§ 102 and 103.

³ US 2010/0248788 A1, filed Mar. 22, 2010, published Sept. 30, 2010 to Yook et al. (“Yook”) (Ex. 1004).

⁴ US 2007/0085759 A1, filed Oct. 12, 2006, published Apr. 19, 2007 to Lee et al. (“Lee”) (Ex. 1005).

⁵ US Patent No. 8,677,284 B2, filed Nov. 4, 2009, issued Mar. 18, 2014 to Aguilar (“Aguilar”) (Ex. 1006).

⁶ US 2007/0024645 A1, filed May 19, 2006, published Feb. 1, 2007 to Purcell et al. (“Purcell”) (Ex. 1007).

“Patent Owner applies Petitioner’s definition that a ‘POSITA at the time of the alleged invention would have had an undergraduate degree in electrical engineering, computer engineering, computer science or a related field along with two years of experience in the field of user interface technologies, including e.g., graphical user interface technologies, or a related field’.” Resp. 11–12 (citing Pet. 20–21).

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986)). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.” *Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007). There is uncontested evidence in the record before us that reflects the knowledge and experience of a POSITA.

We adopt the parties’ agreed level of ordinary skill in the art, which is consistent with the description in the ’756 patent and the prior art of record.

B. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc). Claim terms “are generally given their ordinary and customary

meaning” as understood by a POSITA at the time of the invention. *Id.* When construing a disputed claim limitation, “we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner contends the “specification of the ’756 patent includes definitions for many of the terms that appear in the Challenged Claims.” Pet. 21 (citing Ex. 1001, 3:44–6:39). Petitioner, therefore, applies “the definitions set forth in the ’756 patent” with the qualification that such application is “[f]or purposes of this proceeding only.” *Id.*

“Patent Owner interprets all claim terms in accordance with their plain and ordinary meaning consistent with the specification and file history of the ’756 Patent.” Resp. 11 (citing *Phillips*, 415 F.3d at 1313-1318; 83 Fed. Reg. 51,340, 51,342 (Oct. 11, 2018)). Patent Owner further states “that construction of claim terms is not necessary to” resolve the disputes raised by the parties in this proceeding. *Id.* (citing *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011)).

Neither party has offered any claim construction arguments. We determine that construction of claim terms is not necessary to resolve the disputes raised by the parties in this proceeding. *See, e.g., Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘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)).

C. Legal Standards

“In an inter partes review, the burden of persuasion is on the petitioner to prove ‘unpatentability by a preponderance of the evidence,’ 35 U.S.C. § 316(e), and that burden never shifts to the patentee.” *In re Magnum Oil Tools Int’l Ltd.*, 829 F.3d 1364, 1375 (Fed. Cir. 2016) (quoting *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015)); *see also Aqua Products, Inc. v. Matal*, 872 F.3d 1290, 1306 (Fed. Cir. 2017 (en banc (quoting *Magnum Oil*))).

Anticipation under 35 U.S.C. § 102 requires “the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.” *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010); *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). To anticipate a patent claim under 35 U.S.C. § 102, “a reference must describe, either expressly or inherently, each and every claim limitation and enable one of skill in the art to practice an embodiment of the claimed invention without undue experimentation.” *American Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1341 (Fed. Cir. 2011) (citing *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009)). “[E]xtrinsic evidence may be considered when it is used to explain, but not expand, the meaning of a reference.” *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991) (citing *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576–77 (Fed. Cir. 1991)).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). Obviousness is resolved based

on 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 ordinary skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.⁷ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). A party who petitions the Board for a determination of obviousness must show that “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)).

We assess Petitioner’s evidence and argument according to the above-referenced standards. For the reasons given below, we determine the Petition establishes by a preponderance of the evidence that claims 1–9 of the ’756 patent are unpatentable as anticipated and obvious over Yook (Grounds 1 and 2), Lee (Grounds 3 and 4), Aguilar (Grounds 5 and 6), Purcell (Ground 7), and Purcell in view of Yook (Ground 8). We begin by addressing independent claims 1 and 7.

D. The Petition Establishes the Unpatentability of Claims 1 and 7

The Petition contends that independent claims 1 (method) and 7 (computer-readable medium) are unpatentable (Grounds 1–8). The Petition provides detailed arguments and evidence, including the declaration testimony of Dr. Rodriguez, to explain why Yook (Grounds 1 and 2), Lee (Grounds 3 and 4), Aguilar (Grounds 5 and 6), Purcell (Ground 7), and Purcell in view of Yook (Ground 8) anticipate and render obvious claims 1 and 7. Pet. 21–32, 37–42, 44–52, 54–66, 68–72, 74–79,

⁷ Neither party presents secondary consideration evidence.

81–86 (citing Ex. 1003 ¶¶ 60–77, 90–91, 100–105, 113–125, 133, 139–153, 160–161, 167–169, 176–185, 192, 198–205). We have reviewed the cited evidence in detail, including in our Institution Decision, and we determine the Petition establishes by a preponderance of the evidence that Yook (Grounds 1 and 2), Lee (Grounds 3 and 4), Aguilar (Grounds 5 and 6), Purcell (Ground 7), and Purcell-Yook (Ground 8) anticipate and render obvious claims 1 and 7 of the ’756 patent for the reasons stated in the Petition.

For claims 1 and 7, Patent Owner argues:

The Petition does not identify with particularity evidence that “*displaying, by the processor, the selected first and second desktops or applications on the first and second displays*” is anticipated or obvious (All Grounds).

Resp. 12 (emphasis added); *see also id.* at 13–17 (citing 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(4); *Apple Inc. v. MPH Technologies Oy*, 2022 WL 4103286 (Fed. Cir. Sept. 8, 2022)). Patent Owner quotes the claim language recited in the last element of limitation 1[B] (hereafter “the *displaying* element”), because the text of the *displaying* element does not appear in the Petition sub-heading addressed to limitation 1[B].⁸ Compare Pet. 27 (sub-heading 1[B]) with Resp. 12–13 (claim 1, blue and black font). Petitioner represents that the omission was due to “an obvious typographical error” when the claim language was “copied and pasted” into the Petition sub-heading for limitation 1[B]. Reply 1. Based on the typographical error in the sub-heading, Patent Owner argues that: (i) the Petition’s mapping of Yook, Lee, Aguilar, and Purcell onto limitation 1[B] “omits” the *displaying* element, i.e. omits mapping the prior art disclosures displaying two

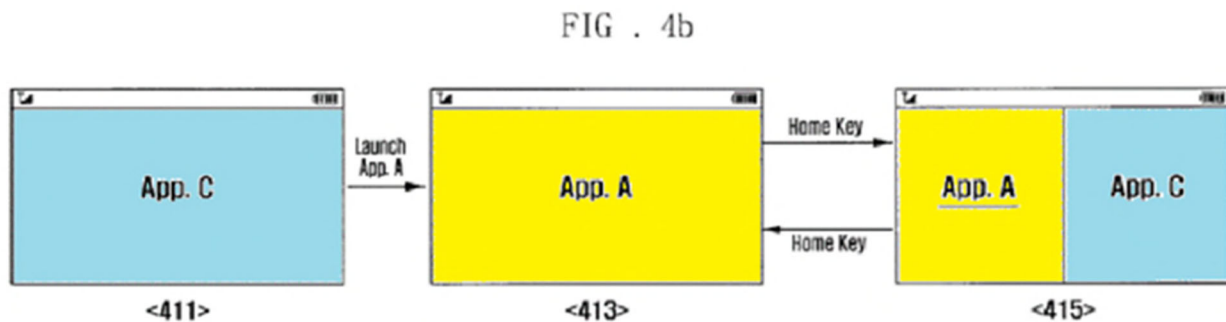
⁸ A similar claim element is recited in limitation 7[B], for which the Petition cross-references its argument and evidence addressed to limitation 1[B]. *See, e.g.*, Pet. 38. There is no omission in the Petition sub-heading for claim 7. Reply 2.

applications on two displays; (ii) the “entire petition fails to address how any reference anticipates or renders the [*displaying* element] of claim 1 obvious;” and (iii) “Petitioners thus failed to address the [*displaying* element] of claim 1 entirely.” Resp. 14–15.

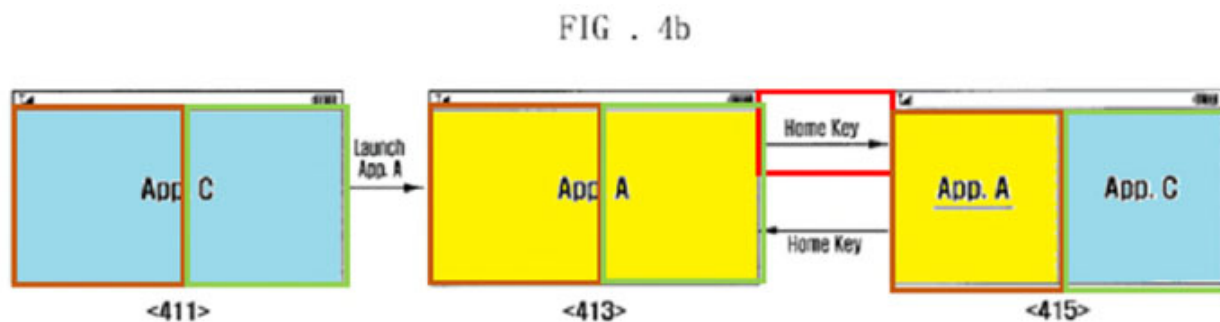
We disagree with Patent Owner’s argument because the Petition presents argument and evidence that substantively demonstrates, with clarity and particularity, how and why each reference discloses, teaches, suggests, or otherwise renders obvious the *displaying* element recited in limitation 1[B]. We agree with Petitioner that “Patent Owner neglects to address the *actual substance* of the Petition, which clearly addresses this limitation with respect to each reference.” Reply 1–2. The Petition addresses in detail how each asserted reference discloses displaying two applications on two separate displays in accordance with the *displaying* element, by presenting multiple annotated figures from Yook, Lee, Aguilar, and Purcell. Pet. 27–30, 47–50, 62–63, 77–78. The Petition also cites and quotes the accompanying descriptions for the annotated figures from each prior art reference as well as explanatory expert opinion testimony from Dr. Rodriguez. *Id.* (citing Rodriguez Decl. Ex. 1003 ¶¶ 70–74, 119–122, 149–150, 182–183; Yook Ex. 1004 ¶¶ 47, 51, 58, 96–101, Figs. 4b, 4d, 5; Lee Ex. 1005 ¶¶ 48–53, Figs. 4, 6, 9, 10; Aguilar Ex. 1006, 7:1–7, Figs. 5–5d; Purcell Ex. 1007 ¶ 16, Fig. 2). We provide detailed examples below of how the Petition maps Yook and Lee onto the *displaying* element of limitation 1[B] in compliance with the particularity requirement of 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(4). Although we do not provide detailed examples directed to Aguilar and Purcell, we find the Petition maps Aguilar and Purcell onto the *displaying* element of limitation 1[B] in compliance with the particularity requirement of 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.104(b)(4).

1. The Petition Maps Yook onto the Displaying Element

The Petition first explains how Yook discloses a “split-screen management program” that allows a user of the Yook device “to display multiple applications at once,” including use of “a divided display to show two open applications across both displays” (415), as depicted below in annotated Yook Figure 4b from the Petition:



Pet. 13–14 (citing Ex. 1003 ¶ 52; Ex. 1004 ¶¶ 46–47 (“the mobile terminal can simultaneously present the two functional view areas on the divided screen areas”), 51, Fig. 4b). The divided screen area depicting two open applications across both displays in annotated Figure 4b is element 415. For limitation 1[B], the Petition specifically identifies Yook Figure 4b as disclosing “simultaneously output[ting] two functional view areas App.C and App.A,” as further depicted below in annotated Yook Figure 4b from the Petition:



Id. at 27–28 (citing Ex. 1003 ¶¶ 70–71; Ex. 1004 ¶¶ 47, Fig. 4b). The Petition highlights the “Home Key” in annotated Figure 4b. The Petition makes clear that: “Yook’s device utilizes a split-screen mode for two applications in which an application (*App.A*) is *revealed on the first display* (orange box);” and “[i]n response to receiving the input from touching the ‘Home’ key, the processor *reveals a second application, App.C on the second display* (green box),” in accordance with the *displaying* element recited in limitation 1[B]. *Id.* at 25, 28 (emphases added) (citing Ex. 1003 ¶¶ 66, 71; Ex. 1004 ¶¶ 46–47, Fig. 4b). The Petition further specifies with precision that, in Yook Figure 4b, “[t]he Home Key input is shown in the red box in annotated Fig. 4b [above], and demonstrates how *Yook can reveal the second application* to the user when it may have been in the background prior to the reveal.” *Id.* at 28 (emphasis added).

The Petition next discusses and annotates Figure 10 of Yook, which the Petition describes as showing that “a user can provide an input for an instruction to *reveal a first application* (e.g., web browser) and Yook’s device will respond by *revealing a second application* (e.g., Twitter) *on the second display*.” *Id.* (emphases added) (citing Ex. 1003 ¶ 72; Ex. 1004 ¶¶ 96–101). Annotated Yook Figure 10 from the Petition is reproduced below:



Id. at 29. Annotated Figure 10 depicts displaying two open applications simultaneously on two displays, i.e., displaying a web browser on display 101 and a Twitter window on display 102.

The Petition provides yet another example from Yook Figure 5a and explains that “Yook also discloses how a user can select one out of multiple running applications to reveal on each display.” *Id.* (citing Ex. 1003 ¶ 73; Ex. 1004 ¶ 58, Fig. 5a). The Petition further cites Dr. Rodriguez’s testimony discussing Yook Figure 4d, where Dr. Rodriguez explains “how a second application ‘Event’ can be *displayed on the second display* (green outline) upon *the processor* in Yook’s device receiving an ‘event generation’ input,” in accordance with the *displaying* element that recites “*displaying, by the processor . . .*” *Id.* at 30 (emphases added) (citing Ex. 1003 ¶ 74; Ex. 1004 ¶ 51, Fig. 4d); *see also id.* at 26 (“Yook further discloses that a processor manages the multiple displays”), 27 (“The split-screen or screen area management program is executed in a series of instructions or commands by the Control Unit processor.”).

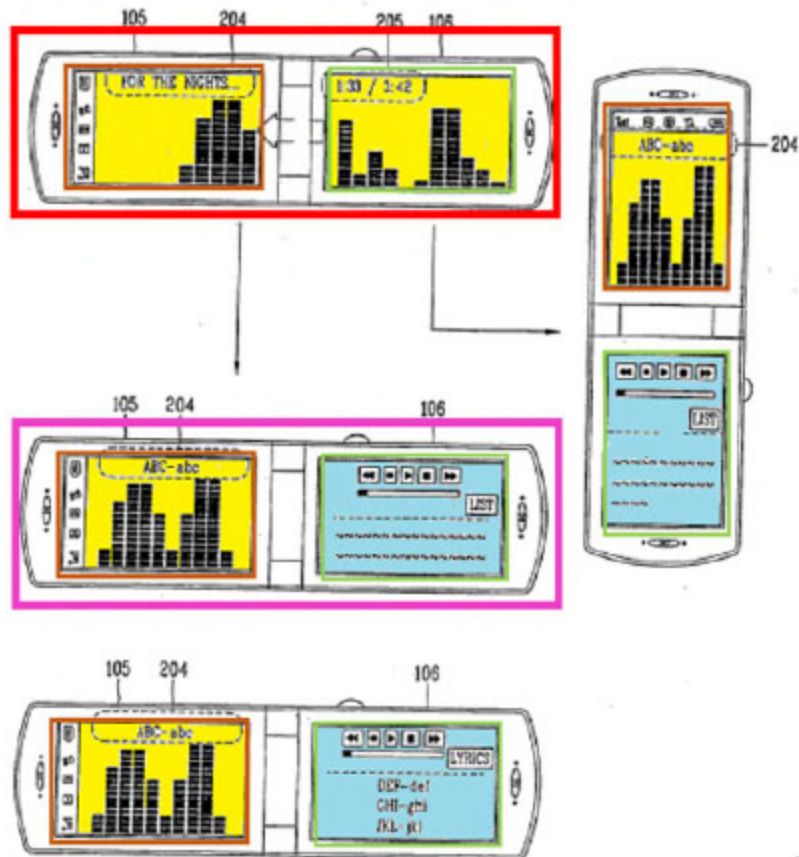
We find Dr. Rodriguez’s testimony to be consistent with the disclosures in Yook (paragraphs 46–47, 51, 58, 96–101, Figs. 4b, 4d, 5a, 10). We also find that Yook Figures 4b, 4d, 5a, and 10, as explained in the Petition and by Dr. Rodriguez, very clearly disclose displaying, by the processor, two application windows on two displays in accordance with the *displaying* element recited in limitation 1[B].

For the reasons given above, we determine the Petition maps Yook onto the *displaying* element of limitation 1[B] in compliance with the particularity requirement of 35 U.S.C. §312(a)(3) and 37 C.F.R. §42.104(b)(4).

2. The Petition Maps Lee onto the Displaying Element

The Petition states: “Lee discloses that when one application is initially displayed and an event occurs, such as an incoming text message, the event is

revealed on the second display.” Pet. 15–16 (emphasis added) (citing Ex. 1003 ¶ 53; Ex. 1005 ¶¶ 2–9, 53–54, Figs. 10C–D, 11B–C). For limitation 1[B] the Petition explains that annotated Lee Figure 9, reproduced below, “shows the device displaying a window of the first application on both the first and second display in the red outline:”



Id. at 47–48 (citing Ex. 1003 ¶¶ 119–121; Ex. 1005 ¶¶ 48–53, Figs. 4, 6, 9). In annotated Figure 9, display screens 105 and 106 (red outline) display a window of an open application. Ex. 1005 ¶ 48. The Petition explains that “Lee further recognized that a user may wish to ‘multitask’ among several applications, and Lee describes how a user can perform multitasking and *display two application windows* using the *two separate displays*.” *Id.* at 47 (emphases added) (citing Ex. 1003 ¶ 119; Ex. 1005 ¶¶ 49–53, Fig. 9). The Petition then specifies how Lee

discloses “*displaying*” two application windows on two separate displays, shown above within the pink outline. *Id.* at 48–49 (emphases added) (citing Ex. 1003 ¶ 121; Ex. 1005 ¶ 49, Fig. 9). We quote Dr. Rodriguez’s cited testimony below:

Once the device receives an input (e.g., screen rotation, touch screen button, or dedicated button), then the device adjusts the output of the *second display* (element 106, indicated by green boxes) so that the application previously displayed on both the first and “*the screen information display on the second display screen disappears*” (indicated by the pink box [above]). For example, in Fig. 9, the *second display changed to reveal a control menu application*, while the first display did not change and continued to output a display of the first application.

Ex. 1003 ¶ 121 (emphases added) (citing Ex. 1005 ¶ 49, Fig. 9). We find Dr. Rodriguez’s testimony to be consistent with the disclosure in Lee paragraph 49 and that Lee Figure 9, as explained in the Petition and by Dr. Rodriguez, very clearly discloses displaying two application windows on two displays in accordance with the *displaying* element.

The Petition further states that Lee “provides an example of displaying one application, and then instructing a second application to open on a second display,” as depicted in Lee Figure 10. Pet. 15 (citing Ex. 1003 ¶ 53; Ex. 1005 ¶¶ 2–9, 53–54, Figs. 10C–D). For limitation 1[B], the Petition specifies that Lee discloses how “a user can tap a message icon (orange) and reveal a *second application* on the *second display* (green outline),” as shown in annotated Lee Figure 10 reproduced below:

FIG. 10A

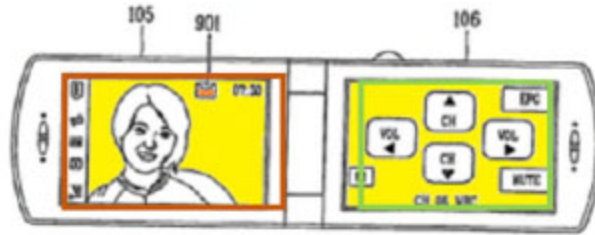


FIG. 10B

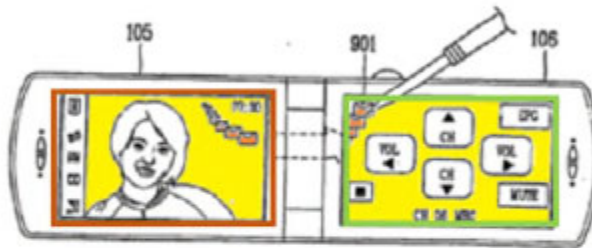


FIG. 10C

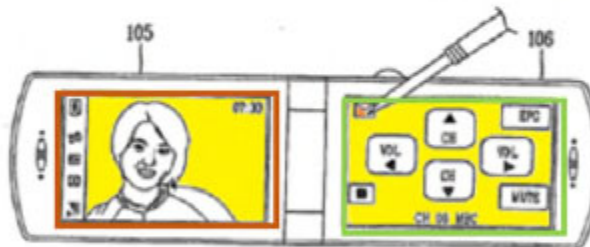
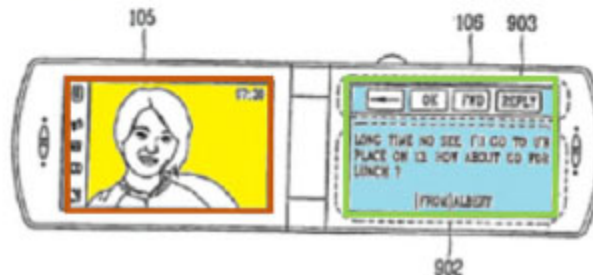


FIG. 10D



Id. at 49–50 (emphases added) (citing Ex. 1003 ¶ 122; Ex. 1005 ¶¶ 52–53, Fig. 10). We credit Dr. Rodriguez’s testimony regarding annotated Lee Figures 10A–D: “Lee discloses that a user can input an instruction to reveal an application on the second display, and the processor will comply.” Ex. 1003 ¶ 122 (citing Ex. 1005 ¶¶ 52–53, Figs. 10A–10D). We also agree with Petitioner that Patent Owner does not argue that the Lee device lacks a processor. Reply 8 (citing Pet. 45). We find that Lee Figures 10A–D, as described in Lee paragraphs 52–53, very clearly show

displaying two application windows on two displays in accordance with the *displaying* element.

For the reasons given above, we determine the Petition maps Lee onto the *displaying* element recited in limitation 1[B] in compliance with the particularity requirement of 35 U.S.C. §312(a)(3) and 37 C.F.R. §42.104(b)(4).

3. Addressing Patent Owner's Sur-Reply Arguments

The Petition did not “bury” the *displaying* element argument or identify any new evidence or argument in the Reply, as asserted by Patent Owner. Sur-Reply 3. As discussed in exemplary detail above, the Petition and Dr. Rodriguez explicitly discuss the disclosures in Yook and Lee of a processor controlling the display of first and second applications—such as App.A and App.C (Yook Fig. 4b), a web browser and Twitter (Yook Fig. 10), or a media file and control menu (Lee Fig. 9)—on first and second displays, precisely as recited in the *displaying* element. Rather it is Patent Owner who avoids engaging the substantive merits of the Petition, and then attempts to leverage an obvious clerical error in the sub-heading of limitation 1[B] to launch an entirely new theory of patentability for the first time in the Sur-Reply. *See* Sur-Reply 3–13 (arguing for the first time that claim 1 requires a “specific order of steps” and attempting to distinguish Yook, Lee, Aguilar, and Purcell on that basis); *see also* Tr. 28:8–20 (“Yes, Your Honor. I can see that this is a new argument in the Sur Reply”).

The omission of the *displaying* element text in the Petition sub-heading for limitation 1[B] is an obvious “copy and paste” error, because, as discussed above, arguments in the Petition and the cited evidence show that Yook and Lee each disclose the *displaying* element. We further determine that Patent Owner had sufficient notice and opportunity to address the merits of the Petition’s contentions and evidence for claims 1 and 7, including those directed to limitation 1[B] and the

displaying element. In its Response, Patent Owner chose not to engage on the merits of the Petition’s arguments and cited evidence that claims 1 and 7 of the ’756 patent are anticipated and obvious over the asserted references. Resp. 12–17. *See Magnum Oil Tools*, 829 F.3d at 1381 (Fed. Cir. 2016) (“[T]he Board must base its decision on arguments that were advanced by a party, and to which the opposing party was given a chance to respond.”). Patent Owner also chose not ask its expert, Dr. Surati, to address the merits of the asserted unpatentability of any claims in the ’756 patent, apart from claim 5: “This declaration addresses the validity of claim 5 only. I have not been asked to opine on the validity of any other claims, and I have not considered the validity of any other claims.” Ex. 2002 ¶ 6. Patent Owner’s Response raises only the typographical error associated with the *displaying* element for claims 1 and 7 of the ’756 patent. Resp. 12–17.

Patent Owner had a further opportunity to respond to the merits of Petitioner’s unpatentability contentions addressed to claims 1 and 7, including Petitioner’s explanation for the typographical sub-heading error in limitation 1[B] in Petitioner’s Reply. Reply 1–15. Patent Owner chose not to address the substance of the detailed citations and evidence in support of the prior art mappings of the *displaying* element in the Petition. *Compare* Reply 1–15 with Sur-Reply 1–3. Patent Owner’s lack of a substantive response is telling. *See Angelly v. United States*, 165 Fed. Cl. 437, 449 (Ct. Cl. 2023) (“The Court cannot tell whether the government’s motion on this point is some sort of magic words gotcha game that i[t] believes Plaintiffs’ complaint does not meet”).

Instead, Patent Owner chose to raise an entirely new theory of patentability. Sur-Reply 3–13; Tr. 28:8–20. Patent Owner’s new theory is based on a claim construction that construes claim 1 of the ’756 patent as “recit[ing] a specific order of steps that must be performed in the order written.” *Id.* at 3–4. “Because of this

order, the [displaying element] must occur after both (two) ‘selecting’ steps,” and Patent Owner contends none of the prior art references asserted in the Petition “meets the order required by claim 1.” *Id.* at 4. We will not consider Patent Owner’s new theory of patentability raised for the first time in its Sur-Reply. *See Apple Inc. v. e-Watch, Inc.*, IPR2015-00412, Paper 50, 44 (PTAB May 6, 2016) (“‘Respond,’ in the context of 37 C.F.R. § 42.23(b), does not mean embark in a new direction with a new approach”); *see also Optivus Tech., Inc. v. Ion Beam Appl’ns S.A.*, 469 F.3d 978, 989 (Fed. Cir. 2006) (argument raised for the first time in the reply brief, which could have been raised in the opening brief, is waived). Patent Owner should have raised its “specific order of steps” argument in the Response. By failing to do so, Patent Owner has waived the argument. *Id.*

We also find Patent Owner’s invocation of *Apple Inc. v. MPH Techs. Oy* to be unavailing. Resp. 14–16 (citing *Apple Inc. v. MPH Techs. Oy*, 2022 WL 4103286 at *15 (Fed. Cir. Sep. 8, 2022)). Unlike the present case, in *Apple* the Board declined to consider petitioner’s unpatentability challenges to dependent claims 6–8 because the grounds raised in the petition failed to identify the references necessary to invalidate claim 5 from which claims 6–8 depended. As explained in detail above, we have considered only the arguments made by Petitioner in the Petition addressed to limitation 1[B], including the Petition’s mapping of Yook, Lee, Aguilar, and Purcell onto the *displaying* element. We further determine that Petitioner has not introduced new arguments addressed to the *displaying* element in its Reply brief, as argued by Patent Owner. Sur-Reply 16 (arguing “it is too late for Petitioners to present arguments against the [displaying element] of claim 1 post-institution”). We agree with Petitioner that, in contrast to the *Apple* case, “the Petition identifies claim 1 in each Ground and

identifies the prior art references that render those grounds unpatentable as anticipated or obvious.” Reply 13 (citing Pet. 5–6).

4. Conclusion

For the reasons given above, we determine the Petition demonstrates by a preponderance of the evidence that independent claims 1 and 7 of the ’756 patent are unpatentable as anticipated by and obvious over Yook (Grounds 1 and 2), Lee (Grounds 3 and 4), Aguilar (Grounds 5 and 6), Purcell (Ground 7), and Purcell-Yook (Ground 8).

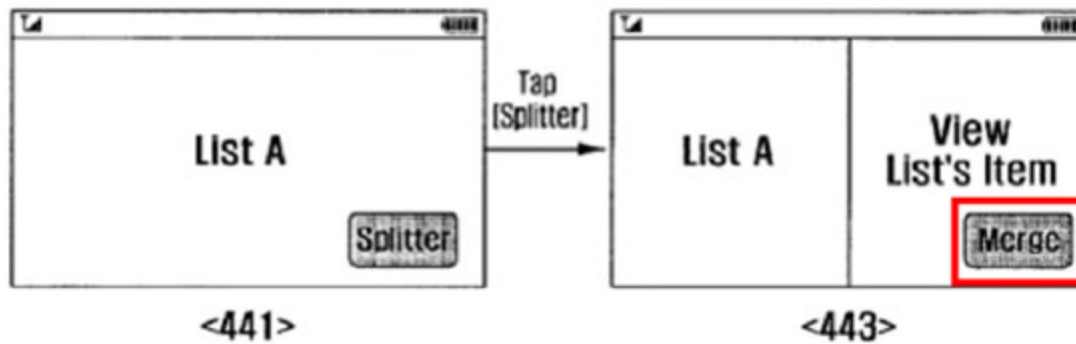
E. Yook Renders Claim 5 Obvious (Grounds 2 and 8)

Claim 5 depends from claim 4, which depends from claim 1. The Petition asserts that Yook (Ground 2) and Purcell-Yook (Ground 8) render claim 5 obvious. Pet. 43–44, 86–88 (citing Ex. 1003 ¶¶ 109, 206–212; Ex. 1004 ¶ 55, Figs. 1, 4e, 5a, 5c, 5d, 6, 7a, 7b, 7c, 8–13; Ex. 1007 ¶¶ 3, 11; Ex. 1008; Ex. 1009). Patent Owner argues that Yook does not disclose or teach “*a wave shape*” as recited in claim 5. Resp. 17–23 (citing Ex. 2001 ¶¶ 60–77). We address the parties’ arguments below.

1. Yook Discloses the Visual Indicator recited in Claim 4

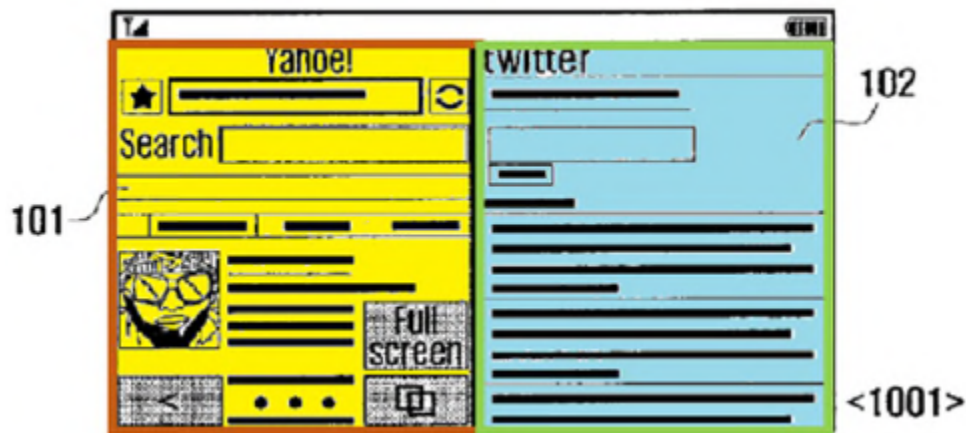
Claim 4 recites “*wherein at least one of the first or second displays has a visual indicator displayed thereon and signifying that a desktop or application appearing on that display can be maximized by a user gesture.*”

The parties do not dispute that Yook discloses a visual indicator signifying that a displayed application can be maximized by a user gesture, as recited in claim 4. Pet. 33–35, 42–43 (citing Ex. 1003 ¶¶ 82–85, 107–108; Ex. 1004 ¶¶ 55–56, Figs. 4, 5, 10); Resp. *generally*. The Petition explains that Yook displays a “Merge” button as a visual indicator, shown in annotated Yook Figure 4e below (red box):



Id. at 33–34 (citing Ex. 1003 ¶¶ 82–84; Ex. 1004 ¶¶ 55–56, Fig. 4e). The Petition further explains that in Yook Figure 4e a user can tap the Merge button to return a split-screen display (443) to a maximized display of an application in one window across two display screens in full screen mode (441). *Id.*

The Petition cites another example of a visual indicator allowing a user gesture to maximize a display, shown in annotated Yook Figure 10 below:



Id. at 35 (citing Ex. 1004, Fig. 10; Ex. 1003 ¶ 85). Dr. Rodriguez testifies that, in Yook Figure 10, a user would have understood that by pressing the displayed “Full screen” input button (yellow display 101) the user could maximize the web browser application on display 101 for display across both displays 101 and 102 in full screen mode. Ex. 1003 ¶ 85. Patent Owner and its expert, Dr. Surati, do not contest the point. Resp. 17–23; Ex. 2002 ¶ 6.

2. *Yook Renders Obvious a Visual Indicator that “has a Wave Shape”*

Claim 5 further recites “*wherein the visual indicator has a wave shape.*”

There is no dispute that Yook does not disclose a visual indicator that has a wave shape. *Compare* Pet. 43–44; *with* Resp. 18 (citing Ex. 2002 ¶¶ 61–65); *see also* Reply 15–19. Yook, however, does disclose displayed visual indicators in various shapes and forms, including the “Merge” button signifying that an application can be maximized by a user gesture as stated above for claim 4. The Petition provides examples of Yook’s disclosed visual indicator icons:



Pet. 43 (citing Ex. 1003 ¶ 109). The Petition contends that “*a wave shape*” is a routine design choice and “has no bearing on the functionality of the element.” Pet. 43–44, 88 (citing Ex. 1003 ¶¶ 109, 212; *Tesla, Inc. v. Charge Fusion Techs., LLC*, IPR2022-01217, Paper 11 (PTAB Feb. 1, 2023) (as part of an obvious finding, noting that a visual charging indicator “would be a matter of routine design choice”)). The Petition argues that the visual appearance of the Yook icons “is irrelevant to providing the visual indication of permitting the application to be maximized.” *Id.* at 44 (citing Ex. 1003 ¶ 109).

Patent Owner argues that Yook does not disclose or teach “*a wave shape*,” because “[t]he ’756 patent teaches that the wave shape recited in claim 5 is a specific functional embodiment of the visual indicator” as depicted in Figures 10A–C of the ’756 patent, shown below from the Response:

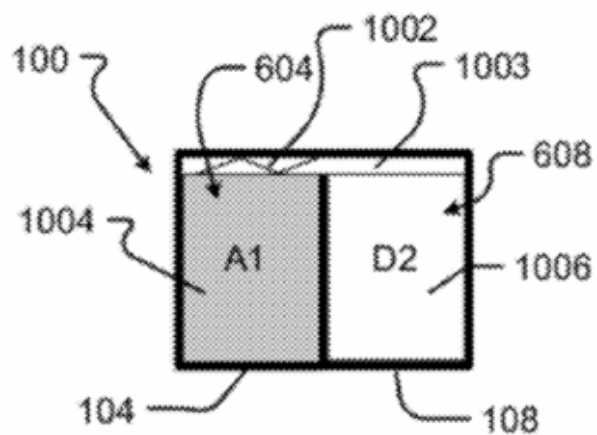


FIG. 10A

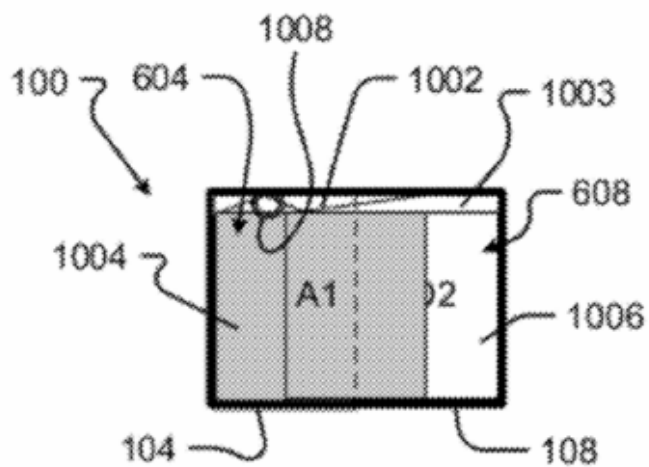


FIG. 10B

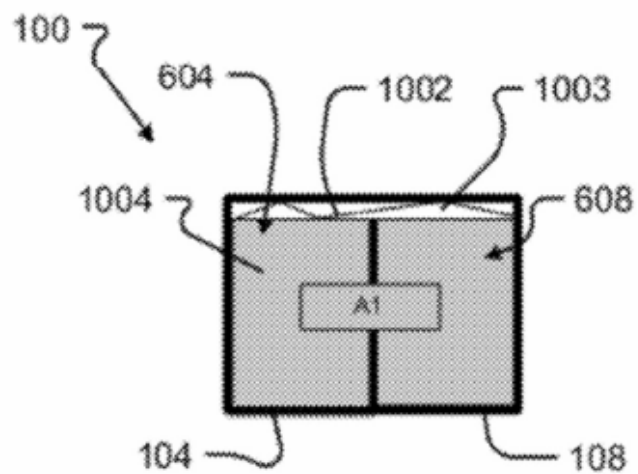


FIG. 10C

Resp. 18–19 (citing Ex. 1001, 31:16–60, Fig. 10; Ex. 2002 ¶¶ 60–77). In Figures 10A–C, Patent Owner emphasizes that visual indicator 1002—the wave shape within annunciator window 1003—“indicates whether the application may be minimized or maximized *by expanding with the application* – as shown in Fig. 10.” *Id.* at 20 (citing Ex. 1001, 31:23–27, 31:54–59; Ex. 2002 ¶¶ 66–74); Sur-Reply 20.

Patent Owner explains that as application A1 expands from left-to-right across both screens, shown sequentially in Figures 10B and 10C, “the wave shaped visual indicator [1002] also expands across both screens.” *Id.* at 21. Patent Owner contends that a POSITA “would understand that a wave shaped visual indicator is a specific functional embodiment of a visual indicator that can expand with the application.” *Id.* at 22–23 (citing Ex. 1001, 31:54–59; Ex. 2002 ¶¶ 62–77); Sur-Reply 21. Patent Owner further contends that a POSITA would have no reason to use any of Yook’s icons as expanding icons and that the wave shape is not an obvious design choice. *Id.* at 23 (citing Ex. 2002 ¶¶ 76–77; Sur-Reply 22). Dr. Surati testifies that a POSITA would not expand any of Yook’s disclosed icons because such expansion “would stretch the text and visuals and render them difficult to impossible to read.” Ex. 2002 ¶ 75. There are several problems with Patent Owner’s argument.

First, the function of signifying that an application can be maximized is recited in claim 4, which is not in dispute and does not require the displayed visual indicator to expand with the application. Patent Owner does not contend otherwise. Claim 5 recites that the displayed visual indicator “has” a wave shape; the claim does not recite functional language of an “expanding” wave shape as argued by Patent Owner. “Although operational characteristics of an apparatus may be apparent from the specification, we will not read such characteristics into

the claims when they cannot be fairly connected to the structure recited in the claims.” *In re Hiniker Co.*, 150 F.3d 1362, 1368 (Fed. Cir. 1998) (citation omitted). Claim 5 does not recite a display having a “wave shaped indicator [that] indicates whether the application may be minimized or maximized ***by expanding with the application***” as argued by Patent Owner. Resp. 20 (citing Ex. 1001, 31:23–27); *see also* Reply 18 (“Patent Owner identifies no requirement in the claim language of the ’756 patent requiring the claimed visual indicator to ‘expand’ or stretch between the minimized and maximized states.”) (citing Ex. 1012, 214:14–215:14, 216:12–217:10).

Patent Owner’s expert, Dr. Surati, acknowledges claim 5 does not recite language requiring expansion of a wave shape: “So I would just simply say, like, literally reading the claim language, it doesn’t literally say that.” Ex. 1012, 214:14–215:14. We agree. After all, “the name of the game is the claim.” *In re Hiniker*, 150 F.3d at 1369.

Second, Patent Owner quotes the ’756 patent in support of its position:

Accordingly, in FIG. 10A, the indicator 1002 signifies that a user can maximize the application A1 in its current minimized state. The indicator 1002 is shown as having a wave shape that extends across the upper portion of the screen 104;

Resp. 20 (quoting Ex. 1001, 31:23–27). But the second sentence of the quote continues beyond the semicolon:

however, it shall be understood that *other graphical representations* can be provided for the indicator 1002 such as *an icon or another type of visual indicator* located on other parts of the screen.

Ex. 1001, 31:27–30 (emphases added). As Petitioner points out, Patent Owner’s expert Dr. Surati did not identify any particular connection between a wave shape and the functions of minimizing and maximizing an application or desktop across displays. Reply 16 (citing Ex. 1012, 189:13–18, 195:6–20, 196:10–200:6). Dr.

Surati's testimony is consistent with the second part of the second sentence quoted above, which indicates the form or shape of the visual indicator, such as a wave shape, is a design choice not tied to the functions of minimizing and maximizing an application or desktop as urged by Patent Owner.

Third, we are further persuaded by Dr. Surati's testimony that the wave shape visual indicator depicted in Figures 10A–C of the '756 patent indicates that a user can do *something*, but not necessarily what that something is (e.g., minimizing or maximizing). *Id.* at 17 (citing Ex. 1012, 200:1–6). It is telling that Dr. Surati testified that only through repeated use and exposure would a user recognize a relationship between a wave shape and the functions of maximizing or minimizing an application. *Id.* (citing Ex. 1012, 197:13–199:22). We are also persuaded by Dr. Rodriguez's testimony regarding the teachings of Yook:

Yook therefore teaches giving users the ability to transition a split-screen application back into full screen mode. Further, a POSITA would have understood that this ability would undoubtedly be implemented in the form of *a visual indicator, which, from the 2000s to today, is the industry's universal method of alerting a user to an accessible function.* . . . Ex. 1003 ¶ 107 (emphasis added);

For claim 5, Yook discloses many different types of “icons” that are used to receive user gesture inputs. *See, e.g.,* Figs. 1, 4e, 5a, 5c, 5d, 6, 7a, 7b, 7c, 8, 9, 10, 11, 12, 13. Examples of these icons are displayed below:



Id. ¶ 108; and

A POSITA would have understood that Yook’s icons can have a wave shape because the shape taken by a visual indicator, or icon, is merely a matter of common and routine design choice. Indeed, *the shape of an icon does not affect its function or how a gesture input is received*. *Id.* ¶ 109 (emphasis added).

In short, we are persuaded Petitioner has established by a preponderance of the evidence that a displayed visual indicator that “*has a wave shape*” is a design choice not affecting the function of the visual indicator, and a visual indicator that “*has a wave shape*” would have been an obvious design choice to a POSITA in view of Yook.

For the reasons given above, we determine the Petition demonstrates by a preponderance of the evidence that dependent claim 5 of the ’756 patent is unpatentable as obvious over Yook and Yook–Purcell (Grounds 2 and 8).

E. The Petition Establishes the Unpatentability of Claim 9

The Petition contends that Yook anticipates and renders obvious claim 9 of the ’756 patent, contentions that Patent Owner disputes. Pet. 37–41; Resp. 23–26.

Claim 9 depends from independent claim 7, which recites “[a] *non-transitory computer-readable medium . . . comprising: . . .*

7[D] instructions configured to receive a third predetermined input that represents an instruction to maximize a selected one of the first or second desktop or applications resulting in the selected one being displayed on both of the first and second displays according to the instructions configured to respond to the third predetermined input;

Claim 9 recites:

The computer-readable medium of claim 7 wherein a fourth predetermined input is an instruction to minimize a selected one of the first or second desktops or applications, resulting in the selected one

being displayed only one⁹ of the first and second displays according to the instructions configured to respond to the third predetermined input.

Claim 7[D] recites a third input instruction (e.g., a user gesture) to maximize the display of one selected desktop or application on both displays. Ex. 1001, 31:43–56, Figs. 10A–C (application A1). Claim 9 recites a fourth input instruction (e.g., another user gesture) to minimize the maximized application selected according to the third input instruction, such that after the fourth input instruction is received the selected maximized application is minimized as “*being displayed only one of the first and second displays.*” *Id.* at 31:60–32:4, Figs. 10D–E.

We analyze below, in detail, the unpatentability of claim 9 as anticipated by and obvious over Yook as asserted in Petition Grounds 1, 2, and 8. Because Patent Owner raises the same argument applicable to “All Grounds,” without detailed citations or references to any of the prior art (Resp. 23–26), we rely on the same analysis and reasoning below for Yook, which also applies to Lee, Aguilar, and Purcell for the reasons stated in the Petition. Pet. 53–58 (Lee), 68–72 (Aguilar), 80–86 (Purcell).

1. Yook Anticipates and Renders Obvious Claim 9

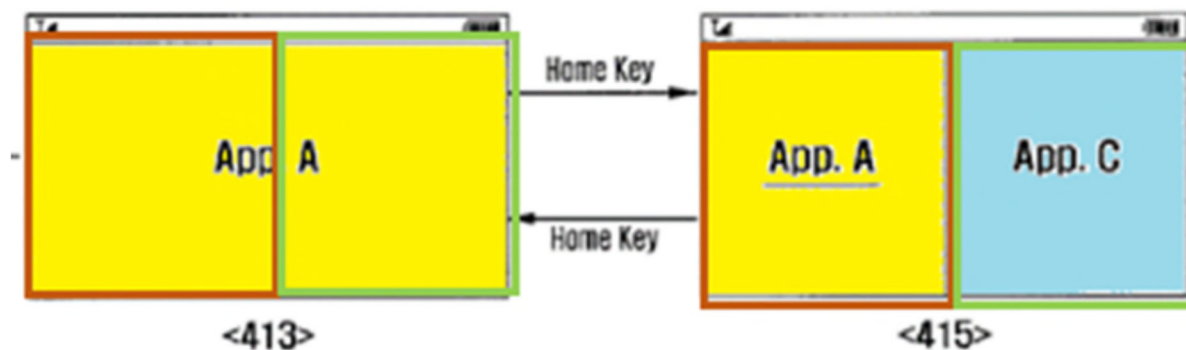
The Petition cross-references the argument and evidence for claim 6 to establish that Yook anticipates and renders obvious claim 9 (Grounds 1 and 2) and that claim 9 is obvious over Yook in view of Purcell (Ground 8). Pet. 36–37, 39–41 (citing Ex. 1003 ¶¶ 76, 85–89), 83–86 (citing Ex. 1003 ¶¶ 198–205). The

⁹ Claim 9 contains an apparent typographical error that should read “*being displayed on only one of the first and second displays,*” as the specification makes clear. Ex. 1001, 31:60–63 (“the user executing another gesture 1008 [fourth input] on the secondary screen 108, which therefore minimizes the application A1 onto the secondary screen 108”), Figs. 10D, 10E.

Petition establishes that Yook’s device can switch or toggle between full screen mode—displaying one application on both the first and second displays in response to a user input to maximize the application—and split screen mode displaying two applications, one on each display, in response to another user input to minimize the selected maximized application. *Id.*

Yook’s full screen and split screen modes are depicted in annotated Yook Figure 4b reproduced below from the Petition:

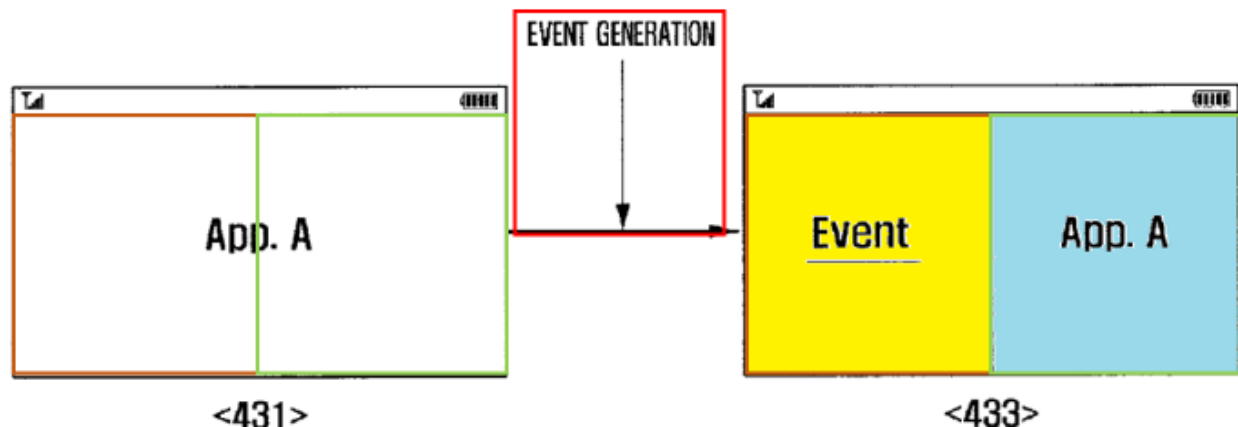
FIG . 4b



Pet. 36 (citing Ex. 1004 ¶¶ 51, 110, Fig. 4b; Ex. 1003 ¶ 76). In Figure 4b, App.A is selected to be maximized for display on both displays (413). *Id.*; *see also* Ex. 1003 ¶¶ 87–88 (“Element 413 in Fig. 4b shows application ‘A’ displayed on both the first and second displays of the screen.”). Dr. Rodriguez testifies that a user can initiate a maximized display by inputting an instruction to Yook’s device, “such as touching a ‘Home Key’” (a third input) shown above in Yook Figure 4b. Ex. 1003 ¶ 76. Dr. Rodriguez explains that “Yook’s processor responds to the input by maximizing one of the first or second applications, resulting in the selected one being displayed on both of the first and second displays.” *Id.* Thus, the Petition establishes a third input instruction resulting in selected App.A displaying in a maximized condition on both displays.

A user can toggle back to split-screen mode by again touching the “Home Key” (a fourth input), and App.A is then displayed in a minimized condition on one display in “split-screen mode for two applications” (Fig. 4b, 415 App.A/App.C). *Id.* (citing Ex. 1004 ¶ 46, Fig. 4b); *see also* Pet. 36 (citing Ex. 1003 ¶ 76); Ex. 1003 ¶ 88. Yook discloses throughout its specification that when the split-screen mode is entered, the first window (maximized App.A) is “resiz[ed]” to fit the new and smaller first display of the split screen display (minimized App.A). Pet. 36 (citing Ex. 1004 ¶ 51; Ex. 1003 ¶ 89). For example, annotated Yook Figure 4d is reproduced below from Dr. Rodriguez’s cited testimony:

FIG . 4d

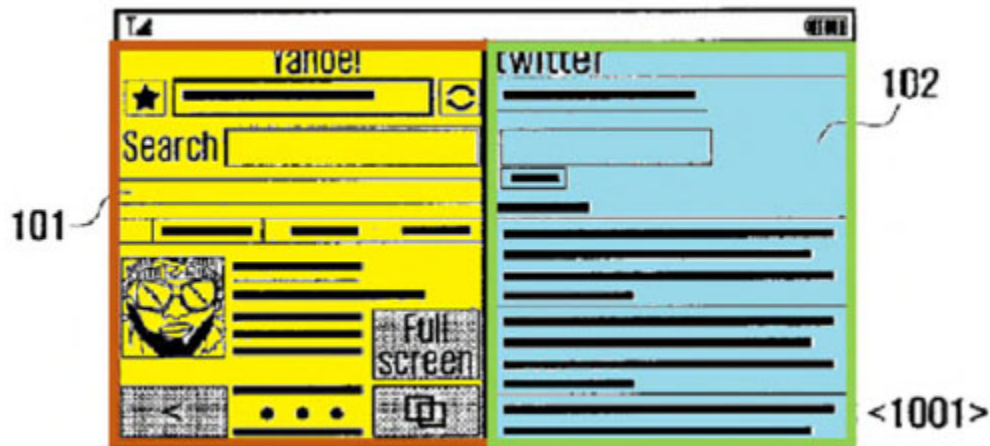


Ex. 1003 ¶ 89. Regarding Yook Figure 4d, the Petition and Dr. Rodriguez emphasize the following disclosure in Yook:

[A]s illustrated in screen 433, the mobile terminal 100 can display the functional view area App.A as to the function ‘A’ on one divided screen area through resizing, and display a functional view area Event as to the event handling application program on the other divided screen area.

Pet. 36–37; Ex. 1003 ¶ 89 (quoting Ex. 1004 ¶ 51). Thus, the Petition establishes that Yook’s split screen mode displays selected App.A in a re-sized minimized condition in response to a fourth input instruction by a user.

The Petition also cites an example of a user inputting an instruction to minimize an application that is initially displayed in a maximized condition on two displays. Pet. 37. Annotated Yook Fig. 10 is reproduced below:



Id. (citing Ex. 1003 ¶ 85; Ex. 1004 ¶ 110). In annotated Yook Figure 10, App.A (web browser 101) is displayed on a minimized window (yellow). *Id.* The Petition explains that “a user can then resize the web browser window to a single display” (maximize the minimized App.A web browser) after touching the Home Key as shown above in Yook Figure 4b. *Id.* (citing Ex. 1003 ¶ 87).

2. Addressing Patent Owner’s Arguments

Patent Owner argues claim 9 contains an additional element not found in claim 6 cross-referenced by Petitioner, namely that “claim 9 further requires that ‘the selected one being displayed only one of the first and second displays **according to the instructions configured to respond to the third predetermined input**’.” Resp. 24. Patent Owner states that “according to claim 9, minimizing a selected desktop or application . . . must result in the selected one ‘being displayed’

according to the *same instructions* that cause the display of a desktop or application ‘in a maximized condition.’” Resp. 25 (emphasis added); Sur-Reply 14–15. Patent Owner contends, therefore, that Yook does not anticipate claim 9 or render claim 9 obvious. *Id.* When the Board asked Counsel for Patent Owner to explain why at the oral hearing, counsel demurred, deflected, and disclaimed. Tr. 39:25–42:2. Patent Owner apparently bases its argument on some opaque interpretation of “*according to the instructions configured to respond to the third predetermined input*” in claim 9, which Patent Owner does not explain with reference to the ’756 patent.¹⁰ *Id.*; *see also* Resp. 24–25; Sur-Reply 14–15. We remain in the dark.

We agree with Petitioner that the difference in language between claims 6 and 9 is due to the fact that claim 9 depends from claim 7, a computer-readable medium claim, whereas claim 6 is a method claim. Reply 20. For claim 6 the Petition properly relies upon, for example, that Yook “direct[s] the processor to respond by initiating full-screen mode.” *Id.* (citing Pet. 36); *see also* Pet. 30–31 (“a user can provide an input with the ‘Home’ key, and direct the processor to respond by initiating full screen mode for App.A.”), 39 (7[D]). “The same is true for all other references and Grounds, including specific reference to a CPU, VRAM, and ‘executing the instructions and commands to perform the screen splitting....’ in Aguilar.” Reply 20 (citing Pet. 68–69). We further agree with Petitioner that the Petition explicitly maps the prior art to “instructions configured

¹⁰ Patent Owner does not raise a claim construction argument for the quoted claim element. To the contrary, Patent Owner expressly declines to construe any claim language, stating that no claim construction is necessary to resolve the parties’ dispute. Resp. 11 (citing *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011)).

to respond to the third predetermined input” in claim 9 because that is also required by claim 7 from which it depends. *Id.* at 20–21 (citing Ex. 1001, 36:10–17, 36:28–33); *see also* Ex. 1001, 31:43–32:4, Figs. 10D–E (“a user executing a gesture 1008 . . . [i]n response to the gesture 1008, the application A1 is maximized”; “the user executing another gesture 1008 on the secondary screen 108, which therefore minimized the application A1 onto the secondary screen 108”).

Patent Owner’s conclusory response—“minimizing a selected desktop or application . . . must result in the selected one ‘being displayed’ according to the same instructions that cause the display of a desktop or application ‘in a maximized condition’”—is unexplained. Sur-Reply 14–15. Patent Owner’s reliance on the *Apple* case is also unavailing because here the Petition substantively addresses similar claims and refers back to those claims for establishing unpatentability of claim 9; there is no mapping omission or missing prior art reference as in *Apple*. Reply 21–22. Patent Owner’s response—“But Petitioners present no evidence that pressing the Home Key from state <413> to <415> is according to instructions of pressing the Home Key from state <415> to state <413> as required by claim 9.”—is not understood and, therefore, unpersuasive. Sur-Reply 16–17.

The same analysis above applies to anticipation and obviousness of claim 9 over Lee (Grounds 3 and 4), Aguilar (Grounds 5 and 6), Purcell (Ground 7), and Purcell-Yook (Ground 8).

3. Conclusion

For the reasons given above, we determine the Petition demonstrates by a preponderance of the evidence that dependent claim 9 of the ’756 patent is unpatentable as anticipated by and obvious over Yook (Grounds 1 and 2), Lee

(Grounds 3 and 4), Aguilar (Grounds 5 and 6), Purcell (Ground 7) and Yook in view of Purcell (Ground 8). Pet. 53–58 (Lee), 68–72 (Aguilar), 80–86 (Purcell).

F. The Petition Establishes the Unpatentability of Claim 8

The Petition contends that Yook anticipates and renders obvious claim 8 of the '756 patent (Ground 1 and 2) and Yook-Purcell renders claim 8 obvious (Ground 8). Pet. 33–35, 39, 42–43, 86–88 (citing Ex. 1003 ¶¶ 82–85, 96–98, 107–108, 206–211). Claim 8 depends from independent claim 7 and recites “*wherein at least one of the first or second displays has a visual indicator displayed thereon and signifying that a desktop or application appearing on that display can be maximized by a user gesture according to the instructions configured to receive a third predetermined input.*” Claim 4 recites the same language recited in claim 8 except omits the underlined language. For claim 8, the Petition cross-references its contentions that Yook anticipates and renders obvious claim 4. Pet. 39 (citing Ex. 1003 ¶¶ 96–98).

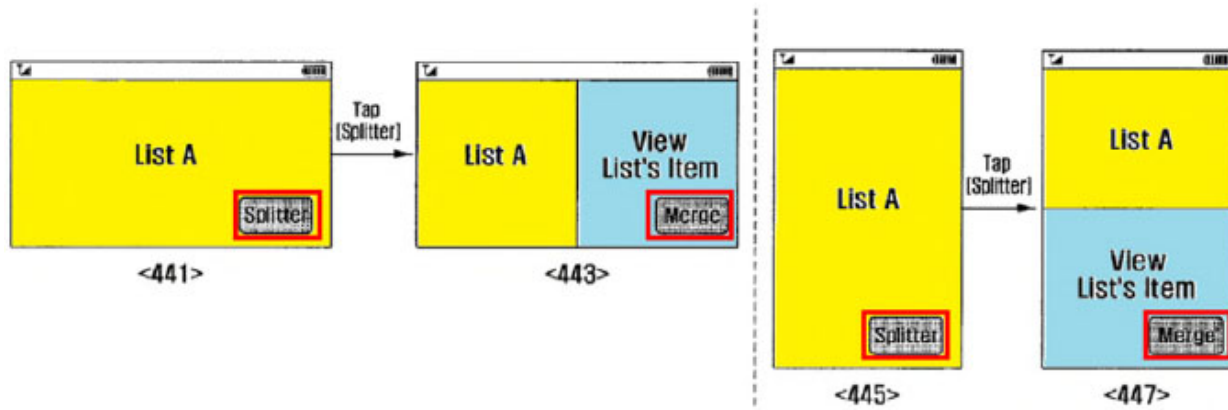
Patent Owner raises the same argument as for claim 9, namely that the Petition does not map the prior art to the underlined language above recited in claim 8 but not in claim 4. Resp. 27. Patent Owner contends the “Petition does not address how the references suggest the visual indicator signifies displaying ‘according to the instructions configured to respond to the third predetermined input.’” *Id.* Patent Owner does not further illuminate its contention addressed to claim 8, which Patent Owner asserts is “for the same reasons as explained for claim 9.” Sur-Reply 18–19 (citing *Apple*, 2022 WL 4103286; *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018)). We refer to our discussion above addressing Patent Owner’s argument for claim 9.

We analyze below, in detail, the Petition’s contention that claim 8 is anticipated by and obvious over Yook as asserted in Grounds 1 and 2. Because

Patent Owner raises the same general argument without detailed citations to the prior art references (Resp. 27), we rely on the same analysis and reasoning below applied to Yook-Purcell (Ground 8) for the reasons stated in the Petition. Pet. 83–88. We begin with Yook’s disclosure of a “visual indicator.”

The Petition establishes that Yook discloses when a user touches a “Splitter” button, application “A” is divided into two windows each displayed on its own display, as depicted in annotated Figure 4e (443, 447) reproduced below from the Petition:

FIG . 4e



Id. at 34–35 (citing Ex. 1003 ¶ 84; Ex. 1004, Fig. 4e). Yook annotated Figure 4e, as the Petition explains, also shows that Yook displays a visual indicator in the form of a “Merge” button that a user can tap with an input gesture to switch Yook’s split screen display back to a maximized full screen display of one application on both the first and second displays (441, 445). Pet. 33–34 (citing Ex. 1003 ¶¶ 82–83; Ex. 1004 ¶¶ 55–56, Fig. 4e); *see also* Pet. 35 (example of “Full screen” visual indicator in Yook Figure 10) (citing Ex. 1003 ¶ 85; Ex. 1004, Fig.

10), 39 (citing Ex. 1003 ¶ 97). As discussed above for claim 5, the parties do not dispute that Yook discloses a visual indicator signifying that a displayed application can be maximized by a user gesture (third input) as recited in claims 4 and 8. Pet. 33–35, 42–43 (citing Ex. 1003 ¶¶ 82–85, 107–108; Ex. 1004 ¶¶ 55–56, Figs. 4, 5, 10); Resp. *generally*.

Dr. Rodriguez emphasizes the following disclosure in Yook of the visual indicator “Merge” button signifying to a user that an application in split screen mode can be maximized for display by an input gesture—touching the Merge button—according to instructions configured to receive that input gesture:

The mobile terminal 100 can provide a “merge” icon for returning to the previous screen as illustrated in screen 445 or screen 447. When the user selects the “merge” icon, the mobile terminal 100 can return to screen 441 or screen 445.

Ex. 1003 ¶ 83 (quoting Ex. 1004 ¶ 56). We also agree with Petitioner that Patent Owner’s argument fails for the same reasons discussed for claim 9 above, and “because the Petition address[es] how a processor executing ‘instructions’ performs the limitation.” Reply 22. We further agree with Petitioner that *Apple* is not applicable here because there is no change in the asserted references from an independent to a dependent claim, and the Petition properly relies on a substantively similar claim for the relevant prior art disclosure. *Id.* at 22–23 (citing Pet. 5–6, 37–40 (Grounds 1 and 2 challenge claims 7 and 8 based on Yook), 81–83 (Ground 8 challenges claims 7 and 9 based on Purcell)).

For the reasons given above, we determine the Petition demonstrates by a preponderance of the evidence that dependent claim 8 of the ’756 patent is unpatentable as anticipated by and obvious over Yook (Grounds 1 and 2) and Yook-Purcell (Ground 8).

G. The Petition Establishes the Unpatentability of the Remaining Challenged Claims

For the remaining challenged claims, Petitioner argues with citations to the record that the asserted references either anticipate or render obvious claims 2–4 and 6. Pet. 32–37, 40–43, 52–54, 56–58, 66–68, 71–73, 79–81, 83–88. We find that the citations to the references disclose, teach, or suggest the limitations recited in claims 2–4 and 6 for the reasons stated in the Petition. *Id.* We also determine that one of ordinary skill in the art would have modified or combined the references in the manner argued with a reasonable expectation of success. *Id.* Patent Owner does not present any argument or evidence regarding claims 2–4 and 6, other than those presented for claim 1, from which claims 2–4 depend. PO Resp. 12–28.

Accordingly, based on the full record, Petitioner persuades us, and we determine, that the asserted references anticipate or render obvious claims 2–4 and 6 for the reasons stated in the Petition.

III. CONCLUSION

We conclude Petitioner has established by a preponderance of the evidence that claims 1–9 of the '756 patent are unpatentable. In summary:

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–4, 6–9	102(a)	Yook	1–4, 6–9	
1–9	103(a)	Yook	1–9	
1–3, 6, 7, 9	102(b)	Lee	1–3, 6, 7, 9	
1–3, 6, 7, 9	103(a)	Lee	1–3, 6, 7, 9	
1–3, 6, 7, 9	102(e)	Aguilar	1–3, 6, 7, 9	
1–3, 6, 7, 9	103(a)	Aguilar	1–3, 6, 7, 9	
1–3, 6, 7, 9	102(b)	Purcell	1–3, 6, 7, 9	
1–9	103 (a)	Purcell, Yook	1–9	
Overall Outcome			1–9	

IV. ORDER

Accordingly, it is:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1–9 of the '756 patent are unpatentable; and

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

IPR2025-00040

Patent 9,134,756 B2

FOR PETITIONER:

Christopher Higgins

Timothy Pearce

ORRICK, HERRINGTON & SUTCLIFFE LLP

0chptabdocket@orrick.com

tvpptabdocket@orrick.com

Naveen Modi

Joseph Palys

Daniel Zeilberger

Quadeer Ahmed

David Valente

PAUL HASTINGS LLP

naveenmodi@paulhastings.com

josephpalys@paulhastings.com

danielzeilberger@paulhastings.com

quadeerahmed@paulhastings.com

davidvalente@paulhastings.com

FOR PATENT OWNER:

James Carmichael

Stephen Schreiner

Minghui Yang

Stephen McBride

Christopher Abidin

CARMICHAEL IP, PLLC

jim@carmichaelip.com

schreiner@carmichaelip.com

mitch@carmichaelip.com

stevemcbride@carmichaelip.com

chris@carmichaelip.com