

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

NEONODE SMARTPHONE LLC,
Patent Owner.

IPR2021-01041
Patent 8,095,879 B2

Before MICHELLE N. ANKENBRAND, KARAL. SZPONDOWSKI, and
CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

ANKENBRAND, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Google LLC (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–7, 9, 12, 13, and 15–17 of U.S. Patent No. 8,095,879 B2 (Ex. 1001, “the ’879 patent”). Paper 1 (“Pet.”). Neonode Smartphone LLC (“Patent Owner”) filed a Preliminary Response. Paper 15 (“Prelim. Resp.”). With our authorization, Petitioner filed a Pre-Institution Reply (Paper 17, “Reply”), and Patent Owner filed a Pre-Institution Sur-reply (Paper 18, “Sur-reply”).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least [one] of the claims challenged in the petition.”

For the reasons set forth below, we determine the information presented in the Petition establishes a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. Accordingly, we institute an *inter partes* review.

II. BACKGROUND

A. Related Matters

The parties identify the following district court proceedings involving the ’879 patent: *Neonode Smartphone LLC v. Apple Inc.*, Case No. 6:20-cv-00505 (W.D. Tex.) and *Neonode Smartphone LLC v. Samsung Electronics Co. Ltd.*, Case No. 6:20-cv-00507 (W.D. Tex.). Pet. 106; Paper 3, 2. The parties also note that the ’879 patent is challenged in IPR2021-00144, which Samsung Electronics Co. Ltd., Samsung Electronics America, Inc.

(collectively, “Samsung”), and Apple Inc. (“Apple”) filed (the “prior petition” or “Samsung and Apple petition”). Pet. 106, Paper 3, 2.

Patent Owner also identifies as related IPR2021-00145 (challenging U.S. Patent No. 8,812,993 B2). Paper 3, 2.

B. The '879 Patent

The '879 patent, titled “User Interface for Mobile Handheld Computer Unit,” issued on January 10, 2012. Ex. 1001 at [45], [54]. The '879 patent describes a user interface for a mobile handheld computer that has a touch sensitive area divided into a menu area and a display area. *Id.* at 1:6–9. The menu area shows a representation of a first, a second, and a third predefined function that “can be activated when the touch sensitive area detects a movement of an object with its starting point within the representation of the function on the menu area and with a direction from the menu area to the display area.” *Id.* at 1:65–2:5, 2:11–14. “[T]he first function is a general application dependent function, the second function is a keyboard function, and the third function is a task and file manager.” *Id.* at 2:7–10.

The user interface is “specifically adapted to be used with a small computer unit” having a touch sensitive area that is approximately 2–3 inches and also is adapted so that a user can operate it with one hand. *Id.* at 3:1–6.

We reproduce Figure 1 of the '879 patent below.

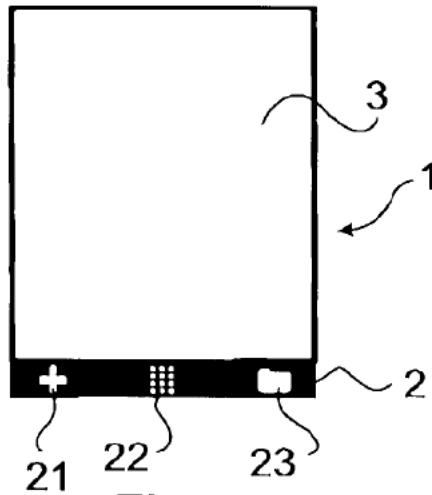


Fig. 1.

Figure 1 is a schematic view of touch sensitive area 1 on a mobile handheld computer unit, depicting menu area 2 adapted to present a representation of first 21, second, 22, and third 23 predefined functions. *Id.* at 3:21–22, 4:1–3.

We reproduce Figure 2 of the '879 patent below.

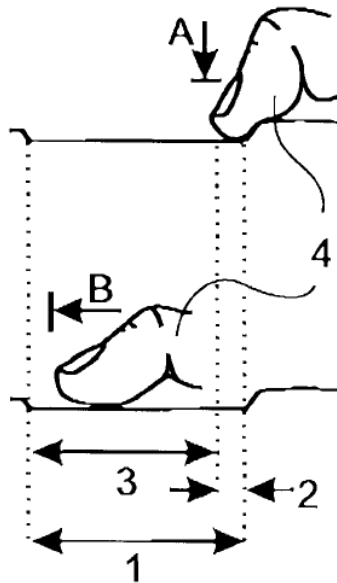


Fig. 2.

Figure 2 is a schematic side view illustrating how a user activates a function. *Id.* at 3:24–25. A user can activate any one of functions 21, 22, or 23 when

touch sensitive area 1 detects a movement of object 4 with its starting point A within the representation of a function on menu area 2 and with direction B from menu area 2 to display area 3. *Id.* at 4:7–11. Object 4 can be a finger, a pen, or another pointing device. *Id.* at 6:11–15.

The '879 patent explains that when a user activates, for example, the first function, the display area is adapted to display icons representing services or settings, depending on the current active application. *Id.* at 2:18–20. Figure 3, which we reproduce below, illustrates first function 21 activated.

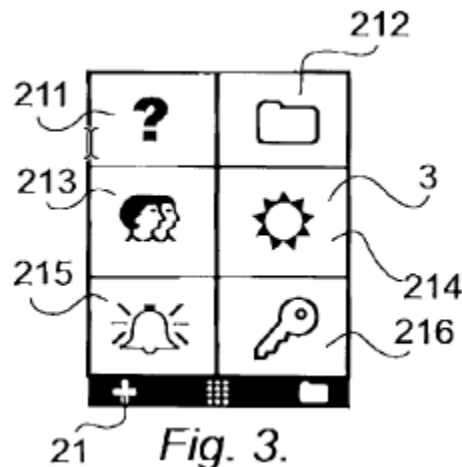


Figure 3 is a schematic illustration of the first function. *Id.* at 3:26. Figure 3 shows that after a user activates first function 21 with the movement depicted in Figure 2, display area 3 displays icons 211–216, each representing services or functions depending on the current active application. *Id.* at 4:12–15. If, for example, the active application handles a picture, then the icons showing on display area 3 after a user activates the first function “can be services such as ‘save to disk’, ‘send as SMS’, or ‘delete’, and they can be setting such as ‘resolution’, ‘colour’, or ‘brightness’.” *Id.* at 4:24–28. If no application is active on the computer, then icons 211–216 represent services or settings of the operating system,

such as background picture clock, alarm 215, users 213, and help 211. *Id.* at 4:29–32.

The '879 patent describes, in similar fashion, how a user activates the second keyboard function and the third task and file manager function. *See id.* at 4:34–5:63.

C. Illustrative Claim

Petitioner challenges claims 1–7, 9, 12, 13, and 15–17 of the '879 patent (collectively, “the challenged claims”). Claim 1, the only independent claim, is illustrative of the claimed subject matter, and recites:

1. A non-transitory computer readable medium storing a computer program with computer program code, which, when read by a mobile handheld computer unit, allows the computer to present a user interface for the mobile handheld computer unit, the user interface comprising:

a touch sensitive area in which a representation of a function is provided, wherein the representation consists of only one option for activating the function and wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, wherein the representation of the function is not relocated or duplicated during the gliding.

Ex. 1001, 6:45–59.

D. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims are unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	References/Basis
1–5, 13, 15–17	103(a) ¹	Robertson, ² Maddalozzo ³
6, 7, 9	103(a)	Robertson, Maddalozzo, Vayda ⁴
12	103(a)	Robertson, Maddalozzo, Bedford-Roberts ⁵
1, 4–6, 13, 15–17	103(a)	Tarpenning ⁶
2, 3, 7, 9	103(a)	Tarpenning, Vayda
12	103(a)	Tarpenning, Bedford-Roberts

Pet. 1–2. Petitioner relies on the Declaration of Dr. Jacob O. Wobbrock (Ex. 1003) to support its asserted grounds of unpatentability. Patent Owner disputes that Petitioner’s asserted grounds render any of the challenged claims unpatentable. *See generally* Prelim. Resp. Patent Owner relies on the Declaration of Dr. Craig Rosenberg (Ex. 2001).

III. DISCRETION UNDER 35 U.S.C. § 314(A) DUE TO PRIOR PETITION

Patent Owner argues that we should exercise discretion to deny institution under 35 U.S.C. § 314(a) in view of the prior petition Samsung

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’879 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA version of 35 U.S.C. § 103.

² George G. Robertson et al., *Buttons as First Class Objects on an X Desktop*, UIST: Proceedings of the ACM Symposium on User Interface Software and Technology: Hilton Head, South Carolina, USA, 35–44 (Nov. 11–13, 1991) (Ex. 1005).

³ U.S. Patent No. 7,768,501, issued Aug. 3, 2010 (Ex. 1006).

⁴ U.S. Patent No. 5,745,717, issued Apr. 28, 1998 (Ex. 1007).

⁵ U.S. Patent No. 5,870,092, issued Feb. 9, 1999 (Ex. 1008).

⁶ U.S. Patent No. 6,181,344, issued Jan. 30, 2001 (Ex. 1009).

and Apple filed in IPR2021-00144 challenging the '879 patent. Prelim. Resp. 1–2; Sur-reply 1–3. Petitioner argues that we should not exercise discretion to deny institution under 35 U.S.C. § 314(a). Pet. 105; Reply 1. For the reasons stated below, we do not exercise discretion to deny institution in view of the prior petition.

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d at 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

When determining whether to exercise discretion to deny institution in view of a prior petition challenging the same patent, we consider the following non-exclusive factors:

1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
3. whether at the time of filing of the second petition the petitioner already received the patent owner’s preliminary response to the first petition or received the Board’s decision on whether to institute review in the first petition;

4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;

5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;

6. the finite resources of the Board; and

7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

General Plastic Co., Ltd. v. Canon Kabushiki Kaisha, IPR2016-01357, Paper 19, 16–17 (PTAB Sept. 6, 2017) (precedential) (“*General Plastic*”).

We address each of these factors in turn.

1. Factor 1: petitioner and challenged claims

As we note above, Samsung and Apple previously filed a petition challenging the ’879 patent. Patent Owner contends that the Samsung and Apple petition and the present petition challenge the same patent, and of the thirteen claims challenged in the follow-on petition, eleven overlap the previous petition. Prelim. Resp. 6–7; Sur-reply 1. Patent Owner further contends Petitioner has a sufficiently close relationship with Samsung and Apple warranting exercise of discretion to deny institution. Prelim. Resp. 7–9 (citing *Valve Corp. v. Elec. Scripting Prods., Inc.*, IPR2019-00062, Paper 11 at 2 (PTAB Apr. 2, 2019) (precedential) (“*Valve*”); *PayPal, Inc. v. IOENGINE LLC*, IPR2019-00884, Paper 22 (PTAB Oct. 3, 2019) (“*PayPal*”). Patent Owner argues that three facts establish a sufficiently close relationship: (1) Petitioner sued Samsung for infringing the ’879 patent and Samsung sells the accused Galaxy devices preinstalled with Petitioner’s operating system and other of Petitioner’s mobile apps; (2) Petitioner offers through Google Play and Apple’s App Store its virtual

keyboard operation—GBoard—that Patent Owner identifies as infringing in the complaint against Apple and that is accessible on the accused Samsung and Apple phones; and (3) Apple relied on the presence of Petitioner’s employees in the Northern District of California to support a motion to transfer Patent Owner’s case and to support a mandamus petition Apple filed after the district court denied the motion to transfer. *Id.* at 8; Sur-reply 1.

Petitioner asserts that it is not a party to any litigation involving the ’879 patent and, therefore, the *Valve* and *PayPal* decisions are distinguishable. Reply 2–3. Petitioner further asserts that it is not a petitioner in, and was not involved with the prior petition, Patent Owner fails to show any “significant relationship” with Samsung or Apple, and the present Petition challenges additional claims that were not included in the first petition, all of which favor declining to exercise discretion to deny institution. Pet. 105; Reply 1–3.

As both parties acknowledge, “when different petitioners challenge the same patent [the Board] consider[s] any relationship between those petitioners when weighing the *General Plastic* factors.” *Valve*, Paper 11 at 9. In *Valve*, the Board explained that the first *General Plastic* factor weighed in favor of exercising discretion to deny institution because “Valve [the second petitioner] and HTC [the first petitioner] were co-defendants in the District Court litigation and were accused of infringing the [challenged] patent based on the same product.” *Id.* at 9–10. Thus, the Board in *Valve* found three facts sufficient to establish a significant relationship between the two petitioners—the first and second petitioners were co-defendants, the challenged patent had been asserted against both petitioners because the first petitioner had licensed the allegedly infringing technology from the second petitioner, and the second petitioner provided the first petitioner with

technical assistance during development of the accused product. *Id.* In *PayPal*, the Board determined a significant relationship existed between the first and second petitioners even though they were not co-defendants because the first petitioner and second petitioner were accused of infringing the same patent based on the same products, the first petitioner had an indemnification agreement with the second petitioner, and the first petitioner filed a declaratory judgment action based on the indemnification agreement. *PayPal*, Paper 22 at 9, 10–11.

Here, in contrast, Petitioner is not a party to any litigation. Thus, Petitioner is not a co-defendant with Samsung or Apple. Nor is there any evidence to indicate that Petitioner has an indemnification agreement with Samsung or Apple. At most, as Patent Owner argues, the accused Samsung devices are preinstalled with Petitioner's operating system and other of Petitioner's mobile applications, and Petitioner's GBoard application, which is accused of infringing, is available for download on Petitioner's store app and Apple's app store.⁷ In our view, these facts do not create a significant relationship under *Valve*. Accordingly, on the record before us, we determine that Petitioner does not have a significant relationship with Samsung or Apple.

As for the challenged claims, we agree with Patent Owner that the current Petition challenges most of the claims that were challenged in the

⁷ We do not find as relevant to our analysis the fact that Apple relied on the location of Petitioner's witnesses in its transfer motion and mandamus petition. As Petitioner notes, Reply 2, the motion and petition rely on the court's power to compel third-party witnesses to testify, *see* Ex. 2015, 10–11; Ex. 2016, 21–22, and Patent Owner does not explain why that is relevant to our determination of whether a significant relationship exists between Petitioner and Apple and/or Samsung.

prior petition. An overlap in claims alone, however, is not enough to tip this factor in favor of exercising discretion to institute review. *See Valve*, Paper 11 at 10 (“The complete overlap in claims *and* the significant relationship between Valve and HTC favor denying institution.”). As a result, we determine that the first factor weighs against exercising our discretion to deny institution.

2. *Factor 2: knew, or should have known, of the prior art*

Patent Owner argues that Petitioner should have known of the prior art references asserted in its Petition at the time the prior petition was filed because the prior art references are all publicly available on either Petitioner’s own search engine, its own patent search platform, or the Patent and Trademark Office’s “Public PAIR” platform. Prelim. Resp. 10–11; Sur-reply 2. Petitioner asserts that it was not aware of the asserted prior art references until six months after the prior petition was filed, and Patent Owner does not adequately explain why Petitioner should have known of them at the time the previous petition was filed. Pet. 105–106; Reply 3–4. Petitioner further asserts that this factor is “of limited relevance” because the current Petition asserts different prior art than the Samsung and Apple petition. Reply 3.

We agree with Petitioner that this factor is of limited relevance in our analysis because the current Petition relies on different prior art than the Samsung and Apple petition. *See Foursquare Labs, Inc. v. Mimzi, LLC*, IPR2019-01287, Paper 11 at 8–9 (PTAB Jan. 14, 2020). Further, as we discuss in connection with the first *General Plastic* factor, Petitioner is not a party to any litigation. This fact undermines Patent Owner’s argument that Petitioner should have known of the prior art references asserted in the Samsung and Apple petition, as we agree with Petitioner that Patent Owner

fails to address why Petitioner should have searched for or known of prior art in November 2020 when Petitioner was not a party to any litigation. Accordingly, the second factor weighs against exercising our discretion to deny institution.

3. Factor 3: had the benefit of preliminary response and prior decision on institution

Patent Owner argues that it filed a preliminary response to the Samsung and Apple petition on March 17, 2021, and Petitioner filed its Petition on June 14, 2021, so Patent Owner's preliminary response was available to Petitioner when it began drafting the Petition. Prelim. Resp. 11–12; Sur-reply 2. Petitioner asserts that it filed the Petition before a decision on institution of the Samsung and Apple petition and Patent Owner offers no evidence that Petitioner obtained an unfair benefit or tactical advantage from Patent Owner's preliminary response. Pet. 105; Reply 4.

We agree with Petitioner. Petitioner relies on different prior art here than the art asserted in the Samsung and Apple petition, and Patent Owner does not identify any unfair benefit or tactical advantage that Petitioner would have gained from reviewing Patent Owner's preliminary response to the Samsung and Apple petition. Accordingly, the third factor weighs against exercising our discretion to deny institution.

4. Factors 4 and 5: delay in filing the petition

For factor four, Patent Owner argues that the Board should consider that: (1) the prior petition was available to Petitioner since November 6, 2020, seven months before Petitioner filed the current Petition; (2) Patent Owner's preliminary response was available Petitioner since March 17, 2021, three months before its petition was filed; and (3) the prior art references that Petitioner cites in its petition were available to Petitioner on

its own search platforms and the Patent and Trademark Office's Public PAIR platform at all material times. Prelim. Resp. 12–14; Sur-reply 2–3. Similarly, for factor five, Patent Owner contends Petitioner's explanation for the elapsed time between the original petition and the current petition is unsupported and fails to address why Petitioner delayed seven months after the original petition and three months after Patent Owner's preliminary response to file the current Petition when the prior art references Petitioner asserts were available to Petitioner on its own search platforms and the Patent and Trademark Office's Public PAIR platform at all material times. Prelim. Resp. 14–15; Sur-reply 2–3. Petitioner argues that it: (1) was not a party to any previous litigation; (2) became aware of the prior art references asserted in the previous petition around May 3, 2021; and (3) filed its petition six weeks after becoming aware of the prior art references. Pet. 106; Reply 4–5.

Because Petitioner and prior petitioners Samsung and Apple are unrelated, we find that this factor is only marginally relevant to our analysis. Here, Petitioner represents on the record that it only became aware of the prior art references asserted in the Samsung and Apple petition in May 2021, and filed its petition six weeks later. Pet. 106; Reply 4–5. Nothing in the record calls Petitioner's representations into question, which we credit. Moreover, Patent Owner's arguments that Petitioner should have known about the prior petition and preliminary response imply a relationship between Petitioner and Samsung or Apple. But as we discuss in connection with the first factor, Petitioner does not have a significant relationship with either Samsung or Apple. Accordingly, the fourth and fifth factors weigh against exercising our discretion to deny institution.

5. *Factors 6 and 7: Board resources and statutory deadline*

Patent Owner asserts that, “in general, having multiple petitions challenging the same patent . . . is inefficient and tends to waste resources.” Prelim. Resp. 15; Sur-reply 3. Other than that general assertion, Patent Owner reiterates the same arguments it presents for factors four and five. See Prelim. Resp. 15–16. Petitioner contends it only recently learned of the ’879 patent and is not a party to any litigation involving it. Pet. 106. Neither party addresses the Board’s statutory deadline.

We are mindful that the “intent in formulating the [*General Plastic*] factors was to take undue inequities and prejudices to Patent Owner into account.” *General Plastic*, Paper 19, at 17. We are also mindful, however, of potential prejudice to a second petitioner if institution of review based on the second petition is denied—as was originally the case with the Samsung and Apple petition—or the proceeding involving the first petitioner is terminated. In view of those two competing concerns, we find the sixth factor neutral. We find that the seventh factor weighs against exercising our discretion to deny institution because there is no argument or evidence that instituting review in this case will cause any delay in meeting our statutory deadline for issuing a final written decision in either this case or the case involving the Samsung and Apple petition.

6. *Conclusion*

We have considered the circumstances and facts before us in view of the *General Plastic* factors. Because our analysis is fact-driven, no single factor is determinative of whether we exercise our discretion to deny institution under § 314(a). Evaluating all of the factors on this record, we determine that the circumstances presented here do not support exercising our discretion under § 314(a) to deny institution of an *inter partes* review.

IV. ANALYSIS

A. Level of Ordinary Skill in the Art

For Petitioner, Dr. Wobbrock testifies that a person of ordinary skill in the art at the time of the invention, would have had “at least a bachelor’s degree in Computer Science, Human-Computer Interaction, Symbolic Systems, or related engineering disciplines, and at least two years of experience designing and programming graphical user interfaces,” but “[r]elevant work experience can substitute for formal education and advanced degree studies could substitute for work experience.” Ex. 1003 ¶ 49. Patent Owner’s expert, Dr. Rosenberg, applies Dr. Wobbrock’s description of the ordinarily skilled artisan. Ex. 2001 ¶ 35. We adopt Dr. Wobbrock’s description of the level of ordinary skill in the art because it is consistent with the problems and solutions the ’879 patent identifies and with the prior art.

B. Claim Construction

Neither party contends that there are claim terms in dispute, or that we need to construe any terms for purposes of this decision. *See* Pet. 4; *see generally* Prelim. Resp. After reviewing the parties’ arguments and evidence, we determine that we do not need to expressly construe any claim terms for purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

C. Asserted References

Before turning to Petitioner’s asserted grounds, we provide a brief summary of the asserted references.

1. Robertson (Ex. 1005)

Robertson describes a high-level user interface toolkit called “XButtons,” that supports on-screen buttons as first-class objects on an

“X window system desktop.” Ex. 1005, 35. Robertson further describes that XButtons: typically appear as small rectangular screen objects; usually have some text that indicates what their action is, and may also have a field for some editable text. *Id.* at 38. A group of XButtons is shown in Figure 1, which we reproduce below.

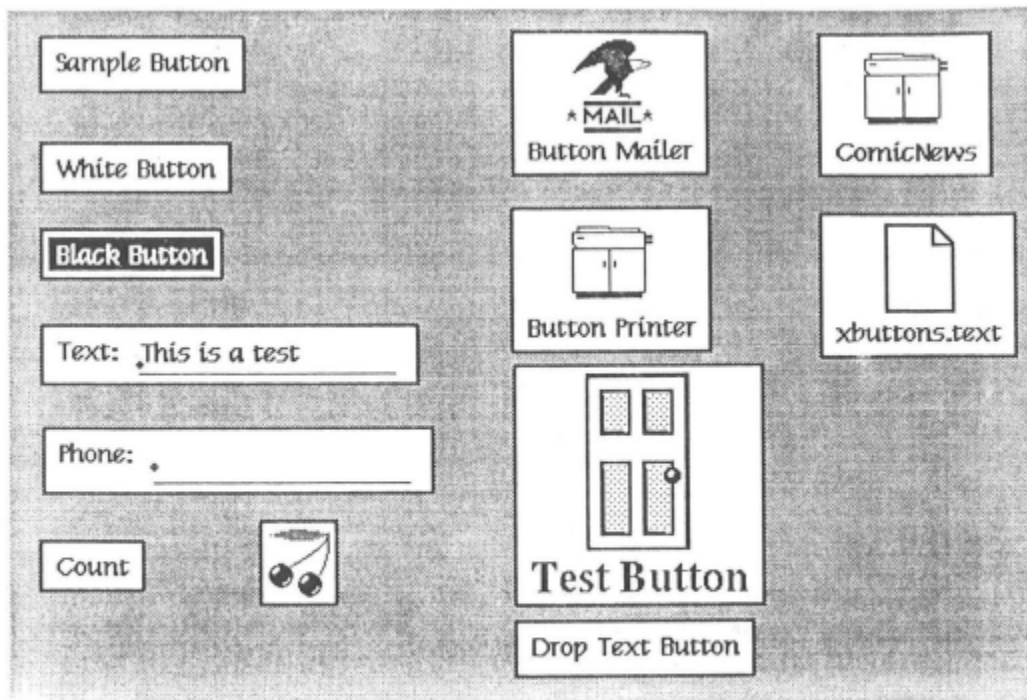


Figure 1: Sample Set of XButtons.

Figure 1 illustrates a sample set of XButtons. *Id.* at 38–39. XButtons have multiple actions which are selected by simple mouse or pen gestures, where there are two classes of gestures, touching gestures and grasping gestures. *Id.* at 39. Whenever a user gestures at an XButton, a gesture parser interprets mouse or pen movement and classifies it as one of a set of easily differentiated gestures (*e.g.*, “flick left,” “flick right,” “flick up,” “flick down,” “click,” “rubout,” “check,” or “insert”). *Id.* A menu for an XButton is shown in Figure 2, which we reproduce below.

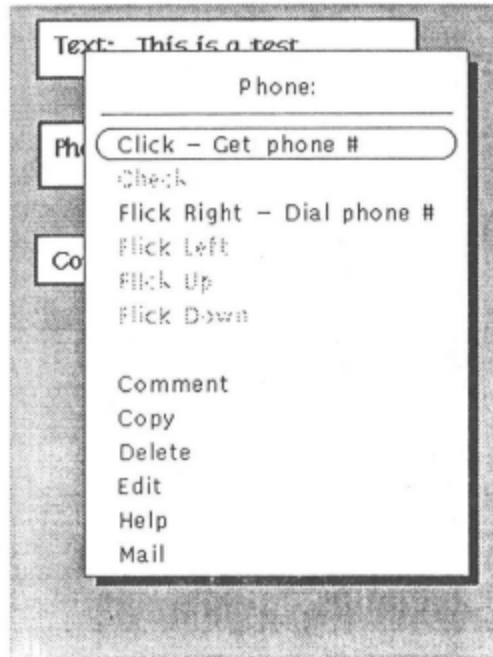


Figure 2: Sample Button Menu.

Figure 2 illustrates a sample menu for an XButton. *Id.* at 40. The menu shows all potential user manipulations of the XButton. *Id.* A button editor for an XButton is shown in Figure 3, which we reproduce below.

The image shows a 'Button Editor' window with the following fields and controls:

- Title:** Phone:
- Font:** *
- Bitmap:** *
- Text:** *
- Title+Bitmap:** True
- Foreground:** black
- Background:** lightgrey
- TextWidth:** 20
- Help:** A text area containing 'Phone Help' and 'Type in a name, then click to get the phone number.' with a vertical scrollbar.
- Initialize:** *
- Click:** dialphone \$XB_Text
- Check:** *
- Flick Right:** dialphone \$XB_Text
- Flick Left:** *
- Flick Up:** *
- Flick Down:** *
- Rubout:** xbdelete
- Insert:** xbedit
- Drop:** *
- Timed:** *
- Interval:** 0
- Attribute:** *
- Value:** *
- Shell:** /bin/csh
- Text:** Get phone #
- Text:** Dial phone #
- Text:** *
- Text:** *
- Buttons:** Get Attr, Set Attr
- File:** /acadia/robertson/.xbuttons/Phone.button
- Bottom Buttons:** Apply, Reset, Clear, Cancel

Figure 3: Structured Button Editor.

Figure 3 shows a button editor for the XButton whose menu is shown in Figure 2. *Id.* The button editor is a structured property-sheet editor designed specifically for editing XButtons. *Id.* The editor fields at the top specify the appearance of the button. *Id.* The middle of the editor specifies the action language, the various actions, and the text to appear in the menu for each action. *Id.* Toward the bottom of the editor are fields (“Attribute” and “Value”) that allow the user to view and replace user-defined properties. *Id.*

2. Maddalozzo (Ex. 1006)

Maddalozzo describes a portable computer having a display screen where data is displayed initially within the display screen. Ex. 1006, 2:15–18. The display screen is partitioned into a touch-sensitive input area and a display area, where data input at the touch-sensitive input area is simultaneously displayed in the display area, in response to a particular input. *Id.* at 2:18–22. A graphical user interface displayed within a display screen is shown in Figure 6, which we reproduce below.

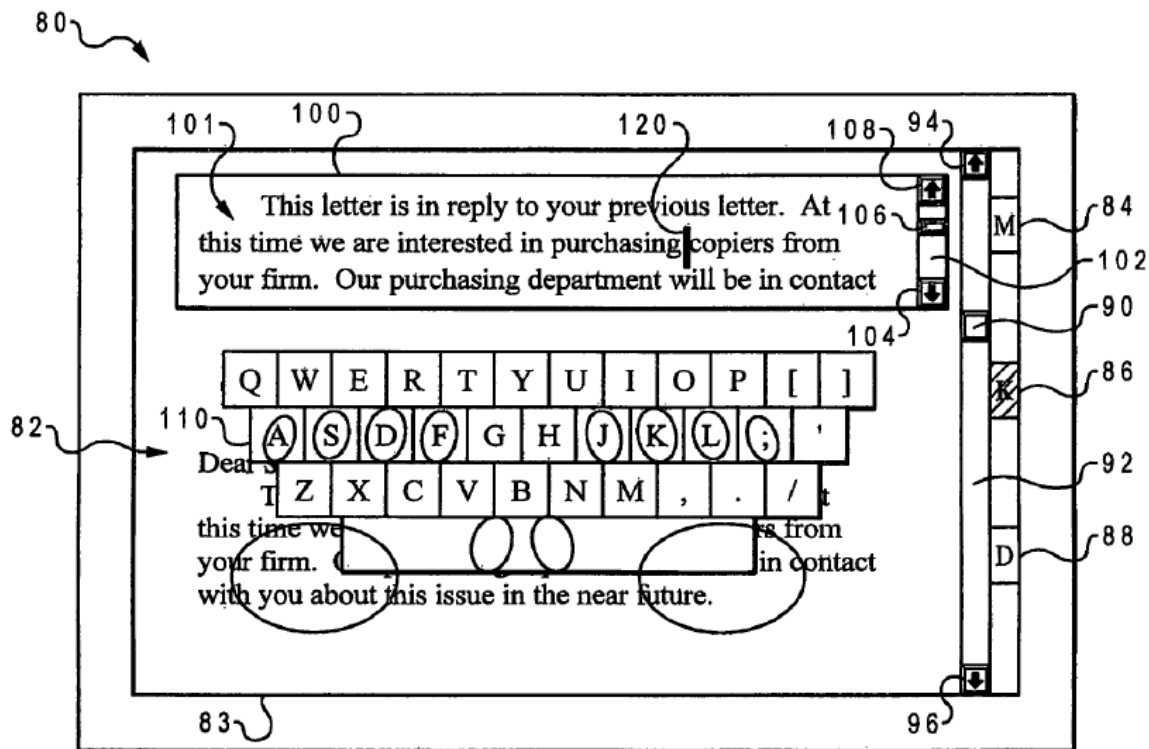


Fig. 6

Figure 6 illustrates a graphical user interface window 83 displayed in a keyboard mode within a display screen. *Id.* at 6:36–38. When a user touches “keys” displayed on display screen 80, keyboard input is reflected onto the screen beneath transparent keyboard 110. *Id.* at 6:48–50. Further, a

smaller “active” window 100 is displayed to indicate the actual typing taking place. *Id.* at 7:1–3.

3. *Vayda (Ex. 1007)*

Vayda describes a menu generating computer system for displaying a graphical display including a menu on a display of the computer system. Ex. 1007, [57]. The menu can be activated by a button combination on a user input device or another input device, such as a touch screen. *Id.* at 6:14–19. An example menu is shown in Figure 14, which we reproduce below.

FIG. 14

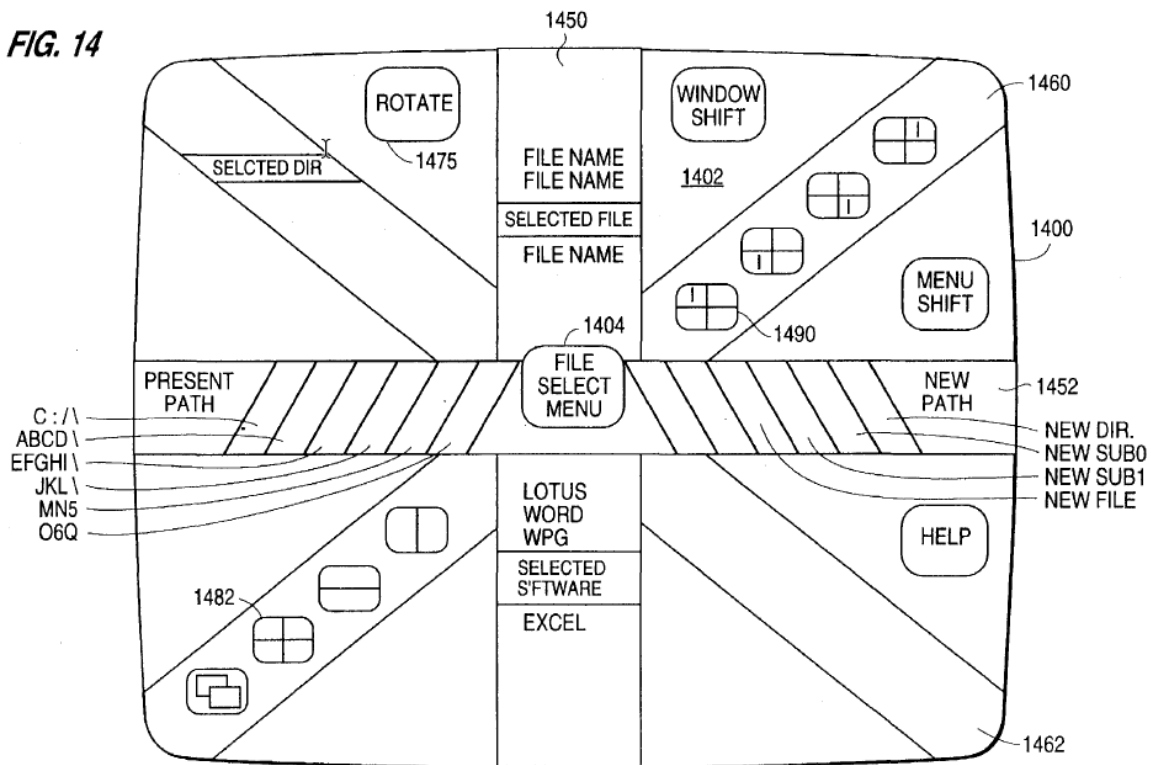


Figure 14 illustrates a menu screen 1400 comprising a select/execute method 1402. *Id.* at 14:67–15:1. Select/execute menu 1402 comprises a vertical command bar 1450, a horizontal command bar 1452, and diagonal command bars 1460 and 1462. *Id.* at 15:1–4. Vayda describes that commands are

selected by scrolling horizontally, vertically and/or diagonally through a focus position. *Id.* at 14:65–67.

4. *Bedford-Roberts (Ex. 1008)*

Bedford-Roberts describes a device for displaying pages of electronically stored information comprising a pen/finger sensitive symbol enabling a user to browse the information by page turning. Ex. 1008, 1:43–45. The user can stroke the symbol to riffle through pages. *Id.* at 1:51–53. The device is shown in Figure 1, which we reproduce below.

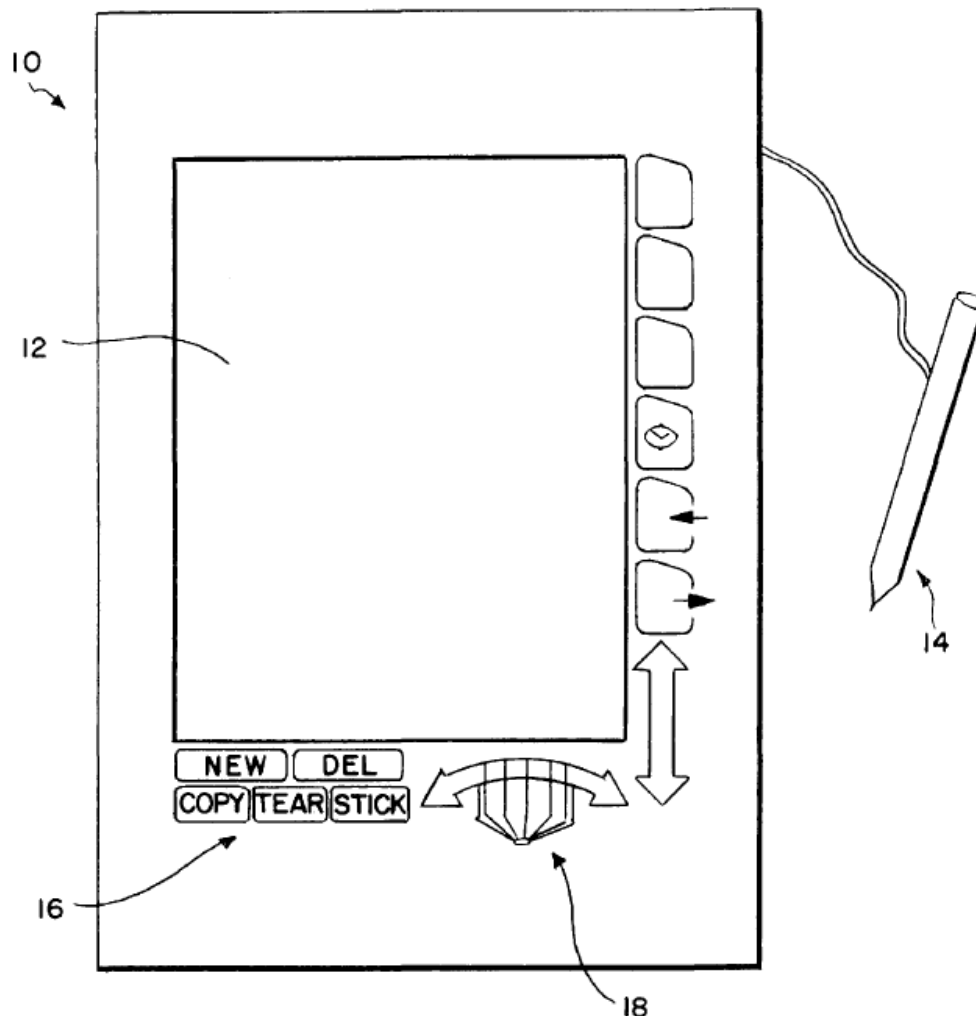


FIG. 1

Figure 1 illustrates a pen-based handheld device 10 for storing and displaying pages of electronic information comprising a display screen 12 and a pen for user input. *Id.* at 2:24–26. The device also comprises a book symbol 18 for enabling users to browse pages of stored information. *Id.* at 2:26–28. Symbol 18 is shown in greater detail in Figure 2, which we reproduce below.

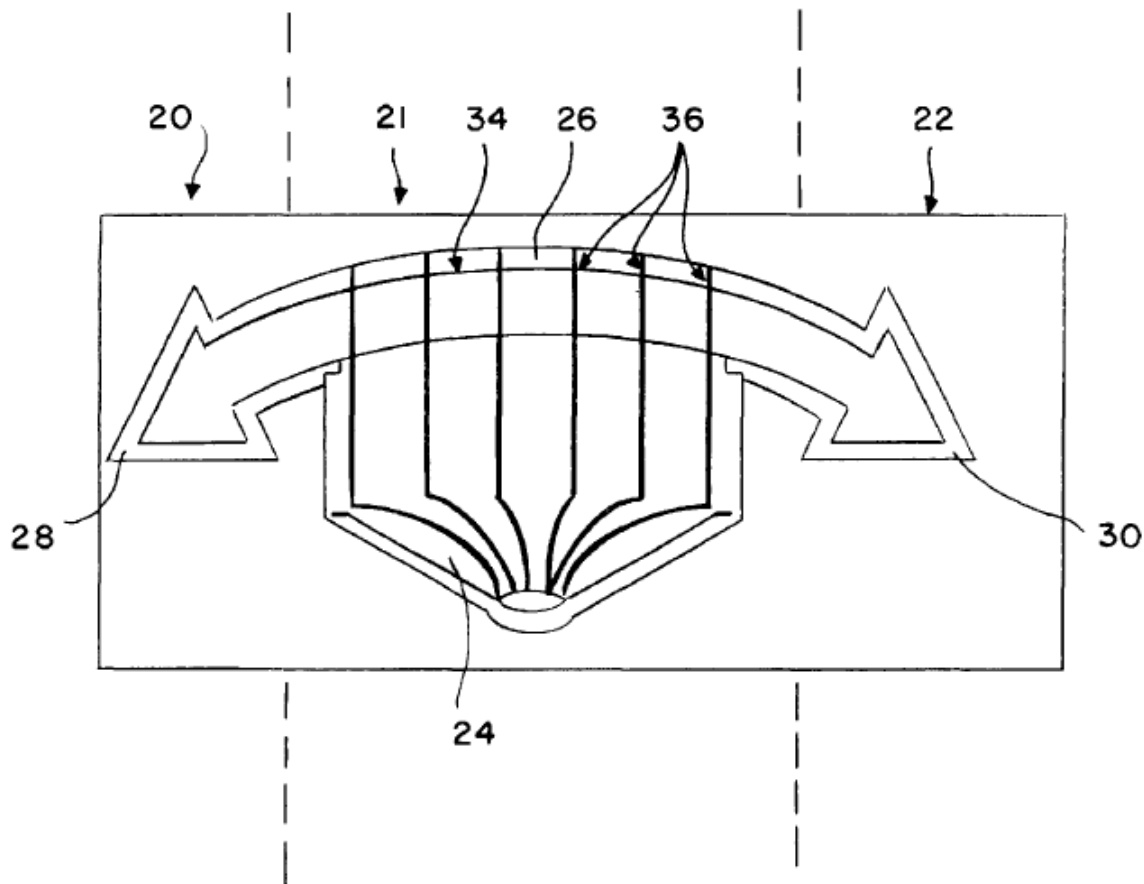


FIG. 2

Figure 2 shows symbol 18 from Figure 1, where symbol 18 depicts an open book. *Id.* at 2:19, 30. The symbol 18 is notionally divided into three segments 20, 21, and 22, the boundaries of which are indicated by dotted lines in Figure 2. *Id.* at 2:37–39. The symbol 18 includes a representation

24 of an open book and a double-headed arrow 26. *Id.* at 2:39–41. The left hand head 28 of the arrow 26 is in the region 20 and the right hand head 30 of the arrow is in the region 22. *Id.* at 2:41–43. The book representation 24 and the body 34 of the arrow 26 are in the region 21. *Id.* at 2:43–44. The book representation 24 comprises page delimiters 36 which are ridges formed in the symbol 18 which the user can feel as the pen 14 is moved over the symbol 18. *Id.* at 2:47–49.

In use, as the user moves the pen 14 along the body 34 of the arrow, or anywhere within the region 21, successive pages of stored information are displayed, depending on the direction of movement along the arrow body 34. *Id.* at 2:50–53. As a page delimiter 36 is traversed by the pen 14, the next page in the direction of movement of the pen 14 is displayed. *Id.* at 2:54–55. If the user taps one of the arrow heads 28 or 30, this causes the device 10 to display the next page in the direction indicated by the tapped arrow head. *Id.* at 2:56–58. In order to riffle through a large number of pages of stored information, the user repeatedly moves the pen 14 in a single direction in the region 21 over the body 34 of the arrow 26. *Id.* at 2:61–63.

5. *Tarpenning (Ex. 1009)*

Tarpenning describes a hand-held reader device that includes a touch-sensitive display and graphical user interface, where the user access various software-implemented features associated with the display and management of the content. Ex. 1009, [57]. A perspective view of the hand-held reader device is shown in Figure 2, which we reproduce below.

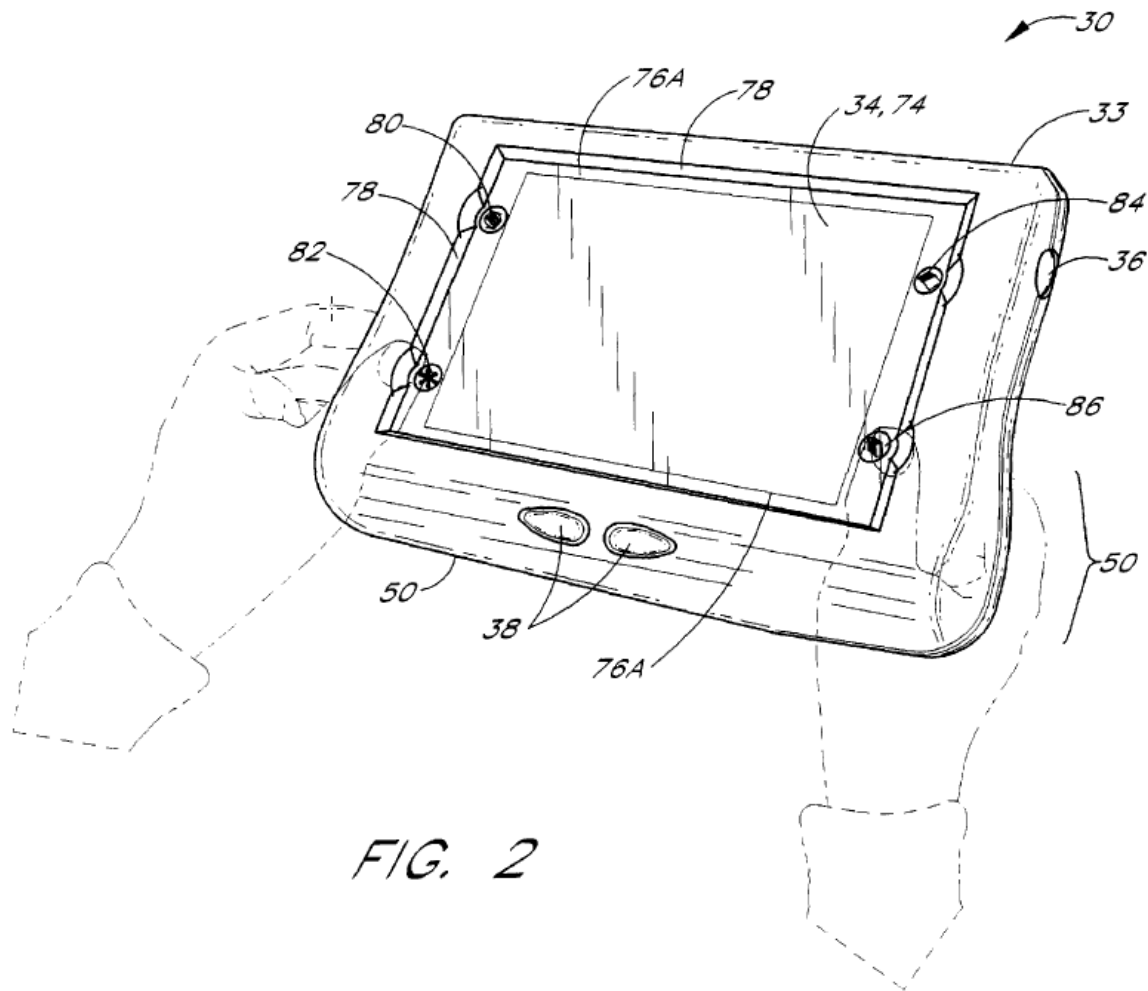
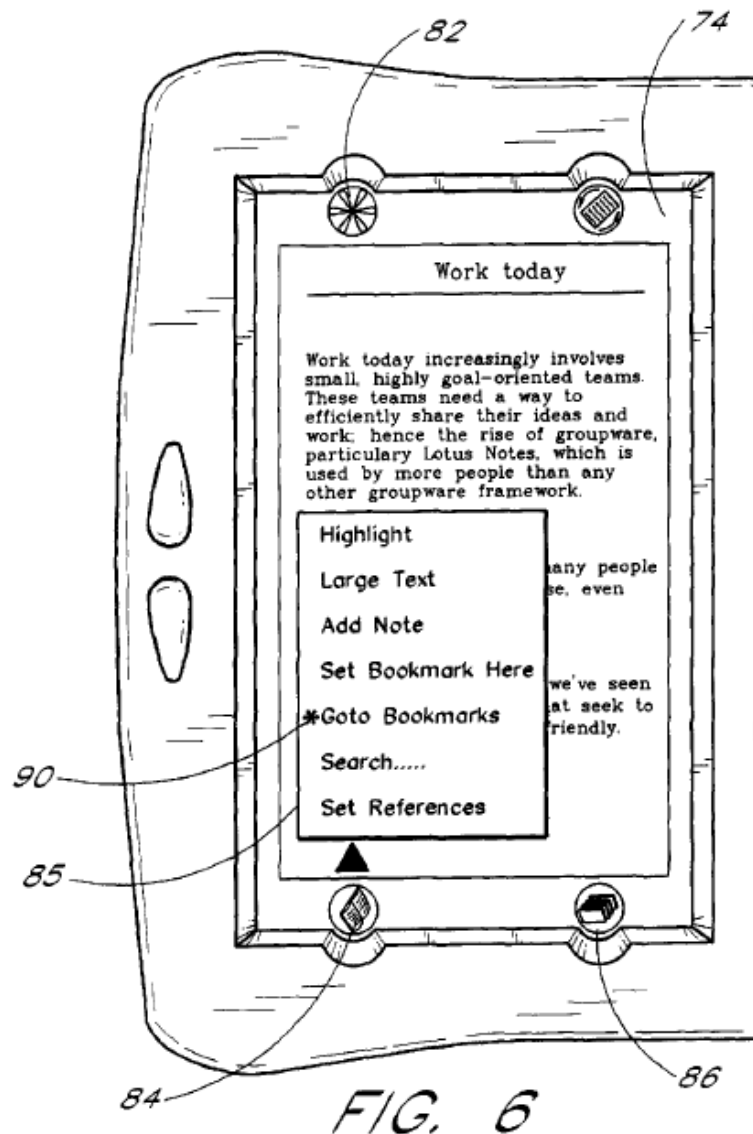
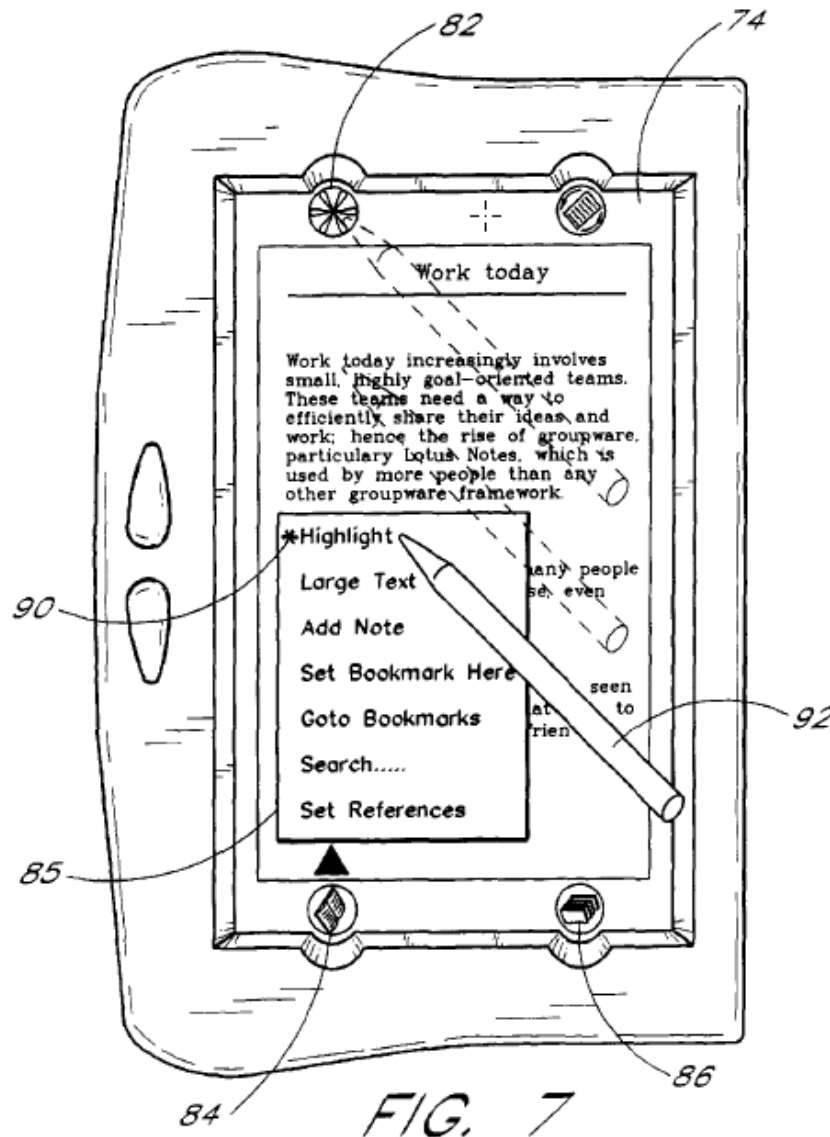


FIG. 2

Figure 2 illustrates a hand-held computing device adapted to be used as a portable reading device allowing a user to read literary titles and other types of content via a touch sensitive display 34. *Id.* at 3:42–48. The housing 33 has an increased width and depth and a rounded configuration along its base to form an extended gripping area 50 for holding the device. *Id.* at 4:10–13. As illustrated in Figure 2, the portion of the touch screen 74 which extends beyond the perimeter 76A of the LCD display 76 has four fixed icons displayed thereon to form four respective function keys: an orientation key 80, a user-definable “hotkey” 82, a book menu key 85, and a library menu key 86. *Id.* at 6:9–14. The hand-held computing device includes a user

interface feature which allow a user to designate a hotkey function, as shown in Figures 6 and 7, which we reproduce below.





Figures 6 and 7 illustrate an example of a hotkey assignment feature of a hand-held computing device's user interface. *Id.* at 3:3–4, 7:39–42. With reference to Figure 6, a user initially brings up a menu or sub-menu that contains the target hotkey function. *Id.* at 7:42–44. The menu or sub-menu item that is currently defined as the hotkey function is denoted as such by a hotkey icon 90. *Id.* at 7:30–32. In this example, the hotkey icon 90 appears next to the “Goto Bookmarks” item of the book menu. *Id.* at 7:32–34. As depicted in Figure 7, the user then touches the hotkey 82 with the stylus 92

(or the user's finger), drags the stylus to the target item, and then removes the stylus from the touch screen 74. *Id.* at 7:44–48. During the dragging process, the hotkey icon 90 is displayed next to the menu item (if any) that is currently touched. *Id.* at 7:49–51. In Figure 7, the hotkey icon 90 is displayed next to the “Highlight” item since the stylus 92 is currently over that item. *Id.* at 7:51–53.

D. Asserted Obviousness Based on Robertson and Maddalozzo

Petitioner asserts three obviousness challenges based on the combination of Robertson and Maddalozzo. Pet. 1–2. Specifically, Petitioner contends the subject matter of the challenged claims of the '879 patent would have been obvious over: (1) Robertson and Maddalozzo (claims 1–5, 13, and 15–17); (2) Robertson, Maddalozzo, and Vayda (claims 6, 7, and 9); and (3) Robertson, Maddalozzo, and Bedford-Roberts (claim 12). *Id.*

1. Claim 1

Petitioner contends that the combined teachings of Robertson and Maddalozzo teach or suggest each limitation of claim 1, and that a person of ordinary skill in the art would have reason to implement Robertson's “XButtons,” or other gesture-activated button, in mobile handheld computer units. Pet. 11–30. Petitioner relies on Dr. Wobbrock's testimony to support its assertions. *See id.* Patent Owner disagrees, arguing that Robertson does not disclose a “representation of a function,” as claim 1 recites. Prelim. Resp. 52–56. Patent Owner also argues that Petitioner fails to show sufficiently that a person of ordinary skill in the art would have been motivated to incorporate Robertson's interface into Maddalozzo or some other undefined mobile handheld computer unit. *Id.* at 16–52. Finally,

Patent Owner argues that objective indicia of nonobviousness confirms that the challenged claims are patentable. We focus our analysis on these issues.

a) “Representation of a function” limitation

Claims 1 requires a user interface comprising “a touch sensitive area in which a representation of a function is provided” (the “representation of a function limitation”). Ex. 1001, 6:50–51. Petitioner asserts that Robertson discloses a representation of a function. Pet. 19–22. Specifically, Petitioner identifies Robertson’s “‘Phone’ button” on the touch-sensitive user interface as representing at least two functions—the “‘dialphone’ function ‘to dial the [phone] number’” and the “xbedit” function, which “opens the ‘button editor’ menu.” *Id.* at 20–21 (citing Ex. 1005 §§ 3–3.2, Figs. 1–3; Ex. 1003 ¶¶ 100–101). Among other things, Petitioner directs us to annotated versions of Robertson’s Figures 1 and 2 to explain how Robertson’s “Phone” button represents the “dialphone” function. *Id.* We reproduce Petitioner’s annotated versions of Robertson’s Figures 1 and 2 below.

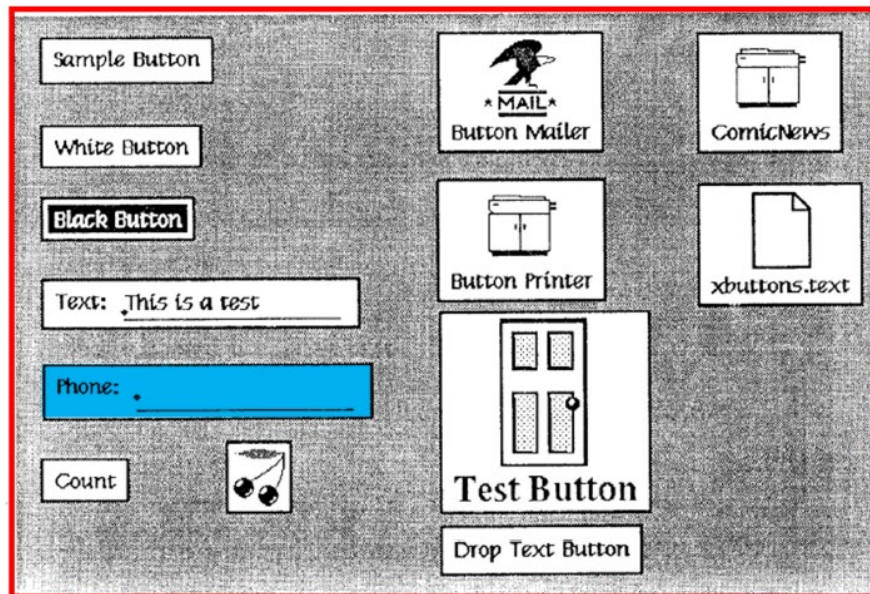


Figure 1: Sample Set of XButtons.



Figure 2: Sample Button Menu.

Petitioner asserts that “[a]nnotated Figure 1 shows a button representation (e.g., ‘Phone’ button (**blue**)) on the touch-sensitive user interface (**red**).” *Id.* at 20. According to Petitioner, Figure 1’s “‘Phone’ button represents a function activated when the user performs a multi-step gesture on the button.” *Id.* at 20 (citing Ex. 1005 §§ 3–3.2; Ex. 1003 ¶ 100). Petitioner further asserts that annotated Figure 2 shows a “function[] (**green**) corresponding to multi-step gestures (**orange**) associated with the ‘Phone’ button (**blue**); namely, “the ‘dialphone’ function to ‘dial the [phone] number’ activated by a ‘flick right gesture.’” *Id.* at 20–21 (citing Ex. 1005 §§ 3–3.1; Ex. 1003 ¶ 101). Petitioner relies on an annotated version of Robertson’s Figure 3 to illustrate the “xbedit,” function. *Id.* at 21–22.

Patent Owner contends that Petitioner fails to show Robertson teaches or suggests the representation of a function limitation because a person of

ordinary skill in the art in 2002 “would have understood a ‘representation of a function,’ in the user interface context, to refer to an icon or other image that represented a function.” Prelim. Resp. 52–55. Patent Owner reasons that icons were “well known” in the user interface design field in 2002, “and would have been immediately recognized as a type of representation of a function.” *Id.* at 52 (citing Ex. 2001 ¶ 89). Pointing to the ’879 patent’s written description, Patent Owner further contends that a person of ordinary skill in the art “would have understood that a ‘representation’ represents something, in this case a function,” *id.* at 54, and that Robertson’s “Phone” button, therefore, “is not a representation of the *xbedit* function.” *Id.* at 53–55. Patent Owner also argues that an ordinarily skilled artisan would not have considered Robertson’s “Phone” button a representation of the “dialphone” function because selecting the representation “is typically sufficient in itself to activate the associated function” but, in Robertson, the “dialphone” function “is not activatable upon selection.” *Id.* at 55–56.

At this stage of the proceeding, Petitioner sufficiently shows that Robertson teaches or suggests a “representation of a function,” at least as to Robertson’s “Phone” button and “dialphone” function.⁸ As shown in Petitioner’s annotated version of Robertson’s Figures 1 and 2, the phone dials a number when a user selects the “Phone” button and flicks right. Thus, Robertson’s “Phone” button represents the “dialphone” function. Patent Owner argues that Robertson fails to teach or suggest the limitation

⁸ We need not decide whether Robertson’s “Phone” button is also a representation of the “*xbedit*” function because a representation of one function satisfies the representation of a function limitation. We note, however, that we disagree with Patent Owner’s argument that the “representation” refers to an icon or an image because claim 1 broadly recites a “representation.”

because Robert's function "is not activatable upon selection." Prelim. Resp. 55. But Patent Owner directs us to nothing in the claim language that requires the representation to activate the associated function upon selection. And Patent Owner and its expert both acknowledge that selection is not always sufficient to activate the function, explaining that selecting the representation "is *typically* sufficient in itself to activate the associated function." *Id.*; see Ex. 2001 ¶ 93.

b) Remaining limitations

Petitioner asserts that Robertson teaches or suggests claim 1's remaining limitations. For example, Petitioner asserts that Robertson teaches or suggests claim 1's preamble and that Maddalozzo discloses and would have rendered obvious the computer unit being a "mobile handheld computer unit." Pet. 12–15. In particular, Petitioner explains that Robertson discloses a computer program with code for implementing gesture-activated XButtons that presents a user interface for receiving gestural inputs when read by a computer. *Id.* at 12–13 (citing Ex. 1005, Abstr., §§ 3.1, 3.2, 4.1; Ex. 1003 ¶ 81). Petitioner further asserts that Maddalozzo discloses a mobile handheld computer, such as a laptop or personal digital assistant ("PDA"), and explains that mobile handheld computer devices commonly used touch-screen technology. *Id.* at 14–15 (citing Ex. 1006, 1:12–35, 2:1–22; Ex. 1003 ¶¶ 87–88).

Petitioner also argues that Robertson teaches or suggests: (1) a representation consisting of only one option for activating the function, (2) activating the function using a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location, and (3) wherein the

representation of the function is not relocated or duplicated during the gliding. Pet. 23–30 (citing Ex. 1005 §§ 3–3.3, 4.2, Figs. 1–3; Ex. 1003 ¶¶ 102–112).

At this stage of the proceeding, Patent Owner does not separately address these limitations.⁹ We have reviewed the information Petitioner provides, including the relevant portions of Dr. Wobbrock’s testimony and find that Petitioner shows sufficiently that Robertson teaches or suggests claim 1’s remaining limitations.

c) Reason to modify and reasonable expectation of success

Petitioner asserts that a person of ordinary skill in the art “would have found it obvious to implement Robertson’s XButtons (or other gesture-activated buttons) in mobile handheld computer units to enhance the user experience through more capable buttons supporting gesture activations.” Pet. 15. Petitioner explains that both Robertson and Maddalozzo disclose touch-based user interfaces, so that an ordinarily skilled artisan would have understood that Robertson’s teachings apply generally to gesture-based

⁹ Patent Owner argues that claim 1’s preamble is limiting and that Robertson does not teach or suggest an interface for a mobile handheld device as the preamble requires. Prelim. Resp. 18–20, 23–25. We do not decide whether the preamble is limiting because Petitioner provides argument that the combined disclosures of Robertson and Maddalozzo teach or suggest claim 1’s preamble. See Pet. 12–15; *see also id.* at n.1 (“Petitioner does not concede the preamble is limiting. If Patent Owner argues it is, Robertson and Maddalozzo render obvious [1 Preamble].”). Further, Patent Owner acknowledges that Petitioner’s combination is based on “Robertson’s X Window interface implemented on Maddalozzo’s mobile device,[] as the basis for Ground 1” and, at this stage of the proceeding, does not contest that Maddalozzo discloses a mobile handheld computer unit. Prelim. Resp. 17, n.2. We invite the parties to address these issues during the course of the trial, if they so desire.

devices, including Maddalozzo’s disclosed mobile handheld devices (e.g., laptops or PDAs). *Id.* Petitioner further explains that Maddalozzo’s laptop and PDA works “with ‘[a]ny suitable operating systems and associated graphical user interface,’ including Robertson’s ‘Unix’ operating system or Lisp-based commands.” *Id.* at 15–16 (citing Ex. 1006, 4:32–38; Ex. 1005, Abstr., §§ 1.2, 2.1, 3–3.2; Ex. 1003 ¶ 90).

Petitioner argues that an ordinarily skilled artisan would have implemented Robertson’s gesture-based operations on a laptop or PDA “to provide a fully integrated handheld device that stores and executes user interface program code to eliminate any need for external computing components and to provide a simple, configurable multi-function user interface.” Pet. 16; *see also id.* at 17 (arguing that an ordinarily skilled artisan would have implemented Robertson’s gesture-based operations on laptops or PDAs “because consumers desired portability and gestures were more convenient for such devices, often lacking external mice and keyboards”). Petitioner further argues that “[t]ouch screen technology [was] increasingly being implemented . . . with portable computers,’ and the ‘increasingly portable’ nature of such devices” would have led an ordinarily skilled artisan “to implement Robertson’s gesture-based function activation to keep the form factor small, while still allowing for convenient user interfaces.” *Id.* (quoting Ex. 1006, 1:28–33 and citing Ex. 1003 ¶¶ 91–93). And Petitioner argues that an ordinarily skilled artisan would have implemented Robertson’s teachings on X-based laptops and PDAs “to take advantage of operations the ‘Unix Shell’ command language provides to design gesture-based buttons that are more useful and convenient for users.” *Id.* at 17.

Petitioner asserts that an ordinarily skilled artisan would have implemented Robertson's gesture-based operations on touch-screen mobile devices because implementing such operations on mobile devices was well known. Pet. 18 (citing Ex. 1003 ¶ 95; Exs. 1009–1015). Petitioner concludes that implementing Robertson's gesture-based operations would have resulted in "the ordinary and expected function of providing [a] touch screen user interface in a mobile device using known functions as expected." *Id.* at 19.

Patent Owner contends that "Petitioner uses Maddalozzo as a prop for a different combination: Robertson and some undefined 'mobile handheld computer unit'" and so Petitioner fails to clearly articulate its proposed combination and how it would operate. Prelim. Resp. 26–27. But Patent Owner appears to misunderstand Petitioner's asserted ground.¹⁰ Petitioner argues that Robertson discloses all of the limitations of claim 1, except that Robertson does not expressly specify the type of computer unit on which to implement its gesture-based operation computer program code and XButtons. *See* Pet. 11–15. Petitioner relies Maddalozzo as disclosing a mobile handheld device (e.g., laptop or PDA) with a touch-based user interface and argues that an ordinarily skilled artisan would have implemented Robertson's code and XButtons on such a mobile handheld

¹⁰ Patent Owner also asserts that a laptop is not a mobile handheld computer unit. Prelim. Resp. 21–23. But the '879 patent's written description expressly describes a laptop as a type of mobile handheld computer. Ex. 1001, 1:24–33 (describing PDAs, mobile phones, and laptops as "kind[s] of handheld computer unit[s]"). In any event, as we explain above, Petitioner relies on Maddalozzo's disclosure of a mobile handheld computer unit and Patent Owner does not dispute that Maddalozzo discloses such a device. *See supra* n. 9.

device. *See* Pet. 15. Thus, we disagree with Patent Owner that “Petitioner uses Maddalozzo as a prop for a different combination.” Prelim. Resp. 26.

Patent Owner argues that Petitioners rationales for combining the prior art “are all either conclusory or predicated on false premises.” *Id.* at 28. As to Petitioner’s assertion that an ordinarily skilled artisan would have used Robertson’s XButtons in Maddalozzo’s mobile handheld devices to enhance user experience through more capable buttons, Patent Owner contends that Petitioner’s rationale “ignores the detrimental implications of Robertson’s X Window interface for implementation on a handheld device.” *Id.* at 28–39 (arguing, *inter alia*, that X Window (1) was not an appropriate system to use on a mobile handheld device, (2) was designed for a different system architecture, (3) would have been wasted on a handheld device, and (4) is not the same as X protocol). As to Petitioner’s other proffered reasons, Patent Owner contends that they are “frivolous.” *Id.* at 39–45 (arguing, for example, that implementing Robertson’s X Window interface on Maddalozzo’s device “would have resulted in an inoperable or seriously degraded device,” that Petitioner’s assertion of “convenience” and “smaller screens” assertions would have been “equally if not more deliverable” through Maddalozzo’s native interface, and that knowing how to code an interface does not provide a reason to code a particular interface).

At this stage of the proceeding, Petitioner, with supporting testimony from Dr. Wobbrock, provides adequate reasons why implementing Robertson’s gesture-based operations and XButtons on a mobile handheld computer unit with a touch-based interface, such as a laptop or notebook-based computer as Maddalozzo discloses, would have been a “predictable use of prior art elements according to their established functions.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 401 (2007); *see* Pet. 14–18 (and evidence

cited therein). We acknowledge that Patent Owner disagrees, but find that Patent Owner's disagreement raises issues of fact that are best resolved on a full trial record. Accordingly, we find that Petitioner shows sufficiently that a person of ordinary skill in the art would have had reason to combine the disclosures set forth in Robertson and Maddalozzo with a reasonable expectation of success in arriving at the subject matter of claim 1.

d) Objective evidence of non-obviousness

Patent Owner contends that objective evidence of non-obviousness confirms the patentability of the challenged claims. Prelim. Resp. 60. Petitioner contends Patent Owner's objective evidence arguments fail because Patent Owner does not establish the prerequisite nexus between the challenged claims and any commercial product. Reply 5–6. Petitioner further contends any objective evidence does not overcome the strong obviousness showing in this case. *Id.* at 6.

The question of obviousness is resolved on the basis of underlying factual determinations, including, *inter alia*, objective indicia of non-obviousness, when such evidence is present. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Secondary considerations may include long-felt but unsolved need, failure of others, unexpected results, commercial success, copying, licensing, and praise. *See id.* at 17–18; *Leapfrog Enters., Inc. v. Fisher–Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

Patent Owner alleges commercial success, industry praise, initial skepticism, and licensing as a demonstration of industry respect. Prelim. Resp. 60–65; Sur-reply 4–7. The issue of objective indicia of non-obviousness is highly fact-specific. Although Petitioner had the opportunity to briefly address Patent Owner's objective indicia arguments in a pre-institution Reply and preliminarily disputes their sufficiency, we find the

record regarding objective indicia incomplete and inconclusive at this stage of the proceeding.¹¹ We will consider the full record developed during trial as to objective indicia as part of our analysis in the final written decision, where we will make the ultimate determination on obviousness.

e) Conclusion

For the foregoing reasons, Petitioner demonstrates a reasonable likelihood of prevailing in its assertion that the subject matter of claim 1 would have been obvious over the combination of Robertson and Maddalozzo.

2. Claims 2–5, 13, 15–17

Petitioner also alleges that the combined teachings of Robertson and Maddalozzo would have rendered obvious the subject matter of dependent claims 2–5, 13, and 15–17. Pet. 30–47. At this stage of the proceeding, Patent Owner does not separately address these dependent claims. We have reviewed the information Petitioner provides, including the relevant portions of Dr. Wobbrock’s testimony and Petitioner’s arguments that a person of ordinary skill in the art would have had reason to combine the disclosures set forth in Robertson and Maddalozzo with a reasonable expectation of success. Based on the current record, Petitioner also demonstrates a reasonable likelihood of prevailing in its obviousness challenge with respect to these claims.

3. Remaining grounds involving Robertson and Maddalozzo

Petitioner also alleges that the combined teachings of Robertson, Maddalozzo, and Vayda would have rendered obvious the subject matter of

¹¹ Indeed, much of Patent Owner’s evidence is in the form of declaration testimony, *see* Exs. 2008, 2009, 2011, and Petitioner has not yet had an opportunity to depose Patent Owner’s declarants.

dependent claims 6, 7, and 9 (*id.* at 47–61), and that the combined teachings of Robertson, Maddalozzo, and Bedford-Roberts would have rendered obvious the subject matter of dependent claim 12 (*id.* at 61–64). At this stage of the proceeding, Patent Owner does not separately address these dependent claims. We have reviewed the information Petitioner provides, including the relevant portions of Dr. Wobbrock’s testimony and Petitioner’s arguments that a person of ordinary skill in the art would have had reason to combine the disclosures set forth in Robertson, Maddalozzo, Vayda, and Bedford-Roberts with a reasonable expectation of success. Based on the current record, Petitioner also demonstrates a reasonable likelihood of prevailing in its obviousness challenge with respect to these claims.

4. Conclusion

For all of the foregoing reasons, we determine that Petitioner demonstrates a reasonable likelihood of prevailing on its grounds based on Robertson and Maddalozzo. As a result, we institute an *inter partes* review of all claims and all challenges raised in the Petition. Nevertheless, in order to further guide the parties after institution, we provide the following observations as to Petitioner’s remaining grounds.

E. Asserted Obviousness Based on Tarpenning

Petitioner asserts three obviousness challenges based on Tarpenning. Pet. 2. Specifically, Petitioner contends that the subject matter of the challenged claims of the ’879 patent would have been obvious over: (1) Tarpenning (claims 1, 4–6, 13, 15–17); (2) Tarpenning and Vayda (claims 2, 3, 7, and 9); and (3) Tarpenning and Bedford-Roberts (claim 12). *Id.*

Petitioner contends that Tarpenning teaches or would have rendered obvious each limitation of claim 1. Pet. 65–76. As part of that argument,

Petitioner avers that a person of ordinary skill in the art would have had reason to substitute Tarpenning's "touch-then-glide" gesture for the touch gesture to activate the menu display function of a book menu key or a library menu key. *Id.* at 76–84. Petitioner relies on Dr. Wobbrock's testimony to support its assertions. *See id.* Patent Owner argues that a person of ordinary skill in the art would not have had reason to modify Tarpenning's book and library menu icons for touch and glide activation. Prelim. Resp. 56–60. We focus our discussion on this issue.

Before turning to Petitioner's argument that an ordinarily skilled artisan would have had reason to modify Tarpenning with a reasonable expectation of success, we provide a short discussion of what Petitioner identifies in Tarpenning as corresponding to claim 1's representation of a function limitation and to claim 1's limitation "wherein the function is activated by a multi-step operation comprising (i) an object touching the touch sensitive area at a location where the representation is provided and then (ii) the object gliding along the touch sensitive area away from the touched location" (the "touch then glide limitation"). For the representation of a function limitation, Petitioner directs us to the touch-sensitive display on Tarpenning's device that includes "touch screen 74 having book menu key 84 and library menu key 86," "which are fixed icons displayed on touch screen 34." Pet. 71–72 (citing Ex. 1009, 3:66–4:2, 6:9–16, Figs. 2, 6; Ex. 1003 ¶¶ 208–211). Petitioner asserts that menu key 84 and library menu key 86 are representations "for their respective menu display functions that, when activated, present interactive menus to users." *Id.* at 73. Petitioner explains that a user activates and displays the book menu function or the library menu function by touching or pressing the key with a stylus or a finger (i.e., they are soft keys). *Id.* at 73–74 (citing Ex. 1009, 6:9–14, 6:41–

43; Ex. 1003 ¶¶ 210–211). That is, Petitioner acknowledges that a user activates the book menu key or library menu key by touch, not by a touch then glide gesture. *See id.*

For the touch then glide limitation, Petitioner points to Tarpenning’s teaching of “using a multi-step touch-then-glide gesture operation” to activate a hotkey “‘assignment’ function, in which [the user . . . [i] touches the hotkey 82 with the stylus 92 (or the user’s finger),’ and then [ii] ‘drags [glides] the stylus to the target item.’” *Id.* at 78 (citing Ex. 1009, 6:35–40, 7:44–48, Fig. 7; Ex. 1003 ¶ 216). Petitioner asserts that the ordinarily skilled artisan “would have found it obvious to replace Tarpenning’s touch operation to activate the menu display functions of book menu key 84 and library menu [key] 86 with the disclosed multi-step touch-then-glide activation gesture.” *Id.* at 80–81 (citing Ex. 1003 ¶¶ 217–218). According to Petitioner, the ordinarily skilled artisan would have made the modification “to prevent accidental activation of the menu functions resulting from accidentally touching the icon” and to more accurately open sub-menus without lifting the stylus or the finger off the screen. *Id.* at 82 (citing Ex. 1003 ¶¶ 219–221; Ex. 1017, 10:14–16). Petitioner continues that the ordinary artisan would have expected success because Tarpenning’s mobile handheld computer already uses both touch and touch-then-glide operations to activate key functions and those operations were well known. *Id.* at 83–84.

We have doubt that Petitioner’s proffered reasons would have prompted an ordinarily skilled artisan to modify Tarpenning’s book and library menu keys for activation by touch then glide. As Patent Owner argues, Tarpenning already allows a user to activate functions and sub-menus through touch activation, which appears to be simpler, faster, and

more accurate than the touch then glide activation that Petitioner proposes in the modification. *See* Prelim. Resp. 59; Ex. 2001 ¶ 103. For touch activation, the user simply touches a key to activate the function (or sub-menu function) on the display. As Patent Owner further argues, touch then glide activation requires the user to touch the key, then in the same gesture, glide on the display to the location of the function or sub-menu and lift off at the desired location. Prelim. Resp. 59. Considering the benefits and drawbacks of the modification, we have doubt that Petitioner shows sufficiently that an ordinarily skilled artisan would have had reason to modify Tarpenning to arrive at claim 1 as Petitioner asserts.

Claims 4–6, 13, and 15–17 ultimately depend from claim 1. Thus, based on the current record, we also have doubt that Petitioner sufficiently shows that Tarpenning would have rendered obvious the subject matter of those claims. For the same reasons, we also have doubt that Petitioner sufficiently shows that Tarpenning and Vayda would have rendered obvious the subject matter of claims 2, 3, 7, and 9, or that Tarpenning and Bedford-Roberts would have rendered obvious the subject matter of claim 12.

V. CONCLUSION

For the foregoing reasons, Petitioner demonstrates a reasonable likelihood that at least one challenged claim of the '879 patent is unpatentable over the prior art of record. Accordingly, we institute an *inter partes* review of claims all challenge claims on all grounds asserted in the Petition.

VI. ORDER

It is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–7, 9, 12, 13, and 15–17 of the '879 patent is instituted

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with respect to all grounds of unpatentability asserted in the Petition
commencing on the entry date of this decision; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and
37 C.F.R. § 42.4, notice is hereby given of the institution of trial.

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