

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,
v.
SMITH INTERFACE TECHNOLOGIES, LLC,
Patent Owner.

Case No. IPR2024-01089
U.S. Patent No. 10,671,212

PETITIONER'S NOTICE OF APPEAL

Pursuant to 28 U.S.C. § 1295(a)(4)(A), 35 U.S.C. §§ 141(c), 142, and 319, and 37 C.F.R. §§ 90.2(a), 90.3, and Federal Circuit Rule 15(a)(1), Apple Inc. (“Petitioner”) provides notice that it appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision of the Patent Trial and Appeal Board (“Board”) entered January 14, 2026 (Paper 28), and from all underlying and related orders, decisions, rulings, institutions, and opinions regarding U.S. Patent No. 10,671,212 (“the ’212 patent”) at issue in *Inter Partes* Review No. IPR2024-01089. This notice of appeal is timely filed because it is filed within 63 days of the January 14, 2026 Final Written Decision.

In accordance with 37 C.F.R. § 90.2(a)(3)(ii), the expected issues on appeal include, but are not limited to: the Board’s determination that Petitioner did not establish that claim 14 of the ’212 patent is unpatentable and all other issues decided adversely to Petitioner in any orders, decisions, rulings, or opinions in this proceeding.

Pursuant to 35 U.S.C. § 142 and 37 C.F.R. § 90.2(a), a copy of this Notice is being filed with the Director of the United States Patent and Trademark Office and with the Patent Trial and Appeal Board. In addition, a copy of this Notice and the required docketing fees are being filed with the Clerk’s Office for the United States Court of Appeals for the Federal Circuit via CM/ECF.

Dated: March 16, 2026

Respectfully submitted,

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CERTIFICATE OF SERVICE AND FILING

I hereby certify that on March 16, 2026, in addition to being filed and served electronically through the Patent Trial and Appeal Board's P-TACTS System, this NOTICE OF APPEAL is being provided to the Director of the USPTO by electronically filing to the email address as follows:

Director of the United States Patent and Trademark Office
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I also hereby certify that on March 16, 2026, this NOTICE OF APPEAL and the requisite docketing fees were filed with the Clerk's Office of the United States Court of Appeals for the Federal Circuit via CM/ECF.

I also hereby certify that on March 16, 2026, this NOTICE OF APPEAL was served via electronic mail to the following counsel at the addresses designated for service by Patent Owner:

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
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v.

SMITH INTERFACE TECHNOLOGIES, LLC,
Patent Owner.

IPR2024-01089
Patent 10,671,212 B1

Before JAMESON LEE, MIRIAM L. QUINN, and SHARON FENICK,
Administrative Patent Judges.

FENICK, *Administrative Patent Judge.*

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

I. INTRODUCTION

A. *Background and Summary*

Apple Inc. (“Petitioner”) filed a petition for *inter partes* review challenging claims 1, 2, 9–11, 13–16, 56–64, and 84 of U.S. Patent 10,671,212 B1 (Ex. 1001 (“the ’212 patent”)). Paper 2 (“Pet.” or “Petition”).

We instituted *inter partes* review. Paper 7 (“Dec. on Inst.” or “Institution Decision”). Patent Owner filed a patent owner response (Paper 14, “PO Resp.”), Petitioner filed a reply (Paper 18, “Pet. Reply”), and Patent Owner filed a sur-reply (Paper 21, “PO Sur-reply”). On October 17, 2025, the parties presented oral arguments, and the Board entered a transcript into the record. Paper 27 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(b)(4). For the reasons set forth in this Final Written Decision, we determine that Petitioner demonstrates by a preponderance of evidence that claims 1, 2, 9–11, 13, 15, 16, 56–64, and 84 are unpatentable, but does not demonstrate by a preponderance of the evidence that claim 14 is unpatentable.

B. *Real Parties in Interest*

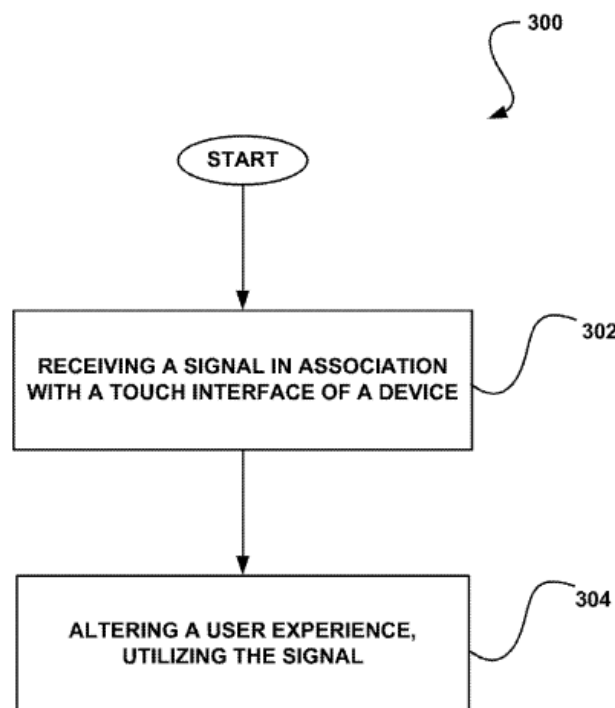
Petitioner names only itself as a real party in interest. Pet. 68. Patent Owner names only itself as a real party in interest. Paper 3 (Patent Owner’s Mandatory Notices), 1.

C. *Related Matters*

Petitioner and Patent Owner each informs us of the following related matters: *Smith Interface Technologies, LLC v. Samsung Electronics Co., Ltd.*, 2-22-cv-00290 (EDTX) (terminated) and *Smith Interface Technologies, LLC v. Apple Inc.*, 3-23-cv-01187 (SDCA) (pending) (the “District Court Litigation”). Pet. 68; Paper 3, 1.

D. The '212 Patent

The '212 patent is entitled “Gesture-Equipped Touch Screen System, Method, and Computer Program Product,” and describes electronic devices with touch-sensitive surfaces (e.g., touch-sensitive screens). Ex. 1001, codes (54), (57), 1:37–38. Figure 3 of the '212 patent, reproduced immediately below, “shows a method for altering a user experience based on a received signal.” *Id.* at 3:49–51.



The two step method in Figure 3 includes a step of receiving a signal in association with a touch interface (element 302) and then altering a user experience utilizing that signal (element 304). *Id.* at 15:9–10, 15:57–59. The signal referenced in element 302 of Figure 3 “may include a pressure signal which is indicative of a magnitude of pressure.” *Id.* at 15:11–12. Figure 4, reproduced immediately below, describes “a method for defining a selection made within a user interface based in part on contact pressure” and

illustrates that the application of a “sufficient pressure” can be used to select objects on the screen. *Id.* at 3:55–56, 16:43–54.

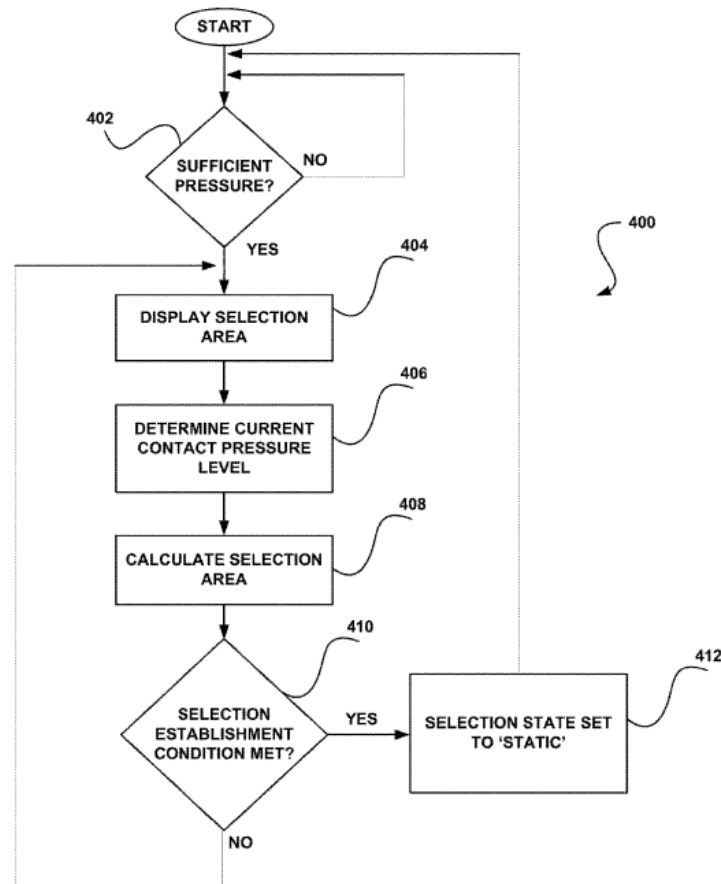


FIGURE 4

Figure 4 is a flow chart depicting a method that determines whether sufficient pressure has been used on the screen, and if it has, determines the contact pressure level and the selection area of the contact. *Id.* at 16:43–54, 18:16–60. Based on the applied pressure, the context of touch from the user can be determined, for example, within a context determination zone that may be initially defined as a function of one or more elements of user input upon which the selection itself is based, such as the touch or pressure of that input. *Id.* at 27:20–58, Fig. 6.

E. Illustrative Claim

Of the challenged claims, claims 1, 16, and 84 are independent claims. Claim 1 is illustrative of the challenged claims and is reproduced immediately below, with identification of claim limitations in brackets corresponding to those used by the parties.

1. A non-transitory computer-readable media storing computer instructions that; when executed by at least one processor of a mobile device including a touch screen, a memory, and an actuator coupled to the at least one processor; cause the mobile device to:

- [1.a] display indicia associated with an application, utilizing the touch screen;
- [1.b] when a first duration of a touch being applied to the touch screen is detected as ceasing in connection with the indicia, perform an operation;
- [1.c] when a second duration of the touch, that is different than the first duration of the touch, being applied to the touch screen is detected in connection with the indicia after the first duration is detected without the ceasing, output feedback that is perceptible by touch, utilizing the actuator;
- [1.d] when the second duration of the touch being applied to the touch screen is detected in connection with the indicia after the first duration of the touch is detected without the ceasing, display at least one menu including a plurality of particular actions;
- [1.e] when a selection touch being applied to the touch screen is detected in connection with at least one of the particular actions of the at least one menu after the second duration of the touch being applied to the touch screen is detected in connection with the indicia after the first duration of the touch is detected without the ceasing, perform the at least one particular action; and

[1.f] when a slide or swipe gesture being applied to the touch screen is detected after the second duration of the touch being applied to the touch screen is detected in connection with the indicia after the first duration of the touch is detected without the ceasing, change at least one aspect of the display of the at least one menu.

Ex. 1001, 95:66–96:21.

F. Evidence

Petitioner relies on the following published patent references as evidence.

Name	Patent Document	Exhibit
Martyn	US 2004/0051726 A1	Ex. 1005
Hotelling	US 2006/0197753 A1	Ex. 1004
Cho	US 2011/0252362 A1	Ex. 1006
Chaudhri	US 2011/0252380 A1	Ex. 1007

Petitioner additionally relies on two declarations of Dr. Andrew Cockburn (Ex. 1003 and Ex. 1062). Patent Owner relies on a declaration of Dr. Vijay Madiseti (Ex. 2005).

G. Prior Art and Asserted Grounds of Unpatentability

Petitioner asserts that claims 1, 2, 9–11, 13–16, 56–64, and 84 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 2, 9–11, 13–16, 58–64, and 84	103 ¹	Hotelling, Martyn, Cho

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011), amended 35 U.S.C. §§ 102 and 103, effective March 16, 2013. Petitioner asserts that the claims of the ’212 patent are not entitled to the earliest claimed priority date of August 5, 2011, but notes that all prior art applied precedes that date. Pet. 3, 5. Patent Owner disputes this. PO Resp. 6 n.2. Each party appears to use the same priority date in its analysis. We apply the pre-AIA version of the relevant statutes.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
56, 57	103	Hotelling, Martyn, Cho, Chaudhri

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion does not shift to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review).

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are “such that the subject matter as a whole would have been obvious . . . to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved 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 skill in the art; and (4) objective evidence of nonobviousness,² i.e., secondary

² Neither party presents arguments regarding objective evidence of nonobviousness.

considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

B. Level of Ordinary Skill in the Art

Petitioner asserts, citing the testimony of Dr. Cockburn (Ex. 1003) that a person of ordinary skill in the art (“POSITA”) would have had “a bachelor’s degree in computer science, computer engineering, or a comparable field and at least two years of professional experience working with graphical user interfaces and applications for computers” and that “[a]dditional years of experience could substitute for an advanced-level degree (and vice-versa).” Pet. 6 (citing Ex. 1003 ¶ 34). Petitioner adds that:

the POSITA would have possessed extensive background knowledge and understanding of the pertinent technologies employed by the ’212 patent, including touch screen mobile devices, menus in computer graphical user interfaces, tactile feedback in touch screen mobile devices, duration-based touch gestures, and edge swiping touch gestures. These technologies were developed and commercially adopted before 2011.

Id. (internal citations omitted) (citing Ex. 1003 ¶¶ 36–60).

In our Decision on Institution, we noted that Petitioner’s definition left it unclear whether the bachelor’s degree in the proposed definition would be considered by Petitioner to be “an advanced-level degree,” and did not adopt the portion of the definition relating to the substitution of years of experience for a degree. Dec. on Inst. 9. Additionally we did not adopt Petitioner’s proposed additional requirement that one of ordinary skill

“would have possessed extensive background knowledge and understanding of the pertinent technologies employed by the ’212 patent.” *Id.* We adopted, for the purposes of the Decision on Institution, the portion of the definition proposed by Petitioner requiring “a bachelor’s degree in computer science, computer engineering, or a comparable field and at least two years of professional experience working with graphical user interfaces and applications for computers” as “consistent with the problems and solutions in the ’212 patent and prior art of record and . . . supported by declarant testimony.” *Id.* Patent Owner adopted this definition (PO Resp. 12–13), noting Dr. Cockburn’s testimony regarding this definition (Ex. 2006, 12:15–21). Patent Owner’s declarant, Dr. Madisetti, also agreed with and adopted this definition. Ex. 2005 ¶¶ 23–25. For the same reasons discussed in the Decision on Institution, we again adopt this definition.

C. Claim Construction

The parties’ papers include some discussion of claim construction. PO Resp. 13–17; Pet. Reply 1–2; PO Sur-reply 2–3. Each party asserts, and we agree, that there is no controversy that would require us to decide any claim construction issue. Pet. Reply 2; PO Sur-reply 3; *see Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Obviousness of Claims 1, 2, 9–11, 13–16, 58–64, and 84 Over a Combination of Hotelling, Martyn, and Cho

Petitioner argues that 1, 2, 9–11, 13–16, 58–64, and 84 would have been obvious over a combination of Hotelling, Martyn, and Cho. Pet. 11–

52. Patent Owner argues specific deficiencies in Petitioner’s assertions. PO Resp. 1–5, 13–17, 26–64; PO Sur-reply 3–20.

We begin with a description of the prior art references and then discuss the parties’ contentions and provide our analysis.

1. Hotelling

Hotelling is entitled “Multi-Functional Hand-Held Device,” and was published on September 7, 2006. Ex. 1004, codes (54), (43). Hotelling generally describes a multi-functional hand-held device with a configurable GUI (graphical user interface) for each of the different functions of the device. *Id.* ¶ 74, code (57). Hotelling teaches that, before one of the multiple functionalities of the device can be used, it must be selected for use, for example from a main menu GUI that includes icons/buttons for launching each device functionality, or by flipping through GUIs until the GUI for the desired functionality is found. *Id.* ¶¶ 84–86, Fig. 18. GUIs may be customized by the user. *Id.* ¶ 93.

Hotelling’s device uses a touch screen as the primary input device, which generates input signals when an object such as a finger or stylus touches or is moved across the surface of the touch screen. *Id.* ¶¶ 61, 97. Touch gestures may comprise contact by one or more fingers and motions associated with the contact. *Id.* ¶ 135. Pressure exerted on the screen may be combined with location of touch and other information regarding touch screen input to form a “touch vocabulary.” *Id.* ¶ 145. Duration of the touch may also be used. *Id.* ¶ 149. Determinations may be made regarding the pressure, number of touches, motion (if any) of the touches, duration, and location of the touches, and an action performed based on these determinations. *Id.* ¶ 150, Fig. 26. A UI mode related to the mode or state of the device may also be considered. *Id.* ¶¶ 146, 150, Figs. 26, 27A–27E.

For example, a device may include cell phone, media player, PDA, game player, camera, GPS receiver, “hand top,” and remote control modes of operation. *Id.* ¶¶ 49, 74–83, 85 Figs. 9–18.

Hotelling provides an “example of a touch vocabulary associated with a music player” in its Figures 27A–E, which is a table that includes columns for “UI Mode,” “Light Touch or Tactile Click,” “# Fingers used,” “Movement during touch or click,” “Duration,” “Touchdown location (virtual button?),” “Proposed Behavior,” and “Feedback.” *Id.* at Figs. 27A–E. For example, in “List Nav.” UI mode, a “click” with one finger and no movement, lasting a “short” “Duration” on the a “virtual button / list item” corresponds to the following “Proposed Behavior”: “On touch-down, do nothing. On click-down highlight item under touch (if any). On un-click execute the item clicked.” *Id.* at Fig. 27A (second entry). In the same UI mode, a “LONG” click on a “virtual button” will “highlight item under touch (if any)” on “click-down” and then, “[a]fter delay, bring up [a] context sensitive menu.” *Id.* at Fig 27A (fourth entry).

Hotelling’s device provides output feedback, including from a haptics mechanism, which can make virtual UI feel more like physical UI. *Id.* ¶¶ 160–161, 163, 173.

2. *Martyn*

Martyn is entitled “Computing Device with Improved User Interface for Applications,” and was published March 18, 2004. Ex. 1005, codes (54), (43).

Martyn describes that, in a computing device with a small screen, different user functions in different applications may be available to a user. *Id.* ¶¶ 2, 4. To assist a user attempting to locate a desired function, Martyn describes providing a “snap-shot” view of an application that brings

together, in one summary window, a limited list of common functions and commonly accessed stored data. *Id.* ¶¶ 9–10, 15, 18. This “summary window,” which Martyn calls an “App Snapshot,” is accessible directly from the Martyn main view, which lists several applications, by selecting the name of the application. *Id.* ¶ 17. Figures 2 and 3 of Martyn, reproduced immediately below, show the summary window snapshot view of functions in the screen of a device. *Id.*



Figure 2



Figure 3

As seen in these figures, a window associated with the Messages application includes links to common functions (e.g. “Create message”) and commonly requested data associated with the application (e.g. “3 unread emails”). *Id.* ¶¶ 16–18, 25, Figs. 1–3.

The selection of an item from the snapshot window may be accomplished by using scrolling functionality to highlight the name of an application for a certain amount of time, by executing “a press and hold . . . when an application name is highlighted,” or by using a cursor key. *Id.* Highlighting is available for the list in the snapshot window, and when an item in that list is selected, “[t]he required application may be automatically opened.” *Id.* ¶ 18.

3. *Cho*

Cho is entitled “Mobile Terminal and Method of Controlling Operation of the Mobile Terminal,” and was published October 13, 2011. Ex. 1006, codes (54), (43). Cho deals with scrolling through an electronic document on a mobile device, in response to a scroll command. *Id.* code (57).

In part, Cho describes that a scroll command might include user input on a touch pad that may be implemented as a “mutual layer structure” with a display. *Id.* ¶¶ 41, 50, 67, 79. This scroll command may be a “touch-and-flick” or “touch-and-drag,” and in response to the detection of such a command the electronic document is scrolled. *Id.* ¶¶ 79, 91. Cho discloses that a “touch-and-flick” is a gentle scratch of the surface of the display module with a finger, and is distinguished from a “touch” by how long the touch is in contact with the surface of the display module. *Id.* ¶ 80.

Cho additionally discloses that, upon the detection of a touch of a predefined item, an information window may be displayed relevant to that predefined item. *Id.* ¶ 107. A touch-and-drag input may be used to resize this window, a touch on a hyperlink object in the window may display information on the hyperlink object, a scroll command may be used to scroll the information window, and a command to end display of the information window makes the information window disappear. *Id.* ¶¶ 107–109, Fig. 6B.

Similarly, if a webpage screen is being displayed, user inputs may be used to scroll the webpage, to open an information window, to display information relevant to a hyperlink object in an information window, to enlarge or reduce the size of an information window. *Id.* ¶¶ 124, 126–128. An information window may additionally be displayed for an email in an

email inbox screen or a news article in a screen displaying a list of news articles. *Id.* ¶¶ 129–132.

4. *Claim 1*

a) Motivation to Combine Hotelling, Martyn, and Cho

(1) Petitioner’s Proposed Combination and Arguments Regarding Motivation to Combine

Petitioner describes a combination of Martyn’s teachings regarding its snapshot menu and associated gestures and of Cho’s teachings regarding slide/swipe touch gestures for interfacing with information windows, integrated into Hotelling’s user interface teachings. Pet. 11–20, 35–40.

Specifically, Petitioner argues that one of ordinary skill in the art would have integrated “supplemental teachings” of Martyn and Cho into Hotelling’s disclosure of a touch screen mobile device with short- and long-touch gestures and swiping and sliding for manipulating GUI elements. Pet. 11–12. The teachings of Martyn utilized in the combination would be the provision of a shortcut menu of application functions in response to a press and hold input on an application function, and those utilized from Cho would be using slide and swipe touch gestures to manipulate information windows. *Id.* at 12–14, 17, 34–40. Petitioner argues that integrating these teachings into Hotelling would leave “fundamental aspects” of Hotelling’s disclosure intact, and would have involved nothing more than applying known solutions to known problems to achieve predictable outcomes. *Id.* at 12 (citing Ex. 1003 ¶¶ 36–54, 74, 99).

For the combination of Martyn with Hotelling, Petitioner asserts that the use of Martyn’s teachings regarding its shortcut menu would be the application of a known solution to a known problem to achieve predictable outcomes. *Id.* at 12 (citing Ex. 1003 ¶¶ 36–54, 74, 99). Petitioner asserts

that providing a shortcut or contextual menu was a well-known and core feature in GUIs in 2011, in order to solve the problem of presenting relevant and available actions for selection by a user based on the state of a device, and that Martyn's discussion of augmenting a main menu listing applications on a mobile device further confirms this. *Id.* at 14–15 (citing Ex. 1003 ¶¶ 33–44, 78–79; Ex. 1004 ¶¶ 42, 84, 85). Petitioner further asserts that it would have been apparent to one of ordinary skill at the time that such a menu would allow a user to accomplish recurring tasks quickly, efficiently, and with better usability. *Id.* at 15 (citing Ex. 1003 ¶¶ 80–82). Petitioner further asserts that Hotelling contains a similar suggestion, of displaying a context sensitive menu pop-up in response to a long touch by a user in its description of the implementation of a music app. *Id.* at 16 (citing Ex. 1004 ¶¶ 93, 151, Figs. 27A–27B). This disclosure, asserts Petitioner, would have prompted one of ordinary skill to seek out and apply teachings from references such as Martyn for implementation details on contextual menus. *Id.* at 16 (citing Ex. 1005 ¶¶ 15–24, Figs. 1–3; Ex. 1003 ¶¶ 83–84). Additionally, Petitioner asserts that Martyn's discussion of the advantages of the shortcut menu would have motivated one of ordinary skill to improve Hotelling using the contextual shortcut menu of Martyn. *Id.* at 17 (citing Ex. 1005 ¶¶ 4–8, 15; Ex. 1003 ¶¶ 85–86).

Petitioner further argues that, in the combination, Martyn's scroll (disclosed in a non-touch screen embodiment in Martyn) would have been accomplished through a slide or swipe, considering Hotelling's discussion of a touchscreen allowing the actuation of command signals through gestures, and that a gesture would be used to effectuate the dismissal of Martyn's snapshot menu. *Id.* at 35–36 (citing Ex. 1001, 60:44–55 (discussing use of “a classic swipe gesture” for scrolling through a collection of objects);

Ex. 1004 ¶¶ 61, 87, 97–98, 135, 145–151, 154, 172, Figs. 27A–27B;
Ex. 1005 ¶¶ 20–22; Ex. 1003 ¶¶ 141–144).

For the combination of Cho with Hotelling and Martyn, Petitioner asserts that Cho would supplement the teachings of Hotelling and Martyn to provide information regarding swipe/slide touch gestures, for example to “leverage motion-based touch gestures on a mobile device to interact with a menu window.” Pet. 18 (citing Ex. 1004 ¶¶ 87, 148; Ex. 1003 ¶ 88). Petitioner additionally argues that Cho’s use of slide/swipe gestures to interact with a contextual menu was a known technique, and applying it to Hotelling-Martyn for the contextual menu window would have been obvious, citing *KSR*. *Id.* at 18–19 (citing Ex. 1003 ¶¶ 89–92, 94–97). Petitioner asserts that Hotelling contains suggestions regarding user configurability and that Cho’s sliding and swiping gestures were used in prior commercially available touch screen devices and that the combination would have been motivated to provide additional information regarding customizing inputs as per Cho, or providing known gestures to trigger known functions for users with prior experience with devices configured in this way. *Id.* at 19–20 (citing Ex. 1004 ¶ 93; Ex. 1003 ¶¶ 91, 93–98).

Petitioner additionally asserts that outputting tactile feedback is described in Hotelling as an example of an element of a “touch vocabulary” that dictates behaviors of an interface. Pet. 26–29 (citing Ex. 1004 ¶¶ 145, 150, Figs. 27A, 27B). Using this feature of Hotelling in the combination, Petitioner argues, would have been obvious, because Hotelling teaches using tactile feedback in conjunction with touch events on “a virtual button.” *Id.* at 28 (citing Ex. 1004 ¶ 160–161, 163, 173; Ex. 1003 ¶¶ 125–126). Petitioner also argues that tactile feedback was a well-known solution to the

problem of signaling significant events or prompting user interaction in mobile devices. *Id.* at 28–29 (citing Ex. 1003 ¶¶ 45–48, 127–130).

(2) Patent Owner’s Contentions and Our Analysis

Patent Owner argues that Petitioner’s showing regarding the combination of Hotelling, Martyn, and Cho fails.

(a) Hotelling

Patent Owner contends that Petitioner improperly mixes embodiments of Hotelling in its combination and does not show why one of ordinary skill in the art would combine these “unrelated” disclosures. PO Resp. 3–4, 18, 34–48; PO Sur-reply 11–13.

Patent Owner asserts that Hotelling’s GUI for a main menu with a virtual button for each functionality, as depicted in Figure 18 of Hotelling, is an embodiment separate from the GUI for a media player, depicted in Figure 11 of Hotelling (and with a “touch vocabulary” depicted in Figures 27A and 27B). PO Resp. 18–22, 37–40 (citing Ex. 2005 ¶¶ 68, 69, 75–81). Patent Owner asserts that “Hotelling itself does not instruct a POSITA to apply Figure 27A to Figure 18 or even describe them as compatible.” PO Resp. 35–37 (citing Ex. 2005 ¶¶ 68–70, 75–81). Patent Owner additionally argues that if one of ordinary skill in the art were to apply the disclosure of Figure 27A to the main menu display of Figure 11, the result would include a touch screen having additional virtual control buttons, because Figure 18 includes virtual control buttons on the touch screen. PO Resp. 40–45 (citing Ex. 2005 ¶¶ 83–89). Patent Owner asserts that the disclosure of Figure 11 and Figures 27A and 27B are applicable only to GUI screens which include two portions – a standard region and a control region. PO Resp. 46–48 (citing Ex. 1004 ¶ 70; Ex. 2005 ¶¶ 75–82, 90).

We determine that one of ordinary skill in the art would not have viewed Hotelling's device as including two separate and incompatible embodiments – Hotelling's device includes both the main menu GUI and the separate functionality GUIs, as per the exemplary depictions in Figure 18 and Figure 11. Ex. 1004 ¶¶ 84–86. We credit Dr. Cockburn's testimony that one of ordinary skill in the art would have appreciated that the disclosure of invoking contextual menus in a music player GUI would have been suitable for use in the main page GUI. *See* Ex. 1003 ¶ 66. Dr. Cockburn quotes Hotelling's description of a “device ‘designed to recognize touch gestures applied to [the] touch screen’ and to determine ‘what action(s) to take in response to [those] gestures.’” *Id.* (quoting Ex. 1004 ¶ 135), 114–120. Dr. Cockburn's characterization of the application icons of Hotelling as virtual buttons which can be “pressed” by detecting a certain user gesture applied to the touch screen, and description of this as a touch gesture applied in other contexts on the Hotelling touch screen with other proposed behaviors appears consistent with the disclosures of Hotelling. Pet. 24; Ex. 1003 ¶¶ 114–118; Ex. 1062 ¶ 45; Ex. 1004 ¶¶ 85 (describing the main menu as a “GUI” including “buttons”), 97 (“In general, the touch screen recognizes the touch and position of the touch on the display and a controller of the hand-held electronic device interprets the touch and thereafter performs an action based on the touch event.”). While Dr. Madisetti describes that the music player touch vocabulary would not be applicable to the main menu GUI because the inputs are specific to the GUI for each operating mode (Ex. 2005 ¶ 76), it is clear that the provided music player touch vocabulary is exemplary (Ex. 1004 ¶ 38). Dr. Madisetti does not convincingly explain why one of ordinary skill in the art would not understand Hotelling as teaching or suggesting that each GUI, including the

main menu GUI, would be similarly configurable for various gestures. In discussing Dr. Cockburn's testimony, Dr. Madisetti relies on an assertion that Figure 18 does not provide a separate control region and so is distinct from the device functionalities, and Dr. Madisetti asserts Dr. Cockburn is incorrect in suggesting that "the standard and control regions [c]ould make up the entire screen" (Ex. 2006, 40:3–13) because "Hotelling explains that the GUI is '*separated into* a standard region 152 and a control region 154'" (quoting Ex. 1004 ¶ 70). Ex. 2005 ¶¶ 77–79. "If each region occupies the entire screen, the distinction between the two becomes meaningless," Dr. Madisetti states. *Id.* But Dr. Madisetti himself cites paragraph 73 of Hotelling as "describing Hotelling's 'adaptability.'" Ex. 2005 ¶ 76. In that paragraph, confirming Dr. Cockburn's testimony, Hotelling teaches that "virtual controls may be overlaid on top of the standard region so that the standard region can fully utilize the entire display," and be coextensive with the control region. Ex. 1004 ¶ 73 (element numbers omitted); *see* Ex. 2006 34:8–42:7 (Dr. Cockburn describing the main menu GUI in Hotelling's Figure 18 as "consist[ing] of a touchscreen where the touch sensor panel that allows control overlays the display of the underlying virtual buttons"). We credit Dr. Cockburn's testimony that Hotelling's device is designed to recognize gestures and determine what actions to take in response to those gestures, and to assign functions to various elements of the UI. *See, e.g.*, Ex. 1003 ¶¶ 64–67, 116.

For these reasons, the reasons discussed below with respect to limitation 1.c and 1.f, and the reasons provided by Petitioner as summarized above, Petitioner has shown by a preponderance of the evidence that one of ordinary skill in the art would have combined these portions of Hotelling as described in the Petition.

(b) Hotelling and Martyn

Patent Owner additionally contends that Petitioner does not adequately show why one of ordinary skill in the art would have combined Hotelling and Martyn. PO Resp. 3–5, 46–50; PO Sur-reply 15–17.

Patent Owner asserts that the highlight from Martyn’s non-touch-screen implementation would not be necessary if displaying Martyn’s menu in Hotelling’s touch screen. PO Resp. 4–5, 49–50; PO Sur-reply 15–17. We address this below in II.D.4.b.(4).(a).

Patent Owner additionally asserts that the Petition does not provide a motivation to combine Martyn with the disclosure in Hotelling relating to Figures 27A and 27B. PO Resp. 3, 46–48. For the reasons discussed above, with respect to the combination of the teachings of Hotelling, we do not agree that the reasons to combine provided by Petitioner, summarized above, are not relevant to the combination of Martyn with the Hotelling touch vocabulary disclosure.

For these reasons and the reasons provided by Petitioner as summarized above, Petitioner has shown by a preponderance of the evidence that one of ordinary skill in the art would have combined the cited portions of Hotelling with Martyn as described in the Petition.

(c) Hotelling, Martyn, and Cho

Patent Owner also contends that Petitioner does not show why one of ordinary skill in the art would have combined Cho’s scrolling with Martyn’s menu, as Martyn only discloses a menu which is entirely visible on the screen. PO Resp. 53–58; PO Sur-reply 18–20.

We address this argument below, in Section II.D.4.b.(4).(b) (addressing limitation 1.f and Petitioner’s contentions relating to Cho).

(3) Conclusion

For the reasons summarized above, and, in the indicated cases, those referred to in succeeding sections, we determine that Petitioner has sufficiently shown the propriety of its proposed combination of Hotelling, Martyn, and Cho.

b) Claim 1 – Obviousness of Claim 1 Over Hotelling, Martyn, and Cho

(1) Preamble and Limitations 1.a and 1.b of claim 1

Petitioner argues that the preamble of claim 1³ is taught or suggested in Hotelling’s mobile device with a touch screen, memory, and tactile feedback devices, and in its microprocessor controller and memory. Pet. 20–21 (citing Ex. 1004 ¶¶ 169–171, Fig. 28; Ex. 1003 ¶¶ 100–103).

Petitioner asserts that limitation 1.a, requiring the mobile device be caused to display indicia associated with an application on the touch screen, Petitioner argues that this is taught or suggested by Hotelling’s main menu page, which includes icons for launching device functionalities such as cell phone functionality, music player functionality, and gameplayer functionality. *Id.* at 22–23 (citing Ex. 1004 ¶¶ 85, 97, 172–173, Fig. 18; Ex. 1003 ¶¶ 105–109).

Petitioner contends that, in its proposed combination, Hotelling teaches limitation 1.b, which requires that the mobile device is caused, “when a first duration of a touch being applied to the touch screen is detected as ceasing in connection with the indicia,” to “perform an operation.” Ex. 1001, 95:62–64; *see* Pet. 24–25. Petitioner additionally asserts in Hotelling’s device, selecting a button on the main page would

³ As we find Petitioner’s showing sufficiently shows that the preamble is taught or suggested, we do not determine whether the preamble is limiting. *See Nidec Motor Corp.*, 868 F.3d at 1017.

involve a short touch of a specific duration. *Id.* (citing Ex. 1004 ¶ 85; Ex. 1003 ¶¶ 49–54, 115, 117, 119).

Patent Owner presents no additional arguments regarding these contentions.

Based on Petitioner’s argument and evidence, we find that Hotelling, in the combination of Hotelling, Martyn, and Cho, teaches or suggests the preamble and limitations 1.a and 1.b of claim 1. Hotelling discloses a mobile device with a touch screen, memory, and actuator for tactile feedback devices. Ex. 1004 ¶¶ 169–172, Fig. 28; Ex. 1003 ¶¶ 101–103. Hotelling additionally discloses that the device displays a main menu screen with display indicia associated with cell phone, music player, game play and other applications. Ex. 1004 ¶¶ 85 (describing the exemplary main menu GUI with icons 262), 97 (describing the touch screen of the device), 172–173, Fig. 18; Ex. 1003 ¶¶ 105–109. Hotelling additionally describes that a user’s selection of one of the indicia through a short touch performs the selection of the associated application. Ex. 1004 ¶ 85 (“When a button is pressed, the main page for the selected functional[ity] . . . is brought into view on the display.”); Ex. 1003 ¶¶ 49–54, 115, 117 (tap gesture starts and ceases within a short time threshold), 119.

For these reasons, we determine that Petitioner has shown that the combination of Hotelling, Martyn, and Cho teaches or suggests the preamble and limitations 1.a and 1.b of claim 1.

(2) Limitation 1.c

Limitation 1.c of claim 1 recites that “when a second duration of the touch, that is different than the first duration of the touch, being applied to the touch screen is detected in connection with the indicia after the first duration is detected without the ceasing,” the mobile device is caused to

“output feedback that is perceptible by touch, utilizing the actuator.”
Ex. 1001, 95:65–96:3.

Petitioner asserts that Hotelling teaches “short” and “long” touches, and that this teaches or suggests a second duration (long) touch being detected after the first (short) duration ends, without the touch ceasing. Pet. 26 (citing Ex. 1004 ¶¶ 149–150; Ex. 1003 ¶ 122). Petitioner further argues that a touch vocabulary could include a detected long touch leading to the behavior opening of a context sensitive menu, such as Martyn’s snapshot menu. *Id.* at 26–27 (citing Ex. 1004 ¶¶ 145, 150, 151, Figs. 26, 27A, 27B; Ex. 1005 ¶ 17; Ex. 1003 ¶¶ 121–124).

Petitioner additionally argues that Hotelling discloses that tactile feedback may be used in conjunction with an input event on a virtual button, which would teach or suggest the output feedback of limitation 1.c. *Id.* at 28 (citing Ex. 1004 ¶¶ 160–161, 163, 173; Ex. 1003 ¶ 125). Alternatively, Petitioner argues that it would have been obvious for one of ordinary skill to implement haptic feedback in conjunction with an input event, in order to provide the “decades-old” technique of using tactile feedback for a touch screen. *Id.* at 28–29 (citing Ex. 1003 ¶¶ 45–48, 126–130).

Patent Owner contends that Hotelling describes providing haptic feedback only for the purposes of making a virtual UI feel more like a physical UI, for example to provide the feel of a soft button or scroll wheel. PO Resp. 2–3, 26–33 (citing Ex. 1004 ¶¶ 67–70, 160–163; Ex. 2005 ¶¶ 53, 55–57, 59–62, 65–65); PO Sur-reply 3–4. Therefore, Patent Owner argues, haptic feedback would occur upon an initial press or upon release in Hotelling, rather than “after the first duration is detected without the ceasing,” as recited in claim 1. PO Resp. 26–30; PO Sur-reply 4. Patent Owner notes that Hotelling teaches, as an example, that tactile feedback may

“create a ‘click’ on the press and a ‘clock’ on the release . . . to simulate a button click when a hard touch is made.” Ex. 1004 ¶ 163 (quoted at PO Resp. 29). Patent Owner contends that Hotelling does not teach or suggest any indication of the use of haptics other than to simulate physical UI or as alert indicators of device status events such as battery life status alerts or alerts to incoming calls. PO Resp. 30–31 (citing Ex. 1004 ¶¶ 161; Ex. 2005 ¶¶ 59–61). Patent Owner additionally contends that Dr. Cockburn’s assertion that one of ordinary skill would have implemented the proposed combination including the haptic response to a long duration touch is hindsight and would conflict with the use of haptics disclosed in Hotelling. *Id.* at 32–33.⁴

We determine that Petitioner has shown how Hotelling and Martyn, in the asserted combination, teaches or suggests the claimed provision of haptic output when a second duration of touch is reached. Petitioner asserts that in the combination, a context sensitive menu is called by a press and hold input (as per Martyn, and as discussed more fully below with reference to limitation 1.d of claim 1) and that Hotelling’s teachings of a haptics mechanism providing feedback regarding input events would teach or suggest the recited feedback regarding the opening of a menu. Pet. 13–14, 26–28. We agree. While Patent Owner asserts that Hotelling only teaches the use of haptics to simulate physical UI or as alerts to non-input events, we do not agree that Hotelling’s teachings are as narrowly drawn. Hotelling teaches, in a section titled “Audio/Tactile Feedback Devices” that “[h]aptics essentially allows a user to feel information, i.e., signals are sent to the

⁴ We note that Patent Owner contends that certain portions of Petitioner’s Reply contain improper arguments. PO Sur-Reply 5–10. As we do not rely on these portions of the Reply, this issue is moot.

hand” and that “[h]aptics may also be used simultaneously with onscreen actions.” Ex. 1004 ¶ 161. Hotelling teaches that:

tactile . . . feedback can be used in conjunction with an input event including touch events, motion events, squeeze events. The feedback may provide information so that the user knows that they actually implemented an input (simulates the audio and tactile feel of a button or switch).

Ex. 1004 ¶ 163. While Hotelling does contain specific description of how haptics can be used to make virtual user interface elements feel like physical user interface elements, this description is not clearly limiting. Hotelling also teaches or suggests more broad uses for haptics, for example, “allow[ing] a user to feel information,” to alert users to “events associated with a device,” “simultaneously with onscreen actions,” and generally “to alert a user that user input has been made.” *Id.* at ¶¶ 158, 161, 163.

Dr. Madisetti focuses on Hotelling’s “repeated[] and consistent[]” explanations that haptics may be used to simulate physical user interface elements (Ex. 2005 ¶¶ 55–57), but does not compellingly address or explain these broader teachings of Hotelling, which we find teach or suggest a haptic response to alert a user that user input, such as a long touch, has been recognized “so that the user knows that they actually implemented an input,” even where no physical UI is being simulated, and where such haptics are implemented to occur “simultaneously with onscreen actions.” Ex. 1004 ¶¶ 161, 163.

For these reasons, we find that the combination of Hotelling, Martyn, and Cho teaches or suggests limitation 1.c of claim 1.

(3) Limitations 1.d and 1.e

Limitation 1.d of claim 1 recites that “when the second duration of the touch being applied to the touch screen is detected in connection with the

indicia after the first duration of the touch is detected without the ceasing,” the mobile device is caused to “display at least one menu including a plurality of particular actions.” Ex. 1001, 96:4–8. Limitation 1.e recites that “when a selection touch being applied to the touch screen is detected in connection with at least one of the particular actions of the at least one menu,” the mobile device must “perform the at least one particular action.” *Id.* at 96:9–15.

Petitioner asserts that in its proposed combination, limitation 1.d is taught or suggested in Martyn’s contextual snapshot menu providing a display of functions of an application. Pet. 29–31 (citing Ex. 1004 ¶ 151, Figs. 27A-27B); Ex. 1005 ¶¶ 9–11, 17–18, Figs. 1–3; Ex. 1003 ¶¶ 131–133). Petitioner further asserts that limitation 1.e is taught in the selection via a touch screen as per Hotelling of a function from Martyn’s snapshot menu in the proposed combination. *Id.* at 31–33 (citing Ex. 1004 ¶ 61; Ex. 1005 ¶¶ 9–11, 15, 17–18, Figs. 1–3; Ex. 1003 ¶¶ 134–136).

Patent Owner presents no additional arguments regarding these contentions.

Based on Petitioner’s argument and evidence, we find that the combination of Hotelling, Martyn, and Cho, teaches or suggests the limitations 1.d and 1.e of claim 1. Martyn’s snapshot menu, displayed when a selection (the highlight in Martyn) rests on the name of an application for a certain amount of time provides links to common functionality in that application. Ex. 1005 ¶ 17, Figs. 2–3. When a functionality in the menu is selected, the device displays a screen offering that functionality. *Id.* at ¶ 18.

For these reasons, we find that the combination of Hotelling, Martyn, and Cho, teaches or suggests limitations 1.d and 1.e of claim 1.

(4) Limitation 1.f

Limitation 1.f recites that the mobile device must “change at least one aspect of the display of the at least one menu” “when a slide or swipe gesture being applied to the touch screen is detected after the second duration of the touch being applied to the touch screen is detected in connection with the indicia after the first duration of the touch is detected without the ceasing.” Ex. 1001, 96:16–21.

(a) Martyn Contentions

First, Petitioner asserts that the change of an aspect of the displayed menu is taught or suggested in Martyn, in Martyn’s teaching that menu items may be highlighted in the snapshot menu and that scrolling moves the highlight to allow the selection of a menu item. Pet. 34–35 (citing Ex. 1005 ¶¶ 18, 20–23, 29, Figs. 2–3; Ex. 1003 ¶¶ 139–142). Petitioner asserts that, per Hotelling’s teaching, this scrolling could be accomplished by a gesture such as sliding or swiping. *Id.* (citing Ex. 1001, 60:44–55; Ex. 1004 ¶¶ 61, 87, 97–98, 135, 145–151, 154, 172, Figs. 27A, 27B; Ex. 1003 ¶¶ 141–142).

Second, Petitioner asserts that Martyn teaches dismissing the app snapshot, and argues that Hotelling’s teaching of a gesture that triggers backing out of a folder would be analogous to Martyn’s menu dismissal, which may occur through the use of an “opposite scroll function” to the one (e.g. “right scroll”) used to call the snapshot menu. Pet. 36 (citing Ex. 1004 ¶¶ 61, Figs. 27A, 27B; Ex. 1005 ¶¶ 20–22; Ex. 1003 ¶ 141); Ex. 1005 ¶ 22.

With respect to the Petition’s first argument, Patent Owner contends that Martyn’s highlight is only provided because Martyn does not disclose a touch screen, but rather a device in which scrolling of a cursor is performed through a non-touch input device such as a scroll wheel, to indicate what item would be selected, although in a touch screen device such as

Petitioner’s proposed combination, any item on the screen could be selected without scrolling. PO Resp. 49–50 (citing Ex. 2004, Fig. 27A; Ex. 1005 ¶¶ 16–18, Fig. 1; Ex. 2005 ¶¶ 94–95; Ex. 2006 80:11–21). In Reply, Petitioner asserts that, although highlighting as in Martyn is not necessary, one of ordinary skill in the art would have found, in a touch screen, that it was “common practice to highlight the item under the finger to confirm to the user the item that is being touched,” and that “highlighting and selection are commonly coupled in touchscreen interaction.” Pet. Reply 14–15 (citing Ex. 2006, 81:11–20; Ex. 1003 ¶¶ 36, 91 (citing Ex. 1022, 137)). Patent Owner contends that this argument is untimely and unsupported. PO Sur-reply 15–17.

With respect to the second argument on this limitation, Patent Owner also contends that Hotelling’s disclosure of backing out a folder is not analogous to menu dismissal, as “Hotelling does not compare folders to menus” or “teach that the gestures disclosed in Figures 27A–E are applicable outside of the context of a music player GUI.” *Id.* at 51 (citing Ex. 2005 ¶ 97). Patent Owner asserts that a folder system is “fundamentally hierarchical” and Martyn’s snapshot menu is only a single menu, and therefore backing out of folders, as Hotelling discloses, would not be relevant to the snapshot menu in Martyn. *Id.* at 52 (citing Ex. 1004, Fig. 27A; Ex. 1005, Figs. 2–3; Ex. 2005 ¶ 97).

With respect to the teachings of Martyn, we determine that Martyn does teach changing an aspect of the display of a menu upon detection of a slide or swipe gesture after Martyn’s long touch. Ex. 1005 ¶¶ 18, 20–23, 29, Figs. 2–3; Ex. 1003 ¶¶ 139–142. Although Martyn’s descriptions relate to a non-touch-screen device, we credit Dr. Cockburn’s testimony regarding Martyn’s disclosure of a highlight of a required item being scrolled to allow

selection of a specific item. Ex. 1003 ¶ 139 (citing Ex. 1005 ¶¶ 18, 20–23). Additionally, we credit Dr. Cockburn’s testimony that, in a touch device, even though a visual representation of a list item can be selected through a touch, “it would be common practice to highlight the item under the finger to confirm to the user the item that is being touched” and that “highlighting and selection are commonly coupled in touchscreen interaction.” *See* Pet. Reply 14–15 (quoting Ex. 2006, 81:11–20; citing Ex. 1022, 137). We weigh this and find it more persuasive than Patent Owner’s evidence and argument regarding whether an item to be selected would be highlighted on a touch screen device. PO Response 49–50 (“[A] POSITA would have understood Martyn’s scrolling of a highlight to be an unnecessary predicate to item selection in Hotelling’s touch screen device.”); Ex. 2005 ¶¶ 94–95 (describing an “incongruity” between highlighting and scrolling on non-touch-screen devices and on touch screen devices). We agree that Martyn’s highlighting is discussed with respect to a non-touch-screen device, but determine that the preponderance of the evidence supports Petitioner’s assertions regarding the benefits of the use of highlighting in the touchscreen device proposed in the combination, even though we credit Dr. Madisetti’s assertion that it would not be necessary.

With regard to highlighting, although Patent Owner asserts that Petitioner has put forward improper new arguments, we determine that Petitioner does not raise a new theory of unpatentability when providing further explanation of prior art disclosures previously relied upon in the same way they were previously relied upon. *Apple Inc. v. Andrea Elecs. Corp.*, 949 F.3d 697, 706–07 (Fed. Cir. 2020); 37 C.F.R. § 42.23(b). We determine that these arguments have a proper nexus to Petitioner’s prior

arguments and do not constitute new theories. *See Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1384–85 (Fed. Cir. 2023).

Additionally, we agree that Petitioner has shown this limitation in its second Martyn argument, relating to Hotelling’s teaching of backing out of folders. Hotelling’s disclosure is that in a list navigation mode, a user gesture of a “touch-down” and “right motion” is used to “go back out a folder.” Ex. 1004, Fig. 27A; Ex. 1003 ¶ 144. Some of Patent Owner’s arguments relate to the use of teachings from Hotelling’s music player GUI, as addressed above. With respect to the assertion that a folder system is “fundamentally hierarchical” (PO Resp. 52), having considered the testimony of each expert, we determine that the preponderance of evidence supports Petitioner’s assertion that a directional input dismisses the menu in Martyn (Ex. 1005 ¶¶ 20, 22) and that “back[ing] out” of a main folder would be analogous to such menu dismissal in Martyn (Ex. 1003 ¶¶ 143–144; Ex. 1062 ¶¶ 50, 52). Although Patent Owner argues that Petitioner’s argument “ignor[es] the existing teachings of Martyn as to how the App Snapshot may be dismissed” (PO Sur-reply 17), we determine instead that Petitioner’s arguments and evidence regarding how one of ordinary skill in the art would have viewed them in combination show how these teach or suggest a combination of Martyn’s disclosure that an “opposite scroll function” from the one used to call the snapshot menu would have been used to dismiss the snapshot with Hotelling’s disclosures of use of gestures to back out of opened folders. Ex. 1005 ¶¶ 17, 20, 22; Ex. 1004, Fig. 27A; Ex. 1003 ¶¶ 143–144; Ex. 1062 ¶¶ 50, 52). Patent Owner’s assertion that one of ordinary skill in the art would have had to “ignore the existing teachings of Martyn” as to how Martyn’s snapshot menu would be dismissed (and related arguments regarding the implementation of the proposed

combination, *see* PO Resp. 43–45, discussed above) does not undermine Petitioner’s evidence and argument that a person of ordinary skill in the art would have implemented these teachings in a touch screen device such as the one in the proposed combination.

(b) Cho Contentions

For limitation 1.f, Petitioner additionally argues that Cho’s teachings regarding its information window, in combination with Hotelling and Martyn, teach limitation 1.f. Pet. 36–40. Petitioner cites Cho’s information window, which provides a menu of selectable commands. *Id.* at 37–38 (citing Ex. 1006 ¶¶ 124, 128, 130, 132, Fig. 17(b)). Petitioner asserts that Cho describes a number of ways in which the detection of a slide or swipe gesture by a user causes a change in an aspect of the display of the information window. *Id.* at 38–39. Petitioner argues Cho teaches or suggests the scrolling of an information window in response to a flick on the screen. *Id.* at 38 (citing Ex. 1006 ¶¶ 79, 91, 108, 127, 132; Ex. 1003 ¶ 148). Additionally, Petitioner argues that Cho teaches changing the size of the information window in response to a touch and drag motion on the screen. *Id.* at 38–39 (citing Ex. 1006 ¶¶ 107, 128, 130, 132, Figs. 17(a), 17(b); Ex. 1003 ¶ 149). Petitioner also argues that Cho teaches a touch and drag motion that ends the display of the information window, which Petitioner asserts constitutes a change in an aspect of the display of the information window. *Id.* at 39 (citing Ex. 1006 ¶ 109; Ex. 1003 ¶ 150). Petitioner asserts that each of these would occur and be detected after the display of such a menu. *Id.* (citing, *inter alia*, Ex. 1003 ¶ 151 (“the scrolling of the menu, dismissing of the menu, and other menu manipulation that cause changes to the display of the menu would have occurred after the long-touch gesture that launched the menu”). Petitioner asserts that the use of Cho’s

gestures for menu information windows would have been a predictable use of prior art elements according to their known functions, as per *KSR*, and that “[p]rovisioning a known gesture to trigger a known function” would make the resulting device “easy and intuitive to use for consumers with prior experience operating older mobile devices.” *Id.* at 12, 17–20, 39–40 (citing Ex. 1003 ¶¶ 38–44, 73, 87–98, 151–152).

Patent Owner argues that Cho’s teachings are unavailing to Petitioner, arguing first that Cho’s scrolling (and the related gestures Cho teaches for scrolling) would not have been used with Martyn’s snapshot menu because all contents of the menu are visible when the menu is displayed. *Id.* at 53–54 (citing Ex. 1005 ¶¶ 17, 21, Figs. 2, 3; Ex. 2005 ¶ 100). Patent Owner asserts that although Martyn teaches that the menu might include more options than depicted in its examples, “this is accomplished by making the App Snapshot ‘longer,’ not by scrolling.” *Id.* at 54–55 (citing Ex. 1005 ¶¶ 15, 17, Figs. 2, 3; Ex. 2005 ¶ 101). Patent Owner argues that Petitioner provides no reason why the resizing and menu dismissal teachings of Cho would have been used with a Hotelling/Martyn combination, and that Patent Owner has merely shown that the claim elements are known in the prior art, and not that there was a motivation to combine. *Id.* at 56–58.

We determine that Petitioner has shown in each of three ways (scrolling, window resizing, window dismissal) that Cho’s gestures, combined with the teachings of Hotelling and Martyn, teach or suggest the limitation.

While Patent Owner argues that the Martyn menu only displays a list of options that fits in a short menu, we credit Dr. Cockburn’s testimony that Cho and Martyn describe similar menus, and that changing aspects of menus as Cho describes would have been motivated by a desire to implement such

menus, and that doing so would be applying known techniques to yield predictable results, including in order to make known gestures available to users to trigger known functions. Ex. 1003 ¶¶ 88–90, 92–98.

With respect to scrolling, although we acknowledge Dr. Madisetti’s testimony regarding the examples provided in Martyn including only windows visible on the Martyn screen and that Martyn teaches accommodating more options by making the Martyn menu “longer,” we do not see find compelling the testimony that the description of Martyn’s menu as a “summary window” implies that “the inventors of Martyn . . . deliberately chose to include only as many options as may fit on the device’s screen at one time,” or that longer menu would not be accomplished through the use of scrolling. Ex. 2005 ¶¶ 99–102 (citing Ex. 1005 ¶ 15). While Patent Owner cites *Virtek Vision*, that “case involve[d] nothing other than an assertion” that a missing limitation was disclosed in a prior art reference and the limitation being “therefore ‘known,’ [thereby] satisfie[d] the motivation to combine analysis.” *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 888 (Fed. Cir. 2024). Petitioner here does not rely on “[t]he mere fact that . . . possible arrangements existed in the prior art,” (*Virtek Vision*, 97 F.4th at 887), but persuasively provides reasoning why one of ordinary skill in the art would have made the combination, to provide a known gesture to trigger a known function. Pet. 19–20; Ex. 1003 ¶¶ 94–98.

(c) Conclusion

For the reasons given above, we find that the combination of Hotelling, Martyn, and Cho, teaches or suggests limitation 1.f of claim 1.

(5) Conclusion

For the reasons discussed above, we determine that Petitioner has shown by a preponderance of the evidence that claim 1 of the '212 patent would have been obvious over Hotelling, Martyn, and Cho.

5. Additional Independent Claims 16 and 84 – Obviousness Over Combination of Hotelling, Martyn, and Cho

Claim 16 is directed to a mobile device including a touch screen, actuator, at least one processor, and memory configured to store an application and programs that include instructions to perform actions substantially similar to those found in limitations 1.a –1.f of claim 1. Ex. 1001, 97:44–98:15. Claim 84 is an independent method claim that includes steps similar to those claimed in limitations 1.a through 1.f of claim 1. Ex. 1001, 114:52–115:16.

Petitioner argues these claims with reference to its arguments relating to claim 1. Pet. 45, 52. Patent Owner makes no arguments specific to these claims.

For the reasons discussed above, we determine that Petitioner has shown by a preponderance of the evidence that claims 16 and 84 are unpatentable over Hotelling, Martyn, and Cho.

6. Claim 13

Claim 13 depends from claim 1, and further recites instructions that “cause the mobile device to operate such that the first duration and the second duration of the touch are detected as part of the same gesture.” Ex. 1001, 97:28–32.

Petitioner asserts that Hotelling discloses a single long touch that persists for a greater time than a short touch duration, referring to the

assertions regarding limitation 1.c of claim 1. Pet. 43 (citing Ex. 1003 ¶ 158). Patent Owner makes no arguments specific to these claims.

For the reasons presented in the Petition and those discussed above, we find Petitioner has shown by a preponderance of the evidence that claim 13 is unpatentable over Hotelling, Martyn, and Cho.

7. *Claim 14*

Claim 14 depends from claim 13, and adds the recitation of instructions that “cause the mobile device to operate such that the slide or swipe gesture is capable of being part of the same gesture.” Ex. 1001, 97:33–37.

Petitioner contends that the slide or swipe gesture (of limitation 1.f) can be part of the same gesture as the long touch gesture (“second duration of the touch being applied to the touch screen is detected . . . after the first duration of the touch is detected without the ceasing” of limitation 1.e). Pet. 43–45. Petitioner asserts that Hotelling teaches touch gestures that include motions during the touch, including “swipe[s].” *Id.* at 43–44 (citing Ex. 1004 ¶¶ 135, 148; Ex. 1003 ¶ 159). Petitioner additionally cites a related application incorporated by reference in Hotelling as teaching multipoint gestures that can include motion and can be performed in a single stroke, as opposed to segmented gestures that are performed in a sequence of distinct steps. *Id.* at 44–45 (citing Ex. 1004 ¶¶ 2, 135, 145–148; Ex. 1010 ¶¶ 8, 65, 66–68, 73, 95, 99–100, 110; Ex. 1003 ¶ 161); Pet. Reply 21–22.

Patent Owner argues that Hotelling teaches that the gesture that displays a context sensitive menu pop-up has no motion associated with the gesture. PO Reply 60 (citing Ex. 1004, Fig. 27A). Patent Owner additionally contends that although Petitioner relies on slide or swipe gestures from Martyn and Cho for the slide or swipe gesture (e.g. in

arguments relating to limitation 1.f of claim 1), Petitioner does not explain why one of ordinary skill would have combined the Hotelling context sensitive menu gesture with a slide or swipe gesture, resulting in a single (“the same”) gesture. *Id.* at 60. Therefore, Patent Owner, “Petitioner does not explain . . . **why** a POSITA would implement the Petition’s proposed set of gestures in a ‘continuous’ manner, or **how** a POSITA would implement any of the Petition’s various Limitation [1.f] mappings as a ‘continuous’ gesture with the original touch.” PO Sur-reply 21 (bracketing in original).

With respect to claim 14, we agree with Patent Owner. Petitioner maps the detection of a “second duration of the touch” to a long touch that opens a context sensitive menu. Pet. 26–31. Petitioner maps limitations 1.f to a variety of actions, including actions on displayed menus or lists. Pet. 33–40. Petitioner’s arguments do show that complex gestures of various kinds are taught in Hotelling and in the reference incorporated by reference in Hotelling, as Petitioner asserts. PO Reply 21–22. But even if “a POSITA would have understood that ‘a ***slide/swipe gesture is capable of*** being part of the ***same*** multi-part ***gesture*** as a ***long/short*** touch,” (Pet. Reply 22 (quoting Claim 14 with emphasis added)) Petitioner does not show why one of ordinary skill in the art would have been motivated to incorporate into the “same gesture” the various gesture teachings relied upon, to show that one of ordinary skill would have found it obvious over the cited references to cause the mobile device to operate in the manner recited in claim 14.

Thus, we conclude that Petitioner has not shown by a preponderance of the evidence that claim 14 is unpatentable over Hotelling, Martyn, and Cho.

8. *Claims 15 and 61–64*

Petitioner presents additional arguments relating to dependent claims 15 and 62–64. Pet. 45, 51–52. Patent Owner’s arguments with respect to claims 15 and 62–64 rely on arguments addressed above. PO Resp. 62, 63–64.

Petitioner presents additional arguments relating to dependent claim 61. Pet. 49–51. One such argument is largely identical to an argument addressed above with respect to limitation 1.f of claim 1 and Cho’s teaching of dismissing a menu in response to touch and drag gesture. *Id.* at 50. A second argument based on Hotelling is also presented, which we do not address. *Id.* at 51–52. For the Cho-based argument, Patent Owner refers to its limitation 1.f arguments, which we addressed above. *Id.* at 62–63.

For the reasons presented in the Petition and those discussed above, we find Petitioner has shown by a preponderance of the evidence that claims 15 and 61–64 are unpatentable over Hotelling, Martyn, and Cho. For claim 61, our decision rests specifically on arguments presented with reference to Cho.

9. *Claims 2, 9–11, and 58–60*

Petitioner presents additional arguments relating to dependent claims 2, 9–11, and 58–60. Pet. 40–43, 46–49. Patent Owner makes no arguments specific to these claims.⁵

⁵ Patent Owner presented a table in its Demonstrative Exhibits listing claims 59 and 60 together with claims for which Patent Owner presents additional argument. However, these claims do not appear to have been discussed in the Patent Owner’s papers. Ex. 2009, 35. Petitioner’s assertions for claims 59 and 60 rely on the assertions provided for limitation 1.f of claim 1 (Pet. 46–48); our conclusions regarding those assertions are discussed *supra* at §II.D.4.b.(4).(b).

For the reasons presented in the Petition and those discussed above, we find Petitioner has shown by a preponderance of the evidence that claims 2, 9–11, and 58–60 are unpatentable over Hotelling, Martyn, and Cho.

*E. Obviousness of Claims 56 and 57
Over the Combination of Hotelling, Martyn, Cho, and Chaudhri*

Petitioner additionally argues that claims 56 and 57 would have been obvious over a combination of Hotelling, Martyn, Cho, and Chaudhri. Pet. 52–65. Patent Owner presents no additional argument specific to these contentions. For the reasons presented in the Petition and those discussed above, we find Petitioner has shown by a preponderance of the evidence that claims 56 and 57 are unpatentable over Hotelling, Martyn, Cho, and Chaudhri.

III. CONCLUSION⁶

Petitioner establishes by a preponderance of the evidence that claims 1, 2, 9–11, 13, 15, 16, 56–64, and 84 of the '212 patent are unpatentable, but does not establish not that claim 14 of the '212 patent is unpatentable, as follows:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not shown Unpatentable
1, 2, 9–	103	Hotelling, Martyn,	1, 2, 9–11, 13,	14

⁶ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claim(s) Shown Unpatentable	Claim(s) Not shown Unpatentable
11, 13– 16, 58– 64, 84		Cho	15, 16, 58–64, 84	
56, 57	103	Hotelling, Martyn, Cho, Chaudhri	56, 57	
Overall Outcome			1, 2, 9–11, 13, 15, 16, 56–64, 84	14

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 2, 9–11, 13, 15, 16, 56–64, and 84 of the '212 patent have been proven to be unpatentable, but that claim 14 of the '212 patent has not been proven to be unpatentable; and

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

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