

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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APPLE INC.,  
Petitioner,

v.

SMITH INTERFACE TECHNOLOGIES, LLC,  
Patent Owner.

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IPR2024-01083  
Patent 10,642,413 B1

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Before JEFFREY S. SMITH, BARBARA A. BENOIT, and  
SHARON FENICK, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

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

## I. INTRODUCTION

Petitioner, Apple Inc., filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1–3, 7, 9, 10, and 101 of U.S. Patent No. 10,642,413 B1 (Ex. 1001, “the ’413 patent”) pursuant to 35 U.S.C. § 311(a). Patent Owner, Smith Interface Technologies, LLC, filed a Preliminary Response (Paper 6, “Prelim. Resp.”) pursuant to 35 U.S.C. § 313.

Pursuant to 35 U.S.C. § 314(a), the Director may not authorize an *inter partes* review unless the information in the petition and preliminary response “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons that follow, we institute an *inter partes* review as to claims 1–3, 7, 9, 10, and 101 of the ’413 patent on the ground of unpatentability asserted in the Petition.

## II. REAL PARTIES-IN-INTEREST

Petitioner identifies itself (Apple, Inc.) as its sole real party-in-interest. Pet. 84. Patent Owner identifies itself (Smith Interface Technologies, LLC) as its sole real party-in-interest. Paper 3, 1.

## III. RELATED MATTERS

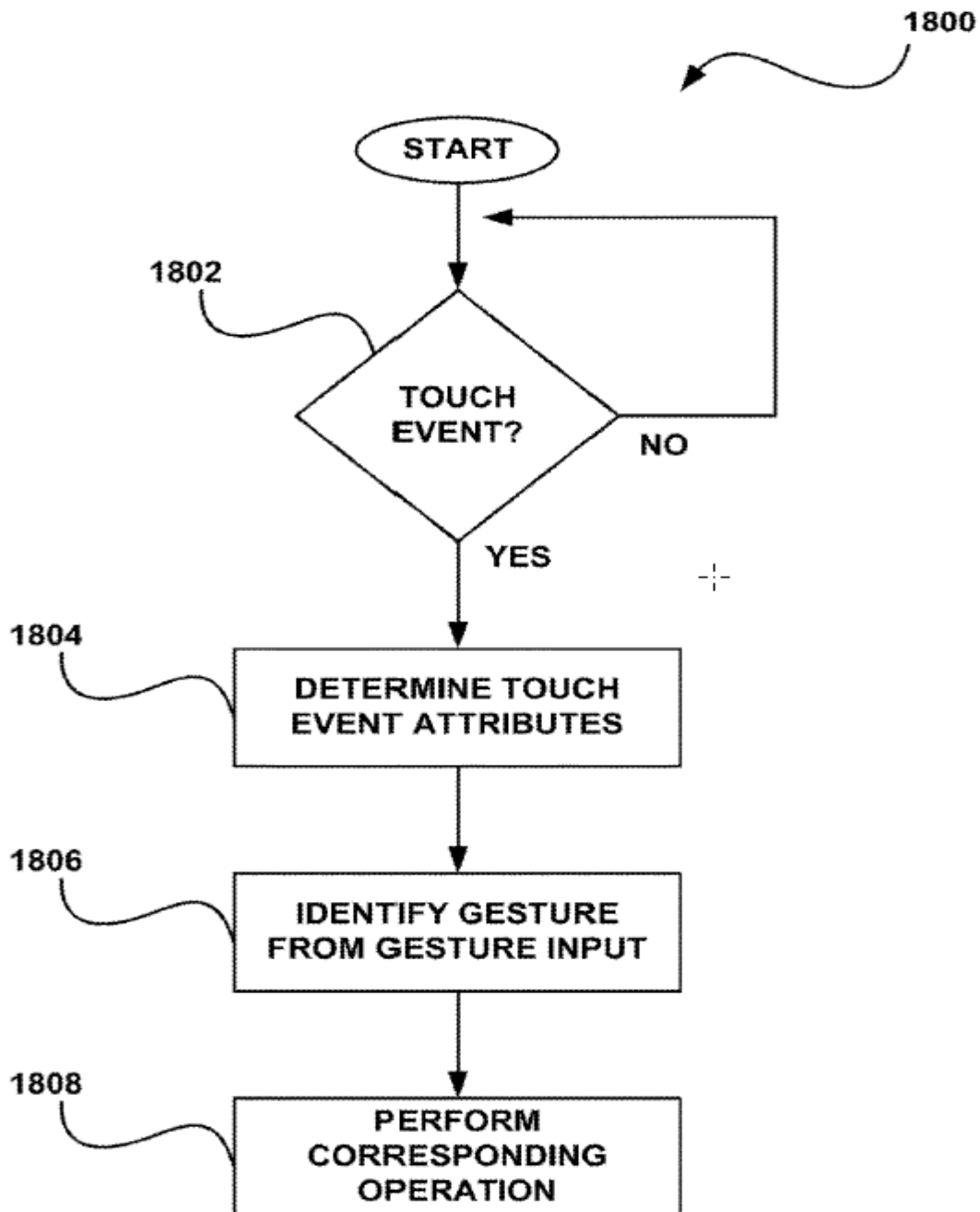
The Petition and Patent Owner state that the ’413 patent is the subject of the following proceeding:

*Smith Interface Technologies, LLC v. Apple, Inc.*, No. 3-23-cv-01187 (S.D. Cal.).

Pet. 84; Paper 3, 1.

#### IV. THE '413 PATENT

The '413 patent relates to a gesture-equipped touch screen. Ex. 1001, Code (54). The touch screen displays a graphical user interface, detects a first gesture that begins at an edge of the touch screen and moves inward, and in response, displays a menu. *Id.* at Abstr. Figure 18 shows method 1800 for utilizing gestures and is reproduced below. *Id.* at 56:53–54.



As shown in Figure 18, the method determines whether a touch event has occurred at 1802. Ex. 1001, 56:61–62. If a touch event has occurred, the method determines touch event attributes at 1804. *Id.* at 56:63–65. Touch event attributes refer to measurable aspects of the user interaction which resulted in the touch event, such as touch state, contact area, contact point, or any other measurable aspect of user interaction. *Id.* at 53:57–63. Then, the method identifies the gesture from the gesture input at 1806. *Id.* at 56:66–67. Some gestures may be identified solely from initial touch event attributes. *Id.* at 57:15–16. Other gestures may only be identified after the gesture has been performed for some time. *Id.* at 57:16–18. Once the gesture has been identified, the method performs the corresponding operation at 1808. *Id.* at 57:38–39.

One gesture is a pinch slide gesture, which begins near an edge of a display then moves inward, and causes a menu to slide in from that edge of the display. Ex. 1001, 67:30–36. Different menus are associated with each edge of the display. *Id.* at 67:38–39. A menu is closed, or slid back out of view, by using a pinch slide to pull it out a bit farther, then releasing it, similar to rolling up a window shade. *Id.* at 67:39–42. The gesture may have a magnitude, such as a length. *Id.* at 61:31–35.

The user interface may be a 3D layered user interface in which displayed objects may exist in one of a plurality of layers. Ex. 1001, 68:41–44. Alternatively, the 3D layered surface may be implemented in a device having a single layer display through the use of virtual display layers. *Id.* at 69:4–6. A virtual display layer refers to a collection of display elements which have all been assigned the same apparent depth within the 3D layered user interface. *Id.* at 69:6–9. Virtual display layers give the appearance of depth through the use of 3D depth cues. *Id.* at 69:25–27. A 3D depth cue

refers to an effect or operation which gives a visual indication of simulated depth. *Id.* at 69:27–30. An example of a depth cue is a blur operation, such that layers located at successively greater depths appear blurrier than those closer to the user. *Id.* at 69:30–33.

## V. ILLUSTRATIVE CLAIM

Claims 1 and 101 are independent, and claims 2–3, 7, 9, and 10 depend directly or indirectly from claim 1. Ex. 1001, 95:42–97:3, 112:37–113:29. Challenged claim 1 of the ’413 patent is reproduced below using Petitioner’s notation (Pet. v–vii) and recites:

[1.a] An electronic device, comprising:

a display;

a touch interface;

one or more processors;

memory; and

one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors,

[1.b] the one or more programs including instructions for: displaying, utilizing the display, a graphical user interface;

[1.c] when the graphical user interface is displayed, detecting, utilizing the touch interface, a first gesture that begins in connection with a first edge of the display and moves inward;

[1.d.i] in response to the detection of the first gesture that begins in connection with the first edge and moves inward, displaying, utilizing the display, a first menu as sliding in and including one or more first menu items, and

[1.d.ii] blurring at least a portion of the graphical user interface such that a magnitude of the blurring of the at least portion of the graphical user interface progressively increases as a function of an increase in a magnitude of the first gesture being detected;

[1.e.i] when the first menu is displayed including the one or more first menu items: detecting, utilizing the touch interface, a first duration of contact on at least one of the one or more first menu items,

[1.e.ii] in response to the first duration of contact on the at least one of the one or more first menu items being detected to not surpass a threshold, performing a first operation, and

[1.e.iii] in response to the first duration of contact on the at least one of the one or more first menu items being detected to surpass the threshold, performing a second operation;

[1.f] when the graphical user interface is displayed, detecting, utilizing the touch interface, a second gesture that begins in connection with a second edge of the display and moves inward;

[1.g] in response to the detection of the second gesture that begins in connection with the second edge and moves inward, displaying, utilizing the display, a second menu including one or more second menu items;

[1.h.i] when the second menu is displayed including the one or more second menu items: detecting, utilizing the touch interface, a selection contact on at least one of the one or more second menu items, and

[1.h.ii] in response to the selection contact being detected on the at least one of the one or more second menu items, performing a third operation;

[1.i] wherein the electronic device is configured such that the graphical user interface is displayed in at least one virtual display layer, and at least one of the first menu or the second menu is displayed in at least one other virtual display layer.

## VI. ASSERTED GROUND

Petitioner asserts that claims 1–3, 7, 9, 10, and 101 of the ’413 patent are unpatentable on the following ground.

| Claim(s) Challenged | 35 U.S.C. § <sup>1</sup> | Reference(s)/Basis                                               |
|---------------------|--------------------------|------------------------------------------------------------------|
| 1–3, 7, 9, 10, 101  | 103(a)                   | Ahn <sup>2</sup> , Chaudhri <sup>3</sup> , Hinckley <sup>4</sup> |

## VII. LEVEL OF ORDINARY SKILL

Petitioner contends that a person of ordinary skill in the art would have a Bachelor of Science degree in computer science, computer engineering, electrical engineering, human-computer interaction, or a comparable field and at least two years of professional experience in the design and development of graphical user interfaces (GUIs), human-computer interfaces, or equivalents thereof. Pet. 4 (citing Ex. 1003 ¶¶ 30–31). Dr. Terveen testifies that “[s]uch experience could be obtained through

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<sup>1</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103. Because the ’413 patent’s effective filing date is before the March 16, 2013 effective date of the applicable AIA amendment, the pre-AIA version of § 103 applies. Although Petitioner contends that the ’413 patent is not entitled to the August 5, 2011 filing date of one of the provisional applications, Petitioner does not contend that the ’413 patent is not entitled to the filing date of the other provisional applications filed in December 2011, or of the utility applications filed on Aug. 3, 2012 and Mar. 16, 2016. Pet. 2. At this stage, we determine that the ’413 patent is entitled to at least the filing date of Application No. 13/567,004 filed on Aug. 3, 2012. We would reach the same outcome, however, under the AIA version of § 103.

<sup>2</sup> Ex. 1004, Ahn, US Patent Application Publication No. 2008/0207188 A1, published Aug. 28, 2008.

<sup>3</sup> Ex. 1005, Chaudhri, US Patent Application Publication No. 2007/0150842 A1, published June 28, 2007.

<sup>4</sup> Ex. 1006, Hinckley, US Patent Application Publication No. 2011/0209093 A1, published Aug. 25, 2011.

research and study in a graduate program or through comparable exposure through industry employment, and additional years of experience could substitute for the advanced-level degree.” Ex. 1003 ¶ 30. Patent Owner notes that it does not agree with Petitioner’s proposed level of ordinary skill, “but does not believe that resolving the level is necessary to resolve the issues raised in this preliminary response.” Prelim. Resp. 6.

As Petitioner’s description of a person of ordinary skill appears commensurate with the subject matter before us, we apply Petitioner’s definition for purposes of this Decision. Also, the level of ordinary skill in the art can be evidenced by the references cited, and we find it commensurate with the cited references in this proceeding. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995); *In re Oelrich*, 579 F.2d 86, 91 (CCPA 1978).

#### VIII. CLAIM CONSTRUCTION

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2019). In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (citations omitted) (en banc). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*,

415 F.3d at 1317 (citations omitted). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

We construe only those claim terms that require analysis to determine whether to institute *inter partes* review. See *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (holding that “only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”). Petitioner and Patent Owner contend that no claims need to be construed in order to resolve a controversy. Pet. 4–5; Prelim. Resp. 6–7. We agree with the parties that no terms need to be construed expressly for this Decision. We discuss claim interpretation to the extent necessary in the context of analyzing the asserted grounds to determine whether to institute trial.

We highlight that for the term “a magnitude of the blurring,” Patent Owner contends that “the amount of surface area that a translucent menu is displayed over a screen is not a magnitude *of the blurring*,” but provides no further construction of the term, other than a statement that even under Petitioner’s interpretation of “blurring,” the grounds are deficient. Prelim. Resp. 32–33 & n.4. On the present record, Petitioner’s proposed construction appears correct, and for purposes of institution, we apply this proposed construction of “a magnitude of the blurring” as discussed below in our analysis of limitation [1.d.ii]; the construction of this term may be addressed by the parties as this *inter partes* review proceeds.

Further, we highlight that limitations [1.e.ii] and [1.e.iii] appear to be written in the alternative, such that satisfying only one of these two limitations is sufficient to meet the claim. For example, when “the first duration of contact” does “not surpass a threshold,” then the first operation

of limitation [1.e.ii] will be performed and the second operation of limitation [1.e.iii] will not be performed. Similarly, when “the first duration of contact” does “surpass the threshold,” then the second operation of limitation [1.e.iii] will be performed and the first operation of limitation [1.e.ii] will not be performed. Patent Owner appears to propose this interpretation in contending that claim 1 recites “two scenarios that occur in response to a single contact . . . either ‘surpass[ing]’ or ‘not surpass[ing]’ a recited threshold.” Prelim. Resp. 22. We invite the parties to address, in a claim construction section in the subsequent briefings, whether limitations [1.e.ii] and [1.e.iii] are written in the alternative, such that only one of these two limitations needs to be satisfied in order to meet the claim. *See Brown v. 3M*, 265 F.3d 1349, 1352–53 (Fed. Cir. 2001)); *Hytera Commc’ns Co. v. Motorola Solutions, Inc.*, 841 Fed. Appx. 210 (2021); *Applera Corp. v. Illumina, Inc.*, 375 Fed. Appx. 12, 21 (Fed. Cir. 2010); *Cybersettle, Inc. v. Nat’l Arbitration Forum, Inc.*, 243 Fed. Appx. 603, 607 (Fed. Cir. 2007); *Ex parte Schulhauser*, Appeal 2013-007847, 2016 WL 6277792 (PTAB 2016) (precedential).

## IX. 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”)); *see also* 37 C.F.R. § 42.104(b) (requiring a petition for *inter partes* review to identify how the challenged

claim is to be construed and where each element of the claim is found in the prior art patents or printed publications relied upon).

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). “The [obviousness] analysis is objective: ‘Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.’” *Id.* (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). When in evidence, “secondary considerations [such] as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized.” *Id.* Against this factual background, the obviousness or nonobviousness of the claims at issue is determined. *Id.*

The obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418. Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2016) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). Furthermore, Petitioner does not satisfy its burden of proving obviousness by employing “mere conclusory statements,” but “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. Claims 1–3, 7, 9, 10, and 101 as Obvious based on Ahn, Chaudhri, and Hinkley*

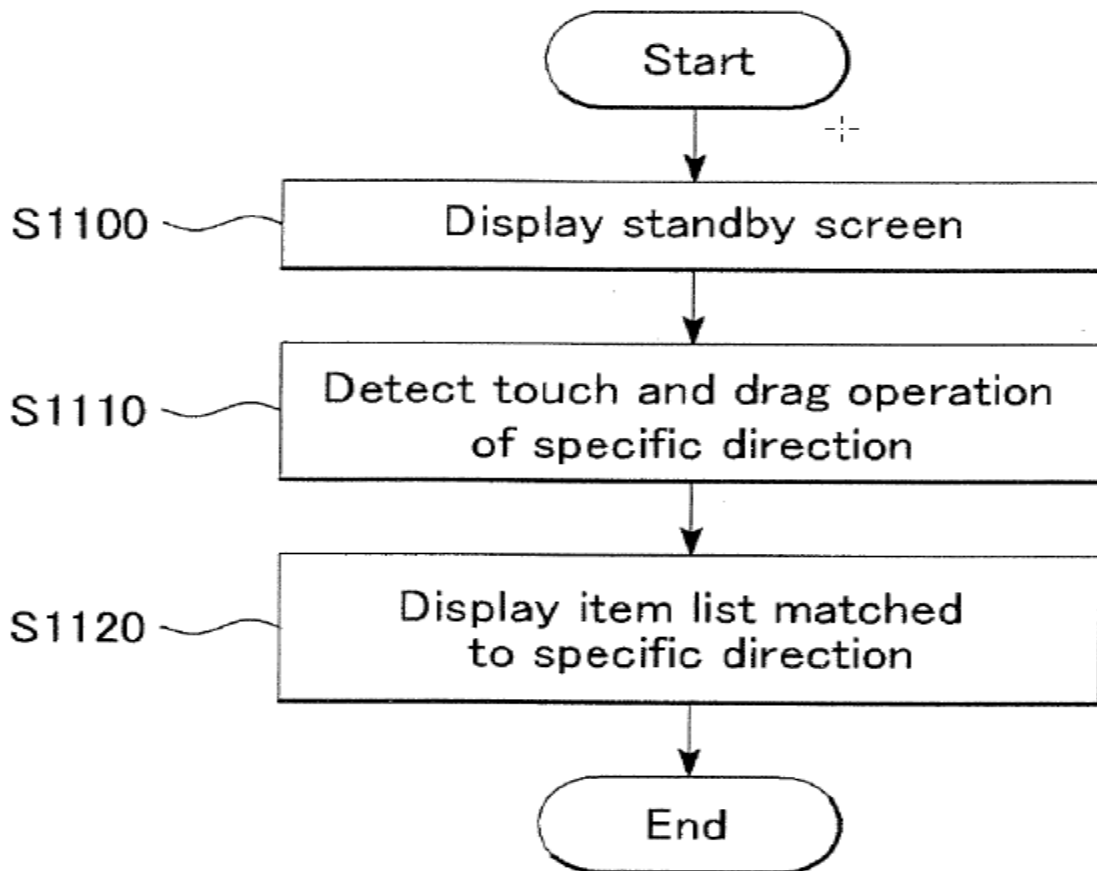
*1. Ahn – Exhibit 1004*

Ahn discloses a method of displaying a menu in a mobile terminal by selecting a specific direction through an input device of the terminal and displaying a menu corresponding to the selected specific direction.

Ex. 1004, Abstr. Figure 11 is a flowchart illustrating a method of displaying a menu in a mobile terminal having a touch screen and is reproduced below.

*Id.* ¶ 95.

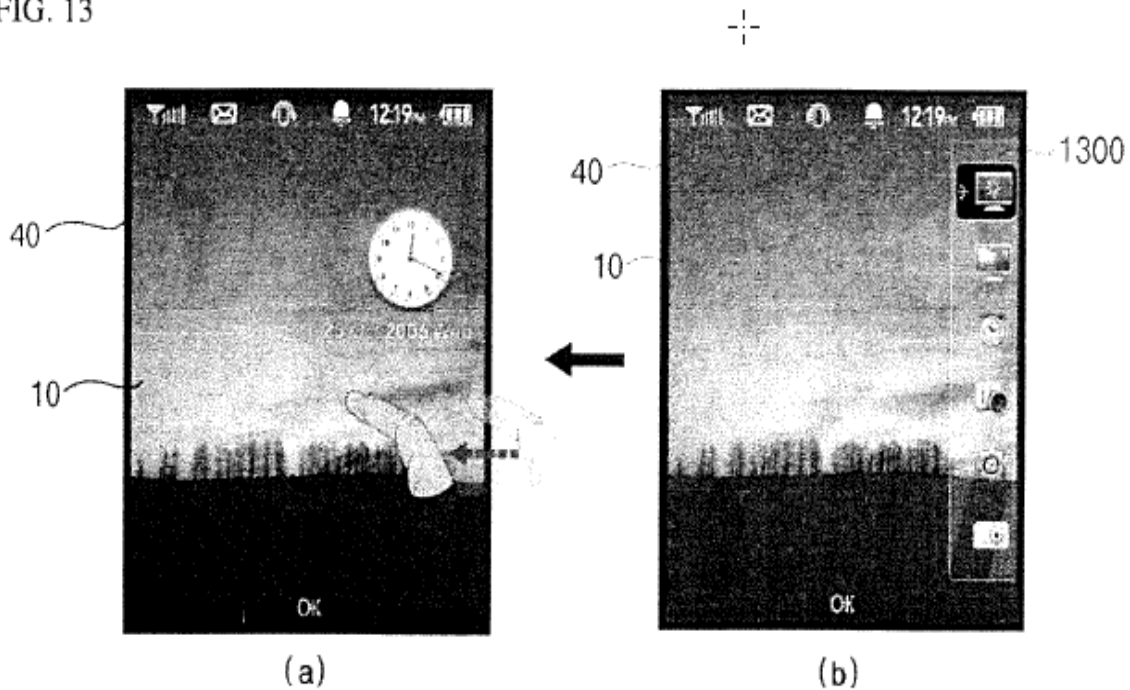
FIG. 11



As shown in Figure 11, at 1100 a controller displays a standby screen in the display of the mobile terminal. *Id.* ¶ 96. At 1110 the controller detects a touch and drag operation, where the touch and drag operation indicates movement of an external object on the touch screen. *Id.* ¶ 98. At 1120, as the touch and drag operation is detected, the controller displays a menu list matched to the specific direction in the display. *Id.* ¶ 99. For example, menu list A may be matched to a right direction and menu list B may be matched to a left direction. *Id.*

Figures 13a, 13b, 14a, 14b, 15a, and 15b illustrate examples of a screen for displaying a menu list according to a touch and drag operation of a specific direction. Ex. 1004 ¶ 101. Figures 13a and 13b are reproduced below.

FIG. 13

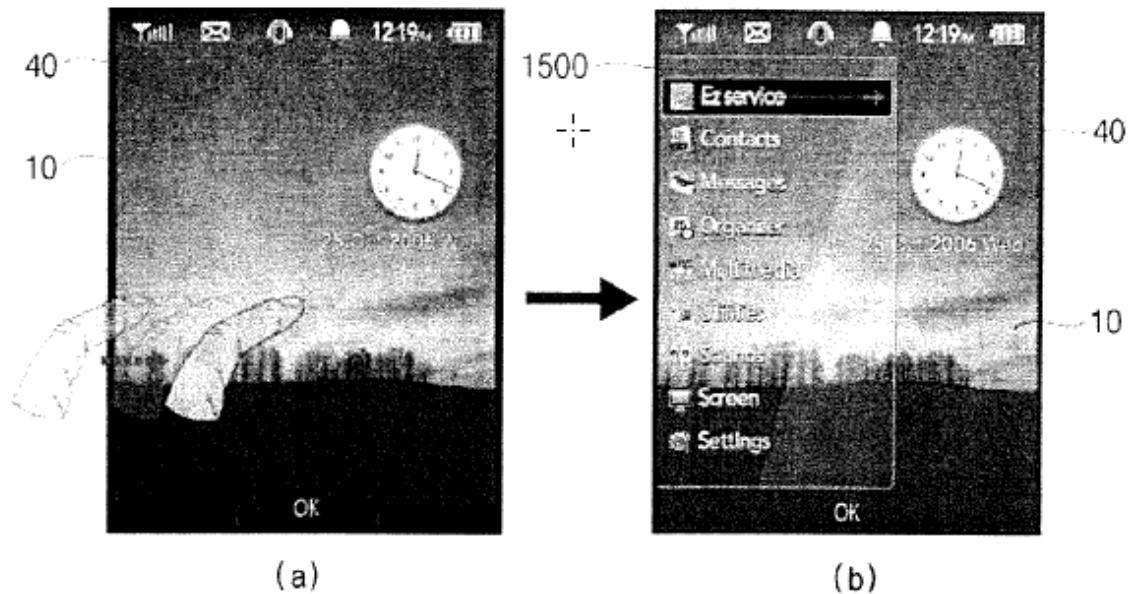


As shown in Figures 13a and 13b, when the user touches a right side of touch screen 10 and drags the touch in a left direction, menu list 1300 matched to the left direction is displayed in the display 40. Ex. 1004 ¶¶ 102,

104. Menu list 1300 shown in Figure 13b is displayed in translucent form over a clock widget. *Id.* ¶ 70; Figs. 13a and 13b. Also, the clock widget shown in Figure 13a is shown as blurred in Figure 13b.

Figures 15a and 15b are reproduced below.

FIG. 15



As shown in Figures 15a and 15b, when the user touches screen 10 and drags the touch in a right direction, menu list 1500 matched to a right direction is displayed in display 10. Ex. 1004 ¶¶ 103, 104. Menu list 1500 shown in Figure 15b can be displayed as emerging from the left side of display 40. *Id.* ¶ 119.

## 2. Chaudhri – Exhibit 1005

Chaudhri discloses a device with a touch screen that may be unlocked when contact with the display corresponds to a predefined gesture for unlocking the device. Ex. 1005, Abstract. The predefined gesture may include moving an unlocked image to a predefined location or along a predefined path. *Id.* While the device is unlocked, the device may display on the touch screen user interface objects such as text, images, icons, virtual

buttons, pull-down menus, radio buttons, check boxes, selectable lists, and so forth. Ex. 1005 ¶ 60. Figure 6 illustrates a process for indicating progress towards satisfaction of a user input condition such as a predefined gesture and is reproduced below.

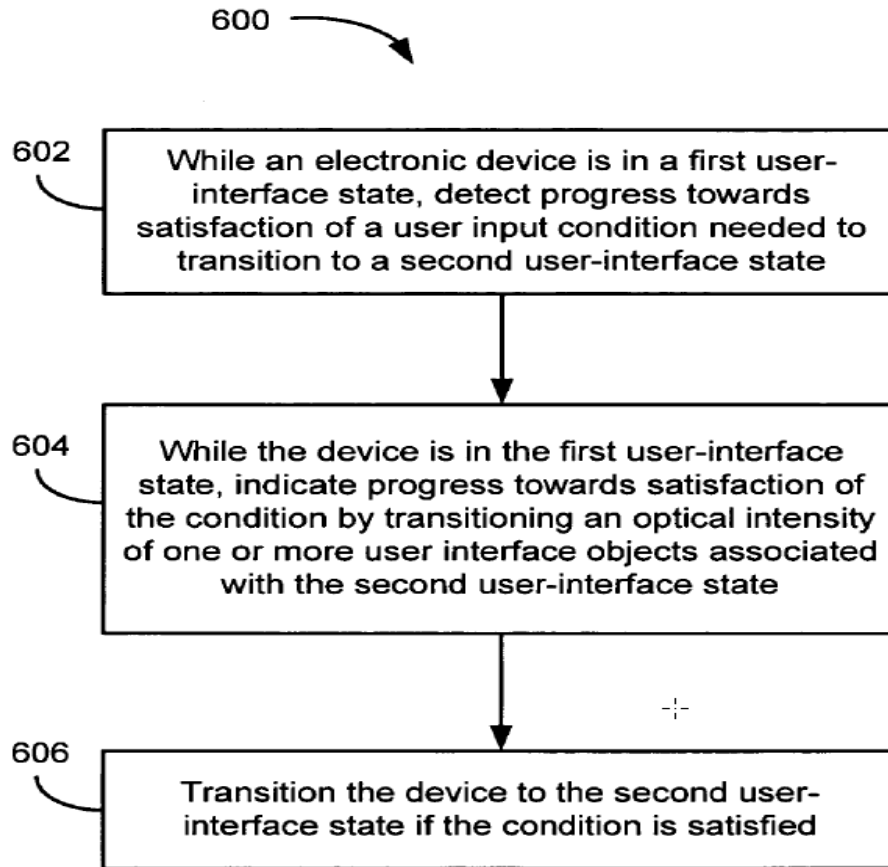


**Figure 6**

As shown in Figure 6, while an electronic device is in a first user-interface state, progress towards satisfaction of a user input condition needed to transition to a second user interface state is detected at 602. Ex. 1005 ¶ 81. While the device is in the first user-interface state, progress towards satisfaction of the condition is indicated by transitioning an optical intensity of one or more user interface objects associated with the second user interface state at 604. *Id.* ¶ 82. The device transitions to the second user

interface state if the condition is satisfied. *Id.* ¶ 84. Chaudhri further discloses that as a user transitions from a first user interface state to a second user interface state, the optical intensity of displayed objects may change. Ex. 1005 ¶¶ 79, 82. The optical intensity may be perceived by users as a transparency effect (or lack thereof) applied to the user interface object. *Id.* ¶ 85. The optical intensity may be the visual differentiation between the user interface object and the background, based on color, hue, color saturation, brightness, contrast, transparency, and any combination thereof. *Id.* The optical intensity of the user interface objects to be displayed in the second user interface state may be increased smoothly. *Id.* ¶ 86. The indication of progress towards completion of the user input condition is a function of the user's satisfaction of the condition. *Id.* ¶ 87. The user may perceive the optical intensity transition as a fading in of the user interface objects as the unlock action is performed. *Id.*

If the user input condition includes a predefined gesture, then the indication of progress of the gesture may be defined in terms of how much of the gesture is completed. Ex. 1005 ¶ 88. For example, if the gesture includes moving the finger from one edge of the screen to the opposite edge horizontally, then the indication of progress may be defined in terms of the distance between the two edges. *Id.* If the user input condition includes dragging an image to a predefined location, then the indication of progress may be defined in terms of the distance between the initial location of the image and the predefined location. *Id.* ¶ 89.

### 3. *Hinckley – Exhibit 1006*

Hickley discloses radial menus with bezel gestures for a touch display of a computing device. Ex. 1006, Title, Abstract. Using a bezel menu, a user can touch down at a certain location and stroke or slide their finger in a

certain direction to access a particular functionality or menu command.

*Id.* ¶ 105. The presence of a radial menu can be indicated by a small icon associated with a larger icon or slot of a bezel menu as shown in Figure 17, which is reproduced below.

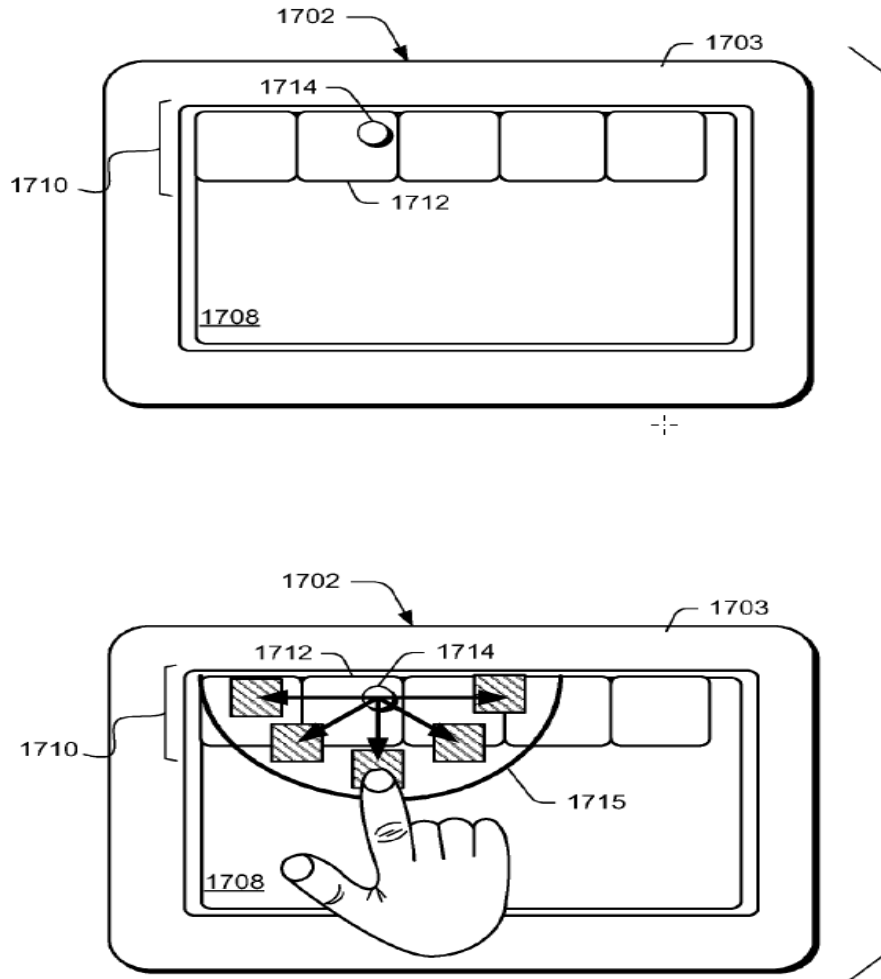


**Fig. 17**

As shown in Figure 17, device 1702 includes a bezel 1703 and a bezel menu 1710 that has been exposed on display device 1708. Ex. 1006 ¶ 106. Bezel menu 1710 includes multiple selectable icons such as icon 1712. *Id.* Each bezel menu icon is associated with a different functionality. *Id.* Icon 1712 includes radial menu icon 1714 that gives a clue to the user that radial

menu 1715 is associated with icon 1712. *Id.* ¶ 107. Radial menu 1715 can be accessed through a tap-and-hold of a finger on or near radial menu icon 1714. *Id.* Tapping radial menu icon 1714 triggers a default action which may be the same as or different than the action associated with tapping bezel menu icon 1712. *Id.* By providing a variety of different types of recognizable inputs, such as “tap” and “tap-and-hold,” and mapping those recognizable inputs to different types of functionalities (*id.* ¶ 66), the user may readily access enhanced functions of the computing device in an efficient and intuitive manner (*id.* ¶ 40) without permanently showing the functions in the device’s user interface (*id.* ¶ 1).

#### 4. *Reasons to Combine Ahn and Chaudhri*

Petitioner contends a person of ordinary skill would have combined the teachings of Ahn and Chaudhri to yield the benefit of a mobile device that changes an optical intensity of a user interface object as a function of progress towards satisfaction of a user’s gesture that transitions the user interface from one state to another. Pet. 19 (citing Ex. 1003 ¶ 57). Petitioner asserts that Ahn discloses blurring a background user interface object such as a clock widget when opening and displaying an edge menu on the screen of the device, but does not disclose further details about the blurring process. *Id.* (citing Ex. 1003 ¶ 58; Ex. 1004, Figs. 3A and 4B). Petitioner further contends that Chaudhri provides implementation details for transitioning the optical intensity of a user interface object as the user interface transitions from one state to another. *Id.* at 19–20 (citing Ex. 1003 ¶ 59). Petitioner contends that a person of ordinary skill in the art would have used this teaching of Chaudhri for the benefit of implementing the optical effect of blurring the clock widget when opening the edge menu as shown in Ahn. *Id.*

Additionally, Petitioner argues that Chaudhri teaches that changing the optical intensity of the user interface objects provides a user with sensory feedback of the progress of transitioning between user interface states. Pet. 20–21 (citing Ex. 1005 ¶ 82; Ex. 1003 ¶ 60). Petitioner contends that blurring background user interface objects when opening the edge menu of Ahn using the transitioning technique of Chaudhri yields the benefit of drawing the user’s attention to the most relevant layer of a user interface. *Id.* at 21–22 (citing Ex. 1008, 1–2; Ex. 1003 ¶ 61). Petitioner contends that varying the optical intensity of a user interface object, for example, varying the blurring of Ahn’s widget as a function of the magnitude of the user’s touch and drag gesture as taught by Chaudhri would have been one of two ways, either binary or progressive, of implementing the blurring effect shown in Figures 4B, 10, and 13B of Ahn. *Id.* at 22–23 (citing Ex. 1003 ¶ 62); *Uber Technologies, Inc. v. X One, Inc.*, 957 F.3d 1334, 1339–40 (Fed. Cir. 2020) (reversing the Board’s determination of lack of motivation “because Okubo’s terminal-side plotting and Konishi’s server-side plotting were both well known in the art, and were the only two identified, predictable solutions for transmitting a map and plotting locations, it would have been obvious to substitute server-side plotting for terminal-side plotting in a combination of Okubo and Konishi.”) (citing *KSR*, 550 U.S. at 421). Petitioner contends that a person of ordinary skill in the art either would have implemented the blurring effect in a binary fashion by instantly toggling from unblurred to blurred, or would have progressively varied the blur as a function of the user’s progress. *Id.* at 23.

Petitioner contends that a person of ordinary skill in the art would have had a reasonable expectation of success in applying the user interface state transition techniques of Chaudhri to the touch screen of Ahn’s mobile

device because the combination is of known elements and does no more than yield expected and predictable results. Pet. 18 (citing Ex. 1003 ¶ 56).

Patent Owner does not provide any specific argument with respect to these contentions.

For purposes of this Decision, we find Petitioner cites sufficient evidence to support its contention that a person of ordinary skill in the art would have had a reason to combine the teachings of Ahn and Chaudhri.

5. *Reason to Combine Hinckley with Ahn and Chaudhri*

Petitioner contends that a person of ordinary skill in the art would have integrated the bezel menus and radial menus of Hinckley with the touch screen in the mobile device of the Ahn-Chaudhri combination to yield the predictable result of a mobile device that uses various gestures on a touch screen in order to implement bezel menus and radial menus. Pet. 23–24 (citing Ex. 1003 ¶ 63). Petitioner contends that implementing Hinckley’s different user interaction modes in Ahn’s mobile device provides the benefits of adapting the user interface to the user’s experience level and providing an intuitive, efficient, and pleasing experience for the user. *Id.* at 24–25 (citing Ex. 1003 ¶ 64).

Petitioner contends that Hinckley’s “bezel gestures allow a user to readily access enhanced functions of a computing device in an efficient and intuitive manner” (Ex. 1006 ¶ 40) “without necessarily permanently manifesting the functionality as part of the ‘chrome’ of a device’s user interface” (Ex. 1006 ¶ 1). Pet. 26. Petitioner contends that Hinckley’s gestures and techniques allow for the conservation of valuable screen real estate on mobile devices. *Id.* (citing Ex. 1003 ¶ 66).

Petitioner contends that Ahn teaches intuitively and efficiently displays menus on a touch screen of a mobile device by touching a finger on

the touch screen at a particular location and dragging the finger in a particular direction. Pet. 26. Petitioner contends that Hinckley addresses a similar problem and provides a similar solution. *Id.* Petitioner contends that using Hinckley’s gestures and user interface elements for displaying a menu on a touch screen in place of Ahn’s gestures and user interface elements would have been a simple substitution of one known element for another to obtain predictable results. *Id.* at 26–27 (citing Ex. 1003 ¶ 67).

Petitioner contends that a person of ordinary skill in the art would have had a reasonable expectation of success in applying the gestures and user interface elements of Hinckley to the touch screen of Ahn’s mobile device because the combination does no more than yield expected and predictable results. Pet. 18 (citing Ex. 1003 ¶ 56).

Patent Owner does not provide any specific argument with respect to these contentions.

For purposes of this Decision, we find Petitioner cites sufficient evidence to support its contention that a person of ordinary skill in the art would have had a reason to combine the teachings of Hinckley with the teachings of Ahn in the Ahn-Chaudhri combination, discussed above in section IX.B.4.

#### *6. Independent claim 1*

Petitioner challenges claim 1 as unpatentable over the combination of Ahn, Chaudhri, and Hinckley. Pet. 18–67. For claim 1, Patent Owner presents arguments only with respect to limitations [1.d.ii], [1.e.ii], and [1.e.iii]. Prelim. Resp. 20–28, 32–46.

##### Limitation [1.a]

Limitation [1.a] recites “An electronic device, comprising: a display; a touch interface; one or more processors; memory; and one or more

programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors.” Petitioner contends that Ahn teaches this limitation in disclosing a mobile communication terminal that includes a touch input device, a memory, a display, and a controller. Pet 27 (citing Ex. 1004 ¶ 27, Fig. 1; Ex. 1003 ¶ 68). Petitioner contends that a person of ordinary skill in the art would have understood that Ahn’s memory, which includes a program memory, stores programs for controlling the operation of the mobile communication terminal, and that the controller executes the programs. *Id.* at 28–29 (citing Ex. 1004 ¶¶ 29, 32, 99–100, 106–108; Ex. 1003 ¶¶ 71–72).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that Ahn teaches limitation [1.a] of claim 1.

Limitation [1.b]

Limitation [1.b] recites “the one or more programs including instructions for: displaying, utilizing the display, a graphical user interface.” Petitioner contends that Ahn teaches this limitation in disclosing that the controller utilizes programs stored in program memory to control the display. Pet. 29–30 (citing Ex. 1004 ¶¶ 29, 31–32, 85, 89, 96, 99, 106, 108; Ex. 1003 ¶¶ 74–76).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that Ahn teaches limitation [1.b] of claim 1.

Limitation [1.c]

Limitation [1.c] recites “when the graphical user interface is displayed, detecting, utilizing the touch interface, a first gesture that begins in connection with a first edge of the display and moves inward.” Petitioner

contends that this limitation is taught by the combination of Ahn and Hinckley. Pet. 30–34. Petitioner contends that Ahn teaches a user touching a specific position of the touch screen and dragging the touch in a specific direction in order to display a menu list matched to that specific direction in the display. Pet. 30–32 (citing Ex. 1004 ¶¶ 95–99, 102, 118–119, Figs. 13a, 13b, 18a, and 18b; Ex. 1003 ¶¶ 77–79). Petitioner contends that Hinckley also teaches a user initiating a bezel gesture in connection with a first edge of a display then moves inward in order to access a bezel menu. Pet. 33–34 (citing Ex. 1004 ¶¶ 44–45, 72–81, Fig. 6; Ex. 1003 ¶¶ 80–82).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.c] of claim 1.

Limitation [1.d.i]

Limitation [1.d.i] recites “in response to the detection of the first gesture that begins in connection with the first edge and moves inward, displaying, utilizing the display, a first menu as sliding in and including one or more first menu items.” Petitioner contends that Ahn teaches this limitation in disclosing a user touching a specific position of the touch screen, such as a right edge, and dragging the touch in a specific direction, such as left, and the controller displaying a menu list matched to the left direction in the display as shown in Figures 13a and 13b. Pet. 35–36 (citing Ex. 1004 ¶¶ 95–99, 102, 104, Figs. 13a, 13b, 14a, 14b, 15a, 15b; Ex. 1003 ¶¶ 83–85). Petitioner contends that Figure 18 shows that as a user drags a graphic shadow, a menu list is displayed along the dragged graphic, and that a person of ordinary skill in the art would have understood that this teaches displaying the menu as “sliding in” as claimed. Pet. 37 (citing Ex. 1004 ¶¶ 118–119; Ex. 1003 ¶ 86).

Petitioner further contends that Hinckley also teaches using a bezel gesture to access a bezel menu as shown in Figure 6, where the bezel gesture allows the bezel menu to be dropped down. Pet. 37–38 (citing Ex. 1006 ¶ 73, Fig. 6; Ex. 1003 ¶¶ 87–88). Petitioner contends that a person of ordinary skill would have understood that this bezel gesture, along with Hinckley’s disclosure of closing the bezel menu by sliding the menu back off of the screen, teaches displaying a first menu as sliding in and sliding off the display. Pet. 38–39 (citing Ex. 1006 ¶¶ 73, 80; Ex. 1003 ¶¶ 88–89).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.d.i] of claim 1.

Limitation [1.d.ii]

Limitation [1.d.ii] recites “blurring at least a portion of the graphical user interface such that a magnitude of the blurring of the at least portion of the graphical user interface progressively increases as a function of an increase in a magnitude of the first gesture being detected.” Petitioner contends that Ahn teaches this limitation in describing displaying a menu in translucent form, where the translucent form allows light but not detailed images to pass through. Pet. 39–40 (citing Ex. 1004 ¶ 7; Ex. 1009, 3, 6; Ex. 1003 ¶¶ 90–91; Ex. 1001, 103:57–59). Petitioner contends that a person of ordinary skill would have understood that as a user uses a dragging gesture to open a translucent menu, causing the translucent menu to slide in the display screen, the translucent menu would progressively blur the background as a function of the magnitude of the sliding gesture. Pet. 40–41 (citing Ex. 1003 ¶ 92). Petitioner asserts that this is because “as the translucent menu slides in, the menu would progressively overlap more of

the standby screen and, thus, progressively blur more over the standby screen.” *Id.* at 40.

Petitioner alternatively contends that the combination of Ahn and Chaudhri teaches limitation [1.d.ii]. Petitioner contends that Ahn illustrates blurring a portion of the background as a result of a user opening a menu. Pet. 41 (citing Ex. 1004, ¶¶ 36, 97, 107, 102, Figs. 3a, 4b, 10, 12, 13a, 13b; Ex. 1003 ¶ 93). Petitioner contends that Chaudhri describes a process for indicating progress towards satisfaction of a user input condition, such as a predefined gesture, by transitioning an optical intensity of one or more user interface objects. Pet. 42–44 (citing Ex. 1005 ¶¶ 60, 80–82, 85, Fig. 6; Ex. 1003 ¶¶ 94–96). Petitioner contends that Chaudhri teaches that the optical intensity may be the visual differentiation between the user interface object and the background, based on transparency. *Id.* at 43–44 (citing Ex. 1005 ¶ 85). Petitioner contends that as the predefined gesture progresses, the optical intensity of the user interface objects would correspondingly vary in magnitude. *Id.* at 44 (citing Ex. 1005 ¶¶ 87–88, Figs. 8A–8C; Ex. 1003 ¶ 97). Petitioner contends that a person of ordinary skill in the art, when using a gesture to slide in a menu on the display as taught by Ahn, would have varied the transparency of the menu by increasing the blurring of the background object as taught by Chaudhri for the benefits of visually indicating the user’s progress in completing the gesture and differentiating between the menu and the background as taught by Chaudhri. *Id.* at 45 (citing Ex. 1005 ¶ 85; Ex. 1003 ¶ 98).

Patent Owner contends that Ahn does not teach the disputed limitation because the amount of the background that the translucent menu covers in Ahn is not a magnitude of the blurring. Prelim. Resp. 32–33. Patent Owner argues that the combination of Ahn and Chaudhri simply teaches increasing

an area that a translucent menu is displayed on the screen and does not alter the magnitude of the translucency. *Id.* at 33 (citing Ex. 2001 ¶ 72). We disagree. On this record, we are persuaded by Dr. Terveen’s testimony that as the amount of background covered by the menu increases, the amount, or “magnitude” of background that is blurred also increases, which, on this record, sufficiently shows “a magnitude of the blurring of the at least portion of the graphical user interface progressively increases” as claimed. Ex. 1003 ¶ 92.

Patent Owner contends that the menu of Ahn is not displayed during the sliding gesture, but is displayed after the gesture is completed. Prelim. Resp. 33–37. We disagree. We agree with Petitioner that Ahn’s description of Figures 18a and 18b teaches that when a user drags a graphic shadow, the menu list is displayed along with the dragged graphic. *See* Pet. 37 (citing Ex. 1004 ¶¶ 118–119, Figs. 18a and 18b; Ex. 1003 ¶ 86). On this record, we are sufficiently persuaded that Ahn teaches a menu “sliding in” as claimed.

Patent Owner contends that Petitioner’s reliance on Figures 18a and 18b, which display menu 1500 shown in Figure 15b, is irrelevant to the operation of menu 1300 shown in Figures 13a and 13b. Prelim. Resp. 37. According to Patent Owner, Petitioner relies on two disparate embodiments of Ahn without providing a sufficient rationale to combine the teachings of the different embodiments. *Id.* at 37–38.

We disagree on this preliminary record that the cited Figures are in fact different embodiments. In its “Brief Description of the Drawings” and in the detailed description, Ahn describes that “FIGS. 13 to 15 illustrate an example of a screen for displaying a menu list according to a touch and drag operation of a specific direction.” Ex 1004 ¶¶ 22, 101. Figures 13a and 13b and Figures 15a and 15b are nearly identical, except that in Figures 13a and

13b, the gesture begins on the right side and drags left, and in Figures 15a and 15b the gesture begins on the left side and drags right. Both sets of Figures show displaying a menu list according to a touch and drag operation of a specific direction. *Id.* To the extent that the description of Figures 18a and 18b in paragraph 118 includes displaying the menu list 1500 shown in Figure 15b, but does not mention displaying the menu list 1300 shown in Figure 13b, based on a plain reading of Ahn we determine that a person of ordinary skill in the art, reading Ahn's description of displaying a graphic shadow at the left edge of the display and displaying menu list 1500 as a user drags the graphic shadow, would immediately envisage the opposing action of displaying the graphic shadow at the right edge and displaying menu list 1300 as the user drags the graphic shadow.

Patent Owner contends that Hinckley's disclosure of a bezel gesture in which a finger of a user's hand touches the bezel at the top of the screen and moves in a down direction in order to allow a bezel menu to be dropped down (Ex. 1006 ¶ 73, Fig. 6) does not show a progressive increase. Prelim. Resp. 38. Patent Owner also contends that Hinckley's disclosure of a user interface object that follows a user's finger (Ex. 1006 ¶ 80) does not disclose a menu following a user's finger. *Id.* at 39.

We disagree with Patent Owner. The obviousness inquiry does not ask "whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole." *In re Etter*, 756 F.2d 852 (Fed. Cir. 1985) (en banc); *see also In re Keller*, 642 F.2d 413 (CCPA 1981) (stating "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference"). On this record we are sufficiently persuaded that (a) Ahn's disclosure of a user dragging a graphic

shadow on a screen and displaying the menu list along with the dragged graphic shadow, (b) Hinckley's disclosure of moving a finger in a down direction starting from a top edge of a screen to drop down a bezel menu, and (c) Hinckley's disclosure of a user interface object following a user's finger, sufficiently show that a user dragging a finger inwards from an edge of a display screen to "slide in" a menu onto the display screen was within the level of ordinary skill in the art. As discussed above, as the amount of background covered by the menu increases as the menu slides in, the amount, or "magnitude" of background that is blurred also increases, which, on this record, sufficiently shows "a magnitude of the blurring of the at least portion of the graphical user interface progressively increases" as claimed. We are sufficiently persuaded that the combination of Ahn and Hinckley teaches this limitation.

We are also persuaded that the combination of Ahn and Chaudhri teaches this limitation. Patent Owner contends that Chaudhri discloses transitioning an optical intensity of one or more user interface objects associated with the second user interface state. Prelim. Resp. 40–41 (citing Ex. 1005 ¶¶ 81–82, Fig. 6). Patent Owner contends that the first interface state of Ahn is shown in Figure 3a, which includes a clock widget. Patent Owner contends that in the second interface state of Ahn shown in Figure 4b, the clock widget is blurred. *Id.* at 42. According to Patent Owner, blurring the clock widget teaches transitioning the optical intensity of a user interface object associated with the first user interface state, not the second user interface state. *Id.* at 42–43.

We disagree. The second user interface state of Figure 4b of Ahn shows a translucent menu displayed over the clock widget. Thus, the clock widget, when displayed as underneath the translucent menu, is a user

interface object associated with the second user interface state. Further, Chaudhri discloses that “the optical intensity may be the visual differentiation between the user-interface object and the background.” Ex. 1005 ¶ 85. To the extent that Patent Owner contends that the menu, not the clock widget, is the user interface object of Ahn associated with the second user interface state, we are persuaded that increasing blurring of the clock widget when the clock widget is displayed as underneath the translucent menu increases “the visual differentiation between the user-interface object” (the menu), “and the background” (the clock widget), as taught by Chaudhri in the Ahn and Chaudhri combination Petitioner proposes.

Patent Owner contends that Petitioner’s modification does not provide visual feedback regarding the progress of a transition between user interface states as a result of detecting a user’s input of a predefined gesture. Prelim. Resp. 43. According to Patent Owner, Chaudhri provides feedback of such progress by moving an image of an arrow to follow a user’s touch from a left side of a screen to a right side of a screen as shown in Figures 5A, 5B, and 5C. *Id.* at 43–45. However, Petitioner does not rely on Chaudhri’s disclosure of providing feedback by moving an arrow across a screen as shown in Figures 5A, 5B, and 5C of Chaudhri. Rather, Petitioner relies on Chaudhri’s disclosure of providing feedback by transitioning an optical intensity of a user interface object as shown and described in Chaudhri’s Figure 6 and paragraphs 80 through 89. Pet. 42–45. Patent Owner’s contention does not address Petitioner’s combination.

Patent Owner contends that progressively blurring the background user interface object such as a clock widget would not help differentiate between the background object and the foreground object such as a menu. Prelim. Resp. 45. According to Patent Owner, the ability to differentiate

between the menu and the clock widget is solely a function of the amount of total opacity, not the progressive change in opacity. *Id.* Patent Owner’s contention is inconsistent with the explicit disclosure of Chaudhri, which describes that as a user transitions from a first state to a second state, a first user interface object may decrease in intensity, or fade out, and a second user interface object may increase in intensity, or fade in, and that this change in intensity provides sensory feedback to the user of the progress in transitioning between the user interface states. Ex. 1005 ¶¶ 79, 81–82, 85, 87, Figs. 8A, 8B, 8C.

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches limitation [1.d.ii] of claim 1.

Limitation [1.e.i]

Limitation [1.e.i] recites “when the first menu is displayed including the one or more first menu items: detecting, utilizing the touch interface, a first duration of contact on at least one of the one or more first menu items.” Petitioner contends that Hinckley teaches this limitation in describing a bezel menu that includes multiple icons, each of which is associated with a different function. Pet. 48 (citing Ex. 1006 ¶ 74, Fig. 6; Ex. 1003 ¶ 104). Petitioner contends that Hinckley teaches that a user may tap an icon to access the associated function. *Id.* at 49 (citing Ex. 1006 ¶ 77; Ex. 1003 ¶ 105). Petitioner contends that the bezel menu may include an icon that includes a radial menu icon. *Id.* at 49–51 (citing Ex. 1006 ¶¶ 105–107, Fig. 17; Ex. 1003 ¶¶ 106–107). Petitioner contends that tapping the radial menu icon triggers a default action, and tapping and holding the radial menu icon accesses a radial menu. *Id.* Petitioner contends that adding Hinckley’s bezel menu icon to Ahn’s menu yields Ahn’s menu including an icon in which

tapping the icon triggers one action, while tapping and holding the icon triggers a different action, such as opening a radial menu. *Id.* at 52–53 (citing Ex. 1006 ¶¶ 105–107; Ex. 1003 ¶ 110).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.e.i] of claim 1.

Limitation [1.e.ii]

Limitation [1.e.ii] recites “in response to the first duration of contact on the at least one of the one or more first menu items being detected to not surpass a threshold, performing a first operation.” Petitioner contends that a person of ordinary skill in the art would have implemented Ahn’s menus to include the multiple selectable icons of Hinckley, and that at least one of the selectable icons would be associated with a radial menu icon as taught by Hinckley. Pet. 53 (citing Ex. 1006 ¶¶ 105–107; Ex. 1003 ¶ 111). Petitioner contends that Hinckley discloses tapping the radial menu icon would have triggered one action different than an action triggered from tapping and holding the icon. Pet. 53–54 (citing Ex. 1003 ¶¶ 111–113).

Patent Owner contends that bezel menu icon 1712, and radial menu icon 1714, which is contained within bezel menu icon 1712 as shown in Figure 17 of Hinckley, are two different icons. Prelim. Resp. 25–27. Patent Owner contends that the Petition does not allege that tapping on the radial menu icon 1714 versus tapping and holding on the radial menu icon 1714 triggers different functions. *Id.* at 25 n.3.

We disagree. The Petition quotes Hinckley as disclosing that “[t]he radial menus 1715 can be accessed through a tap-and-hold of the pen or finger on or near the radial menu icon 1714” and “selecting ‘the radial menu icon [1714] triggers a default action which may . . . be different than the

action associated with tapping on the bezel menu slot [1712].” Pet. 50–51 (quoting Ex. 1006 ¶ 107); *see id.* at 17–18 (citing Ex. 1006 ¶ 107, Fig.17). On this record we are sufficiently persuaded that Hinckley discloses that icon 1714 shown in Figure 17 allows a user to access one action when a user taps icon 1714 and another action when a user taps-and-holds icon 1714 as discussed in paragraph 107 of Hinckley.

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.e.i] of claim 1.

Limitation [1.e.iii]

Limitation [1.e.iii] recites “in response to the first duration of contact on the at least one of the one or more first menu items being detected to surpass the threshold, performing a second operation.” Petitioner contends that Hinckley discloses tapping and holding the radial menu icon results in an action different than an action that results from tapping the radial menu icon, and that a person of ordinary skill would have applied this teaching to Ahn’s menu icon. Pet. 54–55 (citing Ex. 1003 ¶¶ 114–115). Patent Owner’s arguments with respect to this limitation have been addressed above with regard to limitation [1.e.ii].

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.e.iii] of claim 1.

Limitation [1.f]

Limitation [1.f] recites “when the graphical user interface is displayed, detecting, utilizing the touch interface, a second gesture that begins in connection with a second edge of the display and moves inward.” Petitioner contends that Ahn teaches this limitation in disclosing touching

the screen on the right and dragging the touch left to display a menu on the right side of the screen as shown in Figures 13a and 13b, and touching the screen on the left and dragging the touch right to display a menu on the left side of the screen as shown in Figures 15a and 15b. Pet. 55–58 (citing Ex. 1004 ¶¶ 102–103, Figs. 13a, 13b, 15a, 15b; Ex. 1003 ¶¶ 116–120).

Petitioner also contends that Hinckley teaches this limitation in disclosing initiating a gesture on an adjacent bezel and moving inward. Pet. 57–58 (citing Ex. 1003 ¶¶ 119–120).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.f] of claim 1.

Limitation [1.g]

Limitation [1.g] recites “in response to the detection of the second gesture that begins in connection with the second edge and moves inward, displaying, utilizing the display, a second menu including one or more second menu items.” Petitioner contends that Ahn teaches this limitation as shown in Figures 13a, 13b, 15a, and 15b and as discussed in Petitioner’s analysis of limitation [1.f]. Pet. 58–60 (citing Ex. 1004 ¶¶ 102–104, Figs. 13a, 13b, 15a, 15b; Ex. 1003 ¶¶ 121–122).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that Ahn teaches limitation [1.g] of claim 1.

Limitation [1.h.i]

Limitation [1.h.i] recites “when the second menu is displayed including the one or more second menu items: detecting, utilizing the touch interface, a selection contact on at least one of the one or more second menu items.” Petitioner contends that the combination of Ahn and Hinckley

teaches this limitation. Pet. 60–64. Petitioner contends that Ahn teaches selecting an icon displayed in a list of menu items. *Id.* at 60–62 (citing Ex. 1003 ¶¶ 123–125). Petitioner contends that Hinckley teaches that the displayed menu includes icons, and that when one of the icons is touched by the user, the selected icon provides access to an associated function. Pet. 63–64 (citing Ex. 1006 ¶ 77; Ex. 1003 ¶ 127).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.h.i] of claim 1.

Limitation [1.h.ii]

Limitation [1.h.ii] recites “in response to the selection contact being detected on the at least one of the one or more second menu items, performing a third operation.” Petitioner contends that the combination of Ahn and Hinckley teaches this limitation. Pet. 64–65. Petitioner contends that a person of ordinary skill in the art would have understood that Ahn’s menu would include multiple selectable icons such as those described by Hinckley. *Id.* at 64 (citing Ex. 1003 ¶ 129). Petitioner contends that Hinckley teaches detecting a tap on a displayed icon and performing an associated function. Pet. 64–65 (citing Ex. 1006 ¶¶ 51, 66, 72–77; Ex. 1003 ¶¶ 129–130).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn and Hinckley teaches limitation [1.h.ii] of claim 1.

Limitation [1.i]

Limitation [1.i] recites “wherein the electronic device is configured such that the graphical user interface is displayed in at least one virtual display layer, and at least one of the first menu or the second menu is

displayed in at least one other virtual display layer.” Petitioner contends that Ahn teaches this limitation in disclosing that the menu is displayed in a transparent layer above the standby screen. Pet. 65–67 (citing Ex. 1003 ¶¶ 131–137).

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that Ahn teaches limitation [1.i] of claim 1.

Conclusion for claim 1

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that the combination of Ahn, Chaudhri, and Hinckley renders obvious claim 1.

*7. Independent claim 101*

Petitioner challenges claim 101 as unpatentable over the combination of Ahn, Chaudhri, and Hinckley. Pet. 26–41. With respect to this claim, Patent Owner presents arguments only with respect to limitation [101.g]. Prelim. Resp. 28–32. Pages ix to xi of the Petition show claim 101 along with Petitioner’s notation for each limitation of the claim, which we use below in addressing each limitation.

Limitation [101.a]

Limitation [101.a] recites “An electronic device, comprising: a display; a touch interface; one or more processors; memory; and one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.a]. Pet. 76. Based on the evidence and arguments currently of record, for

purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.b]

Limitation [101.b] recites “the one or more programs including instructions for: displaying, utilizing the display, a graphical user interface.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.b]. Pet. 76. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.c]

Limitation [101.c] recites “when the graphical user interface is displayed, detecting, utilizing the touch interface, a first gesture that begins in connection with a first edge of the display and moves inward.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.c]. Pet. 77. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.d]

Limitation [101.d] recites “in response to the detection of the first gesture that begins in connection with the first edge and moves inward, displaying, utilizing the display, a first menu as sliding in and including one or more first menu items including a particular application icon.” Petitioner contends that Ahn describes icons associated with menus and sub-menus as shown in Figures 4b, 5a–5d, 6b, 7b, 7c, 8c, 9a–9c, 10, 13–15, and 17. Pet.

77 (citing Ex. 1003 ¶¶ 154–155). Petitioner contends that a person of ordinary skill in the art would have understood that some of the functions that Ahn calls menus or sub-menus would have been implemented as applications, such as the contacts and messages menus shown in Figure 8c. *Id.* at 78 (citing Ex. 1003 ¶¶ 156–157). Petitioner contends that Chaudhri and Hinckley also teach installing applications on a device. *Id.* at 78–79 (citing Ex. 1003 ¶ 157). Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.e.i]

Limitation [101.e.i] recites “when the first menu is displayed including the one or more first menu items: detecting, utilizing the touch interface, a first duration of contact on at least one of the one or more first menu items.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.e.i]. Pet. 79. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.e.ii]

Limitation [101.e.ii] recites “in response to the first duration of contact on the at least one of the one or more first menu items being detected to not surpass a threshold, performing a first operation.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.e.ii]. Pet. 79. Based on the evidence and arguments currently of record, for purposes of

institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.e.iii]

Limitation [101.e.iii] recites “in response to the first duration of contact on the at least one of the one or more first menu items being detected to surpass the threshold, performing a second operation.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.e.iii]. Pet. 79. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.e.iv]

Limitation [101.e.iv] recites “where the second operation is performed in response to the first duration of contact on the particular application icon being detected to surpass the threshold, and the first duration of contact being detected to include a slide gesture component after the first duration of contact on the particular application icon is detected to surpass the threshold.” Petitioner contends that a person of ordinary skill in the art would have modified Ahn’s menus to include multiple selectable icons as taught by Hinckley, and to associate at least one selectable icon with Hinckley’s radial menu icon, such that tapping the radial menu icon would perform one action and tapping and holding the radial menu icon would perform another action, such as displaying the radial menu. Pet. 79–80 (citing Ex. 1003 ¶ 161). Petitioner contends that Hinckley teaches that after the radial menu is displayed, the user can slide their finger in a certain direction to access a particular function or menu command as shown in Figure 17. Pet. 80–81 (citing Ex. 1003 ¶¶ 162–163). Based on the evidence

and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.f]

Limitation [101.f] recites “when the graphical user interface is displayed, detecting, utilizing the touch interface, a second gesture that begins in connection with a second edge of the display and moves inward.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.f]. Pet. 81. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.g]

Limitation [101.g] recites “in response to the detection of the second gesture that begins in connection with the second edge and moves inward, displaying, utilizing the display, a second menu including one or more second menu items.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.g]. Pet. 82.

Patent Owner notes limitation [1.d] recites “a first menu . . . including one or more first menu items including a particular application icon” and limitation [1.g] recites “a second menu including one or more second menu items.” Prelim. Resp. 28. Patent Owner further notes that Petitioner maps the claimed first menu and the particular application icon to menu list 820 and icon 830 shown in Figure 8c of Ahn, and that Petitioner maps the claimed second menu to menu list 1500 shown in Figure 15b of Ahn. *Id.* at

29–30. Patent Owner contends that menu list 820 and menu list 1500 are the same menu and cannot teach both the first menu and the second menu. *Id.* at 30–32.

Although Patent Owner is correct in noting that the Petition identifies menu list 1500 shown in Figure 15b of Ahn as describing the claimed second menu, the Petition further identifies Paragraphs 102 through 104 of Ahn as describing the claimed second menu. Pet. 59–60. These paragraphs discuss Figures 13b and 14b in addition to Figure 15b. Paragraph 102 in particular discusses only Figures 13a and 13b. On this record, we are sufficiently persuaded that, as Petitioner contends, the menu list shown in Figures 8c and 15b of Ahn teaches the claimed first menu recited in limitation [1.d] and the menu list shown in Figure 13b, as well as the menu list shown in Figure 14b, each teach the claimed second menu recited in limitation [1.g].

Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.h.i]

Limitation [101.h.i] recites “when the second menu is displayed including the one or more second menu items: detecting, utilizing the touch interface, a selection contact on at least one of the one or more second menu items.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.h.i]. Pet. 82. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.h.ii]

Limitation [101.h.ii] recites “in response to the selection contact being detected on the at least one of the one or more second menu items, performing a third operation.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.h.ii]. Pet. 82. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Limitation [101.i]

Limitation [101.i] recites “wherein the electronic device is configured such that the graphical user interface is displayed in at least one virtual display layer, and at least one of the first menu or the second menu is displayed in at least one other virtual display layer.” Petitioner contends that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation for the reasons given in Petitioner’s analysis of limitation [1.i]. Pet. 82. Based on the evidence and arguments currently of record, for purposes of institution, we are sufficiently persuaded that the combination of Ahn, Chaudhri, and Hinckley teaches this limitation of claim 101.

Conclusion for claim 101

On this record, we are sufficiently persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing in showing that the combination of Ahn, Chaudhri, and Hinckley renders claim 101 obvious.

8. *Dependent claims 2, 3, 7, 9, and 10*

Petitioner challenges dependent claims 2, 3, 7, 9, and 10 as unpatentable. *See* Pet. 67–76. Patent Owner does not separately argue against Petitioner’s showing with respect to the dependent claims. *See*

Prelim. Resp. At this stage, because Petitioner demonstrates a reasonable likelihood of prevailing with respect to its challenge of the independent claims, we do not see the need to further address the dependent claims. Further analysis is best left for trial after full development of the record.

#### X. CONCLUSION

Based on the arguments presented in the Petition, we conclude that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the '413 patent challenged in the Petition. Accordingly, we institute a trial on all claims and the ground asserted in the Petition. 37 CFR § 42.108(a). The Board has not made a final determination under 35 U.S.C. § 318(a) with respect to the patentability of the challenged claims.

XI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–3, 7, 9, 10, and 101 of the '413 patent is instituted with respect to the ground set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '413 patent shall commence on the entry date of this Decision, and notice is hereby given of the institution of a trial.

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