Paper 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner

v.

SMITH INTERFACE TECHNOLOGIES, LLC

Patent Owner

IPR2024-01119
IPR2024-01116
IPR2024-01115
Patent 10,656,754

PATENT OWNER RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Shorthand	Description
2001	Declaration	**[withdrawn]** Declaration of Marc Davis, Ph.D.
2002	CV	**[withdrawn]** CV of Marc Davis, Ph.D.
2003	JCC	Excerpt of Joint Claim Construction Chart Exhibit A.
2004	Stay Order	October 2, 2024, Order Granting in Part Apple's Motion to Stay in *Smith Interface Technologies, LLC v. Apple Inc.*, 3-23-cv-01187, S.D. Cal (Dkt. No. 127).
2005	Ahn EP	European Publication App. No. EP08101835.0 to Hye Sang Ahn et al. ("Ahn EP")
2006	Reexam Order	November 14, 2024, Order Granting Request For Ex Parte Reexamination in Control No. 90/019,646
2007	EPR Request	September 5, 2024, REQUEST FOR EX PARTE REEXAMINATION OF U.S. PATENT NO. 10,656,754 UNDER 35 U.S.C. § 302 AND 37 C.F.R. § 1.510
2008	EPR Office Action	March 7, 2025 Office Action in Ex Parte Reexamination Control No. 90/019,646
2009	Terveen	Transcript of the Deposition of Loren Terveen, Ph.D.
2010	Sakar I	Manojit Sarkar and Marc H. Brown. *Graphical fisheye views of graphs*. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '92). Association for Computing Machinery, New York, NY, USA, 83–91 (1992).
2011	Sakar II	Manojit Sarkar, Scott S. Snibbe, Oren J. Tversky, and Steven P. Reiss. *Stretching the rubber sheet: a metaphor for viewing large layouts on small screens*. In Proceedings of the 6th annual ACM symposium on User interface software and technology (UIST '93). Association for Computing Machinery, New York, NY, USA, 81–91. (1993)

Exhibit	Shorthand	Description
2012	Rapp	U.S. Patent Publication No. 2011/0074697 to Peter William Rapp *et. al*.
2013	Leggett	David Leggett, *Tip: Use The Grid in Photoshop*, Photoshop Tutorials (Archived January 10, 2011 and available online at https://web.archive.org/web/20110110073302/http://www.tutorial9.net/tutorials/photoshop-tutorials/tip-use-the-grid-in-photoshop/)
2014	Jaeger	U.S. Patent Publication No. 2005/0068290 to Denny Jaeger.
2015	918 Provisional	Provisional Patent Application 61/581,918
2016	Osnaps	Kate Morrical, *Drafting Settings Part 3 - Object Snaps*, LT Unlimited (Archived May 08, 2010 and available online at https://web.archive.org/web/20100508130049/http://ltunlimited.typepad.com/my_weblog/2009/01/drafting-settings-part-3-object-snaps.html)
2017		U.S. Patent 7,657,849 to Imran Chaudhri *et al*.
2018	Rosenberg	Declaration of Craig Rosenberg, Ph.D.
2019	RosenbergCV	CV of Craig Rosenberg, Ph.D.

I. INTRODUCTION

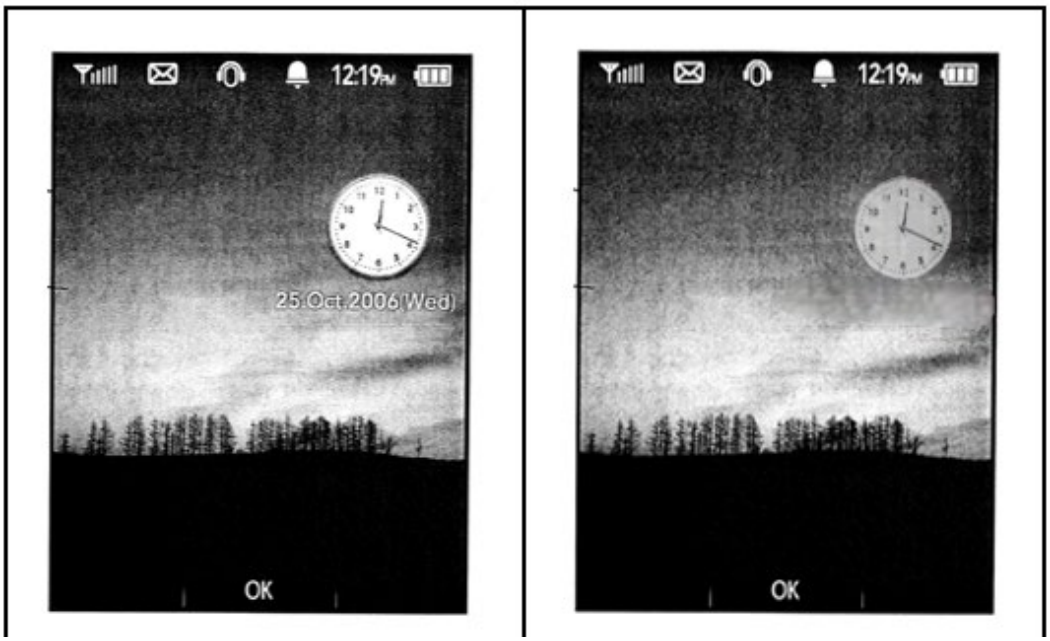
The Petition fails to establish unpatentability of any of the challenged claims based on any of the asserted grounds.

Petitioner provides two theories for allegedly disclosing the claimed blurring as recited in Limitations [1h], [2d], and [225d], each fail to meet what is claimed.

First, Petitioner contends Ahn discloses its right hand menu slides out progressively with the user's finger. Ahn unequivocally does not disclose this specific operation. Nor would any variation in Ahn arrive at Petitioner's proposed operation as such an interpretation requires imparting several internal inconsistencies into Ahn's description and figures that would not otherwise exist.

Second, Petitioner relies Chaudhri-842's transition *decreasing* the translucency of selectable *foreground* buttons during an unlock gesture to indicate to the user that the completion of the gesture will enable the *appearing* buttons to become selectable to answer or decline a call. Petitioner contends that this would have led a POSITA to *increase* the translucency of Ahn's *background* during Ahn's "touch and drag operation" to (a) indicate progress toward display of the foreground menu (which is not visible during that operation), and (b) to differentiate between the background and Ahn's foreground menu. But neither "motivation" makes sense in view of Ahn's non-progressive menu.

Unlike the appearing of Chaudhri's selectable icons, there is no frame of reference for the *background* "blurring" or indication as to what operation this alleged "blurring" would initiate. As illustrated below, the proposed progressive 'blurring' of the clock provides no indication as to how far the user is along in the gesture nor what would occur when this undefined gesture is complete.



Further, as Ahn's menu is not displayed during this gesture, there is nothing in Petitioner's modification to help distinguish between that background and the menu. Any understanding that the 'blurring' of the clock would occur in a transition state along with the appearance of Ahn's menu is inconsistent with Ahn' disclosure—which does not begin displaying the menu until the gesture is complete.

Finally, Petitioner's analysis of the dependent claims only serves to confirm Ahn's disclosure and create inconsistencies in Petitioner's theories.

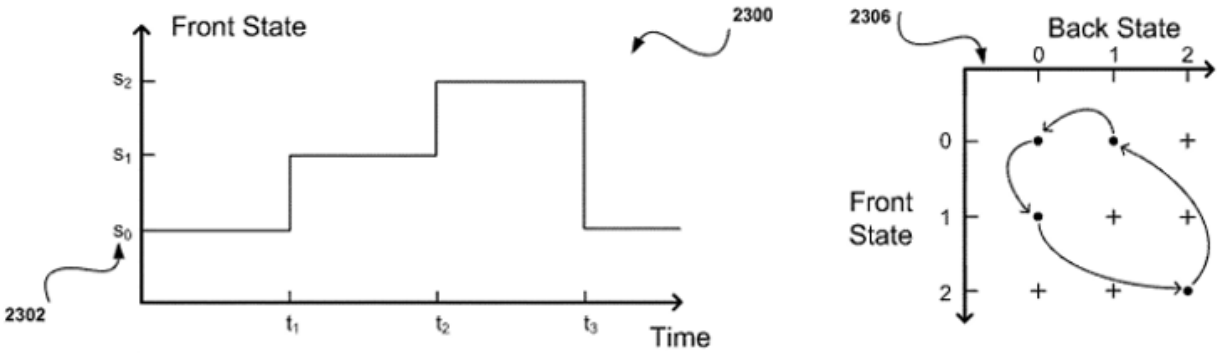
II. OVERVIEW OF THE '754 PATENT

As of August 2011, touch screen mobile devices were becoming increasingly capable of more complex tasks that required more control than possible with basic input methods. EX2018, ¶34[1]. Limited screen real estate meant that input and output techniques used for more complex tasks on desktop computers could not be used. *Id.* The '754 Patent addresses this shortcoming by enabling users to operate these new mobile devices and their feature-rich applications through implementation of multi-part gestures where users can take successive actions and receive feedback at each stage. *Id.*

The '754 Patent describes these multi-part, multi-action gestures as "pattern-based gestures" that "may be recognized in the form of an ordered sequence" by, for example, "using a decision tree." EX1001, 73:45-54; EX2015, ¶[00581]. In the context of the '754 Patent, a "phase space" is a conceptual space that captures the evolving states of user interaction over one or more dimensions. EX2018, ¶35. The patent defines a pattern-based gesture as "a path through a phase space of one or more dimensions" (EX1001, 71:48–51), EX2015, ¶[00564], where each dimension can represent a property of the gesture—such as pressure level, contact location,

[1] Patent Owner hereby withdraws the expert declaration and CV submitted with Patent Owner's preliminary response (EX2001, EX2002).

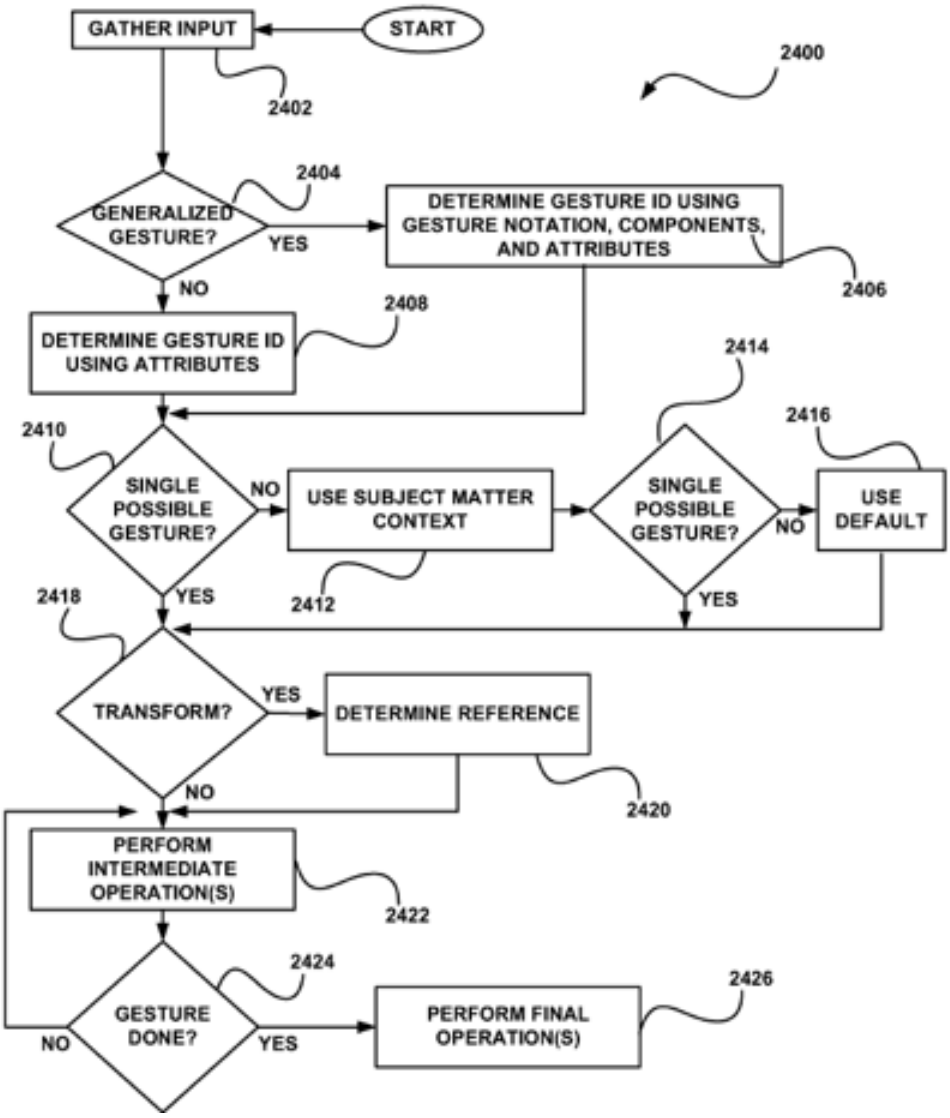
contact duration, or interaction surface (e.g., front or back of the device). EX2018, ¶35; EX1001, 71:62-66, 73:4-7. Transitions between states may depend on changes in the contact point or the time spent on each leg of the gesture. EX1001, 72:1–28. In effect, gestures are not simply static motions but are modeled dynamically based on their behavioral trajectory through this space. This phase space abstraction allows for the recognition of complex, multi-stage gestures that may follow similar initial paths but diverge into distinct outcomes. Exemplary "pattern-based gesture 2302" is "described by a phase space path which represents the time evolution of the touch state associated with a contact point" on the touch screen. EX1001, 71:62-66; EX2015, ¶[00566].



EX1001, FIG. 23; EX2015, FIG. 28. Each state, and transitions between states, may be defined by factors including "contact point changes" and "the time spent on each leg of the path through phase space." EX1001, 72:1–28; EX2015, ¶¶[00567]-[00570]. Consistent with the "decision tree" aspect of these pattern-based gestures,

multiple patterns may share the same starting (and intermediate) points. EX1001, 73:45-54, 75:48-76:26; EX2015, ¶[00581]; EX2018, ¶38.

To detect these pattern-based gestures, the ’918 Provisional, which the ’754 Patent incorporates by reference (EX1001, 1:19-22), discloses “gesture differentiation,” which is distinguished from simply detecting a “basic user interaction (*i.e.*, button press, basic application interaction, etc.),” techniques. EX2015, ¶¶[00498], [00502]. The process begins by “determine[ing] whether there is any meaningful user input,” including applying a “threshold above which user interaction may rise before it may be deemed meaningful.” *Id.*, ¶¶[00501]-[00502]. Detecting the gesture may involve “gesture subject matter context,” including “objects displayed at or near the location of the gesture.” *Id.*, ¶[00512]. For example, the starting point may be the beginning of a touch contact at a particular location of a specific object on the touch screen. *Id.*; EX2018, ¶38.



EX2015, FIG. 24.

One example of a context-specific gesture starting at a particular location on the touch screen is a "slide gesture which begins near an edge of a display and then moves inward [that] cause[s] a menu or window to slide in from that edge of the display." EX1001, 66:66-67:2. Moreover, "there may be different menus or windows associated with each edge of a display." EX1001, 67:3-5. Such a menu may include menu items that function as UI control widgets (e.g., buttons, drop

down lists, or any other non-textual UI widget). EX2015, ¶¶[0164], [0194]; EX2018, ¶39. User selection of a UI control widget may include establishing "one or more primary conditions to establish that the user intends for that particular multi-state widget to be selected, and a secondary condition, to establish the state of that widget." EX2015, ¶[0178]. "Once the selection establishment conditions have been satisfied, the state of the UI control widget may be set." *Id.*, ¶[0182]. For example, "a user may make contact with … an interaction surface, with a contact point near a drop down menu [UI widget] … [and] may increase contact pressure until the drop down menu is highlighted." *Id.*, ¶[0183]. Then, "[a]fter maintaining that contact pressure level for a few seconds, the list of menu items becomes visible, after which the user may select an item by varying the contact pressure." *Id.*

Again, as indicated by FIG. 24, multiple complete patterns may share the same starting (and intermediate) points. EX2018, ¶40. Consistent with the multi-part nature, the device may perform "intermediate operations associated with the identified gesture." EX2015, ¶[00521]. "[E]ach execution of intermediate gesture operations may trigger a display update (i.e. rendering, etc.)." *Id.*, ¶[00524]. "The intermediate operations are continuously performed unless it is determined that the gesture has ended." EX2015, [0525]. One purpose of these intermediate gestures is so "a user may receive feedback on their gesture before terminating the interaction."

Id., ¶[00522]. "[C]ues to provide feedback to the user ... may include 3D or pseudo-3D effects." EX2015, [0538]-[0539].

One example of a pseudo-3D effect used to provide feedback to the user is "a 3D layered user interface implemented in a device having a single layer displays [*sic*] through the use of virtual display layers." EX2015, [0793]. Specifically, "a 3D layered user interface may have a virtual foreground display layer and a virtual background display layer." *Id.* "[V]irtual display layers may be given the appearance of depth through the use of 3D depth cues ... [such as] a blur operation, such that layers located at successively greater depths may appear blurrier than those closer to the user." EX2015, [0795]. Additionally, "[a] degree of translucency [e.g., blur] may be a function of a user input." EX2015, [0848]; EX2018, ¶41.

A "gesture may be ended by ending one or more user inputs" or "by performing a different gesture" at which time "the final operations associated with the identified gesture are performed." *Id.*, ¶¶[00526]-[00528]. "For example, in one embodiment, a gesture which triggers the display of a pop-up menu and allows a user to cycle through menu items may have as a final operation the selection of the current menu item and removal of the pop-up menu." *Id.*, ¶[00529].

A. Independent Claims 1 and 101

Independent claim 1 of the ’754 Patent is directed to an “electronic device” having programs that are executed by one or more processors to perform various functions. EX1001, 95:9-34.

Specifically, Claim 1 recites **[1a]** [a]n electronic device, comprising: a display; 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, the one or more programs including instructions for:

> **[1b]** displaying a plurality of user interface elements on the display including a first user interface element and a second user interface element;
>
> **[1c]** detecting a first contact moving across the display; and,
>
> **[1d]** while the first contact is detected moving across the display: moving the first user interface element in a first direction on the display at a first speed;
>
> **[1e]** moving the second user interface element on the display at a second speed greater than the first speed;
>
> **[1f]** displaying an object and at least one other object;
>
> **[1g]** detecting at least part of a gesture on the display; and
>
> **[1h]** during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a magnitude of the gesture being detected on the display, at least a portion of the at least one other object.

EX1001, 95:9-34.

Independent claim 2 is directed to an apparatus having one or more processors that are configured to execute instructions to perform functions at the apparatus. EX1001, 95:35-49. Specifically, claim 2 recites **[2a]** [a]n apparatus, comprising: at least one non-transitory memory; a touch screen; and one or more processors in communication with the at least one non-transitory memory, and the touch screen, wherein the one or more processors execute instructions in the at least one non-transitory memory to cause the apparatus to:

> **[2b]** display an object and at least one other object;
>
> **[2c]** detect at least part of a gesture on the touch screen; and
>
> **[2d]** during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a magnitude of the gesture being detected on the touch screen, at least a portion of the at least one other object.

EX1001, 95:35-49.

Independent claim 225 is directed to a "method" performed "at an apparatus" and includes limitations similar to Limitations [2a]-[2d] of claim 2. *Id.*, 119:44-54.

III. LEVEL OF ORDINARY SKILL

Patent Owner does not agree with all aspects of Petitioner's proposed level of ordinary skill but does not believe that resolving that level is necessary to resolve the issues raised in this response.

PO agrees with the Board's rejection of Petitioner's ambiguous phrase that "[a]dditional years of experience could substitute for an advanced-level degree (and

vice versa)" (Pet., 4[2]) is inapplicable where the base degree is a bachelor's degree and was therefore likely an error. D.I., 8.[3]

IV. CLAIM CONSTRUCTION

The claims are construed "in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent." 37 C.F.R. § 42.100; *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). Petitioner "submits that no claim terms need to be construed to resolve issues of controversy in the present Petition." Pet., 4. In the Litigation,[4] however, Apple contends that "adjacent" is indefinite, and that "distance magnitude [of the gesture]" means "length [of the gesture]." EX2003, 9-16/31, 17-31/31. However, the plain and ordinary meaning of these terms is readily understandable.

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[2] All references are to the -01119 Petition unless otherwise noted.

[3] All references are to the -01119 Institution Decision unless otherwise noted.

[4] *Smith Interface Techs., LLC v. Apple Inc.*, 3:23-cv-01187 (S.D. Cal., June 27, 2023) (the "Litigation"). On October 2, 2024, the Court granted in part Petitioner's request to stay the Litigation, staying the Litigation "pending the issuance of the last of the PTAB's institution decisions on Apple's pending IPR petitions," with any "further stay" to be addressed after those decisions. EX2004.

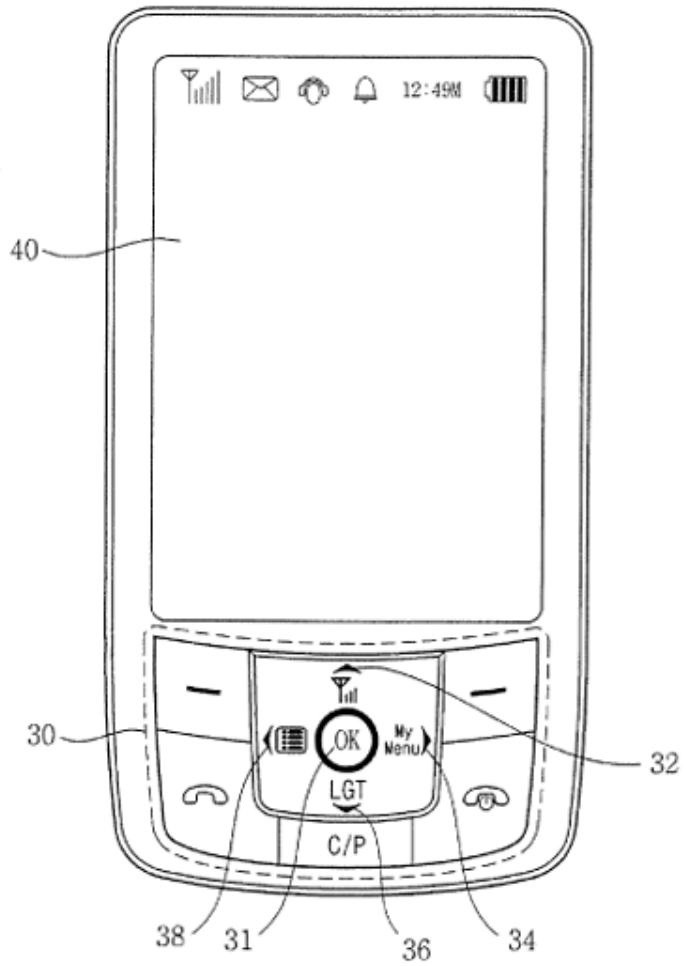
The Board construes "the blurring of an object as displaying that object with less detail." D.I., 9. PO does not necessarily agree with that construction but does not believe further clarification of this term is necessary to resolve the issues herein.

V. OVERVIEW OF THE PRIOR ART

A. Ahn (EX1004)

As depicted in FIG. 2 (inset below), Ahn discloses a mobile communication terminal that includes a display 40 along with a key input device 30 and a touch input device (e.g., element 10 in FIG. 1). EX1004, Abstract, ¶[0027].

FIG. 2



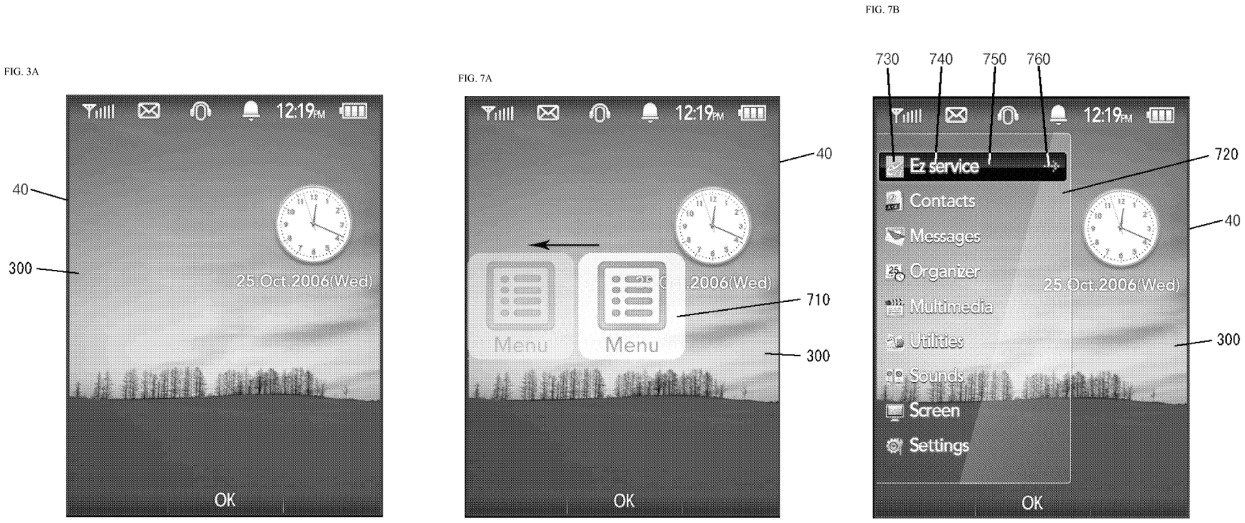
Ahn's proposed operation attempts to solve the problem in which device characteristics are unavailable when a menu list is displayed and proposes displaying menus that only take up a portion of the display so the standby screen can be displayed concurrently. EX2018, ¶50; *see also* EX1004, ¶[0039] ("user can directly enter a menu … while viewing the standby screen 300 in a standby screen state"), FIGs. 3C-3E, 4B, 5A, 6B, 7B (displaying menus while displaying standby screen).

1. Ahn's Menus are Binary Operations

Ahn's menus are displayed after an input is recognized by the device. EX2018, ¶51 (the display of the menu is a binary operation—appearing only when the input is satisfied). In a first embodiment, Ahn describes a method of displaying a menu via a selection of a specific direction on a direction key (e.g., keys 32-38). EX1004, ¶¶[0034]-[0035]. As shown in FIGs. 7A-7C, a menu (e.g., setting menu 720/820) can be accessed "when a leftward direction key is selected." *Id.*, ¶[0062]. "[I]f the user selects the leftward direction key 38 ... ***[t]hereafter***, a basic setting menu list 720 ... is displayed." EX1004, ¶[0063]-[0064]. Referring to FIGs. 3A and 7A-7B (inset below[5]), an input is received corresponding to a left menu (FIG. 3B),

[5] For improved clarity, these figures are from the counterpart European application (EP1962480) that is substantially identical to Ahn and claims priority to the same

an animation effect is displayed after the input (FIG. 7A), and the left menu is depicted after the animation effect (FIG. 7B). EX2018, ¶52.



Ahn refers to the selection of the its direction keys (e.g., 34, 38) as a "click." EX1004, ¶¶[0045]-[047]. These direction keys are single input buttons that can only receive one type of input. EX2018, ¶53. A POSITA would have recognized a selection (*i.e.*, click) of a direction key would initiate display of the menu in a binary manner (e.g., if the direction key is pressed, then the menu is displayed "thereafter," and if the key is *not* pressed, the menu is *not* displayed). *Id.* Accordingly, the opening of Ahn's menu is performed in an "all or nothing" or binary manner rather

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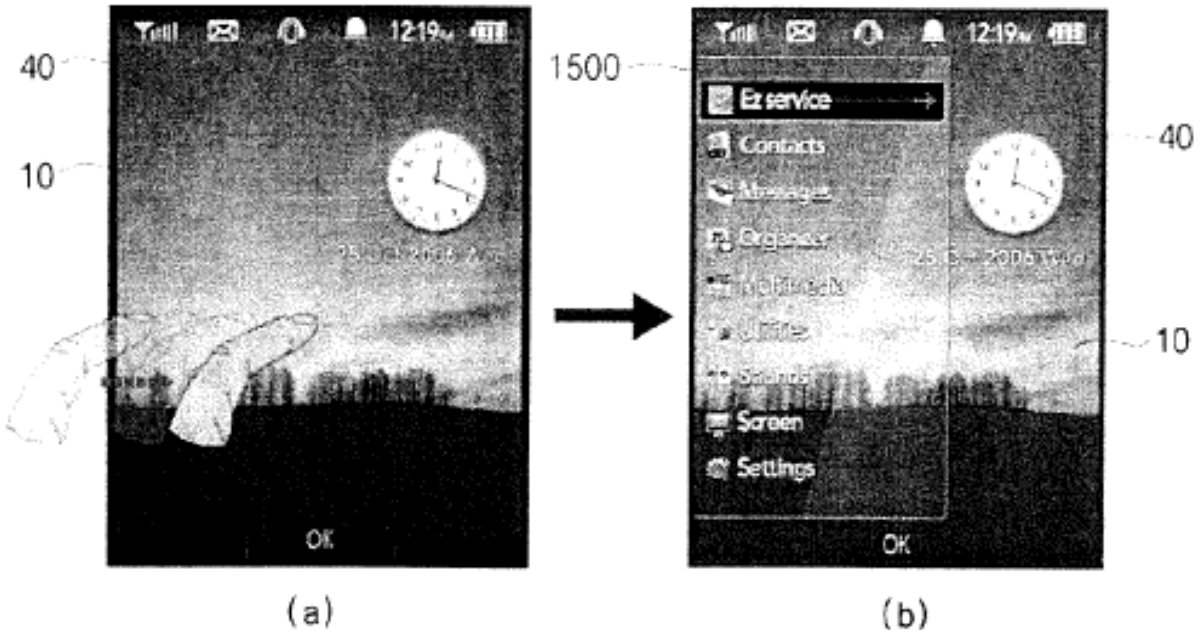
applications as Ahn. *See* EX2005, 78/79 (claiming priority to KR 2007-018175, KR 2007-033308, KR 2007-043087); EX1004, 1 (same).

than progressively and would not be displayed "as a function of an increase in a magnitude" of an input, as claimed. EX2018, ¶53; *supra*, §II.A.

Ahn also describes a method of displaying a menu via "a touch and drag operation of a specific direction." *Id.*, *See* ¶¶[0101]-[0104]. The opening of the menus according to Ahn's touch and drag operation is also performed in a binary manner. EX2018, ¶54. For example, as shown in FIGs. 15A-15B (inset below), "if the user touches screen 10 and drags the touch in a rightward direction, a menu list 1500 matched to a right direction is displayed in the display 40." EX1004, ¶[0103].

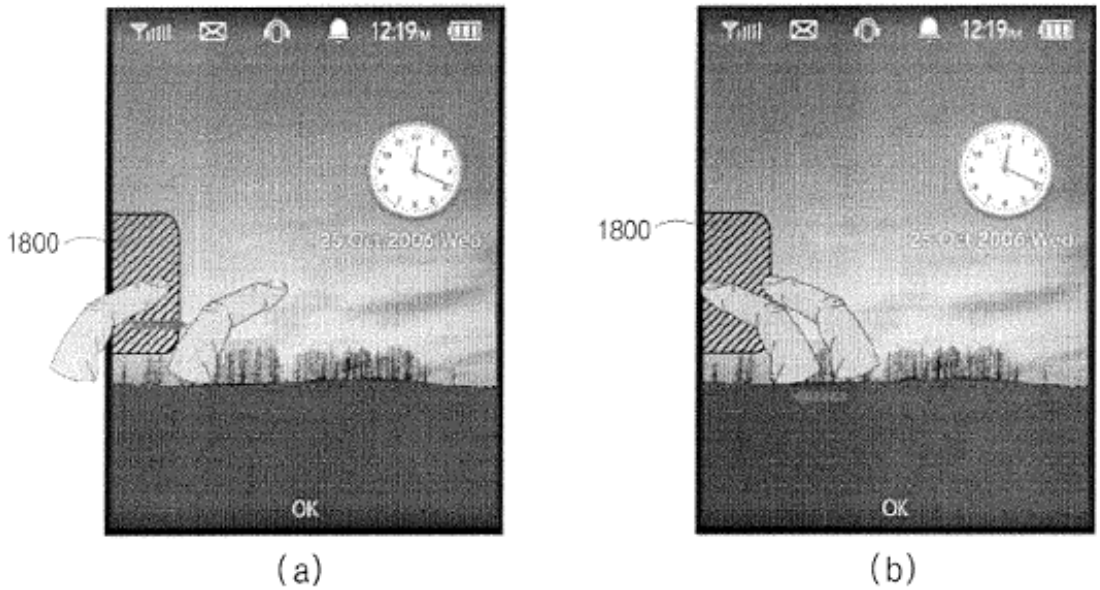


Thus, ***if*** the user drags the touch a sufficient distance, ***then*** the menu is displayed. EX2018, ¶55 (Ahn is describing an if/then function); EX2009, 42:6-16 (Dr. Terveen indicating the menu is not displayed until the distance is reached for if/then functions).

In other words, "controller 50 determines whether a drag distance of the detected touch and drag operation is a first distance or more." *Id.*, ¶[0109]. And ***after*** the user performs the touch and drag gesture and the controller compares the drag distance to a threshold, the menu can then be displayed. *Id.*; *see also* FIG. 16 (detecting touch at step 1610 ***before*** displaying menu at step 1630); FIG. 11 (displaying item list ***after*** detecting touch and drag operation)[6]; EX2018, ¶¶55-56.

In a further embodiment, Ahn explains this touch and drag operation can be used with "an identifier" such as "a specific icon for notifying a ***start position*** of the touch and drag operation." Ahn at ¶[0117]. But that does not diverge from the binary operation described above and simply adds an icon so that a user is notified that a corresponding menu is available, as shown in FIGs. 18a-b (inset below). EX2018, ¶58.

[6] To the extent the Board is interpreting Ahn's display of a menu "***[a]s*** the touch and drag operation is detected" to mean the menu is displayed ***during*** the drag, this is inconsistent with Ahn's use of the term "as" and the understanding of a POSITA. EX2018, ¶57; EX1004, ¶¶[0016], [0071], [0092], [0094] (using similar language for Directional Key embodiment).



As shown in FIG. 18a, the user may perform the same touch and drag operation on the graphical shadow to display a menu 1500 as is done with the touch and drag operation depicted in FIG. 15. Ahn at ¶[0118]. Alternatively, as in FIG. 18b, a user may press graphic 1800 and, in response, "menu list 1500 can be displayed as emerging from the left side of the display 40." *Id.*, at ¶[0119]. This operation follows that of the directional key embodiment in that: an input is received corresponding to a left menu ("press the graphic") and, after the input, an animation effect is displayed and the left menu is depicted ("menu list 1500 can be displayed as emerging from the left side of the display 40 while the graphic 1800 disappears in the display 40"). EX2018, ¶60 (quoting EX1004, ¶[0119]).

In either scenario, the menu appears ***after*** completion of the gesture—a drag operation as in FIG. 18a or a tap operation as in FIG. 18b. EX2018, ¶58. Ahn does not suggest that its menu (e.g., 1500) will emerge and be displayed in any in-between

state where the menu is neither fully open or closed. Thus, all of Ahn's embodiments operate in a binary manner, opening the menu after completion of the gesture and not as a function of a gesture. *Id.*, ¶58-59.

B. Chaudhri (EX1005)

Chaudhri discloses "[a] device with a touch sensitive display [that] may be ***unlocked*** via gestures performed on the touch-sensitive display." EX1005, Abstract. Chaudhri provides several different sections discussing different aspects of its operations. EX1005, ¶¶[0048]-[0051] (User Interface States), [0052]-[0079] (Unlocking a Device via Gestures), [0080]-[0098] (Indication of Progress Towards Satisfaction of a User Input Condition)[7], [0099]-[0109] (User Interface Active States Corresponding to Events or Applications).

1. Unlocking a Device via Gestures

The primary focus of Chaudhri is a method for "unlocking [a] device" via a "predefined gesture" where the method includes "moving [an] unlock image to a predefined location and/or moving the unlock image along a predefined path." EX1005, Abstract. Chaudhri shows progress of such an unlocking gesture by the distance an indicator 402 (shown in FIGs. 5A-5C) moves toward an "end" of a

[7] This section header was incorrectly added into ¶[0079] in the published version of the application. *See* EX2017, 24.

channel 404. EX1005, ¶[0071] (The end of the channel 404 "serves as a predefined location to which the unlock image 402 is to be dragged."). EX2009, 52:17-54:14.

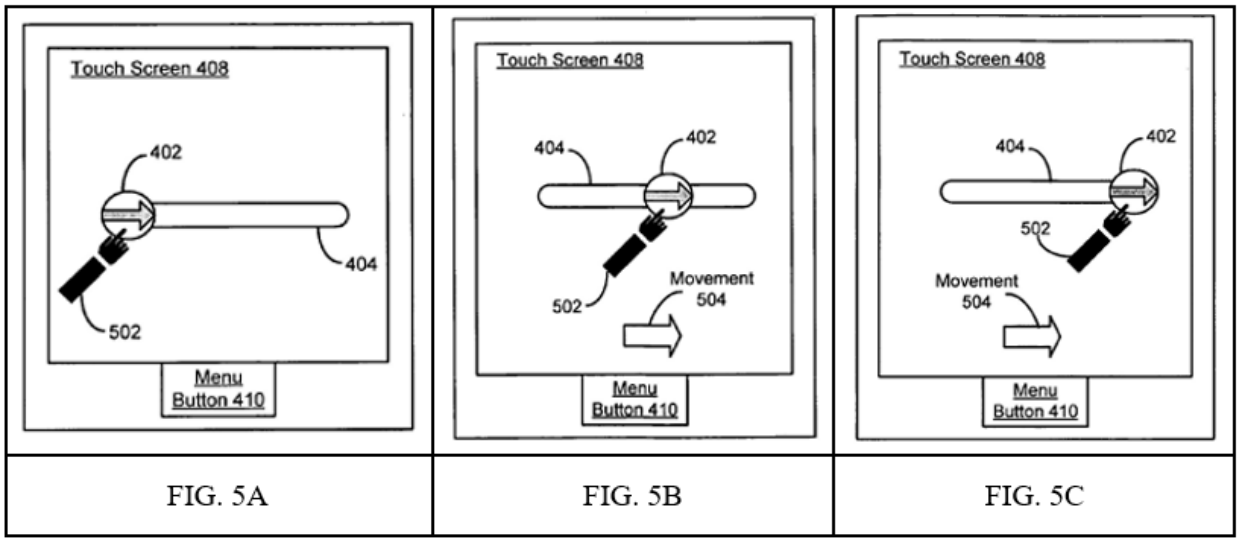


FIG. 5A | FIG. 5B | FIG. 5C

EX1005, FIGs. 5A-5C. A POSITA would have understood that this transition—from a first interface (FIGS. 5A–5C) to a second interface (FIG. 5D)—is performed after the gesture is completed. EX2018, ¶65; *see* EX1005, ¶¶[0076]–[0077] ("Upon completion of the unlock gesture," the device displays the second user interface and failure to complete the gesture results in the device remaining on the lock screen).

2. Indication of Progress Towards Satisfaction of a User Input Condition

In this operation, Chaudhri discloses a process for displaying additional interface objects on the lock screen. Here, Chaudhri describes a method of unlocking a device using a predefined gesture via displaying additional interface objects on a lock screen. *See* EX1005, ¶¶[0091]–[0093]. As shown in FIGS. 7A–7D (below), this operation starts when "device 700 is locked ... [and] display[s] a prompt 706 to the

user, informing the user of [an] incoming call ....” *Id*., ¶[0091]. When the user “drag[s] unlock image 702 along the channel 704 in the direction of movement 712 . . . a set of virtual buttons 708 appears and increases in optical intensity.” *Id*., ¶[0092]. When “the user completes the unlock action by dragging the unlock image to the right end of channel 704 . . . [t]he unlock image 702 and the channel 704 disappear from the display and the virtual buttons 708 are at their final optical intensity levels.” *Id*., ¶[0093]. Once the virtual buttons are at their final intensity levels, “the user may interact with virtual buttons 708 and accept or decline the incoming call.” *Id.*

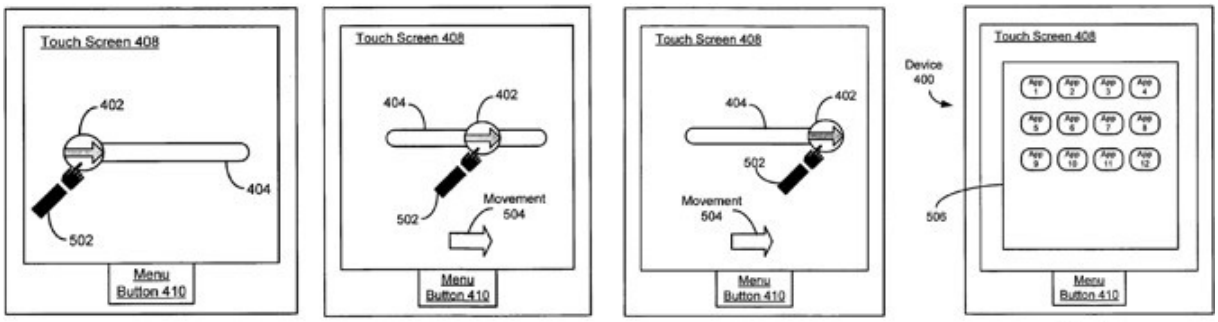


Fig. 5A Fig. 5B Fig. 5C Fig. 5D

EX1005, FIGS. 7A-7D.

Similar to the operation above (supra, §V.B.1), the device only transitions “to the second user-interface state if the condition is satisfied.” EX1005, ¶[0084]. That is, the transition occurs only after the gesture is completed. EX2018, ¶68. As shown in FIGS. 7C-7D, the indicator (e.g., image 702 and channel 704) do not disappear or fade out until after the gesture is determined to be completed. *Id.*; EX1005, ¶[0093] (“the user completes the unlock action by dragging the unlock image to the right end

of the channel 704 and releasing the unlock image 702. The device 700 transitions to the unlock state. The unlock image 702 and the channel 704 disappear from the display and the virtual buttons 708 are at their final optical intensity levels, as illustrated by their solid outlines."). Chaudhri does not describe any fading out of an object for any operation indicating progress of a user-input condition. *See* ¶¶[0080]-[0098]; EX2018, ¶68.

C. Shiplacoff (EX1013)

Shiplacoff discloses a device in which "two or more [display] modes are available for interacting with [the] device." EX1013, ¶ [0068]. One such mode is "a 'card' mode, in which at least two cards are presented." *Id*., ¶ [0070]. As Shiplacoff explains, "a card that has focus (i.e., that the user is interacting with) is visible in full, while at least one other card is only partially visible." *Id*., ¶ [0015]. Shiplacoff's Figure 3 depicts an embodiment of this "card" mode:

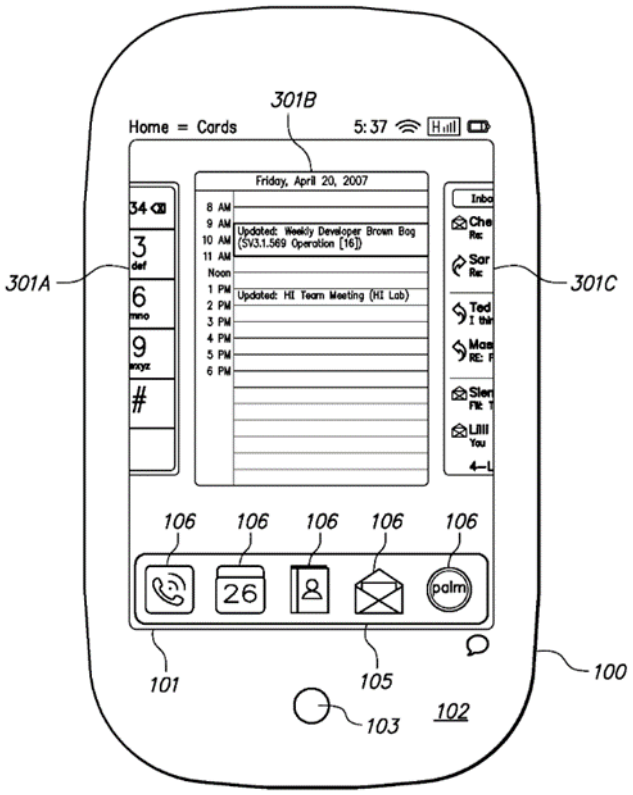


FIG. 3

Id., Fig. 3, ¶ [0077].

While in "card" mode, "the user can dismiss activities, for example by closing a card." EX1013, ¶ [0100]. As Shiplacoff teaches, a card can be closed or dismissed "by clicking on a control within a card" or "performing a flicking action in an upward direction." *Id.* "In general, when a card is dismissed, other cards move to fill the gap." *Id.*, ¶ [0101] (item numbering omitted). These other cards thus become the target of the user's "focus." *Id.*, ¶ [0167]. In some instances, closing a card also causes the card's application to either "close" or "remain[] open even when" the card is closed. *Id.*, ¶ [0102].

Separately, Shiplacoff teaches that the user may also switch to "card" mode from another mode, such as "a 'full-screen' mode, in which a card representing an application or other activity occupies substantially the entire display screen." *Id.*, ¶¶ [0127], [0069]. Shiplacoff's Figure 2 depicts an embodiment of this "full-screen" mode:

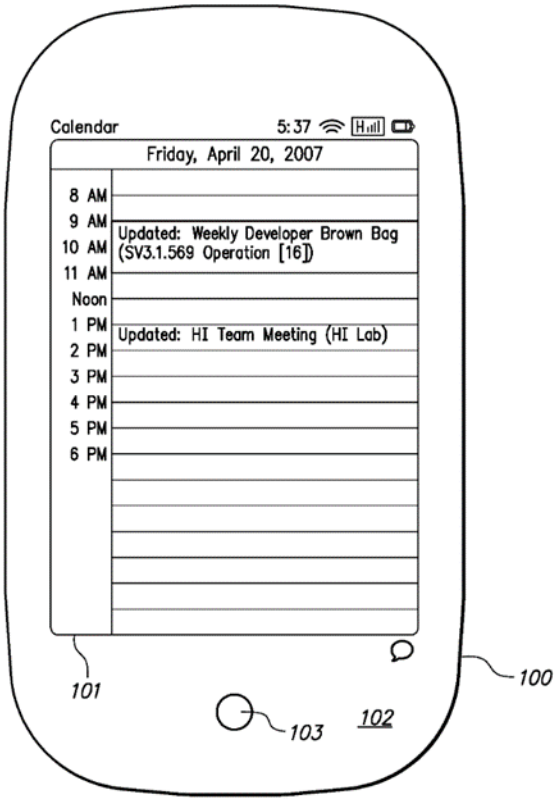


FIG. 2

Id., Fig. 2, ¶ [0075]. As Shiplacoff teaches, "the user can switch among the various modes by performing a gesture." *Id*. That is, after the gesture is performed, a different mode is displayed. EX2018, ¶72. One such "gesture" is a "'swipe up'

gesture" beginning in an off-screen "gesture area 102 and extending onto screen 101." *Id.*, ¶ [0127].

Lastly, Shiplacoff also teaches that "the user can launch additional activities by returning to the launch screen as shown in FIG. 1. In one embodiment, this is performed by performing a gesture or other command." *Id.*, ¶ [0099]. Shiplacoff's Figure 1 is reproduced below:

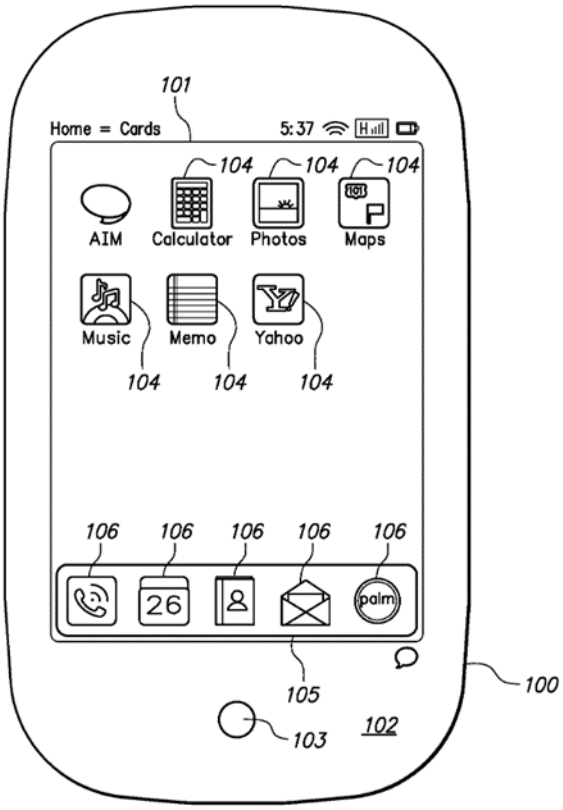


FIG. 1

Id., Fig. 1.

VI. GROUND 1A: THE PETITION FAILS TO ESTABLISH OBVIOUSNESS OF CLAIMS 2, 27, 37, 58, 60-64, 67-79, 186, 187, 189, 191, 192, 197, 199-204, 223, 225 AND 230 OVER AHN AND CHAUDHRI

Petitioner fails to show its combination of Ahn, Chaudhri, and Shiplacoff would arrive at each of the claimed limitations. Petitioner contends that independent claims 2 and 225 are obvious over Ahn and Chaudhri. 1116-Pet., 1. As explained below, Petitioner fails to show the Ahn-Chaudhri combination would render obvious either of claims 2 or 225. Further, Petitioner's mappings to the dependent claims are independent deficient.[8]

A. Limitations [2d], [225d]: Ahn-Chaudhri Does Not Render Obvious Blurring A Portion of An Object During Detection of the Gesture

Limitation [2d] requires "detect[ing] . . . a gesture on [a] touch screen" and "blur[ring]" a portion of an object displayed on the touch screen "during detection of" the gesture and "before a completion" of the gesture is detected. EX1001, 95:44-49; *see also id.*, 119:43-54 (claim 225 reciting similar limitation).

"[T]he at least one other object" is introduced in Limitation [2b], which recites "display an object and at least one other object." For Limitation [2b], the Petition relies on the "clock widget of [Ahn's] standby screen 300" as the claimed "at least one other object." *See* Pet., 23-24 ("the clock widget … [is] ***at least one other***

[8] Petitioner's analysis of claims 58 and 200 must fail as Petitioner fails to address the patentability of intervening claims 52 and 165, respectively.

object" (emphasis in original)); *see also* EX1003, ¶¶83-87 (same). The Petition does not identify any other elements as allegedly corresponding to the claimed "at least one other object." Thus, for Limitation [2d], the Petition must show that Ahn-Chaudhri-842 would have rendered obvious blurring Ahn's "clock widget" as required by the language of the claim. But the Petition fails to establish that doing so would have been obvious over the asserted combination of Ahn and Chaudhri.[9]

The Petition provides two theories for changing the appearance of Ahn's clock widget: Petitioner's first theory relies on Ahn alone and Petitioner's second theory relies on Ahn in combination with Chaudhri-842. Each theory is deficient.

1. Petitioner's Ahn Theory is Deficient

Petitioner's first theory relies solely on Ahn. Pet., 26-29.[10] Petitioner contends that Ahn's menu can be displayed in a translucent state and that "when embodied in translucent form, its menus would have blurred at least a portion of the background standby screen (e.g., shown in FIG. 12) by rendering the portion under which it is displayed as unclear or less distinct." Pet., 27. According to Petitioner,

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[9] Petitioner incorporates its analysis of claim 2 into claim 225 without further explanation or arguments. *See* 1116-Pet., 67-68.

[10] Petitioner does not propose a modification to Ahn and Petitioner's reference to Chaudhri-842 does not include a modification of Ahn. Pet., 27-28.

"[a] POSITA would have found obvious that, as a user utilizes the dragging gesture to open a given translucent menu, the translucent menu would ***progressively slide onto the display*** as a function of the magnitude of the user's dragging gesture." *Id.* Petitioner continues "as a translucent menu ***slides onto the screen*** in correspondence with the magnitude of the touch and drag[] gesture, the translucent menu would correspondingly progressively blur the portion of the background over which the menu is displayed (including, e.g., the clock widget)." *Id.*, 28.

There is no discussion of blurring any object in Ahn. Instead, Petitioner relies on the change in appearance of clock widget shown in Ahn's FIG. 4B/13b when the right hand menu 420/1300 is displayed. Pet., 26-28. None of Ahn's other menus result in any change in appearance of the clock widget. EX2009, 22:17-20, 26:21-27:6; *see also, e.g.*, EX1005, FIGs. 14-15 (no apparent change in appearance of clock widget by menu list 1400 or 1500). Thus, Petitioner's theory is that Ahn discloses its right menu 420/1300 as "***sliding onto*** the display based on a change in a magnitude of the 'touch and drag' gesture." Pet. 28. But Ahn teaches otherwise. EX2018, ¶¶79-80

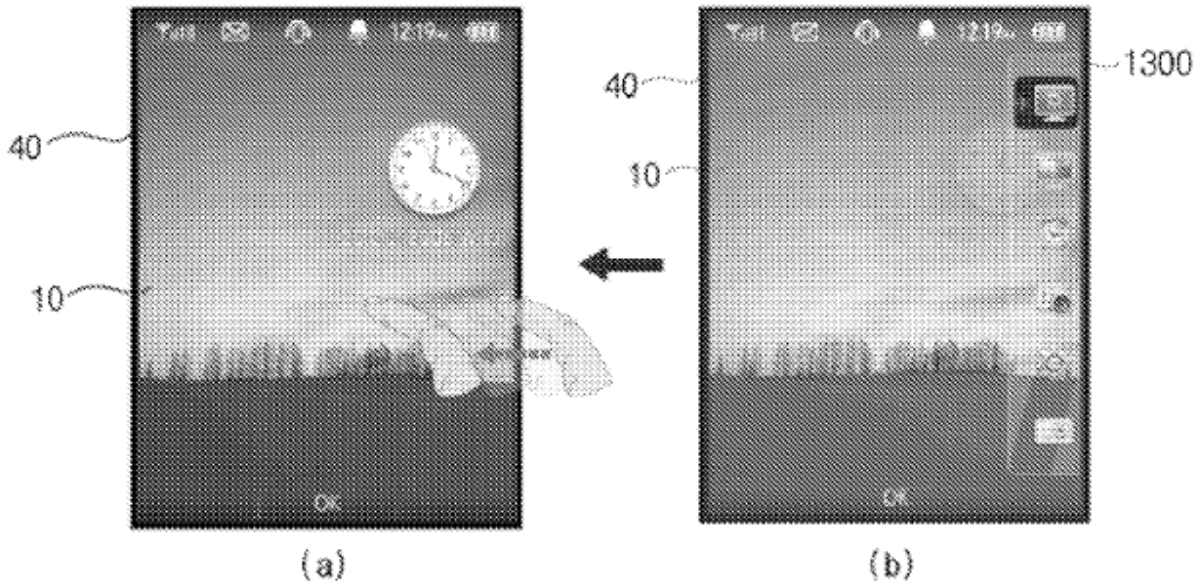
a. Ahn's menus appear *after* completion of a gesture

Ahn's menu 420 does not slide onto the display based on a change in a magnitude of the 'touch and drag' gesture. EX2018, ¶81. For this embodiment, "if the user selects the rightward direction key 34 … ***[t]hereafter***, a user menu 420 as

shown in FIG. 4B is displayed at the right side of the standby screen 300." EX1004, ¶[0050]-[0051]. As illustrated in FIGs. 4A-4B an input is received corresponding to a right menu (selection of rightward direction key 34), an animation effect is displayed after the input is completed (FIG. 4A), and the right menu is depicted after the animation effect. EX2018, ¶81. The display of all of Ahn's menus using the directional keypad are performed in this way. *Id.*

Likewise, Ahn's menu 1300 does not slide onto the display based on a change in a magnitude of the 'touch and drag' gesture. EX2018, ¶82. Referring to Ahn's FIGs. 13A-B (inset below), "***if*** the user touches a specific position of the touch screen 10 and drags the touch in a left direction a menu list 1300 matched to a left direction is displayed in the display 40." EX1004, ¶[0102].

FIG. 13



EX2005, 71/75. As shown in FIG. 13(a), the user's finger drags from a first point to a second point on the display, while the display does not change as the user's finger "drags the touch in a left direction." EX2018, ¶83; *see* EX1004, ¶[0102]. Only ***after*** "the touch and drag operation [i.e., gesture] of the user is completed" is the menu displayed (FIG. 13b). *See* EX1004, ¶[0116]. Thus, ***if*** the user performs the left touch and drag gesture, ***then*** the menu list 1300 is displayed thereafter. EX2018, ¶83

This operation is consistent with the display of menu 420 where an input is received corresponding to a right menu (left touch and drag) and a menu is displayed after the input is completed (FIG. 13b). EX2018, ¶84. A POSITA would understand Ahn's menu list 1300 as an "if/then" operation where the menu would be displayed only 'if' the gesture is detected and would not be displayed before the gesture associated with the menu (e.g., left slide exceeding the distance) is "detected" (i.e., completed). EX2009, 42:6-16(using "the word 'if'" signifies that "if you haven't reached the distance … [the] menu list would not be displayed"); *see also id.* 32:9-33:3

Ahn's FIG. 18 only opens menu 1500 (left menu), which does not blur the clock widget. EX1004, ¶¶[0118]-[0119]. Thus, even accepting Petitioner's incorrect assertion that Ahn's FIG. 18 describes a menu progressively sliding with a

user's finger, this menu would not blur the at least one object (i.e., clock widget). EX2018, ¶86.

b. Any disclosed variation of Ahn would not meet the claimed operation

The Board contends that "Figure 18 is a variation of the embodiment described in Figures 13 to 15" and that the Board does not "understand Ahn to contain any indication that this is dependent on the direction of a gesture or to be specific to certain embodiments." D.I., 21-22. The Board appears to be suggesting that graphical shadow would also be moved to the right side of the display and used to open menu 1300. This configuration is not shown in Ahn. EX1004, ¶[0118] (describing using a ***right swipe*** to open ***menu 1500***) [0119] (describing using a ***left swipe*** to open the same ***menu 1500***); EX2018, ¶87. Nor does Petitioner propose such a modification.

Nevertheless, this variation would not progressively slide in the menu with the user's finger. *Id.*

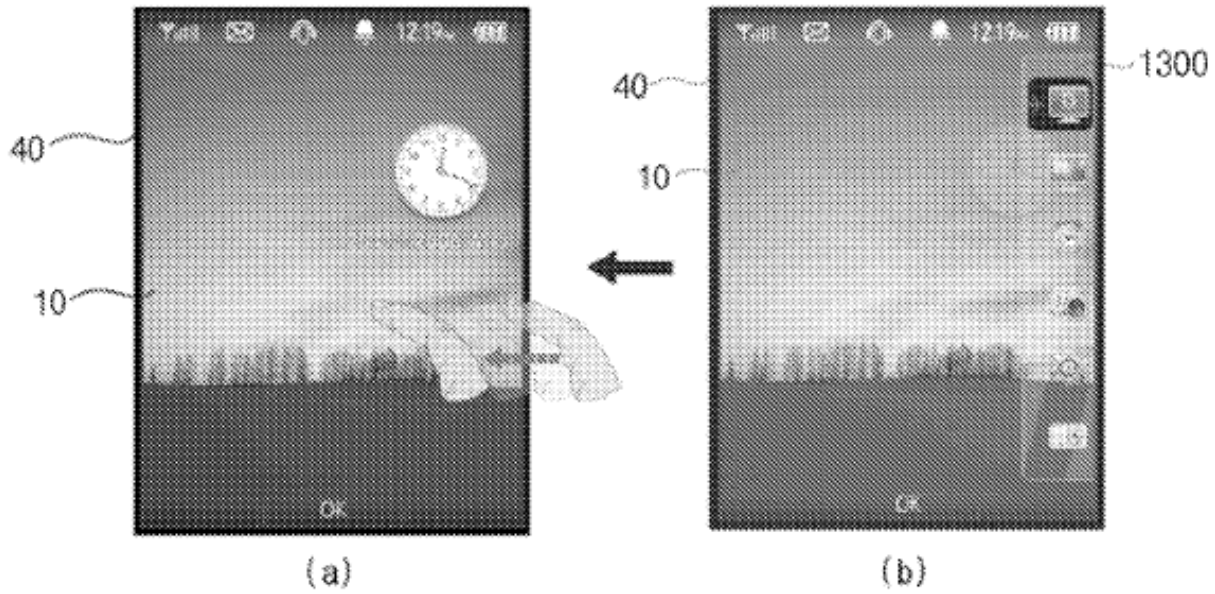
(i) <u>"Drag" does not mean move</u>

To establish Ahn's menu progressively slides with the user's finger, Petitioner relies on one sentence in Ahn's paragraph [0118]: "as the user drags the graphic shadow 1800, the menu list 1500 can be displayed along the dragged graphic 1800." Pet., 27. The crux of Petitioner's theory is that "drags the graphic shadow" means that the showed is depicted as ***moving with*** the user's finger when it performs a touch

and drag operation. But this is inconsistent with Ahn's use of the term "drag." EX2018, ¶88.

Ahn unambiguously uses "drag" to describe the input—***not*** any responsive movement of graphic 1800. In Ahn, "drag" "indicates movement of an ***external object*** on the touch screen 10." EX1004, ¶[0098]. In other words, "drag" means an external object (e.g., finger, stylus, etc.) is acting on the screen or part of the screen, not that a graphic is moving. EX2018, ¶89. For example, related to FIG. 13 below, when Ahn states that "if the user ***touches a specific position*** of the touch screen 10 and ***drags the touch*** in a left direction a menu list 1300 ... is displayed[,]" (EX1004, ¶[0102]) the user is dragging a finger across the touch screen. EX2018, ¶89.

FIG. 13



EX1004, FIG. 13 (depicting movement of the finger when the user "drags the touch"); *see also id.*, ¶[0103] and FIGs. 14-15 (same).

Similarly, Ahn states that "if the user ***drags the touch screen*** *10* by a distance longer than or equal to the distance d1 and shorter than the distance d2, the first menu list 1700 is displayed." EX1004, ¶[0116]. Of course, the user is not moving the touch screen 10 itself, but is merely performing a drag gesture ***over the touch screen***, in response to which the first menu list is displayed. EX2018, ¶89; *see also* EX1004, ¶[0111] (describing touch operation as "dragged"). Likewise, when "the user drags the graphic shadow 1800" (EX1004, ¶[0118]), the user is merely performing a drag gesture ***over the graphic shadow***, in response to which the menu list 1500 is displayed. EX2018, ¶89; *see also* EX1004, ¶[0118] (using "press the graphic 1800" to describe performing a tap gesture that starts on the graphic).

(ii) <u>Ahn's menus are displayed as animations</u>

To the extent the menu would slide in along the graphic 1800, this would have been performed as an animation effect that occurs after the gesture is detected (i.e., completed). EX2018, ¶90. This is consistent with every other menu of Ahn. For example, as described in Ahn's directional key embodiments, an animation effect (e.g., FIG. 4A, 6A, 7A) is produced as a result of the completion of an operation (e.g., key selection). EX2018, ¶90; *Supra*, §V.A.1. Even Ahn's FIG. 18 is described as using an animation in which the user presses (i.e., taps) the graphic 1800 and—as

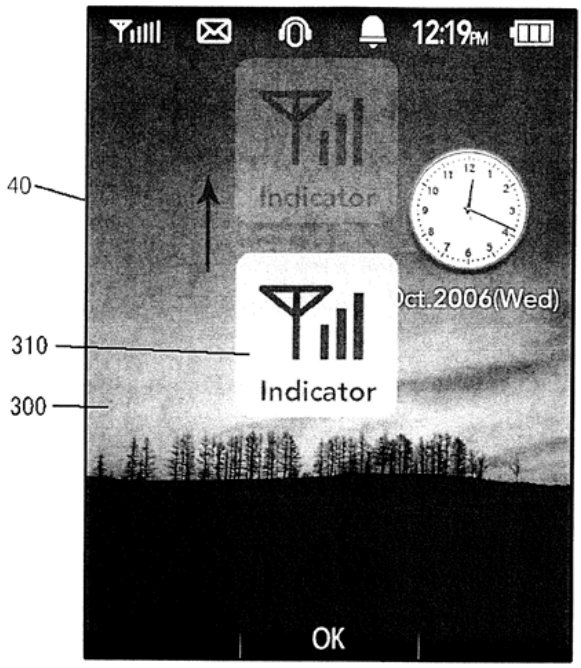
a result of the completion of the press operation—"the graphic 1800 gradually disappears in the display 40, and the menu list 1500 can be displayed as emerging from the left side of the display 40." EX1004, ¶[0119]. A POSITA would not understand Ahn's FIG. 18(a) as from deviating from this operation and any sliding in of Ahn's menu would occur as an animation effect after the operation is completed. EX2018, ¶90.

As explained in Section V.A.1, a POSITA would understand Ahn's menu operations are binary and would open after a corresponding input is received. EX2018, ¶91. Ahn's "Touch and Drag" embodiments are described as binary—not progressive—and only displays its menu ***after*** determining a drag distance exceeds a first distance as opposed to displaying the menu during the gesture. EX2018, ¶91. Paragraphs [0117]-[0118] of Ahn merely describes adding a start position identifier to the binary "Touch and Drag" menu embodiments already described elsewhere in Ahn's disclosure and does not describe differences in the process through which the menus are displayed. EX2018, ¶91; *see* D.I., 21-22. Ahn's disclosure to add "an identifier" for "notifying a start position of the touch and drag operation" (EX1004, ¶[0117]) does not change the described binary menu opening operation to a progressive one. EX2018, ¶91.

(iii) <u>Ahn's menus are not depicted or described as moving</u>

Ahn's figures indicate that it knew how to depict movement of both external and internal objects. EX2018, ¶92. Referring to FIGs. 3B, 4A, 6A, 7A, 8B, Ahn depicts other objects as moving in response to an input. *Id.*

FIG. 3B



Ahn also clearly depicts movement of a finger. EX1004, FIGs. 13-15. In fact, FIG. 18a of Ahn illustrates the user's finger moving along the display while the graphic 1800 ***remains stationary***. EX1004, FIG. 18a. If Ahn wanted to display the graphic 1800 as moving with the finger, it knew how to display such a movement. EX2018, ¶¶92-93.

For the menu to "progressively slide onto the display as a function of the magnitude of the user's dragging gesture," (Pet., 27) Petitioner must create several

internal inconsistencies within Ahn's disclosure. For example, under Petitioner's interpretation show Ahn's paragraph [0118] must: (1) use the term 'drag' inconsistently with the rest of Ahn's disclosure; (2) silently abandon the animation effects for Ahn's other FIG. 18 embodiment (FIG. 18(b)) and directional key embodiments; (3) operate contrary to the described touch and drag operation that display a menu before the gesture is completed; and (4) depict FIG. 18(a)'s stationary graphic as inconsistent with its operation. EX2018, ¶94. But there is nothing in Ahn or Petitioner's explanation that would explain adopting an interpretation that would create such inconsistencies. Instead, a POSITA would understand Ahn's paragraph [0118] to describe displaying a menu after a touch and drag operation—starting on graphic 1800—is detected to be complete as is consistent with Ahn's specification, figures, and other embodiments. EX2018, ¶94.

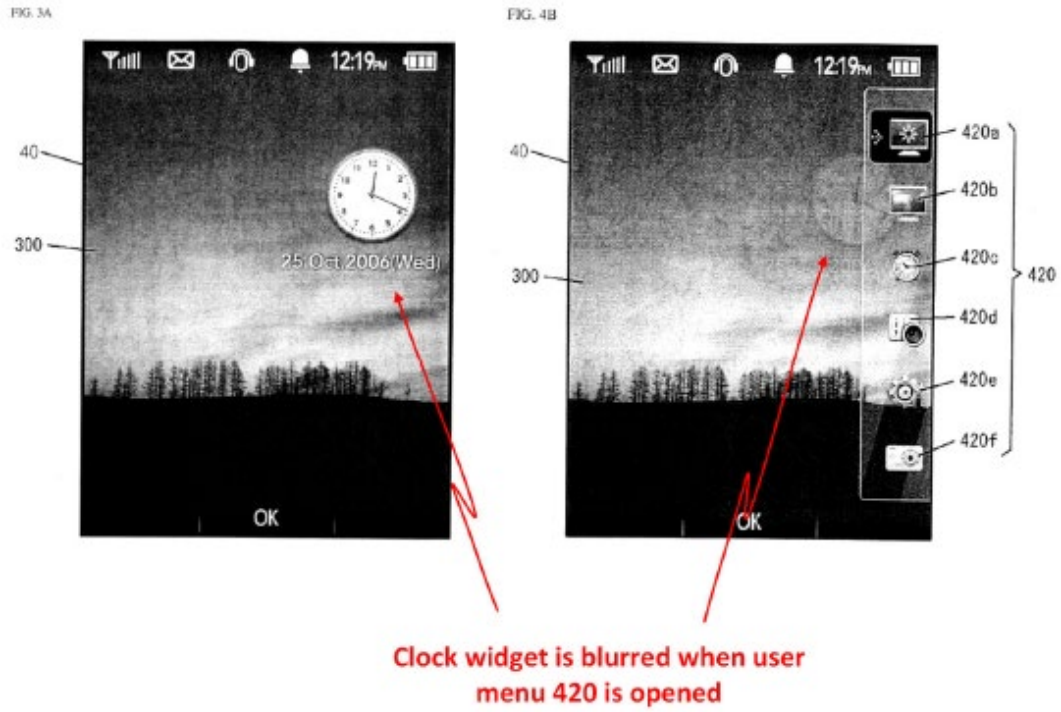
2. Petitioner's Ahn-Chaudhri Theory is Deficient

Petitioner's modification of Ahn with Chaudhri is premised on the combination providing a user with an indication of or feedback on the progress of Ahn's gesture. Pet., 15 ("Ahn-Chaudhri combination is a mobile device that changes an optical intensity of one or more user interface objects as a function of progress towards satisfaction of a user's gesture input"). Specifically, Petitioner asserts it was obvious to vary the optical intensity of the clock widget as a visual indication of a user's progress in completing Ahn's "touch and drag" gesture. Pet., 33; *see id.*, 30

("obvious to apply Chaudhri-842's user interface state transition techniques—particularly the use of transitioning optical intensity to 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"). But this is logically incorrect.

a. Modification does not show progress

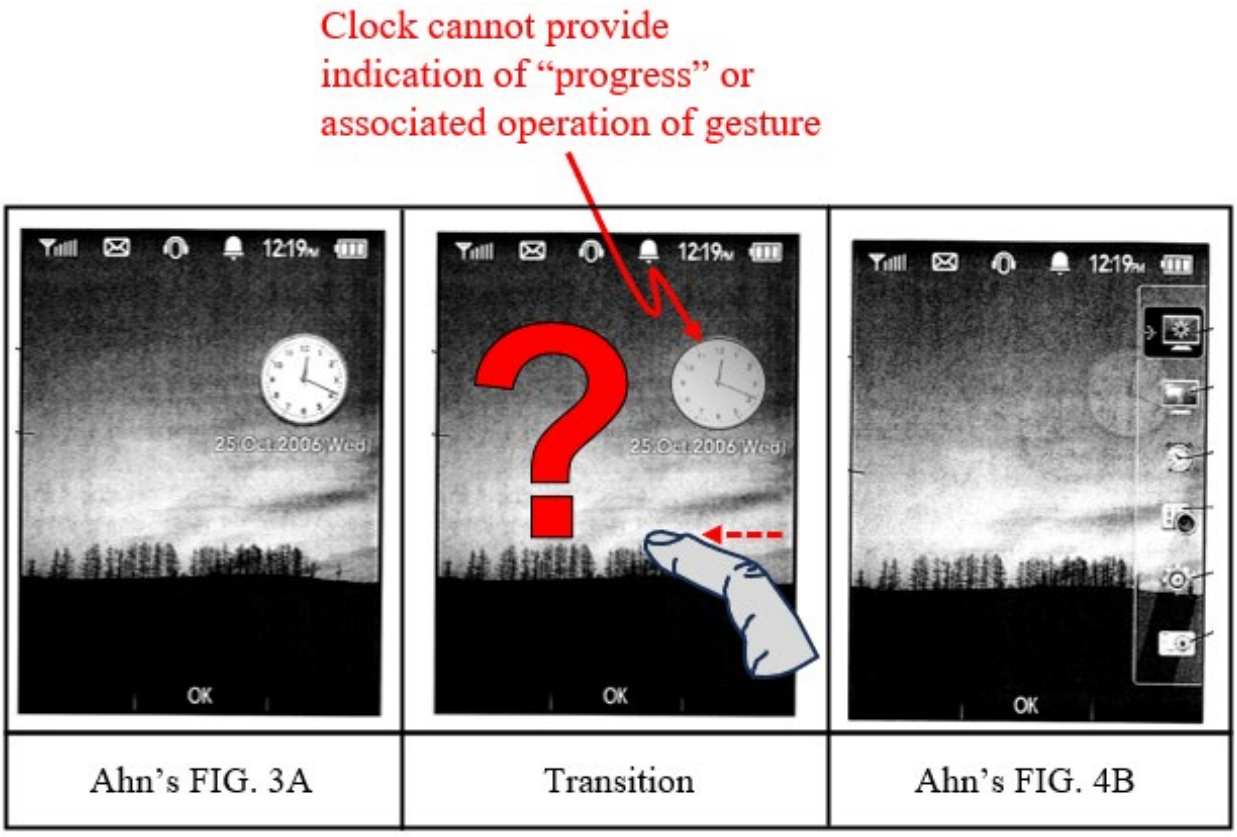
Petitioner's alleged "blurring" of Ahn's clock widget during Ahn's "touch and drag operation" would <u>not</u> provide the user with any indication of progress of opening the corresponding menu list. EX2018, ¶¶96. In Petitioner's modification, the optical intensity of the clock widget is varied as in indication of a user's progress to opening menu 420, as illustrated by Ahn's FIGs. 3A and 4B.



EX1004, FIGS. 3A and 4B

Pet., 33.

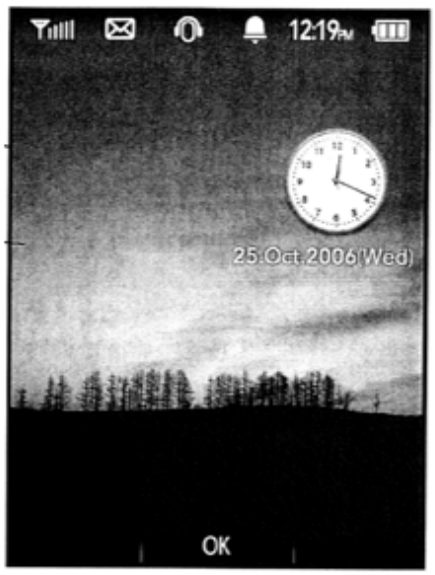
Petitioner's alleged modification of Ahn is illustrated by the below progression which transitions from a Standby Screen (corresponding to Ahn's FIG. 3A) to a Menu Screen (corresponding to Ahn's FIG. 4B) in response to a touch and drag gesture as described in Ahn. EX2018, ¶¶97; *see* Pet., 33 ("obvious to vary … the optical intensity of the standby screen or at least portions thereof (e.g., the blurring of the clock widget, as shown in FIGS. 4B, 10, and 13b) as a visual indication of a user's progress in completing Ahn's 'touch and drag' gesture").



As is apparent in this sequence of figures (and Ahn's FIG. 13B), the clock widget remains visible throughout the transition. EX1004, FIG. 4B (depicting clock widget after menu is displayed). EX2018, ¶98. This optical transition of the clock

widget, from left to right in the images above, does not suggest to a user *when* or *if* the menu 420 will appear as in Ahn's FIG. 4B. Nor is this end-state (display of the menu) otherwise related to the alteration of the clock widget in any manner that is perceivable by a user. EX2018, ¶98. For example, there is no frame of reference to discern any progress, relative to its required distance, of the gesture based on the changing appearance of the clock widget.

As such, the change in optical intensity *during* the touch and drag operation would <u>not</u> provide any indication of progress, which Chaudhri defines as (1) how much of the gesture is completed, or (2) how much of the gesture is remaining. EX2018, ¶99 (citing EX1005, ¶¶[0088]-[0090] ("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 and ***how much of the gesture is remaining***")); Pet., 32 (quoting same). In other words, a user cannot tell from the alleged "blurring" how much more "blurring" or swiping is needed before the menu will appear. EX2018, ¶99. This can be illustrated in the below figure:



Standby Screen (0%)

During Gesture (?%)

Because a user cannot determine the amount of progress for Ahn's touch and drag operation based on the variation in the clock widget in the above image, a POSITA would have understood that progressive blurring of the clock widget would ***not*** indicate progress. EX2018, ¶99; *cf* EX1005, FIG. 5B (depicting progress of gesture). A POSITA therefore would not have been motivated to modify Ahn to progressively blur the clock widget "as a visual indication of a user's progress in completing" the gesture. EX2018, ¶99.

A POSITA would understand that this change in appearance merely indicates that a gesture is happening, but the user *already* knows that much because the user *is performing* that gesture. EX2018, ¶100. As in Ahn alone, the user would only know the gesture is complete once the menu list 1300/420 appears, ***upon completion***

of the gesture. *Id.* Accordingly, a POSITA would have understood that Petitioner's purported modification would not provide any indication of a user's progress in completing Ahn's "touch and drag" gesture because, unlike Chaudhri-842, the Petition's proposed UI shows no indication of progress toward a clearly visible end goal. *Id.* Thus, Petitioner's purported 'progress' motivation would not have led a POSITA to make the asserted modification of Ahn.

Further, as explained in Section VI.A.1, the alleged variation in optical intensity would not have helped differentiate between the user-interface object (e.g., the menu list 1300) and the background (e.g., the standby screen and/or clock widget) because the menu is not shown until ***after*** the gesture is completed. EX2018, ¶101. Because the menu is not displayed during the gesture, there can be no differentiation until the menu appears, which is ***after the gesture is completed***. *Id.* Thus, differentiation cannot provide a logical motivation for why a POSITA would vary the optical intensity of the clock during Ahn's "touch and drag" gesture.

The Board stated that the appearance of a menu only on completion of a gesture is not commensurate with Petitioner's assertions, which rely on a "progressively … appearing menu." D.I., 24. But Ahn does not teach a progressively appearing menu (§VI.A.1), Petitioner does not purport to modify Ahn's menu (Pet., 33 (modifying "the standby screen")), and Chaudhri also does not teach a progressively appearing menu. Thus, it is Petitioner's assertions that are not

commensurate with the cited art and that remain unsupported by evidence. EX2018, ¶102.

b. Modification operates contrary to Chaudhri

As explained above, Petitioner's modification fails to achieve Chaudhri's benefits because its modification implements the opposite of Chaudhri's teachings. *Supra*, §VI.A.2.a. Petitioner contends it would have been obvious to decrease the optical intensity of the standby screen or portions thereof (e.g., clock widget), which Petitioner identifies as Ahn's background. Pet., 33. Thus, Petitioner's modification decreases the optical intensity of Ahn's background—the initial interface state. EX2018, ¶103. Chaudhri-842 teaches the opposite of Petitioner's modification.

First, Chaudhri-842 does not vary the optical intensity of a background. EX2018, ¶104. To the contrary, Chaudhri-842 discloses adjusting an optical intensity of user interface (UI) objects: "The optical intensity of a user-interface object, as used herein, is the object's degree of visual materialization." EX1005, [0085]. And Chaudhri-842 repeatedly makes clear that user interface objects are distinct from a background. *See, e.g.*, EX1005 [0085] ("optical intensity may be the visual differentiation *between* the user-interface object and *the background*"); EX2018, ¶104. Thus, Chaudhri-842 teaches varying the optical intensity of foreground UI elements. EX2018, ¶104.

Unlike Chaudhri-842's foreground UI elements, Ahn's clock widget is part of the background, as conceded by Petitioner. *See* Pet., 29 ("that a clock widget is part of the background standby screen 300"), 33 ("the background (e.g., the standby screen and/or clock widget)."). But Chaudhri-842 does not suggest adjusting the optical intensity (or otherwise altering) a background. EX2018, ¶105. And neither the Petition nor Petitioner's expert explain this gap in logic.

Second, the relied-upon portion of Chaudhri-842 explains that "progress is indicated (604) towards satisfaction of the condition by transitioning an optical intensity of one or more user interface objects ***associated with the second user-interface state***." EX1005, [0081]-[0082], FIG. 6 (reproduced and annotated below).

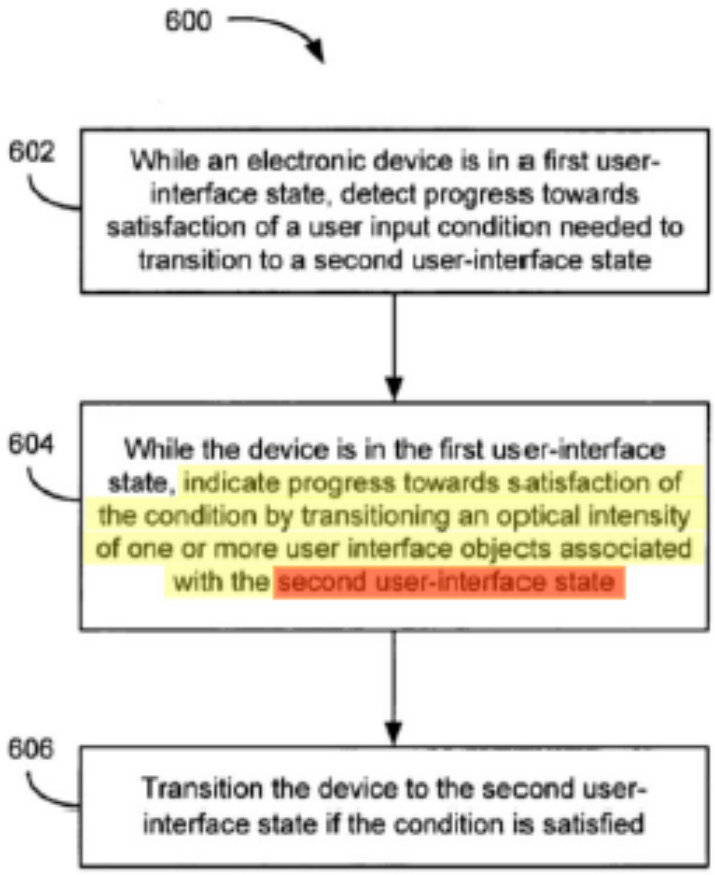
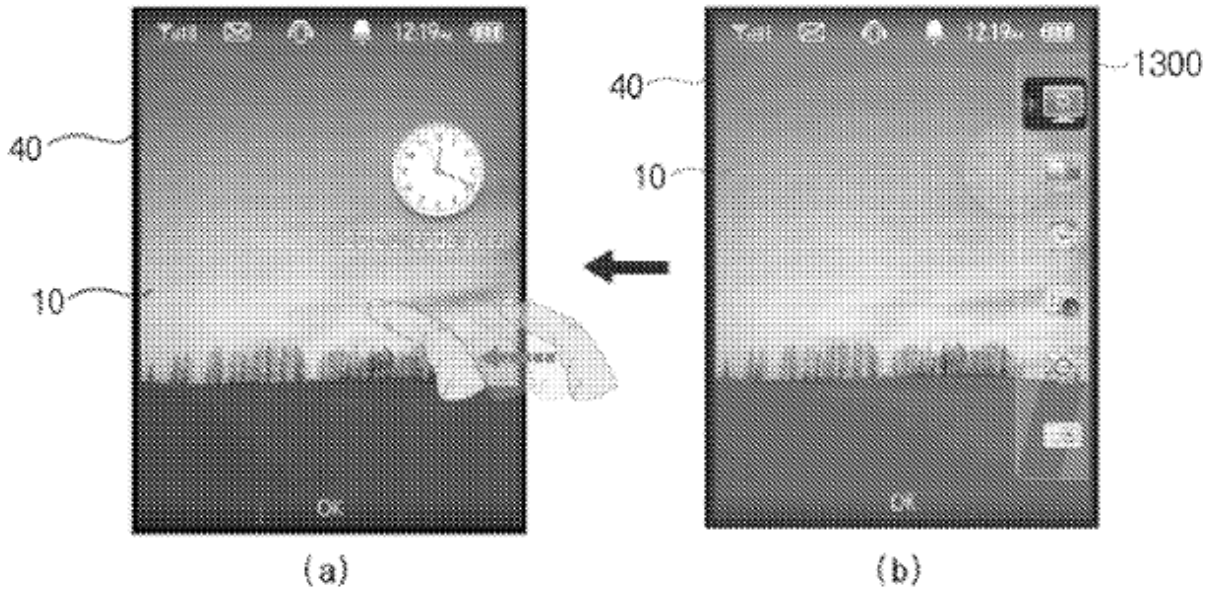


Figure 6

EX1005, FIG. 6

In contrast, Petitioner's Ahn-Chaudhri combination relies on *reducing* the optical intensity of Ahn's background (the alleged *first* user interface state). EX2018, ¶107. Specifically, Petitioner identifies the standby screen of Ahn (FIG. 13A – below left) as corresponding to the <u>first</u> user-interface state and "state where a menu list 1300 is displayed" (FIG. 13B – below right) as the <u>second</u> user-interface state. Pet., 33.

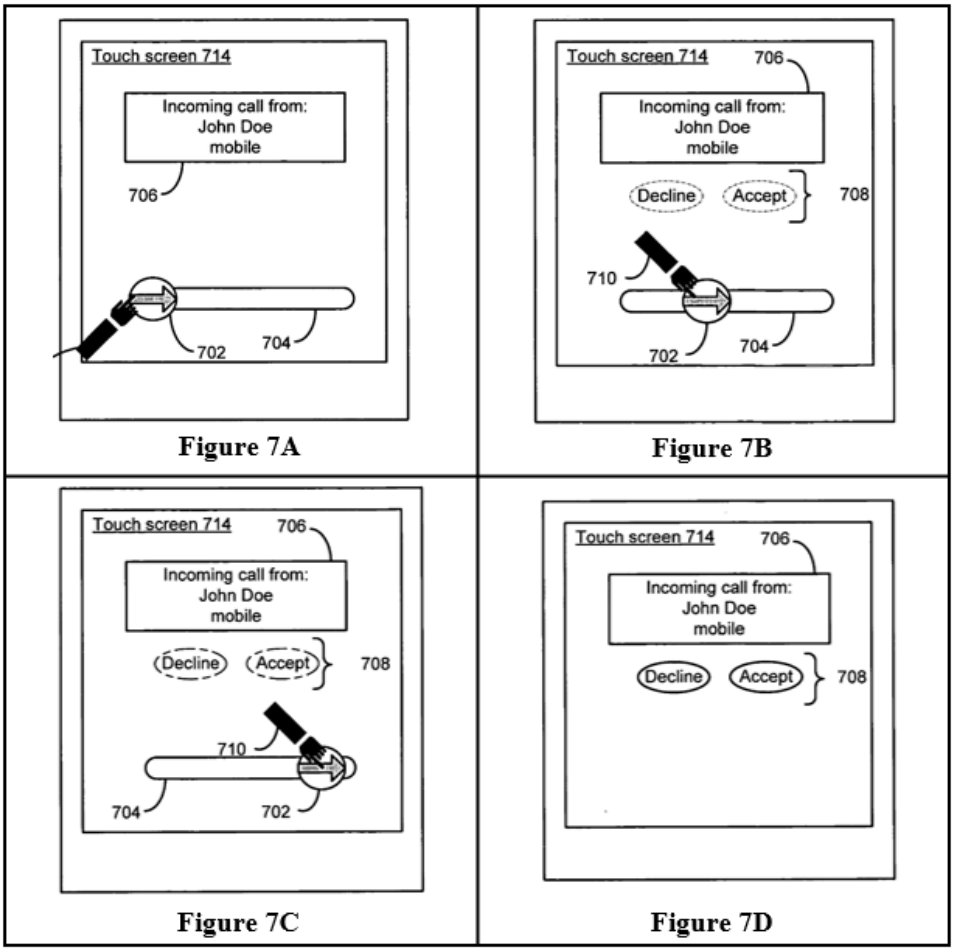
FIG. 13



Thus, Petitioner's modification to change the appearance of Ahn's clock widget (of the ***first*** user-interface state) is inconsistent with Chaudhri-842's teaching to "transition[] an optical intensity of one or more user interface objects associated with the ***second user-interface state***." EX1005, ¶82; EX2018, ¶108. As such, here too, Petitioner's alleged modification does the opposite of what Chaudhri teaches, and a POSITA would not have made such a conflicting modification—especially not without some articulable reason, which Petitioner does not provide. EX2018, ¶108.

Importantly, Chaudhri-842's teaching of changing the optical intensity of ***foreground*** objects of a ***second user-interface state*** provides its user with an indication of progress. EX2018, ¶109. Chaudhri-842 illustrates this concept in its Figures 7A-7D (inset below), where as the user drags arrow 702 to the right, the

optical intensity of the virtual buttons 708—associated with the second user interface state—increases. EX1005, [0092]-[0093].

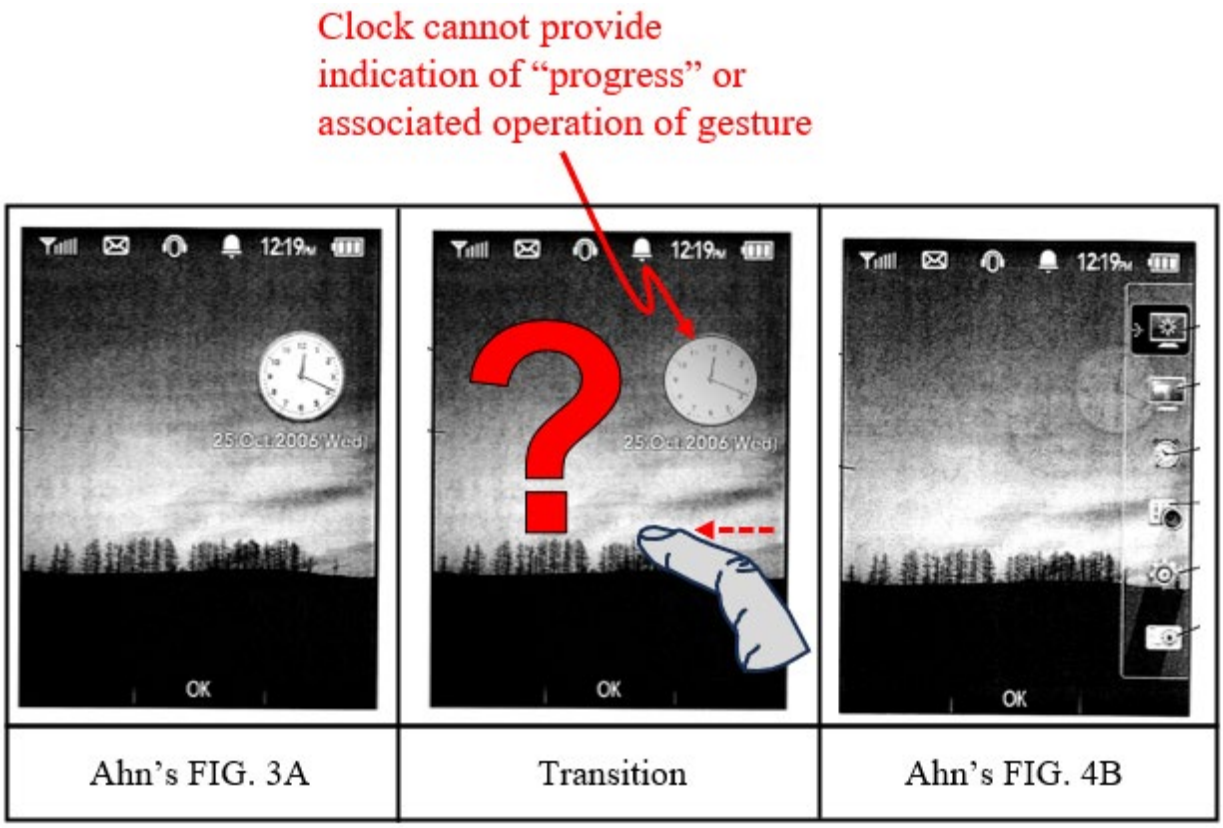


EX1005, FIG. 7A-7D. Here, the user would realize that the gesture—continuing to slide arrow 702 is related to the appearing foreground icons 708[11] and that their

[11] Contrary to the Board's finding, a POSITA would not understand Chaudhri's foreground icons 708 cover a background object. EX2018, ¶111 (citing D.I., 23-34). Nor would a POSITA understand Ahn's background objects as being displayed with progressively less detail. EX2018, ¶111.

increasing optical intensity indicates these icons would be selectable when the gesture is completed. EX2018, ¶109. Thus, the user is provided with a visual indication of a their progress in completing the gesture; both in how much progress of the gesture is left and what functionality this gesture will trigger. *Id.*

In contrast, Petitioner's purported modification changes the appearance of the *background* clock widget as the user drags their finger towards an undefined end, which would not offer any context to the user on what operation will occur or when. EX2018, ¶110. The appearance of the clock widget is unrelated to the menu 420 and the user would not realize that decreasing optical intensity of the clock widget would result in a menu being displayed, as illustrated below. *Id.*



Thus, a POSITA would understand that reducing optical intensity for a background object (in a first interface state)—as Petitioner proposes—would not result in a visual indication of progress like that taught for Chaudhri's increasing of optical intensity for a foreground object of a second interface state. EX2018, ¶110.

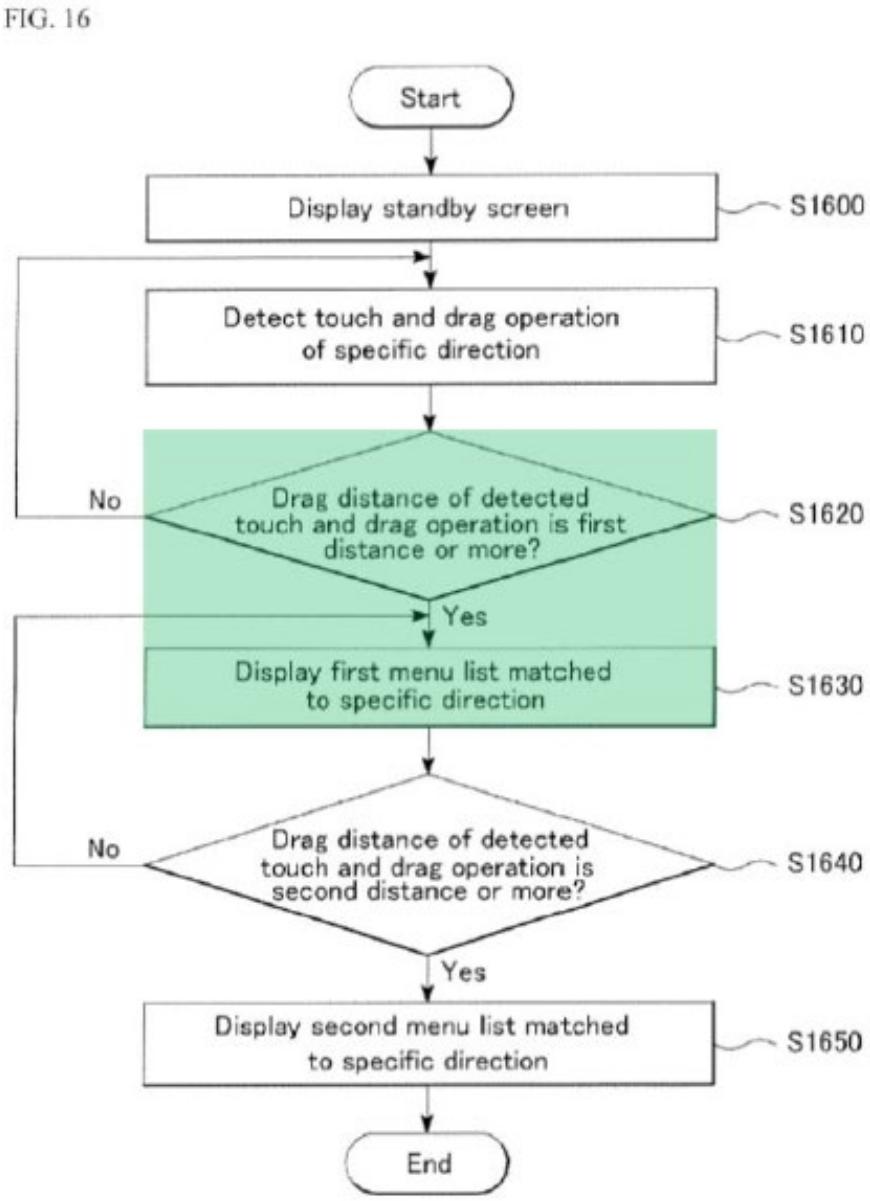
Finally, even if Ahn and Chaudhri both describe visual differentiation, as the Board alleges (D.I., 24), it does not render the claims obvious. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) ("a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art"). Petitioner contends a POSITA would have decreased the optical intensity of the clock widget "as a visual indication of a user's progress in completing Ahn's 'touch and drag' gesture." Pet., 33. As explained above, this is incorrect and not supported by substantial evidence.

B. Petitioner's Dependent Claim Analysis Contradicts its Sliding Menu Theory

In analyzing the challenged dependent claims, Petitioner expressly relies upon embodiments of Ahn that do ***not*** progressively slide onto the display with the user's gesture (*i.e.*, menus that do not appear until after completion of the gesture). EX2018, ¶112.

Other than claim 223, every challenged dependent claim includes or depends from dependent claims 27, 186, or 230. *See* EX1001, *claims* 27, 37, 58, 60-64, 67-79, 186, 187, 189, 191, 192, 197, 199-204, 208-216, and 230. For each of dependent

claims 27, 186, and 230, Petitioner relies on the disclosure of Ahn's FIG. 16 and, specifically, steps S1620-S1630. 1116-Pet., 40, 43, 68; 1115-Pet., 40-41.



EX1004, FIG. 16 (highlighted)

Thus, for all challenged dependent claims (aside from claim 223) Petitioner's modification explicitly adopts Ahn's FIG. 16 embodiment in which "the process of

displaying the first menu list doesn't happen until the distance traveled has exceeded the first distance." EX2009, 32:14-33:3 (Dr. Terveen describing step S1620).

Contrary to Petitioner's assertion, the menu cannot progressively slide in with the gesture when the process of displaying the menu does not begin until after completion of the gesture. EX2018, ¶113. Thus, any reliance on the menu 420-1300 for meeting the blurring limitations would not be "before a completion [of the gesture] is detected," as required by claim 2. EX2018, ¶113. Accordingly, Petitioner's progressive sliding theory (§VI.A.1) must fail for at least claims 27, 37, 58, 60-64, 67-79, 186, 187, 189, 191, 192, 197, 199-204, 208-216, and 230.

Petitioner's dependent claim theory also contradicts the Board's understanding of its Ahn-Chaudhri theory (§VI.A.2) for Limitation [2d]. The Board interpreted "Petitioner's argument to be that the blurring of the widget on the standby screen would occur in a transition between the standby screen user interface state and the menu list display user interface state, progressively to differentiate between an appearing menu and the standby screen clock widget." D.I., 24. That is, the Board instituted based on the theory that the widget was blurred and the menu progressively slid in at the same time (i.e., during the swipe). Based on this understanding, the Board criticized "Patent Owner's argument that the user would see progressive blurring of a clock widget and then the appearance of a menu only on completion of a gesture" and not being "commensurate with Petitioner's

assertions." D.I., 24. However, as explained above, Petitioner's theory (at least for claims 27, 186, and 230) requires the swipe to be completed before the menu appears—contradicting the Board's understanding. EX2018, ¶114; EX2009, 32:14-33:3.

Further, "the user would see … the appearance of a menu only on completion of a gesture" (D.I., 24) and, thus, there would be no transition state between the standby screen user interface state and the menu list display user interface state where the menu is appearing. EX2018, ¶114. Accordingly, Petitioner's Ahn-Chaudhri theory must 'blur' the clock widget without the appearance of the menu—which would not "indicate progress" as explained in Section VI.A.2.

For at least these reasons, Petitioner fails to establish obviousness for any of dependent claims 27, 37, 58, 60-64, 67-79, 186, 187, 189, 191, 192, 197, 199-204, 208-216, and 230.

C. IPR2024-01116: Claims 186-204

IPR2024-01116 challenges several dependent claims in addition to independent claim 2. IPR2024-01116 Petition (1116-Pet.), 1. Each of these fail for the reasons explained above with respect to claim 2 and, independently, for the additional reasons below.

1. Dependent Claim 187

Petitioner's analysis relies on the theory that "[a] POSITA would have understood and found obvious that selecting the 'message notification icon 330b' and/or 'background music setting icon 330c' would have launched an application associated with that functionality." 1116-Pet., 55. For support, Petitioner cites only to its expert who parrots the same assertion. *Id.*; EX1003, ¶[107]. But Ahn directly contradicts this assertion because the selection of icons 330 results in the display of "a pop-up menu window 340 related to the icon" (EX1004, ¶[0039]), which displays options for further sub-menus. EX2018, ¶118; EX1004, ¶¶[0037]-[0043]. Referring to FIGs. 3C-3D (below), selecting the 'message notification icon 330b' and/or 'background music setting icon 330c' results in the display of menu window 340—consistent with all of Ahn's other described embodiments—not the launching of an application. EX2018, ¶118; EX1004, ¶[0039] ("the user can directly enter a menu related to the icon 330 while viewing the standby screen 300 in a standby screen state").

FIG. 3C

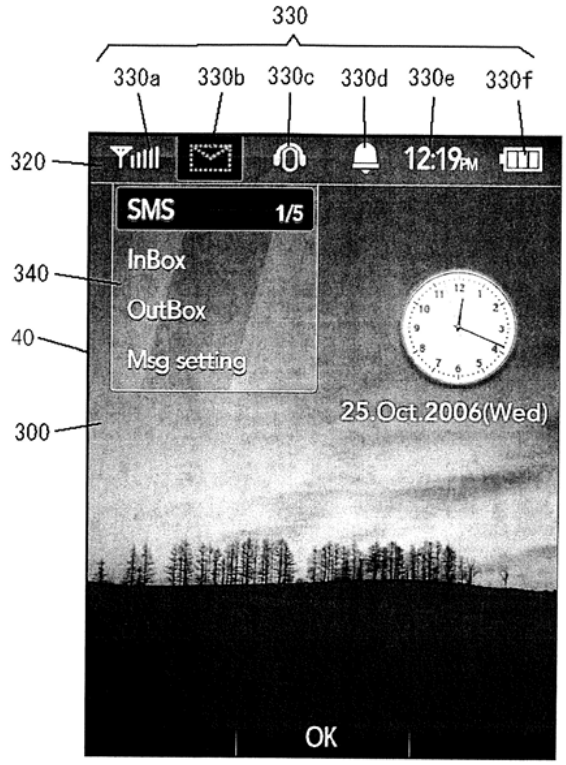
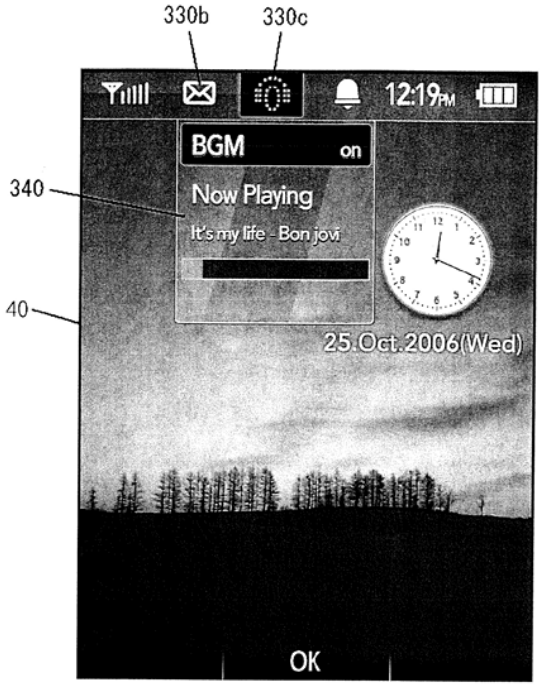


FIG. 3D



As shown in FIG. 3C (above), with icon 330b selected, the user can scroll through and select the various sub-menus of the window 340. EX1004, ¶¶[0042]-[0043]. The user can then "click[] the rightward direction key 34" to select the icon 330c and a "pop-up menu window 340 related to the background music setting icon 330c … is transparently displayed, as shown in FIG. 3D." EX2018, ¶120 (quoting EX1004, ¶[0045]). Alternatively, the user can click the leftward direction key 38 (from FIG. 3C) to select the icons 330a that opens another window 340. Thus, Petitioner's assumption that selection of icon 330b-330c would launch an application is directly undermined by Ahn's disclosure, and would contradict Ahn's objective to have the standby screen visible during operation. EX2018, ¶120;

EX1004, ¶[0045] (pop-up menus allow the user to "enter menus related to the icon 330 displayed in the indicator area 320 ***when the standby screen 300 is displayed*** [and] without separate menu manipulation"); *see also id.*, ¶¶[0005]-[0006] (describing problem where "the standby screen disappears" when a menu is displayed).

Petitioner's proposed modification to have these icons 330 "displayed throughout the standby screen 300 like the menu of icons shown in FIG. 5D of Chaudhri" (1116-Pet., 56) adds additional deficiencies. EX2018, ¶121. For example, a POSITA would have understood that moving icons 330b-330c to the interior of standby screen would have diminished the functionality of Ahn's device. *Id.*

Icons 330 are visible during other operations, such as navigation of other menus or execution of an application, so that a user can receive information even if the standby screen is obscured. EX2018, ¶122. For example, "the message notification icon 330b is displayed in the indicator area 320 if a message arrives" and, thus, the user knows a message has been received if icon 330b is displayed in indicator area 320. *Id* (quoting EX1004, ¶[0041]). However, if icon 330b were displayed like Chaudhri's applications (shown in FIG. 5D below) then a user would not be aware of the received message when interacting with other menus or applications. EX2018, ¶122.

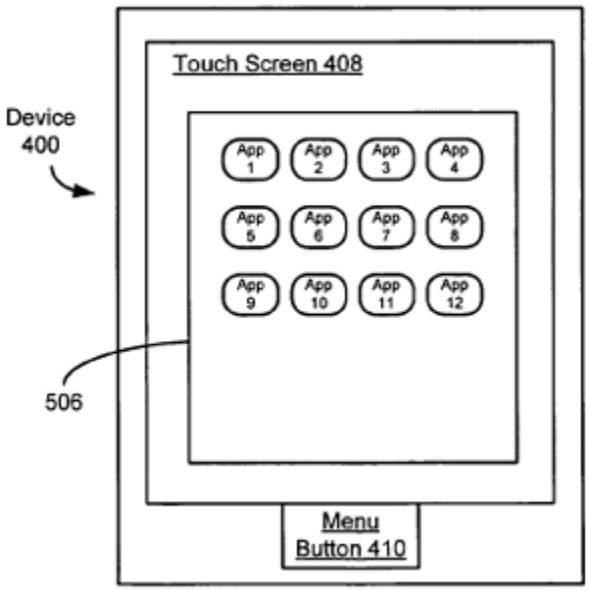


Figure 5D

Thus, the functionality of Ahn's message ***notification*** icon 330b would be eliminated in Petitioner's modification. *Id.*

Further, distilling Ahn's icon 330b into launching a single application would reduce usability. EX2018, ¶123. In Ahn's embodiment, selection of icon 330b opens pop-up window 340 with four sub-menus that would allow the user to access both SMS messages, e-mail messages, and settings. EX1004, FIG. 3C; EX2009, 18:13-19:14. Removing this optionality would prevent the user effectively managing its messages and require the user to navigate between three or four different applications. EX2018, ¶123. Petitioner provides no real benefit for its proposed modification and a POSITA would not have made such a modification in the face of these known drawbacks. *Id.*

2. Dependent Claim 189

Claim 189 requires the gesture to be a swipe down gesture. Petitioner maps only a left swipe gesture for its mappings of claims 2 and 186 and Petitioner fails to allege that this new, swipe down gesture would meet all the limitations of claims 2 and 186—which claim 189 depends from. *See* 1116-Pet., 57-58. A POSITA would understand that Ahn's swipe down gesture would correspond to the opening of pop-up windows 340 (i.e., top menu) associated with indicator area 320. EX2018, ¶125. It is undisputed that these windows 340 do not blur the clock widget. *Id.*; EX2009, 22: 14-20. Thus, for at least this reason, Petitioner's theory is deficient. *See also* EX2018, ¶125 (A POSITA would not open Ahn's right hand menu with a swipe down gesture)

3. Dependent Claims 197, 199, 200-204

Claim 186 recites "the at least one other object is displayed via a first virtual display layer" and a "menu is displayed in a second virtual display layer." EX1001, 110:16-17. Petitioner's mapping is that the "clock widget of standby screen 300[] is displayed" via the first display layer and the menu 1300 is displayed in a second display layer. Pet., 52. Claims 197, 199, and 200-204 provide further limitations on this second display layer. EX1001, 110:16-17, 113:39-114:18. All of Petitioner's theories for these claim are either deficient or create inconsistencies with Petitioner's previous mappings.

For claim 197, the "blur includes decreasing a transparency or a translucency of the second display layer." EX1001, 113:43-46. To meet this limitation, Petitioner asserts its modification would display "the menu fading in, and thus becoming less transparent, as the menu is opening and overlaying the clock widget." Pet., 61. Thus, the blur is performed by the menu in Petitioner's mapping. EX2018, ¶127. However, Petitioner abandoned this theory for its mapping of Limitation [186b]. *See* §VI.B; 1116-Pet., 43-44. Petitioner's attempt to revert to that theory for 197, which depends from claim 186, creates internal inconsistencies that cannot be implemented by Ahn's device.[12]

As Dr. Terveen explains for Petitioner's Limitation [186b] mapping, "the process of displaying the first menu list doesn't happen until the distance traveled has exceeded the first distance." EX2009, 32:14-33:3. And, for Ahn's right menu 1300, the gesture associated with the touch and drag operation is detected to be complete when the distance traveled has exceeded the first distance. EX2018, ¶128. Accordingly, the process of displaying the first menu doesn't happen until the gesture is detected to be complete. *Id.* Consistent with Petitioner's Limitation

[12] Reducing optical intensity of the clock widget in the first display layer, as in Petitioner's Ahn-Chaudhri theory, would not blur via the second display layer. EX2018, ¶129.

[186b] mapping, any alleged "fading in … as the menu is opening" (1116-Pet., 61) would not occur before a completion of the gesture is detected, as required by Limitation [2d]. Petitioner's theory thus cannot satisfy both Limitation [197] and Limitation [2d] and must fail.

For claim 199, the "blurring is continuously increased, until the at least one other object is completely obscured by the second display layer." EX1001, 113:56-60. Petitioner relies on its theory to "to vary the optical intensity (e.g., the blur) of the standby screen 300 or at least the clock widget portion thereof" to "increas[e] the blur until the clock widget is no longer visible." 1116-Pet., 62. But varying the optical intensity of the clock widget—***in the first layer***—fails to explain how the clock widget is "completely obscured by the second display layer," as claimed. EX2018, ¶130. Further, as shown in Ahn's FIG. 13b, menu 1300 only partially overlaps the clock widget and would not "completely obscure" the clock widget. *Id.* Thus, Petitioner's mapping must fail.

For claim 201, Petitioner must show the clock widget "is blurred by continuously decreasing a magnitude of a translucency of the second display layer that overlays [clock widget] …." EX2018, ¶133. Petitioner references its interpretation that a "translucent" menu would "blur" the clock widget and concludes its "axiomatic that increasing blur decreases translucency." 1116-Pet., 62-63. Petitioner then references its analysis in [186.d]—that varies "the optical

intensity of the standby screen" containing the clock widget—and concludes its modification meets the claim. *Id.* Nothing in Petitioner's analysis explains how its modification meets the claims and, thus, fails to articulate its theory with the required particularity. 35 U.S.C. § 322(a); *Harmonic v. Avid Tech*, 815 F.3d at 1363 ("[T]he petitioner has the burden from the onset to show with particularity why the patent … is unpatentable."); EX2018, ¶134.

Nevertheless, Petitioner's theory fails. EX2018, ¶135. If Petitioner is relying on its variation of the clock widget from its Ahn-Chaudhri theory, as discussed in Limitation [186d], this would not result in any change in "the second display layer" because Petitioner contends its clock widget is in "the first display layer." EX2018, ¶136. Alternatively, if Petitioner is relying on Ahn's menu as blurring the clock widget, as discussed in its Ahn-only theory of Limitation [2d], the menu will not appear until the gesture is detected to be complete. EX2018, ¶137; 1116-Pet., 43-44; EX2009, 32:14-33:3.

<u>For claim 202</u>, Petitioner must show the clock widget "is blurred, by the second virtual display layer that overlays the at least one other object being displayed to fade-in while the at least one other object is displayed to fade-out." EX2018, ¶138. As explained above, Petitioner's modification would vary the optical intensity of the clock widget during the gesture and the menu would not be displayed until after the gesture is completed. Thus, Petitioner's modification would not have the

menu fade-in ***while*** the clock widget is displayed to fade-out. EX2018, ¶139 (In Petitioner's mapping the menu would allegedly fade in ***after*** the gesture is complete and the clock is done fading).

For claim 203, Petitioner must show the clock widget "is blurred by continuously decreasing a magnitude of a transparency of the second display layer." EX2018, ¶140. Petitioner's theory is deficient for the same reasons discussed above with respect to claim 201. EX2018, ¶141. Claim 204 depends from claim 203 and is patentable for at least the same reasons.

D. IPR2024-01115: Dependent Claims 27-79 and 223

IPR2024-01115 challenges several dependent claims in addition to independent claim 2. IPR2024-01115 Petition (1115-Pet.), 1. Each of these fail for the reasons explained above with respect to claim 2 and, independently, for the additional reasons below.

1. Dependent Claim 37

Claim 37 requires that "the menu is sharpened and magnified when displayed." EX1001, 98:11-13. Neither Ahn nor Chaudhri disclose magnification of a menu or any other object. EX2018, ¶144. To fill this silence, Petitioner contends that it "was well known to combine blur with other 'focus and context' techniques" such as "'distortion oriented or spatial methods' in which 'geometry of the display is distorted to allow a magnification of interesting information without

losing the (less magnified) context.'" 1115-Pet., 43-44 (quoting EX1008, 1-2). This is incorrect.

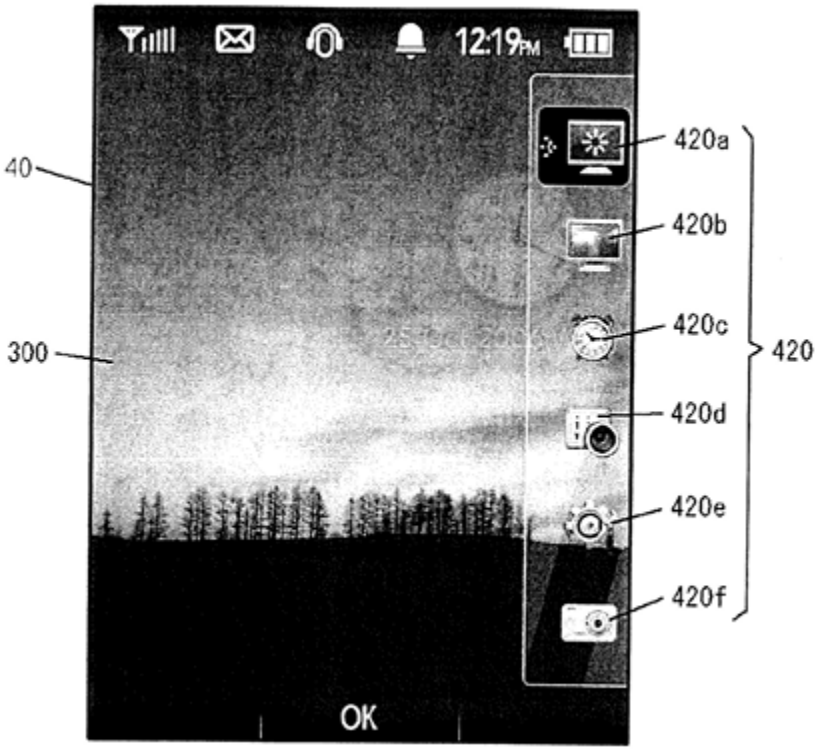
Kosara (EX1008) describes a "Semantic Depth of Field (SDOF)" technique that is "an ***alternative approach*** to focus-and context [techniques]." EX1008, Abstract. Kosara then describes an existing Depth of Field (DOF) approach for displaying geographical information that utilizes 26 layers, "each layer ha[ving] an interest level associated with it that the user can change." EX1008, 2. "The interest level is a combination of blur and transparency, making less interesting layers more blurred and more transparent at the same time." *Id.* This changing of the "combination of blur and transparency" for a DOF approach does not establish it "was well known to combine blur with other 'focus and context' techniques" as Petitioner alleges. EX2018, ¶¶144-145.

In a separate section describing the "different kinds of focus and context" techniques, Kosara discloses "distortion oriented or spatial methods" where the "geometry of the display is distorted to allow a magnification of interesting information without losing the (less magnified) context." EX1008, 1; EX2018, ¶146. These methods make it "possible to navigate information spaces that are far too large to be displayed on a screen" and include "fisheye views," "hyperbolic trees," and "stretchable rubber sheets." *Id*; *see also id.*, 8 (citing EX2010, EX2011). In other words, a user can distort an already displayed interface to explore more

detailed information that cannot be legibly displayed at all times. EX2018, ¶¶147-149 (citing EX2010, 1-3; EX2011, 1-3); EX1008, 1 (methods for "exploration and analysis of very large data-sets" that "are far too large to be displayed on a screen."). A POSITA would understand these techniques were inapplicable to Ahn's device where (1) all information is legibly displayed on the screen and (2) utilizes pop-up menus to selectively display information rather than always displaying the information. EX2018, ¶150 (citing EX1008, 1); *see also* EX2010, 1-3; EX2011, 1-3.

Further, referring to Ahn's FIG. 4B (below), menu 420 already spans the entire length of the display screen and is clearly displayed; thus, there would be no need to magnify the menu. EX2018, ¶151.

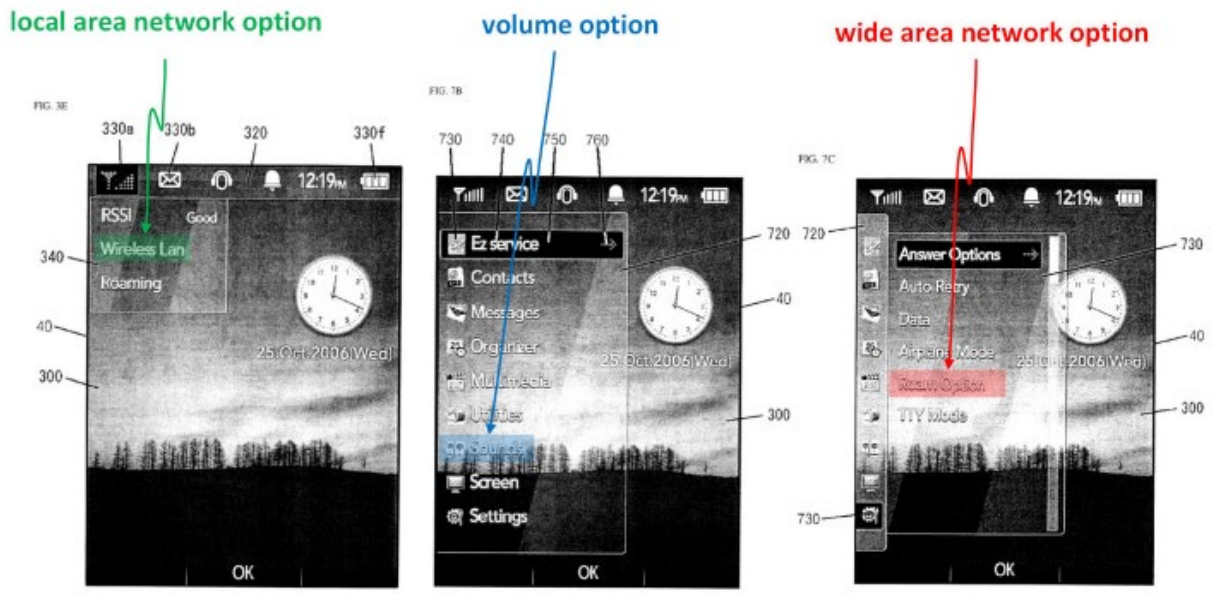
FIG. 4B



Petitioner's assertion to magnify the menu also contradicts its theory that the "menu slides onto the screen" (1115-Pet., 34). EX2018, ¶151. As explained above, none of the record evidence supports that a POSITA would modify Ahn so that "that the menu is sharpened and magnified when displayed."

2. Dependent Claim 64

Claim 64 requires that the menu "includes a wide area network option, a local area network option, and a volume option." EX1001, 99:62-65. As seen in Petitioner's illustration (reproduced below), Petitioner identifies three icons from three separate menus as corresponding to the claimed options.



EX1004, FIGS. 3E, 7B, 7C (annotated)

1115-Pet., 53-54. Petitioner contends it would be obvious to implement these 'icons' into Ahn's menu 420. *Id.*

At the outset, Petitioner's alleged local area network option is not selectable and would not be implemented into menu 420. EX2018, ¶153 (the sub-menus 420a-f of Ahn's menu 420 are associated with selectable functionality); EX1004, FIGs. 5A-5D. As shown in FIGs. 3C-3D, a "user may select a sub-menu among sub-menus in the pop-up menu window 340 by moving the cursor" with the direction keys. EX1004, ¶[0043]; *see id*; ¶[0042] (cursor positioned at SMS menu for FIG. 3C). However, some windows 340 are not associated with selectable options. EX2018, ¶154. For example, "as shown in FIG. 3E[,] [a] cursor may not exist in a sub-menu in the pop-up menu window 340 related to the signal intensity icon 330 a, and thus the user ***may not be able to select*** corresponding sub-menus." EX1004, ¶[0047]. Thus, Ahn discloses the "Wireless Lan" icon identified in Ahns' FIG. 3E as being not selectable. EX2018, ¶154. A POSITA would not have implemented these non-selectable icon as part of menu 420. EX2018, ¶154; EX1003, ¶210 (designer can include whatever "functions they want within an opened list/menu"). Additionally, even if selectable, a POSITA would not have moved an option associated with indicator area 320—which is always visible—to menu 420. EX2018, ¶155; *see also* §VI.C.1.

3. Dependent Claims 67-68

Claims 67-68 depend from claim 27 and require that the Petitioner show "the blur includes decreasing a [translucency/transparency] of a virtual display layer

overlaying the [clock widget]." EX2018, ¶156; 1115-Pet., 57-59; *id.*, 29 (the clock widget is the at least one other object). Petitioner contends its modification meets the claimed features because "the virtual display layer containing the menu [is] fading in as the menu is opening." *Id.*, 57-59. However, as explained above in Section VI.B, Petitioner's modified operation does not display the menu opening until after the gesture is detected to meet the distance threshold associated with displaying the menu. EX2018, ¶157; EX2009, 32:14-33:3. Thus, consistent with Petitioner's Limitation [27] mapping, any alleged "fading in … as the menu is opening" (1115-Pet., 57-59) would not occur before a completion of the gesture is detected, as required by Limitation [2d]. EX2018, ¶157; *see also* §VI.C.3.

4. Dependent Claims 69-70

For claim 69, Petitioner contends that a POSITA would have found it "obvious that, in some implementations, the menu associated with the left direction would be larger to accommodate a larger list of menu items (e.g., menu 720), which would overlap the entire clock widget." Pet., 61. Petitioner and its expert—who parrots this assertion without further analysis—cites only to Ahn's FIG. 7B to support this modification. This fails to meet Petitioner's burden for establishing obviousness and is merely a conclusory assertion that is not substantial evidence. See 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."); *see*

also Xerox Corp. v. Bytemark, Inc., IPR2022-00624, Paper 9 at 15–17 (PTAB Aug. 24, 2022) (precedential) (according "little weight" to declaration testimony that contains a verbatim restatement of a petition's conclusory assertions without additional supporting evidence or reasoning).

Nevertheless, Petitioner's modification also fails to disclose the claimed features. EX2018, ¶160. As explained in Section VI.B, Petitioner's modified operation does not display the menu until after the gesture exceeds the distance threshold associated with displaying the menu. Thus, the display of the menu cannot meet the claimed "continuous[]" blurring.[13] EX2018, ¶160.

To the extent Petitioner relies on varying the optical intensity of the *background* clock widget (*See e.g.,* §VI.A.2) for the blurring, its proposed operation would not continuously increase the blurring "***until*** a predetermined amount of an interface including the at least one other object is completely ***obscured by an overlaying virtual display layer***." EX2018, ¶161. In Petitioner's modification the optical intensity variation must occur before the gesture is complete to "progressively increase[]" (1115-Pet., 59) as a function of the gesture. EX2018,

[13] Petitioner's theory also requires that the menu be "embodied in an opaque form" (1115-Pet., 61) and, thus, the menu would no longer blur any underlying objects as relied on in Ahn's menu sliding theory. EX2018, ¶160.

¶161. However, this variation would stop when the user completed the gesture. EX2018, ¶161 (citing EX1005, ¶[0087,]FIGs. 8A-8C). Thus, Petitioner's operation would decrease the clock widget intensity until the gesture is complete—at which point the process of displaying the menu has not yet begun (EX2009, 32:14-33:3)—after which the menu would be displayed. EX2018, ¶161. Such an operation would not continuously increase the blurring "until a predetermined amount of an interface including the at least one other object is completely obscured by an overlaying virtual display layer." EX2018, ¶161.

Claim 70 requires that the "blurring is continuously increased … until a predetermined amount of an interface including the at least one other object is obscured by an overlaying second virtual display layer." EX1001, 100:34-41. Petitioner's mapping of claim 70 is deficient for at least the same reasons as its claim 69 mapping. EX2018, ¶162.

5. Dependent Claims 71-74

Claims 71 and 73 require Petitioner to show that the clock widget "is blurred by continuously decreasing a magnitude of a [translucency/transparency] of a virtual display layer overlaying the at least one other object as a continuous function of an increase in the change in the magnitude of the gesture." 1115-Pet., 64-66. Petitioner contends this is met by "a "fade-in" of the virtual display layer containing the menu that is being opened." *Id.* As explained above in Section VI.B, Petitioner's modified

operation does not display the menu opening until after the gesture is detected to meet the distance threshold associated with displaying the menu. EX2018, ¶164; EX2009, 32:14-33:3. Thus, consistent with Petitioner's Limitation [27] mapping, any alleged fading in as the menu is being opened would not occur before a completion of the gesture is detected, as required by Limitation [2d]. EX2018, ¶164; *see also* §VI.C.3. Further, as the menu is not displayed until the gesture is complete, it would not open "as a continuous function of an increase in the change in the magnitude of the gesture," as required by claims 71 and 73. EX2018, ¶164.

6. Dependent Claims 75-79

Petitioner incorporates its analysis of claim 75 for each of claims 76-79 without further explanation. 1115-Pet., 68-72.

Petitioner's theory is based on the faulty assumption that "selecting the 'message notification icon 330b' and/or 'background music setting icon 330c' … would have launched an application." 1115-Pet., 68-72; EX2018, ¶167. As explained in Section VI.C.1 and clearly depicted in Ahn's FIGs. 3C-3D, the selection of icons 330b and 330c resulted in the display of pop-up window 340, not the launching of an application. EX1004, ¶¶[0037]-[0043].

Further, Petitioner's assertion that the icons of indicator area 320 "could be displayed as organized throughout the standby screen 300 like the menu of icons shown in FIG. 5D of Chaudhri '842" (1115-Pet., 69) is legally insufficient to

establish obviousness. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) ("Obviousness concerns whether a skilled artisan not only ***could have made*** but ***would have been motivated to make*** the combinations or modifications of prior art to arrive at the claimed invention.") (emphasis in original). For example, a POSITA would have understood that moving message notification icon 330b from indicator area 320 —where the icon is visible during other operations—would have diminished the functionality of this icon and would have been contrary to Ahn's teachings. EX2018, ¶168; §VI.C.1. Additionally, modifying these icons to launch a single application would decrease the efficiency and optionality these icons provide to a user. EX2018, ¶168; §VI.C.1. Thus, a POSITA would not have made this alleged modification. EX2018, ¶168.

Finally, Petitioner's proposed modification is inconsistent with operations of both Ahn and Chaudhri. EX2018, ¶169. As shown in Chaudhri's FIG. 5D, a menu 506 is displayed "[u]pon completion of the unlock gesture." EX1005, ¶[0076].

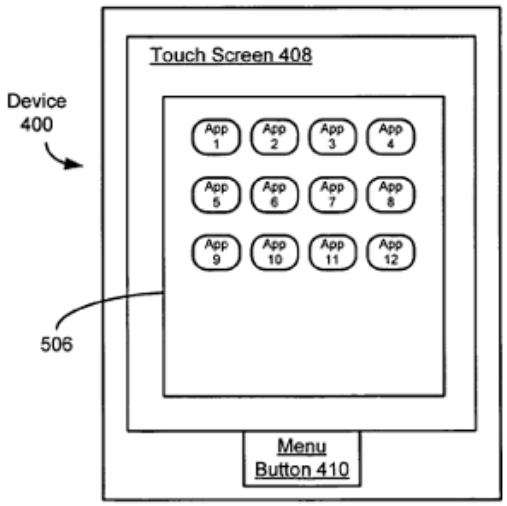
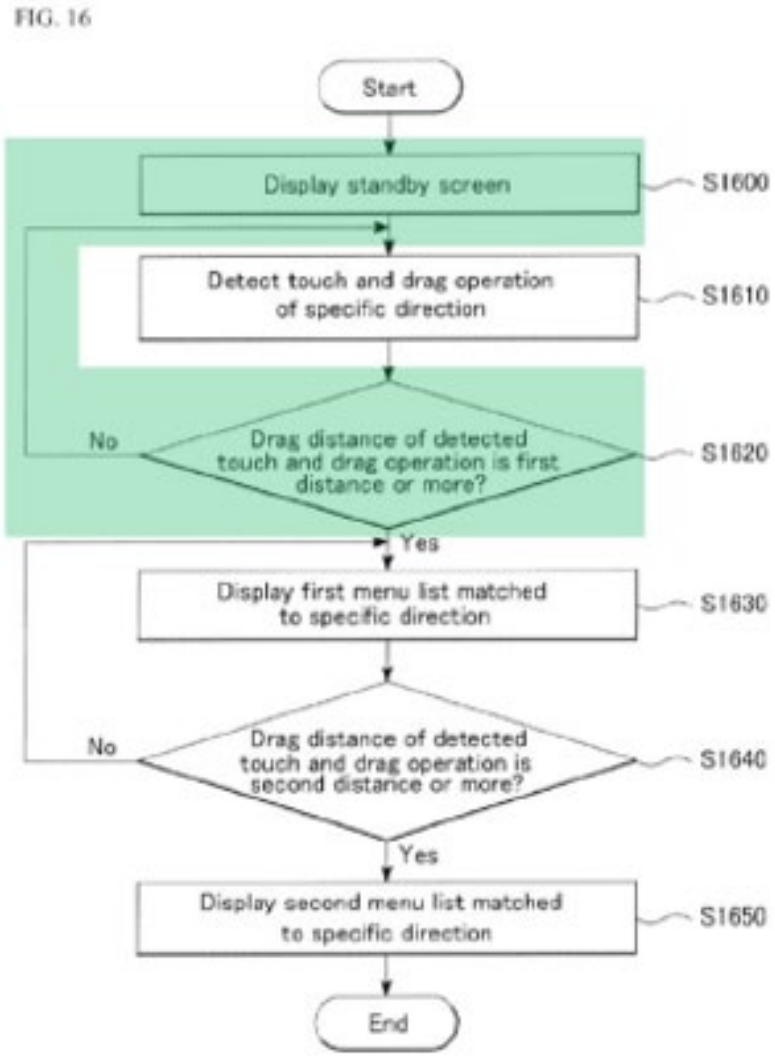


Figure 5D

Ahn also discloses displaying a first menu list matched to a specific direction if a drag distance of the touch and drag operation is a first distance or more. EX1004, ¶[0109].

Petitioner's modification performs contrary to both options. EX2018, ¶¶169-170. Rather then displaying a menu (e.g., 506) that includes objects corresponding to various applications as taught in Chaudhri (EX1005, FIG. 5D, ¶[0076]) when a gesture is incomplete, Petitioner contends that these applications would be displayed when the gesture is not complete. EX2018, ¶169. However, the cited portions of both Ahn and Chaudhri relied upon by Petitioner are contrary to such a modification and Petitioner theory is left unsupported.

Further, to the extent that Petitioner's highlighting of Ahn's FIG. 16 is intending to suggest that Ahn would re-display the standby screen (as opposed to taking no action) when the drag distance is below the first distance, this is incorrect. EX2018, ¶170. If the drag distance is detected to be less than the first distance in step S1620, the only function performed by Ahn is to continue detecting the touch and drag operation. EX2018, ¶170. A POSITA would understand that this operation would not take an action to display a home screen "when the magnitude … of the gesture detected on the touch screen is detected to not increase above the distance threshold," as claimed. *Id.*



EX1004, FIG. 16 (highlighted)

7. Dependent Claim 223

Claim 223 recites that "the blur is accompanied by a fading." EX1001, 119:39-40. Petitioner incorporates its analysis of claim 58 (1115-Pet., 72). Petitioner relies on Chaudhri's disclosure that the transition in optical intensity can be "based on color, hue, color saturation, brightness, contrast, transparency, and any combination thereof." EX1005, ¶[0085]. Petitioner fails to explain how any of the

cited parameters or "combination thereof" would arrive at combination of both blur and fading. Thus, Petitioner's theory is incomplete and fails to show that its modification would result in the clock widget being blurred and "accompanied by a fading," as claimed.

VII. GROUND 1B: THE PETITION FAILS TO ESTABLISH OBVIOUSNESS OF CLAIMS 1 AND 208-216 OVER AHN, CHAUDHRI, AND SHIPLACOFF

Petitioner fails to show its combination of Ahn, Chaudhri, and Shiplacoff would arrive at each of the claimed limitations. Petitioner contends that independent claim 1 and dependent claim 208 (depending from claim 2) are obvious over Ahn, Chaudhri, and Shiplacoff. Pet., 34. Claims 209-216 depend from claim 208. EX1001, 115:21-53. For the reasons below, Petitioner fails to show the Ahn-Chaudhri- Shiplacoff combination would render obvious either of claims 1 or 208.

A. Limitation [1.h]

Petitioner incorporates its analysis of Limitation [2d] for Limitation [1h] without additional explanation or context. As explained above in Section VI.A, Petitioner fails to show its combination of Ahn and Chaudhri disclose the claimed features and claim 1 is patentable for at least the same reasons.

B. [1.d], [1.e]: Moving First and Second UI Elements While the First Contact is Moving Across the Display

1. Claim Construction

Limitations [1.d]-[1.e] recite:

while the first contact is detected moving across the display:

moving the first user interface element in a first direction on the display at a first speed; [and]

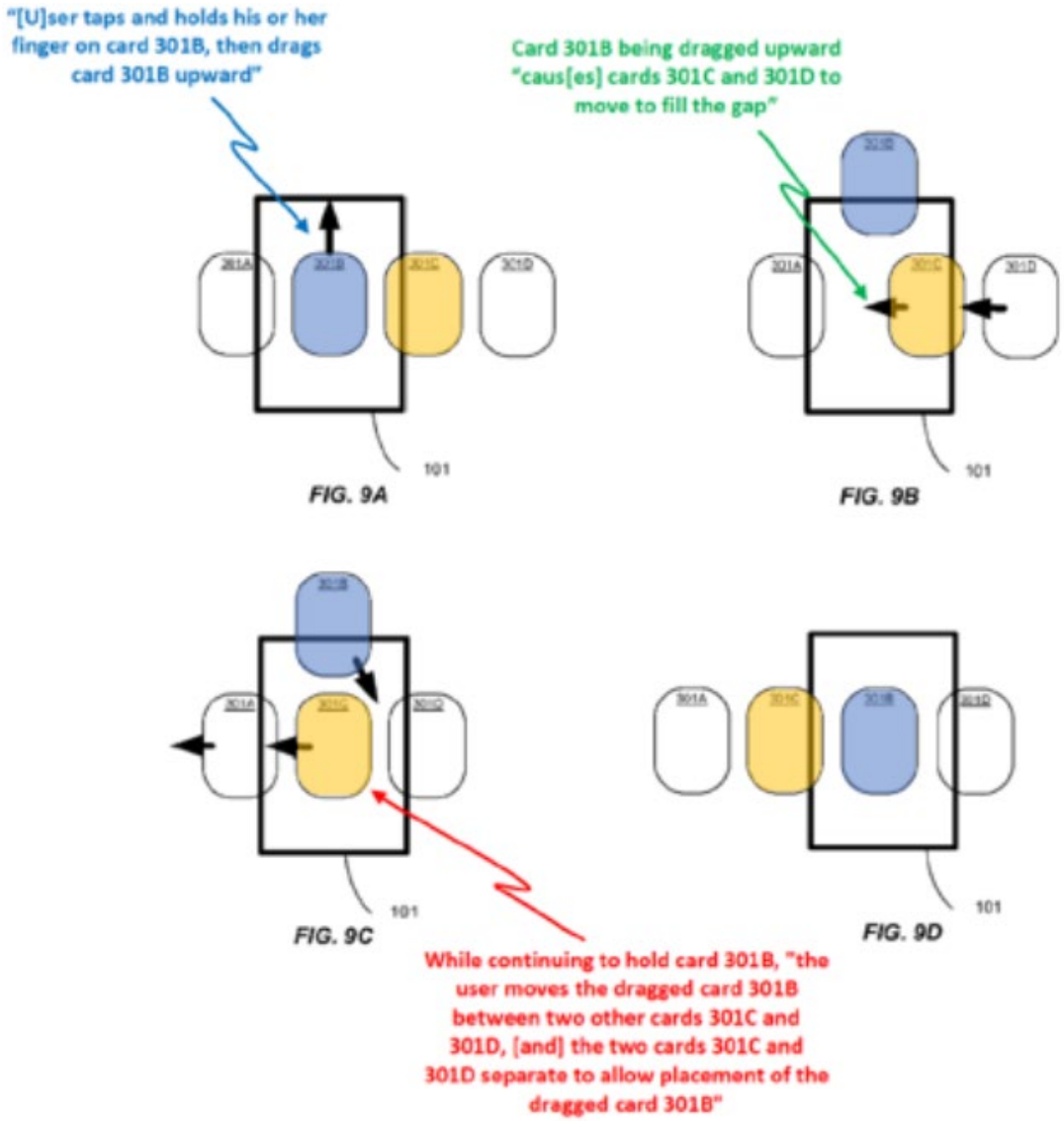
moving the second user interface element on the display at a second speed greater than the first speed

EX1001, 95:21-27. These limitations include three features: (1) a first contact detected moving across the display; (2) moving a first user interface element (UIE) in a first direction at a first speed; and (3) moving a second user interface element (UIE) at a second speed greater than the first speed. *Id.* As written, feature (1) includes a clause ended with a colon that is followed by features (2) and (3) which are indented thereunder. *Id.* Thus, feature (1) modifies both features (2) and (3). EX2018, ¶175. That is, moving the first UIE and moving the second UIE must occur "while the first contact is detected moving across the display."

To arrive at the claimed combination of features, the Petitioner must establish that its modification (1) detects the first contact moving across the display and (2) while the first contact moving: (2a) moving the first UIE in a first direction on the display at a first speed and (2b) moving the second UIE at a second speed greater than the first speed. EX2018, ¶176.

2. Petitioner's Theory Fails to Arrive at the Claimed Features

Petitioner asserts that the dragging of card 301 from one position to another in card mode corresponds to the first contact. Pet., 43. Referring to Petitioner's annotated version of Shiplacoff's FIGs. 9A-9D (below), Petitioner identifies "card 301B" (highlighted blue by PO) as the first UIE (Pet., 46-47) and card "301C" (highlighted yellow by PO) as corresponding to the second UIE (*id.*, 49).



EX1013, FIGS. 9A-D

According to Petitioner, card 301B "mov[es] at the same speed as the user's finger as it is dragging across the touchscreen." *Id.*, 47. Petitioner concedes that Shiplacoff is silent on the speed of cards 301C. *Id.*, 48. Nevertheless, Petitioner contends the speed of card 301C "could move quickly" "[b]ased on [Shiplacoff's] use of the word 'snap.'" *Id.*, 49. Specifically, Petitioner alleges that card 301C (second UIE) would move faster than card 301B (first UIE) when "snapping card 301C to fill the gap while a user slowly drags card 301 upward." Pet., 49.

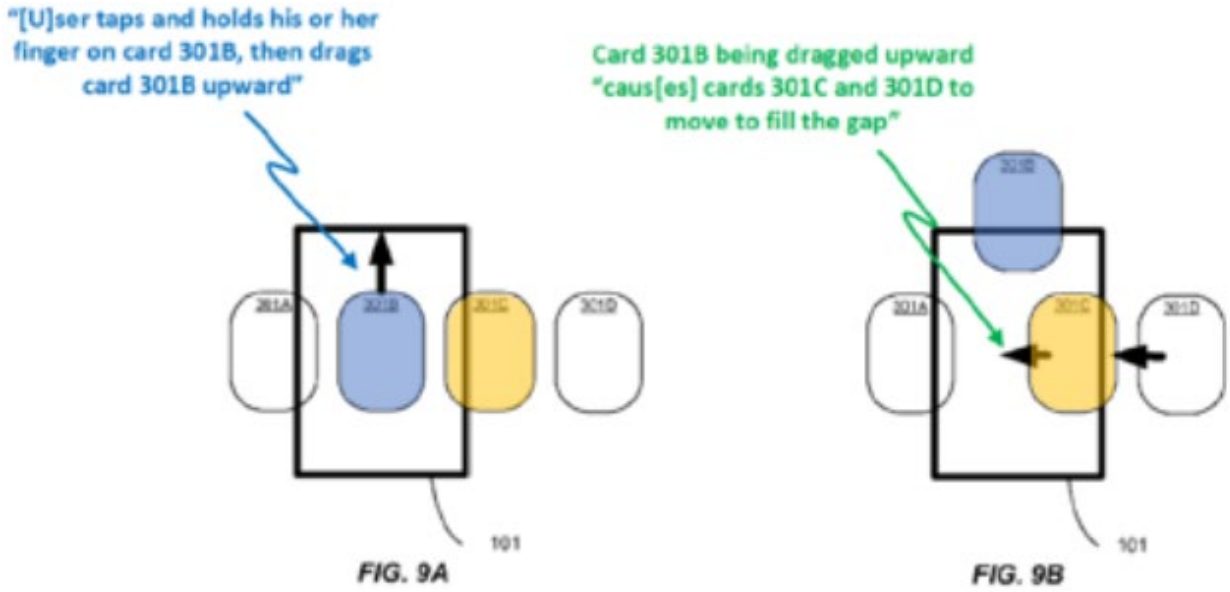


FIG. 9A FIG. 9B

a. Shiplacoff's "Snap" Does Not Disclose the Claimed Movement

Petitioner's theory regarding the speed of the cards is based on the assumption that the term "snap" means moving an object quickly. Pet., 49 ("Based on the use of the word 'snap,' a POSITA would have at least found obvious that the cards 301C and 301D could move quickly on the display."). However, Petitioner presents no

evidence to support this assumption and Petitioner's proposed meaning is contradicted both by Shiplacoff and the understanding of a POSITA. EX2018, ¶¶177-182

Shiplacoff uses the term "snap" in its paragraphs [0086] and [0094] to mean to align an object to a pre-determined position as is consistent with its plain and ordinary meaning. EX2018, ¶180 (citing EX1013, ¶[0086]; EX2012, ¶[0227]; EX2013, 2/8); EX2009, 75:2-18. As Shiplacoff explains "if the user drags cards 301 so as to place a card 301 sufficiently close to the central position to make it clear that the intention is to give the card 301 focus, the card 301 snaps into the central position upon completion of the drag operation." EX1013, ¶[0086]. "Thus, the user need not drag the card 301 all the way to the central position" for the card to end up positioned at the central position. EX2018, ¶180 (quoting EX1013, ¶[0086]). There is no disclosure or teaching in Shiplacoff that would suggest "snap" is related to the speed than an object moves. *See generally*, EX1013; EX2018, ¶180. Without any evidence to support its foundational assumption, Petitioner fails to meet its burden. Pet., 48-49.[14]

[14] Petitioner's assertions to what a POSITA would have found obvious do not cite to any expert testimony and are attorney argument that are entitled to no evidentiary weight. *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir.

Instead of providing any evidentiary link between "the use of the word 'snap'" and an object "mov[ing] quickly on the display" (Pet., 49), Petitioner seems to be tacitly relying a generalized use of snap in other contexts—outside of graphical user interfaces—that may have connotations to quick movements (e.g., snapping ones fingers). EX2018, ¶181. But this cannot establish that a POSITA, viewing Shiplacoff' s use of the term snap in describing its graphical user interface, would mean the cards would "move quickly on the display." *Id.*

A POSITA would have understood that "snap" is related to an object's alignment or position on the screen and not a speed that the object moves. EX2018, ¶182 (citing EX2014, ¶¶[0002]-[0003]; EX2012, ¶¶[0171]-[0172], [0227]; EX2013, 2/8; EX2016, 1-3). For example, as illustrated in FIGs. 6F-6H of Rapp, "after the first input ends" (as illustrated in FIG. 6G), the device automatically, without user intervention, "align[s] one edge of the user interface object 6002 with the first guide 6082." EX1012, ¶[0227]. As illustrated in FIG. 6G (below), "the user interface

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2017) ("Attorney argument is not evidence"). Although Dr. Terveen parrots this text in his declaration (EX1003, ¶366-368), this testimony fails to provide any analysis or explanation linking the work 'snap' to moving quickly. *See* 37 C.F.R. § 42.65(a) (Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight).

object 6002 is not aligned with the first guide 6082, whereas in FIG. 6H, the user interface object 6002 has been aligned with the first guide 6082 by the device." EX1012, ¶[0227].

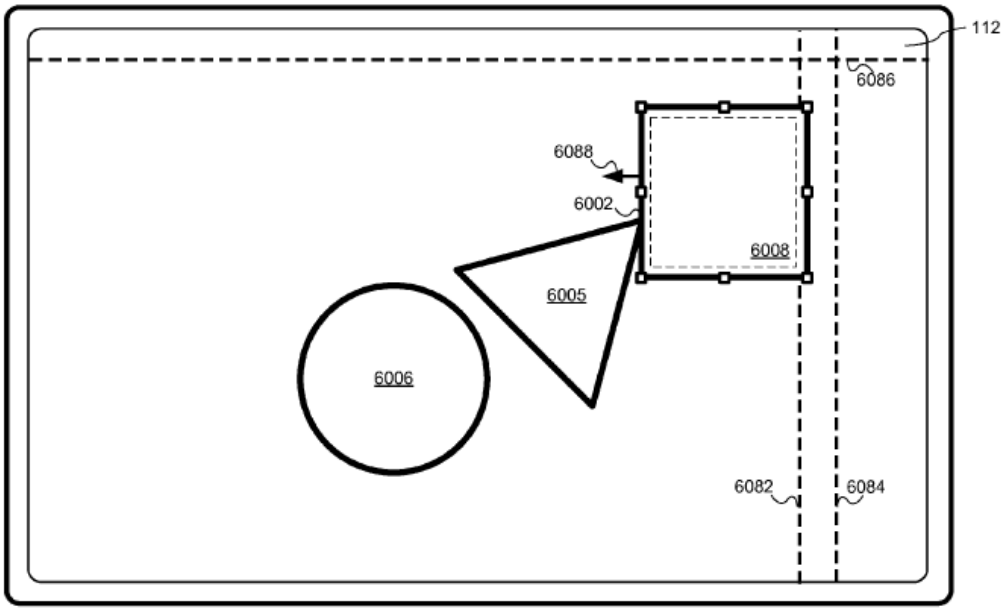


Figure 6G

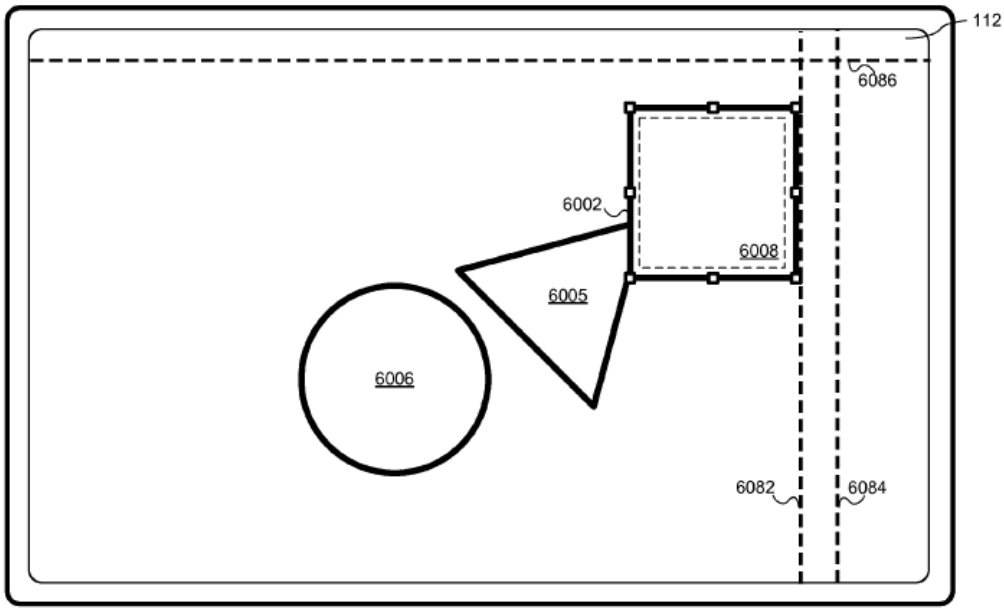


Figure 6H

Thus, a POSITA would understand when the cards "snap[] into the central position upon completion of the drag operation" (EX1013, ¶[0086]), they merely align with a pre-set position that corresponds to the central position and not that they "move quickly on the display," as Petitioner alleges. EX2018, ¶182.

Independent from this false assumption, Petitioner's theory also must fail because Shiplacoff's 'snap' only occurs "upon completion of the drag operation." EX1013, ¶[0086]. In other words, the snap only occurs after the user lifts their finger from the display. EX2018, ¶183; EX2009, 74:15-75:18 (Dr. Terveen confirming "if you move a particular card close enough, sufficiently close to the central position and then complete the drag operation, that is I guess remove your finger from the screen, then it will snap into place."). Yet, the claim requires moving the second UIE at the second speed "while the first contact is ***detected moving across the display.***" *Supra*, §VII.B.1. Thus, even crediting Petitioner's faulty assumption, Shiplacoff's 'snap' would not occur "while a user slowly drags card 301 upward," as Petitioner alleges; instead, it would occur after the user breaks contact with the display. EX2009, 75:13-18; EX2018, ¶183. There is nothing in Shiplacoff that describes moving UIEs at different relative speeds and, importantly, a POSITA would have understood that the Shiplacoff's description of its operation in FIGs. 9A-9D does not disclose the claimed operation. EX2018, ¶¶184-185.

b. Petitioner does not establish a design choice

Shiplacoff does not disclose moving two objects at different relative speeds while a first contact moving across the display. EX2018, 184. Petitioner attempts to spin Shiplacoff's failure to disclose this feature as an opening for a design choice to be made by a POSITA. Pet., 48-49 ("Shiplacoff does not specify … the speed … leaving the speed as a design choice"). But the failure to specify a design does not render the undisclosed design obvious. *See Uber Techs., Inc. v. X One, Inc.*, 957 F.3d 1334, 1338 (Fed. Cir. 2020) (finding design choice obvious when "[t]he record reflects only two possible methods of achieving" the function and both methods "were undisputedly known in the prior art"). Here, Petitioner concedes this relative movement of objects while a first contact is moving across the display is "not specif[ied]" in Shiplacoff. Thus, Petitioner cannot legally establish the claimed function as an obvious design choice as there is no evidence supporting this design was known in the prior art.

Referring to FIGs. 9A-9D of Shiplacoff: card 301B is moved in a first direction (upward) from FIG. 9A to FIG. 9B; card 301B is not moved at all from FIG. 9B to FIG. 9C; and card 301B is moved in a different direction (downward) from FIG. 9C to FIG. 9D. EX2018, 184. As shown in FIGs. 9B to 9C (below), the user's finger and card 301B are stationary as card 301C fills the gap. EX2018, 184; EX2009, 80:14-81:15 (Dr. Terveen stating "301B would not be moving" when

referencing "Figures 9B and 9C" and explaining "if the user's finger is not moving on the screen in this example, then card 301B would not be moving either").

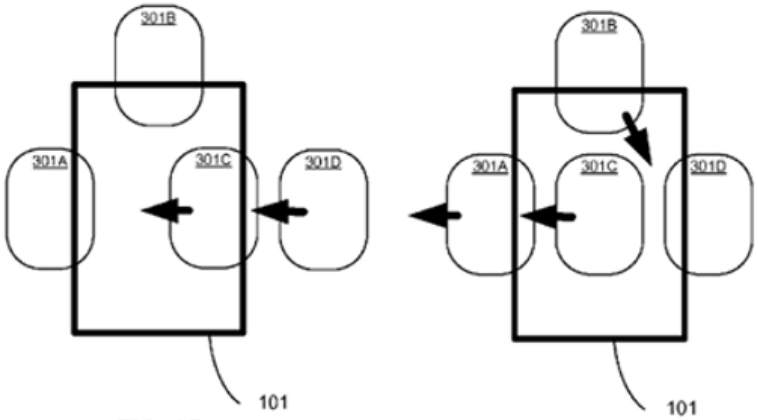


FIG. 9B FIG. 9C

Thus, in the time between the states shown from FIGs. 9B to 9C, the finger would not be moving across the display and card 301B would not be moving in a first direction at a first speed. *See id.*

Referring again to FIGs. 9A and 9B, card 301B is dragged upward from a first position (FIG. 9A) to a second position at which point the card is held stationary from some time (FIGs. 9B-9C).

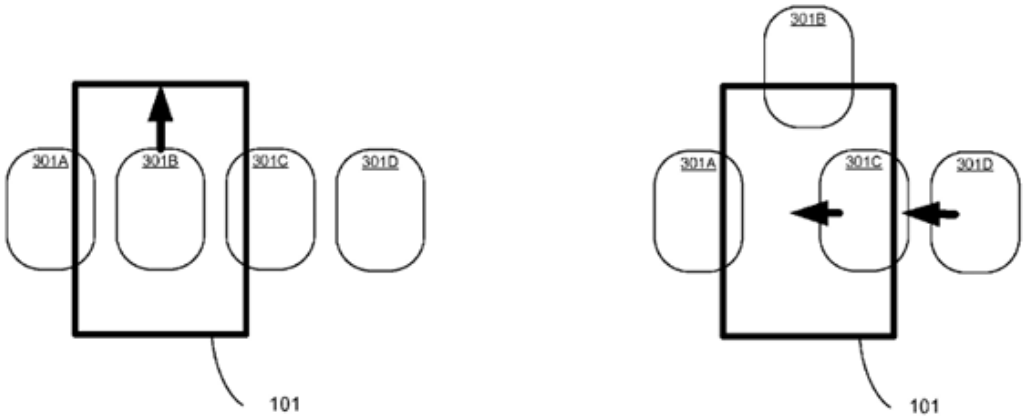


FIG. 9A FIG. 9B

To prove its theory, Petitioner must establish that in the time from Shiplacoff's FIG. 9A to a time before FIG. 9B (at which point card 301B is stationary), card 301C is moving faster than card 301B while the user is dragging card 301B. The only disclosure related to this unpictured time period is that the user "drags card 301B upward, causing cards 301C and 301D to move to fill the gap." This is insufficient to show the claimed operation. EX2018, 185.

As explained in Section VII.B.2.a, the claimed functionality is entirely absent from Shiplacoff and Petitioner's only theory to fill the gap (i.e., snapping means quick movement) is inconsistent with a POSITA's understanding. Petitioner also cannot rely on some undisclosed 'design choice' to meet its burden.

C. Petitioner's Mappings for Claim 208 are Deficient

Claim 208 depends from claim 2 and provides additional context to "the gesture." Petitioner fails to analyze or integrate its claim 2 mapping to its mapping for claim 208 and, at best, only shows that two disparate gestures meet the claimed features. This cannot satisfy Petitioner's burden.

1. Claim 208 modifies the gesture introduced in claim 2

Claim 2 recites to "detect at least part of ***a*** gesture" ([2c]) and blur at least a portion of the at least one other object "during detection of at least a portion of ***the***

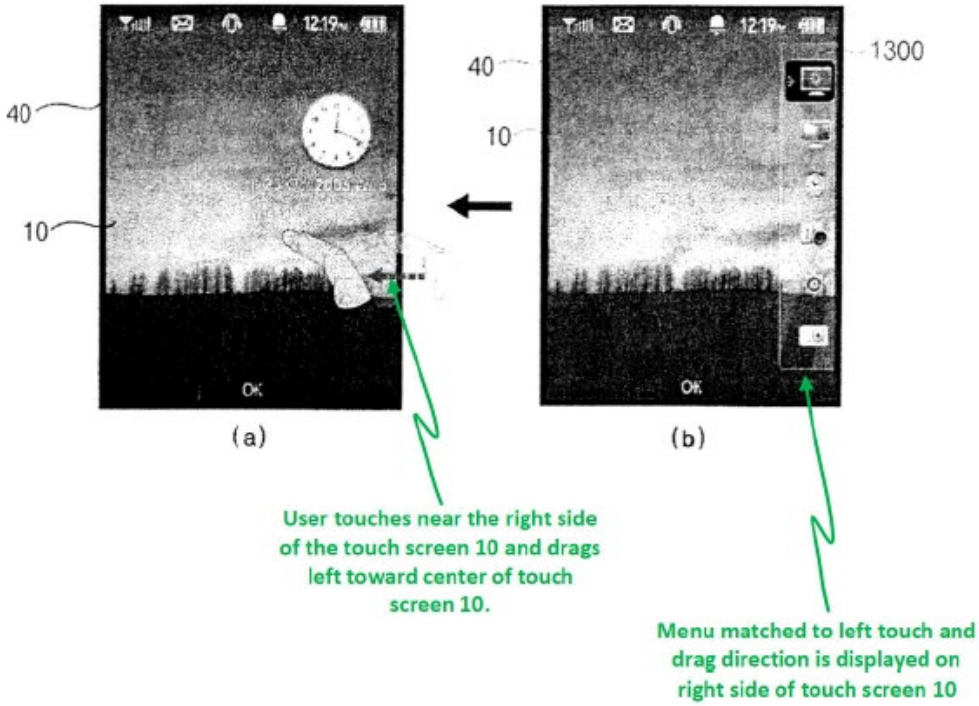
gesture" ([2d])[15]. EX1001, 95:44-49; Pet., *vi*. Claim 208 depends from the "apparatus of claim 2" and provides further limitations on "***the*** gesture" of claim 2 in Limitations [208.a]-[208.g]. EX1001, 114:60-115:20; Pet., *vi*; EX2009, 99:1-100:5. As explained below, Petitioner fails to explain how the gesture identified for its claim 2 mapping achieves the limitations on "the gesture" in claim 208.

2. Petitioner relies on two distinct gestures on two different interfaces

In mapping to "at least part of a gesture" for Limitation [2c], Petitioner identifies Ahn's ***left*** touch and drag operation shown in FIG. 13 (below—annotated by Petitioner). Pet., 24-26 ("a user initially touches near the right side or edge of the touch screen 10 and initiates the drag gesture that moves inward toward the center of the display.")

[15] A POSITA would have recognized that Limitation [2d]'s "***the*** at least *portion* of the gesture" refers back to "at least *part of* a gesture" as is clearly indicated the structure of the claim. EX2018, ¶187 n.6.

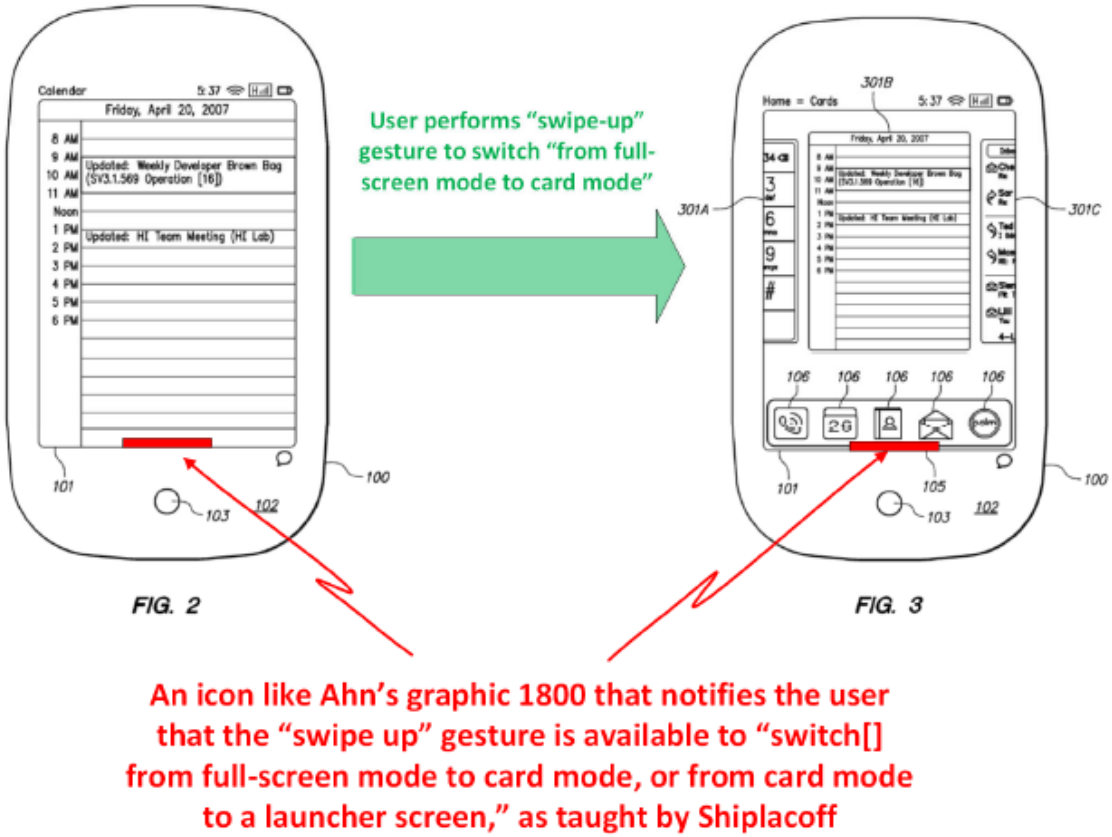
FIG. 13



EX1004, FIGS. 13a and 13b

This gesture starts on Ahn's standby screen and displays a right menu 1300, which Petitioner contends blurs the clock widget. Pet., 26-33. To open Ahn's right menu 1300, this gesture must occur on the standby screen. EX2018, ¶188 (citing EX1004, ¶¶[0050]-[0051]. [0106]).

In mapping to "***the*** at least part of a gesture" for Limitation [208a]-[208b], Petitioner identifies "a 'swipe up' gesture the one described in Shi[p]lacoff," which is illustrated in Petitioner's annotated FIGs. 2-3 of Shiplacoff (below). Pet., 52-55.



EX1004, FIGS. 2 and 3 (modified)

This gesture starts on an icon (red bar) displayed over Shiplacoff's application (e.g., calendar application) shown in "full-screen mode." Pet., 54-55. To meet Limitation [208.b], the 'swipe up' gesture must be detected when the particular application interface (e.g., calendar application) is displayed. *Id.*

That is, to meet Limitations [2c]-[2d], the gesture must be a right swipe that starts on Ahn's standby screen and, to meet Limitation [208.b], the gesture must be an upward swipe that starts on Shiplacoff's application. *See* EX1003, ¶¶89-90, 386-387. Of course, two different gestures that start on two different interfaces cannot

be the same gesture. EX2018, ¶190. Thus, Petitioner's modification fails to arrive at the claimed features.

3. Petitioner's swipe up gesture does not blur the clock widget, based on a change in a magnitude of the gesture being detected

a. Petitioner does not allege its modification performs the claimed blurring

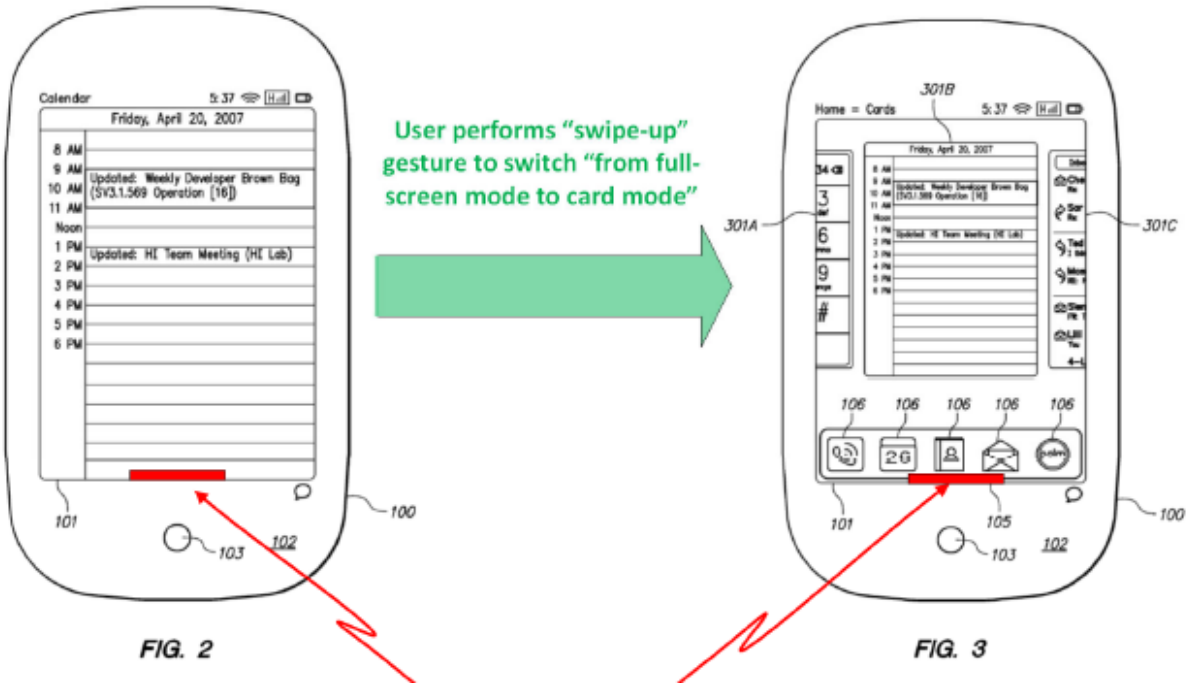
At the outset, Petitioner does not even allege that its "swipe up" gesture would blur the at least one other object (i.e., clock widget) based on a change in a magnitude of the gesture being detected, as required by Limitation [2d]. Pet., 50-68. For this reason alone, Petitioner's theory must fail. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.,* 800 F.3d 1375 (Fed. Cir. 2015) ("***burden never shifts to patent owner***.").

b. Petitioner's modification does not perform the claimed blurring

Nevertheless, Petitioner's alleged operation would not blur the clock widget.[16] As illustrated by Petitioner's annotated figure below, the swipe-up gesture starts on the calendar application and results in the display of a card mode. Pet., 52-53. The clock widget (or any icon displayed on Shiplacoff's launcher screen) is not depicted at any time during the swipe-up gesture. EX2009, 88:17-89:1 (launch screen is not

[16] This is the only object identified as the claimed at least one other object.

visible when application is in full-screen mode); EX2018, ¶192; EX1013, FIGs 2-3 (not depicting icons from launcher screen).



Without the "at least one other object" ever being depicted during the gesture, it cannot be blurred. EX2018, ¶192. Thus, Petitioner's swipe-up gesture fails to teach all the features required by the claims.

The only mention of 'blurring' in the context of Petitioner's swipe-up gesture is the modification that "the area between the displayed cards" would be displayed in a translucent form. Even accepting Petitioner's flawed modification, there is no explanation as to how this would result in blurring of the clock widget (1) "***during*** detection of … the gesture ***before a completion*** thereof" and (2) "based on a change in a magnitude of the gesture being detected."

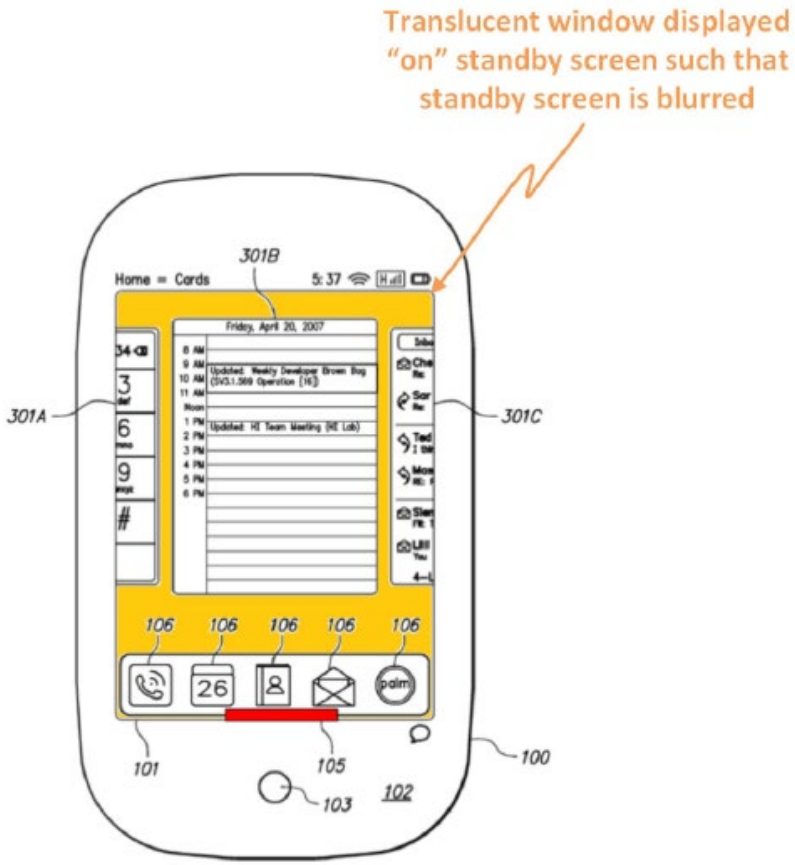


FIG. 3

EX1013, FIG. 1 (modified)

As explained by Shiplacoff, "device 100 can receive input from the user" and "such input can cause device 100 to switch from one display mode to another." EX1013, ¶[0073]. For example, FIG. 6A "shows a calendar application in full-screen mode" and "[i]n FIG. 6B, the user has switched to card mode … by pressing button 103." *Id.*, ¶[0097].

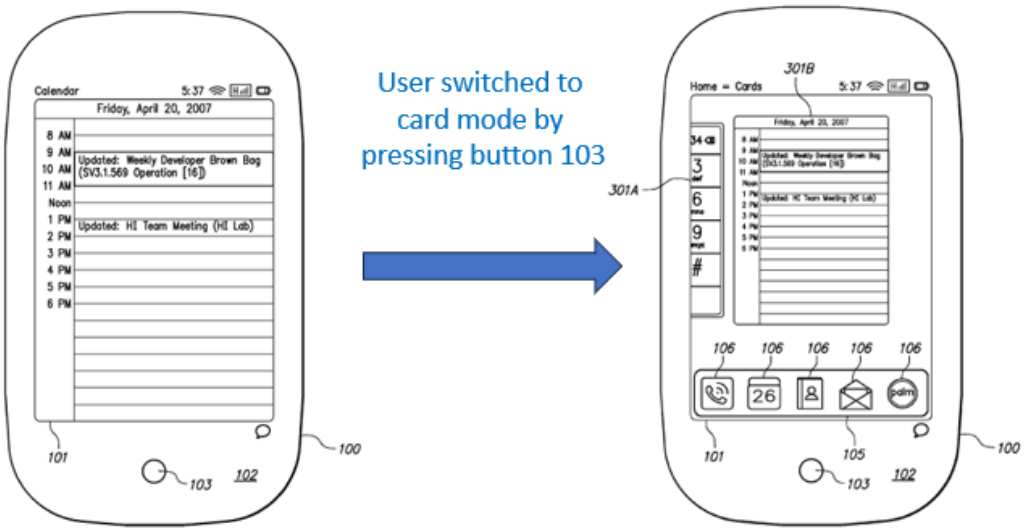


FIG. 6A FIG. 6B

Thus, the card mode is displayed ***after*** the input (e.g., pressing button 103) is received. EX2018, ¶194. Shiplacoff describes "another embodiment" where "the user can switch among the various modes by performing a gesture" (e.g., swipe-up). EX1013, ¶[0073]. This embodiment does not alter the timing or operation of the display of the card mode and, therefore, this embodiment would operate in the same manner—displaying the card mode ***after*** the input (e.g., swipe-up gesture) is received. Such an operation cannot blur the clock widget ***during*** detection of … the gesture ***before a completion*** thereof. EX2018, ¶194.

c. Petitioner's modification is erroneous

Petitioner contends Shiplacoff's card mode is a type of menu and asserts that, because Ahn's menus can be displayed "in a transparent form or an opaque form," "a POSITA would have at least found it obvious that Shiplacoff's card mode would be displayed 'on' the standby screen 300 in a translucent form, such that the area

between the displayed cards would show a blurred standby screen 300." Pet., 64-65. Petitioner provides an example of its modification (below), where various portions of the interface remain opaque while other portions (e.g., area between the cards) are selectively translucent.

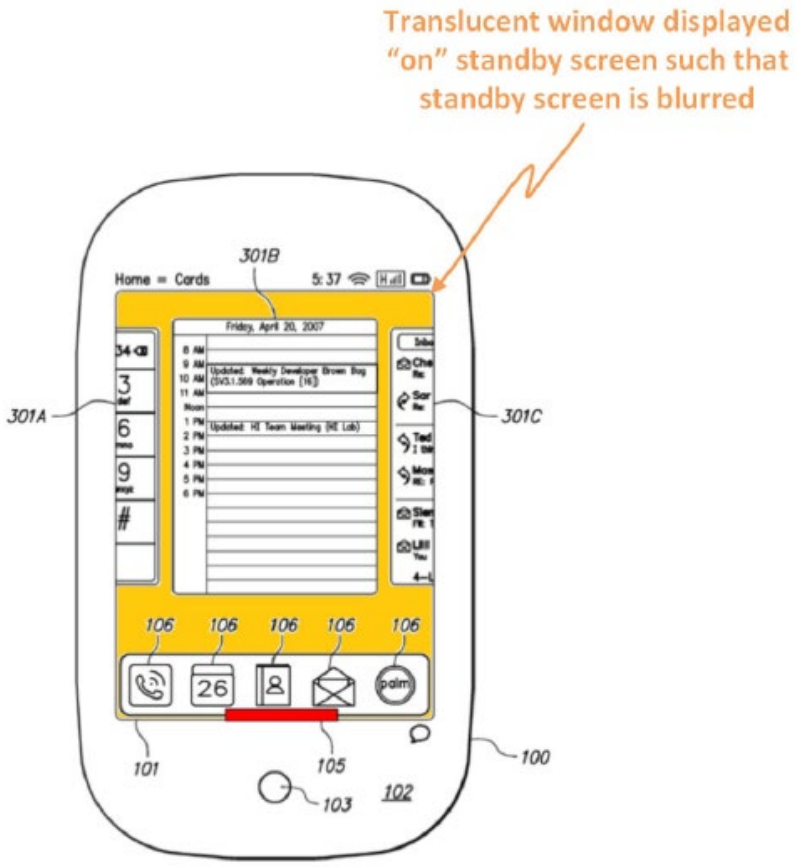


FIG. 3

EX1013, FIG. 1 (modified)

Petitioner and its expert provide no motivation for its modification to blur the area between the cards and merely concludes such a modification was obvious and would arrive at the claimed features. For example, Petitioner fails to tie Shiplacoff's card mode to the display of standby screen and a POSITA would not have made such

a connection. EX2018, ¶195 (explaining card-mode would be its own separate application apart from the standby screen). This conclusory assertion fails to clear the bar for obviousness. *KSR*, 550 U.S. 398, 418 (obviousness cannot be "sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

Additionally, Petitioner can only arrive at its modification by mischaracterizing the teachings of the references and combining disparate portions of the references in a manner contrary to their disclosure. First, Petitioner relies on Ahn's teaching that its pop-up menu can be translucent ***or*** opaque to contend that a POSITA would make portions of Shiplacoff's card mode translucent and other portions opaque.[17] Pet., 64-66; EX2018, ¶197. But neither Petitioner nor its expert explain why a POSITA would deviate from Ahn's teachings to make a 'menu' both translucent ***and*** opaque.

Second, Petitioner identifies Shiplacoff's card mode as a menu because it "provides the user with a list of options" in the form of the cards that represent active

[17] Petitioner does not allege the cards themselves would be translucent; perhaps because it plainly would have been detrimental to the user experience. EX2018, ¶198 (modification to make cards translucent would cause confusion and add unnecessary delays, contrary to Shiplacoff's purpose) (citing EX1013, ¶[0009]).

applications. Pet. 64. In other words, Petitioner identifies the cards (i.e., options) as the menu (i.e., list of options). However, Petitioner's modification is not to make the cards translucent; instead making only "the area between the displayed cards" translucent. Pet., 65; EX2018, ¶199. Displaying the area around the menu as translucent is inconsistent with Ahn's teaching and Petitioner can only arrive at its combination by misconstruing Ahn's disclosure in a hindsight driven quest to arrive at the claimed features.

4. Limitations [208b], [208d]

Petitioner's modification "to include an icon, like graphic 1800, at the bottom edge of the display" to notify the user "that a "swipe up" gesture like the one described in Shi[p]lacoff, would have always been available to switch between modes" (Pet., 54) is not something a POSITA would have done.

Ahn explains its graphic 1800 is "for notifying ***a start position*** of the touch and drag operation." EX1004, ¶¶[0117]-[0118]. Thus, Ahn's graphic signifies where a user can touch to start a gesture. EX2018, 201. Shiplacoff's "'swipe-up' gesture ***begin[s] in gesture area 102*** and extend[s] onto screen 101." EX1013, ¶[0127]. As illustrated below, Petitioner's modification does not "notify[] a start position" as taught by Ahn.

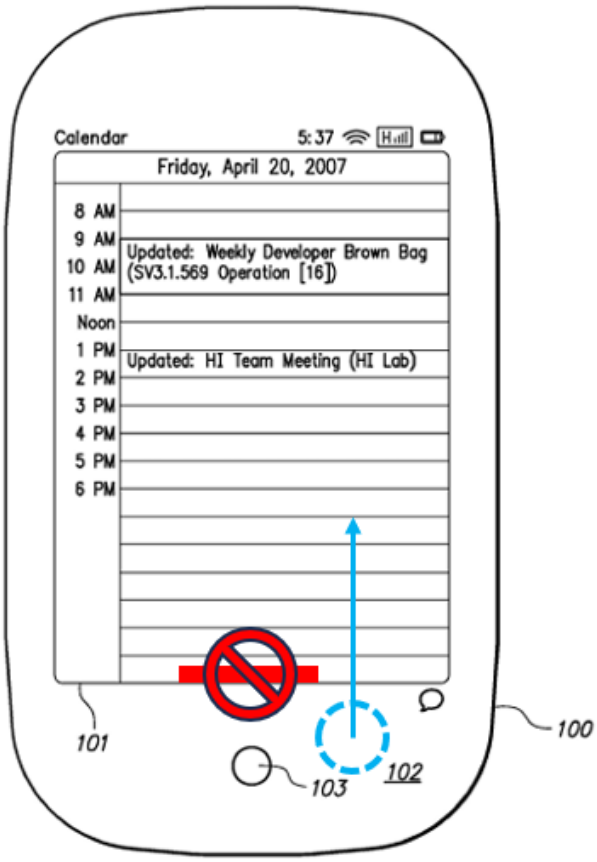


FIG. 2

Nor would Petitioner's added 'object' (illustrated in red above) be the start position for the switching operation and swiping motions on the display during full screen mode would scroll the application (EX2009, 68:5-69:2) and any modification to divide this gesture between two functions would decrease usability. EX2018, ¶¶201-202 (A POSITA would have understood Shiplacoff purposely omits swipes on the display 101 from its litany of actions for switching modes to avoid unintended functionality during scrolling) (citing EX1013, ¶¶[0124]-[0131]).

Aside from Petitioner's unexplained deviation from Ahn's teachings, its modification would also diminish the functionality of the device. In fact, Petitioner

concedes that its modification must eliminate one of Ahn's menu's (additional service menu 620 shown). Pet., 40. This is not something a POSITA would have done, especially when it was so easily avoidable by using any of the other inputs described in Shiplacoff. EX2018, ¶203. Further, having this object "always" (Pet., 54) displayed on the screen would be untenable. It was well-known that cellphone screens had limited display space and a POSITA would not have wasted this space with a permanent object. For example, Petitioner's own illustration (below) shows the object—which is depicted as small as possible, contributing to the difficulty of a user selecting it—would have interfered with other operations (e.g., selection of interior icons 106). EX2018, ¶204

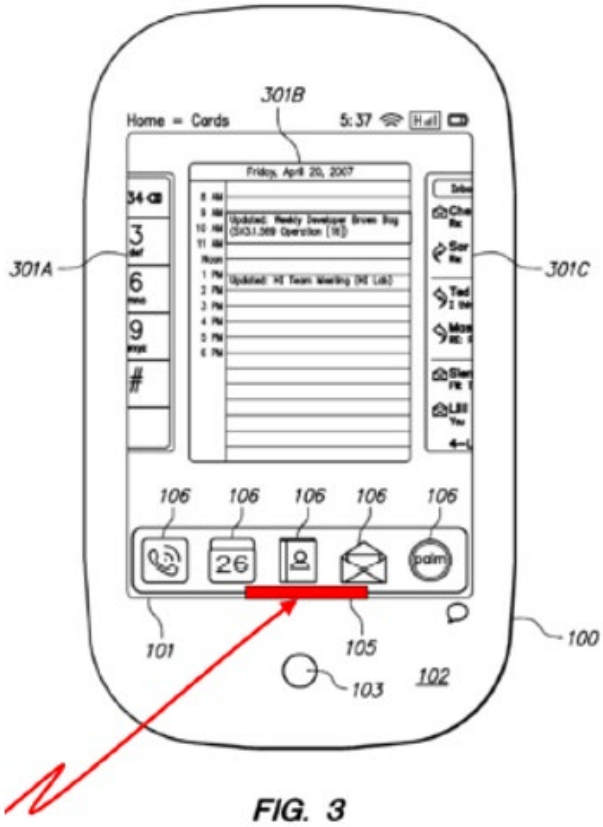


FIG. 3

Finally, this object would have diminished readability, as shown when viewing Ahns' mail application (below), where the final message is now obscured by the object. EX2018, ¶205.

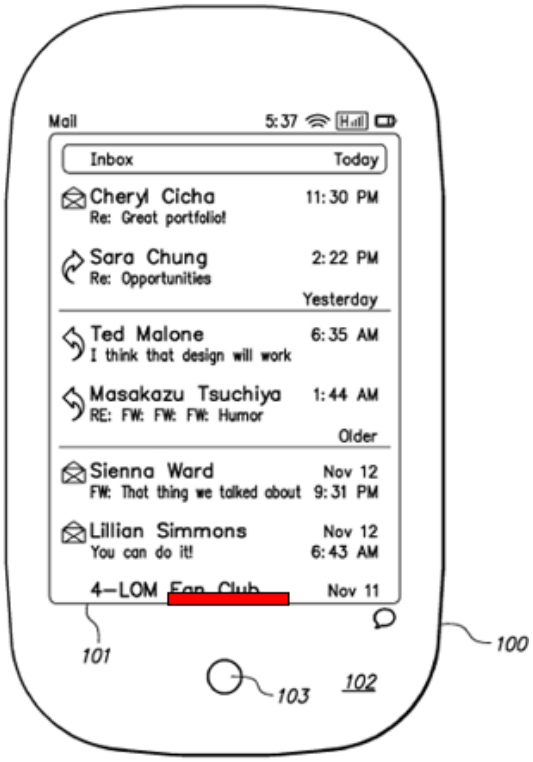


FIG. 5

Outside of mapping to the claims, there is no logical reason a POSITA would have made the alleged modification to eliminate Ahn's menu and diminish the user experience. EX2018, ¶205.

D. Dependent Claims 209-216

Each of claims 209-216 are patentable via there dependency to claim 208 as explained above. §VII.C. Further, Petitioner's analysis of these dependent claims is independently deficient.

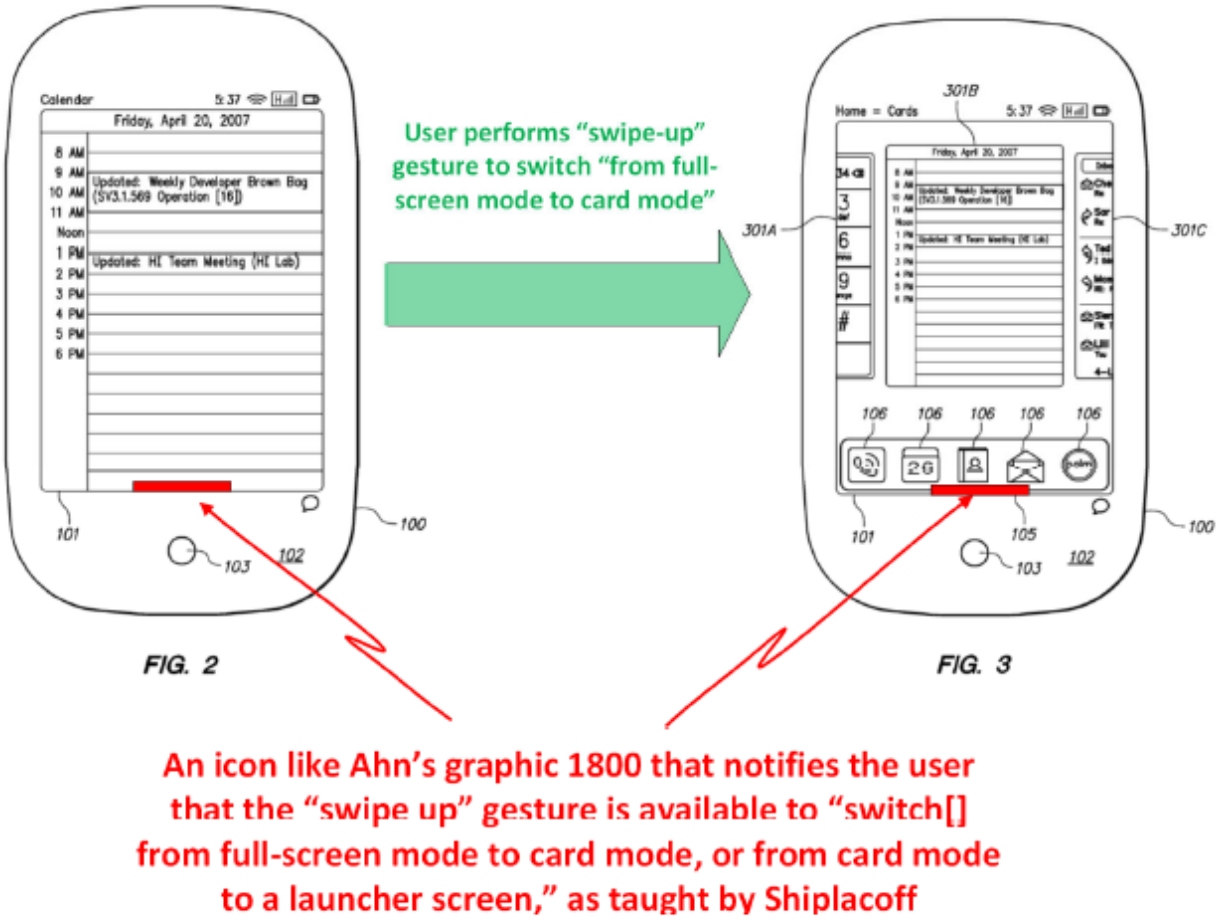
1. Dependent Claim 210

Petitioner contends the third virtual display layer is "a virtual display layer containing the clock widget" and contends "the second virtual display layer" is "virtual display layer containing one or more elements of standby screen 300, such as the thumbnail image displayed under the clock widget." Pet., 73.

Claim 210 depends from claim 208 and recites "***the*** second virtual display layer" which refers back to "a second virtual display layer including the at least portion of the at least one other object that is blurred." EX1001, 115:15-18, 25-28. Petitioner identifies the at least one other object that is blurred as "the clock widget of standby screen 300." Pet., 24; *see also id.*, 28-33, 67. Thus, Petitioner's theory is internally inconsistent and requires Ahn's clock widget to be included in both the third and second virtual layers. EX2018, ¶208.

2. Dependent Claim 216

Petitioner contends its added graphic (in red below) is moved during the at least part of the gesture. Pet., 86.



EX1004, FIGS. 2 and 3 (modified)

This modification is inconsistent with Petitioner's other assertions and the cited evidence.

Petitioner asserts its object would move allegedly because Ahn's graphic moves along with a user's touch. Pet., 86. Although this is incorrect (§VI.A.1), even following Petitioner's alleged operation of Ahn would result in a user dragging graphic by starting its drag gesture on the graphic. Pet., 86 ("dragged"); EX1004, [0118]. However, in Petitioner's modification the gesture would not start on the

added graphic, but the separate gesture area 102. EX2018, ¶210; §VII.C.4. Thus, Petitioner's graphic would not be "dragged" like Ahn's graphic *allegedly* is. A POSITA would not move Petitioner's graphic when switching from a full-screen mode to a card mode based on Ahn's alleged teaching to drag an object when opening a menu. EX2018, ¶210. This is also inconsistent with Petitioner's assertion that the added graphic would "always" be displayed to indicate to the user that its 'swipe-up' gesture was available to switch between modes. Pet., 85; EX2018, ¶211.

As Petitioner's theory is based on a mischaracterization of the references and inconsistent with a POSITA's understanding of what the references actually teach, it must fail.

VIII. CONCLUSION

For the foregoing reasons, the Petition should be denied in its entirety.

Dated: June 30, 2025

Respectfully submitted,

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(a)(i), the undersigned certifies that this Paper—exclusive of the table of contents, table of authorities, certificate of service, and this certificate of word count—includes 16,495 words. The undersigned relies upon the word count generated by Microsoft Word.

/Eagle H. Robinson/
Eagle H. Robinson (Reg. No. 61,361)

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on June 30, 2025, complete copies of this Patent Owner Response and EX2009-EX2019 were served on Petitioner via email (by consent), at the following email address(s):

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