

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner

v.

SMITH INTERFACE TECHNOLOGIES, LLC,

Patent Owner

IPR2024-01256
Patent 11,740,727

PATENT OWNER PRELIMINARY RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Shorthand	Description
2001	Declaration	Declaration of Rajeev Surati, Ph.D.
2002	CV	CV of Rajeev Surati, 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 <i>Smith Interface Technologies, LLC v. Apple Inc.</i> , 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")

I. INTRODUCTION

Institution should be denied because the Petition fails to establish a reasonable likelihood of prevailing on any challenged claim.

First, Petitioner fails to establish that Ahn and Chaudhri-842 would suggest all features of Limitation [1d]. The Petition glosses over several elements and simply assumes—without evidence—that its combination would arrive at the claimed features despite the references teaching to the contrary. In mapping to the gesture “to thereby move the object on the touch screen,” Petitioner relies on a presumed interpretation of “dragged” that is contrary to Ahn’s usage of the term. Further, to establish the ‘blur’ in its combination “is increased as a function of an increase in the *distance magnitude*” of the gesture, the Petition cites only to Chaudhri-842’s teaching of fading over a pre-set *temporal* interval.

Second, Petitioner must selectively mix and match various elements of the sub-embodiments of both Ahn and Chaudhri-842 to arrive at its proposed modification, but fails to explain why a POSITA would have arrived at Petitioner’s particular combination.

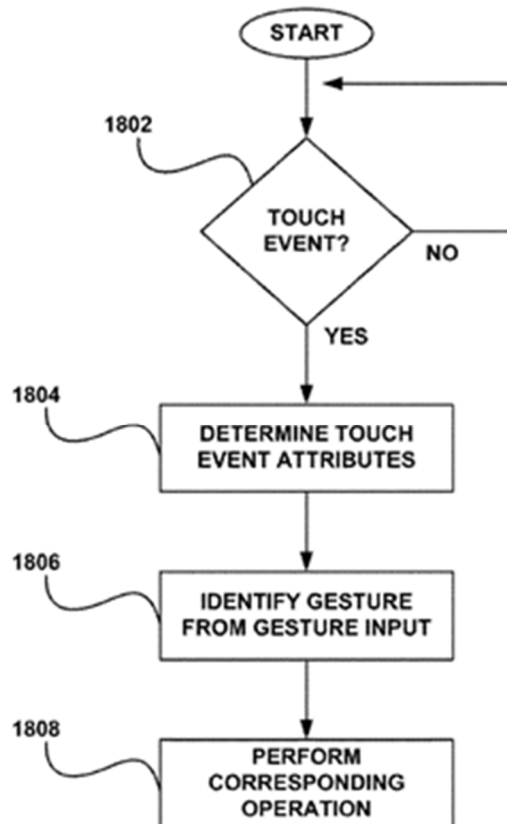
Finally, Petitioner contends that a POSITA would have *increased* the translucency of Ahn’s *background* widget during Ahn’s opening of a pop-up menu. Petitioner bases this contention on Chaudhri-842’s teachings of: (1) *decreasing* the translucency of *foreground* buttons to make those buttons “solid” over a static

background; and (2) transitioning between two different applications after an unlock gesture is complete. But neither example supports Petitioner's asserted modification of Ahn, and Petitioner fails to bridge the logical leap with an articulated rationale. As such, the combination rests solely on impermissible hindsight, which is laid bare by the facts that (a) Petitioner's asserted motivations (indicating progress toward display of the foreground menu or differentiating between the background and a menu) would have led POSITA to the asserted modification, and (b) the combination would not have achieved the intended benefits of the asserted modifications.

II. OVERVIEW OF THE '727 PATENT

The '727 Patent describes devices, methods, and graphical user interfaces for manipulating user interface objects with visual and/or haptic feedback. EX1001, Title. For example, the '727 Patent describes a mobile device having various components, including user interface devices such as a touch screen. EX1001, 13:41-58. In operation, signals can be received in association with the touch interface (e.g., touch screen) and can correspond to a signal indicative of a touch interface being touched. *Id.*, 14:11-33. The user experience can then be altered utilizing these touch signals. *Id.*, 15:19-31, FIG. 3.

An example of these operations can be seen in FIG. 18, where attributes of touch events are detected, and gesture inputs related to these touch event attributes (both initial and over time) can be identified. EX1001, 56:8-35.



EX1001, FIG. 18.

These attributes can include the duration and/or distance of a gesture because often different gestures will be indistinguishable based on initial contact. EX1001, 56:8-35, 60:43-47. Once the gesture is identified, a corresponding operation can be performed (step 1808). EX1001, 56:50-51. Such operations can include the modification of one or more display attributes such as blurring the display attributes. EX1001, 57:9-10, 68:37-52.

In some operations, “a user may be given feedback as a gesture is performed.” *Id.*, 59:23-24. For example, some “gestures may be associated with operations that are carried out as functions of the gesture input” EX1001, 58:58-59:3. In this way,

the device can provide a user with feedback as a gesture is performed. *See id.*, 59:23-29; FIG. 18 (step 1802 showing continuous detection of touch event as gesture is performed); EX2001, 41.

A. Independent Claim 1

Independent claim 1 is directed to a “device” having one or more processors that are configured to execute instructions that cause the device to perform functions. EX1001, 102:31-50. Specifically, claim 1 recites **[1.a]** A device, 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 device to:

[1.b] display an object and at least one other object;

[1.c] detect at least part of a gesture on the touch screen; and

[1.d.i] during detection of at least a portion of the gesture before a completion thereof is detected, blur, based on a change in a distance magnitude of the gesture being detected on the touch screen to thereby move the object on the touch screen, at least a portion of the at least one other object that is not overlapped

[1.d.ii] such that a magnitude of the blur itself, and not a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude.

EX1001, 102:31-50.

B. 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., 5. In the Litigation,¹ however, Apple contends that “distance magnitude [of the gesture]” means “length [of the gesture].” EX2003, 9-11. However, the plain and ordinary meaning of this term is readily understandable and Patent Owner does not believe formal construction to be necessary to deny institution on the following bases.

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 preliminary response.

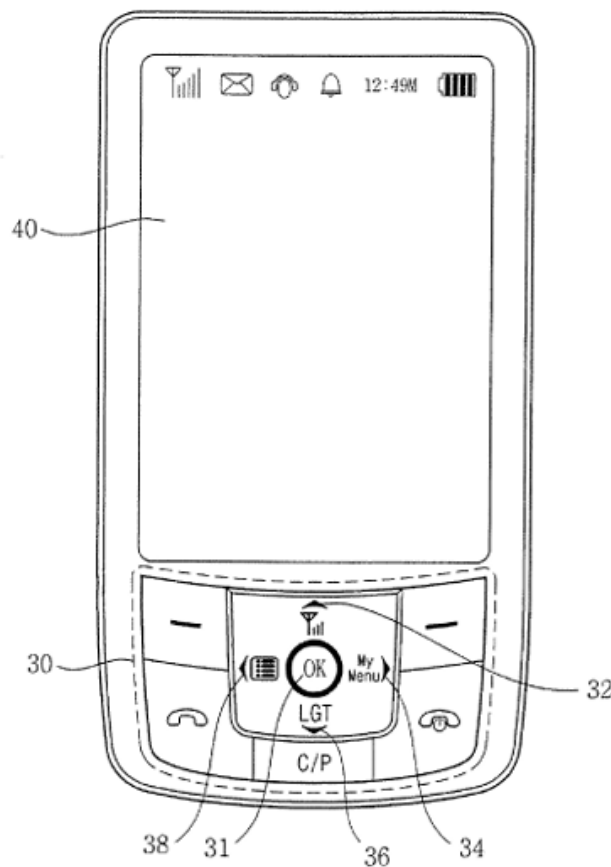
¹ *Smith Interface Techs., LLC v. Apple Inc.*, 3:23-cv-01187 (S.D. Cal., June 27, 2023) (the “Litigation”). On October 2, 2024, the Court granted in part Petitioner’s request to stay the Litigation, staying the Litigation “pending the issuance of the last of the PTAB’s institution decisions on Apple’s pending IPR petitions,” with any “further stay” to be addressed after those decisions. EX2004.

IV. 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 where device characteristics are unavailable when a menu list is displayed. EX1004, ¶¶[0005]-[0006]. In conventional browsers, the standby screen disappears when a menu screen is displayed. Thus, Ahn proposes to provide menus that only take up a portion

of the display so that the standby screen can still be displayed concurrently with the menu. EX2001, ¶45.

Against this backdrop, Ahn discloses a method of displaying menus in a mobile communication terminal, where each menu can correspond with a selection of one of a plurality of specific directions associated with the menus. EX1004, Abstract (“menu corresponding to the selected specific direction on the standby screen”). In Ahn, the menu is displayed after an input (e.g., after selection of direction key (¶[0034]) or after a touch and drag operation (¶[0102])) is completed. If the input is not completed, the menu will not open and will remain closed (i.e., not displayed). EX2001, ¶46; *see e.g.*, EX1004, ¶[0116] (menu can be displayed “if the touch and drag operation of the user *is completed*”).²

As described in more detail below, Ahn discloses three separate methods for displaying its menu via the use of directional keys, a simple touch and drag operation, and via a start position operation.

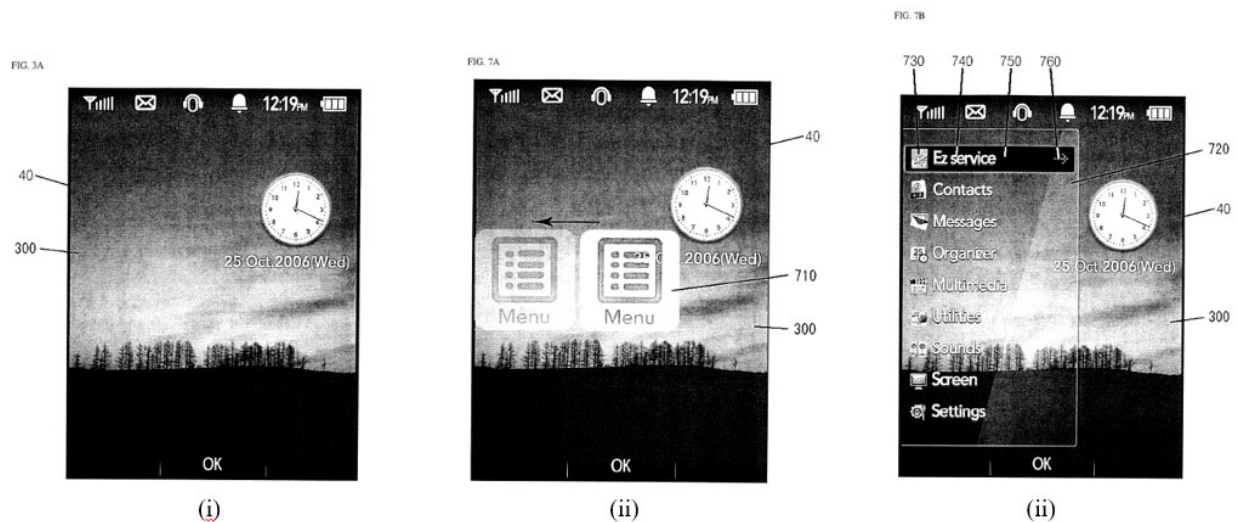
1. Directional Key Operation

In a first embodiment, Ahn describes a method of displaying a menu via a selection of a specific direction on a direction key. *See* EX1004, ¶¶[0030], [0034]-[0035]. As shown in FIGs. 7A-7C, a menu (e.g., setting menu 720/820) can be

² All emphasis added unless otherwise noted.

accessed “when a leftward direction key is selected.” *Id.*, ¶[0062]. This operation starts “when the standby screen 300 is displayed on the display 40.” *Id.*, ¶[0063]. After the “user selects the leftward direction key 38,” an icon 710 is “displayed around the center of the standby screen 300” and then “disappears while moving to [the] left” side of the screen. *Id.* A menu associated with the direction of the user’s completed input is then displayed. *Id.*

This operation is illustrated in greater detail below, in which three graphical settings are displayed to the user.

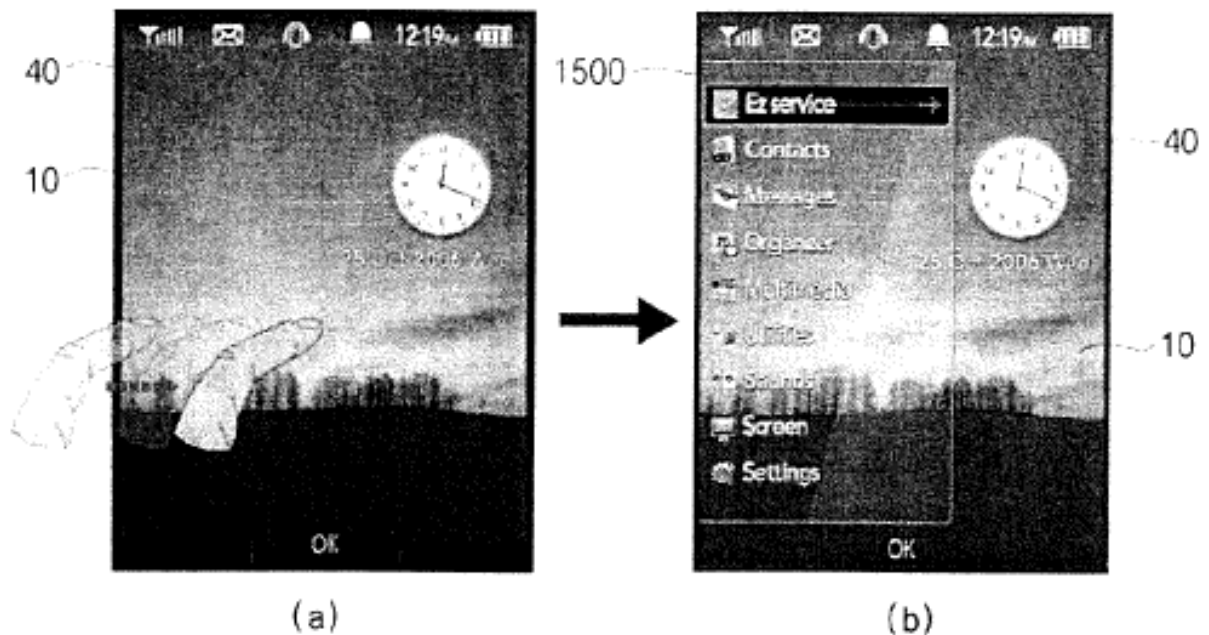


First, the standby screen 300 is displayed. EX1004, ¶[0035]. Next, after the left direction key is pressed (i.e., the gesture is completed), an icon 710 is displayed and fades to the lefthand side of the screen to provide the user with feedback as to the operation associated with the left direction key. *Id.*, ¶[0063]. Finally, once the icon 710 disappears, a menu 720 is displayed on the lefthand side of the standby screen 300. *Id.*

2. *Touch and Drag Operation*

In another embodiment, Ahn describes a method of displaying a menu via “a touch and drag operation of a specific direction.” *Id.*, ¶[0101], see also ¶¶[0102]-[0104]. As shown in FIGs. 15A-15B of Ahn (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.” *Id.*, ¶[0103].

FIG. 15

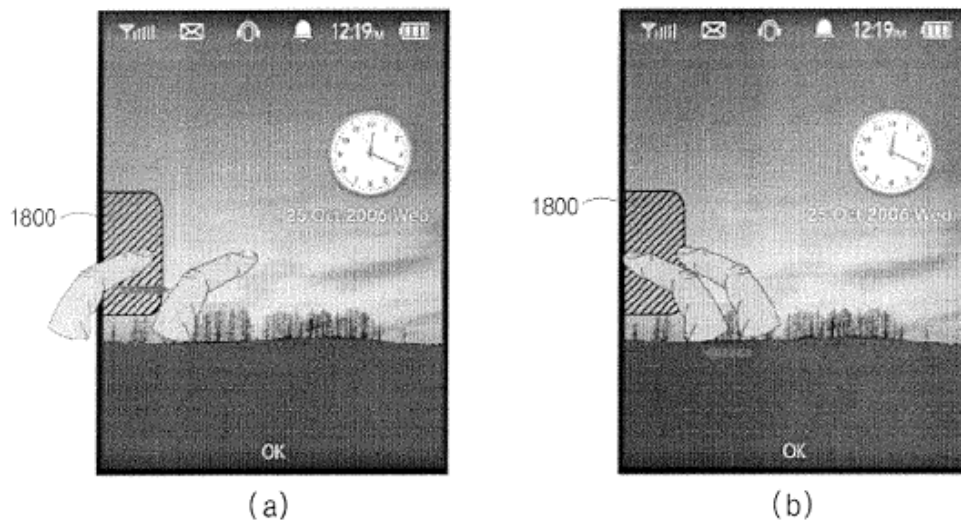


In this operation, “[a] controller 50 detects a touch and drag operation of a specific direction in the touch screen 10.” *Id.*, ¶[0107]. Then “controller 50 determines whether a drag distance of the detected touch and drag operation is a first distance or more.” *Id.*, ¶[0109]. *After* the user performs 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 and displaying menu at step 1630); EX2001, ¶51. “That is, if the touch and drag operation of the user *is completed*, the controller 50 determines a distance of the touch and drag operation, whereby a specific menu list corresponding to the distance can be displayed in the display 40.” EX1004, ¶[0116].

3. *Start Position Operation*

In another embodiment, Ahn describes methods of “notifying a start position of a touch and drag operation to a user,” as illustrated in FIGs. 18a and 18b (inset below). *Id.*, ¶[0118].



In these operations, a “graphical shadow 1800,” instead of a menu, is displayed based on a user’s touch and drag operation. Unlike the directional key and touch and drag operations described above, this operation does not open a menu that corresponds to the direction of a user’s input and, instead, menu 1500 is opened based on a left and right swipe. EX2001, ¶53; EX1004, ¶¶[0118]-[0119] (opening

menu list 1500 when “the user drags in a right direction after touching” and when “the user touch drags to the left”).

In a first operation, “if the user drags in a right direction after touching the screen, a graphical shadow 1800 is displayed in the display 40.” *Id.*, ¶[0118]. Then, after the drag in the right direction is completed, the user may perform a drag action on the graphical shadow 1800 to display menu list 1500, as illustrated in FIG. 18A. *Id.*

In a second operation, the menu list 1500 can also be displayed “if the user touch drags to the left.” *Id.*, ¶[0119]. In this operation, the user touch drags to the left to display the graphical shadow 1800 and, after the gesture is completed, the user may then press the graphic 1800 with a finger. *Id.* After the user selects the graphical shadow 1800 (when activated with a left swipe), the graphical shadow “disappears in the display 40, and the menu list 1500 can be displayed.” Thus, Ahn’s Start Position operation provides an alternative manner of handling the detected touch and drag gestures than the Touch and Drag Operation described in Section IV.A.2, above. EX2001, ¶55; *see also id.*, ¶¶40-43.

B. Chaudhri-842 (EX1005)

Chaudhri-842 discloses “[a] device with a touch sensitive display [that] may be unlocked via gestures performed on the touch-sensitive display.” EX1005, Abstract. The primary focus of Chaudhri-842 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-842 describes three different operations, each broken up into its own section: (1) Unlocking a Device via Gestures (EX1005, ¶¶[0052]-[0079]); (2) Indication of Progress Towards Satisfaction of a User Input Condition³ (EX1005, ¶¶[0080]-[0098]); (3) User Interface Active States Corresponding to Events or Applications (EX1005, ¶¶[0099]-[0108]). EX2001, ¶56.

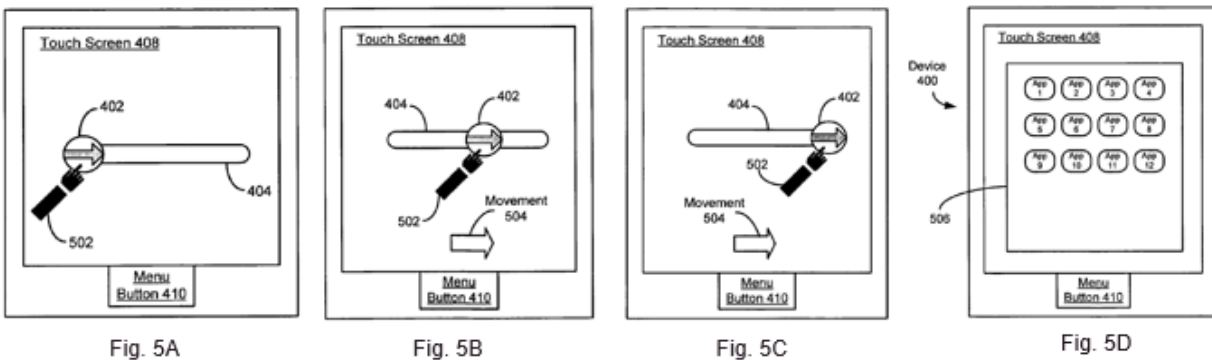
1. Unlocking a Device via Gestures

In this operation, Chaudhri-842 discloses a process for unlocking a device via transitioning from a lock screen to a separate interface. For this embodiment, Chaudhri-842 provides two examples of this transition: (1) between a lock state and an unlock state (EX1005, ¶¶[0048], [0052]-[0078]) and (2) between a first and second application (EX1005, ¶¶[0048], [0079]).

In the first example, Chaudhri-842 describes transitions from a lock screen to an unlock screen, illustrated in FIGs. 5A-5D (inset below). *See* EX1005, ¶¶[0074]-[0076]. This operation starts when a user “touch[es] a touch screen 408 of device 400 with her finger 502.” *Id.*, ¶[0074]. Specifically, “[t]he user touches the touch

³ There is a typographical error in EX1005 such that this heading is not spaced from paragraph [0079].

screen 408 at the location corresponding to the unlock image 402 which is located initially at the left end of the channel 404.” *Id.* When the user drags the finger “in the direction of movement 504 . . . [t]he unlock image 402 is dragged along the channel 404 as a result of the gesture.” *Id.*, ¶[0075]. When “the user has dragged the unlock image 402 to the right end of the channel 404 . . . [and] releases the unlock image 402 at the right end of the channel 404, the unlock action is complete.” *Id.* Thus, “[u]pon **completion** of the unlock gesture, the device unlocks and displays on the touch screen 408 user-interface objects associated with normal operation of device 400[,]” such as menu 506. *Id.*, ¶[0076].



EX1005, FIGs. 5A-5D. 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. EX2001, ¶58; *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).

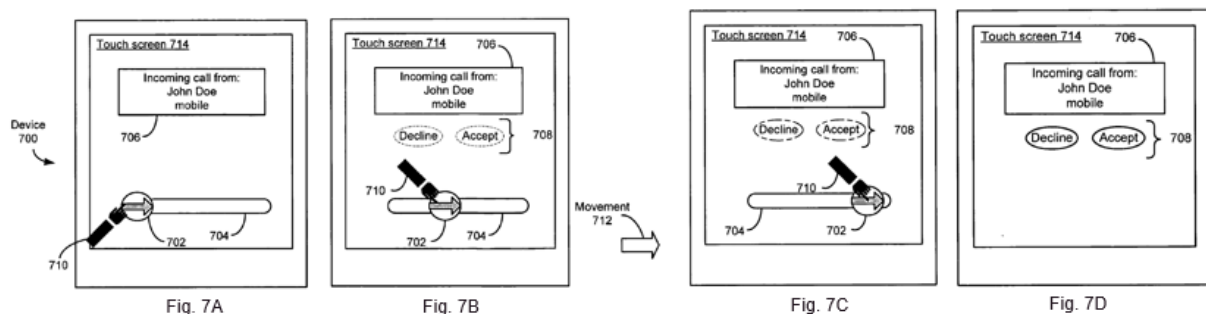
Chaudhri-842 also describes a second scenario for this embodiment, in which a user transitions between two different applications (e.g., between “a telephone application to a music player”), as opposed to a lock and unlock state. EX1005, ¶[0079]. In this application transition scenario, “as the user transitions from a first application and to a second application, a user interface for the second application may fade in (i.e., increase in intensity) and a user interface for the first application may fade out (i.e., decrease in intensity).” EX1005, ¶[0079]. Similar to the lock/unlock scenario, the transition does not occur until *after* the gesture is completed. EX2001, ¶59; *see* EX1005, ¶¶[0076]-[0077]. Chaudhri-842 only describes this fade in/fade out operation for the scenario in which a user transitions between two different applications. EX1005, ¶¶[0052]-[0079]. Thus, Chaudhri-842 discloses two ways to transition between interfaces states, each occurring *after* a condition (e.g., gesture) is completed. EX2001, ¶59 (citing EX1005, ¶¶[0076]-[0079]); *see also* EX1005, FIG. 3.

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

In this operation, Chaudhri-842 discloses a process for displaying additional interface objects on the lock screen. Here, Chaudhri-842 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 (inset 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.*



EX1005, FIGs. 7A-7D.

Similar to the operation above (*supra*, §IV.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. EX2001, ¶61. 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.”)

V. GROUND 1: THE PETITION FAILS TO ESTABLISH OBVIOUSNESS OF CLAIM 1 OVER AHN AND CHAUDHRI

Petitioner fails to show that its combination of Ahn and Chaudhri would arrive at each of the claimed limitations.

A. Limitation [1.d.i]: “based on a change in a distance magnitude of the gesture being detected on the touch screen *to thereby move the object on the touch screen*”

Limitation [1.d.i] recites “based on a change in a distance magnitude of the gesture being detected on the touch screen *to thereby move the object* on the touch screen.” Petitioner relies solely on paragraph [0118] of Ahn to support that “graphic 1800 moves (i.e., is ‘dragged’) in response to and along with a user’s touch and drag gesture.” Pet., 39-40. The Petition cites Chaudhri ’842’s discussion of “cues,” but does so solely to suggest an interpretation of Ahn. Pet., 40-41. Notably, the Petition does not articulate any modification of Ahn’s graphic shadow 1800. *Id.* But Ahn does **not** disclose that the graphic shadow 1800 moves. EX2001, ¶65.

Petitioner’s theory rests on the assumption that the phrase “***dragged*** graphic 1800” (EX1004, ¶[0118]) means that the graphic is moved. Pet., 40. But Ahn unambiguously uses “drag” to describe the input—**not** any responsive movement of

graphic 1800. In Ahn, “drag” explicitly “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. EX2001, ¶66. For example, 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 (*see* EX1004, FIG. 1) but is merely performing a drag gesture on the touch screen, in response to which the first menu list is displayed. EX2001, ¶66; *see also* EX1004, ¶[0102] (“drags the touch”).

Similarly, in the context of Ahn’s paragraph [0118], the user is not dragging the graphic shadow 1800, but merely performing a drag gesture on the graphic. EX2001, ¶67. This understanding is consistent with Ahn’s explanation that graphical shadow 1800 is specifically “for notifying a *start* position of a touch and drag operation.” EX1004, ¶[0118]. Graphic 1800 merely notifies a user of where to begin (i.e., start) the touch and drag gesture; Ahn does not disclose or suggest that the graphic 1800 moves with the drag. *See* EX1004, FIG. 18(a) (depicting graphic 1800 remaining stationary as a finger is depicted as dragging across the screen).

Petitioner provides no explanation or reasoning as to why “drag” in Ahn’s paragraph [0118] would be read in a different context than is used in the rest of Ahn’s description. *See* EX1004, ¶¶[0098], [0116]. Instead, Petitioner makes an

unexplained assumption that is inconsistent with Ahn’s use of the term. But that cannot meet Petitioner’s burden. *Wasica Finance GmbH v. Continental Automotive Systems Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017) (“[a]mbiguous references do not anticipate a claim.”); *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016) (“no burden shifts from the patent challenger to the patentee. This is especially true where the only issues to be considered are what the prior art discloses”). Further, Petitioner provides no explanation, reasoning, or motivation for why moving of the shadow—which Ahn explicitly discloses as indicating “a **start position** of a touch and drag operation”—would have served any purpose. EX1004, ¶[0118]; EX2001, ¶68. Because Petitioner maps exclusively to Ahn’s graphical shadow 1800 and its function as the claimed “object” and its movement (Pet., 31, 39-41), Petitioner cannot show that the mapped gesture is “to thereby move the object on the touch screen” as recited in Limitation [1.d.1].

Petitioner’s Ahn-Chaudhri ’842 combination therefore does not include each and every feature claim 1. For this reason alone, Ground 1 fails.

B. Limitation [1.d.ii]: “a magnitude of the blur itself, and not a magnitude of an area of the touch screen that is blurred, is increased as a function of an increase in the distance magnitude”

For Limitation [1.d.ii], Petitioner must show that “blur” of the clock widget increases as a function of the distance magnitude of the gesture. But Petitioner’s analysis of Limitation [1.d.ii] focuses solely on the portion of the clock widget being

blurred, not that the blur is increased as a function of the gesture. Pet., 41-43. Ahn fails to describe any gradual change in the appearance of its clock widget. EX2001, ¶69; *see generally* EX1004. And, while Petitioner cites to paragraph [0079] of Chaudhri-842 as teaching that a first application may “fade out,” this is not done as a function of an increase in the distance magnitude. EX2001, ¶69.⁴ Instead, Chaudhri-842 explains that such fading is performed according to a pre-set *temporal* interval, not a *distance* magnitude. EX1005, ¶[0079] (“over a ***pre-determined*** time interval”). Thus, the only description of decreasing an optical intensity in Chaudhri-842 is performed as a function of a pre-determined time interval, not as a function of an increase in the distance magnitude. EX2001, ¶69. As such, the Petition fails to support any combination of Ahn and Chaudhri ’842 that would result in decreasing the optical intensity of Ahn’s clock widget as a function of the distance magnitude of any gesture. *Id.*

Further, Petitioner’s incorporation of its analysis from Limitation [1.d.i] cannot support Petitioner’s theory because neither Ahn nor Chaudhri ’842 discloses

⁴ Moreover, as explained in Section V.C.2.c(2) below, switching between two distinct *applications* is not applicable to Ahn, at least because a transitions from a first application and to a second application requires removing the entire UI of the first application, whereas Ahn’s background remains. EX2001, ¶69 n. 3.

decreasing the optical intensity of a background object during a gesture, much less as a function of the distance magnitude of a gesture. *Infra*, §V.C.2. At no point does the magnitude of the optical intensity of the first application UI decrease as a function of an increase in the distance magnitude of the gesture. *Id.*; EX2001, ¶70. For at least this reason, Petitioner’s Ground 1 must fail.

C. Limitation [1.d]: “*during* detection of at least a portion of the gesture *before* a completion thereof is detected, *blur* ... at least a portion of the at least one other object that is not overlapped”

Limitation [1.d.i] recites that “*during* detection of at least a portion of the gesture before a completion thereof is detected” the processor executes instructions to cause the device to “blur [at least a portion of the at least one other object] based on a change in a magnitude of the gesture.” *Supra*, II.A. That is, Limitation [1.d.i] requires to (1) blur the at least one other object based on a change in a magnitude of the gesture and (2) that the blur occurs “*during* detection of” the gesture and “*before* a completion” of the gesture is detected. EX1001, 102:41-46. Limitation [1.d.ii] further recites that the magnitude of the blur “is increased as a function of an increase in the distance magnitude” of the gesture. EX2001, ¶63; EX1001, 102:46-50.

1. The Petition’s “at least one other object” is Ahn’s clock widget

Limitation [1.b] introduces “the at least one other object,” for which the Petition relies exclusively on the “clock widget of [Ahn’s] standby screen 300.” *See* Pet., 30-31 (“the clock widget displayed on display 40 of Ahn’s mobile

communication terminal 100 [is the] ... *at least one other object*, respectively, as in [1.b]” (emphasis in original)); *see also* EX1003, ¶¶64-65 (same). The Petition does not identify any other elements as allegedly corresponding to the claimed “at least one other object.” Thus, for Limitations [1.d.i]-[1.d.ii], the Petition must show that Ahn-Chaudhri-842 would have rendered obvious to blur Ahn’s “clock widget” as required by the language of the claim. But the Petition fails to do so.

Petitioner asserts that the change in the appearance of Ahn’s clock widget (EX1004, FIG. 4B) discloses the claimed “blur”⁵ by applying the use of transitioning optical intensity of Chaudhri-842. Pet., 33-35. “The optical intensity of a user-interface object, as used herein, is the object’s degree of visual materialization,” (EX1005, [0085]), which Petitioner identifies as “transparency” or translucency. Pet., 37 (emphasis in original); *see also* Pet., 39 (“utilizing this progressive translucency or blurring effect”). However, Petitioner’s mapping fails for at least three reasons: (1) none of the cited references disclose decreasing translucency *during*—and before completion of—a gesture based on a distance magnitude of the

⁵ Patent Owner does not agree with Petitioner’s proposed interpretation of blurring. Nevertheless, Petitioner’s grounds are deficient even under Petitioner’s own interpretation. Patent Owner therefore reserves the right to address Petitioner’s interpretation if IPR is instituted.

gesture; (2) the proposed combination is inconsistent with the teachings of Chaudhri-842 and is only navigable by using the claims as a roadmap; and (3) there is no motivation to make the proposed modifications between Ahn's embodiments and Chaudhri's teachings. EX2001, ¶71.

2. *The Petition fails to show that it would have been obvious to change the appearance of Ahn's clock widget during detection, and before a completion, of the gesture*

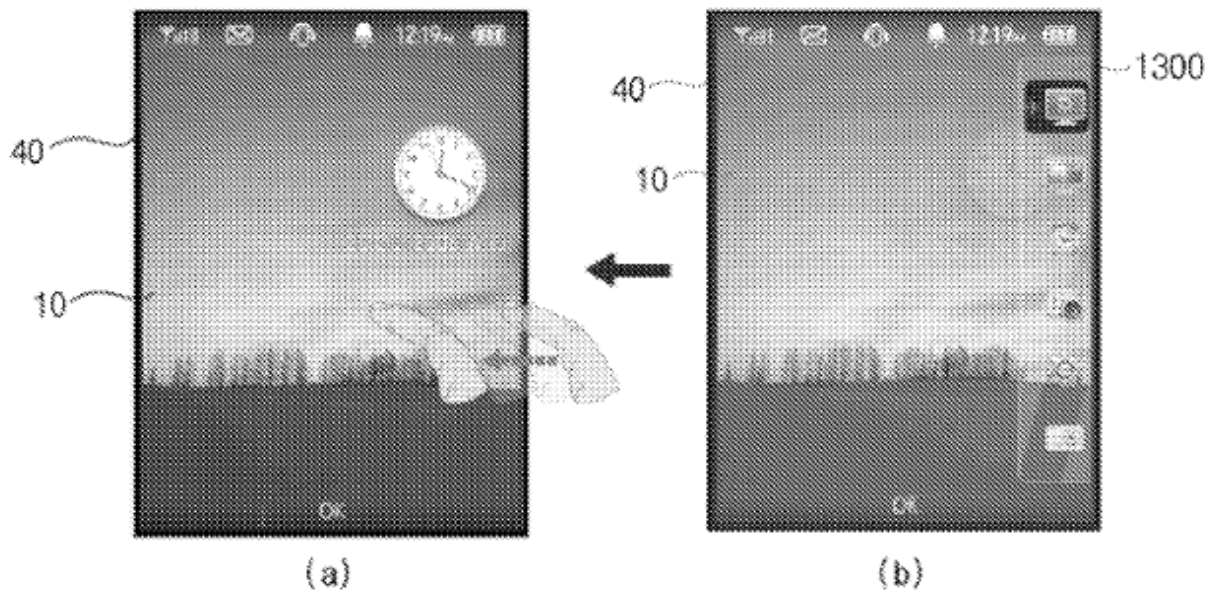
Petitioner fails to show that display of Ahn's menu 420 would cause the alleged 'blurring' of the clock widget "during detection of at least a portion of the gesture" and "before a completion [of the gesture] is detected." EX2001, ¶72. At no point does Ahn explain, identify, or even allude to any gradual change in appearance of its clock widget. *See generally*, EX1004. As such, Petitioner turns to Chaudhri '842 as allegedly motivating a ***gradual transition*** from Ahn's Figure 3A to Ahn's Figure 13(b) during a touch and drag operation to deploy Ahn's menu 1300. Pet., 33-39. However, Chaudhri '842 does not suggest this; instead, Chaudhri '842 *increases* the optical intensity of a *foreground* element, or entirely fading out a previous application when transitioning to a new application. Ultimately, Chaudhri '842 does not suggest either of changing the appearance of a background ***during*** detection of a gesture or *decreasing* optical intensity of a background that remains visible upon completion of the gesture. EX2001, ¶72.

a. Ahn does not change the appearance of its clock widget *before* a completion of the gesture

Petitioner's analysis of Limitation [1.c] maps the claimed "gesture" to a "touch and drag operation" associated with opening Ahn's menu list 1300, which matches Ahn's user menu 420. Pet., 31-33; *compare* EX1004, FIG. 13 *with id.*, FIG. 4B. There is no evidence that Ahn's clock widget is "blurred" during this gesture.

First, referring to Ahn's "touch and drag" embodiment, shown in FIGs. 13A-B (inset below), a user touches the screen and "drags the touch in a left direction" (EX1004, ¶[0102]) and *afterwards* a menu list 1300 matched to a left direction is displayed (FIG. 13B). EX2001, ¶74.

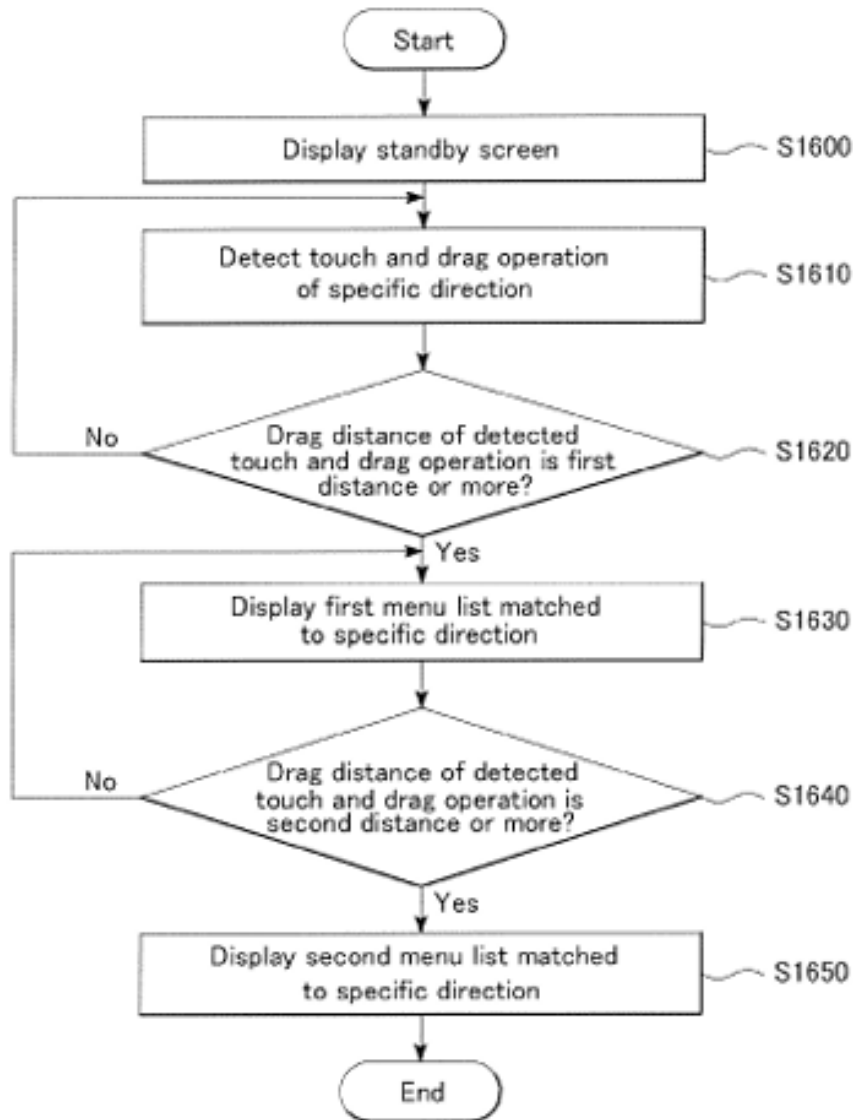
FIG. 13



EX2005, 71/75.⁶

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." EX2001, ¶75; *see* EX1004, ¶[0102]. Only *after* "the touch and drag operation [i.e., gesture] of the user is completed" is the appearance of the clock changed (FIG. 13b). *See* EX1004, ¶[0116]. This operation is confirmed by Ahn's FIG. 16 (inset below), in which Ahn displays its menu (1630) only *after* determining a drag distance exceeded a first distance (1620). EX2001, ¶75; *see* EX1004, ¶[0107]-[0109].

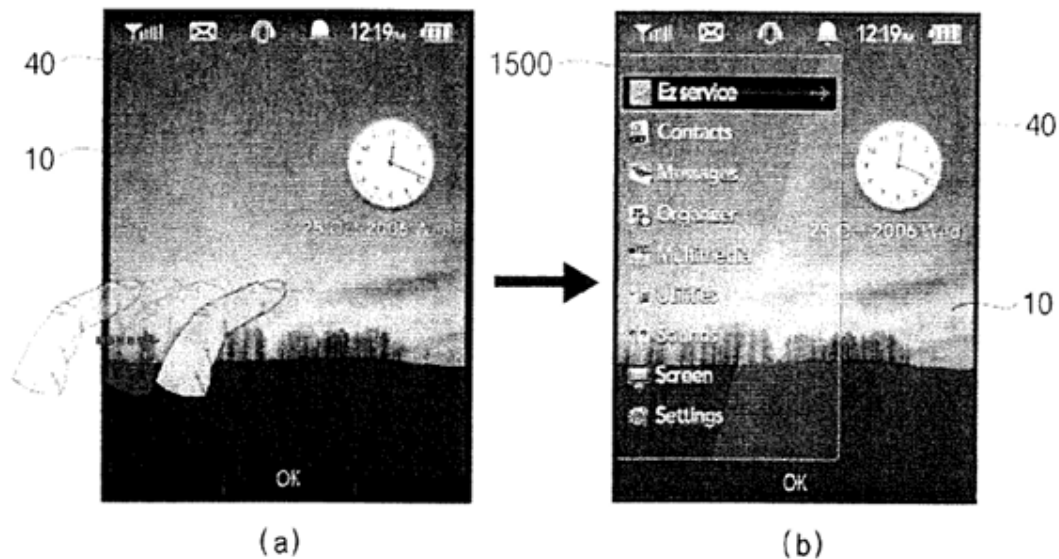
⁶ For improved clarity, the figure is from the counterpart European application (EP1962480) that is substantially identical to Ahn and claims priority to the same applications as Ahn. *See* EX2005, 78/79 (claiming priority to KR 2007-018175, KR 2007-033308, KR 2007-043087); EX1004, 1 (same).



EX1004, FIG. 16. “That is, if the touch and drag operation of the user *is completed*, the controller 50 determines a distance of the touch and drag operation, whereby a specific menu list corresponding to the distance can be displayed in the display 40.” EX1004, ¶[0116]. Thus, in Ahn’s touch and drag embodiments, the menu 1300 is not displayed *during* the gesture; rather, it is displayed only *after* the gesture is completed.

Second, referring to Ahn's two "Start Position" embodiments, a graphical shadow 1800 is utilized to display menu list 1500. As shown in Ahn's FIGs. 15a-15b (inset below), the display of menu list 1500 does not dim, obstruct, or otherwise alter the appearance of the clock widget.

FIG. 15



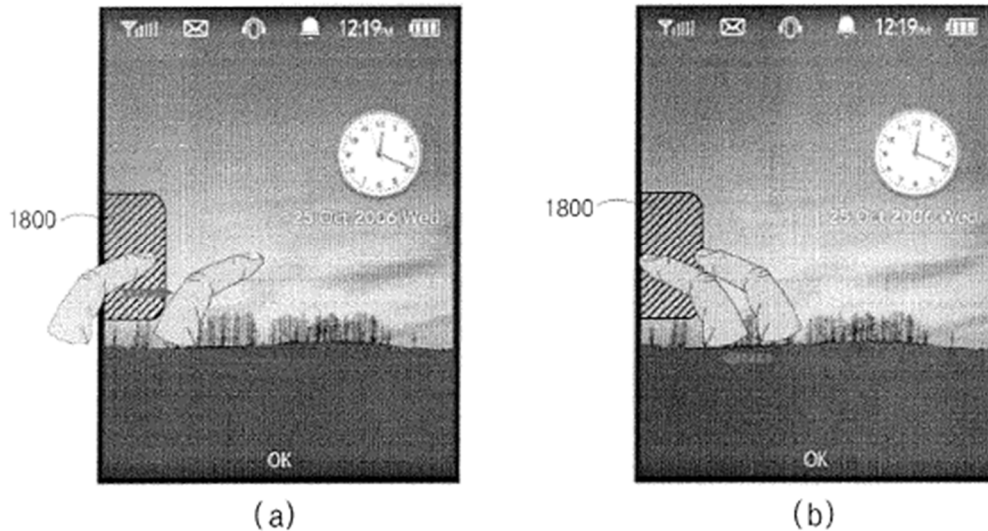
EX1004, FIG. 15A-B (appearance of clock widget is not changed from FIG 15A to FIG. 15B) *see also* FIGs. 8C, 9A, 9B (same).

Contrary to the "Touch and Drag" operation of FIGs. 13-15 where a menu list is displayed according to a specific direction of a gesture (EX1004, ¶[0101]), the "Start Position" provides a method of opening a single menu using two different gestures. *Supra*, §IV.A.3; EX2001, ¶77. However, neither of the two functions of the "Start Position" embodiment changes the appearance of the clock widget. EX2001, ¶77. At the outset, Ahn's "FIG. 18 illustrates *an example* of a screen for

displaying a graphical display for notifying a start position of a touch and drag operation to a user.” EX1004, [0118]; *see also id.*, [0025]. Thus, Figures 18A and 18B illustrate examples of functions of a single common embodiment. EX2001, ¶77.

In the first function, illustrated in FIG. 18A (shown below), “if the user *drags in a right direction* after touching the screen, a graphical shadow 1800 is displayed” and then, after the drag in the right direction is completed, the user may “drag” the graphical shadow 1800 (i.e., perform a touch and drag operation starting on the graphical shadow) to display menu list 1500. EX1004, ¶[0118].

FIG. 18

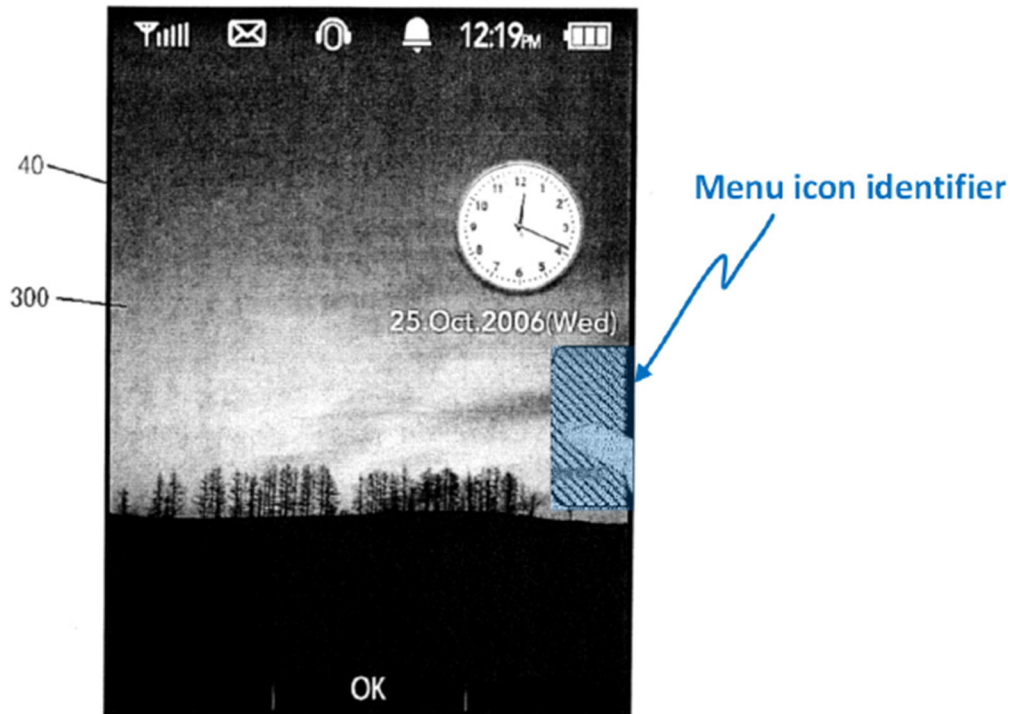


EX1004, FIGs. 18A-B. There is nothing in Ahn that suggests that any object is “blurred” during the initial touch and drag in a right direction or while the user’s finger “drags” the graphical shadow 1800. EX2001, ¶78.

In the second function, illustrated in FIG. 18B (shown above), the user performs a touch and *drag in a left direction* to display a graphical shadow 1800. EX1004, ¶[0119]; EX2001, ¶79. The user may then “press the graphic 1800 with a finger” to cause the graphic 1800 to gradually disappear in the display 40 and the menu list 1500 to be displayed. EX1004, ¶[0119]; EX2001, ¶79. As with the first embodiment, there is nothing in Ahn that suggests that any object is “blurred” *during* the touch and drag in a left direction. EX2001, ¶79. Thus, Ahn does not disclose “blurring” any object—much less its clock widget—based on an interaction with graphical shadow 1800.

b. Petitioner’s Amalgamation of Ahn does not blur before a completion of the gesture is detected

As none of the embodiments disclosed in Ahn teach the claimed feature, Petitioner must modify Ahn internally and with Chaudhri-842 to arrive at claim 1. Petitioner contends that a POSITA “found obvious that the menu identifier icons would have been associated with any of the menus, including, for example, the user menu illustrated in FIGS. 4B and 13b” and presents the below “amalgamation” of Ahn.



EX1004, Amalgamation of FIGS. 3A and 18a

Pet., 29-30.

Petitioner does not explain why its amalgamation would “blur” the clock widget *during* a gesture to move graphical shadow 1800. The Petition cites to no evidence to support that its amalgamation would operate contrary to Ahn’s “Touch and Drag” embodiment—which changes the appearance of the clock widget *after* the completion of the gesture (*Supra*, §V.C.2.a). Pet., 35 (tacitly conceding “Ahn does not specify ... the manner in which a POSITA would have implemented the above-described blurring of its clock widget”); EX1003, ¶72 (expert conceding the same).

The Petition merely cites to Ahn’s FIGs. 4B, 10, and 13B as support that Ahn illustrates blurring at least a portion of background standby screen 300 (e.g., a clock widget) as a result of a user’s gesture opening one of the menus. Pet., 33. But this fails to establish that Ahn’s clock is “blurred” *during* the gesture in Petitioner’s amalgamation. See EX1004, FIGs. 4B, 10, and 13B (showing clock widget *after* gesture is complete). Thus, to the extent Petitioner intends to assert⁷ that Ahn’s clock widget would change appearance while graphical shadow 1800 is being “dragged,” this assumption is unsupported and contradicted by the operation of Ahn. EX2001, ¶¶81-82.

c. Chaudhri ’842 does not suggest decreasing optical intensity of an object *before* a completion of the gesture is detected

Petitioner points to Chaudhri-842 as remedying the deficiencies of Ahn and broadly contends that “a POSITA would have found it 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—in the context of Ahn’s mobile communication terminal 100.” Pet., 35-36. But Chaudhri-842 fails to “blur” a standby screen or background object *during* a gesture. EX2001, ¶83.

⁷ The Petition does not explicitly make this assertion. See Pet., 33-35.

(1) *The cited portion of Chaudhri-842 does not support
Petitioner's Modification*

The Petition's analysis of Limitation [1.d.i] relies on Chaudhri-842's teaching of *increasing* the optical intensity of *foreground* objects associated with a *second* user interface. Pet., 35-39 (citing EX1005, ¶¶[0080]-[0089] and FIG. 6); EX2001, 84 (This teaching does not include decreasing the optical intensity of the background of the first user interface) (citing EX1005, [0080]-[0082], [0092]-[0093]). But, as explained in Section V.C.3.b below, this teaching is not commensurate with Petitioner's modification to *decrease* an optical intensity of a *background* object (clock widget) that is part of the *first* user interface state. Compare Pet., 33-41 (alleging to *decrease* appearance of *background* clock widget during gesture); with EX1005, ¶¶[0091]-[0093] (describing *increasing* optical intensity of *foreground* buttons 708 during gesture, but only *decreasing* optical intensity of image 702 and channel 704 after the gesture is completed—"by dragging the unlock image to the right end of the channel 704 and releasing the unlock image 702.").

Petitioner cites to nothing in Chaudhri-842 that supports the required modification to *decrease* the optical intensity of Ahn's background object *during*—and as a function of—a user's gesture. To the extent Petitioner is attempting to read the term "transitioning an optical intensity" broadly to include decreasing the optical intensity, this is incorrect. Chaudhri-842 only teaches "transitioning an optical intensity of one or more user interface objects *associated with the second user-*

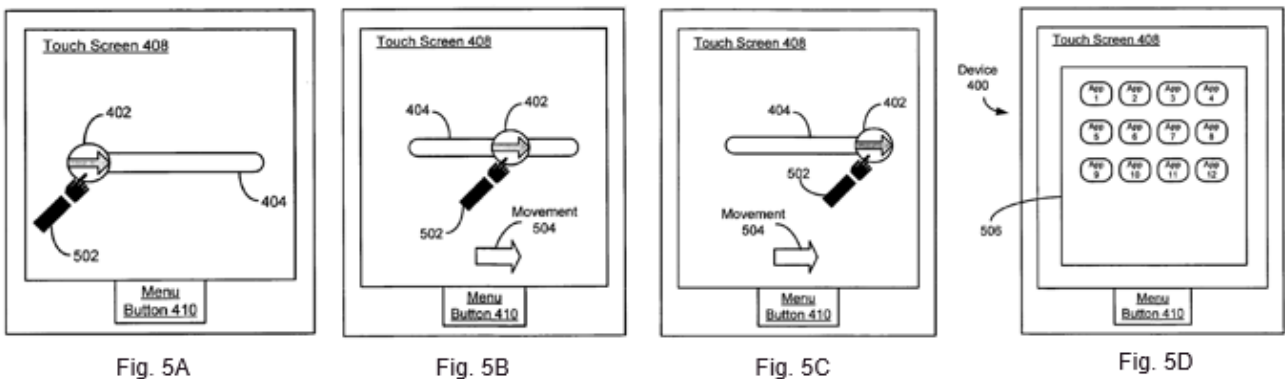
interface state”—i.e., increasing optical intensity of an emerging foreground object—not decreasing optical intensity of a remaining background. EX1005, ¶[0082]; EX2001, 85. And the cited operation of Chaudhri-842 does not extend this transition in optical intensity to any object associated with the first user-interface state. EX1005, ¶[0080]-[0098]; EX2001, 85. With nothing to bridge the gap between Chaudhri-842’s teaching to increase optical intensity of a foreground object in a second user interface and Petitioner’s modification to decrease optical intensity of a background object in a first user interface, Ground 1 must fail.

(2) *The other operations of Chaudhri-842 do not support Petitioner’s Modification*

The only citation relevant to Petitioner’s modification to *decrease* the optical intensity of Ahn’s clock is found in the Petition’s analysis of another Limitation ([1.d.ii]), which cites to a separate section of Chaudhri-842. Pet., 41-43 (citing EX1005, ¶[0079]); EX1005, ¶[0052]-[0079] (Under heading “Unlocking a Device via Gestures”); EX1005, ¶[0080]-[0098] (Under heading “Indication of Progress Towards Satisfaction of a User Input Condition”). This alone renders Ground 1 deficient for failing to state its case with the particularity required in IPR proceedings. *See* 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.”). Regardless, the cited portions of Chaudhri-842 do not support Petitioner’s modification.

Specifically, Chaudhri-842's disclosure of fading out in the "unlocking a Device via Gestures" section fails to support Petitioner's modification. EX2001, ¶87. In this section, Chaudhri-842 provides two examples of this transition: (1) between a lock state and an unlock state (EX1005, ¶¶[0048], [0052]-[0078]) and (2) between a first and second application (EX1005, ¶¶[0048], [0079]). EX2001, ¶87.

As explained above and shown in Chaudhri-842's FIGs. 5A-5D (inset below), the device may transition between states "[u]pon completion of the unlock gesture" which occurs when "the user releases the unlock image 402 at the right end of the channel 404." EX1005, ¶[0076]; *supra*, IV.B.1.



EX1005, FIGs. 5A-5D. *Id.* In other words, *after* "completion of the unlock gesture," the device transitions from a first user-interface (lock screen in FIG. 5C disappears from display) to a second user-interface (menu 506 from standby screen in FIG. 5D appears on display). EX1005, ¶[0076]; EX2001, ¶88.

Paragraph [0079] of Chaudhri-842 describes an example where the device transitions from one application to another, such as "from a telephone application to

a music player or vice versa.” EX1005, ¶[0079]. Chaudhri-842 explains that “as the user transitions from a first application and to a second application, a user interface for the second application may fade in (i.e., increase in intensity) and a user interface for the first application may fade out (i.e., decrease in intensity).” *Id.* Chaudhri-842 does not disclose changing the timing of this fade in/fade out feature from lock/unlock operation and a POSITA would have understood that the first application UI will fade out *after* completion of the unlock gesture. *see id.*; EX2001, ¶89. That is, the completion of the gesture will start the transition between applications and “as the user transitions” between the applications the second UI will fade in, and the first UI will fade out. EX2001, ¶89. This fade in and fade out can then occur over a fixed, “pre-determined time interval.” EX1005, ¶[0079].

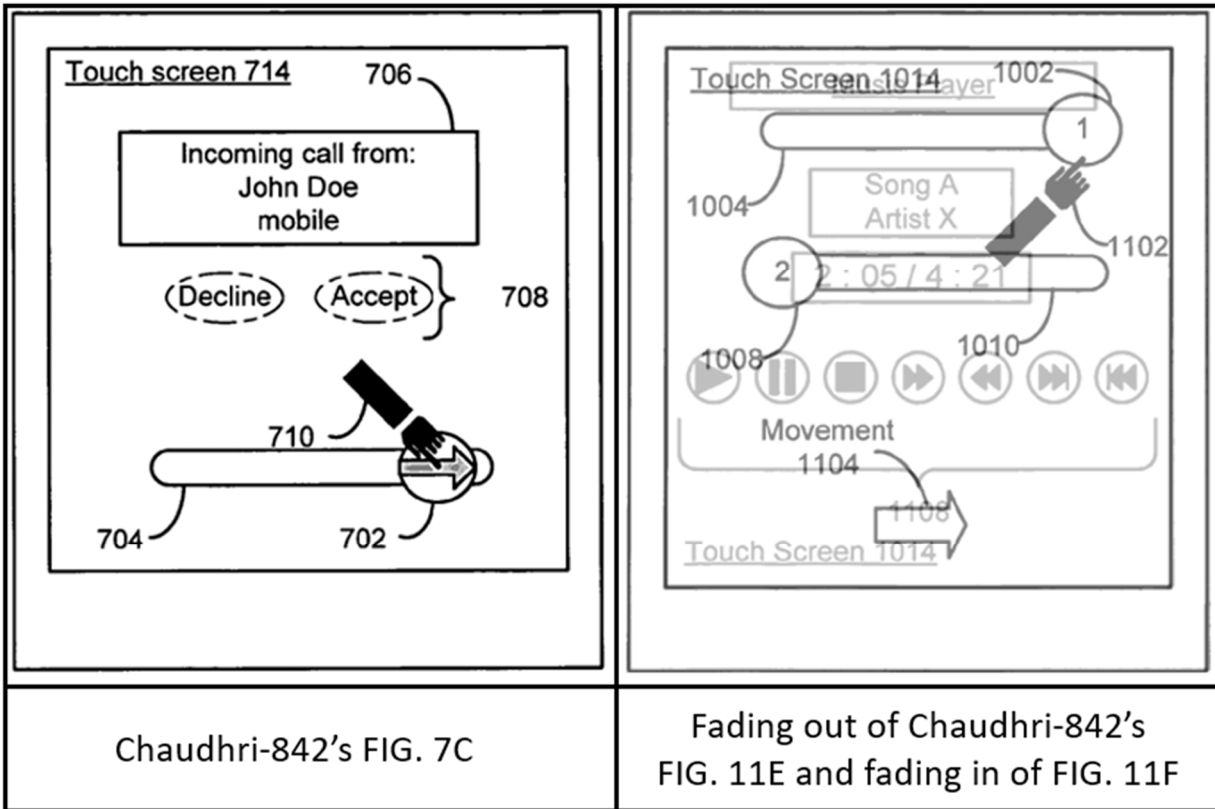
Of course, the time it takes for a given gesture to be performed by a given user cannot be determined until *after* the gesture is completed. EX2001, ¶90. As such, the length of Chaudhri-842 transition cannot be “pre-determined” until after the gesture has been completed. EX2001, ¶@@. A POSITA therefore would have understood the reference to “[t]he pre-determined time” associated with the unlock gesture would not occur *during* the unlock gesture. EX2001, ¶@@. Thus, a POSITA would have understood this transition to occur *after* completion of the gesture as illustrated by the figures of Chaudhri-842. *Id.*; *see also* EX2001; ¶@@ (all figures of Chaudhri-842 disclose an operation where the objects of the first

interface state disappear *after* the gesture is complete) (citing EX1005, FIG. 5C to FIG. 5D; FIG. 11C to FIG. 11D; and FIG. 11E to FIG. 11F). Therefore, applying this teaching to Ahn's embodiments would have simply resulted in the same operation as disclosed by Ahn, where the appearance of the clock is changed *after* the gesture is completed—not during the gesture, before a completion thereof. EX2001, ¶90.

Further, the fading out of the *entire* user interface for the first application, and the fading in of the *entire* user interface for the second application, does not teach and is not applicable to Petitioner's alleged modification to decrease the optical intensity of an isolated background object. EX2001, ¶91. Unlike Ahn's menu opening operation—where a menu is overlaid on a portion of the background—the transition between applications requires the display to completely change interfaces. *Id.* This can only be done by ceasing the display of the first application UI and transitioning to display the second application UI. *Id.* The fact that Chaudhri-842 does this transition by fading in and fading out the UIs does not explain why a POSITA would fade out Ahn's background clock widget. *Id.* Ahn's transition is not between two applications. EX2001, ¶91 (the standby screen and menu 420 are not applications) (citing EX1004, ¶¶[0063]-[0064], FIG. 7B; EX1005, ¶[0079]). Nor does Ahn replace the entire background display. EX1004, FIG. 13 (displaying background and menu). In fact, Ahn's clock widget is still visible when the menu

appears (EX1004, FIG. 4B); whereas Chaudhri-842's first application fades out completely.

Ahn displays a background screen and then displays a popout menu over a portion of that background screen. This does not necessitate ceasing the display of the background screen and, in fact, Ahn chooses to continue displaying the background screen. EX2001, ¶92. Ahn's and Chaudhri-842's goals are completely opposing on this point. *Id.* Ahn emphasizes the benefits of its directional pop out menus is to enable the standby screen to *remain visible* while using the menus. *Supra*, §IV.A; EX2001, ¶92; EX1004, ¶¶[0005]-[0006], [0039], [0064] (displaying menus and standby screen concurrently). On the other hand, a POSITA would have understood that, when transitioning from a first application to a second application, allowing the first application UI to *remain visible* during a gesture would lead to a poor user experience. EX2001, ¶92. This is illustrated by comparing the isolated fading in of two buttons as shown in Chaudhri-842's FIG. 7C, with a fading in and fading out between Chaudhri-842's unlock screen (FIG. 11E) and music player application (FIG. 11F). EX2001, ¶92; EX1005, ¶[0107]; *see* EX1005, ¶[0079] ("music player application").



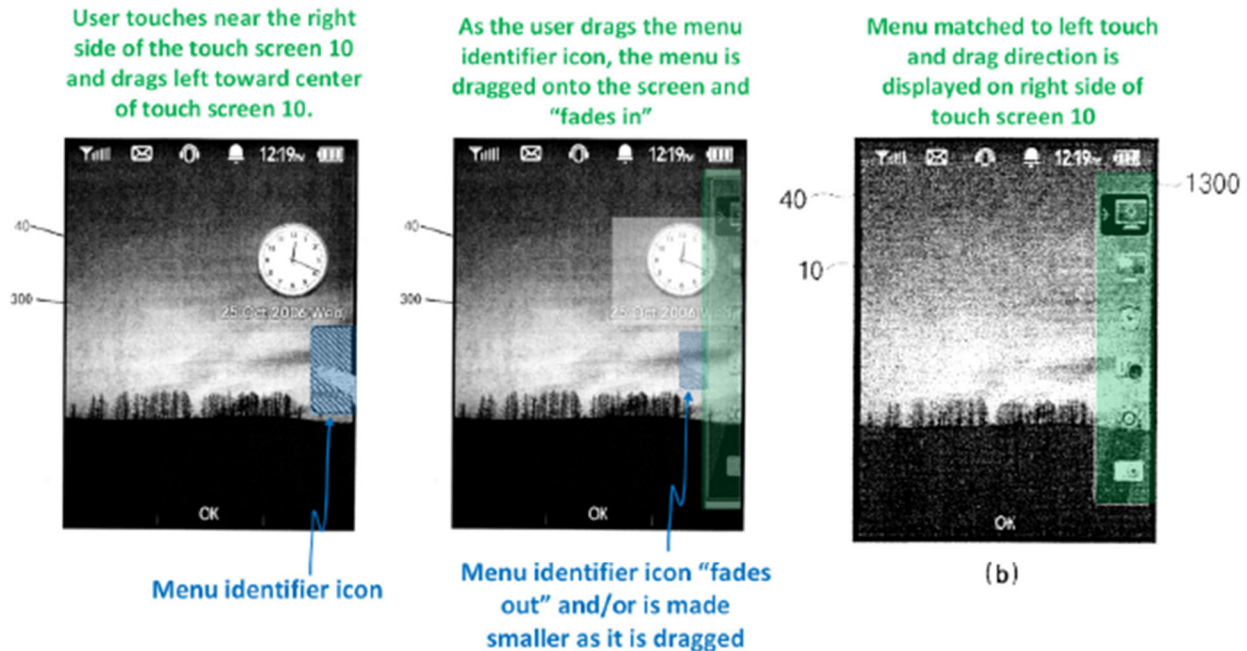
As shown, when the user is at 50% progress of the unlock gesture the transparency of the unlock screen and the music application would be at 50%. EX1005, ¶[0087]. However, this fails to provide a clear indication of progress of the gesture or transition as the significant overlap of UI elements leads to a poor user experience and would confusion the user. EX2001, ¶92. Thus, a POSITA would understand Chaudhri-842's fade in/fade out of applications as occurring after the gesture is complete. *Id.*

Further, Chaudhri-842 does not extend this fade in/fade out to transitions between a lock screen and a menu (EX1005, ¶¶[0074]-[0078]) and does not teach to fade out a single object associated with the first user-interface (EX1005, ¶¶[0080]-

[0094]). EX2001, ¶93. Thus, Petitioner’s modification to decrease the optical intensity of Ahn’s clock widget when transitioning from a standby screen to a popout menu is not commensurate with the teachings of Chaudhri-842.

3. Petitioner’s proposed Ahn-Chaudhri ’842 combination does not flow from the teachings of Ahn or Chaudhri ’842

Even setting aside the absence of necessary disclosures noted above, Petitioner’s modification is only logical when using the claims of the ’727 Patent as a roadmap to reconstruct the claimed invention, but this cannot support obviousness. *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019). Starting with Petitioner’s “amalgamation” of Ahn, graphical shadow 1800 is used to denote the start position for a gesture to bring out the user menu 1300 illustrated in FIG. 13b. Pet., 29-30; *supra*, §V.A. Petitioner then seeks to modify Ahn’s graphical shadow 1800 operation so that the menu 1300 “fades in” as it is dragged onto the screen and the graphical shadow 1800 “fades out” or is made smaller as it is dragged. Pet., 39-41. This modified operation is shown in the figure below.



EX1004, Amalgamation of FIGS. 3A and 18a (left), Amalgamation of FIGS. 3A, 4A, and 18a (center), and FIG. 13b (right)

Pet., 40.

This operation is only possible by conflating Ahn's two separate 'Start Position Operation' embodiments. Ahn specifically provides an option where the user may press the graphic 1800 and after the gesture (i.e., press) is completed, "the graphic 1800 gradually disappears in the display 40, and the menu list 1500 can be displayed as emerging from the ... display 40."⁸ EX1004, ¶[0119]; EX2001, ¶95. But this fails to meet the claimed operation, as the gradual disappearance does not

⁸ There is no embodiment of Ahn describing the Ahn's clock widget as disappearing in the same manner as the graphic 1800. EX2001, ¶95 n. 7.

occur during the gesture or increase as a function of a distance magnitude. EX2001, ¶95. Thus, Petitioner seeks to merge the two opposing functions of Ahn's Start Position Operation embodiment. *Id.*; *supra*, §IV.A.3. Petitioner provides no reasoning or explanation for this intermingling of embodiments and Petitioner's reliance on Chaudhri-842 does not provide the required explanation.

Similar to its mixing of Ahn, Petitioner must blend two of Chaudhri-842's operations to arrive at this modification. Again, Petitioner fails to provide any reasoning or explanation for this mixing and matching. First, Petitioner relies on Chaudhri-842's "Indication of Progress Towards Satisfaction of a User Input Condition" operation, which teaches increasing the optical intensity of an object of a second user-interface. But this fails to disclose decreasing the optical intensity of a background object of a first user-interface. *Supra*, §§IV.B.2, V.C.2.c(1). Second, Petitioner relies on Chaudhri-842's "Unlocking a Device via Gestures" operation, which teaches fading in an entire user-interface of a second application and fading out an entire user-interface of a first application. But this fails to disclose decreasing the optical intensity of a single background object of a first user-interface. *Supra*, §§IV.B.1, V.C.2.c(2). Thus, Petitioner seeks to merge select aspects of Chaudhri-842's different embodiments. EX2001, ¶96; *supra*, §IV.A.3. Petitioner provides no reasoning or explanation for combining Chaudhri-842's operations.

As explained below, rather than address Ahn's and Chaudhri-842's actual teachings, the Petition simply uses the challenged claims as a roadmap to select and reassemble certain words of the references to seemingly match what is claimed. However, Petitioner's presentation of Ahn and Chaudhri-842 is incorrect, and the alleged motivations for modification of Ahn are illogical and would not result in Petitioner's combination.

a. Petitioner's proposed modification is inconsistent with Ahn's described operations

Ahn does not disclose fading out graphic shadow 1800, or making the graphical shadow smaller, as it is dragged. EX2001, ¶98. As explained above in Section IV.A.3, Ahn provides two operations of using graphical shadow 1800. In the first operation, "as the user drags the graphic shadow 1800, the menu list 1500 can be displayed along the dragged graphic 1800." EX1004, ¶[0118]. In this operation, the menu does not fade in, nor does the graphic shadow 1800 fade out (or become smaller). EX2001, ¶98. In Ahn's second operation, the user may press (e.g., tap) the graphic shadow 1800 and "the 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." EX1004, ¶[0119]. In this second operation, neither the menu nor the graphic shadow 1800 slide in. EX2001, ¶98.

The Petition does not provide any rationale for integrating the teachings of Ahn's mutually exclusive embodiments. *See* Pet., 33-40. Nor does the Petition

contend that Chaudhri-842 provides a reason to make this modification. *See e.g.*, Pet., 35 (applying “Chaudhri ’842’s user interface state transition techniques” only to the “blurring of [Ahn’s] clock widget”). Nor would this flow from Chaudhri-842’s teachings, which disclose increasing optical intensity of stationary buttons. EX2001, ¶99; EX1005, ¶¶[0080]-[0094].

b. Petitioner’s proposed modification is inconsistent with Chaudhri-842’s varying the optical intensity of foreground UI elements associated with a second user-interface state

Chaudhri-842 does not vary the optical intensity of a background. EX2001, ¶100. To the contrary, Chaudhri-842 discloses adjusting an optical intensity of user interface (UI) objects and 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*”); EX2001, ¶100. Thus, Chaudhri-842 teaches varying the optical intensity of foreground UI elements. *Id.*

Unlike Chaudhri-842’s foreground UI elements, Ahn’s clock widget is part of the background, as conceded by Petitioner. *See* Pet., 33 (“that a clock widget is part of the background standby screen 300”), 39 (“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. EX2001, ¶101. And neither the Petition nor Petitioner’s expert explain this gap in logic. Further, Petitioner’s

assertion to “vary ... the optical intensity of the [background] standby screen” by “utilizing [a] progressive translucency” on the background (Pet., 38-39) is nonsensical. EX2001, ¶101. A POSITA would have understood that varying the transparency of the *background* standby screen is pointless because there is nothing below the background (e.g., underlying layers) that would be revealed by altering its transparency. EX2001, ¶101.

Additionally, Chaudhri-842 does not decrease the optical intensity of objects associated with a first user-interface. EX2001, ¶102. As explained in the Petition, Chaudhri-842 describes “a process 600 for indicating progress towards satisfaction of a user input condition” in which an electronic device is transitioned between a first user-interface state and a second user-interface state. EX1005, [0080]-[0082]; Pet., 36. The “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*,” as illustrated in Chaudhri’s FIG. 6 (inset and annotated below). EX1005, [0080]-[0082]; Pet., 36.

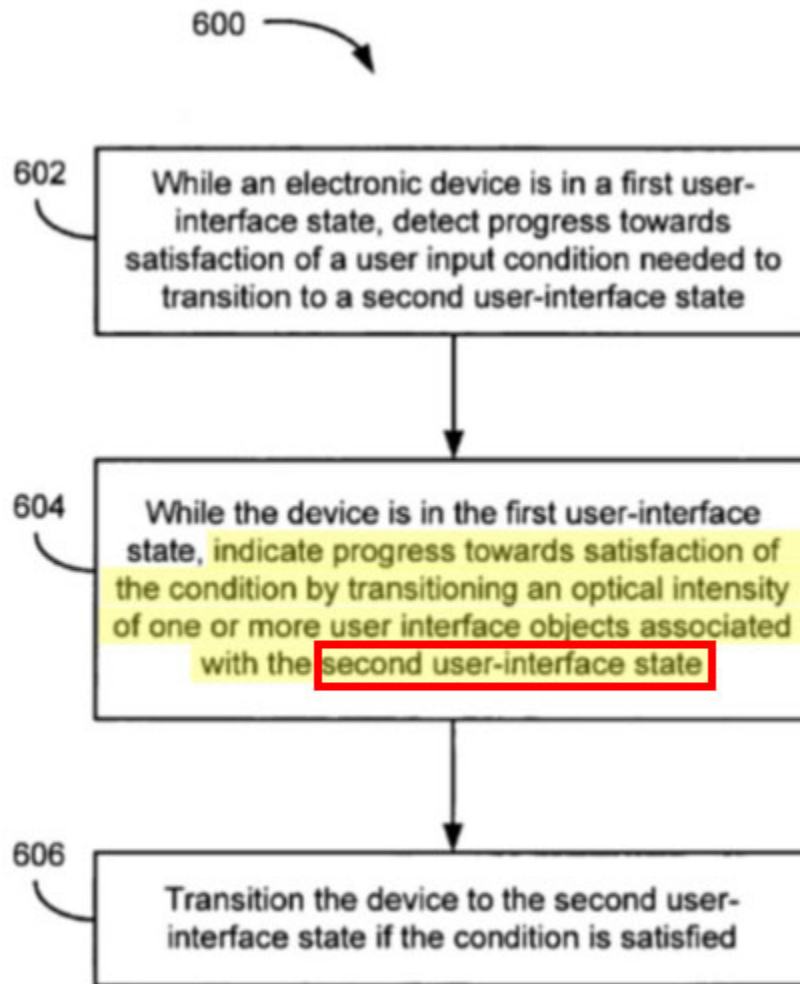
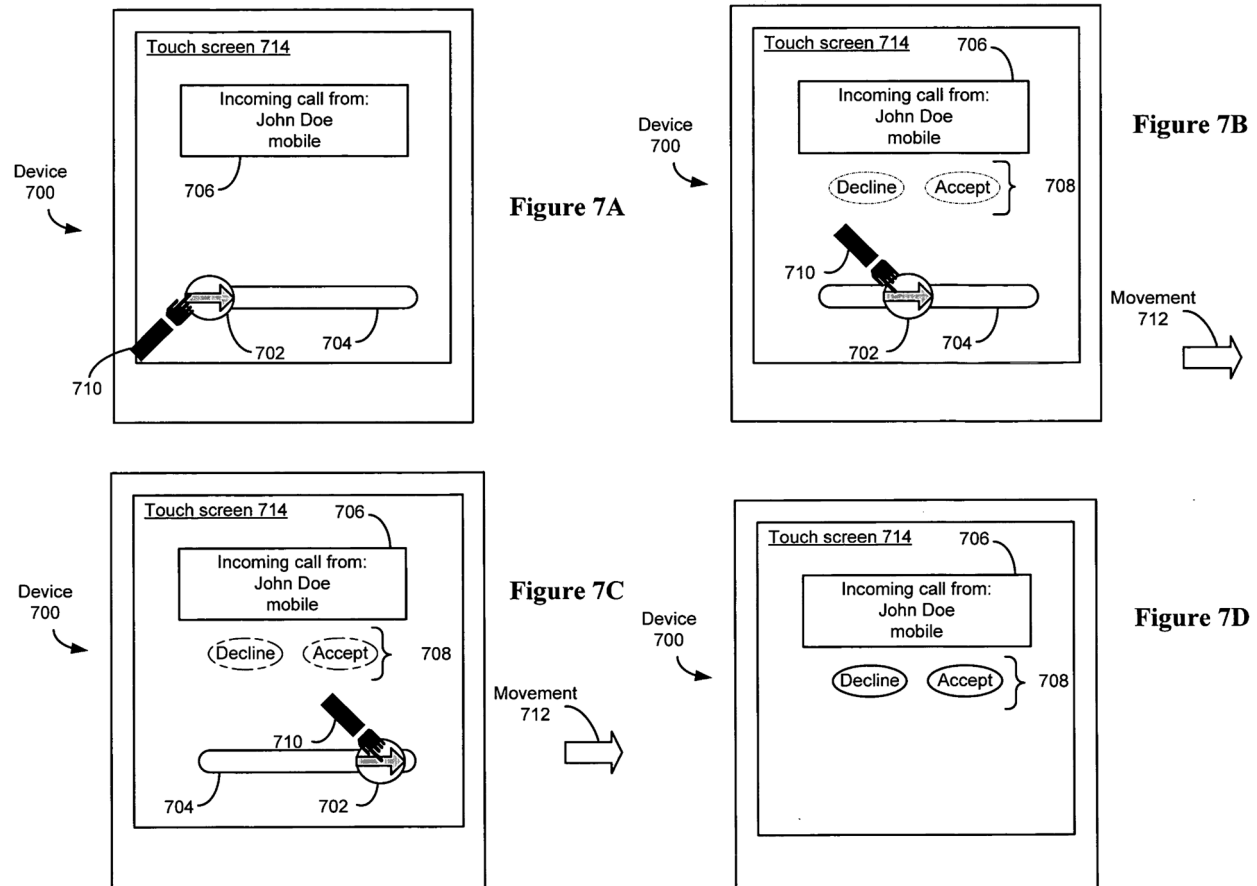


Figure 6

EX1005, FIG. 6.

Chaudhri-842 also illustrates an example of this concept in its Figures 7A-7D (inset below). As shown, as the arrow 702 slides to the right, the optical intensity of the virtual buttons 708—associated with the second user interface state—increases. EX1005, [0092]-[0093] (“In FIG. 7D, the user completes the unlock action ... [such that] [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, as illustrated by their solid outlines.”); *see also* EX2001, ¶103. At no point does an object associated with the first user-interface state (e.g., 702, 704, 706) decrease in optical intensity during the unlock action (FIGs. 7A-7C). EX2001, ¶103.

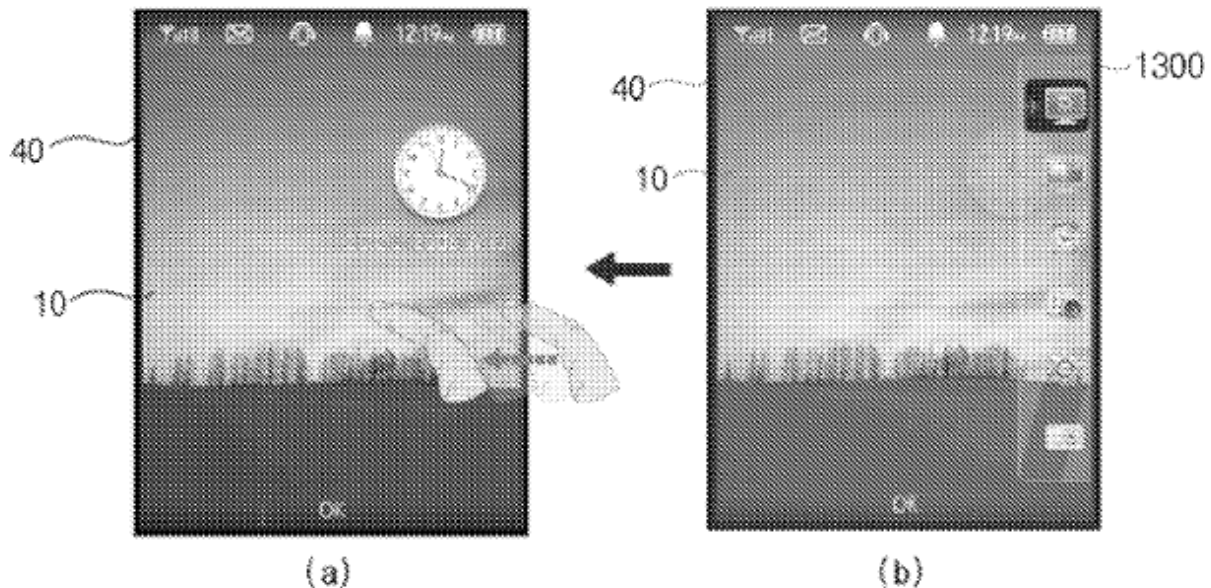


EX1005, FIG. 7A-7D.

In contrast, Petitioner’s Ahn-Chaudhri combination relies on *reducing* the optical intensity of Ahn’s background (the alleged *first* user interface state). Specifically, Petitioner identifies the standby screen of Ahn (FIG. 13A – below left) as corresponding to the first user-interface state and the “state where a menu list

1300 is displayed” (FIG. 13B – below right) as the second user-interface state. Pet., 38.

FIG. 13



EX2005, 71/75.

In Petitioner’s mapping to Ahn, the clock widget is displayed in (e.g., associated with) the *first* user-interface state. Pet., 38. But Chaudhri-842 does not teach adjusting the optical intensity of an object associated with the *first* user-interface state. EX2001, ¶105. 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; EX2001, ¶105. 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 the Petition does not provide. EX2001, ¶105.

Ultimately, Petitioner’s proposed modification would not have made sense in the context of Chaudhri-842’s teachings. EX2001, ¶106. As shown in Chaudhri-842’s FIGs. 7A-7D (above) a *selectable UI element* (708) from a second interface state increases in optical intensity to signify to the user that further completion of its gesture will allow the user to interact with that UI element. EX2001, ¶106; EX1005, ¶[0092]. In the example of Chaudhri-842’s FIGs. 7A-7D, the increasing optical intensity of the virtual buttons 708 helps the user understand that continuing to slide image 702 to the end of channel 704 will allow the user to interact with (e.g., select) one of buttons 708. *Id.*

In contrast, Petitioner’s modification would decrease the optical intensity 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. EX2001, ¶107. Thus, Petitioner departs from Chaudhri-842’s teachings at least in that the proposed Ahn-Chaudhri-842 combination purports to make translucent a *background* object (clock widget) that is part of the *first* user interface state. EX2001, ¶107. It makes little sense to add translucency to a background, given the lack of anything beneath the background that might otherwise show through

(Petitioner offers no other motivation for making any element translucent). *Id.* This is evidenced by Ahn's disclosure in which only the menu is referred to as being translucent—not the background or anything else. *Id.*

Moreover, once the touch and drag operation is complete and the menu subsequently deployed, the clock widget also cannot be interacted with (i.e., selected) in the second interface, meaning that the alleged *decreasing* of the optical intensity of the clock widget fails to serve the purpose set forth in Chaudhri-842 for *increasing* the optical intensity of Chaudhri-842's virtual buttons. EX2001, ¶108 (a POSITA would understand that the clock widget is not selectable when obstructed by menu).

Petitioner fails to acknowledge these significant discrepancies, much less provide any evidence or explanation for why a POSITA would have done the opposite of what Chaudhri-842 discloses. That alone undermines the alleged Ahn-Chaudhri-842 combination.

4. Petitioner's asserted modification would not achieve the functionality allegedly motivating Petitioner's combination

Here too, even setting aside the absence of necessary disclosures noted above, Petitioner relies on several of the benefits associated with Chaudhri-842's operation as motivations for a POSITA to make its alleged modifications to Ahn. But, as explained above, Petitioner's alleged modifications are inconsistent with Chaudhri-842's teachings and, ultimately, none of those purportedly motivating

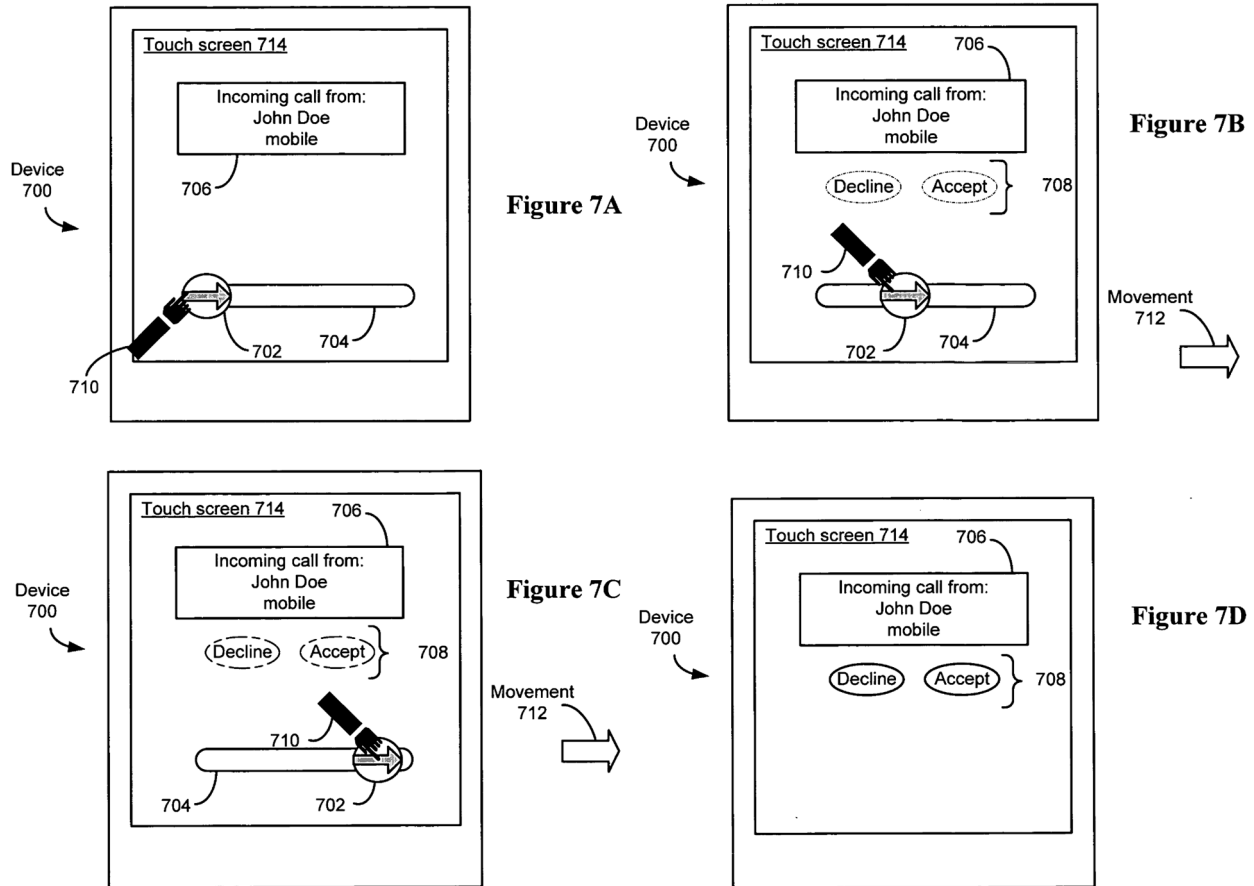
benefits actually carry over to Petitioner's alleged combination. This too undermines Petitioner's alleged combination.

To illustrate, Petitioner contends it would have been obvious to implement its modification—alleged “blurring” of the clock widget during the touch and drag operation—“to provide *visual feedback* regarding the *progress* of a transition between user interface states.” Pet., 35-36. According to Petitioner, this would (1) “provid[e] a visual indication to the user of their progress in completing the gesture” and (2) “help differentiate between the” menu list and the clock widget. Pet., 39. But a POSITA would not have expected either purported motivation to be present in Petitioner's proposed Ahn-Chaudhri-842 combination.

a. Petitioner's modification does not provide visual feedback of the progress of a user's gesture

The alleged “blur” of Ahn's clock widget during Ahn's “touch and drag operation” would not provide the user with any indication of progress of opening menu 420/1300. EX2001, ¶112.

Chaudhri-842 shows progress by an indicator 702 moving toward an “end” of a channel 704. EX1005, FIGs. 7A-7D; *see also id.*, [0071] (end of the channel 404 “serves as a predefined location to which the unlock image 402 is to be dragged.”). Simultaneously, optical intensity of the virtual buttons 708 *increases* to “their final optical intensity levels, as illustrated by their *solid outlines*.” EX1005, ¶[0093].



EX1005, FIGs. 7A-7D.

Thus, a user is given feedback of the progress of an “unlock action” by the distance the indicator 702 has moved relative to the total length of the channel 704, and by virtual buttons 708—associated with the second user-interface state—*increasing* in optical intensity to an opaque end point with “solid outlines.” *Id.*, [0090]-[0093]; *see also id.*, [0087] (“the indication of progress may be defined in terms of the distance between the two edges because the distance remaining objectively measures how much further the user has to move her finger to complete the gesture”). Chaudhri-842’s visual feedback is thus provided only because the

selectable virtual buttons 708 of the second user-interface state *increase* in optical intensity. EX2001, ¶114.

A POSITA would have understood that this visual feedback would not be present by Petitioner's proposed modification to "blur" the clock widget of Ahn. EX2001, ¶115. In Petitioner's modification, the user cannot compare its gesture to some visual end point and, instead, would see only in abstract the alleged "blur" of the clock widget. *Id.* But that change in appearance of the clock widget offers no indication of progress, at least because its end state cannot be perceived or predicted based on that alleged change in appearance. *Id.* Nor does it direct a user to a selectable object as in Chaudhri-842 because a user would not be able to interact with Ahn's clock widget once the menu is displayed over the top of that clock widget. EX2001, ¶115. 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. *Id.* 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. *Id.*

As such, the alleged "blur" *during* the touch and drag operation would not provide any indication of (1) how much of the gesture is completed, or (2) how much of the gesture is remaining. *Id.*; *contra* 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., 38 (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 be completed. EX2001, ¶116.

Further, Petitioner’s modification to have menu 1300 slide out with graphical shadow 1800 “as part of the touch and drag gesture” (Pet., 39-41) renders the “blurring” of the clock widget even less relevant. EX2001, ¶117. A user would know the gesture is completed when the menu 1300 stops advancing according to the user’s drag. There is no evidence or logical explanation to suggest that the “blurring” of the clock widget—to a state that is not completely transparent (EX1004, FIGs. 4B, 13B)—would suggest the gesture is complete or how much of that gesture remains until the menu is fully opened. Accordingly, a POSITA would have understood that Petitioner’s purported modification to blur the clock widget 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.* And Petitioner’s remaining modifications (to fade out the graphical shadow 1800 or slide in menu 1300) do not meet the claim language. *Supra*, §V.C.1 (Petitioner only identifies Ahn’s clock widget as the claimed “at least one other object.”). Thus, Petitioner’s

purported ‘progress’ motivation would not have led a POSITA to make the asserted modification of Ahn.

b. Petitioner’s modification does not help differentiate between objects

Petitioner’s assertion that “utilizing this progressive translucency or blurring effect would 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)” is misguided and is not supported by evidence. Pet., 39.

As explained above, the menu 1300 in Ahn is not selectable until the gesture is complete. EX2001, ¶119. Additionally, Petitioner does not modify Ahn so that the clock widget is “blurred” more than already pictured in Ahn (e.g., transparency of the clock widget in Petitioner’s modification is not reduced as compared to Ahn’s FIG. 4B). See Pet., 33-43. When displayed in a selectable state, the differentiation of the clock widget and the menu is identical in Ahn’s disclosure and Petitioner’s modification. EX2001, ¶119. Thus, this alleged ‘differentiation’ motivation offers no change from the ‘differentiation’ already provided by Ahn. That is, the alleged motivation is a solution without a problem. See *Ex parte Rinkevich*, Appeal No. 2007-1317, slip op. at 8-9 (BPAI May 29, 2007) (noting that “the problem proffered by the Examiner is already solved” by the primary reference, and explaining that “a person of ordinary skill in the art having common sense at the time of the invention

would not have reasonably looked at [a secondary reference] to solve a problem already solved by [the primary reference].”).

Further, a POSITA would understand that the cited portion of Chaudhri-842 teaches that differentiation between a user-interface element and a background is a function of the total difference of optical intensity and not any *progressive change* in optical intensity. EX2001, ¶120; EX1005, ¶[0085] (defining “*the* optical intensity”—not a progressive change in optical intensity—as “the visual differentiation between the user-interface object and the background”); Pet., 37 (citing EX1005, ¶[0085]). Thus, it is the difference in opacity between the UI element and the background that results in the visual differentiation of Chaudhri-842. EX2001, ¶120; EX1005, ¶[0085]. Accordingly, a POSITA reading Chaudhri-842 would have understood that progressively changing the appearance of Ahn’s background would not improve visual differentiation of Ahn’s menu 1300. Thus, Petitioner’s purported ‘differentiation’ motivation would not have led a POSITA to make the asserted modification of Ahn.

c. Petitioner’s generic motivations also fail

Petitioner’s mapping of Limitation [1.d] also references Section VI.A.3 of the Petition as support for its assertion that “a POSITA would have found it 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—in the context of Ahn's mobile communication terminal 100.” Pet., 35. Foundationally, this sentence is so broad as to be meaningless and, as explained above, Petitioner's modification does not “provide visual feedback regarding the progress of a transition between user interface states.” *Supra*, §V.C.4.a. Petitioner fails to assert that, much less explain why, Chaudhri-842's teachings would be applied in a way that would meet the claims. EX2001, ¶121. Nevertheless, the four motivations alleged in that referenced section also fail to lead a POSITA to Petitioner's alleged combination. *See*, Pet., 19-23.

First, Petitioner asserts generally that “Chaudhri-842 provides one example of implementation details that are lacking for a feature otherwise disclosed in Ahn.” Pet., 19. However, for the reasons explained above in Sections V.C.3.b, Chaudhri-842 (1) discloses varying the optical intensity of foreground UI elements (not the background), (2) discloses increasing the optical intensity of UI elements associated with a second user-interface state (not decreasing optical intensity of a background associated with first user-interface state), and (3) these foreground UI objects associated with a second user-interface state can be interacted with once the increase in their optical intensity has been completed. EX2001, ¶122. As such, Petitioner's proposed modifications to Ahn do not implement the alleged “implementation details” of Chaudhri-842's. *Id.*

Second, Petitioner asserts generally that “Chaudhri-842 teaches that the ‘change in optical intensity of the user-interface objects provides a user with sensory feedback of the progress in transitioning between user interface states.’” Pet., 20. But this is the same motivation parroted specifically for Limitation [1.d.i], and therefore fails for the same reasons explained in Section V.C.4.a above. EX2001, ¶123.

Third, Petitioner asserts generally that “a POSITA would have known that transparency, translucency/blurring, and other ‘focus and context’ techniques may be utilized in user interfaces to help draw a user’s attention to the most relevant part of a user interface.” Pet., 22. This too is the same “visual differentiation” motivation parroted specifically for Limitation [1.d.i], and therefore fails for the same reasons explained in Sections V.C.4.a-b. EX2001, ¶124.

Fourth, Petitioner asserts generally that “POSITA would have known that varying optical intensity for a user interface object (e.g., the blurring of Ahn’s clock widget) as a function of the magnitude of the user’s touch and drag gesture would have been one of a limited number of ways of implementing the blurring effect that’s shown in FIGS. 4B, 10, and 13B of Ahn.” Pet., 23. Petitioner continues that “[e]ither a POSITA could have implemented the blurring effect in a binary fashion (e.g., toggling instantaneously between unblurred and blurred) or progressively varied the blur as a function of the user’s gesture, as taught by Chaudhri-842.” Pet.,

23. Here, Petitioner abandons its first three motivations and, as a last-ditch fallback, constructs a false binary choice of its own by framing the decision as simply either/or. EX2001, ¶125. Not only is this motivation divorced from the teachings of Ahn or Chaudhri-842, but it is also belied by Petitioner’s own arguments based on the various reasons and considerations driving a POSITA’s decision of whether, when, and how to alter the appearance of Ahn’s background. *See, e.g.,* Pet., 19-23.

As explained in Section V.C.2 above, Ahn’s widget is not “blurred” until after the “touch and drag operation” is complete. EX2001, ¶126. Weighing against doing so is the fact that varying the optical intensity of the background is not without cost. *Id.* In particular, *progressively* varying the optical intensity of the background in a touch input device 10 like Ahn’s would require code that would eat into the device’s limited storage, as well as the use of limited processing and memory bandwidth, and limited battery power, to execute the function of varying that optical intensity. *Id.* In Petitioner’s asserted combination, progressively varying the optical intensity of the background while the menu 1300 is not selectable would serve no purpose. *Id.* As such, even assuming Petitioner’s false binary, a POSITA would have chosen not to expend resources to make that modification to Ahn. EX2001, ¶126.

For the reasons explained above, Petitioner’s modification would not achieve any of the purported benefits alleged to motivate Petitioner’s modifications of Ahn. As such, “we are left with only hindsight bias that *KSR* warns against.” *Metalcraft*

of Mayville, Inc. v. The Toro Company, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (Fed. Cir. 2017).

VI. CONCLUSION

For the reasons explained above, the Board should deny institution because Petitioner has not established a reasonable likelihood of success on any claim.

Dated: December 18, 2024

Respectfully submitted,

/Eagle H. Robinson/

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Reg. No. 61,361

Lead Counsel for Patent Owner

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 10,827 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 December 18, 2024, complete copies of Patent Owner Preliminary Response and EX2001-EX2005 were served on Petitioner via email (by consent), at the following email address(s):

IPR50095-0175IP1@fr.com

/Eagle H. Robinson/

Eagle H. Robinson, Reg. No. 61,361