UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., AND
SAMSUNG ELECTRONICS AMERICA, INC.,

Petitioners,

v.

KEYLESS LICENSING LLC,

Patent Owner.

Case IPR2025-00526
Patent No. 9,304,602

PETITION FOR *INTER PARTES* REVIEW

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a. [1pre]: "A system for capturing an event provided from an edge of a touch screen comprising:" 12

b. [1a]: "a device having a touch screen;" 14

c. [1b]: "at least one window located in the touch screen on an edge of the touch screen, wherein said at least one window functions independently of an interface of an application in use on the touch screen; and" 17

d. [1c]: "a processor;" 20

e. [1d]: "wherein a gliding action provided from outside of the touch screen towards inside of the touch screen, said gliding action at first interacting with said at least one window on the touch screen,

is processed by said processor to cause an action assigned to said window, and" 22

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b. [19a]: "a device having a touch screen;" 45

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d. [19c]: "a processor;" 47

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PETITIONERS' EXHIBIT LIST

Exhibit	Description
Ex. 1001	U.S. Patent No. 9,304,602 to Ghassabian ("the '602 patent")
Ex. 1002	Excerpts from File History for U.S. Patent No. 9,304,602
Ex. 1003	Declaration of Dr. Benjamin Bederson, Ph.D. ("Bederson")
Ex. 1004	Curriculum Vitae of Dr. Benjamin Bederson, Ph.D.
Ex. 1005	U.S. Patent Application Publication No. 2009/0249247 A1 to Tseng et al. ("*Tseng*")
Ex. 1006	U.S. Patent Application Publication No. 2010/0302172 A1 to Wilairat ("*Wilairat*")
Ex. 1007	Japanese Published Unexamined Patent Application No. 2003-195998 to Hisatomi ("*Hisatomi*")
Ex. 1008	Certified Translation of Japanese Published Unexamined Patent Application No. 2003-195998 to Hisatomi ("*Hisatomi*")
Ex. 1009	Reserved
Ex. 1010	U.S. Patent Application Publication No. 2009/0094562 A1 to Jeong et al. ("*Jeong*")
Ex. 1011	U.S. Patent Application Publication No. 2010/0050076 A1 to Roth ("*Roth*")
Ex. 1012	Volker Roth & Thea Turner, *Bezel Swipe: Conflict-Free Scrolling and Multiple Selection on Mobile Touch Screen Devices*, CHI 2009 ~ Multimodal Mobile Interaction, pp. 1523-26 (ACM 2009) ("*Bezel Swipe*")
Ex. 1013	U.S. Patent Application Publication No. 2011/0209099 A1 to Hinckley et al. ("*Hinckley*")

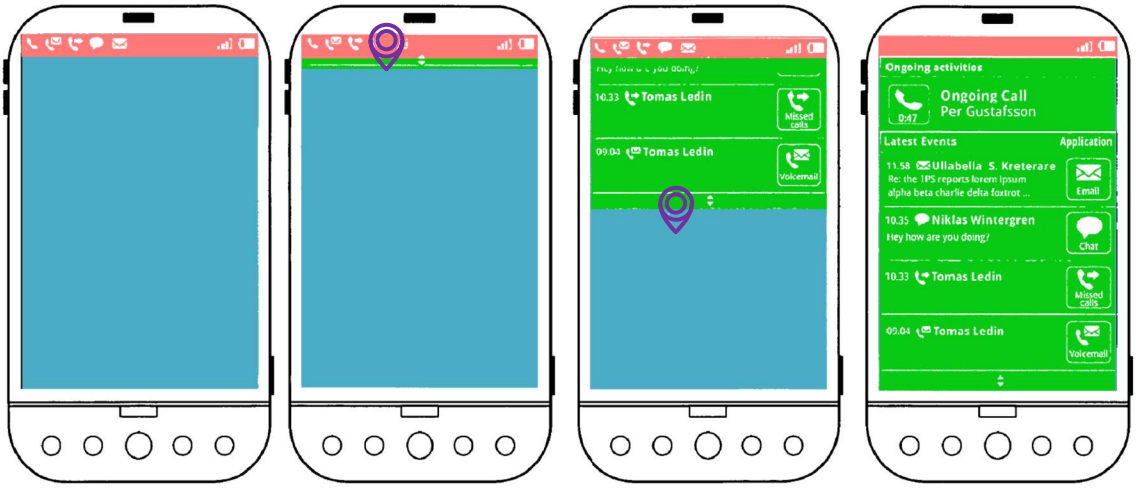
Exhibit	Description
Ex. 1014	U.S. Patent Application Publication No. 2004/0109013 A1 to Goertz ("*Goertz*")
Ex. 1015	U.S. Patent Application Publication No. 2006/0209040 A1 to Garside et al. ("*Garside*")
Ex. 1016	U.S. Patent Application No. 2010/0105443 A1 to Vaisanen ("*Vaisanen*")
Ex. 1017	Reserved
Ex. 1018	T-Mobile G1 User Manual (2009) ("*T-Mobile G1 User Manual*")
Ex. 1019	Samsung Galaxy User Manual (Samsung 2009) ("*Samsung GT-i7500 User Manual*")
Ex. 1020	User Guide palm pre plus (Palm Inc. 2009) ("*Palm Pre Plus User Guide*")
Ex. 1021	Edward C. Baig, *Palm Pre The Missing Manual* (O'Reilly Media Inc., 1st ed. Aug. 2009) ("*Palm Pre The Missing Manual*")
Ex. 1022	Neonode N2 user guide (Neonode AB 2007) ("*Neonode N2 User Guide*")
Ex. 1023	Excerpt from Barron's *Dictionary of Computer and Internet Terms* (Barron's Educational Series, Inc., 10th ed. 2009) ("window")
Ex. 1024	Excerpt from *Microsoft Computer Dictionary* (Microsoft Press, 5th ed. 2002) ("window")
Ex. 1025	Excerpts from Jef Raskin, *The Humane Interface: New Directions for Designing Interactive Systems* (ACM Press, A Division of the Association for Computing Machinery (ACM) 2000)
Ex. 1026	IBM Simon Users Manual (IBM Corp. 1994)

Exhibit	Description
Ex. 1027	Johnny Accot & Shumin Zhai, *More than dotting the i's — Foundations for crossing-based interfaces*, CHI 2002, Vol. 4, Issue 1, pp. 73-80 (ACM 2002) ("*Crossing-based Interfaces*")
Ex. 1028	Georg Apitz & François Guimbretière, *CrossY: A Crossing-Based Drawing Application*, UIST '04, Vol. 6, Issue 2, pp. 3-12 (ACM 2004) ("*CrossY*")
Ex. 1029	Apple Newton MessagePad Handbook (Apple Computer, Inc., 1995)
Ex. 1030	Apple Newton 2.0 User Interface Guidelines (Apple Press 1996)
Ex. 1031	Plaintiff's Infringement Contentions in *Keyless Licensing LLC v. Samsung Electronics America, Inc.*, No. 2:24-cv-00464-JRG (Oct. 9, 2024)

I. PRELIMINARY STATEMENT

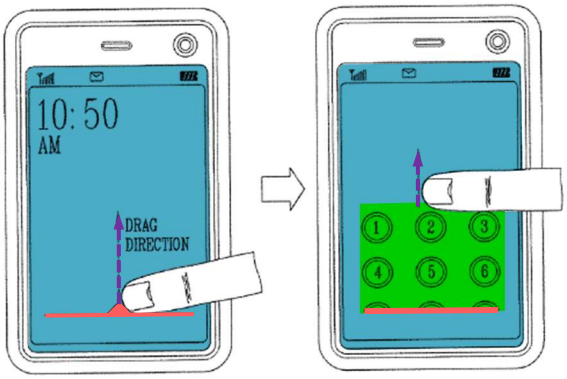
Petitioners Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc., request IPR of the '602 patent, assigned to Keyless Licensing LLC, and cancellation of claims 1-13, 15-19, and 21-36. The patent is titled "System for Capturing Event Provided from Edge of Touch Screen," and claims a device having a touch screen with a window or zone located on an edge of the touch screen, where a user performs a gliding action from outside the touch screen towards the inside of the touch screen and contacts the window or zone to activate a function. Ex. 1001, cover, 103:2-16, 104:1-19.

But the prior art disclosed this, including in U.S. Patent Application Publication No. 2009/0249247 ("*Tseng*") and U.S. Patent Application Publication No. 2009/0094562 ("*Jeong*"). *Tseng* discloses a mobile phone having a touch screen that includes a status bar window located at the top edge of the touch screen for displaying notifications (e.g., alerts for new emails or messages, missed calls, new voice mails). A user performs a "finger swipe" gliding their finger across the face of the device over the status bar to pull down a message area that displays details about the new notifications. The user may then select one of the notifications or applications shown in the message area to open the corresponding message or application in the main screen display.

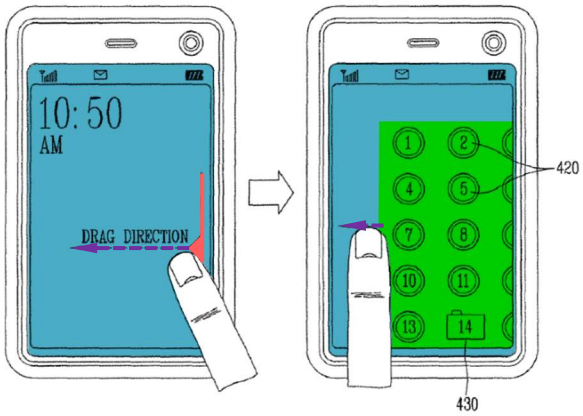


Tseng, FIG. 2C (annotated).

Jeong similarly discloses a mobile device having a touch screen that displays tags located on the edges of the touch screen, such as the bottom and side edges shown below. A user performs a dragging action, gliding their finger across the face of the device over the tag, to pull out a menu that displays icons that the user can select to open an application.



Jeong, FIG. 7B (annotated).



Jeong, FIG. 7C (annotated).

Persons of ordinary skill in the art also knew that swiping or gliding actions, like *Tseng*'s and *Jeong*'s, beginning on the bezel or housing first interact with the touch screen when they cross into the touch-sensitive area. Such actions were well known in the art, dating back to basic menu design in the 1990s.

Claims 1-13, 15-19, and 21-36 would have been obvious based on *Tseng* or *Jeong* either individually or in combination with other prior art.

The Board should thus institute review and cancel all challenged claims.

II. STATE OF THE ART

Touch-screen devices, including smartphones, dated back decades before the '602 patent's claimed priority date to at least the IBM Simon's release in the early 1990s. Ex. 1003, Bederson Decl. ("Bederson") ¶¶47-48. Palm devices led the way for touch-screen-based, keyboard-free personal digital assistants (PDAs), along with the Apple Newton/MessagePad and HP iPaq devices, in the 1990s and early 2000s. Bederson ¶48. By the mid-to-late-2000s, touch-screen-driven phones, like the Samsung Galaxy GT i7500 and Behold II; HTC G1, Hero, and Magic; Motorola Droid line; Palm Pre series; Nokia's Symbian line; and Apple iPhone series, became ever more prevalent with their larger touch screens. *Id.*

With the growing popularity of touch-screen devices, "[e]fforts [were] ongoing to support and increase the functionality of mobile terminals." *Jeong*, [0004].

It was recognized that because "[t]he screens of mobile devices are necessarily small," it "limits the size of displayed pages and the space that can be devoted to user interface widgets," and these smaller devices also have "smaller widgets [that] are harder to hit" or contact with a finger. *Bezel Swipe*, 1. One way that user interface designers sought to improve mobile devices was using various actions beyond just pointing and tapping. Bederson ¶49 For example, gesture-based actions, such as gliding actions and pinching actions, allowed the user to perform various operations by sliding their finger from or over an activation window (e.g., button, bar, menu item) to activate it, such as described in *Crossing-based Interfaces* (Ex. 1027) and *CrossY* (Ex. 1028). Bederson ¶49.

Persons of ordinary skill knew that the benefits of crossing interfaces were achieved when a user "start[ed] [a swiping gesture] on the bezel and mov[ed] into the display." *Bezel Swipe*, 2;[1] *see Roth*, [0009]-[0010], [0015], [0036], [0039], Fig. 2B; *Wilairat*, [0009], [0012], Fig. 1; *Hinckley*, [0072]-[0073], Fig. 6; Bederson ¶¶50-51. For example, persons skilled in the art knew that a user's gliding gesture from outside the touch screen and crossing into the interior of the screen over an activatable bar/line "[was] recognized by detecting touches inside a thin

[1] Petitioner cites to the exhibit page numbering for non-patent documents (e.g., page x of y in the lower corner), not original page numbers.

rectangular area positioned flush against the display [screen] edge[].” *Bezel Swipe*, 1-2, Figures 1-2 (describing using “a narrow target (the red bar) [being] positioned flush against the display edge” activated by a crossing gesture); *see Roth*, Fig. 2B.

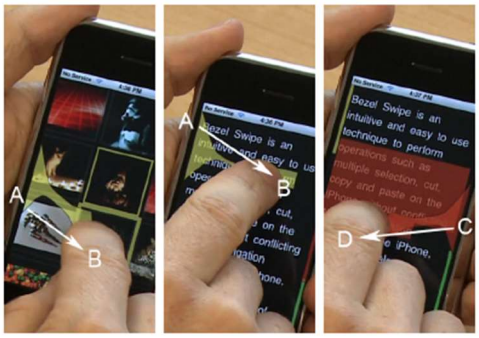


Figure 1. The Bezel Swipe prototype in action. Left panel: A swipe from A to B selects an image. Middle panel: A swipe from A to B marks the beginning of a text selection. Right panel: A swipe from C to D marks the end of the text selection.

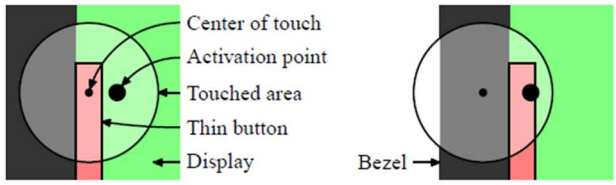
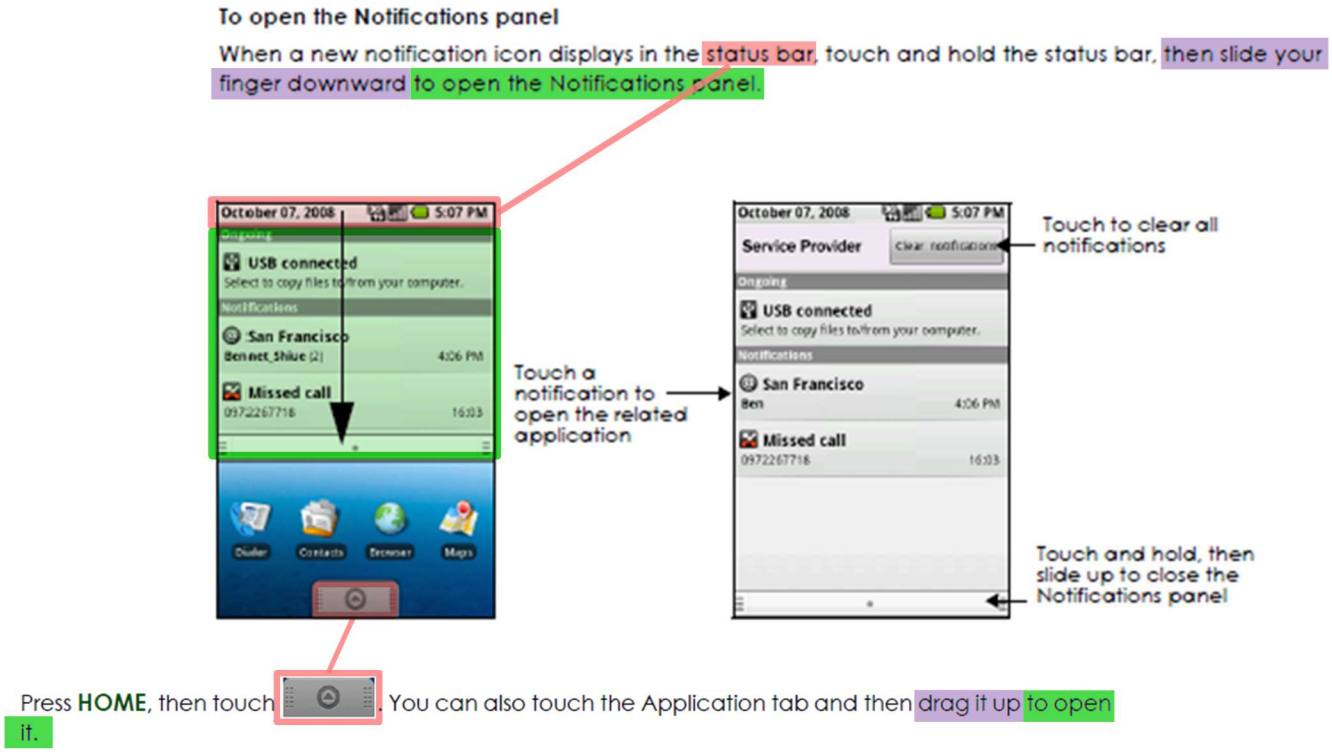


Figure 2. Touching narrow targets close to the bezel: a touch (large circle) centered on the target (left) may not activate it whereas a touch significantly overlapping the bezel (right) does.

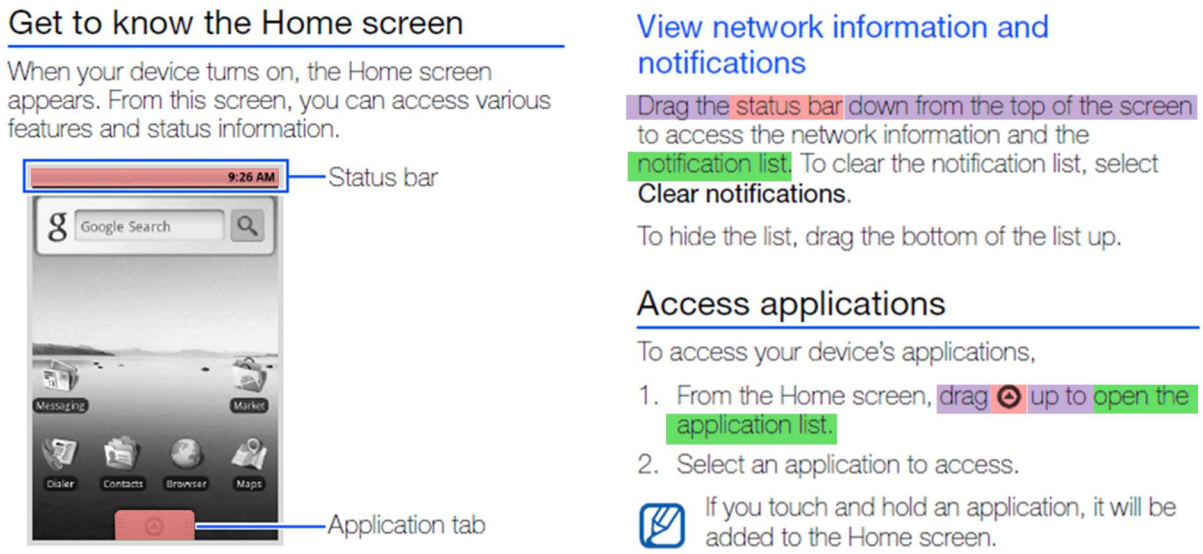
Bezel Swipe, Figures 1-2.

The state of the art recognized that these types of interactions “enable[d] the reliable activation of a button [activation line being crossed] that is so narrow that it would be difficult to activate by direct touch,” such as tapping. *Bezel Swipe*, 2. This had several recognized benefits, including smaller activation areas (bars/lines) and that such actions “can be more efficient than pointing tasks” (e.g., than the user directly tapping or long-pressing on the activation window), especially on small-screen devices. *Roth*, [0010], [0036]; *Bezel Swipe*, 2; Bederson ¶¶51-53; *see Raskin*, 8-11. Such offscreen-to-onscreen gliding actions to activate a function were consistent with well-established principles that they increased the “effective size” of the window at the edge of the screen being activated, making it easier and

faster for the user to interact with. Bederson ¶¶52-53; *Raskin*, 8-11. Indeed, several commercial devices' user manuals instructed the users to perform such off-to-onscreen gliding action to activate various functions. Bederson ¶¶55-56; *see also id.*, ¶54; *T-Mobile G1 User Manual*, 27-29; *Samsung GT-i7500 User Manual*, 30-31; *Palm Pre Plus User Guide*, 20, 25; *Neonode N2 User Guide*, 7).



T-Mobile G1 User Manual, 27-29.



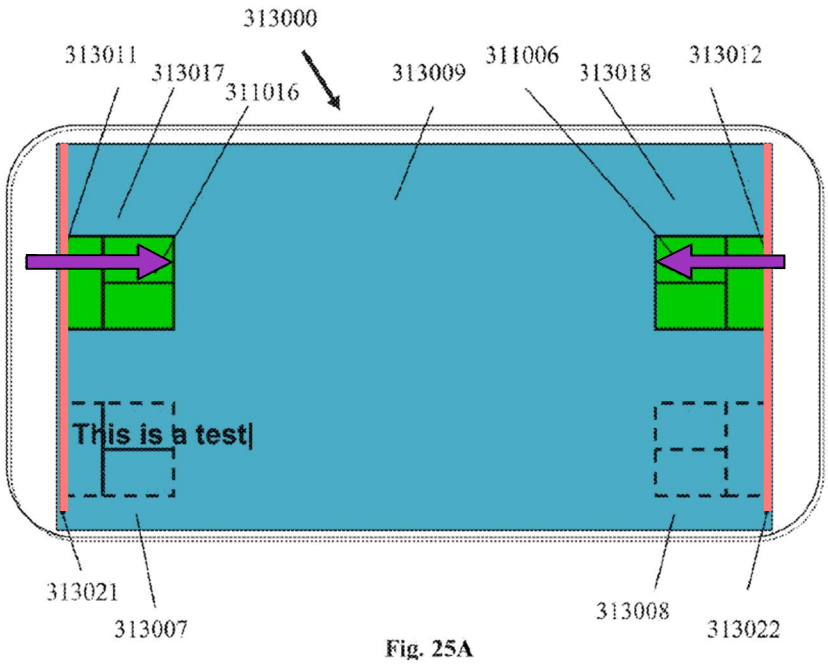
Samsung GT-i7500 User Manual, 30-31.

As Dr. Bederson explains and recounts, the state of the art was well developed for users performing gliding actions from or across a window at an edge of a touch screen towards the inside of the touch screen to activate functions, such as pull-down interfaces, and many examples of such actions existed in the art. Bederson ¶¶54, 57-58, §VI (citing *Tseng*, FIG. 2C; *Roth*, FIG. 2B; *Bezel Swipe*, Figure 1; *Hinckley*, Figs. 6, 8; *Wilairat*, Fig. 1; *Goertz*, Figs. 1, 2).

III. THE '602 PATENT

The '602 patent relates to user interfaces on mobile devices. In Fig. 25A's example, "[i]f the user desire[s] to change the location of (a portion of) said keypad, he may provide a gliding action 311006 departing from the edge 313012 of the screen (e.g. obviously, the gliding action may begin from out of the screen but the system considers the departing point from the edge of the screen) towards

his desired location inside the screen." Ex. 1001, 60:39-49. The '602 patent uses the terms "gliding," "swiping," and "dragging" interchangeably. *Id.*, 44:49-52 ("gliding or swiping actions"), 61:64-62:5 ("dragging/gliding action 313105")."During the gliding action, the system may dynamically show and drag [a] corresponding portion[] of the keypad on the screen." *Id.*, 60:52-54. "[T]he sides of the touch[-]sensitive surface may include … a bar 313021, and a bar 313022 (e.g.) on each corresponding side of the screen such that said gliding action(s) begin(s) from said bar(s) and not from a portion of the screen which is also used by other means/functions such as the mouse." *Id.*, 61:1-8, Fig. 25A.



Id., Fig. 25A (annotated).

IV. CLAIM CONSTRUCTION

The Board construes claims per *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b). Claims are construed only to the extent necessary to resolve a controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017). Here, no terms need construction to resolve the controversy in this forum.[2]

V. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art ("POSITA") would have had at least a bachelor's degree in electrical engineering, computer science, or a similar field and two to three years of experience designing graphical user interfaces, including those with touch screens and for mobile devices. Additional relevant work experience can compensate for less education, and vice versa. Bederson ¶74.

[2] Petitioners reserve the right to argue in an appropriate forum that certain limitations in the challenged claims are indefinite. Petitioners also reserve the right to challenge the priority date here and/or in other proceedings.

VI. STATEMENT OF PRECISE RELIEF REQUESTED

A. Prior Art

U.S. Patent Application Publication No. 2009/0249247 ("*Tseng*"; Ex. 1005), published October 1, 2009, is prior art to the '602 patent under § 102(a), (b), and (e).

U.S. Patent Application Publication No. 2009/0094562 ("*Jeong*"; Ex. 1010), published April 9, 2009, is prior art under § 102(a), (b), and (e).

U.S. Patent Application Publication No. 2010/0302172 ("*Wilairat*"; Ex. 1006), published December 2, 2010, and filed May 27, 2009, is prior art under § 102(e).

Japanese Published Unexamined Patent Application No. 2003-195998 ("*Hisatomi*"; Ex. 1007; Ex. 1008 (translation)[3]), published July 11, 2003, is prior art under § 102(a) and (b).

Tseng, *Jeong*, *Wilairat*, and *Hisatomi* are analogous art because they are directed to the same field of endeavor as the '602 patent—mobile communications devices and user input interfaces for mobile communications devices. *Tseng*, Abstract, [0051]-[0061], FIGS. 2B-2C; *Jeong*, Abstract, [0050]-[0059], FIGS. 6A-7C; *Wilairat*, Abstract, [0003], [0009]-[0015], Fig. 1; *Hisatomi*, Abstract,

[3] Citations in this Petition are made to the translation of *Hisatomi* (Ex. 1008).

[0029]-[0034], FIGS. 5-7; Ex. 1001, Abstract, Figs. 25A-25B. Each is also directed to the same problem as the '602 patent, for example, displaying user interfaces in response to user gestures. *Tseng*, Abstract, [0051]-[0061], FIGS. 2B-2C; *Jeong*, Abstract, [0050]-[0059], FIGS. 6A-7C; *Wilairat*, Abstract, [0003], [0009]-[0015], Fig. 1; *Hisatomi*, Abstract, [0029]-[0034], FIGS. 5-7; Ex. 1001, 60:9-61:16, Figs. 25A-25B; Bederson ¶¶77, 79, 81, 83.

B. Challenges

Ground	Challenged Claims	35 U.S.C. Section	Prior Art
1	1-13, 17-19, 21, 23-36	103	*Tseng*
2	1-13, 17-18, 33	103	*Tseng* and *Wilairat*
3	15-16, 18-19, 21-36	103	*Tseng*, or *Tseng* and *Wilairat*, in further view of *Hisatomi*
4	1-13, 15-19, 21-36	103	*Jeong*
5	1-13, 15-19, 21-36	103	*Jeong* and *Wilairat*

VII. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Ground 1: Claims 1-13, 17-19, 21, and 23-36 Are Rendered Obvious by *Tseng*

Tseng renders obvious claims 1-13, 17-19, 21, and 23-36. Bederson ¶¶87-188.

1. Independent Claim 1

a. [1pre]: "A system for capturing an event provided from an edge of a touch screen comprising:"

Tseng discloses [1pre]. Bederson ¶¶88-90.

Tseng discloses a "computer-implemented user notification method includes displaying, in a status area near a perimeter of a graphical interface, a notification of a recent alert event for a mobile device." *Tseng*, Abstract. *Tseng*'s mobile device, such as a mobile phone or smartphone, displays a "status bar" or "status area" on the edge of a touch screen, such as shown in FIG. 1. *Tseng*, [0017], [0028], [0039], [0119]; Bederson ¶89, 89 n.16.

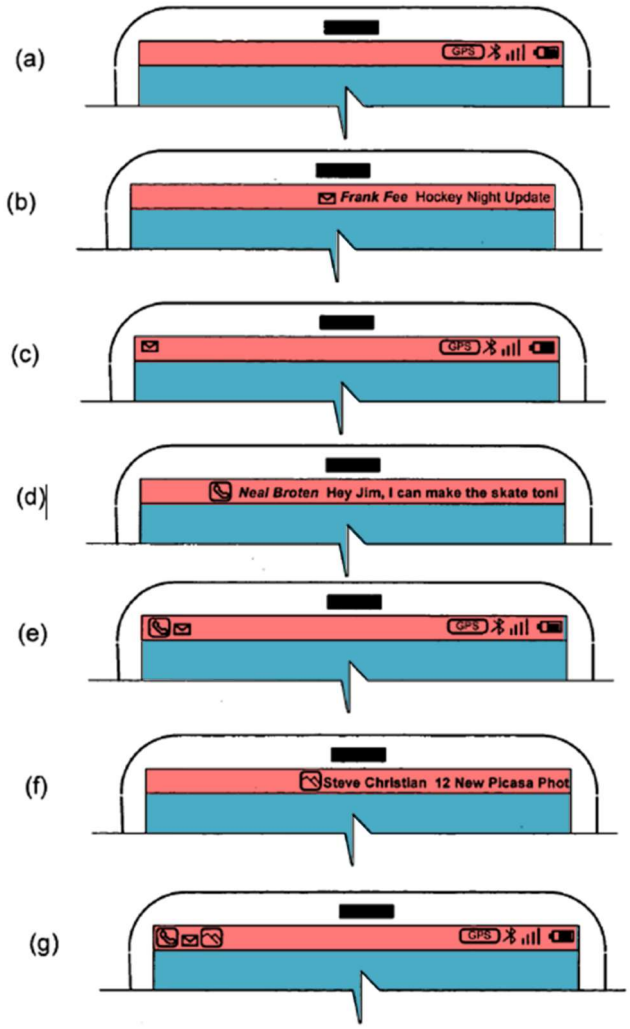


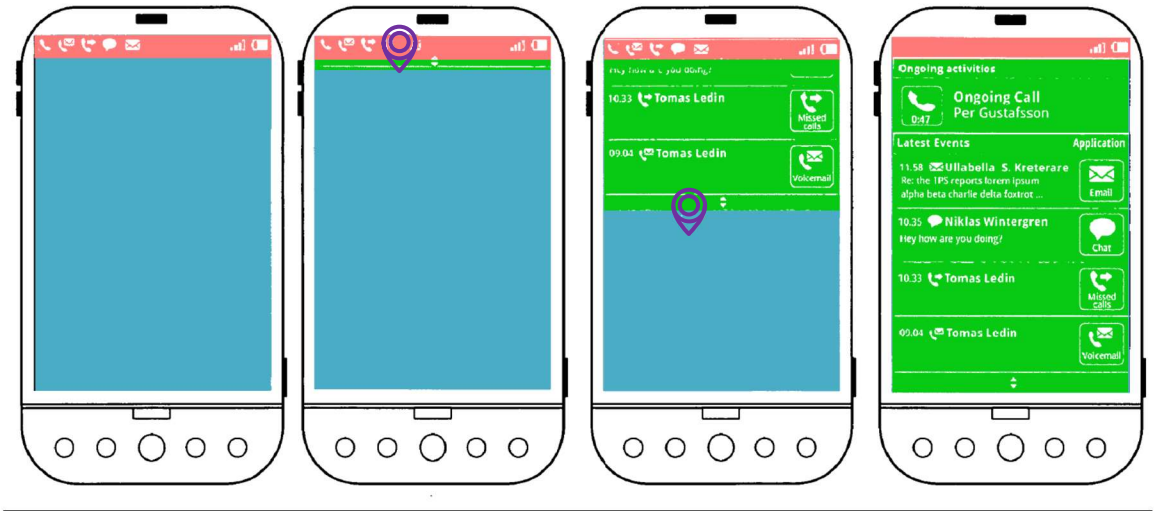
FIG. 1

Tseng, FIG. 1.[4]

Tseng's FIG. 2C shows a gliding (e.g., dragging/sliding) motion (e.g., event provided) is at the edge of the touch screen, as shown by the "circle having a ring around it in the status bar." *Tseng*, [0058], FIG. 2C. The user makes "a finger

[4] All colors and colored annotations added to figures unless otherwise noted.

swipe across the face of the display [touch screen], where the edge of the element showing an extended view of the messaging events 'sticks' to the user's finger as the finger moves past." *Tseng*, [0029]; *see Tseng*, [0011], [0013] (describing "displaying the detail regarding the plurality of recent messaging events behind the slider mechanism as [the user's finger] is slid across the display"). *Tseng* explains that this "event" can be a "user selection" action, such as a "finger swipe" (e.g., dragging/gliding action). *Tseng*, [0013]-[0015], [0029], [0058], [0080], FIGS. 2C, 4A-4B; Bederson ¶90.



Tseng, FIG. 2C.

b. [1a]: "a device having a touch screen;"

Tseng discloses [1a]. Bederson ¶¶91-92.

Tseng discloses a device, such as the "mobile device" or "smartphone" shown in FIGS. 1, 2A-2C, 3, 5, having a touch screen display (e.g., display 200,

220; touch screen 304; pointing device 504). *Tseng*, [0002], [0028], [0031]-[0032], [0064], [0090], FIGS. 1, 2A-2C, 3, 5; Bederson ¶92.

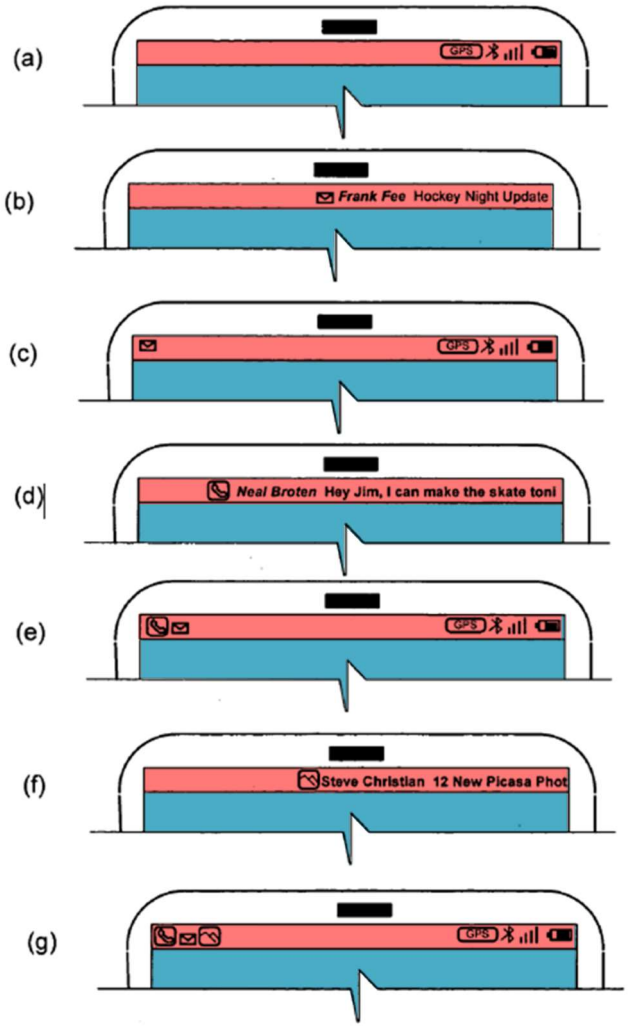


FIG. 1

Tseng, FIG. 1.

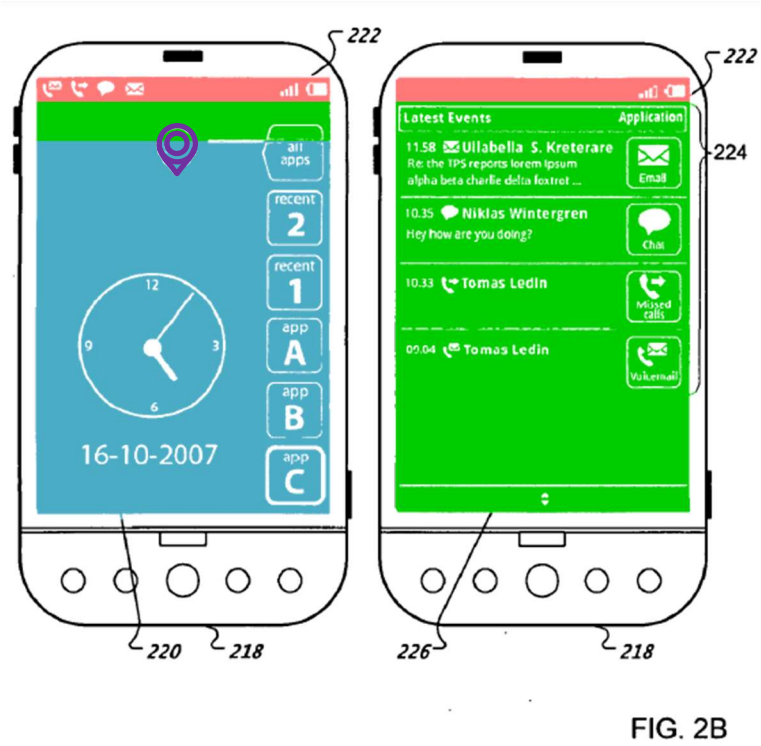
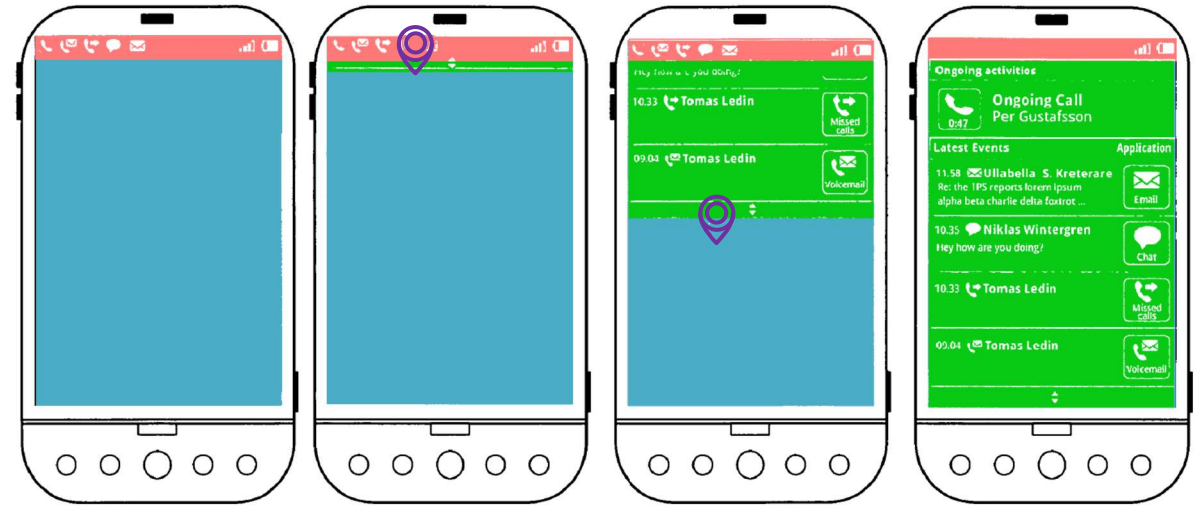


FIG. 2B

Tseng, FIG. 2B (excerpted).[5]

[5] Dr. Bederson explains that the message is "semi-transparent" in FIG. 2B's first image, which is why the application interface can be seen through it. Bederson ¶92 n.18.



Tseng, FIG. 2C.

c. [1b]: "at least one window located in the touch screen on an edge of the touch screen, wherein said at least one window functions independently of an interface of an application in use on the touch screen; and"

Tseng discloses [1b]. Bederson ¶¶93-98.

Tseng's status bar/status area is a "window" positioned (located) "in a peripheral area at the edge of" the touch screen's display. *Tseng*, [0028], FIGS. 1, 2A-2C, 3, 4A-4B, 5; *see Tseng*, [0005] (explaining that "supplemental elements are typically displayed around the periphery of the main area or over the main area in pop-up *windows or similar graphical elements*" (emphasis added)), [0014] (describing "present[ing] the notification message in a first zone near a perimeter of the graphical display"). A POSITA would have understood that *Tseng*'s status bar is a "window" being drawn or rendered at the top edge of the touch screen as a

region or zone for displaying status information and notifications-related information. Bederson ¶94; *Tseng*, [0014], [0028], [0058], FIGS. 1, 2A-2C.

This understanding would have been confirmed by the POSITA's knowledge that a "window" in a graphical user interface, like *Tseng*'s, is generally "an area of the screen set aside for a special purpose." Ex. 1023, Barron's *Dictionary of Computer and Internet Terms*, 3 ("window"); Bederson ¶95.

Tseng explains, in accordance with a POSITA's knowledge, that a "status bar area is [a] typically-static area on a device that displays information," which a POSITA would have recognized is a window displaying information separate from the main application area of the display, as shown in FIG. 1. *Tseng*, [0005]. The POSITA's understanding is confirmed by *Tseng*'s disclosure that a "window manager 745[/814]" "allows multiple applications with multiple windows to share the display 501." *Tseng*, [0111], [0115]-[0116] (describing window manager 814), FIGS. 7-8. A POSITA would have recognized that the status bar represents one such window that shares the display and another is the main application area. *Tseng*, [0031]-[0037], [0048], [0052], [0057]-[0058], FIGS. 1, 2A-2C, 4A-4B; Bederson ¶96.

FIG. 1 shows an exemplary notification "display portion shown [at] the top of a graphical display, where a status bar is located," that shows the window being

updated (e.g., re-rendered or re-drawn) with new notifications. *Tseng*, [0031]-[0037].

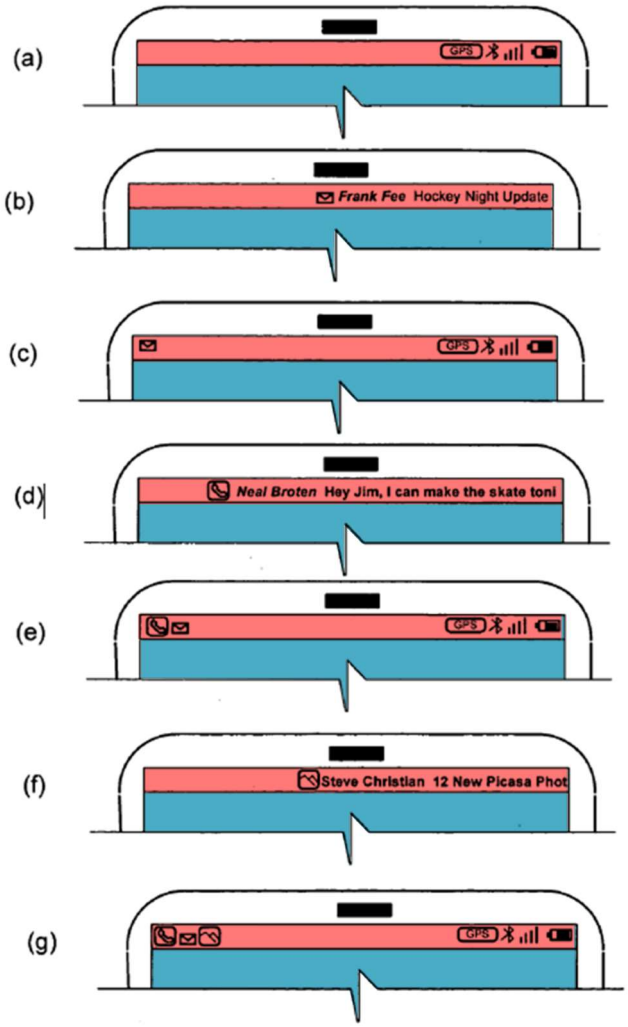
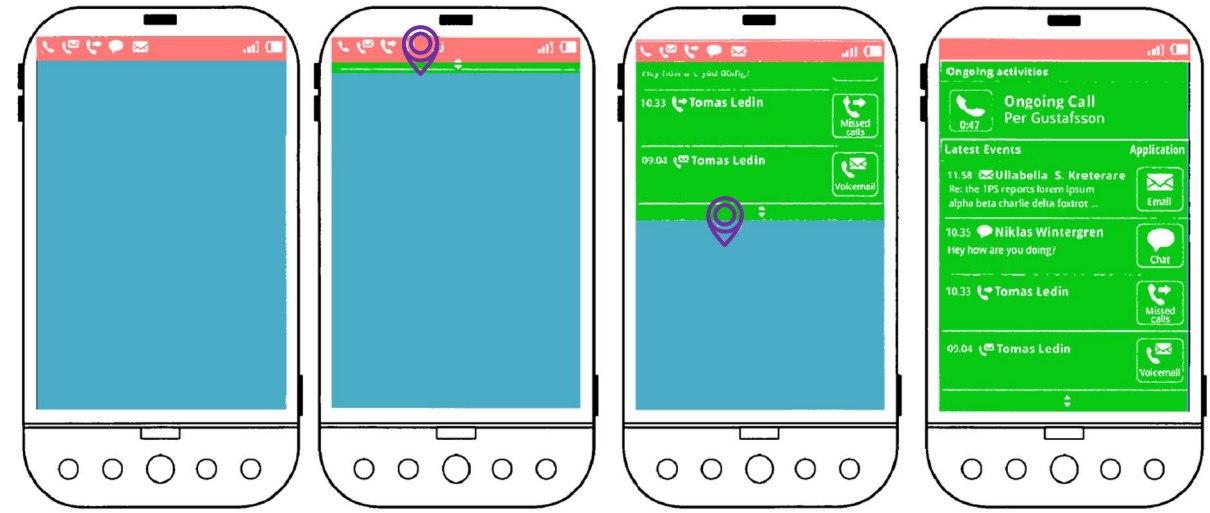


FIG. 1

Tseng, FIG. 1.

Tseng's status bar window functions independently of an interface of an application. Bederson ¶¶97-98. *Tseng* explains that "one or more applications may be shown in the main zone" of the touch screen ("shown blank in [FIGS. 2A-2C]")

below the status bar. *Tseng*, [0040]. Although one example describes an interface for "an application tracking an ongoing telephone call," *Tseng*'s FIGS. 2A-2C may show any application, but the status bar remains to show notifications and status icons from other applications (e.g., mail, messages, music), making the status bar independent of the application shown in the main display. *Tseng*, [0005], [0040]. A POSITA thus would have understood that *Tseng*'s status bar functions independently of the application interface shown in the main display area in use on the touch screen. *Tseng*, [0032], [0052], [0057]; Bederson ¶98.



Tseng, FIG. 2C.

d. [1c]: "a processor;"

Tseng discloses [1c]. Bederson ¶¶99-100.

Tseng discloses that the mobile device includes a processor, such as CPU 601 or processor 902/952. *Tseng*, [0095], [0120], [0125]-[0127], FIG. 6; Bederson ¶100.

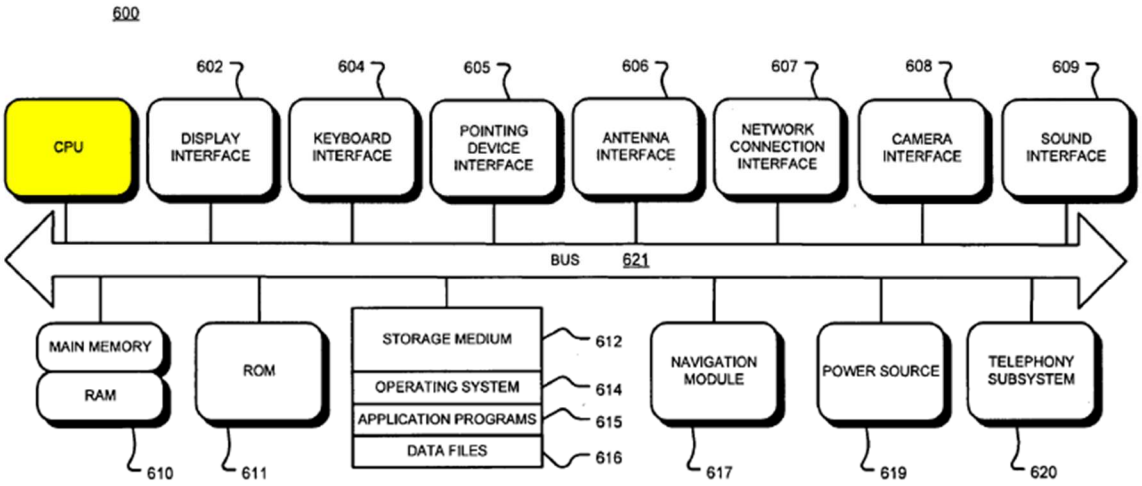


FIG. 6

Tseng, FIG. 6.

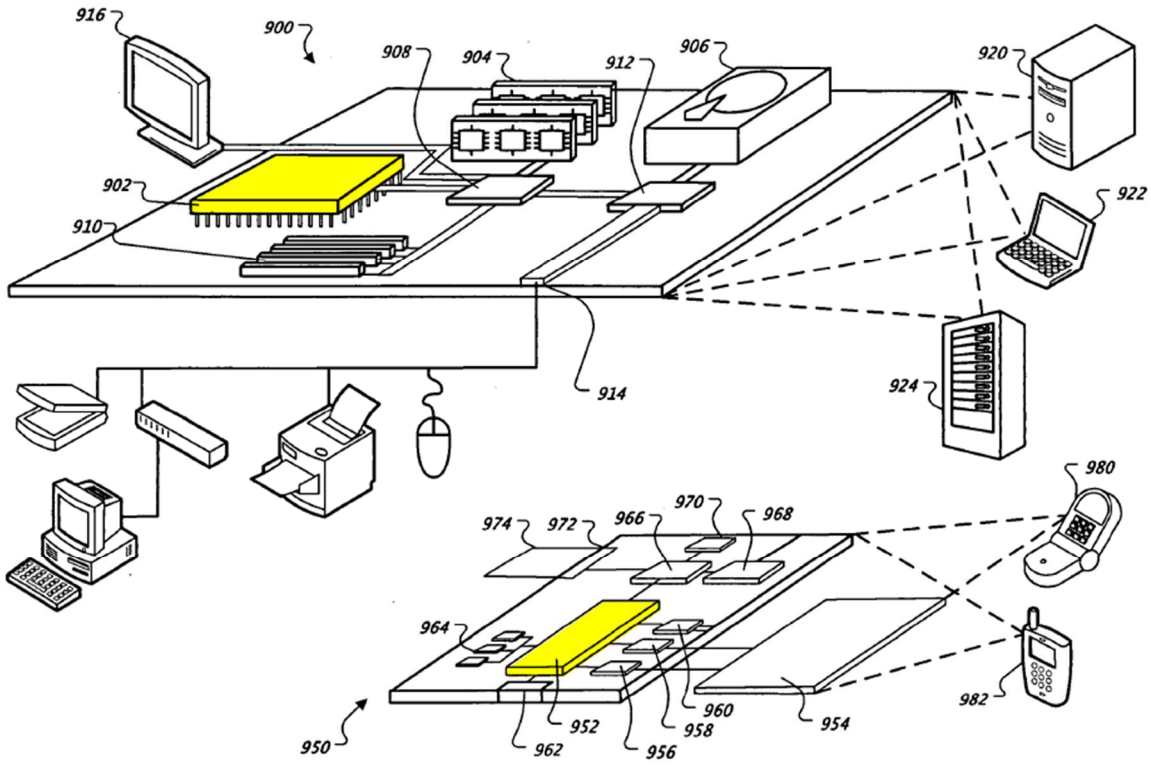


FIG. 9

Tseng, FIG. 9.

e. [1d]: "wherein a gliding action provided from outside of the touch screen towards inside of the touch screen, said gliding action at first interacting with said at least one window on the touch screen, is processed by said processor to cause an action assigned to said window, and"

Tseng discloses or renders obvious [1d]. Bederson ¶¶101-121.

Tseng discloses that the user can display the notifications message area using "a finger swipe[6] across the face of the display," for example, by "pressing on the status area and dragging downward to pull out the messages." *Tseng*, [0029]. When the user swipes their finger downward from the status bar, "the edge of the element showing an extended view of the messaging events 'sticks' to the user's finger as the finger moves past" and expands the message area showing new notifications, such as shown in FIG. 2C. *Tseng*, [0029]; *Tseng*, [0011], [0013], FIGS. 2B, 4A-4B; Bederson ¶102.

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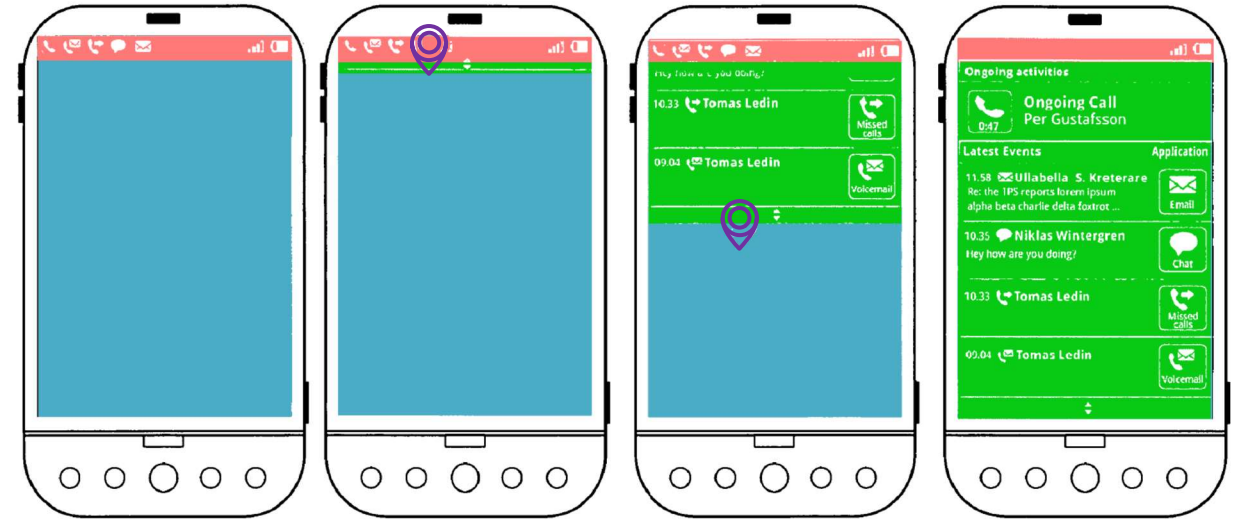
[6] *Tseng* also describes the "swipe" motion (e.g., glide) as a "drag[]." *See, e.g.*, *Tseng*, [0029], [0041], [0053], [0059], [0074], [0076]. The '602 patent also uses swiping and dragging as a term for a gliding action. Ex. 1001, 44:49-52 (referring to "gliding or swiping actions"), 61:64-62:5 (referring to "dragging/gliding action 313105"). A POSITA would have recognized that the terms "swipe," "slide," "sweep," and "drag" were often used interchangeably with "glide" to refer to a gesture that contacts the touch screen during the movement. Bederson ¶102 n.19. A POSITA would have known that a "swipe" or "slide" is an example of "drag[ging]" a finger "across the [touch] screen." *T-Mobile G1 User Manual*, 22, 27-28, 38, 42, 49 (referring to "slid[ing]" down a notification panel; describing "swip[ing]" or "slid[ing]" as "drag[ging]" a finger "across the [touch] screen").

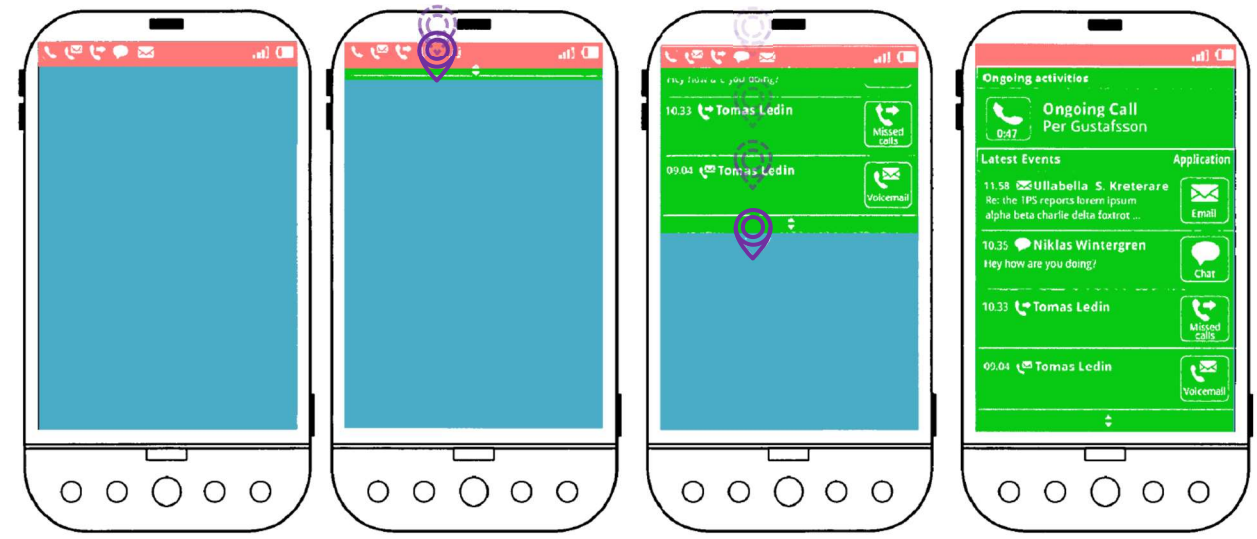


Tseng, FIG. 2C; *see Tseng*, FIG. 2B.

Tseng describes the "finger swipe" (gliding action) first interacting with the status bar window on the touch screen when the user "press[es] on the status bar and then drag[s] it downward across the top of the display." *Tseng*, [0074]; *see Tseng*, [0013], [0029], [0041], [0053], [0059]; Bederson ¶¶103-104.

A POSITA would have understood a swiping or gliding action from outside of the touch screen and moving onto the status bar would have been first registered as a "touch" or "press" on the status bar, as taught by *Tseng*, because the touch screen is touch sensitive, but the area around it is not. Bederson ¶¶104-105; *Tseng*, [0013], [0029], claim 17, FIGS. 2A-2C, 4A-4B. *Tseng* describes "the device ha[ving] a fairly flush front surface" to perform "a finger swipe across the face" that a POSITA would have understood describes a substantially flat front face that allows the user's finger to slide across the status bar from the surrounding housing

or bezel. *Tseng*, [0029]; Bederson ¶¶104-106. *Tseng*'s device would therefore have registered a gliding action starting outside of the touch screen and moving towards the inside of the touch screen across the status bar in the same way as a gliding gesture starting on the status bar and moving toward the main display area. Bederson ¶¶106-107. Annotated FIGS. 2C and 2B show this understanding.



Tseng, FIG. 2C (dashed gliding annotations added).

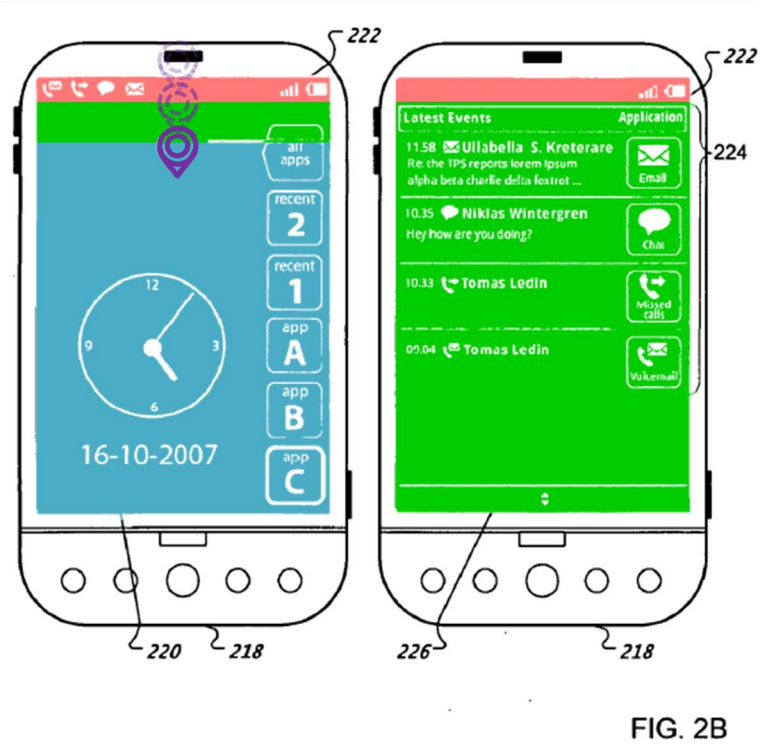


FIG. 2B

Tseng, FIG. 2B (excerpted, dashed gliding annotations added).

A POSITA would have recognized that the finger moving or swiping "past" the status bar encompasses the action starting either on the status bar or outside of the screen on the touch-insensitive bezel and moving towards the inside of the touch screen, as shown in FIGS. 2B-2C. Bederson ¶108. Activating actions corresponding to narrow bars or windows located at the edge of the screen, like *Tseng*'s status bar, using off-to-on screen gliding actions had known benefits of being more efficient than the user trying to touch or tap the bar directly because they allowed for "low-precision" gestures enabling easier activation for the user. *See* Section II; *Bezel Swipe*, 2, Figure 2; *Roth*, [0009], [0015], [0036], [0039], Fig.

2B; *Wilairat*, [0003], [0009], [0012], [0015], Fig. 1; *Hinckley*, [0072]-[0073], Fig. 6; Bederson ¶108, §VI.

Tseng discloses that this swiping or dragging gesture ("gliding action") is processed by the processor to cause the action of pulling open or displaying message area 206/224 assigned to the status bar. *See Tseng*, [0012]-[0013], [0053]. *Tseng*'s device stores instructions that "cause the one or more processors to receive a dragging manipulation [gliding action] on a touch screen display of the graphical interface, from the status area and across the display, and move the slider mechanism in response to the dragging mechanism, and display the detail regarding the plurality of recent messaging events behind the slider mechanism as it is slid across the display." *Tseng*, [0013]; *Tseng*, [0012], [0014]; Bederson ¶108.[7]

If Keyless argues or the Board finds that *Tseng* does not disclose [1d], *Tseng* renders it obvious. Bederson ¶¶109-121. As explained above, *Tseng* describes using a "finger swipe" to "drag[] downward" from the status bar to "pull out the messages" in the message area. *Tseng*, [0029], FIGS. 2A-2C, 4A-4B. While *Tseng*

[7] Keyless's infringement contentions accuse a pull-down status/notification bar function similar to *Tseng*'s pull-down notifications area from a status bar. *See* Ex. 1031, 14-42 (claim 1), 42-62 (claims 2-13, 15-19, 21-36).

sometimes refers to this action starting on the status bar, a POSITA would have recognized that, in this case, this is because the area around the display screen is not touch sensitive. Bederson ¶109. Thus, in *Tseng*, a gliding action beginning outside of the touch screen and crossing over the status bar would first be sensed when the touch screen is touched at the status bar—and thus would operate the same as a gliding action starting on the status bar because *Tseng*'s device would register the first "press" or touch when the swipe gesture reaches the edge of the touch screen. Bederson ¶109; *see Bezel Swipe*, 2, Figure 2.

A POSITA would have found it obvious to have the gliding gesture begin outside of the touch screen and move towards the inside of the touch screen across the status bar, such that the gesture first interacts with the status bar window on the touch screen. Bederson ¶109. A POSITA would have recognized that this requires no alteration to *Tseng*'s design because only the starting location of the gliding action changes, but would be registered as the press/touch and swipe/drag gesture

described when it enters the touch screen. Thus, only how a user interacts with the device changes, not the functionality of the device itself. *Id.*[8,9]

i. Motivation

A POSITA would have been motivated to provide a gliding action from outside of the touch screen towards inside of the touch screen, where the gliding action at first interacts with *Tseng*'s status bar window on the touch screen, and is processed by the processor to cause the action of sliding out the message area. Bederson ¶110; *Tseng*, Abstract, [0011]-[0013], [0029], [0041], [0053], [0059], [0074], [0076], FIGS. 2A-2C, 4A-4B.

A POSITA would have recognized, as explained above in Section II, that this functionality would have provided the user with a better user experience

[8] Petitioners reserve the right to argue that the claims are invalid under *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1383-84 (Fed. Cir. 2005). The Board need not resolve this issue, however, because it is one of infringement, and the scope of the prior art may still be determined to render the claims unpatentable in this proceeding.

[9] If independent claim 1 is interpreted to require determining that the gliding action began offscreen and moved onscreen, *Wilairat* renders this obvious, as discussed below in Ground 2.

because it requires less precision than requiring the user to start the gesture on the status bar itself because the gliding gesture effectively increases the size of the status bar being activated. Bederson ¶111, §VI. For example, a POSITA would have recognized that this would have "enable[d] the reliable activation of a button that is so narrow that it would be difficult to activate by direct touch" and "can be more efficient than pointing tasks" (e.g., than requiring the user to directly tap or long-press on the status bar). *Bezel Swipe*, 2; *Roth*, [0010].

A POSITA would have been motivated to use these gesture activations on *Tseng*'s status bar to display the notifications message area because they "do[] not typically reduce the accessible display area" and "require[] minimal display real estate," making them beneficial to mobile devices that have small screens, like *Tseng*. *Bezel Swipe*, 2; *Roth*, [0009], [0036]; *see* Section II; Bederson ¶112-115, §VI.

A POSITA would have recognized that this operation represents merely implementing a known prior art off-to-on-screen gliding action that first registers a touch when it contacts the status bar on the touch screen to yield the predictable result of contacting the status bar window and pulling down the message display area. *See* Section II; *Tseng*, Abstract, [0011]-[0013], [0029], [0041], [0053], [0059], [0074], [0076], FIGS. 2A-2C, 4A-4B; *Bezel Swipe*, 2; *Roth*, [0009], [0015], [0036], [0039], Fig. 2B; *Wilairat*, [0003], [0009], [0012], [0015], Fig. 1;

Hinckley, [0072]-[0073], Fig. 6; Bederson ¶¶113-117, §VI. At a minimum, a POSITA would have found it obvious to try implementing an off-to-on-screen gliding action to activate *Tseng*'s pull-down message area because it was a known technique that would have improved *Tseng*'s device in the same way as known in the prior art. *See* Section II; Bederson ¶117, §VI.

ii. Expectation of Success

A POSITA would have reasonably expected to succeed in providing a gliding action from outside of the touch screen towards inside of the touch screen, where the gliding action at first interacts with *Tseng*'s status bar window on the touch screen, and is processed by the processor to cause the action of sliding out the message area. Bederson ¶¶118-121.

A POSITA would have recognized that providing a gliding action from outside of the touch screen towards inside of the touch screen to activate a function based on the gliding action first interacting with a window on the touch screen was well known and routine in the prior art. *Tseng*, Abstract, [0011]-[0013], [0029], [0041], [0053], [0059], [0074], [0076], FIGS. 2A-2C, 4A-4B; *see* Sections II, VII.A.1.e.i; Bederson ¶¶119-120, §VI.

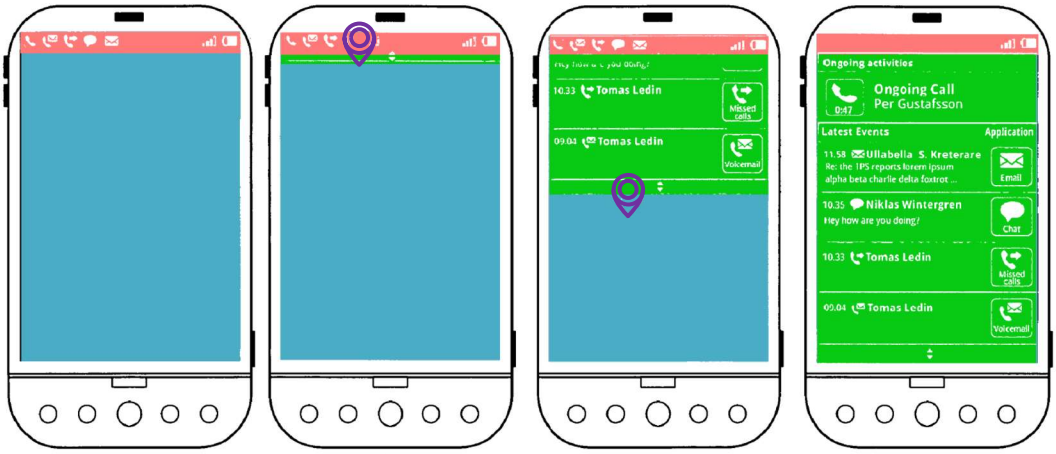
Implementing this functionality in *Tseng*'s system to pull down the message area as the user's finger crosses over the status bar would have been merely the straightforward application of known, conventional techniques used according to

their known functions to yield predictable results (pulling down the message area, such as shown in *Tseng*'s FIGS. 2A-2C). Bederson ¶121; *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007); *Slot Speaker Techs., Inc. v. Apple Inc.*, 680 F. App'x 932, 943-44 (Fed. Cir. 2017).

f. [1e]: "wherein said at least one window is located on the touch screen before said gliding action begins."

Tseng discloses [1e]. Bederson ¶¶122-127.

As explained in [1b] and [1d], *Tseng* discloses displaying the "status bar" or "status area" on the touch screen to alert the user to the new events or notifications before the user begins the "finger swipe [gliding action] across the face of the display." *Tseng*, Abstract, [0010], [0029], FIGS. 1, 2A-2C, 3, 4A-4B, 5. FIG. 2C (first image) shows both the active application and the status bar, but the user's "finger swipe" (gliding action, dragging) gesture begins in the second image to pull down the expanded notifications message area (third and fourth images). *Tseng*, [0057]-[0061], FIG. 2C; *see Tseng*, [0014], [0029], [0041], [0058]-[0059], [0070], [0074], FIGS. 1, 4A-4B (showing status bar and main application before the user "drag[s] downward on the status bar"); Bederson ¶¶123-127.



Tseng, FIG. 2C.

Tseng thus renders obvious claim 1.

2. Claim 2

a. "The system of claim 1, wherein the system relates said gliding action to a function which is not related to a mouse function."

Tseng discloses the additional limitations of claim 2. Bederson ¶¶128-129.

Tseng's "finger swipe" (gliding action) relates to pulling down a notifications menu, as explained in claim 1, which is not related to the types of "mouse" functions described in the '602 patent. *See* Section VII.A.1. For example, the '602 patent describes mouse functions as "control[ling] a mouse pointer," "control[ling] a mouse cursor," and "character entry." Ex. 1001, 36:10-13, 36:41-51; Bederson ¶129.

3. Claim 3

a. "The system of claim 1, wherein said at least one window comprises at least one bar located on said edge of the screen."

Tseng discloses or renders obvious the additional limitations of claim 3. Bederson ¶¶130-131.

Tseng discloses that the "status *bar*" window is located "at the edge of a [touch screen] display" and shown along the entire top edge of the touch screen in FIGS. 1, 2A-2C. *Tseng*, [0028] (emphasis added); Bederson ¶131.

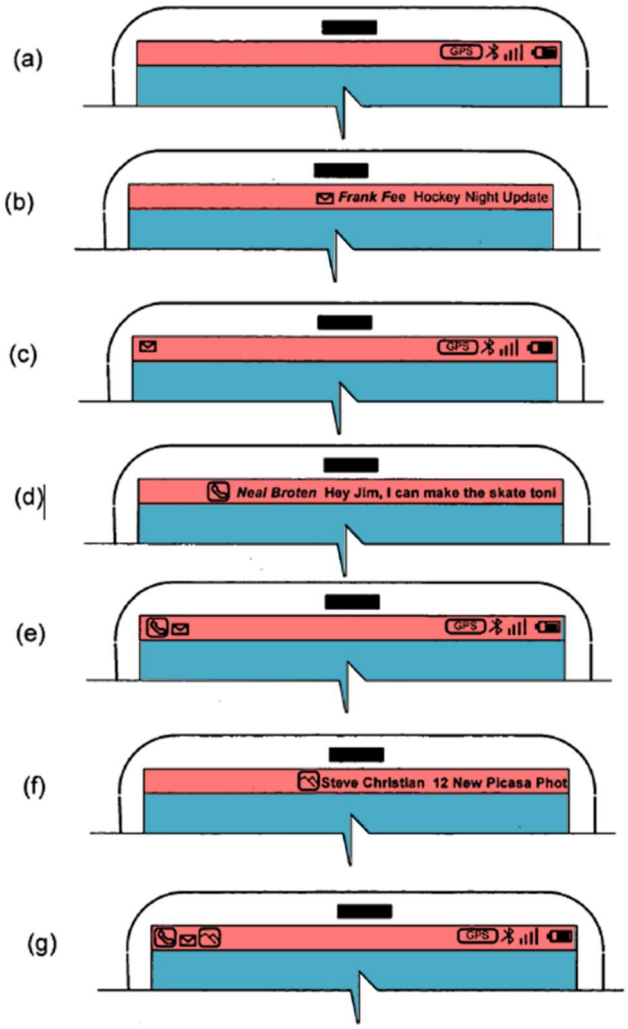
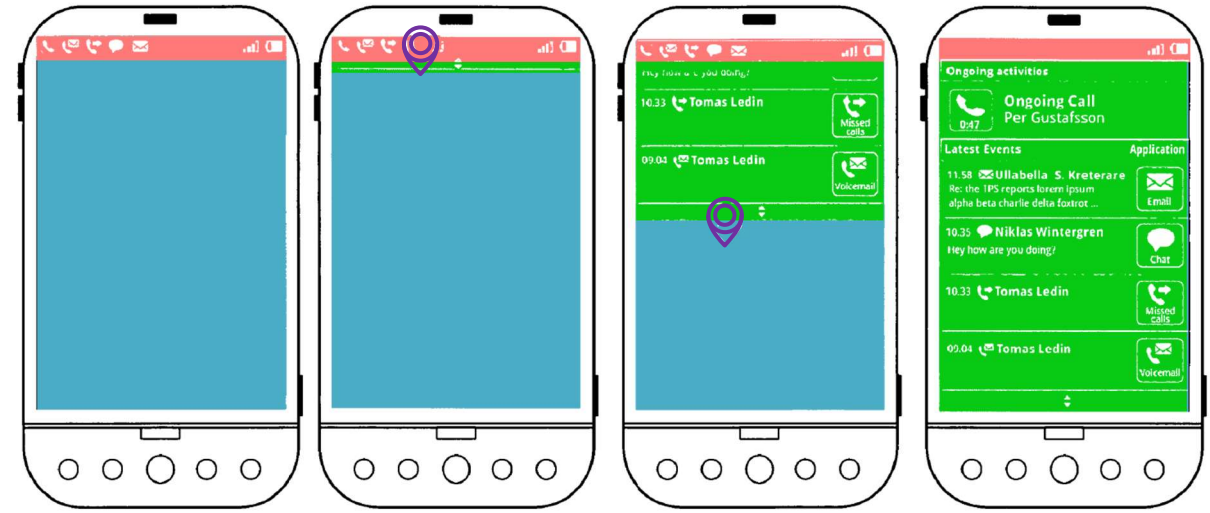


FIG. 1

Tseng, FIG. 1.



Tseng, FIG. 2C.

4. Claim 4

a. "The system of claim 3, wherein said at least one bar extends along a substantial portion of an edge of the touch screen."

Tseng discloses the additional limitations of claim 4. Bederson ¶¶132-133.

Tseng discloses that the status bar extends along the entire top edge (e.g., a substantial portion of an edge) of the touch screen. *See* Sections VII.A.1.c, VII.A.3; *Tseng*, FIGS. 1, 2A-2C; Bederson ¶133.

5. Claim 5

a. "The system of claim 3, wherein said bar is in a form of a line."

Tseng discloses the additional limitations of claim 5. Bederson ¶¶134-135.

As discussed in [1b] and claim 3, *Tseng*'s status bar window is in the form of a straight line across the top edge of the touch screen. Bederson ¶135.

6. Claim 6

a. "The system of claim 5, wherein said action is displaying an interface on the screen."

Tseng discloses the additional limitations of claim 6. Bederson ¶¶136-139.

Tseng discloses that the user's "finger swipe" action over the status bar causes the system to display, or partially display, the notifications message area, which is "an interface." Bederson ¶137; *Tseng*, [0029], FIGS. 2A-2C, 4A-4B.

Tseng explains that a user's "selection of a particular message" in message area 206/224 "may result in the full message being opened for the user in its corresponding application, while selection of an application icon may cause the application to be invoked," which describes an interface where the user selects the particular notification or corresponding application to view. *Tseng*, [0053]; *see Tseng*, [0044], [0075]; Bederson ¶138. *Tseng* also describes the user "reviewing," "deleting," or "moving" messages in the message area, which further confirms it is an interface. *Tseng*, [0075]; Bederson ¶139.

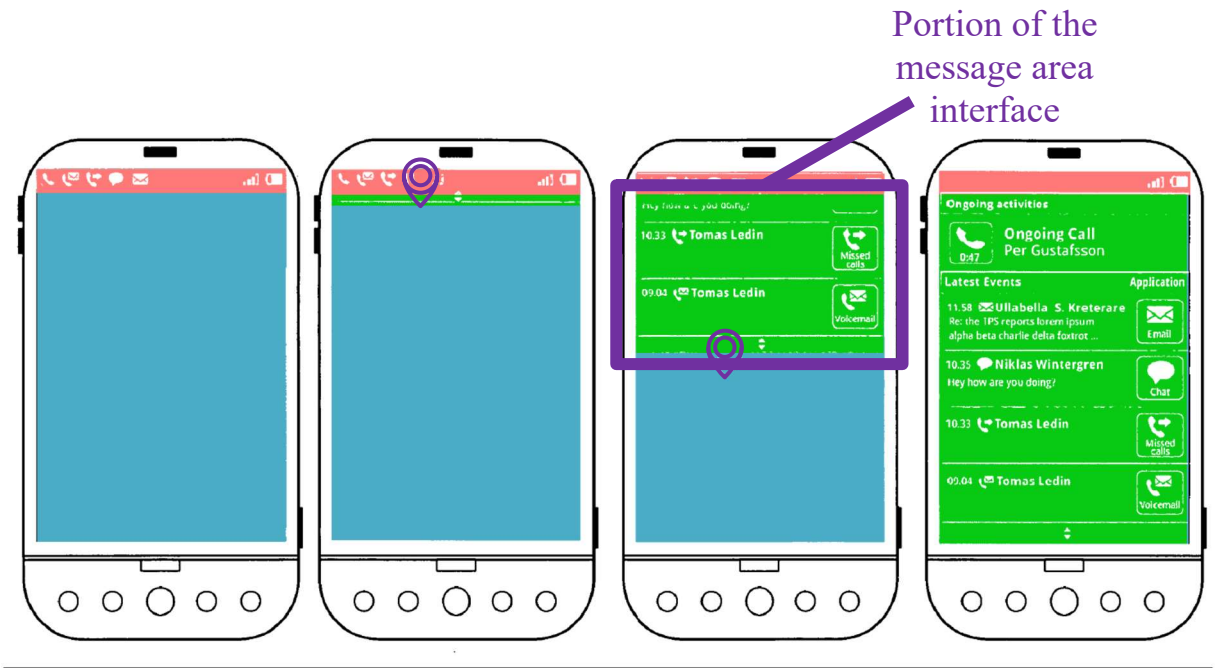
7. Claim 7

a. "The system of claim 5, wherein said action is displaying a portion of an interface on the screen."

Tseng discloses the additional limitations of claim 7. Bederson ¶¶140-142.

As shown in FIG. 2C, third image, *Tseng*'s gliding action displays a portion of message area 206/224 corresponding substantially to the length of the gliding

action. *Tseng* explains that "the edge of the [message area] element showing an extended view of the messaging events 'sticks' to the user's finger as the finger moves past" during the "finger swipe" (gliding action). *Tseng*, [0029], [0059]; Bederson ¶141.



Tseng, FIG. 2C (annotated).

Furthermore, if all the new message notifications "do not all fit on the display at one time," only some or a portion of the notifications (a portion of the interface) may be shown, and "the presence of additional off-screen messages may be indicated by a fading out of the last message toward the edge of the display." *Tseng*, [0030], [0043], [0059]; Bederson ¶142.

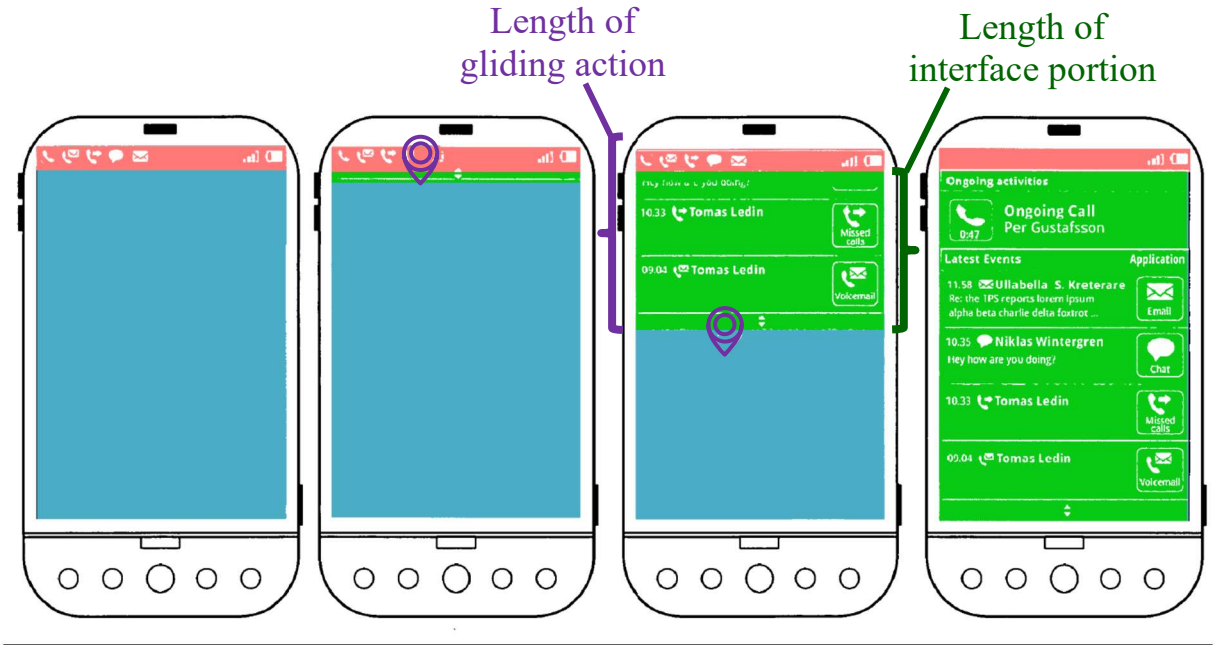
As explained below in claims 8 and 13, *Tseng* also discloses the message area display being only partially opened.

8. Claim 8

a. "The system of claim 7, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action."

Tseng discloses the additional limitations of claim 8. Bederson ¶¶143-144.

For example, as shown in FIG. 2C, second and third images, and explained above in claim 7, during the user's "finger swipe [gliding action] across the face of the display, … the edge of the element [message area] showing an extended view of the messaging events 'sticks' to the user's finger as the finger moves past" to move with the finger and display a portion of the interface substantially equal to the length of the swipe. *Tseng*, [0029], [0058]-[0059]; *see* Section VII.A.7; Bederson ¶144.



Tseng, FIG. 2C (annotated).

9. Claim 9

a. "The system of claim 3, wherein said action is displaying an interface on the screen."

Claim 9 recites substantively the same additional limitations as claim 6, which *Tseng* discloses[10] as discussed for claim 6. Bederson ¶145.

[10] *Tseng* discloses or renders obvious the limitations of the parent claims from which every dependent claim depends.

10. Claim 10

a. "The system of claim 3, wherein said action is displaying a portion of an interface on the screen."

The additional limitations of claim 10 are substantively the same as claim 7, which *Tseng* discloses as discussed for claim 7. Bederson ¶146.

11. Claim 11

a. "The system of claim 10, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action."

Claim 11 recites substantively the same additional limitations as claim 8, which *Tseng* discloses as discussed for claim 8. Bederson ¶147.

12. Claim 12

a. "The system of claim 1, wherein upon detecting said gliding action, the system displays an interface on said touch screen."

Claim 12 recites substantively the same additional limitations as claims 6 and 9, which *Tseng* discloses as discussed for claims 6 and 9. Bederson ¶147.

13. Claim 13

a. "The system of claim 12, wherein upon detecting said gliding action, the system relates said gliding action to setting the location of said interface on said touch screen."

Tseng discloses or renders obvious the additional limitations of claim 13. Bederson ¶¶149-155.

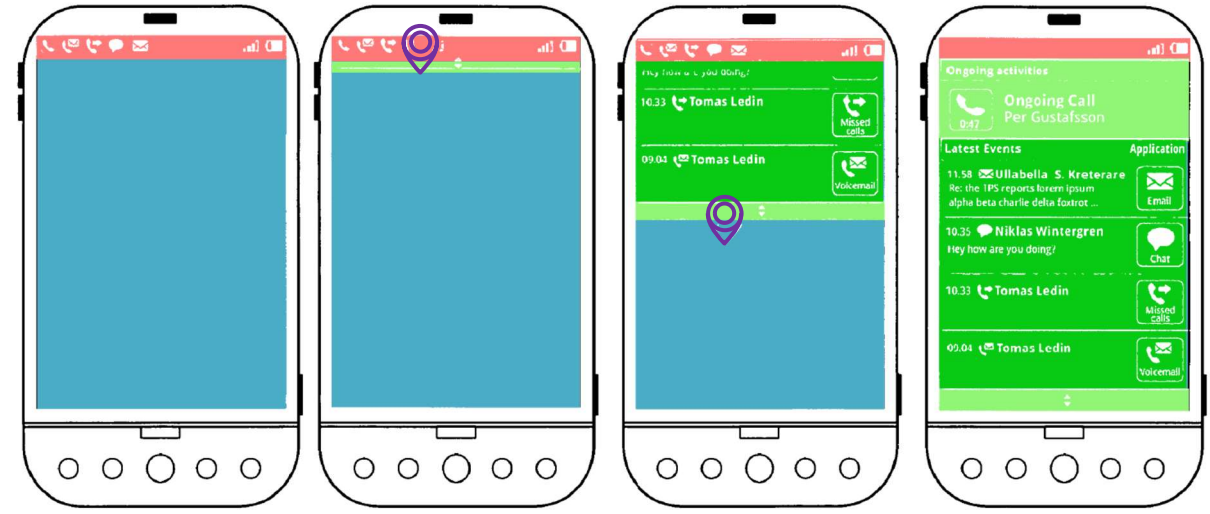
Tseng discloses several examples of "partially" opening message area 206/224, which sets the location of the message area interface, for example, by moving the bottom of the message area interface and corresponding interactive elements (e.g., rows of alerts and application icons that the user can select, such as the alert for the voicemail from Tomas Ledin) down the screen to positions that previously displayed the main application:

- If the user drags (e.g., swipes, glides) message area 206/224 to the bottom of the screen and then back up, it may remain "partially" open. *Tseng*, [0046].
- "[I]f the user pulls the bar below a determined level on the display," but not far enough to fully open the message area. *Tseng*, [0060].
- "[I]f a user drags the bar quickly and releases it, the bar may continue moving until its momentum runs out *or* until it hits the bottom of the display," meaning that it may stop opening *before* reaching the bottom of the display. *Id.* (emphasis added).

Bederson ¶¶150-152.

Alternatively, *Tseng* also discloses the system relating the user's gliding action to setting the location of the interface for message area 206/224, for

example, being shown at the top of the screen in the third image of FIG. 2C and below the application area 214 in the fourth image. Bederson ¶153.



Tseng, FIG. 2C.

A POSITA would have recognized that, in these examples, the message area interface 206/224 is shown in some, but not all, of the display area, thereby setting the location of the interface as a proportion of the screen according to the gliding action. *Tseng*'s partially-displayed message area interface based on the length of the user's dragging action also renders claim 13 obvious to allow users to find the specific notification being looked for. Bederson ¶¶150-155. Implementing this functionality in *Tseng* would have been merely the straightforward application of known, conventional techniques used according to their known functions to yield predictable results. Bederson ¶¶154-155.

14. Claim 17

a. "The system of claim 1, wherein during providing said gliding action, the system dynamically drags and shows an interface or a portion of an interface on the touch screen."

Tseng discloses the additional limitations of claim 17. Bederson ¶¶156-157.

As explained in claims 1, 7-8, and 13, *Tseng* discloses that, during the finger swipe (gliding action), the mobile device dynamically "drags" and shows the menu interface or a portion of the menu interface as it "sticks" with the user's finger during the gliding action, such as shown in FIG. 2C. Bederson ¶157.

15. Claim 18

a. "The system of claim 1, wherein the processor relates a gliding action provided towards any arbitrary direction inside the screen to presenting a same interface."

Tseng discloses the additional limitations of claim 18. Bederson ¶¶158-160.

Tseng discloses that the message area "'sticks' to the user's finger as the finger moves past" the status bar during the gliding action, as explained for claims 7-8 and 13. *Tseng*, [0029], [0058]-[0059], FIG. 2C; Bederson ¶159. A POSITA would have recognized that this "stick[ing]" would have allowed the user's finger to glide in any direction inside the screen from the status bar towards the main application area (towards any arbitrary direction inside the screen) to display the same message area interface because only the vertical component (not the

horizontal component[11]) would be relevant to the location of the sticking. Bederson ¶160.

16. Independent Claim 19[12]

a. [19pre]: "A system for capturing an event provided from an edge of a touch screen comprising:"

[19pre] recites substantively the same limitations as [1pre], which *Tseng* discloses as discussed for [1pre]. Bederson ¶161.

b. [19a]: "a device having a touch screen;"

[19a] recites substantively the same limitations as [1a], which *Tseng* discloses as discussed for [1a]. Bederson ¶162.

c. [19b]: "a zone in form of a bar located in the touch screen on an edge of the touch screen; and"

[19b] recites substantively similar limitations to [1b] and claim 3, except that [19b] recites "zone in [a] form of a bar" instead of a "window."[13] Bederson ¶¶163-164.

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[11] If *Tseng*'s device also tracks the touch's X-coordinate, the result is the same because the *user's gliding action* continues in any arbitrary direction to pull down the message area in the Y-direction. Bederson ¶160 n.23.

[12] Claim 19 as corrected in the Certificate of Correction issued February 16, 2021.

[13] The "functions independently" limitation of [1b] is discussed below in [19d].

Tseng discloses [19b] for at least similar reasons discussed for [1b] and claim 3 (in the form of a bar). Bederson ¶164. *Tseng* describes the status bar or status area as a "*first zone* near a perimeter of the graphical display" in the form of a bar positioned "at the edge of a display." *Tseng*, [0014], [0028], FIGS. 1, 2A-2C (emphasis added); Bederson ¶164.

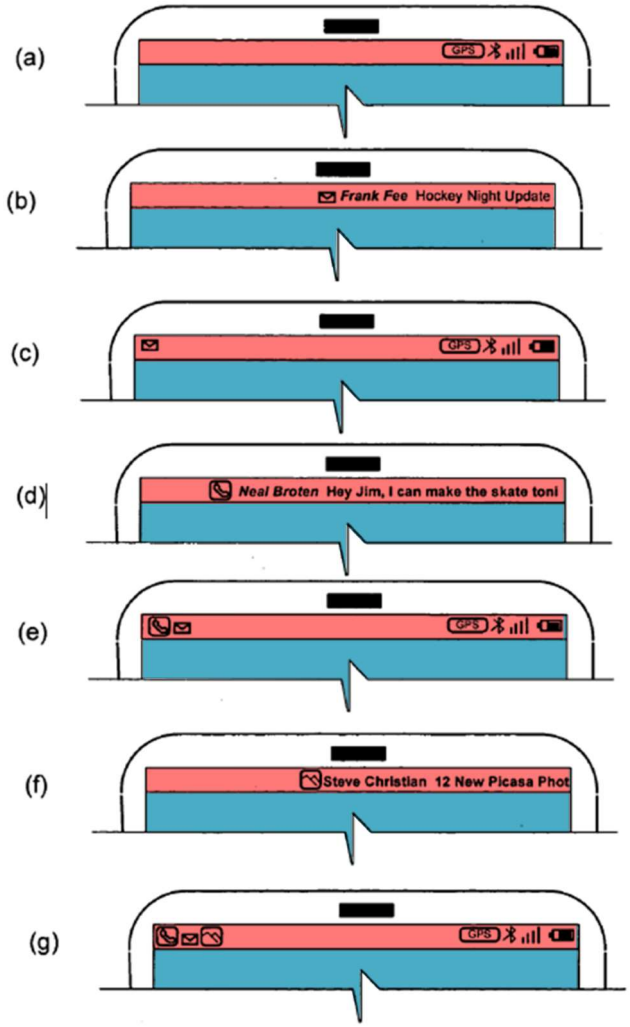
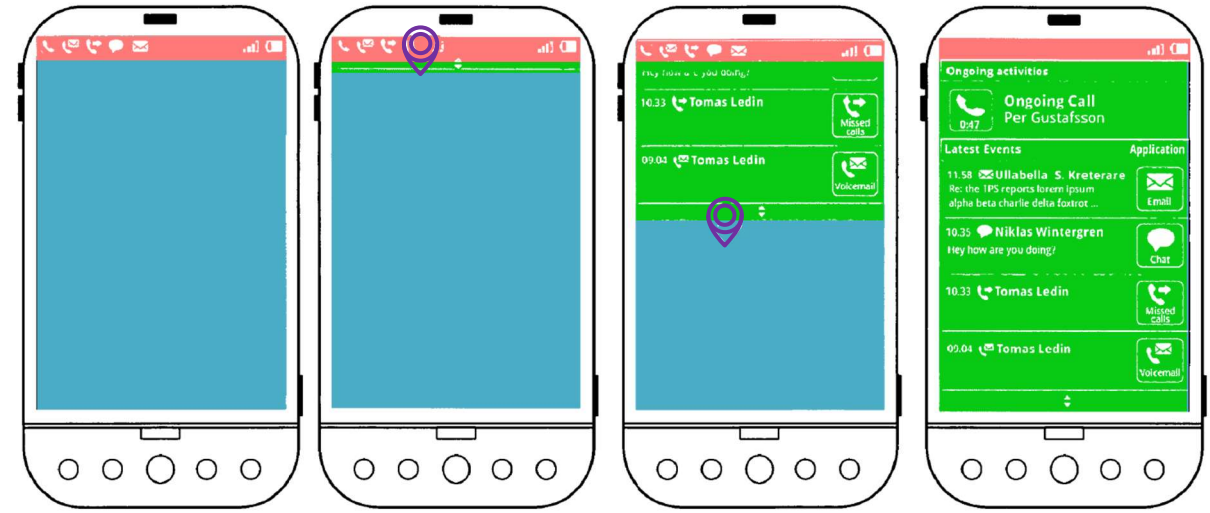


FIG. 1

Tseng, FIG. 1.



Tseng, FIG. 2C.

d. [19c]: "a processor;"

[19c] recites substantively the same limitations as [1c], which *Tseng* discloses as discussed for [1c]. Bederson ¶165.

e. [19d]: "wherein a gliding action provided from said zone of the touch screen towards any arbitrary direction inside the touch screen at first interacts with said zone, and wherein the processor executes a function related to said zone, and wherein said zone is present on said edge regardless of the interface of an application on said touch screen, and"

Tseng discloses or renders [19d]. Bederson ¶¶166-170.

For example, as explained in [1d], a user's gliding action (e.g., "finger swipe") provided from the status bar (zone) towards the inside of the touch screen first interacts with the status bar when the user's finger contacts the status bar

(either by starting on the status bar or when gliding from offscreen to onscreen through the status bar). Bederson ¶167.

As explained for claim 18, *Tseng* discloses that the user's gliding action to display the message area 206/224 is towards any arbitrary direction inside the touch screen. Bederson ¶168.

As explained in [1d], the processor executes the function related to the status bar zone of displaying the message area 206/224 in response to the user's gliding action. Bederson ¶169.

As explained in [1b] and [1d], the status bar zone is displayed (present) on the edge of the touch screen regardless of the interface of an application displayed in the touch screen's main area. Bederson ¶170.

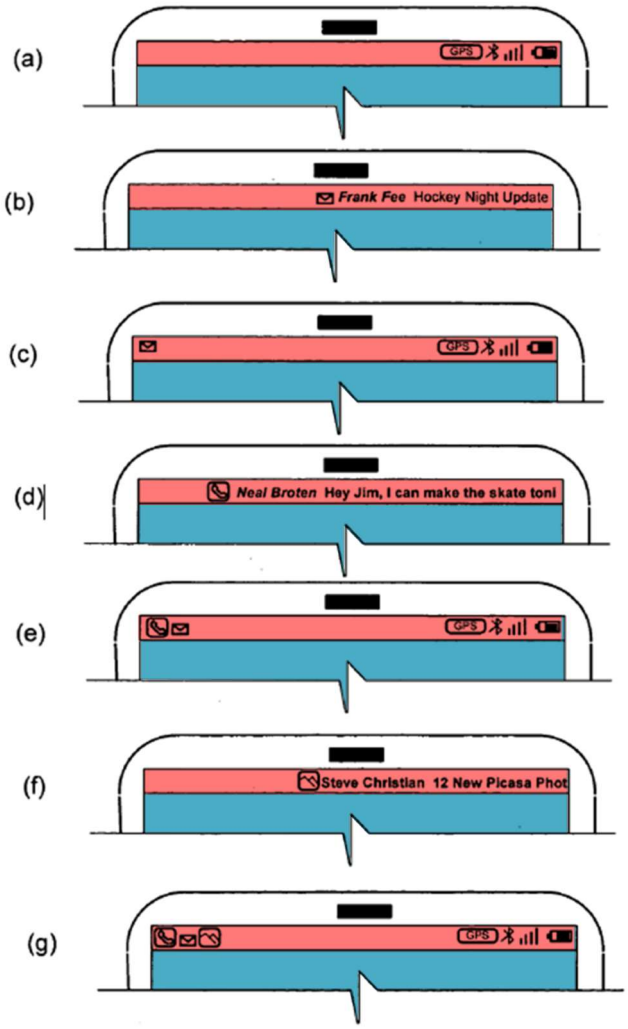
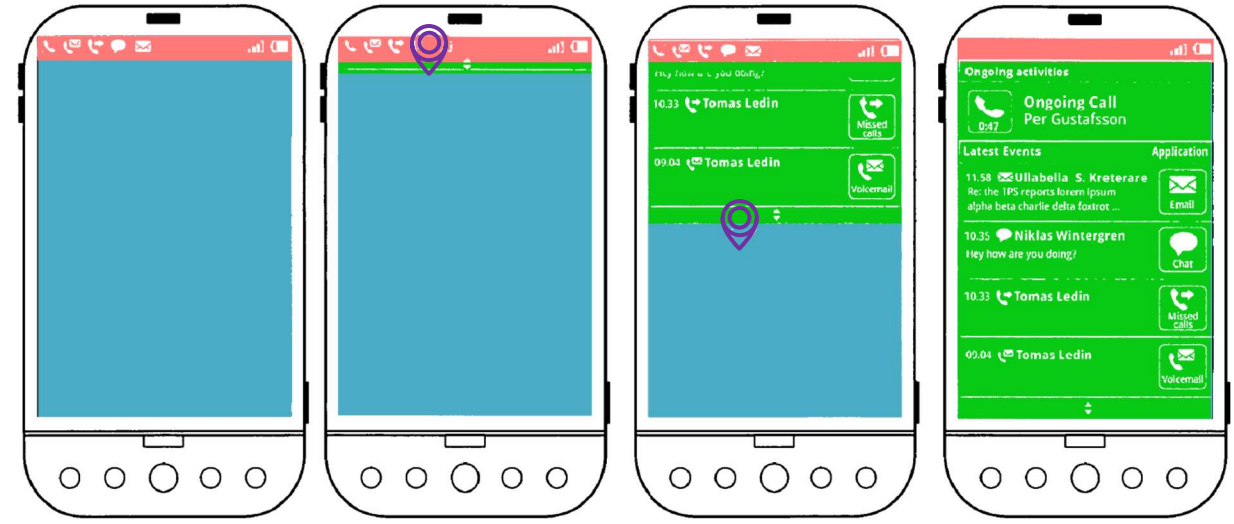


FIG. 1

Tseng, FIG. 1.



Tseng, FIG. 2C.

f. [19e]: "wherein said zone is located on the touch screen before said gliding action begins."

[19e] recites substantively the same limitations as [1e], except that it recites a "zone" instead of a "window." *Tseng* discloses [19e] as discussed for [1e] and [19b]. Bederson ¶171.

17. Claim 21

a. "The system of claim 19, wherein upon detecting said gliding action, the system relates said gliding action to setting the location of an interface on the touch screen."

Claim 21 recites substantively the same additional limitations as claim 13, which *Tseng* discloses or renders obvious as discussed for claim 13. Bederson ¶172.

18. Claim 23

a. "The system of claim 19, wherein said zone is in a form of a visible or invisible line."

Claim 23 recites substantively the same additional limitations as claim 5, which *Tseng* discloses as discussed for claim 5, showing a visible status bar line. Bederson ¶173.

19. Claim 24

a. "The system of claim 23, wherein said function is displaying an interface on the screen."

Claim 24 recites substantively the same additional limitations as claims 6, 9, and 12, which *Tseng* discloses as discussed for claims 6, 9, and 12. Bederson ¶174.

20. Claim 25

a. "The system of claim 23, wherein said function is displaying a portion of an interface on the screen."

Claim 25 recites substantively the same additional limitations as claims 7 and 10, which *Tseng* discloses as discussed for claims 7 and 10. Bederson ¶175.

21. Claim 26

a. "The system of claim 23, wherein said function is displaying a portion of an interface on the screen, and wherein a length of said portion of the interface is substantially equal to a length of the gliding action."

Claim 26 recites substantively the same additional limitations as claims 8 and 11, which *Tseng* discloses as discussed for claims 8 and 11. Bederson ¶176.

22. Claim 27

a. "The system of claim 19, wherein said bar is visible or invisible."

Claim 27 recites substantively the same additional limitations as claims 5 and 23, which *Tseng* discloses as discussed for claims 5 and 23. Bederson ¶177.

23. Claim 28

a. "The system of claim 27, wherein said function is displaying an interface on the screen."

Claim 28 recites substantively the same additional limitations as claims 6, 9, 12, and 24, which *Tseng* discloses as discussed for claims 6, 9, 12, and 24. Bederson ¶178.

24. Claim 29

a. "The system of claim 27, wherein said function is displaying a portion of an interface on the screen."

Claim 27 recites substantively the same additional limitations as claims 7, 10, and 25, which *Tseng* discloses as discussed for claims 7, 10, and 25. Bederson ¶179.

25. Claim 30

a. "The system of claim 29, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action."

Claim 30 recites substantively the same additional limitations as claims 8, 11, and 26, which *Tseng* discloses as discussed for claims 8, 11, and 26. Bederson ¶180.

26. Claim 31

a. "The system of claim 19, wherein during providing said gliding action, the system dynamically drags and shows an interface or a portion of an interface on the touch screen."

Claim 31 recites substantively the same additional limitations as claim 17, which *Tseng* discloses as discussed for claim 17. Bederson ¶181.

27. Claim 32

a. "The system of claim 19, wherein said function is displaying a same interface for any said gliding action, said gliding action interacting with any portion of said zone."

Tseng discloses the additional limitations of claim 32. Bederson ¶¶182-184.

As explained for claim 18 and [19d], *Tseng* discloses or renders obvious that the same message area interface is displayed for any gliding action direction from the zone towards the inside of the touch screen. Bederson ¶183.

Tseng explains that the user "may select more generally in the status bar" or may "press … over the status bar" when the user's gliding action is performed, which does not limit the user's gliding action to interacting with any particular portion of the status bar. *Tseng*, [0038], [0053]; *Tseng*, [0029], [0058], [0074], FIGS. 2A-2C; Bederson ¶184. *Tseng* describes displaying only one interface for the gliding action, regardless of where the user touches the status bar, and therefore displays the same interface for any such gliding action. Bederson ¶184.

28. Claim 33

a. "The system of claim 32, wherein said gliding action is provided from outside the touchscreen towards inside the touch screen, wherein said gliding action at first interacts with said zone on said touch screen."

Claim 32 recites substantively the same additional limitations as [1d], which *Tseng* discloses or renders obvious as discussed for [1d]. Bederson ¶185.

29. Claim 34

a. "The system of claim 19, wherein said function is displaying a portion of an interface on the screen."

Claim 34 recites substantively the same additional limitations as claims 7, 10, 25, and 29, which *Tseng* discloses as discussed for claims 7, 10, 25, and 29. Bederson ¶186.

30. Claim 35

a. "The system of claim 34, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action."

Claim 35 recites substantively the same additional limitations as claims 8, 11, 26, and 30, which *Tseng* discloses as discussed for claims 8, 11, 26, and 30. Bederson ¶187.

31. Claim 36

a. "The system of claim 19, wherein said zone extends along a substantial portion of said edge."

Claim 36 recites substantively the same additional limitations as claim 4, which *Tseng* discloses as discussed for claim 4. Bederson ¶188.

B. Ground 2: Claims 1-13, 17-18, and 33 Are Rendered Obvious by *Tseng* and *Wilairat*

1. Claims 1 and 33

If Keyless argues or the Board finds that *Tseng* does not disclose or render obvious the gliding action being provided from outside of the touch screen towards the inside of the touch screen ([1d], claim 33), *Wilairat* renders these limitations obvious. Bederson ¶189-201.

Wilairat discloses revealing a "user interface component" by detecting "a touch pull-in gesture" when a user "initiate[s] a touch input with a finger just off an

edge of the touch-screen and then motion[s] a pull-in gesture across the touch-screen." *Wilairat*, [0009], [0012], [0015], Fig. 1. *Wilairat* detects the pull-in gesture using "a contact region 124 progressively expand[ing]" from the edge of the touch-screen, for example, as the user's finger moves from position 118 to position 120 to position 122 of Fig. 1. *Wilairat*, [0012], Fig. 1; Bederson ¶¶190-191.

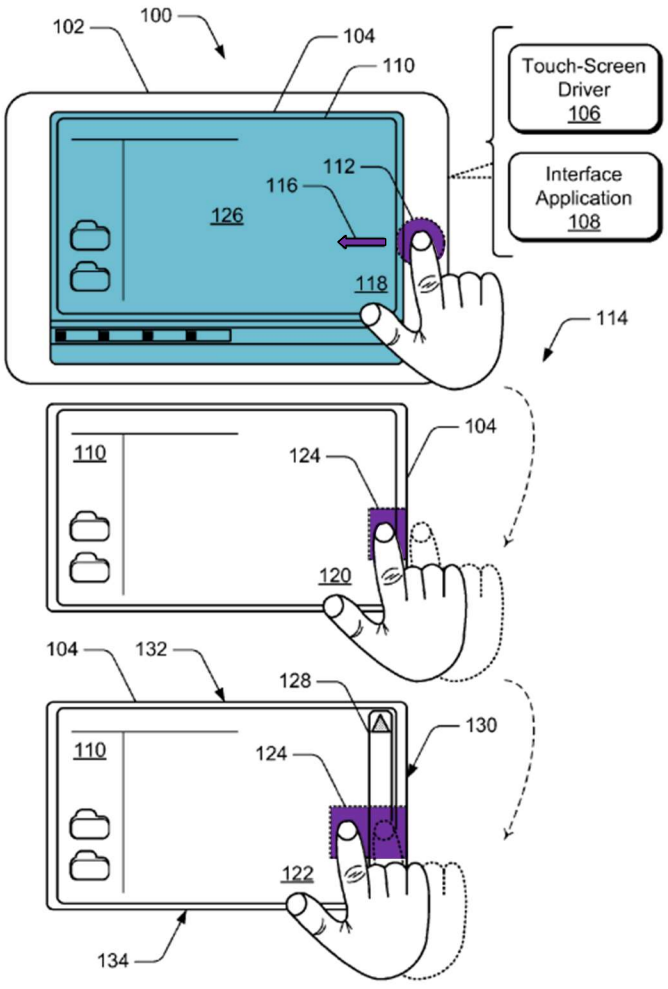


Fig. 1

Wilairat, Fig. 1.

Wilairat teaches displaying a user interface using a pull-in gesture to "interact as necessary with the various messages and/or applications," like *Tseng*'s message area 206/224. *Wilairat*, [0009]; *Tseng*, [0076]. A POSITA would have found it obvious to detect a pull-in gesture by determining that the gliding gesture begins offscreen and moves onscreen, as taught by *Wilairat*, to drag down *Tseng*'s message area because it helps the system differentiate between intentional actions by the user to perform a pull-in gesture and accidental touches on *Tseng*'s status bar that may have intended to touch on the main application. Bederson ¶191.

a. Motivation to Combine

A POSITA would have been motivated to incorporate *Wilairat*'s pull-in gesture into *Tseng*'s system, for example, because it would have allowed for a thinner status bar, avoided confusion whether the user needs to tap the bar to see the message area, and required more intentionality by users without sacrificing accuracy. Bederson ¶192. Using a pull-in action to activate *Tseng*'s status bar would also have let the status bar act as a buffer between the main display actions and the start of the "finger swipe" to show message area 206/224, thereby providing the benefit of "low-precision" gestures that are more efficient to activate for thin bars using crossing-type gestures and could avoid frustration by users trying to touch the status bar directly, which is slower and leads to accidentally touching the main application area, especially for activations very close to the

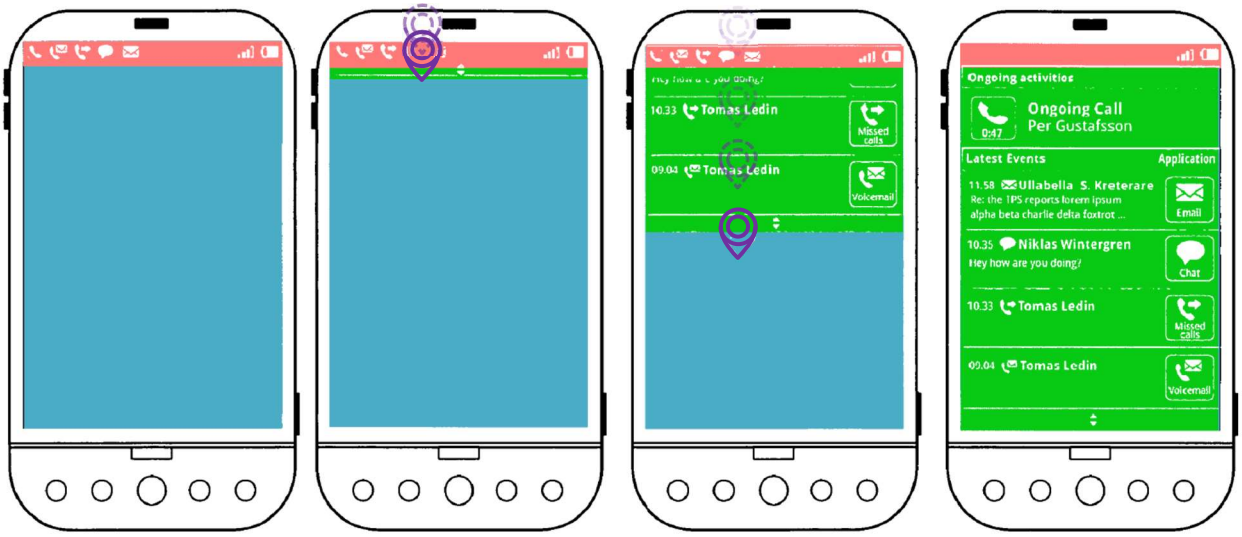
status bar. *See* Sections II, VII.A.1.e; *Bezel Swipe*, 2; *Roth*, [0009], [0015]; Bederson ¶¶192-196, §VI.

At a minimum, a POSITA would have found it obvious to try implementing an off-to-on-screen gliding action to activate *Tseng*'s pull-down message area as a pull-in gesture or expanding-contact determination, such as taught by *Wilairat* (*see also Bezel Swipe*, 1-2), because it was a known technique that would have improved *Tseng*'s device in the same way as known in the prior art. A POSITA would have recognized that this operation represents merely implementing a known prior art off-to-on screen gliding action determination that first registers a touch when the user contacts the status bar on the touch screen, such as by determining a pull-in gesture or expanding-contact area determination, to yield the predictable result of contacting the status bar window and pulling down the message display area. *See* Section II; Bederson ¶197, §VI.

b. Expectation of Success

Implementing *Wilairat*'s pull-in gesture determination in *Tseng*'s system to determine that the user's gliding action started offscreen and moved towards the inside of the touch screen over the status bar to pull down *Tseng*'s message area would have been merely the straightforward application of known, conventional techniques used according to their known functions to yield predictable results (pulling down the message area, as shown in *Tseng*'s FIGS. 2A-2C, when the

device determines a pull-in gesture). Bederson ¶¶198-201; *KSR*, 550 U.S. at 416; *Slot Speaker*, 680 F. App'x at 943-44.



Tseng, FIG. 2C (dashed gliding annotations added).

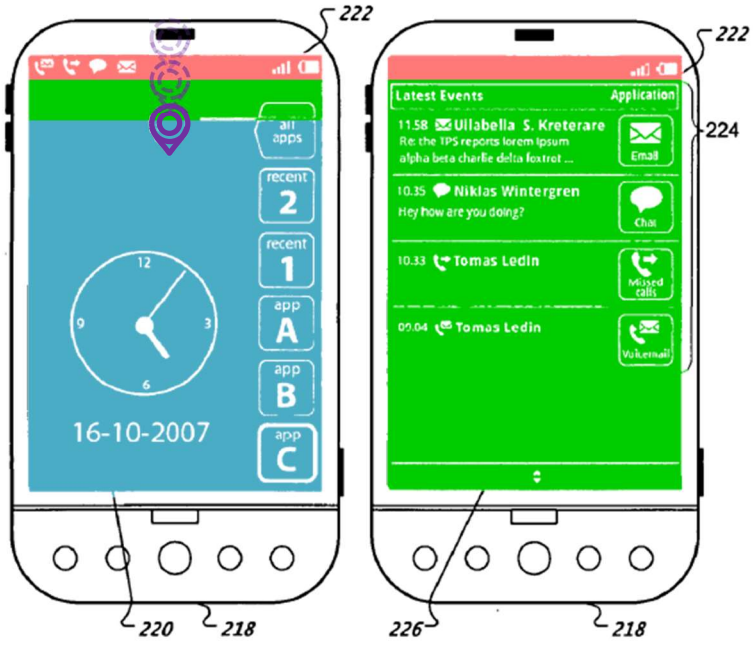


FIG. 2B

Tseng, FIG. 2B (excerpted, dashed gliding annotations added).

2. Claims 2-13 and 17-18

Tseng discloses or renders obvious the additional limitations of dependent claims 2-13 and 17-18, as discussed in Ground 1. Bederson ¶202.

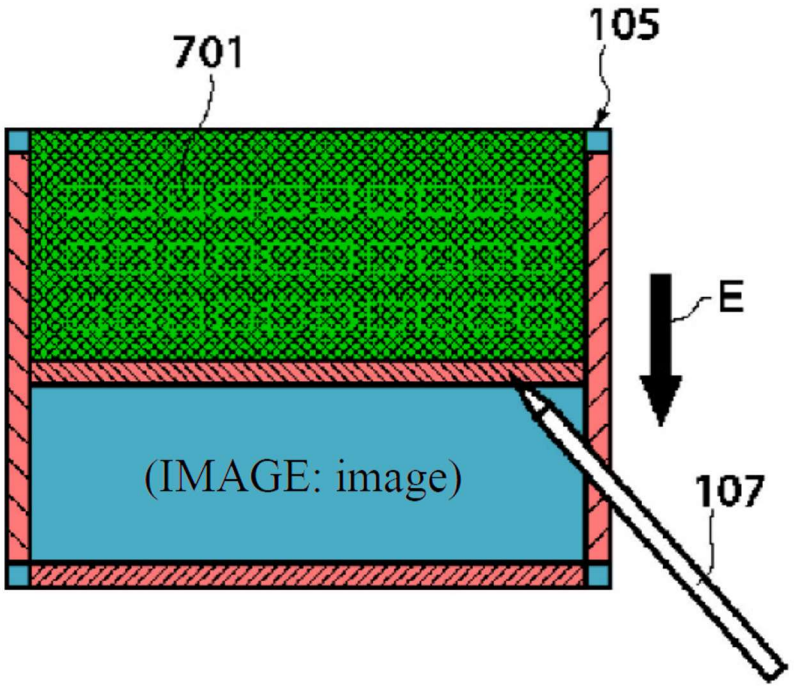
C. Ground 3: Claims 15-16, 18-19, and 21-36 Are Rendered Obvious by *Tseng*, or *Tseng* and *Wilairat*, in further view of *Hisatomi*

1. Claim 15

a. "The system of claim 1, wherein said at least one window comprises more than one window located on one or more edges of the touch screen."

Hisatomi discloses and renders obvious the additional limitations of claim 15. Bederson ¶¶203-211.

Hisatomi discloses that FIGS. 5-7 "show[] examples of coordinate definitions for 'drawer menu display-triggering areas'" on a touch screen. *Hisatomi*, [0029]. FIGS. 5-7 show four "drawer menu[]" categories A-D, each having different functions to select. *Hisatomi*, [0030], [0032]. Like *Tseng*, *Hisatomi*'s "user can display the menus for the respective categories by … pulling out from the edges of the display 105," such as by "sliding the input device 107 in the direction of arrow E toward the center of the display screen." *Hisatomi*, [0033]-[0034], FIG. 7; Bederson ¶204.



Hisatomi, FIG. 7.

i. Motivation

A POSITA would have been motivated to incorporate *Hisatomi*'s additional slide-pen menu options into *Tseng* to provide additional functionality for a user. Bederson ¶205. For example, a POSITA would have been motivated to provide a second pull-out menu at a second edge of *Tseng*'s screen, such as disclosed in the *T-Mobile G1 User Manual*, 27-29, and the *Samsung GT-i7500 User Manual*, 30-31, to allow a user to quickly access other applications using a second menu, such as shown at the bottom of Figure A. Bederson ¶206.

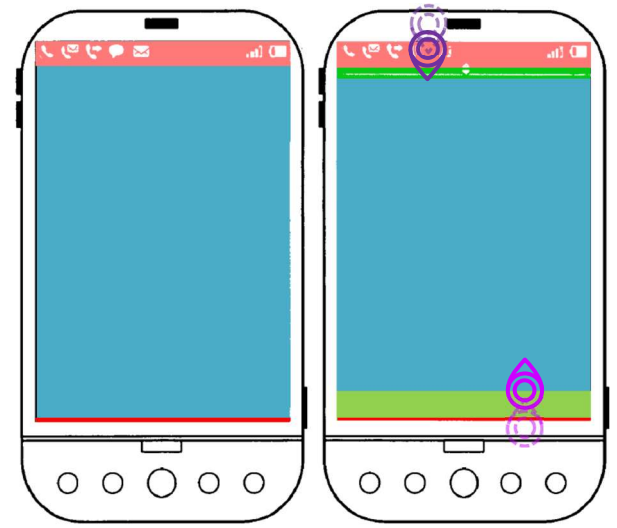


Figure A.

A POSITA would have been motivated to provide the second window, shown at the bottom of Figure A. Bederson ¶¶206-208. The size may depend on design preferences, such as shorter windows, such as shown in *Bezel Swipe*, *Roth*, the *T-Mobile G1 User Manual*, and the *Samsung GT-i7500 User Manual*, or the entire bottom few pixels, as shown in Figure A. Bederson ¶208, §VI; *see* Section II. In each case, the design would not have hindered the user's use of *Tseng*'s main application area because, by design, the second window would have been "so narrow that it would be difficult to activate by direct touch." *Bezel Swipe*, 2; Bederson ¶208. Furthermore, if a "finger swipe" is required to activate the pull-out menu, as taught by *Tseng*, even an accidental direct touch by a user on the thin second window would not accidentally activate it. *Id.* This could be further bolstered, as explained in Ground 2, by determining an off-to-on screen pull-in

gesture, using, for example, the expanding contact method taught by *Wilairat*, which would have further safeguarded against accidental activation.

See Section VII.B; Bederson ¶208.

ii. Expectation of Success

A POSITA would have reasonably expected to succeed in the at least one window comprising more than one window located on one or more edges of the touch screen. Bederson ¶¶209-211. Implementing this functionality would have involved nothing more than the routine application of existing technology in predictable ways, which was well known and routine in the prior art, as explained in Sections II, [1d], and Ground 2. Bederson ¶210, §VI.

Implementing the functionality of claim 15 in *Tseng*'s system to slide open a second menu as the user's finger glides over a second window, such as shown in Figure A, would have been merely the straightforward application of known, conventional techniques used according to their known functions to yield predictable results (opening a second menu similar to that shown in *Tseng*'s FIGS. 2A-2C, as shown in Figure A). Bederson ¶211, §VI; *see* Sections II, VII.A.1.e, VII.B; *KSR*, 550 U.S. at 416; *Slot Speaker*, 680 F. App'x at 943-44.

2. Claim 16

a. "The system of claim 15, wherein said at least one window extends along a substantial portion of an edge of the touch screen."

The additional limitations of claim 16 are substantively the same as claim 4, which *Tseng* discloses as discussed for claim 4. *See* Section VII.A.4; Bederson ¶212.

3. Claim 18

a. "The system of claim 1, wherein the processor relates a gliding action provided towards any arbitrary direction inside the screen to presenting a same interface."

If Keyless argues or the Board finds that *Tseng* does not disclose or render obvious the additional limitations of claim 18, *Hisatomi* renders these limitations obvious. Bederson ¶¶213-219.

Hisatomi discloses that, when sliding open the drawer menus, if a touch on "the interior of any [menu A-D] regions is detected, then the respective coordinate data are mapped" and, when "the coordinates [of the touch/slide] are continuously updated toward the center portion of the display screen of the image-displaying display 803, the display region of the drawer is slid in the indicated direction." *Hisatomi*, [0059]. In tracking the slide direction, for example, up-and-down sliding of menus B and C in *Hisatomi*'s FIGS. 5-7 (like *Tseng*'s pull-down status bar

notification menu), "X-axis information [X-coordinate] is ignored and only Y-axis information [Y-coordinate] is reflected in the process" so that "the bar display position is continuously updated in accordance with the Y-coordinate information." *Hisatomi*, [0065], [0069]. A POSITA would have recognized that, because only the Y-coordinate information is used to determine how far to slide open the menu, then the same vertical pull-down menu is presented for any Y-coordinate, but the user's direction may be in any arbitrary direction towards the interior of the touch screen. Bederson ¶214.

i. Motivation

A POSITA would have been motivated to have *Tseng*'s processor relate a gliding action provided towards any arbitrary direction inside the screen to presenting a same interface, as taught by *Hisatomi*. Bederson ¶¶215-216.

A POSITA would have been motivated to use only the Y-coordinate of the user's "finger swipe" (gliding action) such that any arbitrary direction into *Tseng*'s touch screen from or across the status bar would have opened the same message area 206/224 because it would have simplified the user's interaction and provided a better user experience. Bederson ¶216. By providing the same interface for any arbitrary gliding direction from *Tseng*'s status bar, a POSITA would have recognized that the activation gesture would have been more natural and would have increased the speed and intuitiveness of the user opening *Tseng*'s message

area because the user does not need to precisely place their finger or navigate a particular direction and allows for user variation. Bederson ¶216, §VI; *see* Sections II, VII.A.1.e.

ii. Expectation of Success

A POSITA would have reasonably expected to succeed in the processor relating a gliding action provided towards any arbitrary direction inside the screen to present a same interface in *Tseng*'s device. Bederson ¶¶217-219. Implementing this functionality would have involved nothing more than the routine application of existing technology in predictable ways. Bederson ¶¶217-218, §VI; *see* Sections II, VII.A.1.e, VII.B.

Implementing the functionality of claim 18 in *Tseng*'s system to slide open the message area as the user's finger glides in any arbitrary direction towards the inside of the touch screen would have been merely the straightforward application of known, conventional techniques used according to their known functions to yield predictable results (opening the message area as shown in *Tseng*'s FIGS. 2A-2C using the coordinate of the menu-opening direction). Bederson ¶219; *KSR*, 550 U.S. at 416; *Slot Speaker*, 680 F. App'x at 943-44.

4. Claim 19

If Keyless argues or the Board finds that *Tseng* does not disclose or render obvious that the gliding action of claim 19 is provided towards any arbitrary

direction inside the touch screen, *Hisatomi* renders this limitation obvious as discussed for claim 18. *See* Section VII.C.3; Bederson ¶220.

5. Claim 22

a. "The system of claim 19, wherein said bar comprises more than one bar located on one or more edges of the touch screen."

The additional limitations of claim 22 are substantively the same as claim 15, which *Tseng*, or *Tseng* and *Wilairat*, in further view of *Hisatomi*, renders obvious as discussed for claim 15. *See* Section VII.C.1; Bederson ¶221.

6. Claims 21 and 23-36

Tseng, or *Tseng* and *Wilairat*, discloses or renders obvious the additional limitations of dependent claims 21 and 23-36 for the reasons discussed above in Grounds 1 and 2 and claims 15 and 16 of Ground 3. *See* Sections VII.C.1, VII.C.2; Bederson ¶222.

D. Ground 4: Claims 1-13, 15-19, and 21-36 Are Rendered Obvious by *Jeong*

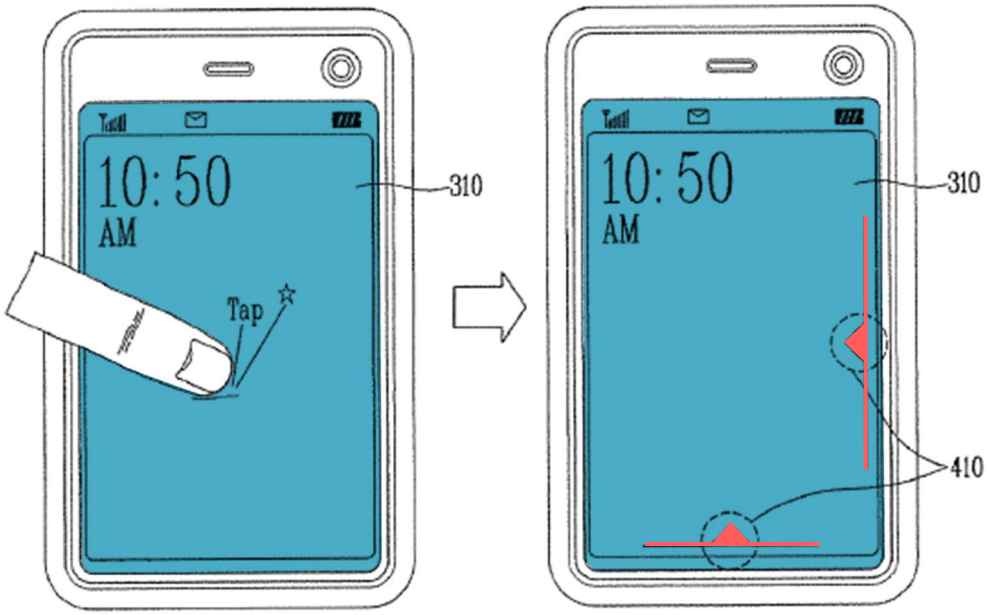
Jeong renders obvious claims 1-13, 15-19, and 21-36. Bederson ¶¶223-319.

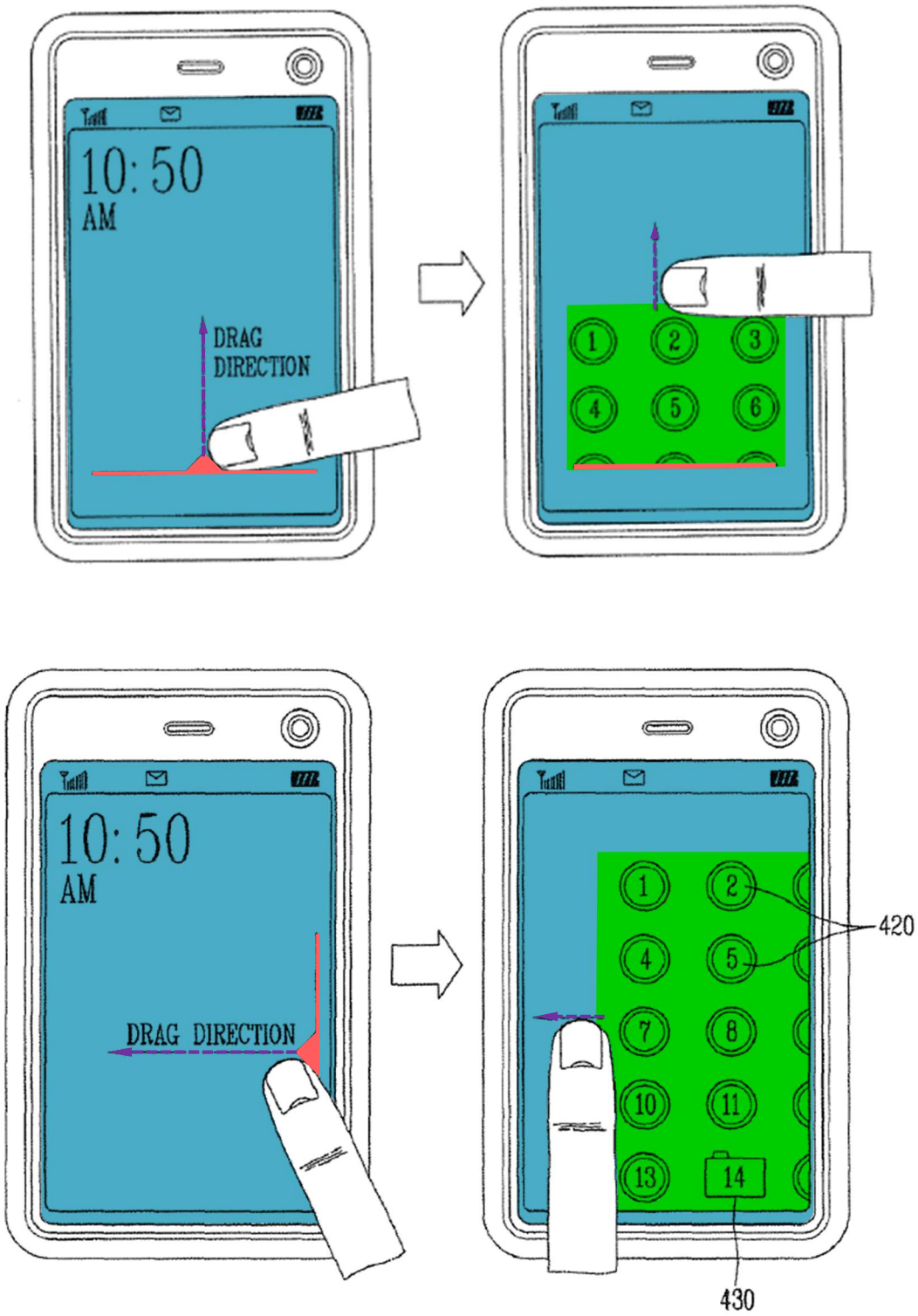
1. Independent Claim 1

a. [1pre]

Jeong discloses [1pre]. Bederson ¶¶224-227.

Jeong discloses "[a] mobile terminal" (system) that "compris[es] a display module to display a tag and to display a menu screen image … as the tag is dragged." *Jeong*, Abstract. Tags 330/410 on the device's touch screen are "graphical user interface (GUI) object[s] associated with a functional interface which allows a user to expose or hide from view other GUI objects." *Jeong*, [0050]. A "side portion" of *Jeong*'s "touch screen" forms "a boundary region," indicated by tags 330/410, "from which [a] menu screen image 320 can appear or disappear." *Jeong*, [0056]-[0058], FIGS. 6A-6B, 7A-7C; Bederson ¶¶225-227.



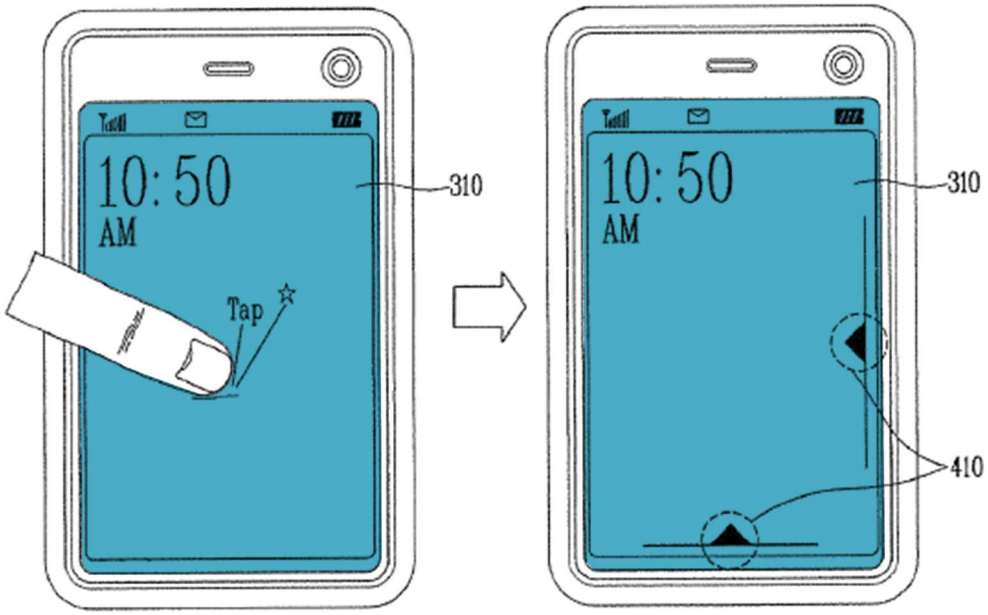


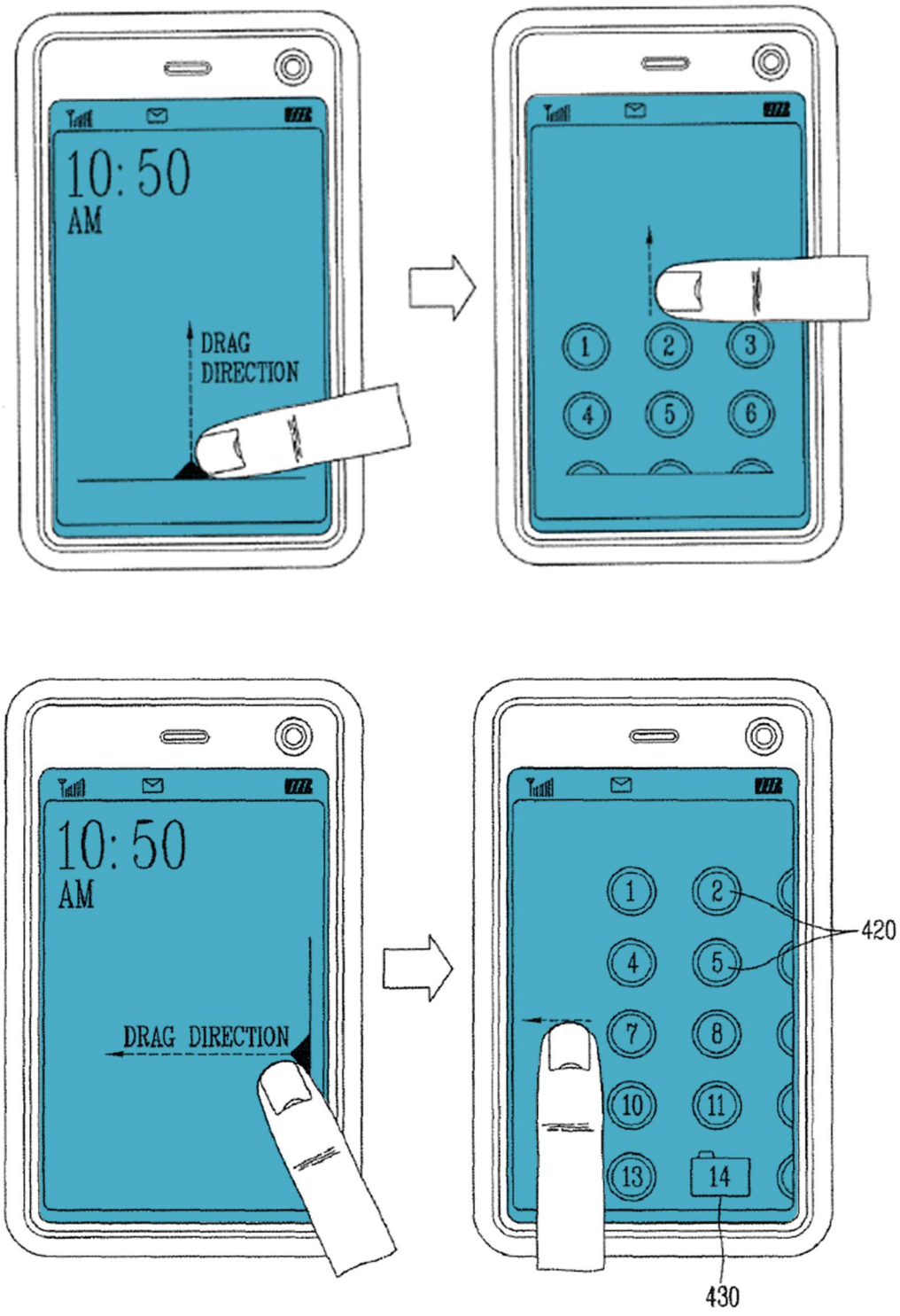
Jeong, FIGS. 6A, 7B-7C.

b. [1a]

Jeong discloses [1a]. Bederson ¶¶228-229.

Jeong's "mobile terminal 100" includes "a touch screen." *Jeong*, [0030], [0034], [0041], [0058], FIGS. 4-9E.



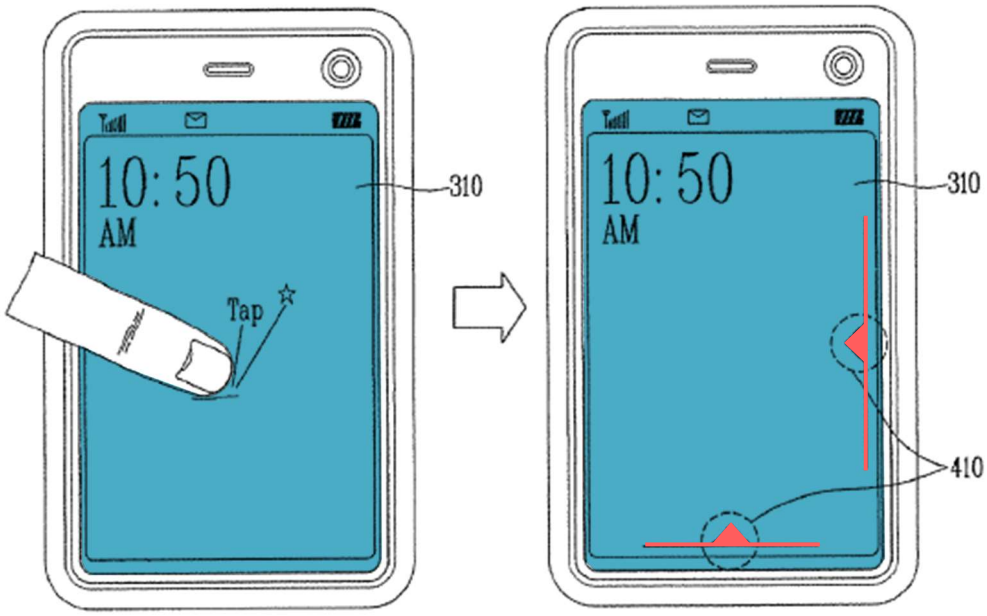


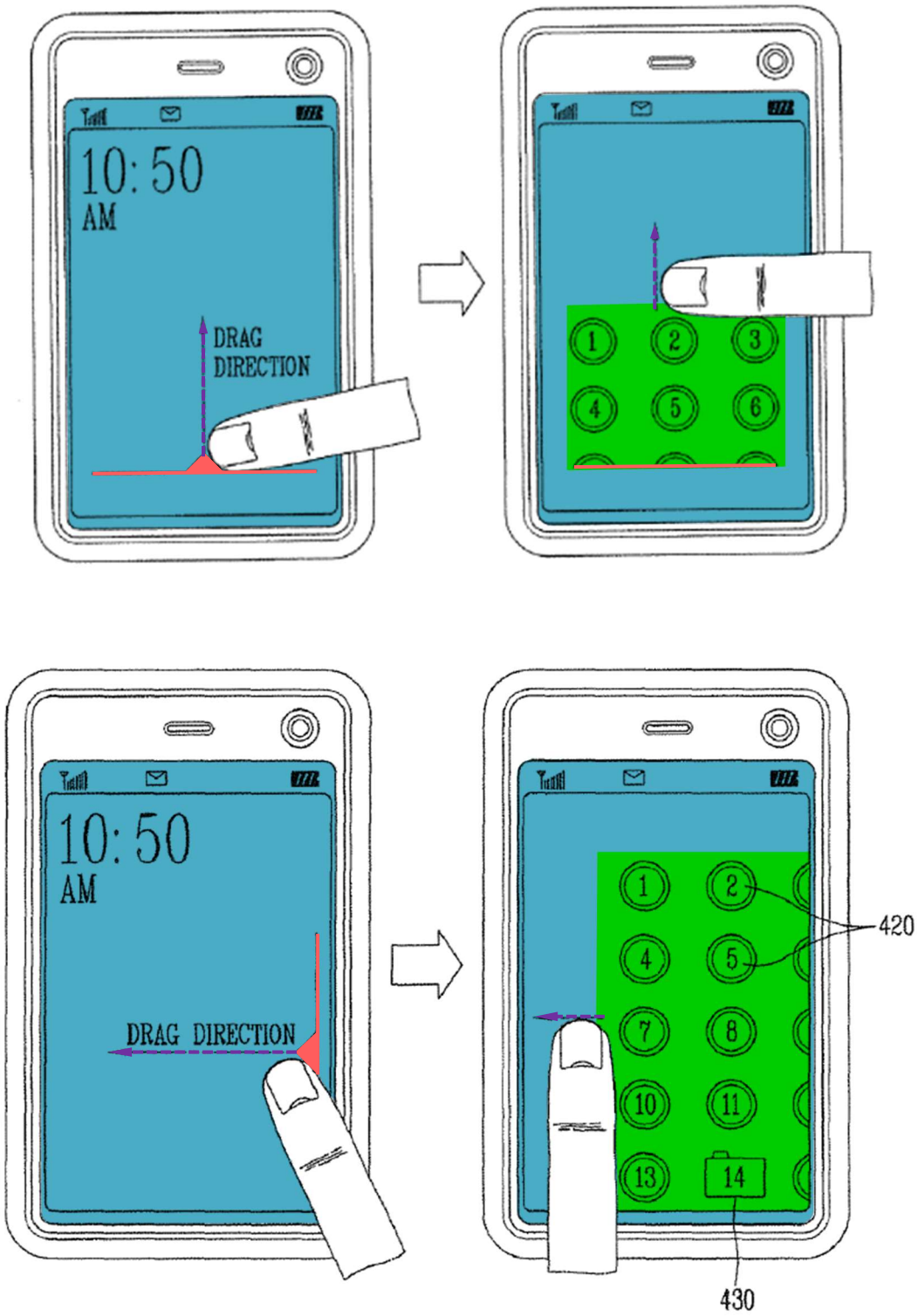
Jeong, FIGS. 6A, 7B-7C.

c. [1b]

Jeong discloses or renders obvious [1b]. Bederson ¶¶230-246.

Jeong discloses "a side portion" of the touch screen such as "tag 330 (or other graphical indicator) can be used to indicate the boundary region" from which "the menu screen image 320 can appear or disappear." *Jeong*, [0056], FIGS. 6A, 7B-7C. A POSITA would have understood that tags 330/410 are windows because they are drawn over the screen image when they are displayed. *Jeong*, [0057]-[0058], FIG. 6A; Bederson ¶231.

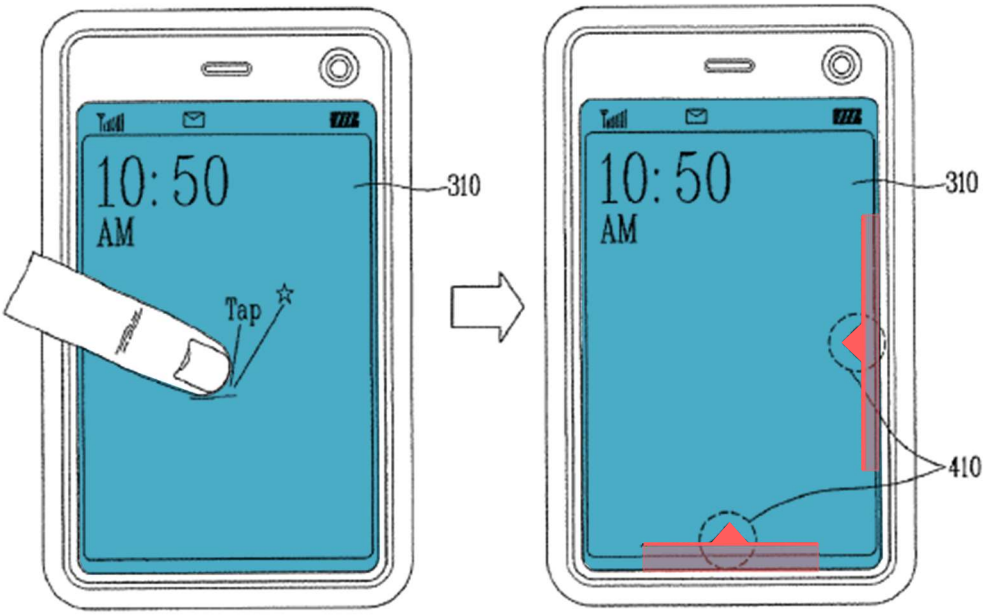




Jeong, FIGS. 6A, 7B-7C.

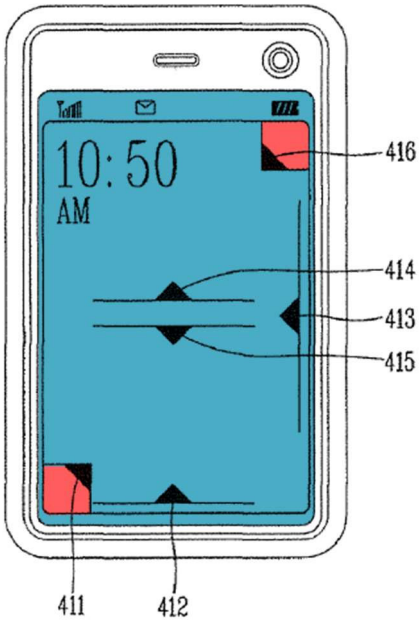
A POSITA reading *Jeong* would have also understood that tag 330/410 is a window at the edge of the touch screen based on their drawn position in *Jeong*'s figures. Bederson ¶232. A POSITA also would have recognized, or at least found obvious, that the window extends to the screen's outermost edge,[14] as shown in dashed form in modified FIG. 6A below, because *Jeong*'s tags "indicate the boundary region" for the menu display. *Jeong*, [0056]; Bederson ¶¶232-233. A POSITA would have recognized that *Jeong*'s tags are independent of an application in use on the touch screen because *Jeong*'s background image and any applications running on it are shown irrespective of the tags' presence. *Jeong*, [0057]-[0058], FIG. 6A; Bederson ¶232. A POSITA would have recognized that extending *Jeong*'s tag to the outermost edge of the screen would have mitigated confusion or frustration by users because the user's gliding action would not need to be as precise to exactly touch the narrow tag because of the wider activation region, as explained below in [1d]. Bederson ¶233.

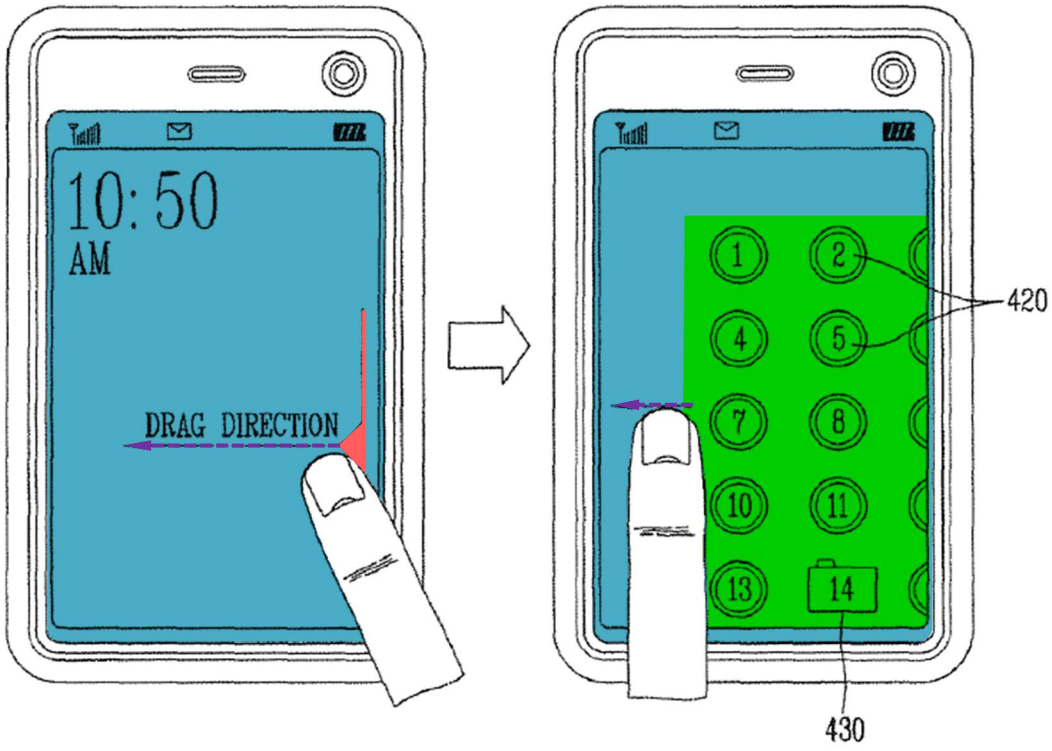
[14] *Jeong*'s tags are located on an edge of the touch screen even if they are not at the outermost edge. If this claim element is interpreted to require the window be at the outermost edge, *Jeong* discloses or renders it obvious. Bederson ¶233 n.27.

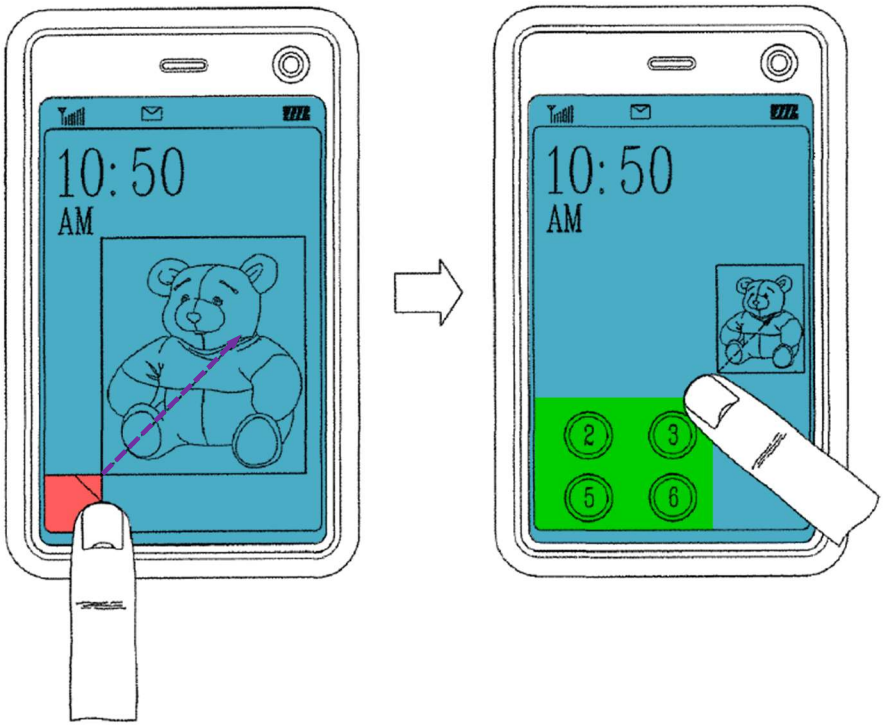


Jeong, FIG. 6A (modified).

Jeong shows both the pull-out tag and the menu being pulled out being at the outermost edge of the touch screen's background image, which a POSITA would have generally understood denotes the outermost edge of the main display. *Jeong*, FIGS. 6B, 7C, 9C; Bederson ¶234.


10:50
AM
416
414
413
415
411
412


10:50
AM
DRAG DIRECTION
1
2
4
5
7
8
10
11
13
14
420
430



Jeong, FIGS. 6B, 7C, 9C.

A POSITA would have found it obvious to place *Jeong*'s tags on the outermost edge of the touch screen, either on the background image display area (light blue in Figure B) (as shown by *Jeong*) or in the screen's edge region outside of the background image (shown dark blue in Figure B). Bederson ¶235.

Figure B.

i. Motivation

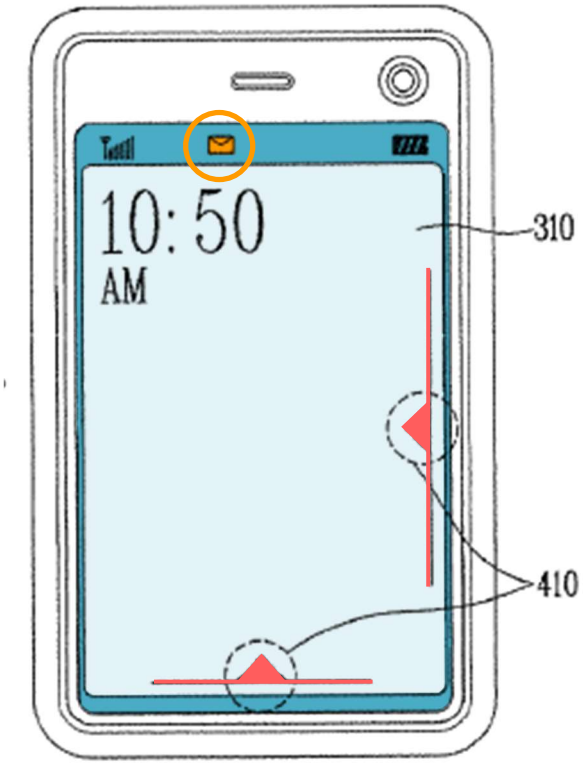
A POSITA would have recognized that placing *Jeong*'s tags as windows on the edge of the touch screen would have simplified the user's experience opening *Jeong*'s menus by removing uncertainty about where the user needs to touch or glide to activate the menu. Bederson ¶¶236-242. A POSITA would have found it obvious to position *Jeong*'s tags as "a narrow target … flush against the display edge" of the touch screen, such as shown in Figure B, to enable reliable activation and clarify the operation for the user while also enabling more efficient crossing

gestures to pull out the menu. *Roth*, [0009], [0036]; *Bezel Swipe*, 1-2, Figures 1-2; Bederson ¶¶237-239.

As shown in exemplary Figure B, placing *Jeong*'s tags on the outer edge of the touch screen would have made better use of the area outside (blue) the background image (light blue), thereby freeing up more of the main display for other applications, while continuing to enable the gliding-based activation. Bederson ¶240; *Roth*, [0009], [0036]; *Bezel Swipe*, 1-2, Figures 1-2.

Figure B.

A POSITA would have further found this obvious to display *Jeong*'s application menu tag 330/410 regardless of (independent of) an interface of an application shown at the background image of the touch screen. Bederson ¶241. *Jeong* shows a status bar at the top edge of the screen outside of the background image, which a POSITA would have known is generally updated, such as with notifications (e.g., message envelope (*Jeong*, FIGS. 6A-6B, 7A-7C)), regardless of the application shown on the rest of the touch screen. *See Tseng*, [0005], [0028], FIGS. 1, 2A-2C, 5; Bederson ¶241. As such, a POSITA would have been motivated to use the area outside of the background image as an active portion of the display, such as for *Jeong*'s tags. Bederson ¶241.



Jeong, FIG. 6A (excerpted).

Figure B.

A POSITA would have been motivated to position *Jeong*'s tags on an edge of the touch screen, like in Figure B, because it would have made use of the outer edge "that is so narrow that it would be difficult to activate by direct touch" using "pixels that are not typically touched during regular interactions," while still using *Jeong*'s dragging gesture to activate the pull-out menu. *Bezel Swipe*, 2. A POSITA also would have recognized that this would enable (to the extent not already

disclosed by *Jeong*) the user to drag over any portion of the tag to expose or hide the menu, which was well known in the prior art. Bederson ¶242.

ii. Expectation of Success

A POSITA would have reasonably expected to succeed in providing *Jeong*'s tags on an edge of the touch screen as windows functioning independently of an interface of an application in use on the touch screen, such as shown in Figure B. Bederson ¶¶243-246.

A POSITA would have recognized that this functionality was well known and routine in the prior art. Bederson ¶¶244-245, §VI; *see* Section II. Implementing this functionality in *Jeong*'s system would have thus been merely the straightforward application of known, conventional techniques used according to their known functions to yield predictable results (displaying *Jeong*'s tags on an edge of the screen, for example, being "flush" with the screen edge (*Bezel Swipe*, 2)). Bederson ¶246; *KSR*, 550 U.S. at 416; *Slot Speaker*, 680 F. App'x at 943-44.

d. [1c]

Jeong discloses [1c]. Bederson ¶¶247-248.

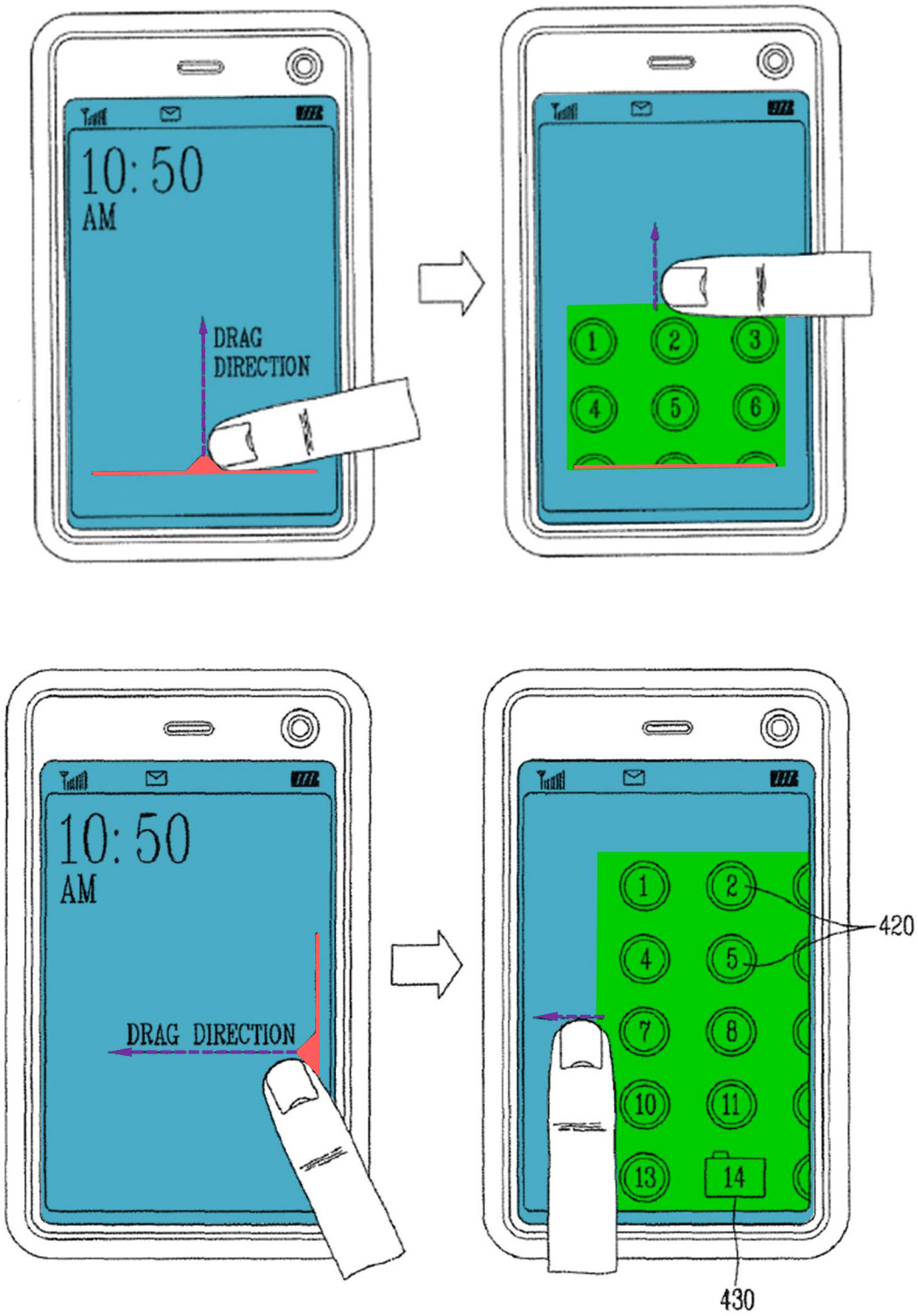
Jeong discloses a "controller 180" for "control[ling] the general operations of the mobile terminal 100," such as "determin[ing] [a] type of touch that was or is being performed when the user touches or releases the tag (icon) 330" on the touch

screen. *Jeong*, [0023], [0037], [0054], FIG. 1. For example, "when the user touches one of the tags 410 and drags it (S104 [of FIG. 5]), the controller 180 exposes a menu screen image 320, which has been hidden, in the direction in which the tag is dragged." *Jeong*, [0058], FIGS. 6A-7C; Bederson ¶248.

e. [1d]

Jeong discloses or renders obvious [1d]. Bederson ¶¶249-254.

Jeong discloses "dragging a menu screen image in a tactile manner to allow the menu screen image to be exposed or hidden." *Jeong*, [0002], [0006]-[0007], [0017]-[0019], [0057]-[0059], FIGS. 5, 6A, 7A-7C. *Jeong* further discloses that the user's gliding or dragging action is towards the inside of the touch screen and first interacts with *Jeong*'s tag windows on the touch screen, such as shown in FIGS. 7B-7C. Bederson ¶¶250-251.



Jeong, FIGS. 7B-7C.

The user's gliding action (dragging) is processed by the "controller" to cause the action of displaying "[a] menu screen image being displayed according to a dragging direction and a dragging distance." *Jeong*, [0006]-[0007], [0050], [0052], [0057]-[0059], FIGS. 5, 7B-7C; Bederson ¶252.

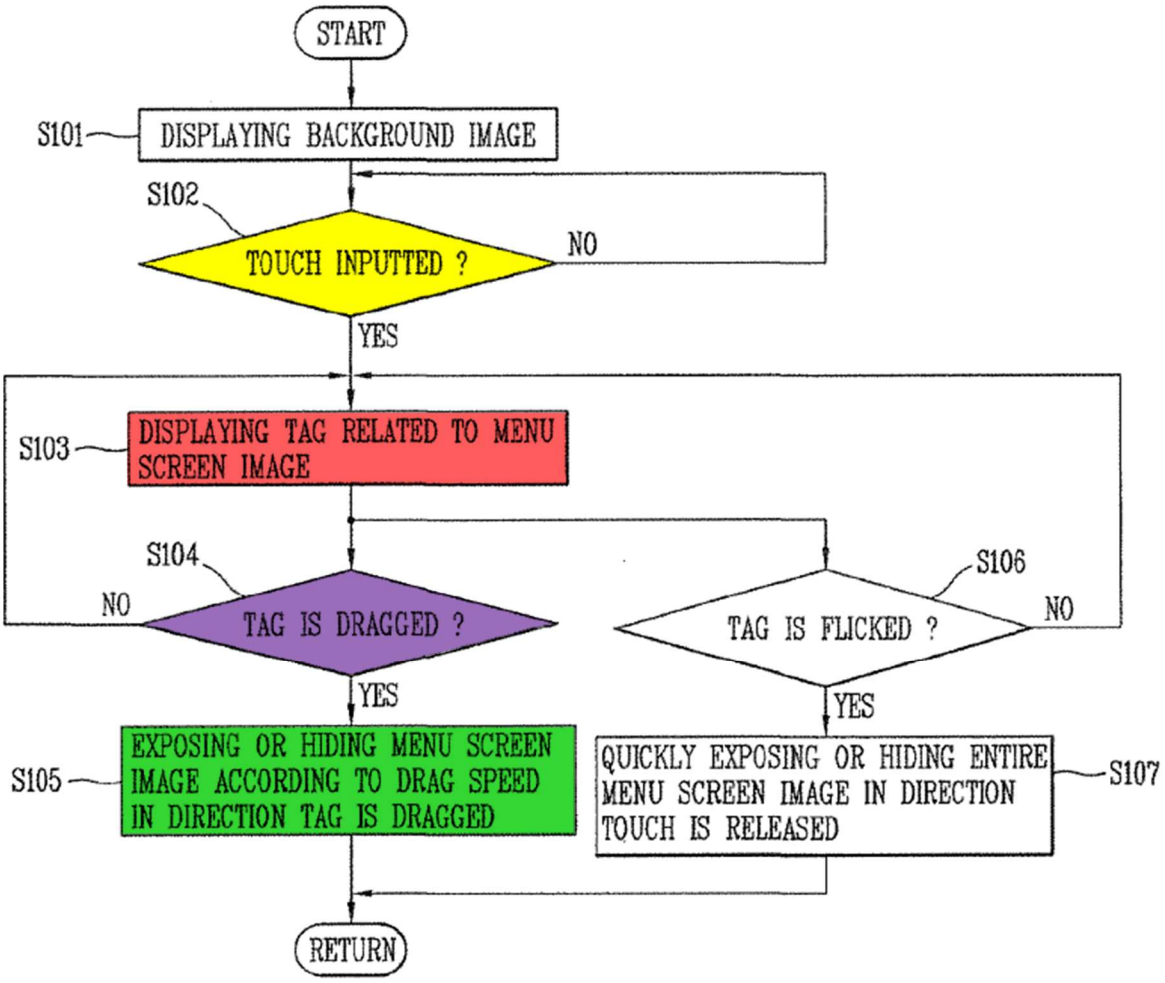
If Keyless argues or the Board finds that *Jeong* does not disclose the tags being positioned on an edge of the touch screen, a POSITA would have found this obvious as explained in [1b]. Bederson ¶253.

Furthermore, a POSITA would have found it obvious, been motivated to implement, and reasonably expected to succeed in implementing *Jeong*'s gliding action provided from outside of the touch screen towards the inside of the touch screen for the same reasons as discussed in Ground 1, [1d]. *See* Sections II, VII.A.1.e; Bederson ¶254, §VI.

f. [1e]

Jeong discloses [1e]. Bederson ¶¶255-257.

Jeong discloses at FIG. 5 that tags 330/410 are shown (step S103) before the "tag is dragged" (gliding action, step S104). *Jeong*, [0057]-[0059], FIG. 5. After "the tags 410 [are] displayed, when the user touches one of the tags 410 and drags it (S104), the controller 180 exposes a menu screen image 320, which has been hidden, in the direction in which the tag is dragged as shown in FIGS. 7A to 7C." *Jeong*, [0058], FIGS. 5, 7A-7C; Bederson ¶¶256-257.



Jeong, FIG. 5.

A POSITA also would have been motivated to provide the tags on the edge of *Jeong*'s touch screen, as explained in [1b] and shown in Figure B, to make better use of "pixels that are not typically touched during regular interactions" and display the tags before the dragging begins. Bederson ¶257; *Jeong*, [0057]-[0058], FIGS. 5, 7A-7C.

Jeong thus renders obvious claim 1.

2. Claim 2

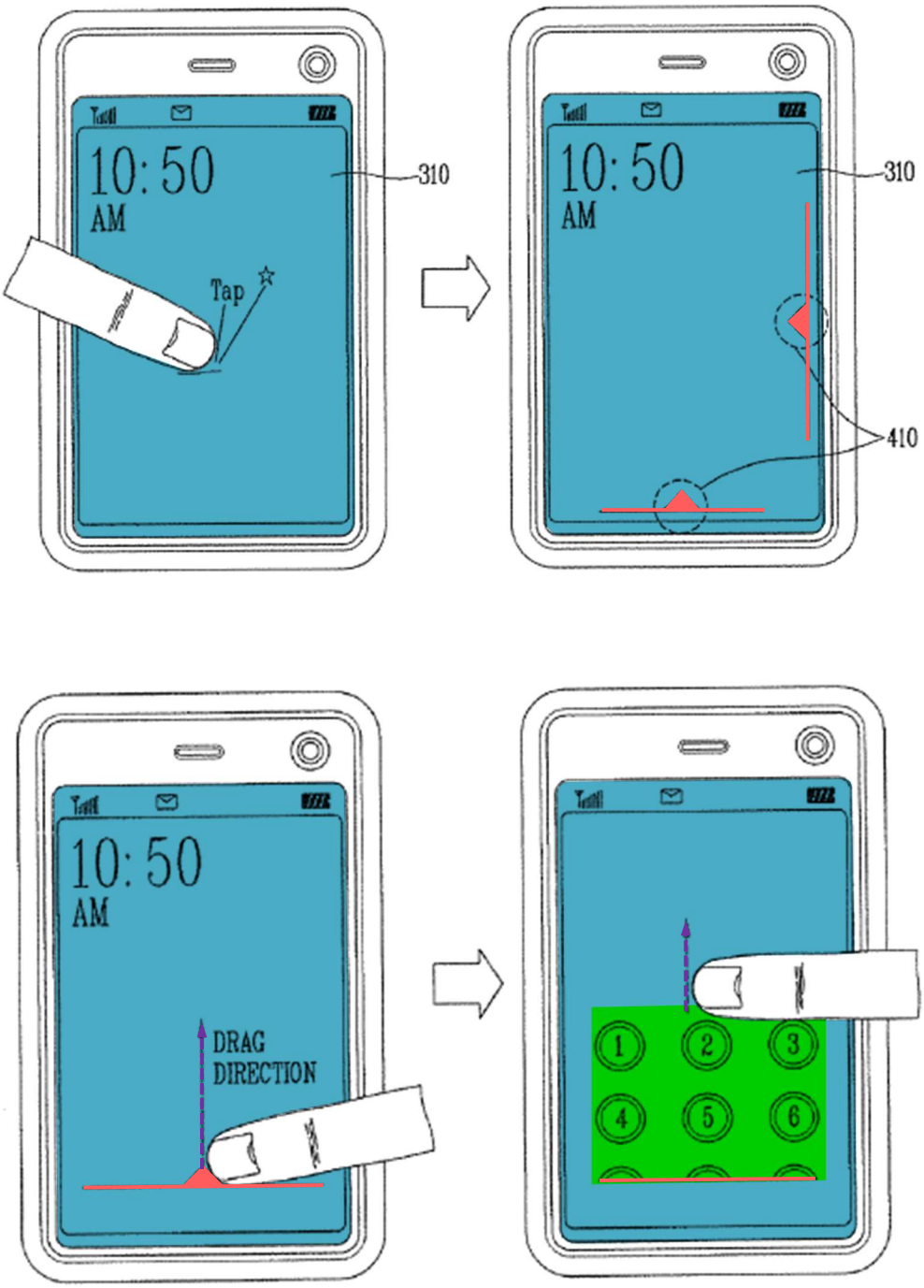
Jeong discloses the additional limitations of claim 2. Bederson ¶¶259-260.

Jeong's "dragging" (gliding action) pulls open the tag menus based on the distance and direction of the drag, as explained in claim 1, which is not related to the "mouse" functions described in the '602 patent. Bederson ¶260.

3. Claim 3

Jeong discloses the additional limitations of claim 3. Bederson ¶¶261-262.

Jeong discloses, or a POSITA would have found obvious, that tags 330/410 are windows located on the edge of the touch screen, as explained in [1b]. *Jeong*'s tags 330/410 are shown in the shape of a bar in the form of a line located outward of an arrow indicating the drag direction. *Jeong*, FIGS. 6A-6B, 7B-7C. Bederson ¶262.


10:50
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AM
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410
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AM
DRAG
DIRECTION
1
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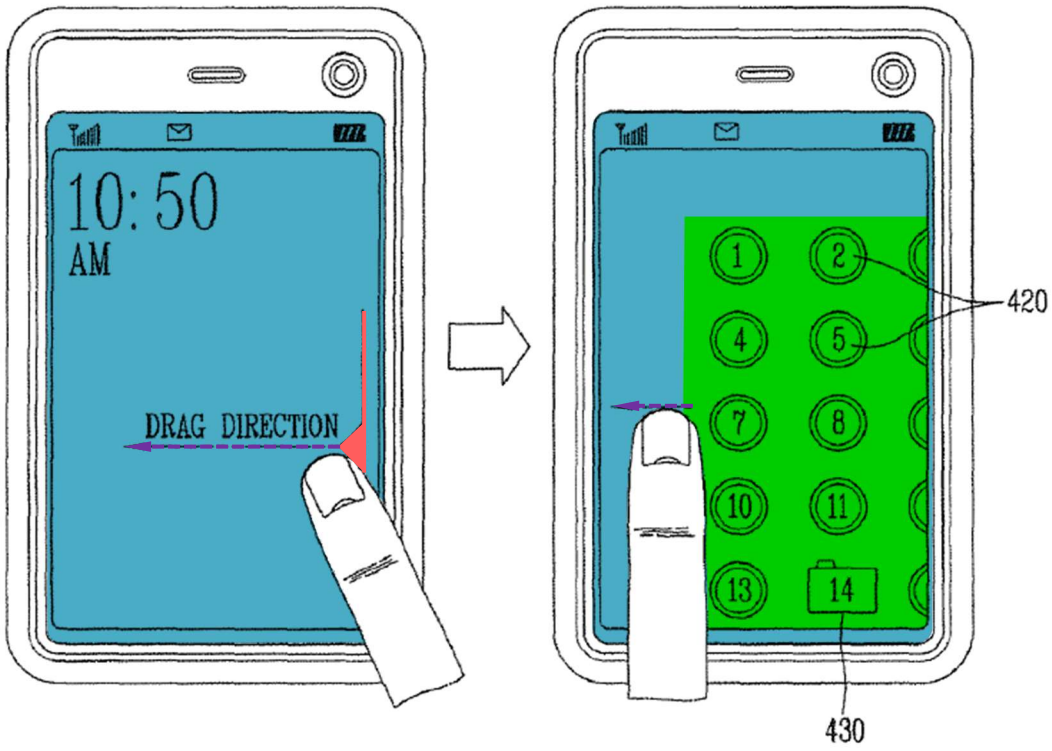
4
5
6



Jeong, FIGS. 6A, 7B-7C.

4. Claim 4

Jeong discloses the additional limitations of claim 4. Bederson ¶¶263-265.

Jeong's FIGS. 6A and 7B show the bar for tags 330/410 extending along a substantial portion of the bottom edge of the touch screen. Bederson ¶264.

If Keyless argues or the Board finds that *Jeong* does not disclose the tags being on an edge of the touch screen, a POSITA would have found this obvious, as explained in [1b]. Bederson ¶265.

5. Claim 5

Jeong discloses the additional limitations of claim 5. Bederson ¶¶266-267.

As explained in claim 3, *Jeong*'s tags 330/410 are in a form of a line. Bederson ¶267.

6. Claim 6

Jeong discloses the additional limitations of claim 6. Bederson ¶¶268-269.

Jeong discloses "[a] tag may be [a] graphical user interface (GUI) object associated with a functional interface which allows a user to expose or hide from view other GUI objects on the mobile terminal 100's display." *Jeong*, [0050]. *Jeong*'s menu screen image exposed using the gliding action "includ[es] a plurality of menu items (or icons)" "for executing a program" and a "'group menu item' 430 for retrieving a menu item of a different group and displaying it." *Jeong*, [0052]-[0053], FIGS. 7A-7C. A POSITA would have known that this describes an interface for selecting a program's icon to launch or execute programs. Bederson ¶269.

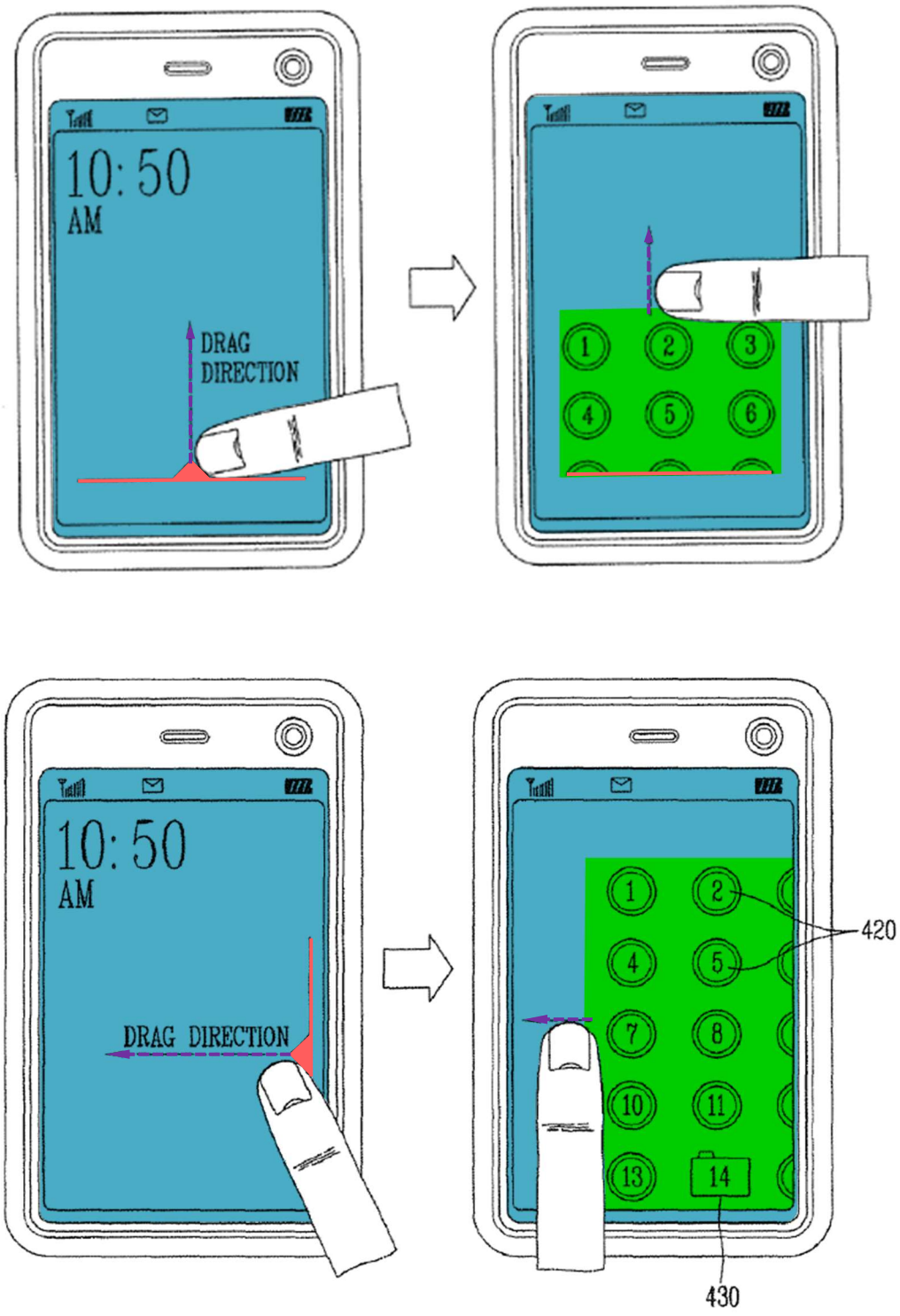
7. Claim 7

Jeong discloses the additional limitations of claim 7. Bederson ¶¶270-272.

Jeong discloses that "menu screen image 320 may expose some of the menu items while hiding other items according to the distance along which the tag 330 is dragged," and "some of the menu items may be displayed while others may not be displayed *according to the drag distance*." *Jeong*, [0054] (emphasis added). A POSITA would have recognized that "expos[ing] some of the menu items"

displays a portion of the menu interface on the screen because the number of icons shown varies depending on how far the user glides their finger when exposing the menu. Bederson ¶271.

Jeong explains that, "[i]f [the] tag dragging is stopped before the entire menu screen image 320 is exposed, or when the touch to the tag being dragged is released, the menu screen *maintains a currently exposed state as it is*"—that is, *Jeong*'s system exposes or hides a portion of the menu both during the dragging action and when the user ceases the dragging action. *Jeong*, [0059], FIGS. 7A-7C (emphasis added). As shown in FIGS. 7B-7C, this exposure is proportional to the dragging distance. *See Jeong*, Abstract, [0006]-[0007], [0054], [0061], [0064]; Bederson ¶272.



Jeong, FIGS. 7B-7C.

8. Claim 8

Jeong discloses the additional limitations of claim 8. Bederson ¶¶273-274.

Jeong discloses, for example, as shown in FIGS. 7B-7C, during the user's dragging action, the length of the portion of the menu interface displayed is substantially equal to the length of the dragging (gliding) action because the edge of the menu is shown under the user's finger as it is dragged. Bederson ¶274. This proportional display allows for the menu to remain partially open if the user ceases the action. *Jeong*, [0059], FIGS. 7B-7C; Bederson ¶274.

9. Claim 9

The additional limitations of claim 9 are substantively the same as claim 6, which *Jeong* discloses[15] as discussed for claim 6. Bederson ¶275.

10. Claim 10

The additional limitations of claim 10 are substantively the same as claim 7, which *Jeong* discloses as discussed for claim 7. Bederson ¶276.

11. Claim 11

The additional limitations of claim 11 are substantively the same as claim 8, which *Jeong* discloses as discussed for claim 8. Bederson ¶277.

[15] *Jeong* discloses or renders obvious the limitations of the parent claims from which every dependent claim depends.

12. Claim 12

The additional limitations of claim 12 are substantively the same as claims 6 and 9, which *Jeong* discloses as discussed for claims 6 and 9. Bederson ¶278.

13. Claim 13

Jeong discloses or renders obvious the additional limitations of claim 13. Bederson ¶¶279-283.

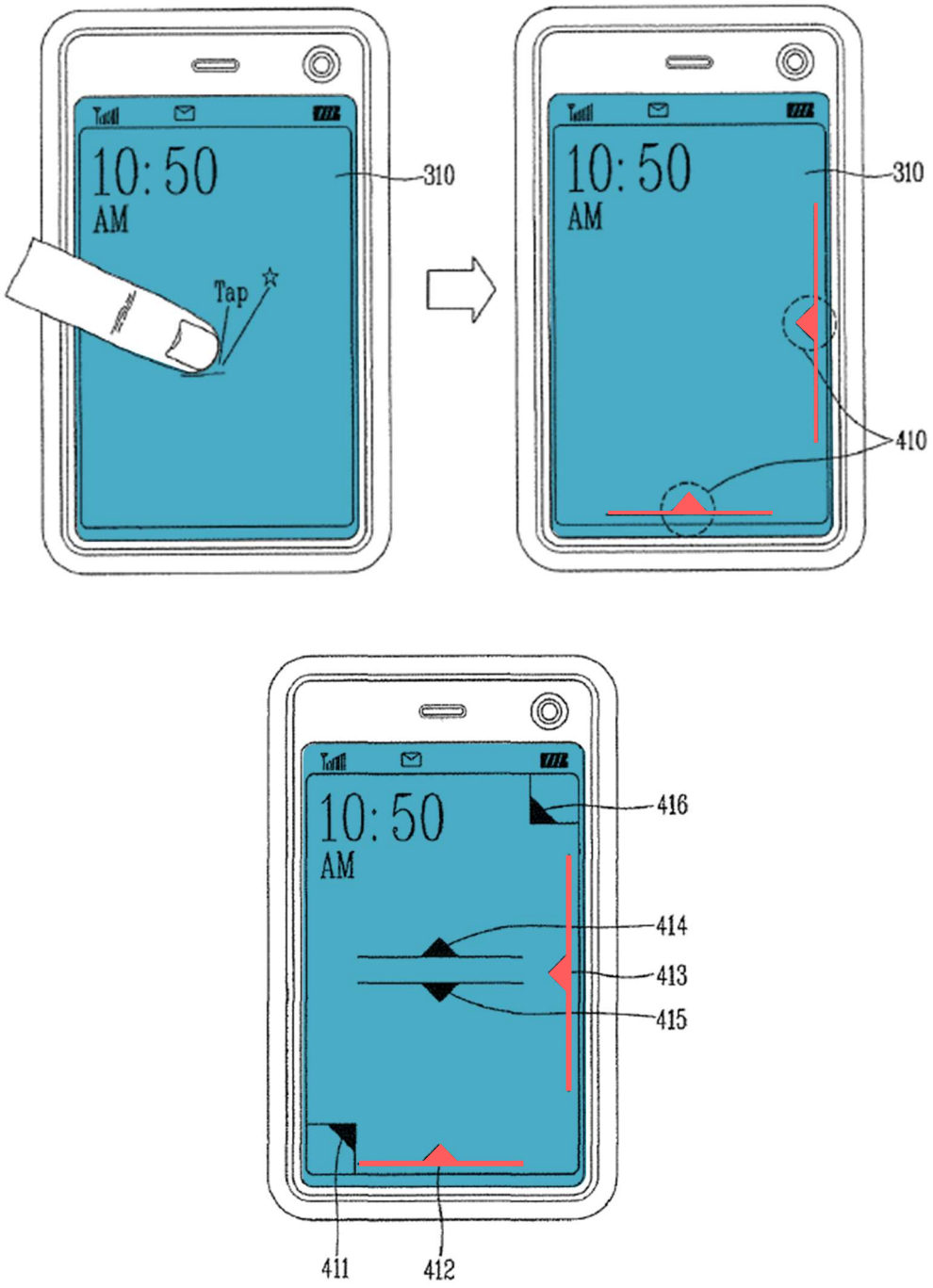
For example, as explained in claims 1 and 7-8, *Jeong* discloses that the portion of the menu screen image shown as a result of the dragging action tracks with the user's touch during the gliding gesture and, "[i]f [the] tag dragging is stopped before the entire menu screen image 320 is exposed, or when the touch to the tag being dragged is released, the menu screen *maintains a currently exposed state as it is*." *Jeong*, [0059] (emphasis added). Bederson ¶280. In each of these examples, a POSITA would have recognized that the menu screen image may comprise some, but not all, of the display area, thereby setting the location of the interface as a proportion of the screen dictated by the user's gliding action, as explained in claims 7-8. Bederson ¶¶281-283.

14. Claim 15

Jeong discloses the additional limitations of claim 15. Bederson ¶¶284-285.

Jeong discloses multiple tag windows 330/410 located on multiple screen edges, such as the bottom and side edges in FIGS. 6A-6B. *Jeong*, [0058]. A

POSITA also would have found it obvious to place *Jeong*'s tags on the outermost edge, as discussed for [1b]. Bederson ¶285.



Jeong, FIGS. 6A-6B.

15. Claim 16

The additional limitations of claim 16 are substantively the same as claim 4, which *Jeong* discloses as discussed for claim 4. Bederson ¶286.

16. Claim 17

Jeong discloses the additional limitations of claim 17. Bederson ¶¶287-288.

As explained in claim 7, *Jeong* discloses that, during the dragging (gliding) action, the mobile device dynamically drags and shows the menu interface or a portion of the menu interface on the touch screen. Bederson ¶288.

17. Claim 18

Jeong discloses or renders obvious the additional limitations of claim 18. Bederson ¶¶289-291.

Jeong discloses that "tag 330 may be displayed in a shape (e.g., an arrow) indicating a direction in which the menu screen image 320 is exposed or a direction in which the tag 330 can be dragged." *Jeong*, [0052], FIG. 6A; Bederson ¶290. *Jeong* also discloses that the menu screen area travels up and down or left and right with the user's finger, as explained for claims 7-8 and 13. Bederson ¶290. A POSITA would have recognized that this would have allowed the user's finger to glide anywhere on the screen in the indicated general direction (e.g., left from the tag indicating left) arbitrarily to expose the same menu screen image interface. *Id.*

A POSITA would have recognized that, because *Jeong* describes a pull-out interface, the device would have used the direction coordinate in the direction indicated by the tag (e.g., Y-coordinate for up-down exposure or X-coordinate for left-right exposure), but that the reciprocal coordinate would not be needed, thus allowing the device to either ignore or discard it.[16] Bederson ¶291. Thus, the user's gliding action would be able to proceed in any direction inside the interface from the tag, but the exposed menu screen would show the same interface, as shown, for example, in *Jeong*'s FIGS. 7B and 7C. *Id.*

18. Independent Claim 19

a. [19pre]

[19pre] recites substantively the same limitations as [1pre], which *Jeong* discloses as discussed for [1pre]. Bederson ¶292.

b. [19a]

[19a] recites substantively the same limitations as [1a], which *Jeong* discloses as discussed for [1a]. Bederson ¶293.

[16] Whether *Jeong*'s device also tracks the X-component of the gliding action does not change the result because it does not change that the *user's gliding action* is in any arbitrary direction to pull open *Jeong*'s menu interface. Bederson ¶291 n.28.

c. [19b]

[19b] recites substantively similar limitations to [1b] and claim 3, except that [19b] does not require that the "zone" be a "window," as recited in [1b].[17] Bederson ¶¶294-295.

Jeong discloses or renders obvious [19b] for at least similar reasons discussed for [1b] and claim 3 (in the form of a bar). Bederson ¶295.

d. [19c]

[19c] recites substantively the same limitations as [1c], which *Jeong* discloses as discussed for [1c]. Bederson ¶296.

e. [19d]

Jeong discloses or renders obvious [19d]. Bederson ¶¶297-301.

For example, as explained in [1d], *Jeong* discloses or renders obvious a user's dragging or gliding action provided from tag 330/410 of the touch screen towards the inside of the touch screen at first interacts with the tag zone when the user's finger contacts the touch screen (for example, either starting on the tag zone or, alternatively, gliding from offscreen to onscreen through the tag zone, as explained in [1d]). Bederson ¶298.

[17] The "functions independently" limitation of [1b] is discussed below in [19d].

As explained for claim 18, *Jeong* discloses or renders obvious that the user's gliding action to display the menu screen image is towards any arbitrary direction inside the touch screen. Bederson ¶299.

As explained in [1d], *Jeong*'s processor executes the function related to the tag 330/410 of displaying the menu screen image in response to the user's gliding action. Bederson ¶300.

As explained in [1b] and [1d], *Jeong*'s tag 330/410 is displayed (present) on an edge of the screen regardless of the interface of an application displayed in the background area of the touch screen. Bederson ¶301.

f. [19e]

[19e] recites substantively the same limitations as [1e], except that it recites a "zone" instead of a "window," as explained in [19b]. *Jeong* discloses [19e] as discussed for [1e] and [19b]. Bederson ¶302.

19. Claims 21-31

The additional limitations of claims 21-31 are substantively the same as the claims shown in the table below. *Jeong* discloses or renders obvious the additional limitations in claims 21-31 for the reasons discussed for those claims (second column). Bederson ¶¶303-313.

Claim	Substantively same as
21	13
22	15
23, 27	5
24, 28	6, 9, 12
25, 29	7, 10
26, 30	8, 11
31	17

20. Claim 32

As explained for claim 18 and [19d], *Jeong* discloses or renders obvious the additional limitations of claim 32. Bederson ¶¶314-315.

Jeong also explains that "[a] tag 330 related to a menu display may be displayed to allow the user to touch the tag 330 to drag it in a certain direction to expose the other remaining menu items that are usually hidden." *Jeong*, [0050]; Bederson ¶315. *Jeong* does not disclose or require touching any particular part of the tag, but rather explains that the entire "tag may be [a] graphical user interface (GUI) object associated with a functional interface which allows a user to expose or hide from view other GUI objects on the mobile terminal 100's display." *Jeong*, [0050]. *Jeong* further explains that the user "drag[s] *a tag*," which a POSITA would have also recognized describes the user being able to interact with and drag

any portion of the tag when performing the gliding action to expose the menu screen image. *Jeong*, [0051], FIGS. 7B-7C (emphasis added); Bederson ¶315.

21. Claims 33-36

The additional limitations of claims 33-36 are substantively the same as the claims shown in the table below. *Jeong* discloses or renders obvious the additional limitations in claims 33-36 as discussed for those claims (second column). Bederson ¶¶316-319.

Claim	Substantively same as
33	[1d]
34	7, 10, 25, 29
35	8, 11, 26, 30
36	4, 16

E. Ground 5: Claims 1-13, 15-18, and 33 Are Rendered Obvious by *Jeong* and *Wilairat*

If Keyless argues or the Board finds that *Jeong* does not disclose or render obvious the gliding action being provided from outside of the touch screen towards the inside of the touch screen ([1d], claim 33), *Wilairat* renders these limitations obvious. Bederson ¶¶320-331.

Wilairat discloses that "a touch pull-in gesture" is detected when a user "initiate[s] a touch input with a finger just off an edge of the touch-screen and then

motion[s] a pull-in gesture across the touch-screen," as explained for Ground 2. *Wilairat*, [0009], [0012], [0015], Fig. 1; Bederson ¶321.

A POSITA would have found it obvious to incorporate *Wilairat*'s pull-in gesture to detect an offscreen-to-onscreen gliding action to activate *Jeong*'s tags 330/410 to cause the menu to be pulled out for similar reasons to combining with *Tseng*, as discussed above in Ground 2. Bederson ¶322. For example, a POSITA would have been motivated to incorporate *Wilairat*'s pull-in gesture determination into *Jeong*'s system to activate *Jeong*'s pull-open menus from the edge of the displays with tags 330/410, which would have allowed the tags to be thinner and/or positioned at the outermost edge of the touch screen. Bederson ¶¶323-327. A POSITA also would have reasonably expected to succeed in implementing *Wilairat*'s pull-in gesture determination to determine that a user's gliding action (e.g., "dragging") began offscreen and moved towards the inside of the screen in *Jeong*'s system because it represented nothing more than combining known prior art elements according to known methods and techniques to yield predictable results. Bederson ¶¶328-331.

VIII. DISCRETIONARY DENIAL IS NOT WARRANTED

A. Denial of Institution Is Not Warranted Under *Fintiv*

Consistent with *Sotera Wireless, Inc.*, Petitioners hereby stipulate "that, if the PTAB institutes inter partes review, Petitioner[s] 'will not pursue in [*Keyless*

Licensing LLC v. Samsung Electronics America, Inc., et al., Case No. 2:24-cv-00464-JRG (E.D. Tex.)] the specific grounds [asserted in IPR2025-00526], or … any other ground … that was raised or could have been reasonably raised in an IPR (i.e., any ground that could be raised under §§ 102 or 103 on the basis of prior art patent or printed publications).'" *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 13-14 (PTAB Dec. 1, 2020) (precedential as to § II.A).

The Director's Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation ("Interim Procedure"[18]) directs that "the PTAB will not discretionarily deny institution of an IPR or PGR in view of parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition." Interim Procedure, 3, 7-8. Petitioners have so stipulated.

Denial of institution is not warranted under *Fintiv*.

[18] Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

B. Denial of Institution Is Not Warranted Under § 325(d)

None of *Tseng*, *Jeong*, *Wilairat*, or *Hisatomi* was before the Examiner during prosecution. Thus, the same or substantially the same prior art or arguments have not been previously presented to the Patent Office and denial of institution is not warranted under § 325(d).

IX. MANDATORY NOTICES

A. Real Parties-in-Interest

The real parties-in-interest are Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc.

B. Related Matters

Keyless Licensing LLC asserted the ’602 patent in the following litigation: *Keyless Licensing LLC v. Samsung Electronics America, Inc., et al.*, Case No. 2:24-cv-00464-JRG (E.D. Tex.).

The ’602 patent is a national stage entry of PCT application PCT/IL2010/001075, which claims priority to U.S. Provisional Application No. 61/294,382 and Israeli Application Nos. 209484, 209416, 209305, 209218, 208790, 208740, 208140, 207665, 207545, 207114, 206257, 205329, 205052, 203922, 203560, 203090, and 202852. U.S. Patent Application No. 15/016,304 claims priority to the ’602 patent and is pending.

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Please address all correspondence to counsel at the addresses above. Petitioners consent to electronic service by email at the above email addresses.

X. GROUNDS FOR STANDING

Petitioners certify that the '602 patent is available for IPR and that Petitioners are not barred or estopped from requesting IPR challenging the patent claims on the grounds identified herein.

XI. CONCLUSION

For the reasons set forth above, Petitioners request institution of *inter partes* review and cancellation of each challenged claim. The Office may charge any required fees to Deposit Account No. 06-0916.

Dated: February 14, 2025

By: /Joshua L. Goldberg/
Joshua L. Goldberg
Lead Counsel
Reg. No. 59,369

CERTIFICATION OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24, Petitioners certify that the word count of Petitioners' Petition for *Inter Partes* Review (exclusive of any table of contents, table of authorities, mandatory notices under § 42.8, certificates of service and word count, and list of exhibits or claim listing) as measured by Microsoft Word is 13,762.

Dated: February 14, 2025

By: /Joshua L. Goldberg/
Joshua L. Goldberg
Lead Counsel
Reg. No. 59,369

CLAIMS APPENDIX

1. **[1pre]** A system for capturing an event provided from an edge of a touch screen comprising:

[1a] a device having a touch screen;

[1b] at least one window located in the touch screen on an edge of the touch screen, wherein said at least one window functions independently of an interface of an application in use on the touch screen; and

[1c] a processor;

[1d] wherein a gliding action provided from outside of the touch screen towards inside of the touch screen, said gliding action at first interacting with said at least one window on the touch screen, is processed by said processor to cause an action assigned to said window, and

[1e] wherein said at least one window is located on the touch screen before said gliding action begins.

2. The system of claim 1, wherein the system relates said gliding action to a function which is not related to a mouse function.

3. The system of claim 1, wherein said at least one window comprises at least one bar located on said edge of the screen.

4. The system of claim 3, wherein said at least one bar extends along a substantial portion of an edge of the touch screen.

5. The system of claim 3, wherein said bar is in a form of a line.

6. The system of claim 5, wherein said action is displaying an interface on the screen.

7. The system of claim 5, wherein said action is displaying a portion of an interface on the screen.

8. The system of claim 7, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action.

9. The system of claim 3, wherein said action is displaying an interface on the screen.

10. The system of claim 3, wherein said action is displaying a portion of an interface on the screen.

11. The system of claim 10, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action.

12. The system of claim 1, wherein upon detecting said gliding action, the system displays an interface on said touch screen.

13. The system of claim 12, wherein upon detecting said gliding action, the system relates said gliding action to setting the location of said interface on said touch screen.

15. The system of claim 1, wherein said at least one window comprises more than one window located on one or more edges of the touch screen.

16. The system of claim 15, wherein said at least one window extends along a substantial portion of an edge of the touch screen.

17. The system of claim 1, wherein during providing said gliding action, the system dynamically drags and shows an interface or a portion of an interface on the touch screen.

18. The system of claim 1, wherein the processor relates a gliding action provided towards any arbitrary direction inside the screen to presenting a same interface.

19.[19] **[19pre]** A system for capturing an event provided from an edge of a touch screen comprising:

[19a] a device having a touch screen;

[19b] a zone in form of a bar located in the touch screen on an edge of the touch screen; and

[19c] a processor;

[19d] wherein a gliding action provided from said zone of the touch screen towards any arbitrary direction inside the touch screen at first interacts with said zone, and wherein the processor executes a function related to said

[19] Claim 19 as corrected in the Certificate of Correction issued February 16, 2021.

zone, and wherein said zone is present on said edge regardless of the interface of an application on said touch screen, and

[19e] wherein said zone is located on the touch screen before said gliding action begins.

21. The system of claim 19, wherein upon detecting said gliding action, the system relates said gliding action to setting the location of an interface on the touch screen.

22. The system of claim 19, wherein said bar comprises more than one bar located on one or more edges of the touch screen.

23. The system of claim 19, wherein said zone is in a form of a visible or invisible line.

24. The system of claim 23, wherein said function is displaying an interface on the screen.

25. The system of claim 23, wherein said function is displaying a portion of an interface on the screen.

26. The system of claim 23, wherein said function is displaying a portion of an interface on the screen, and wherein a length of said portion of the interface is substantially equal to a length of the gliding action.

27. The system of claim 19, wherein said bar is visible or invisible.

28. The system of claim 27, wherein said function is displaying an interface on the screen.

29. The system of claim 27, wherein said function is displaying a portion of an interface on the screen.

30. The system of claim 29, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action.

31. The system of claim 19, wherein during providing said gliding action, the system dynamically drags and shows an interface or a portion of an interface on the touch screen.

32. The system of claim 19, wherein said function is displaying a same interface for any said gliding action, said gliding action interacting with any portion of said zone.

33. The system of claim 32, wherein said gliding action is provided from outside the touchscreen towards inside the touch screen, wherein said gliding action at first interacts with said zone on said touch screen.

34. The system of claim 19, wherein said function is displaying a portion of an interface on the screen.

35. The system of claim 34, wherein during said gliding action, a length of the portion of the interface being displayed is substantially equal to a length of the gliding action.

36. The system of claim 19, wherein said zone extends along a substantial portion of said edge.

CERTIFICATE OF SERVICE

The undersigned certifies that, in accordance with 37 C.F.R. § 42.6(e) and 37 C.F.R. § 42.105(a), the **Petition for *Inter Partes* Review, the associated powers of attorney, and Exhibits 1001-1008, 1010-1016, and 1018-1031** were served via overnight courier on February 14, 2025, on the correspondence address of record below indicated in the Patent Office's Patent Center for U.S. Patent No. 6,304,602:

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Dated: February 14, 2025

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