

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Michael S. Smith
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Title: GESTURE-EQUIPPED TOUCH SCREEN SYSTEM,
METHOD, AND COMPUTER PROGRAM PRODUCT

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**PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT
NO. 10,656,758 PURSUANT TO 35 U.S.C. §§ 311–319, 37 C.F.R. § 42**

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EX1001	U.S. Patent No. 10,656,758
EX1002	U.S. Patent No. 10,656,758 File History
EX1003	Declaration of Dr. Andrew Cockburn
EX1004	U.S. Publication No. 2011/0252372 to Chaudhri (“Chaudhri”)
EX1005	U.S. Publication No. 2004/0051726 to Martyn (“Martyn”)
EX1006	U.S. Publication No. 2011/0248948 to Griffin et al. (“Griffin”)
EX1007	U.S. Publication No. 2011/0167382 to Os (“Os”)
EX1008-EX1019 RESERVED	
EX1020	Newton MessagePad, Models: original (OMP) and 100 (MP100), https://web.archive.org/web/19990202045806/https://msu.edu/~luckie/gallery/mp100.htm (1999)
EX1021	Of mice and menus: designing the user-friendly interface, IEEE Spectrum (1999)
EX1022	Newton 2.0 User Interface Guidelines (1996)
EX1023	U.S. Patent No. 7,479,949
EX1024	U.S. Patent No. 8,954,887
EX1025	U.S. Publication No. 2009/0244023
EX1026	U.S. Patent No. 4,885,565
EX1027	Active Click: Tactile Feedback for Touch Panels (2001)

EX1028	Snap-Crackle-Pop: Tactile Feedback for Mobile Touch Screens (2006)
EX1029	Tactile Feedback for Mobile Interactions (2007)
EX1030	Design and Evaluation of Identifiable Key-Click Signals for Mobile Devices (2011)
EX1031	U.S. Publication No. 2006/0197753
EX1032	Issues and Techniques in Touch-Sensitive Tablet Input (1985)
EX1033	U.S. Patent No. 5,612,719
EX1034	U.S. Publication No. 2008/0036743
EX1035	U.S. Patent No. 8,830,181
EX1036	U.S. Patent No. 9,760,241
EX1037	Android Developers Guide, Creating Menus, https://web.archive.org/web/20110216140646/http://developer.android.com/guide/topics/ui/menus.html (2011)
EX1038	The State of the Art of Mobile Application Usability Evaluation (2012)
EX1039	Usability Heuristics for Touchscreen-based Mobile Devices (2012)
EX1040	RESERVED
EX1041	U.S. Application Serial No. 11/367,749
EX1042	Evolution of Mobile Devices and Operating Systems (2013)
EX1043	RESERVED

EX1044 RESERVED

EX1045 iPhone User Guide: For iPhone OS 3.1 Software (2009)

EX1046 U.S. Publication No. 2012/0319959

EX1047 Newton Apple MessagePad Handbook (1995)

EX1048 U.S. Publication No. 2007/0157089

EX1049 U.S. Patent No. 7,490,295

EX1050-EX1096 RESERVED

EX1097 United States District Courts — National Judicial Caseload
Profile (Dec. 31, 2023) | United States Courts (uscourts.gov),
[https://www.uscourts.gov/sites/default/files/fcms_na_distprofile
1231.2023_0.pdf](https://www.uscourts.gov/sites/default/files/fcms_na_distprofile1231.2023_0.pdf) (last visited June 25, 2024)

EX1098 Memorandum, Interim Procedure for Discretionary Denials in
AIA Post-Grant Proceedings with Parallel District Court
Litigation (USPTO June 21, 2022) (“Guidance”)

EX1099 Case Management Order, Smith Interface Technologies, LLC v.
Apple Inc., 3-23-cv-01187, S.D. Cal. (June 20, 2024)

LISTING OF CLAIMS

Claim 1	
[1.pre]	An electronic device, comprising:
[1.a]	a display;
[1.b]	a touch-sensitive surface;
[1.c]	one or more processors;
[1.d]	memory; and
[1.e]	one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:
[1.f]	displaying, on the display, an application launching user interface that includes a plurality of application icons for launching corresponding applications;
[1.g]	while displaying the application launching user interface, detecting a first single-finger touch input that includes detecting the first single-finger touch input at a location on the touch-sensitive surface that corresponds to a first application icon of the plurality of application icons, wherein the first application icon is for launching a first application that is associated with one or more corresponding action options; and

[1.h]	in response to detecting the first single-finger touch input, determining a response to the first single-finger touch input based on evaluating the first single-finger touch input against at least one of a plurality of criteria, including evaluating a duration of the first single-finger touch input against at least one of: one or more application-launch criteria, one or more action-option-display criteria, or one or more operation criteria, and further including evaluating a movement of the first single-finger touch input against one or more movement criteria, for:
[1.i]	in accordance with a determination that the first single-finger touch input meets the one or more application-launch criteria that is met when the duration of the first single-finger touch input is evaluated to be less than a first time threshold, launching the first application,
[1.j]	in accordance with a determination that the first single-finger touch input meets the one or more action-option-display criteria that is met when the duration of the first single-finger touch input is evaluated to be greater than the first time threshold, displaying one or more action option objects associated with the first application without launching the first application,
[1.k]	in accordance with a determination that the first single-finger touch input meets the one or more operation criteria that is met when the duration of the first single-finger touch input is evaluated to be greater than a second time threshold that is greater than the first time threshold, performing an operation in connection with the first application icon, and
[1.l]	in accordance with a determination that the first single-finger touch input meets the one or more movement criteria, moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.

Claim 9

[9]	The electronic device of claim 1, wherein the one or more programs include instructions for, in response to determining that the one or more action-option-display criteria has been met, generating a first tactile output that is indicative of a satisfaction of the one or more action-option-display criteria.
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Claim 12

[12]	The electronic device of claim 1, wherein displaying the one or more action option objects includes displaying the one or more action option objects in a menu that includes a plurality of action option objects.
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Claim 19

[19]	The electronic device of claim 1, wherein: the first application is a content creation application; the one or more action option objects include a respective action option object that is associated with creating a new object; and wherein the one or more programs include instructions for: detecting selection of the respective action option object, and, in response to detecting selection of the respective action option object, creating the new object.
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Claim 20

[20]	The electronic device of claim 19, wherein the content creation application includes an email application, and the new object includes a new email message.
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Claim 21	
[21]	The electronic device of claim 1, wherein: the first application is a content creation application; the one or more action option objects include a respective action option object that is associated with displaying at least a portion of previously created content; and wherein the one or more programs include instructions for: detecting selection of the respective action option object, and, in response to detecting selection of the respective action option object, displaying the at least portion of previously created content.

Claim 22	
[22]	The electronic device of claim 21, wherein the content creation application includes an email application, and the displayed at least portion of previously created content includes a previous email message, for generating a reply thereto.

Claim 24	
[24]	The electronic device of claim 1, wherein the electronic device is configured such that the operation is related to a delete operation.

Claim 25	
[25]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes displaying a graphical user interface element for, in response to detecting a selection thereof, deleting the first application icon.

Claim 26

[26]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes entering an icon reconfiguration mode in which one or more of the plurality of application icons is capable of being reorganized on the application launching user interface.
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Claim 27

[27]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes changing a mode of operation.
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Claim 28

[28]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes adding a graphical user interface element to the first application icon.
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Claim 29

[29]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes moving the first application icon.
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Claim 30

[30]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes at least partially rotating the first application icon.
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Claim 31

[31]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes animating the first application icon.
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Claim 32

[32]	The electronic device of claim 1, wherein the electronic device is configured such that the operation includes cyclically animating the first application icon.
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Claim 35

[35]	The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, multiple of the plurality of application icons is moved in the foreground virtual display layer so that the multiple of the plurality of application icons appear to float above the background virtual display layer.
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Claim 36	
[36]	The electronic device of claim 1, wherein the electronic device is configured such that the one or more action option objects associated with the first application is displayed along with the first application icon.

Claim 37	
[37]	The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface.

Claim 38	
[38]	The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface immediately prior to detecting the first single-finger touch input.

Claim 39

[39]	The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of the application launching user interface is changed to display at least a portion of a different user interface on a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface immediately prior to detecting the first single-finger touch input.
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Claim 40

[40]	The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of the application launching user interface is ceased to be displayed.
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Claim 41

[41]	The electronic device of claim 1, wherein the electronic device is configured such that the floating is a function of the movement of the first application icon.
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Claim 42

[42]	The electronic device of claim 1, wherein the electronic device is configured such that an action is performed utilizing the first application in response to detection of a selection of at least one of the one or more action option objects.
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Claim 43

[43]	The electronic device of claim 1, wherein the electronic device is configured such that an action is performed utilizing another application other than the first application in response to detection of a selection of at least one of the one or more action option objects.
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Claim 47

[47]	The electronic device of claim 1, wherein the electronic device is configured such that, during detection of the first single-finger touch input and prior to displaying the one or more action option objects, a user interface element is displayed to appear at least partially behind the first application icon.
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Claim 57

[57]	The electronic device of claim 1, wherein the electronic device is configured such that at least one of the one or more action option objects includes content that is dynamically generated.
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Claim 58	
[58]	The electronic device of claim 1, wherein the electronic device is configured such that at least one of the one or more action option objects includes content that is dynamically generated based on historical usage.

Claim 59	
[59]	The electronic device of claim 1, wherein the electronic device is configured such that at least one of the one or more action option objects includes content that is dynamically generated based on historical usage of the first application.

Claim 63	
[63.pre]	A method, comprising:
[63.a]	at an electronic device including a display and a touch-sensitive surface:
[63.b]	displaying, on the display, an application launching user interface that includes a plurality of application icons for launching corresponding applications;
[63.c]	with the application launching user interface displayed, detecting a first single-finger touch input that includes detecting the first single-finger touch input at a location on the touch-sensitive surface that corresponds to a first application icon of the plurality of application icons, wherein the first application icon is for launching a first application that is associated with one or more corresponding action options; and

[63.d]	in response to detecting the first single-finger touch input, determining a response to the first single-finger touch input based on evaluating the first single-finger touch input against at least one of a plurality of criteria, including evaluating a duration of the first single-finger touch input against at least one of: one or more application-launch criteria, one or more action-option-display criteria, or one or more operation criteria, and further including evaluating a movement of the first single-finger touch input against one or more movement criteria, for:
[63.e]	based on a determination that the first single-finger touch input meets the one or more application-launch criteria that is met based on the duration of the first single-finger touch input being evaluated to be less than a first time threshold, launching the first application,
[63.f]	based on a determination that the first single-finger touch input meets the one or more action-option-display criteria that is met based on the duration of the first single-finger touch input being evaluated to be greater than the first time threshold, displaying one or more action option objects associated with the first application without launching the first application,
[63.g]	based on a determination that the first single-finger touch input meets the one or more operation criteria that is met based on the duration of the first single-finger touch input being evaluated to be greater than a second time threshold that is greater than the first time threshold, performing an operation on the first application icon, and
[63.h]	based on a determination that the first single-finger touch input meets the one or more movement criteria, moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.

Claim 71	
[71]	The method of claim 63, and further comprising: in response to determining that the one or more action-option-display criteria has been met, generating a first tactile output that is indicative of a satisfaction of the one or more action-option-display criteria.

Claim 74	
[74]	The method of claim 63, wherein displaying the one or more action option objects includes displaying the one or more action option objects in a menu that includes a plurality of action option objects.

Claim 81	
[81]	The method of claim 63, wherein: the first application is a content creation application; the one or more action option objects include a respective action option object that is associated with creating a new object; and and further comprising: detecting selection of the respective action option object, and, in response to detecting selection of the respective action option object, creating the new object.

Claim 82	
[82]	The method of claim 81, wherein the content creation application includes an email application, and the new object includes a new email message.

Claim 83

[83]	The method of claim 63, wherein: the first application is a content creation application; the one or more action option objects include a respective action option object that is associated with displaying at least a portion of previously created content; and and further comprising: detecting selection of the respective action option object, and, in response to detecting selection of the respective action option object, displaying the at least portion of previously created content.
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Claim 84

[84]	The method of claim 83, wherein the content creation application includes an email application, and the displayed at least portion of previously created content includes a previous email message, for generating a reply thereto.
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Claim 86

[86]	The method of claim 63, wherein the operation is related to a delete operation.
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Claim 87

[87]	The method of claim 63, wherein the operation includes displaying a graphical user interface element for, in response to detecting a selection thereof, deleting the first application icon.
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Claim 88	
[88]	The method of claim 63, wherein the operation includes entering an icon reconfiguration mode in which one or more of the plurality of application icons is capable of being reorganized on the application launching user interface.

Claim 89	
[89]	The method of claim 63, wherein the operation includes changing a mode of operation.

Claim 90	
[90]	The method of claim 63, wherein the operation includes adding a graphical user interface element to the first application icon.

Claim 91	
[91]	The method of claim 63, wherein the operation includes moving the first application icon.

Claim 92	
[92]	The method of claim 63, wherein the operation includes at least partially rotating the first application icon.

Claim 93

[93]	The method of claim 63, wherein the operation includes animating the first application icon.
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Claim 94

[94]	The method of claim 63, wherein the operation includes cyclically animating the first application icon.
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Claim 97

[97]	The method of claim 63, wherein, based on the determination that the first single-finger touch input meets the one or more movement criteria, multiple of the plurality of application icons is moved in the foreground virtual display layer so that the multiple of the plurality of application icons appear to float above the background virtual display layer.
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Claim 98

[98]	The method of claim 63, wherein the one or more action option objects associated with the first application is displayed along with the first application icon.
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Claim 99

[99]	The method of claim 63, wherein, based on the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface.
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Claim 100

[100]	The method of claim 63, wherein, based on the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface immediately prior to detecting the first single-finger touch input.
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Claim 101

[101]	The method of claim 63, wherein, based on the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of the application launching user interface is changed to display at least a portion of a different user interface on a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface immediately prior to detecting the first single-finger touch input.
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Claim 102

[102]	The method of claim 63, wherein, based on the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of the application launching user interface is ceased to be displayed.
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Claim 103

[103]	The method of claim 63, wherein the floating is a function of the movement of the first application icon.
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Claim 104

[104]	The method of claim 63, wherein an action is performed utilizing the first application in response to detection of a selection of at least one of the one or more action option objects.
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Claim 105

[105]	The method of claim 63, wherein an action is performed utilizing another application other than the first application in response to detection of a selection of at least one of the one or more action option objects.
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Claim 109

[109]	The method of claim 63, wherein, with the first single-finger touch input detected and prior to displaying the one or more action option objects, a user interface element is displayed to appear at least partially behind the first application icon.
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Claim 119

[119]	The method of claim 63, wherein at least one of the one or more action option objects includes content that is dynamically generated.
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Claim 120

[120]	The method of claim 63, wherein at least one of the one or more action option objects includes content that is dynamically generated based on historical usage.
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Claim 121

[121]	The method of claim 63, wherein at least one of the one or more action option objects includes content that is dynamically generated based on historical usage of the first application.
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Claim 124

[124.pre]	A non-transitory computer readable storage medium storing one or more programs, the one or more programs comprising instructions which, when executed by an electronic device with a display and a touch-sensitive surface, cause the electronic device to:
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[124.a]	display, on the display, an application launching user interface that includes a plurality of application icons for launching corresponding applications;
[124.b]	with the application launching user interface displayed, detect a first single-finger touch input that includes detecting the first single-finger touch input at a location on the touch-sensitive surface that corresponds to a first application icon of the plurality of application icons, wherein the first application icon is for launching a first application that is associated with one or more corresponding action options; and
[124.c]	in response to detecting the first single-finger touch input, determine a response to the first single-finger touch input based on evaluating the first single-finger touch input against at least one of a plurality of criteria, including evaluating a duration of the first single-finger touch input against at least one of: one or more application-launch criteria, one or more action-option-display criteria, or one or more operation criteria, and further including evaluating a movement of the first single-finger touch input against one or more movement criteria, for:
[124.d]	based on a determination that the first single-finger touch input meets the one or more application-launch criteria that is met based on the duration of the first single-finger touch input being evaluated to be less than a first time threshold, launching the first application,
[124.e]	based on a determination that the first single-finger touch input meets the one or more action-option-display criteria that is met based on the duration of the first single-finger touch input being evaluated to be greater than the first time threshold, displaying one or more action option objects associated with the first application without launching the first application,

[124.f]	based on a determination that the first single-finger touch input meets the one or more operation criteria that is met based on the duration of the first single-finger touch input being evaluated to be greater than a second time threshold that is greater than the first time threshold, performing an operation on the first application icon, and
[124.g]	based on a determination that the first single-finger touch input meets the one or more movement criteria, moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.

Apple Inc. (“Apple” or “Petitioner”) petitions for IPR of claims 1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59, 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121, and 124 (“Challenged Claims”) of U.S. Patent No. 10,656,758 (“the ’758 patent”) based on the compelling evidence of obviousness presented throughout this Petition.

The ’758 patent “generally relate[s] to touch screens” and describes embodiments where “a user experience [with a touch screen device] may be altered” based on a “touch signal.” EX1001, 1:38-39, 14:26-15:64. Amidst a longstanding and extensive field of prior art, the ’758 patent’s Challenged Claims embrace rudimentary scenarios where common touch gestures are paired with known functions, such as the following:

- When the contact is a **tap** on an application icon, launch the corresponding application;
- When the contact is a **hold** on the application icon, display a menu of action options;
- When the contact is a **longer hold** on the application icon, perform an operation associated with the icon; and
- When the contact on the application icon **moves**, move the icon.

None of these scenarios were new at the time of the ’758 patent. As explained below in Section VI, it was known in the art to launch an application based on a tap gesture; to display a menu of options based on a touch-and-hold gesture; to perform

an operation, such as entering an icon reconfiguration mode, based on a longer touch-and-hold gesture; and to move an icon with a drag gesture. These features were not just known in isolation, they were also known to be compatible and a skilled artisan would have been motivated to combine them, reasonably expecting success. This is a quintessential case of obviousness—combining known elements using known techniques to achieve predictable and advantageous results.

I. CONVENTIONS OF THE PETITION

- All emphasis is added unless noted otherwise;
- Bold-italic emphasis correlates to claim language;
- Quotations are generally from exhibits, not claim language; and
- The phrase “as discussed” and equivalent phrases incorporate fully the analysis of the cross-cited portion of the Petition.

II. REQUIREMENTS FOR IPR—37 C.F.R. §42.104

A. Grounds for Standing—37 C.F.R. §42.104(a)

Petitioner Apple Inc. certifies that the ’758 patent is available for IPR, and Petitioner is not barred or estopped from requesting IPR.

B. Challenge and Relief Requested—37 C.F.R. §42.104(b)

Petitioner requests IPR on Grounds 1-2 listed below. A detailed declaration replete with corroborating evidence from Dr. Cockburn supports Grounds 1-2. *See* EX1003, ¶¶27 (materials considered), 54 (conclusions formed).

Ground	Challenged Claims	Basis for Rejection
1	1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59, 63 , 71, 74, 81-84, 86-94, 97-105, 109, 119-121, 124	§103–Chaudhri (US 2011/0252372), Martyn (US 2004/0051726), and Griffin (US 2011/0248948)
2	1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59 63 , 71, 74, 81-84, 86-94, 97-105, 109, 119-121, 124	§103–Chaudhri, Martyn, Griffin, and Os (US 2011/0167382)

The '758 patent is not entitled to its earliest claimed priority date of August 5, 2011. Still, every art reference advanced in Grounds 1 and 2 precedes that date.

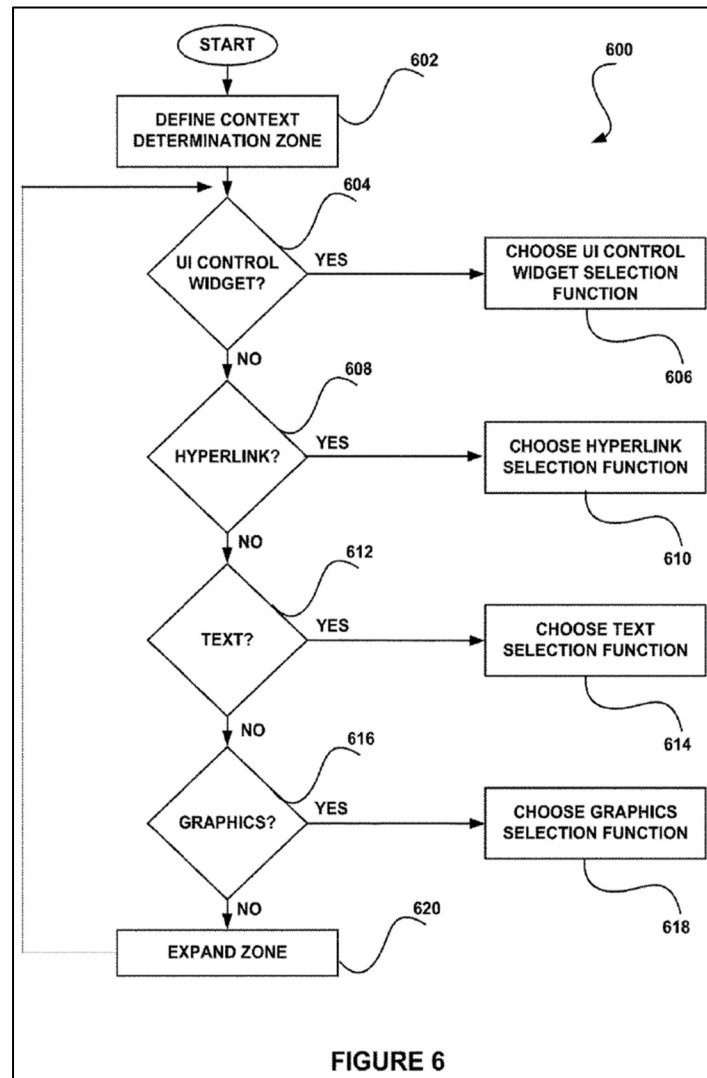
Reference	Prior Art Date	Status
Chaudhri (EX1004)	Filed September 22, 2010	§102(e)
Martyn (EX1005)	Published April 30, 2004	§102(b)
Griffin (EX1006)	Filed April 8, 2010	§102(e)
Os (EX1007)	Published July 7, 2011	§102(a)

III. THE '758 PATENT

A. Pertinent Disclosure

The '758 patent “generally relate[s] to touch screens” and describes embodiments where “a user experience [with a touch screen device] may be altered” based on a “touch signal.” EX1001, 1:38-39, 14:26-15:64, Figure 3; *see also* EX1003, ¶¶30-33. In one such embodiment, a method involves defining a “context determination zone” associated with the point or area of the user’s touch contact and choosing an appropriate “selection function” based on the user interface elements within that zone. *See generally*, EX1001, 26:41-35:53, Figure 6 (right). For

example, as shown in Figure 6 (below), the zone may include a “UI control widget,” a “hyperlink,” a block of “text,” or one or more “graphics.” EX1001, 26:41-35:53.



EX1001, Figure 6. The invoked “selection function” may trigger the display of a “menu” of context-specific selectable “items.” EX1001, 30:49-58, 32:17-30, 34:5-19, 35:47-36:4, 84:37-55. “Once the desired menu item is highlighted, the user may execute a rapid increase in pressure to finalize the selection of that menu item.” EX1001, 30:56-58.

As part of an “alternative method,” the ’758 patent describes a sequence where the “attributes” of a “touch event” are used to detect a “gesture,” which can be “mapped to any command or operation of the device.” EX1001, 53:61-56:20, Figure 16. A given “gesture may be associated with a variety of different actions,” such as “scrolling a display or user interface element, zooming in or out, modifying the display brightness, and/or any other action.” EX1001, 56:13-17. In a particular example, the ’758 patent explains that “a user may perform relocation operations on a selected object...by making contact with the object on an interaction surface...and dragging the contact point to relocate the object.” EX1001, 56:62-57:8.

B. Claimed Subject Matter

The ’758 patent’s independent claims 1, 63, and 124 outline four scenarios regarding a user’s touch contact with an area of a mobile device touch screen that corresponds to “a first application icon.” *See* EX1003, ¶¶34-38. In the first scenario, where the user’s touch is applied for a duration less than a first time threshold, the device “launch[es] the first application.” *See* Element [1.i]. In the second scenario, where the user’s touch is applied for a duration greater than the first time threshold, the device displays “one or more action option objects associated with the first application.” *See* Element [1.j]. In the third scenario, where the user’s touch is applied for a duration greater than a second time threshold—which is greater than the first time threshold—the device “perform[s] an operation in connection with the

first application icon.” *See* Element [1.k]. In the fourth scenario, where the user’s touch meets a movement criteria, the device “mov[es] the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.” *See* Element [1.l].

To be clear, this feature combination of independent claims 1, 63, and 124 is not described in the ’758 patent’s specification. The specification offers nothing to substantiate a contention that the inventors possessed the purported invention of the Challenged Claims when the ’758 patent was filed in 2019, much less as of the claimed priority date of August 5, 2011. Nevertheless, each and every one of the recited claim elements were known in the prior art before August of 2011, and a POSITA would have been motivated to combine these known elements as arranged in the Challenged Claims.

C. Prosecution History

On October 25, 2019, the Applicant (P4TENTS1, LLC) filed the ’758 patent as U.S. Appl. No. 16/687,649 accompanied by a Request for Prioritized Examination under 37 C.F.R. §1.102(e). EX1002, 603, 607. On March 4, 2020, the Examiner issued a first-action Notice of Allowance canceling the previously submitted claims and entering new claims 31-161 five days after receiving them from the Applicant via email. EX1002, 103-164. According to the Examiner, the prior art “teaches

different functions based on different input durations” but lacks the specific interface functionality recited in the Challenged Claims. EX1002, 161-162.

The Examiner was wrong. As demonstrated by this Petition, the Challenged Claims are obvious, and this conclusion would have been apparent had the Examiner more thoroughly searched the prior art and vetted the Challenged Claims.

IV. LEVEL OF ORDINARY SKILL

The range of qualifications for a POSITA would have included a bachelor’s degree in computer science, computer engineering, or a comparable field and at least two years of professional experience working with graphical user interfaces and applications for computers. EX1003, ¶¶39-40. Additional years of experience could substitute for an advanced-level degree (and vice versa). EX1003, ¶¶39-40.

As Petitioner’s Dr. Cockburn explains, the POSITA would have possessed extensive background knowledge and understanding of the pertinent technologies employed by the ’758 patent, including touch screen mobile devices (*see* EX1003, ¶¶41-42), menus in computer graphical user interfaces (*see* EX1003, ¶¶43-48), and duration-based touch gestures (*see* EX1003, ¶¶49-53). These technologies were developed and commercially adopted before 2011. The ’758 patent’s claims would have been exceedingly obvious given the mature state of the art and the advanced abilities of the POSITA.

V. CLAIM CONSTRUCTION—37 C.F.R. §42.104(b)(3)

The prior art mapping analysis below in Section VI proves the Challenged Claims obvious under any interpretation reasonably advanced according to the *Phillips* standard, including if the Board were to apply case law from the Federal Circuit finding conditional claim language non-limiting. Petitioner submits that the Board need not resolve any express constructions. *See Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011). Should any subsequent discussion of claim interpretation arise here or in the parallel district court proceeding, Petitioner reserves the right to address and respond to any construction advanced by Patent Owner, the Board, and/or the District Court.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. GROUND 1—Claims 1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59, 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121, 124 Are Obvious Over Chaudhri, Martyn, and Griffin

1. Chaudhri (EX1004)

Chaudhri describes user interfaces for mobile computing devices with touch-sensitive surfaces, such as touch screen displays. EX1004, [0003-0004], [0007-0008], [0073]; EX1003, ¶¶55-58. As shown below, Figure 4A illustrates a user interface page including a background wallpaper layer providing the backdrop for “a menu of applications,” each represented by a corresponding “application icon.” EX1004, [0180], [0215], [0366], [0368]. When the device detects a touch input

associated with one of the application icons, it determines a responsive action based on certain gesture characteristics of the touch. EX1004, [0102], [0174], [0216-0217], [0276], [0280], [0302], [0310-0311], Figures 4A, 5A-B, 7A-B; EX1003, ¶55.

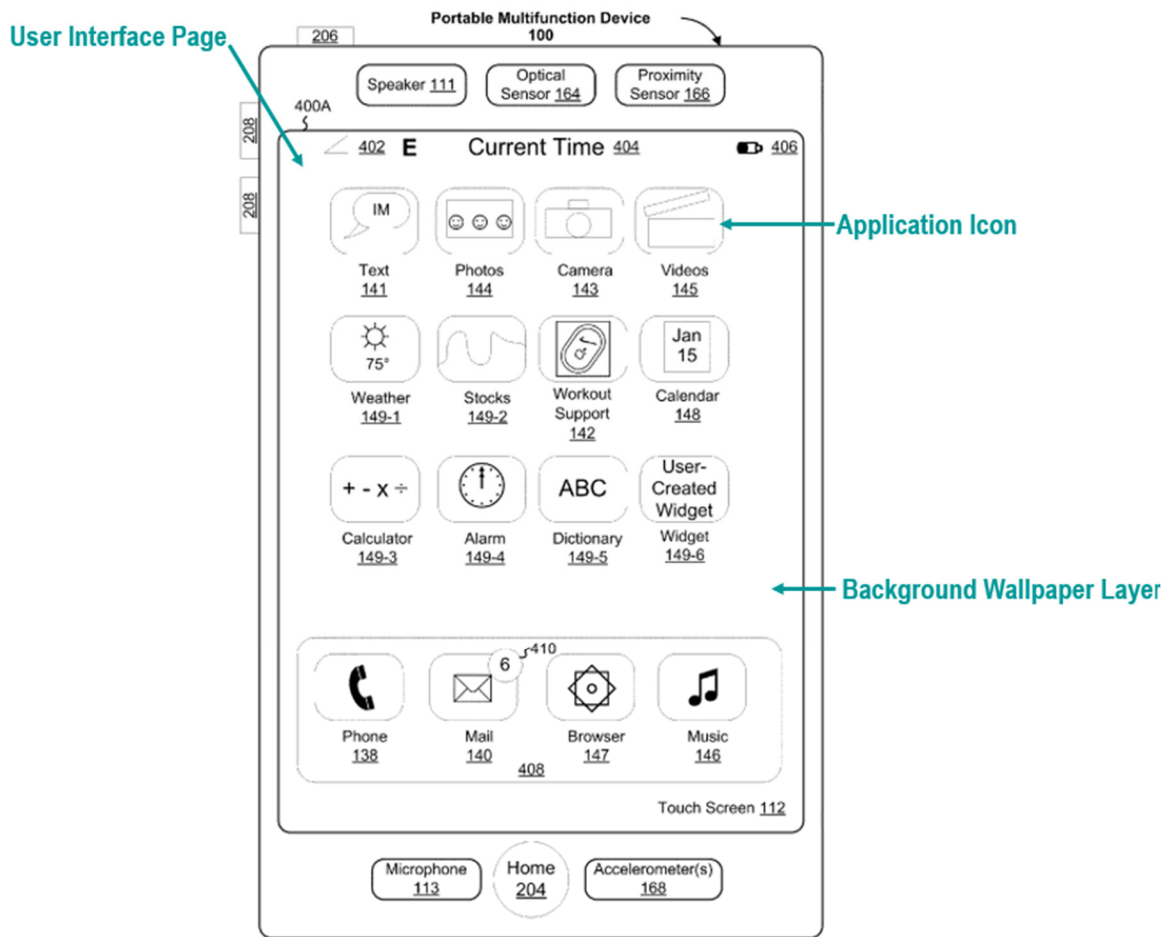


Figure 4A

EX1004, Figure 4A (annotated); EX1003, ¶55.

In the “normal” mode of operation for the application menu interface, Chaudhri’s device launches an application when the matching icon is selected with a “tap” gesture (also colloquially called a “short touch”). EX1004, [0101-0102], [0174], [0217], [0276], [0280], [0289], [0302], Figure 5A. For example, Chaudhri

explains that “detecting a tap gesture [] at a location on the touch-sensitive surface that corresponds to the photos [application] icon...launch[es] the photos application.” EX1004, [0276].

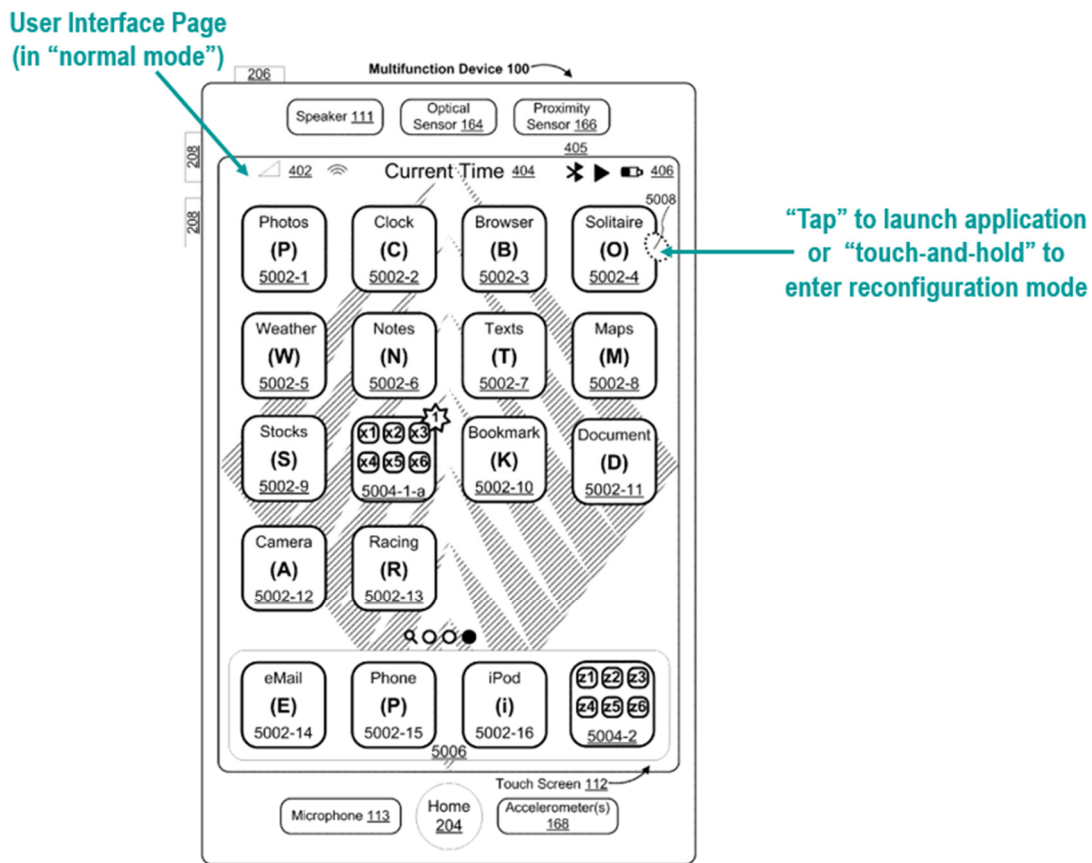
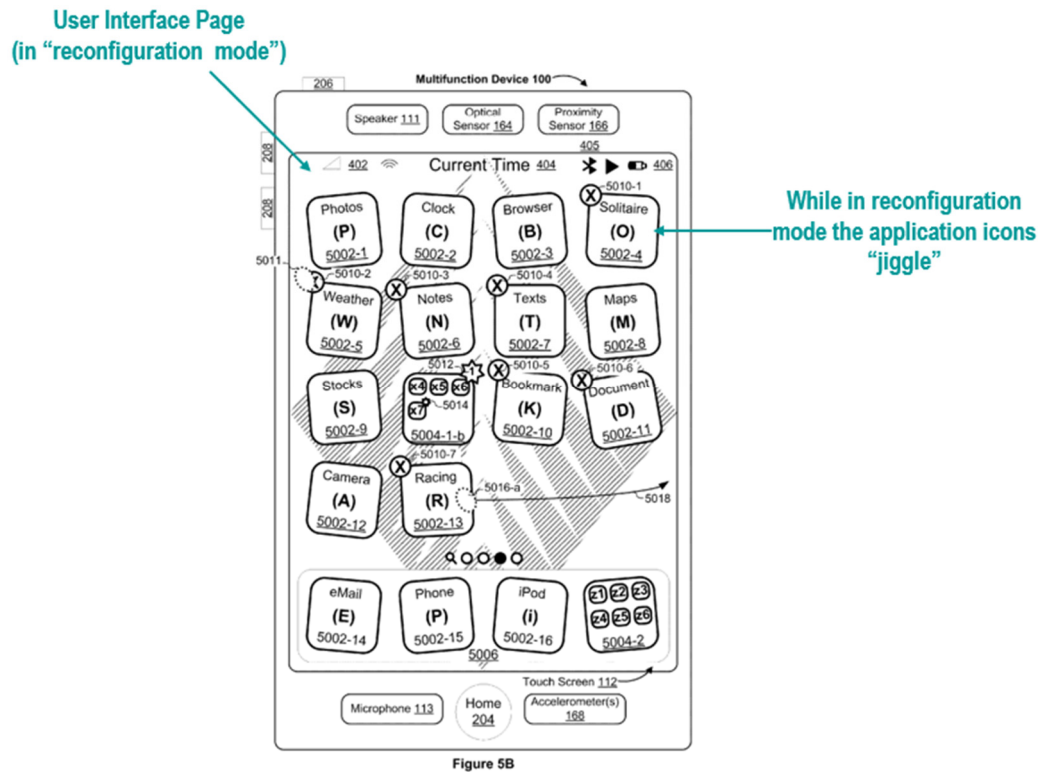


Figure 5A

EX1004, Figure 5A (annotated); EX1003, ¶56.

In addition to the “tap” gesture, Chaudhri’s device also recognizes and responds to a touch-and-hold (also colloquially called a “long touch”) at an application icon. EX1004, [0217-0218], [0313], Figures 5B, 7A, 7B. For example, if the duration of the user’s touch at the photos application icon persists for “more than a predetermined period of time (e.g., 2 seconds)...the device enters a user

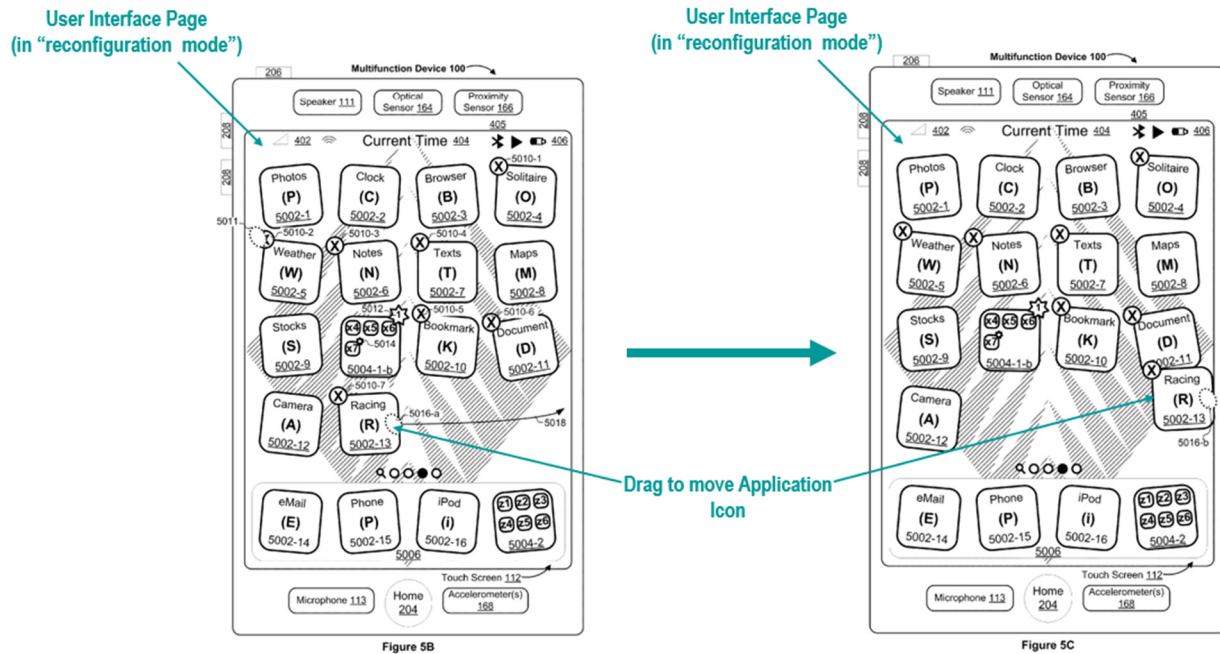
interface reconfiguration mode” for reorganizing the application menu. EX1004, [0217], Figures 5A-B. As a signal to the user that the device is in the “reconfiguration mode,” the application icons on the menu “jiggle as though they are floating on water.” EX1004, [0218].



EX1004, Figure 5B (annotated); EX1003, ¶57.

While the interface for the application menu is in the “reconfiguration mode,” Chaudhri’s device recognizes yet another gesture—a drag—as a command to move an application icon. EX1004, [0087], [0101], [0218], [0220], [0328-0331], Figures, 5B-C, 9A-9B, 5KK-5MM. For example, as illustrated in Figures 5B and 5C (below), when the device detects a touch “at a location that corresponds to a ‘racing’

[application] icon” coupled with “subsequent movement” of the touch “to the edge of the touch-sensitive surface,” the icon is likewise “moved to the edge of the display.” EX1004, [0220].



EX1004, Figures 5A-B (annotated); EX1003, ¶58.¹

2. Martyn (EX1005)

Martyn’s disclosure “relates to a computing device with an improved user interface for applications.” EX1005, [0002]; EX1003, ¶59. Like Chaudhri, Martyn is particularly concerned with improving “mobile” devices having relatively “small

¹ General descriptions provided for this and other references and combinations thereof are incorporated into each subsection and mapping of the claims that includes citations to these references.

screens” (e.g., compared to traditional desktop computers). EX1005, [0002], [0004]. According to Martyn, “[o]ne of the problems facing the designers” of these small-screen mobile devices “is how to allow the user to navigate quickly and efficiently to...activate a desired function.” EX1005, [0002], [0004]. To solve this problem, Martyn promotes the use of a shortcut/contextual sub-menu—i.e., “a snap-shot view which brings together, in one summary window, a limited list of common [application] functions.” EX1005, [0015]. This “summary window,” which Martyn calls an “App Snapshot,” is accessible directly from the “App Launcher” main page by executing “a press and hold...when an application name is highlighted.” EX1005, [0015-0018]. “When an item in the App Snapshot is selected...[t]he required application may be automatically opened.” EX1005, [0015-0018].

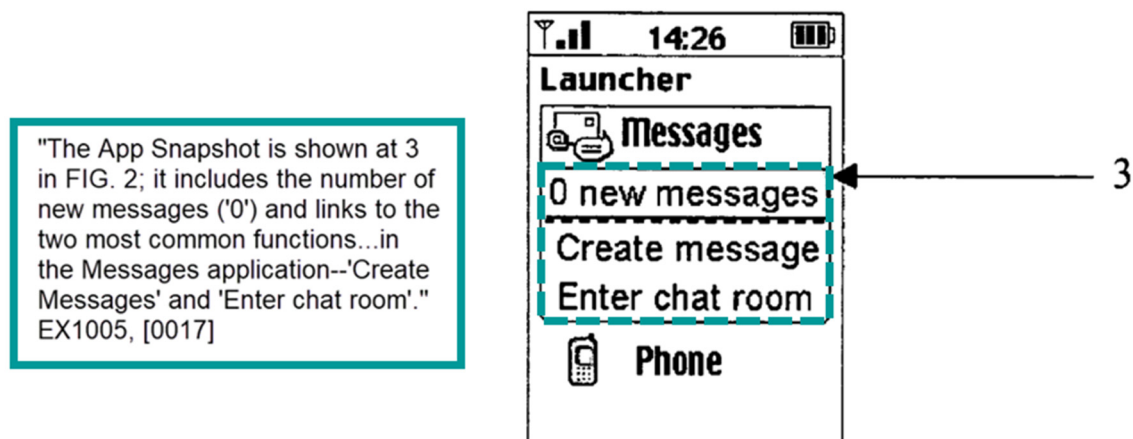
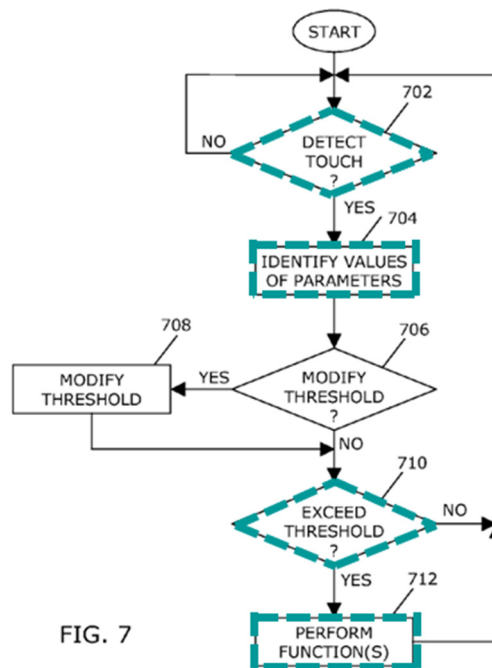


Figure 2

EX1005, Figure 2 (annotated); EX1003, ¶55.

3. Griffin (EX1006)

Griffin discloses the concept of applying “touch thresholds” to certain monitored “parameters” of the user’s contact with the touch screen of a mobile device. EX1006, [0032], [0040], [0053]. Based on a comparison between the value of a touch parameter and a given threshold criterion, the device performs a corresponding functionality, as demonstrated in the flow chart below from Griffin’s Figure 7. EX1006, [0053]. In this way, the user can access a variety of different functions by varying the duration, force, and/or area of contact. EX1003, ¶60.



EX1006, Figure 7 (highlighted); EX1003, ¶60.

4. The Combination, Reasons to Combine, & Expectation of Success

The Chaudhri-Martyn-Griffin Combination represents the predictable result of applying in the context of Chaudhri's user interface for a touch screen device: **[a]** Martyn's teachings about providing a contextual shortcut sub-menu of common application functions in response to a press-and-hold user input; and **[b]** Griffin's teachings about evaluating a user's touch input against predetermined threshold criteria. EX1003, ¶61. From a POSITA's perspective, integrating the supplemental teachings of Griffin and Martyn with Chaudhri would have been nothing more than applying known solutions to known problems in the field of computer interfaces and applications to achieve predictable outcomes. EX1003, ¶62; *see also* ¶¶41-53. The fundamental aspects of Chaudhri's disclosure would remain intact, bolstered by the well-known and beneficial teachings of Griffin and Martyn to successfully arrive at the '758 patent's claimed invention. EX1003, ¶62; *see also* ¶78 (explaining the reasonable expectation of success from the discussed combination of teachings from Chaudhri, Martyn, and Griffin).

(a) Applying Martyn's teachings on a contextual "summary window" menu in view of Chaudhri's user interface for a touch screen device

A POSITA would have been motivated to integrate Martyn's teachings about providing a contextual shortcut sub-menu in the form of a "summary window" of

common application functions (an “App Snapshot”) in response to a press-and-hold user input with Chaudhri’s disclosure of a touch screen mobile device with a user interface for displaying and reorganizing a menu of selectable application icons. EX1003, ¶¶63-69. The POSITA would have understood that the analog to Martyn’s press-and-hold input on a touch screen like Chaudhri’s is the well-known touch-and-hold gesture. EX1003, ¶63; *see also* ¶¶49-53. Accordingly, the predictable result of the Chaudhri-Martyn Combination is a mobile device featuring an application menu user interface that displays a contextual sub-menu, such as Martyn discloses, in response to a touch-and-hold gesture applied to Chaudhri’s touch screen. EX1003, ¶63. The following reasons, each independently and together collectively, support the Chaudhri-Martyn Combination.

First, providing a sub-menu of selectable options corresponding to commonly used application functions was a ubiquitous feature in computer GUIs by 2011. EX1003, ¶¶64-65; *see also* ¶¶43-48. Indeed, so-called “shortcut” or “contextual” sub-menus of this type had been a core feature in GUIs for decades by that time. EX1003, ¶¶64-65; *see also* ¶¶43-48. Such sub-menus were an exceedingly well-known solution to the equally well-known problem of presenting contextually relevant and available actions and functionalities for selection by the user based on the state of the device. EX1003, ¶¶64-65; *see also* ¶¶43-48. Martyn employs a contextual shortcut sub-menu to augment a “main menu listing some or all

applications” of a mobile device (EX1005, [0015]), and it would have been axiomatic for a POSITA to do the same in the context of Chaudhri’s user interface for “a menu of applications” (EX1004, [0180], Figure 4A). EX1003, ¶¶64-65; *see also* ¶¶43-48.

Second, a POSITA would have recognized that applying Martyn’s teaching of a contextual sub-menu would predictably improve Chaudhri’s user interface for “a menu of applications” from a usability standpoint. EX1003, ¶¶66-67. Specifically, it would have been apparent to the POSITA that providing a sub-menu of options for invoking common application functions, as Martyn teaches, would allow the user to accomplish recurring tasks more quickly and efficiently (e.g., with fewer user inputs). EX1003, ¶¶66-67. As the POSITA would have known, usability in this context—e.g., the degree to which a given user interface efficiently facilitates the user’s desired task—was a key differentiator amongst competing mobile devices. EX1003, ¶¶66-67. While the same application functions may have been available on two competing devices, differences in the user interface could make accessing those functions easier and more efficient on one of the two. EX1003, ¶¶66-67. A mobile device with a superior interface from a usability standpoint would be more attractive to consumers. EX1003, ¶¶66-67.

Third, Martyn identifies specific “advantages” of the “App Snapshot” contextual sub-menu over other known techniques for accessing a desired

functionality on a mobile device. EX1005, [0004-0008], [0015]; EX1003, ¶68. Where other techniques require the user to navigate between “many layers” and/or only show “one option...at any one time,” Martyn’s App Snapshot “brings together, in one summary window, a limited list of common functions,” which “yields many advantages in ease and speed of navigation.” EX1005, [0004-0008], [0015]; EX1003, ¶68. Understanding the similarities between Chaudhri and Martyn’s respective multi-functional mobile devices, the POSITA would have sought to predictably improve Chaudhri’s interface for accessing application functions in the same way Martyn did—i.e., via a contextual shortcut sub-menu. EX1003, ¶68.

Fourth, the POSITA would have been prompted to pursue a combination with Martyn based on Chaudhri’s suggestions to do so. EX1003, ¶69. For example, Chaudhri teaches the notion of displaying a contextual “pop-up dialogue” sub-menu that “provides the user with options for modifying the selectable user interface object.” EX1004, [0274], [0317] (discussing “a contextual menu”), Figure 5LLL. This disclosure by Chaudhri would have prompted a POSITA to seek out and apply the teachings from other references in the same field, like Martyn, that describe analogous implementations of contextual sub-menus to augment a user interface for a multi-functional mobile device. EX1003, ¶69; *see also* ¶¶43-48. From the POSITA’s perspective, the straightforward discussion in Martyn about presenting commonly used application functions as selectable sub-menu options in an App

Snapshot/summary window is a natural and obvious extension of Chaudhri. EX1003, ¶69; *see also* ¶¶43-48.

(b) Applying Griffin's concept of evaluating a user's touch against predetermined criteria in view of Chaudhri's user interface for a touch screen device

Griffin and Chaudhri both describe touch screen mobile devices where different functionalities are triggered based on the characteristics of the user's contact with a touch screen. *Supra*, §§VI.A.1, VI.A.3; EX1003, ¶70. Where Chaudhri (as supplemented by Martyn) provides a set of distinct functionalities invoked through specific touch gestures on an application icon, Griffin provides additional information regarding the underlying concept of evaluating the user's touch against predetermined criteria. EX1003, ¶70. For example, Griffin provides an exemplary process flow for tracking touch contact, evaluating parameters of the contact (e.g., duration and/or location) against predetermined criteria, and determining the corresponding device functionality based on the evaluation. EX1003, ¶70; EX1006, [0032], [0040], [0053]. A POSITA would have had multiple independent reasons to pursue a predictable combination that supplements Chaudhri based on Griffin's rudimentary concept of evaluating the parameters of a touch input against predetermined criteria. EX1003, ¶70-74.

First, Chaudhri’s instruction to trigger specific functionalities based on the duration of the user’s touch contact on an application icon—e.g., a tap gesture to launch an application and a touch-and-hold gesture to trigger the reconfiguration mode (*supra*, §VI.A.1)—would have prompted a POSITA to seek out and apply the teachings from references in the same field, like Griffin, that provide additional information on this subject. EX1003, ¶¶71-73. To wit, from the POSITA’s perspective, the straightforward discussion in Griffin about tracking touch duration and evaluating the touch duration against predetermined criteria are implicit and/or expressly suggested by Chaudhri. EX1003, ¶¶71-73. In short, the POSITA would have been motivated by Chaudhri’s teachings and suggestions to pursue this predictable combination with Griffin. EX1003, ¶¶71-73. Second, Griffin’s technique of evaluating the user’s touch against predetermined criteria was well known in the art by 2011, and applying that known technique in the context of a similar reference like Chaudhri to obtain a substantially similar result would have been obvious as a matter of law under *KSR*. EX1003, ¶¶74; *see also* ¶¶49-53.

(c) The predictable result of the Chaudhri-Martyn-Griffin Combination

As discussed, the application menu user interface of Chaudhri’s mobile device begins in the “normal operation mode” and uses the well-known technique of launching an application in response to a “tap gesture” at an application icon.

EX1004 [0217-0218]; *supra*, §VI.A.1; EX1003, ¶75. Chaudhri further describes how the device transitions from the “normal operation mode” to a “reconfiguration mode” when the user executes a touch-and-hold gesture at the application icon—i.e., a touch that exceeds the criterion of a “predetermined period of time (e.g., 2 seconds).” EX1004, [0217]. Additionally, as a result of integrating Martyn’s teachings, the device provides the functionality of responding to a touch-and-hold gesture at the application icon by displaying a contextual sub-menu, such as the App Snapshot summary window. EX1005, [0015-0018]; *supra*, §VI.A.2; EX1003, ¶75.

Presented with three distinct operations invoked by duration-based touch gestures at an application icon—namely, [1] a tap to launch the application, [2] a touch-and-hold to trigger a contextual sub-menu, and [3] another touch-and-hold to transition into the reconfiguration mode—the POSITA would have sought a solution to the problem of distinguishing between the different gesture commands. EX1003, ¶76. Thus, the POSITA would have looked to incorporate Griffin’s teachings to evaluate a duration parameter of the user’s touch against certain predetermined criteria. *Supra*, §VI.A.4.(b); EX1006, [0032], [0040], [0053]; EX1003, ¶76. Establishing such criteria would have been simple for a POSITA exercising common sense and ordinary creativity in view of the problem to be solved. EX1003, ¶76.

As a POSITA would have known, the “tap” gesture Chaudhri describes for launching an application in the “normal” mode is widely understood to connote a

touch contact that ends within a short duration of time and, accordingly, a conventional technique for detecting a “tap” includes a criterion that the duration of the user’s touch contact is less than a first time threshold. EX1003, ¶¶77; *see also* ¶¶49-53. Next, understanding that Martyn’s contextual sub-menu “summary window” is related to selecting and launching the application (i.e., assisting the user with selecting a desired application functionality), the POSITA would have appreciated that this operation should likewise be part of the “normal” mode. EX1003, ¶77 (providing additional technical discussion and reasoning). Accordingly, the POSITA would have known to implement the duration criterion for the corresponding touch-and-hold gesture as being greater than the first time threshold of the tap, while also less than a second time threshold beyond which the interface transitions out of the “normal” mode and into the “reconfiguration” mode. EX1003, ¶77.

5. Element-by-Element Analysis

(a) Claim 1

Element [1.pre] An electronic device, comprising:

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.pre]. EX1003, ¶79. For example, per Chaudhri, this Combination “relate[s] generally to *electronic devices*.” EX1004, [0003], [0009] (“a multi-function device”), [0074] (“a computing device”), Figures 2-3; EX1003, ¶79.

Elements [1.a] a display; [1.b] a touch-sensitive surface;

The Chaudhri-Martyn-Griffin Combination renders obvious Elements [1.a], [1.b]. EX1003, ¶80. For example, per Chaudhri, this Combination has “a computing device that includes ***a display*** and ***a touch-sensitive surface***.” EX1004, [0074]; *see also* [0009], [0074], [0078] (“Touch-sensitive display 112 is sometimes called a ‘touch screen’ for convenience, and may also be known or called a touch-sensitive display system.”), [0177], Figures 1A (“Touch-Sensitive Display System 112”), 1B, 2, 3; EX1003, ¶80.

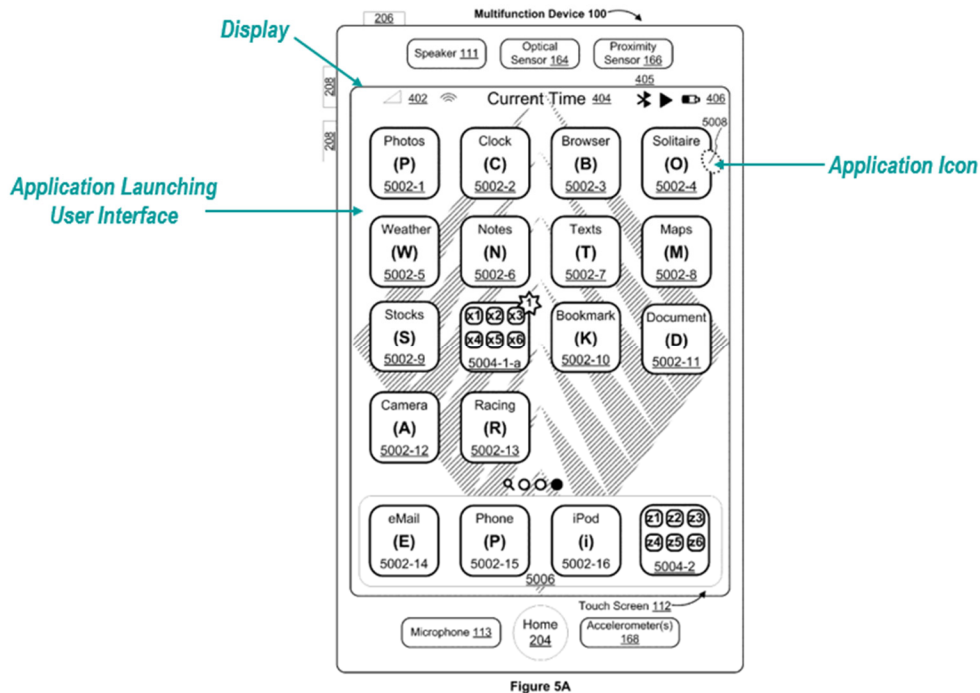
Elements [1.c] one or more processors; [1.d] memory; and [1.e] one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the one or more programs including instructions for:

The Chaudhri-Martyn-Griffin Combination renders obvious Elements [1.c], [1.d], [1.e]. EX1003, ¶81. For example, per Chaudhri, this Combination has “a multi-function device [that] includes a display, ***one or more processors***, ***memory***, and ***one or more programs***.” EX1004, [0015]; *see also* [0080-0081], [0177], Figures 1A, 1B, 3; EX1003, ¶81. “***The one or more programs are stored in the memory and configured to be executed by the one or more processors***.” EX1004, [0015]; *see also* [0017], [0081] (“The one or more processors 120 run or execute various software programs and/or sets of instructions stored in memory 102 to perform various functions for device 100[.]”), [0098] (identifying programs,

instructions, modules stored in memory), [0127], [0146] (explaining that the identified programs, instructions, and modules perform the functions throughout the disclosure), [0177], Figures 1A, 1B, 3; EX1003, ¶81.

Element [1.f] displaying, on the display, an application launching user interface that includes a plurality of application icons for launching corresponding applications;

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.f]. EX1003, ¶82. To start, per Chaudhri, this Combination provides numerous ***user interface*** pages ***displayed*** on the touch screen ***display*** of a mobile electronic device. EX1004, [0029], [0179-0180], [0216], Figures 4A-5PPP; EX1003, ¶82. Chaudhri further explains that these user interface pages present “a menu of applications”—i.e., “a plurality of selectable user interface objects, including ***a plurality of [application] icons*** 5002...for activating [(***launching***)] respective ***applications***.” EX1004, [0180], [0216], Figure 5A; *see also* [0029], [0179], [0217] (“selecting one of the action icons will activate an application (e.g., ***launch an application*** that is not currently running on the device...)”), [0280] (illustrating an example where “selecting a solitaire ***application icon*** 5002-1 in Figure 5A (e.g., while the device is in a normal operation mode) would ***launch*** a solitaire game ***application***”), Figures 4A, 5B; EX1003, ¶82.



EX1004, Figure 5A (annotated).

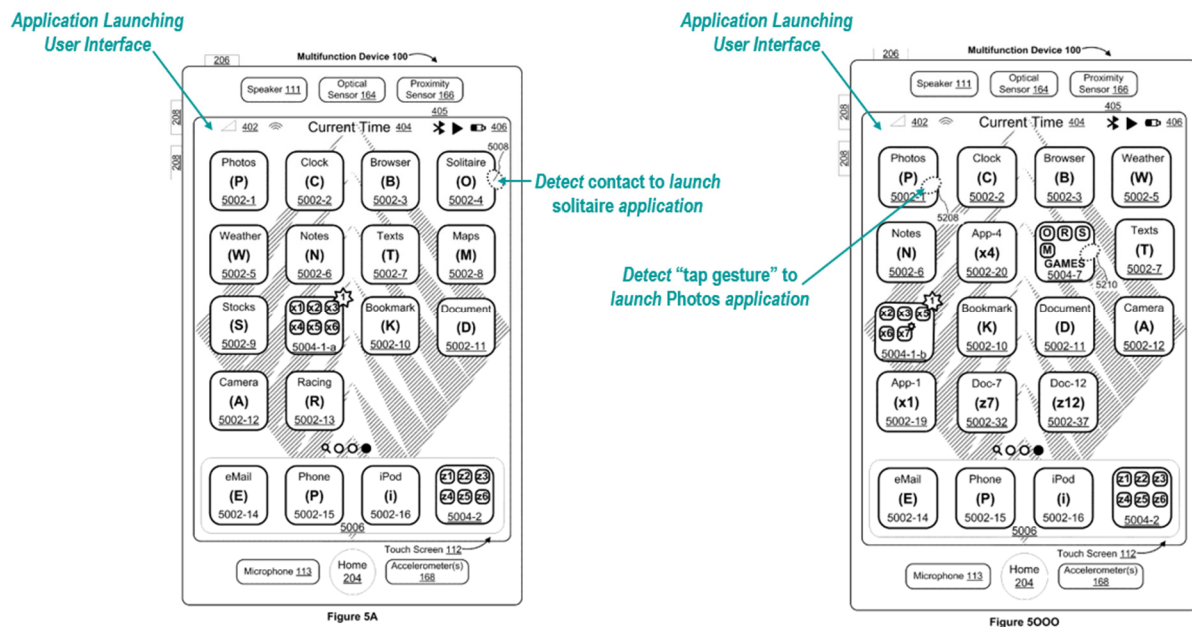
Element [1.g] while displaying the application launching user interface, detecting a first single-finger touch input that includes detecting the first single-finger touch input at a location on the touch-sensitive surface that corresponds to a first application icon of the plurality of application icons, wherein the first application icon is for launching a first application that is associated with one or more corresponding action options; and²

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.g].

EX1003, ¶¶83-87.

² By presumption, numerical claim terms like “first” and “second” serve the purpose of distinguishing between otherwise identical nouns in the claim. *Cf. 3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003).

As discussed, per Chaudhri, this Combination provides the feature of *displaying an application launching user interface* including one or more pages presenting *a plurality of icons* corresponding to respective *applications*. *Supra*, Element [1.f]; EX1003, ¶84. Additionally, as illustrated in Figure 5A's depiction of a *displayed application launching user interface*, Chaudhri explains that “the device *detects* a contact 5008 with the solitaire application icon” and performs a responsive action (e.g., *launching the application* or entering the reconfiguration mode) based on the characteristics of the touch. EX1004, [0216-0217]; *supra*, §VI.A.1. Similarly, as shown in Figure 5000, “*detecting* a tap gesture 5208 at a location on the touch-sensitive surface that corresponds to the photos action icon 5002-1” causes the device to “*launch[]* the photos *application*.” EX1004, [0276].



EX1004, Figures 5A (annotated), 5000 (annotated); EX1003, ¶85.

Consistent with Chaudhri's disclosure as a whole, the ***detected*** contact is depicted in Figure 5A and Figure 5000 as a ***single-finger touch input at a location of the touch screen (touch-sensitive surface) that corresponds to the (first) application icon.*** EX1004, [0102] ("***[D]etecting a finger tap gesture...at the position of an icon...***"), [0101] (describing operations being "applied to ***single*** contacts (e.g., one ***finger*** contacts)"), [0216-0217], [0276], [0280], [0302], [0310-0311], Figures 5A, 5000, 7A, 7C; EX1003, ¶86; *see also infra*, Elements [1.h]-[1.l] (discussing various touch inputs detected as having different durations).

Finally, Chaudhri teaches that each of the applications (including ***the first application***) for which there is a corresponding application icon (including ***the first application icon***) ***is associated with*** a suite of "one or more functions" (***action options***). EX1004, [0146] (describing "each of the ... ***applications*** correspond to a set of executable instructions for performing one or more functions"), [0280]; EX1003, ¶87. Additionally, as discussed in §VI.A.4, the Chaudhri-Martyn-Griffin Combination incorporates, based on Martyn's disclosure, an application-specific contextual "summary window" that includes "links to common functionality in ***[(action options associated with)] that application.***" EX1005, [0017]; *see also* [0015-0019], Figures 2-3; EX1003, ¶87; *infra*, Element [1.j].

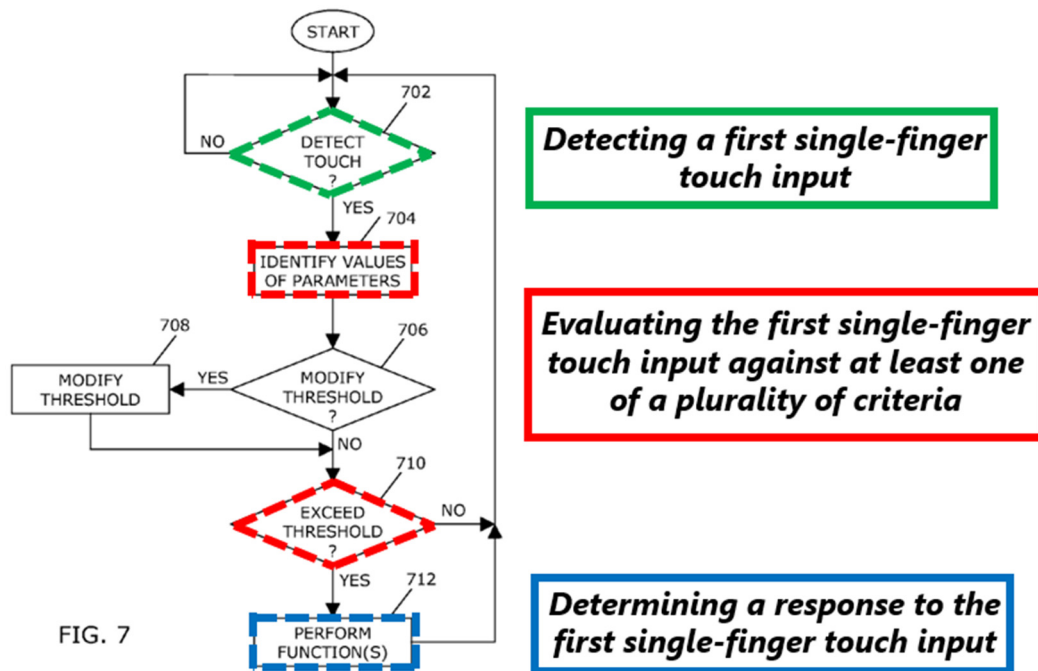
Element [1.h] in response to detecting the first single-finger touch input, determining a response to the first single-finger touch input based on evaluating the first single-finger touch input against at least one of a plurality of criteria, including evaluating a duration of the first single-finger touch input against at least one of: one or more application-launch criteria, one or more action-option-display criteria, or one or more operation criteria, and further including evaluating a movement of the first single-finger touch input against one or more movement criteria, for:

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.h].
EX1003, ¶¶88-92.

As discussed, per Chaudhri, this Combination provides the feature of ***detecting the first single-finger touch input*** and ***determining a responsive*** action based on the characteristics of the touch. *Supra*, Element [1.g]; EX1003, ¶89.

Moreover, as discussed at §VI.A.4, the Chaudhri-Martyn-Griffin Combination incorporates Griffin's teachings about ***determining a response to the first single-finger touch input based on evaluating the first single-finger touch input against at least one of a plurality of criteria***. EX1003, ¶90. For example, Griffin describes a cyclical process flow where specific "values of one or more various parameters are identified." EX1006, [0040], Figure 7 (elements 702, 704). These "parameters may include...touch parameters" like "touch duration." EX1006, [0040], Figure 7 (elements 702, 704); *see also* [0032], [0037], [0042-0043], [0050]. Later in Griffin's process flow, the touch duration value is evaluated against multiple

touch duration *criteria* to *determine a responsive* “function.” See EX1006, [0053], [0032], Figure 7 (element 710, 712). After performing the function triggered by satisfying a given *criteria*, the cyclical process flow continues to monitor the touch duration value. EX1006, Figure 7 (elements 710, 712→ 702, 704).



EX1006, Figure 7 (annotated).

Turning back to Chaudhri, this aspect of the Chaudhri-Martyn-Griffin Combination provides that the *plurality of criteria* against which the *touch input* is *evaluated* includes an *application-launch criteria*, an *operation criteria*, and a *movement criteria*. EX1003, ¶91. For example, Chaudhri distinguishes between a short-*duration* “tap gesture” for launching an application (*application-launch criteria*, per Element [1.i]) and a longer-*duration* touch-and-hold contact (e.g., 2

seconds) for initiating a reconfiguration mode (*operation criteria*, per Element [1.k]). EX1004, [0217], [0289]; *see also* [0101]-[0102], [0276], Figures 5A, 5000; EX1003, ¶91. Chaudhri further explains that, while in the reconfiguration mode, detection of a *movement* contact results in the corresponding movement of an application icon (e.g., detecting a drag, satisfying the *movement criteria*, per Element [1.l]). EX1004, [0087], [0101], [0220], Figures 5B-5C; EX1003, ¶91.

Finally, the Chaudhri-Martyn-Griffin Combination further includes Martyn's "summary window" providing "a limited list of...common functions [*(particular actions)*]" offered within an application." EX1005, [0009-0011], [0017], Figures 1-3; *supra*, §VI.A.4 (motivation-to-combine); EX1003, ¶92. As integrated with Chaudhri and Griffin, Martyn's "summary window" is invoked by a touch-and-hold contact on an application icon that meets a predetermined *duration* threshold (*action-option-display criteria*, per Element [1.j]). EX1003, ¶92.

Element [1.i] in accordance with a determination that the first single-finger touch input meets the one or more application-launch criteria that is met when the duration of the first single-finger touch input is evaluated to be less than a first time threshold, launching the first application,

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.i]. EX1003, ¶¶93-94. For example, as discussed at Element [1.g], this Combination incorporates Chaudhri's teaching of "detecting" that a *first single-finger touch input*

is “a tap gesture” on an application icon and, *in accordance with* that detection, “*launching* [that] *application*.” EX1004, [0276]; *see also* [0102], [0216-0217], [0302], [0310], Figures 5A, 5OOO, 7A, 7C. As a POSITA would have known, Chaudhri’s “tap gesture” teaches and renders obvious a touch input having a *duration* within (e.g., *less than*) a predetermined short (*first*) *time threshold*. EX1003, ¶¶93-94; *see also* ¶¶49-53; *supra*, §VI.A.4.(c). Accordingly, the combination of Chaudhri’s teaching to detect a short-*duration* tap gesture with Griffin’s teaching to *evaluate* the parameters of a touch input against predetermined *criteria* renders obvious the concept of *determining that the first single-finger touch input meets the one or more application-launch criteria that is met when the duration of the first single-finger touch input is evaluated to be less than a first time threshold*. EX1003, ¶¶93-94; *supra*, §VI.A.4 (motivation), Element [1.h].

Element [1.j] in accordance with a determination that the first single-finger touch input meets the one or more action-option-display criteria that is met when the duration of the first single-finger touch input is evaluated to be greater than the first time threshold, displaying one or more action option objects associated with the first application without launching the first application,

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.j]. EX1003, ¶¶95-96. As discussed at §VI.A.4, this Combination incorporates Martyn’s teachings regarding a contextual sub-menu called the “App Snapshot,” which

comprises a “summary window” providing “a limited list of...common functions ([*action option objects*]) offered within [*the first*] *application*.” EX1005, [0009]-[0011], [0017], Figures 1-3; *supra*, §VI.A.3 (motivation), Element [1.h]; EX1003, ¶95. According to Martyn, “[t]he App Snapshot can [] display data from an application and functions of that application *without* actually opening [*(launching)*] *the application*.” EX1005, [0018]; *see also* [0010]-[0011], [0053], Figures 1-3.

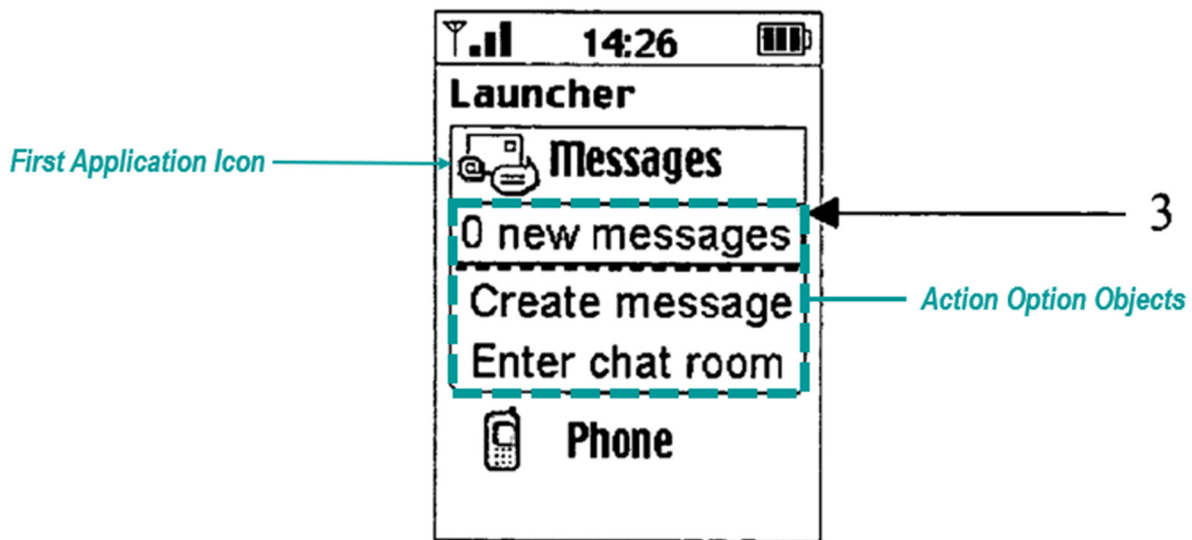


Figure 2

EX1005, Figure 2 (annotated); EX1003, ¶95.

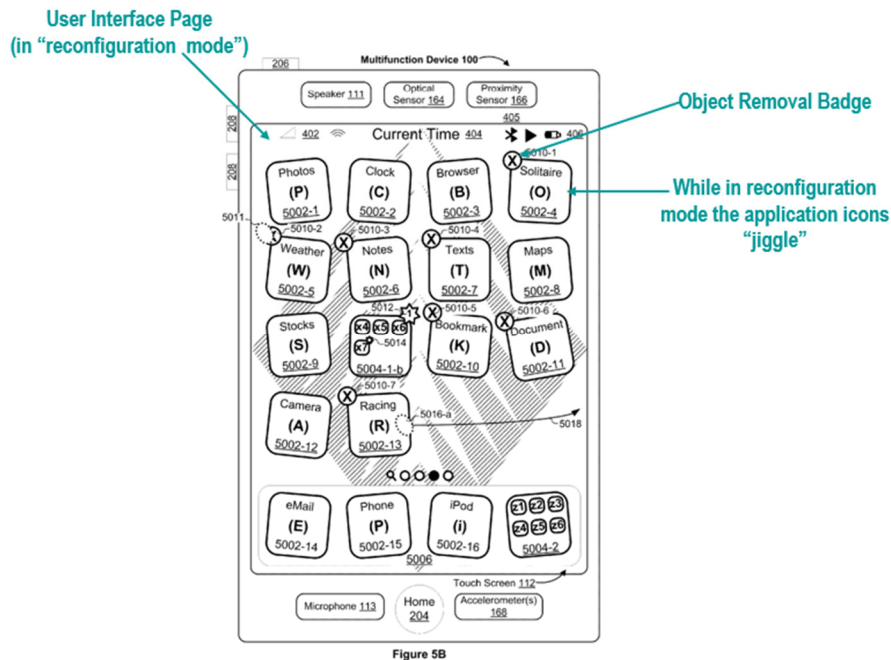
As discussed, a POSITA would have integrated Martyn’s teachings with Chaudhri and Griffin such that the App Snapshot summary window is displayed *in accordance with a determination that* the user’s *single-finger touch input meets* a corresponding *action-option-display criterion* where the *duration is evaluated to be greater than the first time threshold*. *See supra*, §VI.A.4(a)-(b) (discussing

motivation-to-combine), §VI.A.4(c) (explaining why a POSITA would have set the evaluation criterion for Martyn's App Snapshot to be *greater than a first time threshold*), Element [1.g] (discussing Chaudhri's teaching to detect a *single-finger touch input*), Element [1.h] (discussing Griffin's teaching to *evaluate* the user's touch against predetermined *criteria*); EX1003, ¶¶96. In short, the Chaudhri-Martyn-Griffin Combination features two operations for interfacing with an application when the device is operating in a "normal" mode, each invoked by a distinct gesture. *See supra*, §§VI.A.4(a)-(b); EX1003, ¶¶95-96. A tap gesture at an application icon launches the application, and a touch-and-hold gesture at the application icon triggers the App Snapshot. EX1003, ¶¶95-96. The *first time threshold* distinguishes the tap (*duration less than*) from the touch-and-hold (*duration greater than*). EX1003, ¶¶95-96.

Element [1.k] in accordance with a determination that the first single-finger touch input meets the one or more operation criteria that is met when the duration of the first single-finger touch input is evaluated to be greater than a second time threshold that is greater than the first time threshold, performing an operation in connection with the first application icon, and

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.k]. EX1003, ¶¶97-99. For example, per Chaudhri, this Combination has a device that

“enter[s] a user interface reconfiguration mode” (*performing an operation*)³ in response to detecting a touch at an “application icon...for more than a predetermined period of time (e.g., 2 seconds).” EX1004, [0217], Figure 5B. Upon entering the reconfiguration mode (*operation*), all of the application icons on the application menu (including the *first application icon*) “jiggle as though they are floating on water,” and some of the application icons “are associated with an object removal badge.” EX1004, [0218], Figure 5B; *see also* [0180], [0313]; EX1003, ¶97.



EX1004, Figure 5B (annotated); EX1003, ¶97.

A POSITA would have understood that Chaudhri’s disclosure of detecting a touch lasting “more than a predetermined period of time (e.g., 2 seconds)” teaches

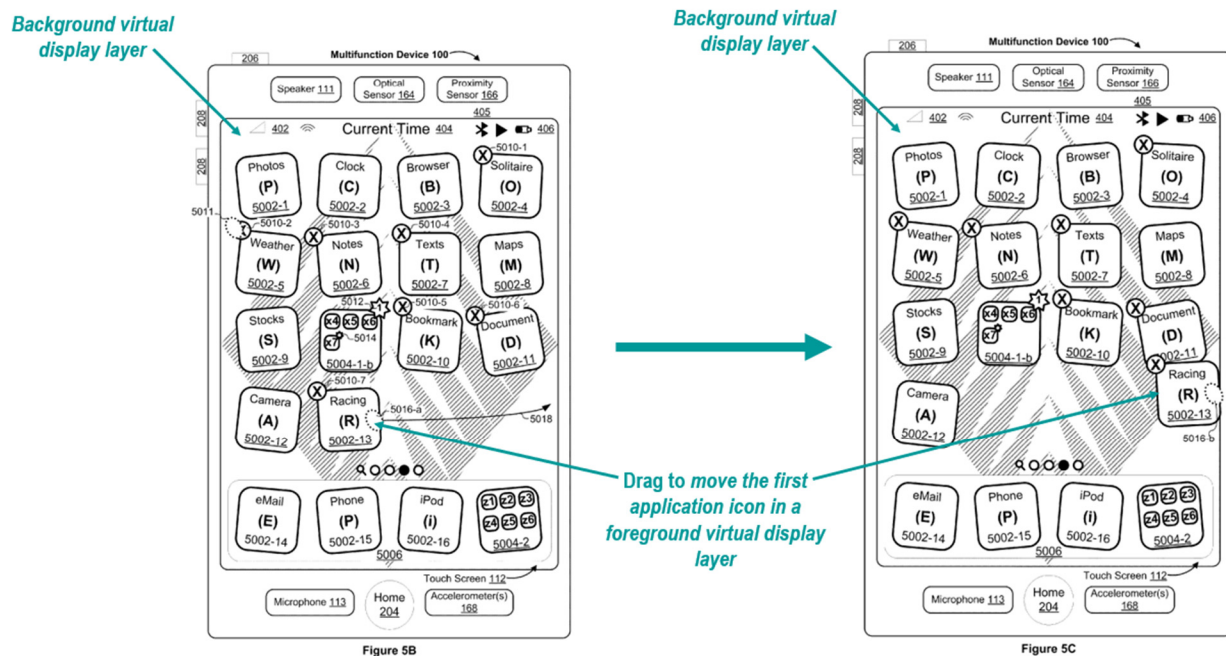
³ The *reconfiguration mode* limitation of dependent claim 26 supports this mapping.

or renders obvious making *a determination that* the user's *single-finger touch input meets* an *operation criterion* where the *duration* is *evaluated to be greater than the second time threshold*. See *supra*, §VI.A.4(a)-(b) (discussing motivation-to-combine), §VI.A.4(c) (explaining why a POSITA would have set the evaluation criterion for Chaudhri's reconfiguration mode to be *greater than a second time threshold*), Element [1.g] (discussing Chaudhri's teaching to detect a *single-finger touch input*), Element [1.h] (discussing Griffin's teaching to *evaluate* the user's touch against predetermined *criteria*); EX1003, ¶98. The POSITA would have further understood that the *second time threshold* is distinct from and *greater than* the *first time threshold*. EX1003, ¶98. As discussed, a "tap" connotes a touch gesture that persists for a relatively short *duration* of time compared to the *duration* of a touch-and-hold that lasts for a significantly longer period of time—e.g., at least "2 seconds." *Supra*, §VI.A.4(c); EX1003, ¶97.

Element [1.i] in accordance with a determination that the first single-finger touch input meets the one or more movement criteria, moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [1.i]. EX1003, ¶¶100-111. To start, this Combination incorporates Chaudhri's teaching of "*determining* if there is *movement* of the contact [(*single-finger touch input*)]"

and tracking the **movement** across the touch-sensitive surface (e.g., detecting one or more finger-dragging events).” EX1004, [0101-0102]; *see also* [0087]; [0218], [0220], [0328-0331], Figures 5B-C, 9A-9B, 5KK-5MM. For example, as illustrated in Figures 5B and 5C (below), when the device is operating in the “reconfiguration mode” and detects a touch “at a location that corresponds to a ‘racing’ [application] icon” coupled with “subsequent movement” of the touch “to the edge of the touch-sensitive surface,” the **application icon** is likewise “**moved** to the edge of the display.” EX1004, [0220].



EX1004, Figures 5B-C (annotated); EX1003, ¶100.

Chaudhri’s teaching to move an application icon in conjunction with a detected drag gesture combined with Griffin’s teaching to evaluate a touch input

against predetermined criteria renders obvious the claimed feature of ***determining that the first single-finger touch input meets the one or more movement criteria and moving the first application icon.*** EX1003, ¶101.

Chaudhri further teaches and/or suggests that the ***first application icon*** is moved in ***a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.*** EX1003, ¶¶102-104.

First, Chaudhri shows and describes that icons on the application menu user interface are displayed and ***move*** in front of a “wallpaper ***background.***” EX1004, [0368], Figures 5A-5D. EX1003, ¶102. Second, Chaudhri explains that, in the reconfiguration mode, the application icons “jiggle as though they are ***floating*** on water.” EX1004, [0218], Figures 5B-E; EX1003, ¶102. Third, Chaudhri depicts the application icon being moved (via a drag gesture) in a ***foreground virtual display layer above the virtual display layer of the background wallpaper.*** EX1004, Figures 5B-5E, 5M-5N, 5JJ-5MM; EX1003, ¶102 (explaining that movement of the icon over a static wallpaper teaches the POSITA that the icon and wallpaper are in distinct virtual layers of the GUI); *see also* EX1001, 72:34-48 (the ’758 patent describing a background “display layer” that is “virtual” and “used to display a wallpaper”). Fourth, Chaudhri shows the ***application icon*** being moved in a ***layer*** above the ***layer*** of the remaining application icons. EX1004, Figures 5B-5E, 5M-5N, 5JJ-5MM, [0282-0283] (describing a moving application icon as “overlapping” a non-moving

application icon), [0348]; EX1003, ¶¶103-104. In view of these disclosures, Chaudhri clearly teaches or renders obvious the claim feature of *moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer*. EX1003, ¶¶102-104 (explaining at ¶103 that this claim feature would have been “exceedingly obvious to a POSITA,” e.g., given the “common practice” of using “multiple *virtual layers* to create a three-dimensional depth effect in a 2D-GUI environment”).

* * * * *

Claim 1 would be no less obvious even if the Challenged Claims were interpreted to require a single continuous touch between Elements [1.k] and Elements [1.l]. Such an arrangement would have been apparent and obvious to a POSITA in view of Chaudhri’s teachings⁴. EX1003, ¶¶105-111.

A POSITA would have recognized that there are only three apparent design options to implement Chaudhri’s teachings for using a drag gesture to move an application icon after shifting from the “normal mode” to the “reconfiguration mode” via a touch-and-hold gesture. EX1003, ¶¶107-108. First, the device and interface could be designed so that the user must keep their finger down on the touch screen between the touch-and-hold gesture and the drag gesture. EX1003, ¶¶107-

⁴ Ground 2 below provides yet another basis to find obviousness in this scenario.

108. Second, the device and interface could be designed so that the user must break contact with the touch screen between the two gestures—i.e., inputting a touch-and-hold gesture followed by a distinct touch-and-drag gesture. EX1003, ¶¶107-108. Third, the device and interface could be designed so that the user may input the two gestures either as a single continuous touch or as consecutive touches with a lift off in between. EX1003, ¶¶107-108.

All three of these design options—the first and third of which account for a single continuous touch—were known and predictable alternatives that a POSITA would have expected to yield virtually the same results. EX1003, ¶108; *see also* ¶¶109-110 (explaining, among other things, that recognizing a touch-and-hold gesture and a drag gesture as part of a single continuous touch was a feature implemented commercially decades before the '758 patent). This reason alone compels a finding of obvious. Additionally, a POSITA applying common sense and ordinary creativity to the problem at hand would have appreciated that the most natural way to implement Chaudhri's teachings would be to select the third of the above-discussed design options, making the device and interface easier to use by providing multiple avenues for the user to move the application icon once activating the "reconfiguration mode." EX1003, ¶108.

(b) Claim 9

Element [9] The electronic device of claim 1, wherein the one or more programs include instructions for, in response to determining that the one or more action-option-display criteria has been met, generating a first tactile output that is indicative of a satisfaction of the one or more action-option-display criteria.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [9]. EX1003, ¶112. For example, this Combination incorporates Griffin’s teaching of providing “*tactile feedback*” *in response to* determining that the user’s contact on the touch screen has *satisfied* a given evaluation *criteria*. EX1006, [0034]; *see also* [0014], [0024], [0030], [0032], [0035], [0053], [0057], Figure 1. A POSITA would have been motivated to apply this teaching by Griffin to the various evaluation criteria in the Chaudhri-Martyn-Griffin Combination, including *the action-option-display criteria* discussed above in Elements [1.h] and [1.j]. EX1003, ¶112. First, Chaudhri’s disclosure suggests and invites this aspect of the Combination, incorporating by reference at Paragraph [0090] a teaching from U.S. patent application Ser. No. 11/367,749 about a “haptics mechanism...configured to vibrate” in response to certain “touch events” for the purpose of “alert[ing] a user that a user input has been made.” EX1041, p. 42 ([0161]); *see also generally id.*, pp. 42-43 ([0160-0163]). Second, tactile feedback was a well-known solution to the longstanding problem in mobile device computing of confirming user inputs,

providing alerts, and giving contextual cues to users. EX1003, ¶112. The POSITA would have recognized that Griffin’s “tactile feedback” teaching would serve this same purpose in the Chaudhri-Martyn-Griffin Combination. EX1003, ¶112.

(c) **Claim 12**

Element [12] The electronic device of claim 1, wherein displaying the one or more action option objects includes displaying the one or more action option objects in a menu that includes a plurality of action option objects.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [12]. EX1003, ¶113. As discussed, this Combination includes Martyn’s teaching of a contextual sub-*menu* called an “App Snapshot” that features a “summary window” displaying a plurality of “common functions” of an application (*action option objects*). *Supra*, Element [1.j], §VI.A.2; *see also* EX1005, [0009]-[0011], [0017]-[0018], Figures 1-3.

(d) **Claim 19**

Element [19] The electronic device of claim 1, wherein: the first application is a content creation application; the one or more action option objects include a respective action option object that is associated with creating a new object; and wherein the one or more programs include instructions for: detecting selection of the respective action option object, and, in response to detecting selection of the respective action option object, creating the new object.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [19]. EX1003, ¶114. As discussed, this Combination incorporates Martyn’s teachings

regarding a contextual sub-menu called an “App Snapshot” that features a “summary window” displaying a plurality of “common functions [(*action option objects*)] offered within [*the first*] application.” EX1005, [0009]-[0011], [0017], Figures 1-3; *supra*, §VI.A.3 (motivation-to-combine), Elements [1.h] and [1.j]; EX1003, ¶114. Martyn further teaches that *the first application* can be a “Messages application” (*content creation application*). EX1005, [0017], Figure 3; EX1003, ¶114. Chaudhri teaches the same—i.e., *the first application* can be an “instant messaging” application or an “E-mail client” (*content creation applications*). EX1004, [0075], [0128], [0131-0132] (discussing an “e-mail client module” and an “instant messaging module”), [0187], [0191], Figure 4A (“Text”/“IM” application icon 141, “Mail” application icon 140). In the context of a “Messages application,” Martyn explains that one of the “common functions” (*action option objects*) includes a “*Create* Messages” function. EX1005, [0017], Figure 3; EX1003, ¶114. “[W]hen ‘Create Messages’ in an App Snapshot is *selected*, then the messaging application is opened up” to *create the new* message (*object*). EX1005, [0018]; EX1003, ¶114.

(e) **Claim 20**

Element [20] The electronic device of claim 19, wherein the content creation application includes an email application, and the new object includes a new email message.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [20] including for all the reasons discussed above at Element [19] (discussing Chaudhri's disclosure of an "***E-mail*** client" application and corresponding icon). EX1003, ¶115; *see also* EX1005, [0030] (Martyn discussing the concept of generating "a new ***email***..."), Figure 3 (indicating the number of "unread ***emails***"). EX1003, ¶115.

(f) **Claim 21**

Element [21] The electronic device of claim 1, wherein: the first application is a content creation application; the one or more action option objects include a respective action option object that is associated with displaying at least a portion of previously created content; and wherein the one or more programs include instructions for: detecting selection of the respective action option object, and, in response to detecting selection of the respective action option object, displaying the at least portion of previously created content.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [21] including for all the reasons discussed above at Elements [19] and [20]. EX1003, ¶116 (explaining that Martyn's ***action option object*** for "unread emails" connotes ***displaying content previously created*** by other users). Moreover, Martyn's App Snapshot includes an additional ***selectable action option object*** associated with the

“Messages” *content creation application* for *displaying* a chat that is “ongoing.” EX1005, Figure 3, [0017-0018]. A POSITA would have understood that an “ongoing” chat includes *previously created* messages (*content*). EX1003, ¶116.

(g) **Claim 22**

Element [22] The electronic device of claim 21, wherein the content creation application includes an email application, and the displayed at least portion of previously created content includes a previous email message, for generating a reply thereto.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [22] including for all the reasons discussed above at Elements [19], [20], [21]. EX1003, ¶117. As discussed, Martyn’s App Snapshot includes a selectable *action option object* associated with the “Messages” *content creation application* for interacting with “unread *emails*” (*previous email messages*). EX1005, Figure 3, [0017-0018]. As a POSITA would have understood, the purpose of viewing “unread emails” is *for generating a reply thereto*. EX1003, ¶117; *see also* EX1004, [0131] (explaining that a common functionality of an email client is to “create, send, receive, and manage e-mail”); EX1005, [0017] (Martyn teaching options in the App Snapshot include “common functionality”), [0030] (Martyn discussing functionality to create email messages).

(h) **Claim 24**

The electronic device of claim 1, wherein the electronic device is configured such that the operation is related to a delete operation.

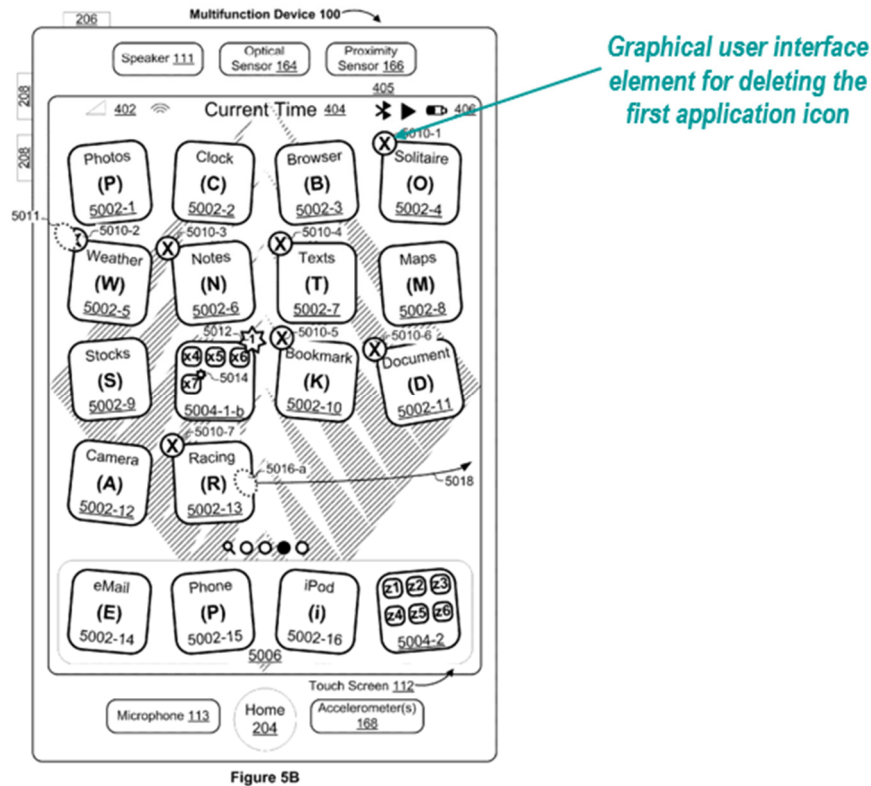
The Chaudhri-Martyn-Griffin Combination renders obvious Element [24]. EX1003, ¶118. As discussed, this Combination includes Chaudhri's teaching of displaying "an object removal badge" for ***deleting*** application icons as part of entering the "reconfiguration mode" (***operation***). *Supra*, Element [1.k]; EX1004, [2018], Figure 5B (reference number 50101).

(i) **Claim 25**

Element [25] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes displaying a graphical user interface element for, in response to detecting a selection thereof, deleting the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [25]. EX1003, ¶119. As discussed, this Combination includes Chaudhri's teaching of ***displaying*** "an object removal badge" (***a graphical user interface element***) on each ***application icon*** as part of entering the "reconfiguration mode" (***operation***). *Supra*, Element [1.k]; EX1004, [2018], Figure 5B (reference number 50101). "[W]hen the device ***detects*** activation [(***selection***)] ***of the object removal badge*** (e.g., tap gesture 5011 in Figure 5B), the selectable user interface object (e.g., weather ***application***

icon 5002-5 in Figure 5B) associated with the object removal badge is removed from the user interface (e.g., *deleted*).” EX1004, [0218]; Figure 5B; EX1003, ¶119.



EX1004, Figure 5B (annotated); EX1003, ¶119.

(j) **Claim 26**

Element [26] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes entering an icon reconfiguration mode in which one or more of the plurality of application icons is capable of being reorganized on the application launching user interface.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [26] including for all the reasons discussed above regarding Chaudhri’s “*reconfiguration mode*” (*operation*) and application menu (*application launching user interface*) at

Elements [1.f], [1.k] and §VI.A.1. EX1003, ¶120; EX1004, [0015] (explaining that the “reconfiguration mode” is “for rearranging the [application] icons...”), [0029], [0179-0180], [0216-0218], [0280], [0301] (explaining that the “reconfiguration mode” is where icons “can be moved around the display”), [0313], Figures 4A-5PPP, 7A-B.

(k) **Claim 27**

Element [27] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes changing a mode of operation.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [27] including for all the reasons discussed above regarding Chaudhri’s “reconfiguration *mode*” (*operation*) at Element [1.k] and §VI.A.1 (explaining that Chaudhri’s device is configured to operate in, and transitioning between, a “normal *mode*” and a “reconfiguration *mode*”). EX1003, ¶121.

(l) **Claim 28**

Element [28] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes adding a graphical user interface element to the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [28] including for all the reasons discussed above regarding Chaudhri’s teachings of entering a “reconfiguration mode” (*operation*), which *adds* an “object removal

badge” (*graphical user interface element*) to the *first application icon* at Elements [1.k], [25] and §VI.A.1. EX1003, ¶¶122-123.

(m) **Claim 29**

Element [29] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes moving the first application icon.

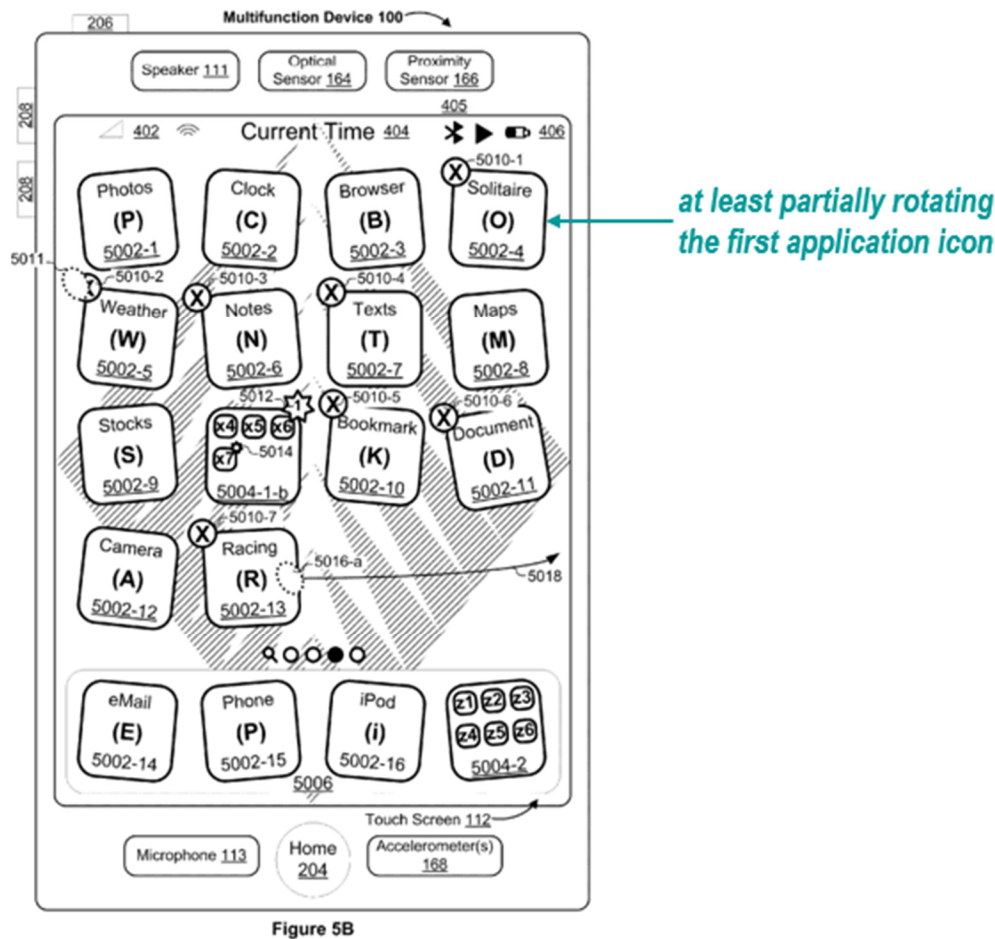
The Chaudhri-Martyn-Griffin Combination renders obvious Element [29]. EX1003, ¶¶124-125. As discussed at Element [1.k], this Combination includes Chaudhri’s teaches that entering the “reconfiguration mode” (*operation*) causes all of the application icons, including *the first application icon*, to “jiggle [(*move*)] as though they are floating on water.” EX1004, [0218] (describing the “jiggle” movement as “oscillat[ing] about a respective average position”), Figure 5B; *see also* [0180], [0313]; EX1003, ¶124. Additionally, as an independent basis to find obviousness, *moving the first application icon* is a consequence of entering the “reconfiguration mode” (*the operation*) and executing a drag gesture. *See* Element [1.l]; EX1003, ¶125.

(n) **Claim 30**

Element [30] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes at least partially rotating the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [30] including for all the reasons discussed above at Elements [1.k], [29] regarding

Chaudhri's teaching of a "reconfiguration mode" (*operation*) that causes all of the application icons, including *the first application icon*, to "jiggle." EX1004, [0218] (describing the "jiggle" movement as "oscillat[ing] about a respective average position"), Figure 5B; *see also* [0180], [0313]; EX1003, ¶126. As shown, for example, in Chaudhri's Figure 5B, the oscillating "jiggle" movement includes *at least partially rotating the application icons*. EX1003, ¶126; EX1004, Figure 5B, [0218].



EX1004, Figure 5B (annotated); EX1003, ¶126.

(o) **Claim 31**

Element [31] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes animating the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [31] for all the reasons discussed above at Elements [1.k], [29], [30] regarding Chaudhri's teaching of a "reconfiguration mode" (***operation***) that causes all of the application icons, including ***the first application icon***, to perform a "jiggle" ***animation***. EX1004, [0218], Figure 5B; *see also* [0180], [0313]; EX1003, ¶¶127-128.

(p) **Claim 32**

Element [32] The electronic device of claim 1, wherein the electronic device is configured such that the operation includes cyclically animating the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [32] for all the reasons discussed above at Elements [1.k], [29], [30], [31] regarding Chaudhri's teaching of a "reconfiguration mode" (***operation***) that causes all of the application icons, including ***the first application icon***, to perform a "jiggle" ***animation*** comprising "oscillat[ing motion] about a respective average position." EX1004, [0218], Figure 5B; *see also* [0180], [0313]; EX1003, ¶129 (explaining that a POSITA would have understood "oscillating" motion to connote a ***cyclical*** movement ***animation***).

(q) **Claim 35**

Element [35] The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, multiple of the plurality of application icons is moved in the foreground virtual display layer so that the multiple of the plurality of application icons appear to float above the background virtual display layer.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [35]. EX1003, ¶130. As discussed at Element [1.1] and §VI.A.1, this Combination incorporates Chaudhri's teaching that entering the "reconfiguration mode" of the device triggers a "visual indication" where ***all of the application icons*** displayed on the application menu ***move in the foreground virtual display layer above the wallpaper in the background virtual display layer***—i.e., "jiggle as though they are ***floating*** on water." EX1004, [0218], Figure 5B. As was also discussed at Elements [1.h], [1.1] and §VI.A.1, §VI.A.4, Chaudhri's teachings (as supplemented by Griffin) regarding the "reconfiguration mode" further provide the claim limitations of ***determining that the first single-finger touch input meets the one or more movement criteria*** and responsively ***moving*** the first application icon across the display ***in a foreground virtual display layer above a background virtual display layer***. EX1004, [0220], Figures 5B-5C. As shown in Chaudhri's Figures 5B and 5C, the remaining ***plurality of application icons*** continue to jiggle (***move***) as the first

application icon moves across the display. EX1003, ¶130. Moreover, the trivial notion of continuing the jiggling movement would have been exceedingly obvious to a POSITA exercising common sense and ordinary creativity. EX1003, ¶130 (noting that the continued jiggling would serve the purpose of confirming for the user that the device remains in the reconfiguration mode).

(r) **Claim 36**

Element [36] The electronic device of claim 1, wherein the electronic device is configured such that the one or more action option objects associated with the first application is displayed along with the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [36]. EX1003, ¶131. As discussed, this Combination includes Martyn's teachings about ***displaying*** an "App Snapshot" listing selectable common functions (***the action option objects***) associated with ***the first application***. *Supra*, Elements [1.g], [1.j]. Martyn also teaches that the "App Snapshot" is ***displayed along with the first application icon***. EX1005, Figures 2-3. For example, as shown below, the "App Snapshot" under the application icon for the "Messages application." EX1005, Figures 2-3; EX1003, ¶131.

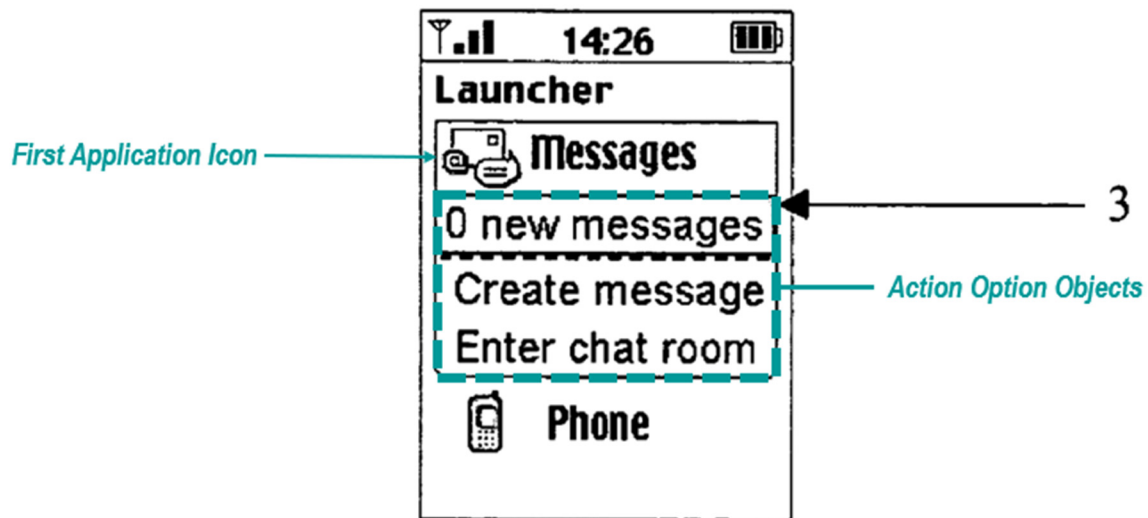


Figure 2

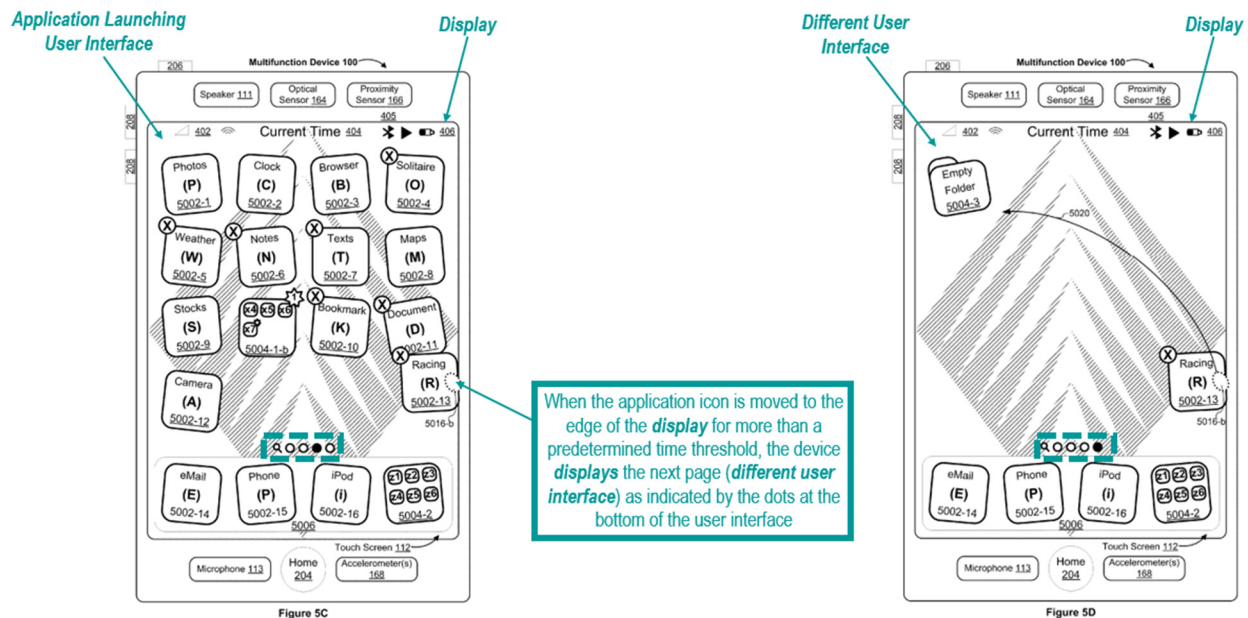
EX1005, Figure 2 (annotated); EX1003, ¶131.

(s) Claim 37

Element [37] The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [37]. EX1003, ¶132. As discussed at Elements [1.h], [1.l] and §VI.A.1, §VI.A.4, Chaudhri's teachings (as supplemented by Griffin) regarding the "reconfiguration mode" provide the claim limitations of *determining that the first single-finger touch input meets the one or more movement criteria* and responsively *moving* the

first application icon across the displayed application menu page (*application launching user interface*, per Element [1.f]). EX1004, [0220], Figures 5B-5C. Chaudhri also provides the additional limitations where *at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface*. EX1003, ¶132. For example, Chaudhri further teaches that, “[i]n response to detecting the [movement of application] icon 5002-13 [to] the edge of the display (e.g., touch screen 112) for more than the predetermined time threshold, the device navigates to [(displays)] a next set/page of selectable user interface objects [(a different user interface)].” EX1004, [0220-0221] Figures 5B-5D; EX1003, ¶132.



EX1004, Figures 5C-D (annotated); EX1003, ¶132.

(t) **Claim 38**

Element [38] The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of a different user interface is displayed on at least a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface immediately prior to detecting the first single-finger touch input.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [38] including for all the reasons discussed above at Element [37] regarding the shift from the original application menu page (*application launching user interface*, per Element [1.f]) to the next application menu page (*a different user interface*). EX1003, ¶133. Additionally, as discussed at Elements [1.f]-[1.g], Chaudhri teaches or renders obvious that the original application menu page, including its *plurality of application icons*, is displayed *immediately prior to detecting the first single-finger touch input*. EX1003, ¶133; *see also* EX1004, Figures 5A-5D.

(u) **Claim 39**

Element [39] The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of the application launching user interface is changed to display at least a portion of a different user interface on a portion of the display that was previously occupied by at least multiple of the plurality of application icons in the application launching user interface immediately prior to detecting the first single-finger touch input.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [39] for all the reasons discussed above at Elements [37], [38]. EX1003, ¶134.

(v) **Claim 40**

Element [40] The electronic device of claim 1, wherein the electronic device is configured such that, in accordance with the determination that the first single-finger touch input meets the one or more movement criteria, at least a portion of the application launching user interface is ceased to be displayed.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [40] including for all the reasons discussed above at Element [37] regarding Chaudhri's teaching to replace (*cease to display*) the original application menu page (*application launching user interface*, per Element [1.f]) with the next application menu page. EX1003, ¶135; *see also* EX1004, Figures 5A-5D.

(w) **Claim 41**

Element [41] The electronic device of claim 1, wherein the electronic device is configured such that the floating is a function of the movement of the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [41]. EX1003, ¶136. As discussed at Element [1.1] and §VI.A.1, §VI.A.4, Chaudhri’s teachings regarding the “reconfiguration mode” also establish or render obvious the concept of a ***floating movement of the first application icon*** across the display at different locations in accordance with drag touch moving the application icon. EX1004, [0220], [0282-0283], [0348], Figures 5B-5E, 5M-5N, 5JJ-5MM; EX1003, ¶136. As also discussed at Element [1.1], the first application moves across the screen at a layer that is higher than a layer of the non-moving application icons in addition to being above the “wallpaper ***background***” layer as ***a function of the movement of the first application icon***. EX1004, [0282-0283], [0348]; Figures 5B-5E, 5M-5N, 5JJ-5MM; EX1003, ¶136. Accordingly, as a POSITA would have understood, the manner in which ***the first application icon floats*** depends on (***is a function of***) ***the movement***—e.g., movement across the screen. EX1003, ¶136.

(x) Claim 42

Element [42] The electronic device of claim 1, wherein the electronic device is configured such that an action is performed utilizing the first application in response to detection of a selection of at least one of the one or more action option objects.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [42] including for all the reasons discussed above at Element [1.j] (explaining that Martyn’s App Snapshot provides *selectable action option objects* for performing “common functions” (*actions*) within *the first application*) and Elements [19]-[22] (discussing *actions* associated with Martyn’s “Messages” *application* that are accessible via the App Snapshot). EX1003, ¶137.

(y) Claim 43

Element [43] The electronic device of claim 1, wherein the electronic device is configured such that an action is performed utilizing another application other than the first application in response to detection of a selection of at least one of the one or more action option objects.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [43]. EX1003, ¶138. As discussed, this Combination includes Martyn’s teachings about an App Snapshot presenting *one or more action option objects*. *Supra*, Element [1.g], [1.j], §VI.A.4. For example, Martyn teaches a “contacts manager” (*first application*) with an associated “App Snapshot” listing the “email addresses” (*action option objects*) of various contacts. EX1005, [0030]; EX1003, ¶138. In response to

a user *selecting* the email address of a given contact, the device *performs an action utilizing another application*—an email application—to create “a new email form seeded with [the contact’s] email address.” EX1005, [0030]; EX1003, ¶138.

(z) **Claim 47**

Element [47] The electronic device of claim 1, wherein the electronic device is configured such that, during detection of the first single-finger touch input and prior to displaying the one or more action option objects, a user interface element is displayed to appear at least partially behind the first application icon.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [45] for all the reasons discussed above at §VI.A.1 (explaining that Chaudhri’s user interface pages for the application menu include a background wallpaper (*user interface element*) *displayed to appear behind the first application icon*), Element [1.1] (similar), and Element [1.g] (discussing *the detection of a single-finger touch input* while displaying the application menu). EX1003, ¶139.

(aa) **Claim 57**

Element [57] The electronic device of claim 1, wherein the electronic device is configured such that at least one of the one or more action option objects includes content that is dynamically generated.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [57]. EX1003, ¶140. As discussed, this Combination includes Martyn’s teachings about an App Snapshot presenting *one or more action option objects* in the form of

“common functions” of the associated application. *Supra*, Element [1.g], [1.j], §VI.A.4. Martyn also teaches that the device “may be able to learn what functionality [of the application]...[is] most likely to be of interest to a given user and which should therefore be included in a summary view to any given user.” EX1005, [0026]. In this way, the “constituency of the App Snapshot can [] vary as determined by...usage patterns of the user” in a *dynamic* way. EX1005, [0026]; EX1003, ¶140.

(bb) **Claim 58**

Element [58] The electronic device of claim 1, wherein the electronic device is configured such that at least one of the one or more action option objects includes content that is dynamically generated based on historical usage.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [58] for all the reasons discussed above at Element [57] (discussing Martyn’s teaching to *dynamically generate the action option objects* of the App Snapshot based on application “*usage* patterns”). EX1003, ¶141.

(cc) **Claim 59**

Element [59] The electronic device of claim 1, wherein the electronic device is configured such that at least one of the one or more action option objects includes content that is dynamically generated based on historical usage of the first application.

The Chaudhri-Martyn-Griffin Combination renders obvious Element [59] for all the reasons discussed above at Element [57] (discussing Martyn’s teaching to

dynamically generate the action option objects of the App Snapshot based on application “*usage* patterns”). EX1003, ¶142.

(dd) Claims 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121, 124

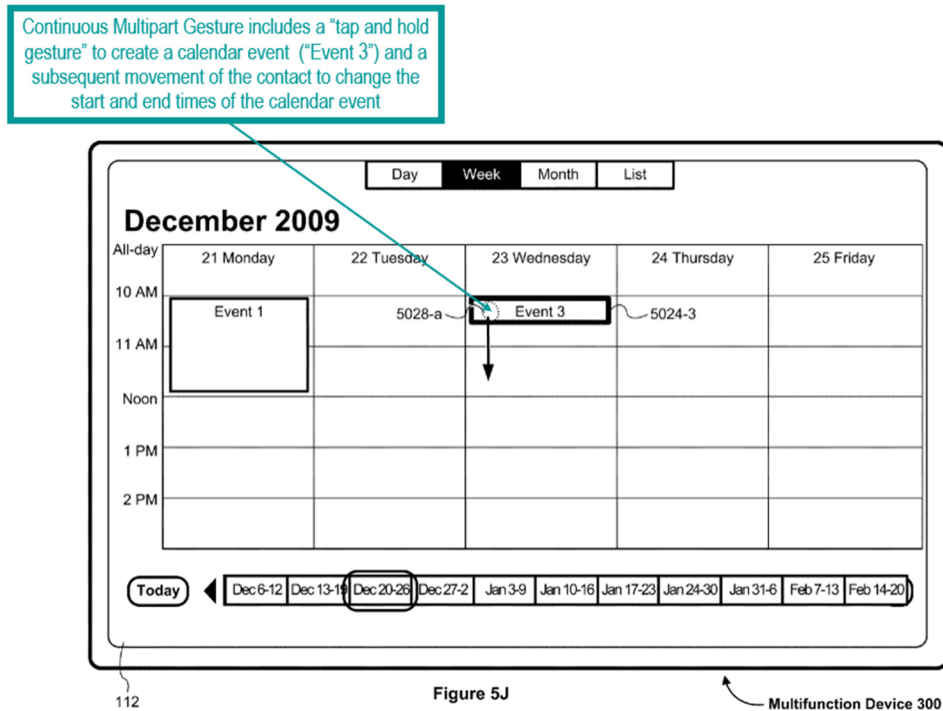
Claims 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121 are substantially similar to claims 1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59, respectively. EX1003, ¶143 (mapping the corresponding claim elements). Claim 124 is substantially similar to claim 1. EX1003, ¶143 (mapping the corresponding claim elements). These respective claim sets recite a similar series of steps in different forms and statutory categories—namely, as an “electronic device” with “one or more programs including instructions” to perform the steps (claims 1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59), as a “method” comprised of those steps (claims 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121), and as a “on-transitory computer readable storage medium” with “one or more programs comprising instructions” to perform the steps (claim 124). Accordingly, the Chaudhri-Griffin- Martyn Combination satisfies claims 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121, 124, for the same reasons discussed above regarding claims 1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59. EX1003, ¶143.

B. GROUND 2—Claims 1, 9, 12, 19-22, 24-32, 35-43, 47, 57-59, 63, 71, 74, 81-84, 86-94, 97-105, 109, 119-121, 124 Are Obvious Over Chaudhri, Martyn, Griffin, and Os

Ground 2 is identical to, and incorporates the analysis of, Ground 1 in all but one respect. Ground 2 introduces the additional disclosure of Os as an alternative basis to find that it would have been obvious to account for a continuous touch contact between Chaudhri’s touch-and-hold gesture to invoke the “reconfiguration mode” (Element [1.k]) and Chaudhri’s drag gesture to move the application icon (Element [1.l]). EX1003, ¶144. Integrating Os’ disclosure of continuous multipart gestures does not disturb the aspects of Chaudhri, Griffin, and Martyn mapped to the remaining claims and elements discussed above in Ground 1. EX1003, ¶144.

1. Os (EX1007)

Os discloses devices methods, and graphical user interfaces for manipulating selectable user interface objects. EX1007 [0007]; EX1003, ¶145. Os, a published patent application filed in 2010, demonstrates that “continuous multipart gesture[s]” were known and implemented before ’758 patent. EX1003, ¶145; EX1007, [0182]. In one example, Os describes detecting a “tap and hold gesture” on a “touch-sensitive surface...for more than a predetermined period of time...and subsequent lateral movement of the contact.” EX1007, [0182]. Here, Os describes using a touch-and-hold gesture to create a calendar event and a subsequent drag gesture to adjust the start and end times of that event. EX1007, [0182]; EX1003, ¶145.



EX1007, Figure 5J (annotated); EX1003, ¶145.

2. The Combination, Reasons to Combine, & Expectation of Success

As discussed above, a POSITA would have been motivated to combine Chaudhri, Martyn, Griffin to arrive at the predictable result outlined above in §VI.A.4.(c). EX1003, ¶¶146-149; *see also* ¶145. Multiple independent reasons (viewed separately or collectively) would have motivated a POSITA to further incorporate the “continuous multipart gesture[s]” taught by Os in conjunction with Chaudhri’s touch-and-hold gesture to enter the “reconfiguration mode” and subsequent drag gesture to move an application icon. EX1003, ¶¶146-149.

First, integrating continuous multipart gestures would predictably improve Chaudhri by making the user interface more intuitive to use. EX1003, ¶147. As discussed throughout Ground 1, Chaudhri's device recognizes and responds to a touch-and-hold gesture at an application icon to enter a "reconfiguration mode." EX1004, [0217-0218], [0313], Figures 5B, 7A, 7B; EX1003, ¶147. One primary purpose of the "reconfiguration mode" is to rearrange application icons, and the user would expect this functionality to manifest immediately. EX1004, [0015]; EX1003, ¶147. Accordingly, a POSITA would have been motivated to make the touch-and-hold and drag gestures detectable as part of a "continuous multipart gesture," as taught by Os. EX1003, ¶147.

Second, a POSITA would have been motivated to incorporate Os' "continuous multipart gesture" teaching in this way to increase the efficiency of the user interface. EX1003, ¶148. Simply put, the POSITA would have appreciated that an experienced user would be able to input one continuous multipart gesture more quickly than two distinct gestures. EX1003, ¶148. Combining Chaudhri's touch-and-hold and drag gestures in this way would allow users to accomplish the task of moving an application icon faster and with fewer finger movements. EX1003, ¶148.

Third, continuous multipart gestures were well known and commonly used for interacting with a touch screen user interface by 2011. EX1003, ¶149; *see also*

¶¶109-110. Such gestures were a well-known solution to the well-known problem of recognizing a series of related touch input commands. EX1003, ¶149; *see also* ¶¶109-110. Os implements a continuous multipart gesture to perform the related tasks of creating and manipulating an event GUI element in a calendar application (EX1007, [0182]), and it would have been axiomatic for a POSITA to do the same in the context of Chaudhri's related tasks of entering a "reconfiguration mode" and moving an application icon. EX1003, ¶149.

3. Element-by-Element Analysis

As discussed, Ground 2 is largely identical to, and incorporates the analysis of, Ground 1. Ground 2 differs in that it relies on the additional disclosure of Os relating to Element [1.1]. EX1003, ¶150. To reduce repetition, and because the analysis of all other claim elements is identical, only Element [1.1] is addressed here in Section VI.B.3.

(a) Claim 1

Element [1.1] in accordance with a determination that the first single-finger touch input meets the one or more movement criteria, moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer.

The Chaudhri-Martyn-Griffin-Os Combination renders obvious Element [1.1]. EX1003, ¶¶151-153.

As discussed, the Chaudhri-Martyn-Griffin Combination of Ground 1 provides the claim feature of *determining that the first single-finger touch input meets the one or more movement criteria* and *moving the first application icon in a foreground virtual display layer so that the first application icon appears to float above a background virtual display layer* when the user executes a drag gesture while the device is in the “reconfiguration mode.” *Supra*, §VI.A.5 Element [1.l]; EX1003, ¶152.

Moreover, although the claim language does not expressly recite that Chaudhri’s touch-and-hold gesture for invoking the “reconfiguration mode” (Element [1.k]) to occur continuously with Chaudhri’s drag gesture for moving the application icon (Element [1.l]), the Chaudhri-Martyn-Griffin-Os Combination renders such a design option obvious. EX1003, ¶153. For example, Os teaches a “continuous multipart gesture” that includes a “tap and hold gesture” combined with “subsequent lateral movement of the contact,” all while the user’s finger remains down on the touch screen. EX1007, [0182], Figure 5J; *supra*, §VI.B.1 (brief description of Os). As discussed, a POSITA would have been motivated to apply Os’s teachings to the Chaudhri-Martyn-Griffin Combination to provide functionality for accommodating Chaudhri’s touch-and-hold gesture and drag gesture as a single “continuous multipart gesture.” *Supra*, §VI.B.2; EX1003, ¶153; *see also* ¶¶146-149. In this way, the user could execute the touch-and-hold gesture to enter the

“reconfiguration mode” and subsequently execute the drag gesture to move an application icon without lifting their finger from the touch screen—i.e., as a single continuous touch input. EX1003, ¶153; *see also* ¶¶145-149.

VII. ANALYSIS ON DISCRETION

A. 35 U.S.C. §325(d)—*Advanced Bionics*

The *Advanced Bionics* framework strongly favors institution. There is no indication in the ’758 patent’s file history that the Examiner substantively considered Chaudhri, much less the above-discussed combinations with uncited supplemental references like Martyn and Griffin. Neither condition of Part One in the *Advanced Bionics* two-part framework is met. Further, while there is no need to reach Part Two of the *Advanced Bionics* framework, the record shows that the Challenged Claims were allowed based on a material error by the Examiner—a failure to thoroughly search, vet, and apply the prior art. Had the Examiner identified Chaudhri and appreciated its teachings in view of the prior art as a whole, the Challenged Claims would not have issued, especially not on a first-action allowance. *Supra*, §III.C.

B. 35 U.S.C. §314(a)—*Fintiv*

Institution should not be discretionarily denied under §314(a) because no *Fintiv* factor favors denial. Rather, five of the six factors enumerated in *Apple Inc.*

v. Finitv, Inc. weigh against discretionary denial, and the remaining factor is neutral. IPR2020-00019, Paper 11 at 2-3 (PTAB “precedential” Mar. 20, 2020).

Factor 1 weighs against discretionary denial. Apple intends to file a motion to stay the parallel litigation. Thus, factor 1 does not favor discretionary denial and, at worst, is neutral.

Factor 2 weighs against discretionary denial. Director Vidal’s Guidance instructed the Board that “when considering the proximity of the district court’s trial date to the date when the PTAB final written decision will be due, the PTAB will consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.” EX1098, pp. 3, 8. According to the latest published district court statistics, the median time to trial in the Southern District of California (SDCal) is 40.2 months, predicting a trial in November 2027—significantly later than a Final Written Decision would be issued in this case. EX1097, p. 69; EX1098, p. 8 (“A court’s scheduled trial date, therefore, is not by itself a good indicator of whether the district court trial will occur before the statutory deadline for a final written decision.”). For this reason alone, Factor 2 weighs against discretionary denial. Though a pre-trial conference of October 23, 2025 has been scheduled in the co-pending litigation, no trial date has been set, and it is uncertain whether the schedule will stick, particularly if Apple’s motion to stay is granted. EX1099, p. 6.

Factor 3 also weighs against discretionary denial because Petitioner has diligently filed this Petition while the co-pending litigation is still in its early stages. Petitioner filed as soon as practicable following Patent Owner Smith's election of 200 asserted claims from over 1,000 claims in the asserted patents just weeks before this filing. Beyond serving preliminary infringement contentions, the parties and the District Court have yet to expend significant resources. No invalidity contentions have been served, and discovery is in its infancy.

Factor 4 weighs against discretionary denial. As noted above, no trial date has been scheduled. And even using the pre-trial conference date of October 2025 as a reference point, if Apple's to-be-filed motion to stay is granted, the case schedule is going to change and any trial will be further delayed. Accordingly, it is likely that a final written decision will be issued before trial. Indeed, no stipulation has been offered given the lack of a trial date, and it otherwise remains too early to assess the suitability of a stipulation with invalidity contentions still not exchanged.

Factor 5 The parties in the parallel co-pending litigation are the same.

Factor 6 favors institution because the merits of this Petition are compelling, as described in this Petition.

VIII. PAYMENT OF FEES—37 C.F.R. §42.103

Petitioner authorizes the Patent and Trademark Office to charge any fees to Deposit Account No. 06-1050.

IX. MANDATORY NOTICES—37 C.F.R §42.8(a)(1)

A. Real Party-In-Interest—37 C.F.R. §42.8(b)(1)

Apple Inc. is the petitioner and the real party-in-interest.

B. Related Matters—37 C.F.R. §42.8(b)(2)

Petitioner is not aware of any disclaimers, reexamination certificates, or petitions for *inter partes* review for the '758 Patent. The '758 patent is the subject of a number of civil actions including: *Smith Interface Technologies, LLC v. Samsung Electronics Co., Ltd. et al.*, 2-22-cv-00290 (EDTX) (terminated), and *Smith Interface Technologies, LLC v. Apple Inc.*, 3-23-cv-01187 (SDCA) (pending).

C. Lead And Back-Up Counsel—37 C.F.R. §42.8(b)(3)

Petitioner provides the following designation of counsel:

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D. Service Information

Please address all correspondence and service to the address listed above.

Petitioner consents to electronic service by email at IPR50095-0168IP1@fr.com.

Respectfully submitted,

Dated: June 26, 2024

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CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 12,603 words, which is less than the 14,000 allowed under 37 CFR § 42.24.

Dated: June 26, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4)(i) *et seq.* and 42.105(b), the undersigned certifies that on June 26, 2024, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided via USPS Priority Express Mail, to the Patent Owner by serving the correspondence address of record as follows:

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