

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Michael S Smith
U.S. Patent No.: 10,725,581 Attorney Docket No. 50095-0170IP1
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Title: DEVICES, METHODS, AND GRAPHICAL USER
INTERFACES FOR MANIPULATING USER INTERFACE
OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

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**PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES PATENT
NO. 10,725,581 PURSUANT TO 35 U.S.C. §§ 311–319, 37 C.F.R. § 42**

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LIST OF EXHIBITS

EX1001	U.S. Patent No. 10,725,581
EX1002	U.S. Patent No. 10,725,581 File History
EX1003	Declaration of Dr. Andrew Cockburn
EX1004	US 2008/0259041 (“Blumenberg”)
EX1005	US 2008/0235594 (“Bhumkar”)
EX1006	US 2011/0248948 (“Griffin”)
EX1007-1019	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	US 7,479,949
EX1024	US 8,954,887
EX1025	US 2009/0244023
EX1026	US 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	US 2006/0197753
EX1032	Issues and Techniques in Touch-Sensitive Tablet Input (1985)
EX1033	US 5,612,719
EX1034	US 2008/0036743
EX1035	US 8,830,181
EX1036	US 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	Web Usability: A Review of the Research (1999)
EX1041	US 11/367,749
EX1042	Evolution of Mobile Devices and Operating Systems (2013)
EX1043	US 2008/0094368
EX1044	US 2008/0168405

EX1045	iPhone User Guide: For iPhone OS 3.1 Software (2009)
EX1046-1049	RESERVED
EX1050	Xlib—C Language X Interface, X Window System Standard (2002) (excerpts)
EX1051	US 2013/0007665
EX1052	US 2011/0252380
EX1053-1096	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_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 CHALLENGED CLAIMS

Claim 1	
[1.pre]	An electronic device, comprising:
[1.a]	a display;
[1.b]	a touch-sensitive interaction surface;
[1.c]	an actuator;
[1.d]	one or more processors;
[1.e]	memory; and
[1.f]	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 to:
[1.g]	display, on the display and via a user interface of a network browser application, a first web page including a hyperlink that identifies a second web page;
[1.h]	detect a first contact starting at a first contact point at a first contact time on the touch-sensitive interaction surface;
[1.i]	detect an end of the first contact at a second contact time;
[1.j]	determine a duration of the first contact as a difference between the first contact time and the second contact time;
[1.k]	determine whether there is a contact movement of the first contact between the first contact point and a second contact point;
[1.l]	determine whether the first contact point of the first contact corresponds with a location of the hyperlink of the first web page;
[1.m.i]	when: the first web page is displayed via the user interface of the network browser application,

[1.m.ii]	when...the duration of the first contact is determined to be less than a first user-configurable predefined duration, and the end of the first contact is detected:
[1.m.iii]	avoid display, on the first web page, a result of any operation based on the first contact;
[1.n.i]	when: the first web page is displayed via the user interface of the network browser application,
[1.n.ii]	when...the duration of the first contact is determined to be greater than the first user-configurable predefined duration and less than a second user-configurable predefined duration,
[1.n.iii]	when...the first contact point of the first contact is determined to correspond with the location of the hyperlink of the first web page,
[1.n.iv]	when...it is not determined that there is the contact movement of the first contact between the first contact point and the second contact point, and
[1.n.v]	when...the end of the first contact is detected:
[1.n.vi]	replace the display of the first web page with the second web page via the user interface of the network browser application; and
[1.o.i]	when: the first web page is displayed via the user interface of the network browser application,
[1.o.ii]	when...the duration of the first contact is determined to be greater than the second user-configurable predefined duration,
[1.o.iii]	when...the first contact point of the first contact is determined to correspond with the location of the hyperlink of the first web page,
[1.o.iv]	when...it is not determined that there is the contact movement of the first contact between the first contact point and the second contact point, and
[1.o.v]	when...the end of the first contact is not detected:

[1.o.vi]	output, utilizing the actuator, a first feedback that is perceptible by touch and
[1.o.vii]	display a menu including at least one option for, in response to detection of a selection thereof, performing an operation on a web address associated with the hyperlink of the first web page, and
[1.o.viii]	further display at least a portion of the second web page, such that at least the at least portion of the second web page is displayed in at least one first virtual display layer which appears above at least one second virtual display layer that includes at least a portion of the user interface of the network browser application that remains at least partially visible.

Claim 2	
[2.pre]	The electronic device of claim 1, wherein the electronic device is configured such that:
[2.a]	the user interface of the network browser is configured for performing an operation in response to it being determined that there is the contact movement of the first contact between the first contact point and the second contact point; and
[2.b]	the at least portion of the second web page is displayed in a view that is not configured for performing the operation in response to it being determined that there is the contact movement of the first contact between the first contact point and the second contact point.

Claim 3	
[3]	The electronic device of claim 1, wherein the electronic device is configured such that the first feedback that is perceptible by touch is output prior to the display of the menu.

Claim 21	
[21.pre]	The electronic device of claim 1, wherein the electronic device is configured such that:
[21.a]	the user interface of the network browser is configured for displaying: scrolling of the second web page via the user interface of the network browser application in response to detection of longitudinal contact movement, opening of one or more hyperlinks of the second web page in response to detection of a selection thereof, and opening of one or more manually entered web addresses in response to detection of a manual entry thereof; and
[21.b]	the at least portion of the second web page is displayed in a view that is different from the user interface of the network browser application in that the view is configured for not displaying: the scrolling of the second web page via the user interface of the network browser application in response to detection of the longitudinal contact movement, the opening of the one or more hyperlinks of the second web page in response to detection of the selection thereof, and the opening of the one or more manually entered hyperlinks in response to detection of the manual entry thereof.

Claim 29	
[29]	The electronic device of claim 1, wherein the electronic device is configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the second web page is enlarged.

Claim 30	
[30]	The electronic device of claim 1, wherein the electronic device is configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least one first virtual display layer is enlarged.

Claim 31	
[31]	The electronic device of claim 1, wherein the electronic device is configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least portion of the second web page is displayed via the user interface of the network browser application.

Claim 42	
[42.pre]	A method, comprising:
[42.a]	at an electronic device including a display, a touch-sensitive interaction surface, an actuator, one or more processors, and memory:
[42.b]	displaying, on the display and via a user interface of a network browser application, a first web page including a hyperlink that identifies a second web page;
[42.c]	detecting a first contact starting at a first contact point at a first contact time on the touch-sensitive interaction surface;
[42.d]	detecting an end of the first contact at a second contact time;
[42.e]	determining a duration of the first contact as a difference between the first contact time and the second contact time;

[42.f]	determining whether there is a contact movement of the first contact between the first contact point and a second contact point;
[42.g]	determining whether the first contact point of the first contact corresponds with a location of the hyperlink of the first web page;
[42.h]	based on detected usage where: the first web page is displayed via the user interface of the network browser application, the duration of the first contact is determined to be less than a first user-configurable predefined duration, and the end of the first contact is detected: avoiding display, on the first web page, a result of any operation based on the first contact;
[42.i]	based on detected usage where: the first web page is displayed via the user interface of the network browser application, the duration of the first contact is determined to be greater than the first user-configurable predefined duration and less than a second user-configurable predefined duration, the first contact point of the first contact is determined to correspond with the location of the hyperlink of the first web page, it is not determined that there is the contact movement of the first contact between the first contact point and the second contact point, and the end of the first contact is detected: replacing the display of the first web page with the second web page via the user interface of the network browser application; and

[42.j]	based on detected usage where: the first web page is displayed via the user interface of the network browser application, the duration of the first contact is determined to be greater than the second user-configurable predefined duration, the first contact point of the first contact is determined to correspond with the location of the hyperlink of the first web page, it is not determined that there is the contact movement of the first contact between the first contact point and the second contact point, and the end of the first contact is not detected: outputting, utilizing the actuator, a first feedback that is perceptible by touch and displaying a context menu including at least one option for, in response to detection of a selection thereof, performing an operation on a web address associated with the hyperlink of the first web page, and further displaying at least a portion of the second web page, such that at least the at least portion of the second web page is displayed in at least one first virtual display layer which appears above at least one second virtual display layer that includes at least a portion of the user interface of the network browser application that remains at least partially visible.
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Claim 43	
[43.pre]	The method of claim 42, wherein:
[43.a]	the user interface of the network browser is configured for performing an operation in response to it being determined that there is the contact movement of the first contact between the first contact point and the second contact point; and
[43.b]	the at least portion of the second web page is displayed in a view that is not configured for performing the operation in response to it being determined that there is the contact movement of the first contact between the first contact point and the second contact point.

Claim 44	
[44]	The method of claim 42, wherein the first feedback that is perceptible by touch is output prior to the display of the context menu.

Claim 54	
[54.pre]	The method of claim 42, wherein:
[54.a]	the user interface of the network browser is configured for displaying: scrolling of the second web page via the user interface of the network browser application in response to detection of longitudinal contact movement, opening of one or more hyperlinks of the second web page in response to detection of a selection thereof, and opening of one or more manually entered web addresses in response to detection of a manual entry thereof; and
[54.b]	the at least portion of the second web page is displayed in a view that is different from the user interface of the network browser application in that the view is configured for not displaying: the scrolling of the second web page via the user interface of the network browser application in response to detection of the longitudinal contact movement, the opening of the one or more hyperlinks of the second web page in response to detection of the selection thereof, and the opening of the one or more manually entered hyperlinks in response to detection of the manual entry thereof.

Claim 62	
[62]	The method of claim 42, wherein the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the second web page is enlarged.

Claim 63	
[63]	The method of claim 42, wherein the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least one first virtual display layer is enlarged.

Claim 64	
[64]	The method of claim 42, wherein the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least portion of the second web page is displayed via the user interface of the network browser application.

Claim 65	
[65]	The method of claim 42, wherein the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least portion of the second web page is displayed via the user interface of the network browser application.

Apple Inc. (“Petitioner”) petitions for IPR of Claims 1-3, 21, 29-31, 42-44, 54, 62-65 (“Challenged Claims”) of U.S. Patent No. 10,725,581 (“the ’581 patent”) based on the compelling evidence of obviousness presented throughout this Petition.

The ’581 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 Challenged Claims embrace rudimentary scenarios where common touch gestures are paired with known functions, such as the following:

- When the contact on a hyperlink is **brief and deemed inadvertent**, do nothing;
- When the contact on the hyperlink is a **tap**, replace the current webpage with the hyperlinked webpage; and
- When the contact on the hyperlink is a **hold**, overlay a portion of the hyperlinked webpage above the current webpage.

None of these scenarios were new at the time of the ’581 patent. As explained below in Section VI, it was known in the art to disregard inadvertent touches; to navigate from one webpage to another when the user performs a tap gesture on a hyperlink; and to display a preview or a snippet of a webpage identified by the hyperlink when the user performs a touch-and-hold 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 certifies that the ’581 patent is available for IPR, and that 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 Ground 1 listed below. A detailed declaration replete with corroborating evidence from Dr. Cockburn supports Ground 1. *See* EX1003, ¶¶26-27 (materials considered), ¶57 (conclusions formed).

Ground	Claims	Basis for Rejection
1	1-3, 21, 29-31, 42-44, 54, 62-65	§103–Blumenberg (US 2008/0259041), Bhumkar (US 2008/0235594), and Griffin (US 2011/0248948)

The '581 patent is not entitled to its earliest claimed priority date of August 5, 2011. Still, every art reference advanced in Ground 1 precedes that date.

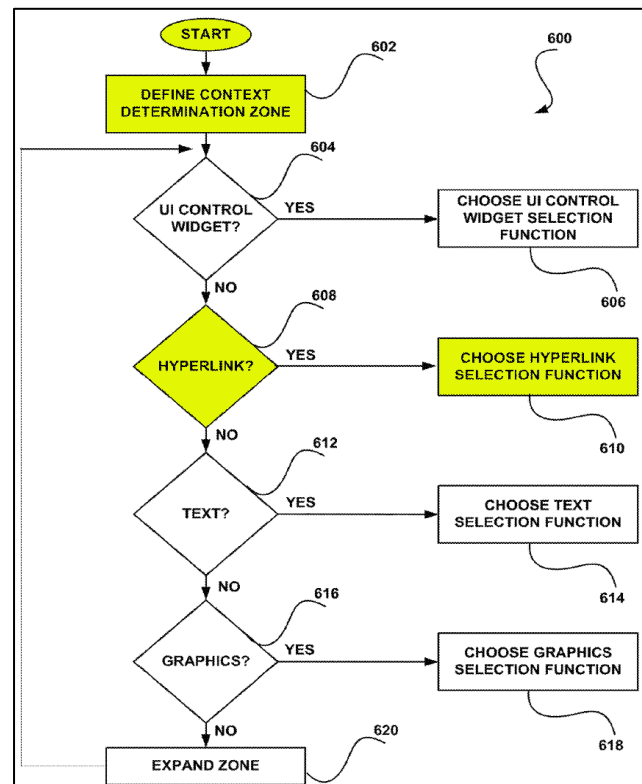
Reference	Prior Art Date	Status
Blumenberg (EX1004)	Published Oct. 23, 2008	§102(b)
Bhumkar (EX1005)	Published Sep. 25, 2008	§102(b)
Griffin (EX1006)	Filed Apr. 8, 2010	§102(e)

III. THE '581 PATENT

A. Pertinent Disclosure

The '581 patent “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, FIG. 3; EX1003, ¶¶30-32.

In one such embodiment, a method involves determining the point or area of the user’s touch contact and choosing an appropriate “selection function.” EX1001, 26:41-35:53, Fig. 6 (at right). For example, “a context sensitive embedded hyperlink selection function is chosen” when the context determination zone includes “at least one hyperlink.” *Id.*, 30:44-50.



According to the '581 patent, the hyperlink selection function “may have selection establishment conditions,” e.g., “if the contact pressure level surpasses a value of P_1 , but not P_2 , the selection establishment condition may change to require the selection of an option from a hyperlink contextual menu.” EX1001, 31:39-45. “The contextual menu may provide options common to web browsers, including but not limited to ‘open link’, ‘copy link’, and/or any other action which may be performed on or with a hyperlink.” *Id.*, 31:46-49.

B. Claimed Subject Matter

The '581 patent's Independent Claims 1 and 42 outline three scenarios regarding a user's contact with a touch screen device displaying a webpage via a web browser application.

The first scenario includes the contact duration being less than a first predefined duration. *See* Element [1.m.ii]. The second scenario includes the contact corresponding to a hyperlink and the contact duration being between the first predefined duration a second predefined duration. *See* Element [1.n.ii]. The third scenario includes the contact corresponding to a hyperlink and the contact duration being greater than the second predefined duration. *See* Element [1.o.ii].

Claims 1 and 42 further recite a respective functionality associated with each of the three contact scenarios. The functionality for the first scenario involves avoiding display of any operation. *See* Element [1.m.iii]. The functionality for the

second scenario involves replacing the current webpage with the webpage identified by the hyperlink. *See* Element [1.n.vi]. The functionality for the third scenario involves outputting tactile feedback, displaying at least one selectable menu option, and displaying a portion of the webpage identified by the hyperlink. *See* Elements [1.o.iv], [1.o.v], [1.o.vi].

To be clear, this feature combination of Independent Claims 1 and 42 is not described in the '581 patent's specification. The specification offers nothing to substantiate a contention that the inventors possessed the purported invention of the Challenged Claims when the '581 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 was 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 November 18, 2019, the Applicant (P4TENTS1, LLC) filed the '581 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, pp. 990-1170. Shortly thereafter, the Applicant filed two preliminary amendments, each canceling all previously pending claims in favor of one or more new claims. *Id.*, pp. 427-467, 477-484. The second of those preliminary amendments, filed on April 27, 2020, introduced the

Challenged Claims. *Id.*, pp. 427-467. Just ten days later, on May 7, 2020, the Examiner issued a first-action Notice of Allowance deeming the Challenged Claims ready for patenting. *Id.*, pp. 23-34. According to the Examiner, the prior art “teaches context sensitive gesture combinations” but lacks the specific interface functionality recited in the Challenged Claims. *Id.*, pp. 28-30.

The Examiner was wrong. 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, ¶¶36-37. Additional years of experience could substitute for an advanced-level degree (and vice versa). *Id.*

As Petitioner’s Dr. Cockburn explains, the POSITA would have possessed extensive background knowledge and understanding of the pertinent technologies employed by the ’581 patent, including touch screen mobile devices (EX1003, ¶¶38-39), menus in computer graphical user interfaces (*id.*, ¶¶40-46), tactile feedback in touch screen mobile devices (*id.*, ¶¶47-51), and duration-based touch gestures (*id.*, ¶¶52-56). These technologies were developed and commercially adopted long

before 2011. The '581 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)

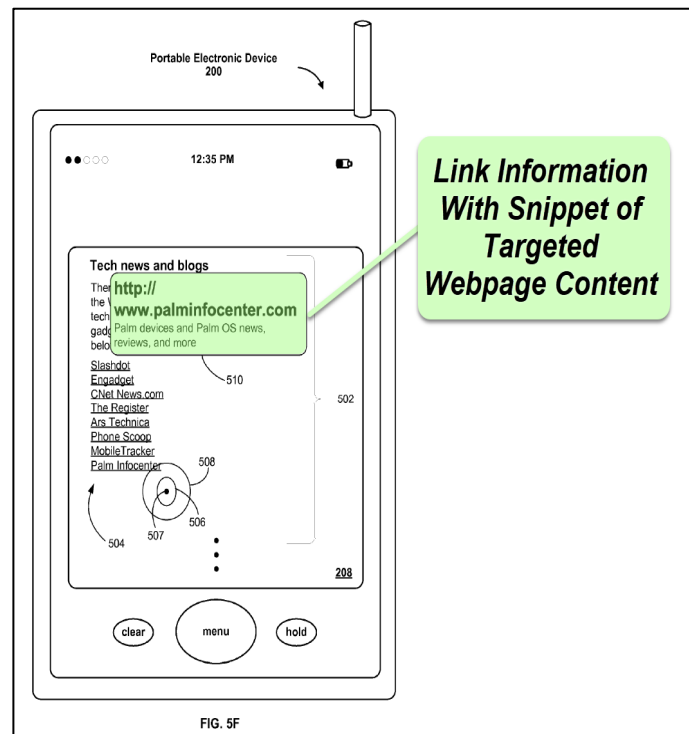
The prior art mapping analysis below in Section VI proves the Challenged Claims obvious under any interpretation reasonably advanced according to the *Phillips* standard, including if the Board were to apply case law from the Federal Circuit finding conditional claim language non-limiting. Moreover, because certain theories of invalidity (e.g., written description, enablement, and indefiniteness) are outside the scope of an IPR proceeding, Petitioner addresses various claim terms in this Petition as best understood in light of Patent Owner Smith's infringement allegations, reserving the right to assert one or more of these presently out-of-scope theories before the District Court. At this time, 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). However, 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 1-3, 21, 29-31, 42-44 Are Obvious Over Blumenberg, Bhumkar, and Griffin

1. Blumenberg (EX1004)

Blumenberg’s “disclosed embodiments relate generally to user interfaces for portable devices, and more particularly, to activating hyperlinks on a portable electronic device.” EX1004, [0002]; EX1003, ¶¶58-64. Specifically, Blumenberg’s embodiments alleviate the “frustrat[ion]” that users experience when using portable devices with small screens to browse the web. EX1004, [0002-0005]. In short, “because links in webpages displayed on a small screen may not be perceived easily by users,” “getting information about the hyperlinks and navigating to other webpages via the hyperlinks takes on a hit-or-miss character.” *Id.* In search of “more efficient ways to convey hyperlink information and select hyperlinks,” Blumenberg found the solution of a web browser for a touch screen device that displays “link information” previewing a “snippet of the content” from a webpage targeted by a link at or near the user’s touch. *Id.*, [0005], [0040], Figures 5F (right).



Like the Challenged Claims, Blumenberg’s design solution involves multiple scenarios regarding a user’s touch contact that corresponds to a hyperlink and associates each of those scenarios with a particular functionality. EX1003, ¶¶59-64.

A first scenario relates to detection of a contact that is characterized as an “inadvertent” contact—e.g., when the user contacts the touch screen for a duration of less than a threshold of “0.2 seconds”—which registers no selection and triggers no change on the display. EX1004, [0034], [0049]. For ease of discussion, this Petition references the touch duration threshold in Blumenberg’s first scenario as the selection threshold.

A second scenario relates to detection of a contact at a hyperlink that extends beyond the selection threshold, which results in selecting the hyperlink and displaying “link information” previewing “a snippet of the content from the [targeted] page.” EX1004, [0040], [0048-0049], Figures 5B-5C. If the user breaks contact following the selection threshold but before a “predetermined amount of time”—which this Petition refers to as the activation threshold—the selected link is activated and the browser navigates to the targeted webpage. *Id.*, [0051] (“the activation of the link may be triggered by...a quick tap”), Figures 5C-5D.

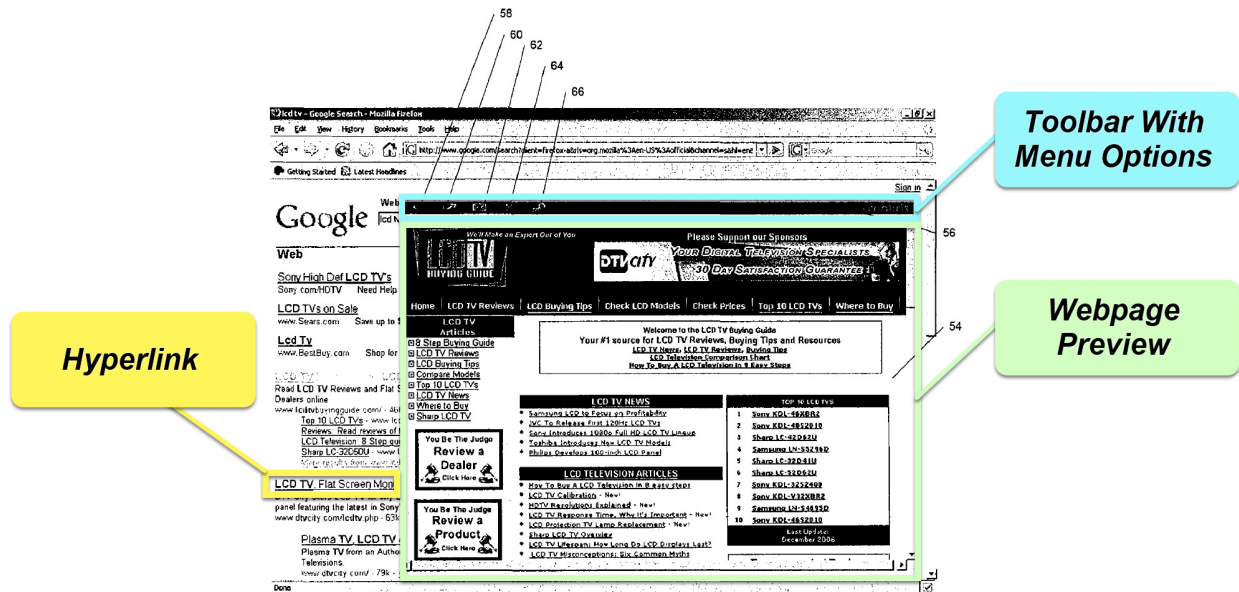
A third scenario includes contact at the hyperlink that extends for a duration beyond the activation threshold. EX1004, [0051], Figure 5C. In that case, the “link information” previewing the targeted webpage is maintained on the display during

and after the user breaks contact. *Id.* That is, once the contact duration surpasses the activation threshold, a break in contact no longer triggers immediate activation of the selected hyperlink. *Id.* Instead, the “link information” remains on the display after the break, and the user may then execute a confirmatory tap to activate the hyperlink and visit the targeted webpage. *Id.*¹

2. Bhumkar (EX1005)

Bhumkar “relates to the display and/or consumption of information, such as over the Internet,” and describes techniques to facilitate “navigating, displaying, extracting, sharing and/or storing links, text and/or media using gesture-based or similar interfaces.” EX1005, [0002]; EX1003, ¶65. For example, as shown below, Bhumkar discloses embodiments featuring “a ‘quick view’ or ‘preview’ of a target web site.” EX1005, [0038]. Bhumkar’s webpage “preview” can “be used with any hyperlinks or similar anchors associated with any [w]eb page rendered in a browser.” *Id.* In the Figure 5 embodiment below, Bhumkar’s preview window includes a variety of options displayed on a “toolbar” menu for extracting and sharing content of the previewed webpage. *Id.*, [0071-0075]; *see also* [0021], [0042-0043].

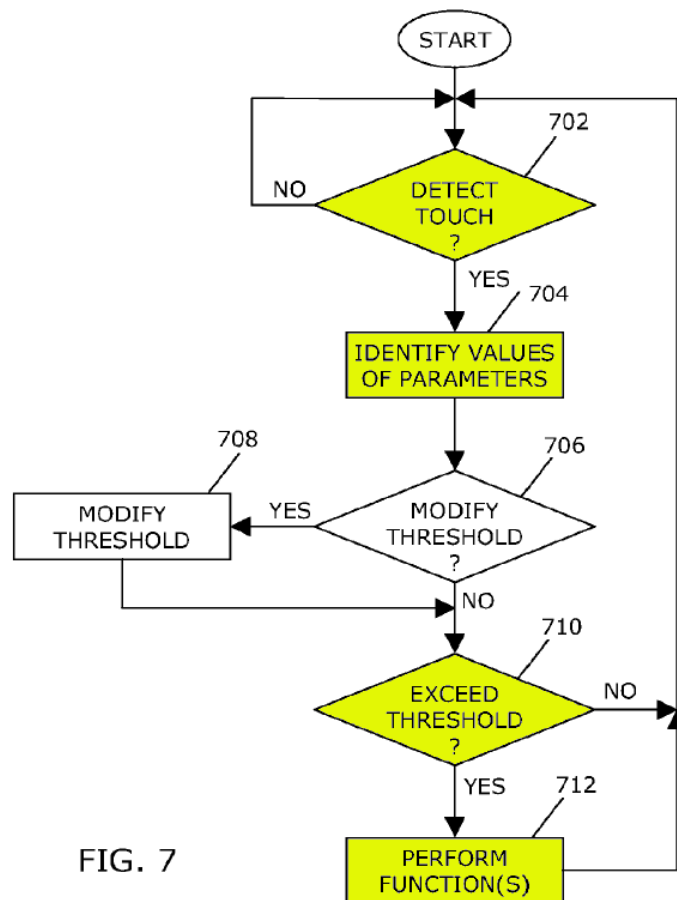
¹ General descriptions provided for this and other references and combinations thereof are incorporated into each subsection and mapping of the claims that includes citations to these references.



Id., Figure 5 (annotated).

3. Griffin (EX1006)

Griffin discloses the concept of applying “touch thresholds” to certain monitored “parameters” of the user’s contact with a touch screen. EX1006, [0032], [0040], [0053]. When the value of a touch parameter surpasses a given threshold, the device performs a corresponding functionality and optionally provides tactile feedback, as demonstrated in the flow chart below from Griffin’s Figure 7. *Id.*, [0053]. In this way, the user can access a variety of different functions by varying the duration, force, and/or area of contact. EX1003, ¶66.



Id., Figure 7 (highlighted).

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

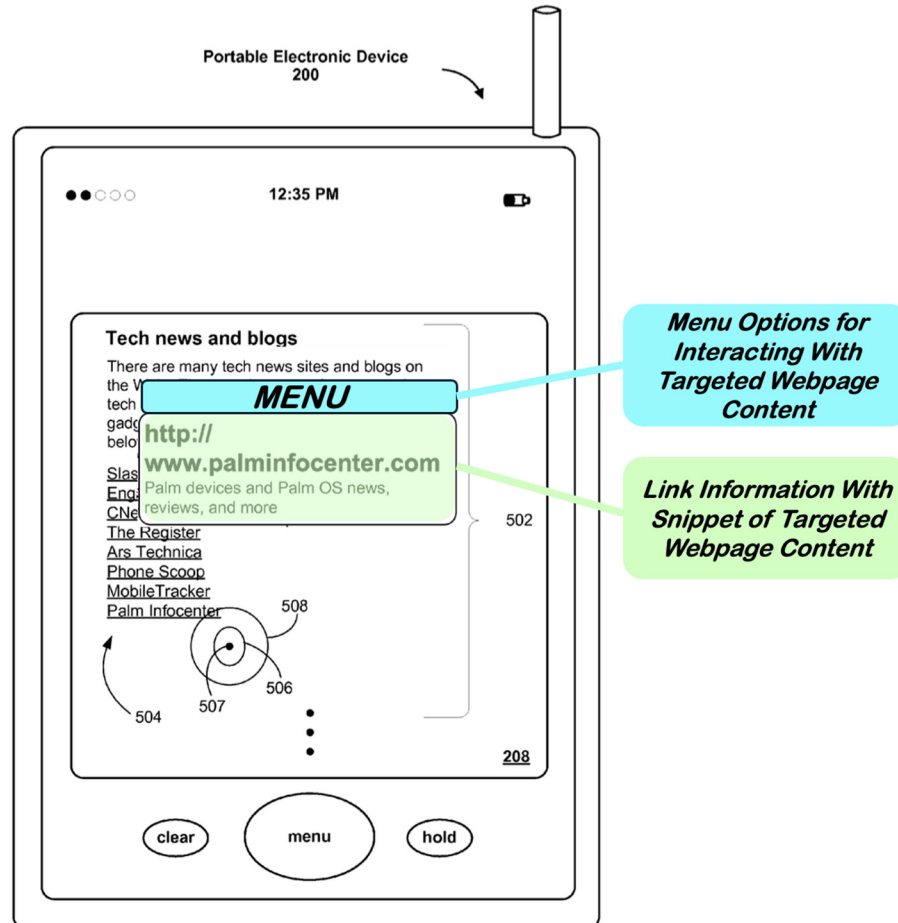
The Blumenberg-Bhumkar-Griffin Combination represents the predictable and expected result of applying in the context of Blumenberg's web browser: **[a]** Bhumkar's teachings on menu options for interacting with a webpage preview window corresponding to a hyperlink; **[b]** Griffin's teachings on multiple user-configurable touch duration thresholds; and **[c]** Griffin's further teachings on triggering selective tactile feedback. EX1003, ¶67. From a POSITA's perspective

in 2011, integrating the supplemental teachings of Bhumkar and Griffin with Blumenberg's disclosure would have involved nothing more than applying known solutions to known problems in the field of computer interfaces and applications to achieve predictable outcomes. *Id.* The fundamental aspects of Blumenberg's disclosure would remain intact, bolstered by the well-known and beneficial teachings of Bhumkar and Griffin to arrive at the '581 patent's claimed invention with a reasonable expectation of success. *Id.*; *see also* ¶¶96 (discussing reasonable expectation of success).

(a) Applying Bhumkar's teachings on menu options for interfacing with a webpage preview in the context of Blumenberg's web browser

A POSITA would have been motivated to incorporate Bhumkar's teachings about providing menu options for a webpage preview with Blumenberg's teachings about displaying "link information" previewing a snippet of content from a webpage targeted by a selected hyperlink. EX1003, ¶69. The predictable result of this Blumenberg-Bhumkar Combination includes a touch screen mobile device with a web browser that displays "link information" previewing a snippet of targeted webpage content, as Blumenberg teaches, and further displays a menu of options for interacting with that targeted webpage content, per Bhumkar. *Id.* The visual aid below demonstrates an exemplary display of a web browser embraced by the

Blumenberg-Bhumkar Combination, illustrating both the webpage previewing “link information” (green) and an accompanying menu (blue).² *Id.*



The following independent reasons, taken separately or collectively, support the Blumenberg-Bhumkar Combination. EX1003, ¶¶70-82.

First, providing menu options associated with the displayed content of an application or information window was a ubiquitous feature in computer GUIs by

² This visual aid includes an adapted drawing from Blumenberg. To be clear, Petitioner is not proposing a bodily incorporation of Blumenberg and Bhumkar.

2011. EX1003, ¶¶71-72. To wit, menus had been a core feature in GUIs for nearly half a century beforehand. *Id.*; *see also* ¶¶40-46 (discussing, with corroborating evidence, the extensive use of menus in desktop and mobile device GUIs decades before the '581 patent). Menus were an exceedingly well-known solution to the equally well-known problem of presenting available actions and functionalities for selection by the user. *Id.* Bhumkar employs a menu to augment a webpage preview for this purpose, and it would have been axiomatic for a POSITA to do the same in the context of Blumenberg's "link information" that similarly previews webpage content. EX1003, ¶72.

Second, a POSITA would have recognized that applying Bhumkar's teaching of a menu for a webpage preview window would predictably improve Blumenberg's browser from a usability standpoint. EX1003, ¶¶73-74. Specifically, it would have been apparent to the POSITA that providing menu options in connection with a preview window, as Bhumkar teaches, would allow the user to accomplish common tasks associated with the target webpage (e.g., sharing the page with an acquaintance) more quickly and efficiently (e.g., with fewer user inputs). As the POSITA would have known, usability in this context—e.g., the degree to which a given web browser efficiently facilitates the user's desired task—was a key differentiator amongst competing web browsers. EX1003, ¶74. While the same web content could be accessed on two competing web browsers, differences in the user

interface could make accessing that content more efficient on one of the two. *Id.* The browser with a superior interface from a usability standpoint would be more desirable to consumers, particularly in the crowded marketplace of mobile devices. (explaining with reference to EX1038 that “usability” is an “important” aspect of mobile device applications in a crowded marketplace). In this way, “design incentives and other market forces” would have prompted the Blumenberg-Bhumkar Combination. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007).

Third, a POSITA would have been prompted to pursue this combination based on Bhumkar’s express teachings and motivations. EX1003, ¶¶75-76. Bhumkar recognized certain problems with earlier “interfaces to the Internet”: For example, they “make extracting information somewhat restrictive and often involve multiple steps.” EX1005, [0009-0010]. Bhumkar’s solution involves providing a window to display a preview of a target webpage for a hyperlink on a current webpage and pairing the preview window with an associated set of menu options for, among other things, saving or sharing content of the target webpage without leaving the current webpage or invoking a separate application (e.g., an email client). *Id.*, [0038-0043]. Understanding the similarities between Blumenberg’s “link information” and Bhumkar’s webpage preview, the POSITA would have sought to predictably improve Blumenberg’s browser in the same way Bhumkar did. EX1003, ¶76.

Fourth, a POSITA would have been prompted to pursue this combination based on the teachings, suggestions, and motivations evident from Blumenberg. EX1003, ¶¶77-82.

As discussed, Blumenberg sets forth multiple touch duration thresholds that dictate how the device and its web browser application respond to touch inputs. *Supra*, §VI.A.1. When the duration of the user’s touch is greater than the selection threshold and less than the activation threshold (e.g., a tap), the browser responds by activating the link and loading the target webpage. *Id.* (discussing Blumenberg’s “second” scenario). On the other hand, when the duration is greater than the activation threshold (e.g., a hold), the browser maintains a preview of the targeted webpage and requires a confirmatory tap before activating the selected link and navigating to the target webpage. *Id.* (discussing Blumenberg’s “third” scenario).

Regarding this latter scenario, a POSITA would have understood that Blumenberg’s browser requires a confirmatory tap because the extended touch duration indicates the user’s competing interests in [i] potentially interacting with the candidate target webpage; and/or [ii] leaving the current webpage. EX1003, ¶79. Accordingly, the POSITA would have appreciated that introducing some degree of functionality to interact with Blumenberg’s webpage preview after the activation threshold would naturally assist the user with choosing and accomplishing their next step. *Id.* In an attempt to address the user’s competing interests, the POSITA would

have sought to integrate functionality for the user to interact with the target webpage without leaving the current webpage. *Id.*, ¶80. Bhumkar, a prior art reference analogous to both the '581 patent and Blumenberg, provides exemplary teachings on the subject of interactive webpage previews and, therefore, would have commended itself to the POSITA. *Id.*

Moreover, the POSITA would have appreciated that there are additional benefits to introducing menu options to the displayed webpage preview after the duration of the user's touch surpasses Blumenberg's activation threshold. EX1003, ¶82. For example, it would have been apparent to the POSITA that modifying the display to add menu options accompanying the webpage preview at this time would provide some degree of visual feedback to the user, indicating that the device has transitioned to a different state. *Id.* As another example, displaying the menu options when they become selectable by a conventional tap gesture—i.e., after the activation threshold—would provide a more effective prompt and enhance usability by avoiding an otherwise confusing scenario that would occur if the options were presented before the user could fully interact with them. *Id.* (Dr. Cockburn explaining, among other things, why Bhumkar's menu options would not be selectable by a tap gesture before the activation threshold).

**(b) Applying Griffin's teachings on tactile feedback
in the context of Blumenberg's web browser**

As discussed, Griffin teaches a portable touch screen device that triggers specific functionalities based on corresponding touch thresholds. *Supra*, §VI.A.3. Griffin also teaches that these triggered functionalities can be paired with tactile feedback induced by actuators beneath the touch screen. *E.g.*, EX1006, [0053] (discussing an embodiment where a virtual keyboard function is paired with tactile feedback when a predetermined touch threshold is met), [0057]. In the context of a web browser, Blumenberg similarly describes how touch duration thresholds can be used to trigger application-specific functionalities. *Supra*, §VI.A.1. A POSITA would have been motivated to incorporate Griffin's notion of applying selective tactile feedback in this context for at least the following independent reasons. EX1003, ¶¶83-88.

First, a POSITA would have been prompted to seek out and incorporate Griffin's teachings on tactile feedback in view of Blumenberg's teachings and suggestions to do so. EX1003, ¶¶84-85. According to Blumenberg, the touch-sensitive display of its disclosure can be implemented "as described in...U.S. patent application Ser. No. 11/367,749, 'Multi-Functional Hand-Held Device,' filed on Mar. 3, 2006" and "incorporated by reference herein." EX1004, [0026]. This incorporated '749 Application expressly describes 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 (at [0161]); *see also generally id.*, pp. 42-43 (at [0160-0163]). Appreciating that the “touch events” in Blumenberg are associated with predetermined touch duration thresholds, it would have been apparent to the POSITA that the haptic/tactile feedback Blumenberg teaches (via the ’749 Application) should be used to alert the user when a given threshold is reached, just as Griffin describes. EX1003, ¶85.

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, ¶86. By the time of the Critical Date in 2011, “most” mobile devices incorporated tactile feedback for one or more of these purposes. *Id.* (quoting EX1030, p. 1); *see also* ¶¶47-51 (discussing, with corroborating evidence, the extensive use of tactile feedback with touch screen devices before the ’581 patent). A POSITA, therefore, would have been prompted by ongoing design trends and market forces to implement a similar solution, as taught by Griffin, in the context of Blumenberg. *Id.*, ¶86. As discussed, one of the significant events in Blumenberg occurs when the user’s touch duration reaches and surpasses the activation threshold, meaning the user must execute a confirmatory tap to visit the target webpage. *Supra*, §VI.A.1. The POSITA, appreciating that the user should be alerted to this event and given a cue to execute the confirmatory tap,

would have been motivated to use the widespread solution of providing tactile feedback as a response to the user's touch-and-hold input. EX1003, ¶86.

Third, a POSITA would have recognized the similarities between Griffin and Blumenberg and understood that Griffin's tactile feedback teaching would apply equally to Blumenberg. EX1003, ¶87. Both of these references describe touch screen mobile devices that trigger different functionalities based on the duration of the user's touch. *Id.* Thus, it would have been clear to a POSITA that Griffin's teaching to use tactile feedback in conjunction with a triggered functionality would accomplish the same alerting/prompting benefit in Blumenberg as it does in Griffin. *Id.* (Dr. Cockburn explaining that using tactile feedback to alert and prompt a user was "exceedingly simple and ubiquitous," and further explaining that a POSITA would have appreciated its broad applicability to touch screen devices); *see also* ¶¶47-51. This predictable use of prior art elements according to their known functions is obvious as a matter of law under *KSR*.

Fourth, a POSITA would have appreciated that the inclusion of tactile feedback would prove particularly beneficial in Blumenberg because the result of exceeding the activation threshold—i.e., the requirement to give a confirmatory tap input—may not be otherwise perceivable to the user. EX1003, ¶88. For example, any material change to the display when the device transitions to a different state after the activation threshold may be difficult for some users to perceive, particularly

on a small-screen mobile device.³ *Id.* Similarly, the user may be in an environment where audible alerts are undesirable or undistinguishable from ambient noise. *Id.* In this context, tactile feedback would be especially effective and desired. *Id.*

(c) Applying Griffin’s teachings on multiple user-configurable touch duration thresholds in the context of Blumenberg’s web browser

Griffin and Blumenberg both describe touch screen mobile devices where different functionalities are triggered by touch duration thresholds. *Supra*, §VI.A.3, §VI.A.1. Griffin further provides an exemplary process flow with implementation details associated with tracking touch contact, comparing the contact to predetermined touch duration thresholds, and modifying the thresholds automatically and/or based on user input. *Id.* A POSITA would have had multiple independent reasons to pursue a predictable combination that applies Griffin’s rudimentary implementation details in the context of Blumenberg’s disclosure. EX1003, ¶¶89-95.

³ As Dr. Cockburn explains, the discussion above at Section VI.A.4.a about incorporating visual feedback to signal the state change associated with surpassing the activation threshold does not detract from the further notion of also incorporating tactile feedback. EX1003, ¶88 n3.

First, Blumenberg's instruction to trigger specific web browser functionalities based on the duration of the user's touch contact on a given hyperlink would have prompted a POSITA to seek out and apply the teachings from references in the same field, like Griffin, that provide rudimentary implementation details. EX1003, ¶¶90-92. From the POSITA's perspective, the straightforward discussion in Griffin about tracking touch duration, comparing the touch duration to predetermined thresholds, and modifying those thresholds are implicit and/or expressly suggested by Blumenberg. *Id.*, ¶91 (Dr. Cockburn explaining that Blumenberg's disclosure raises a "simple design problem" regarding duration-based touch gestures to which Griffin's disclosure provides the evident solution). In short, the POSITA would have been motivated by Blumenberg's teachings and suggestions to pursue this predictable combination with Griffin. *Id.*, ¶92.

Second, Griffin's implementation details were all known techniques, and applying them in the context of a similar reference like Blumenberg to obtain a substantially similar result would have been obvious as a matter of law under *KSR*. EX1003, ¶92. Third, Griffin's process would have been viewed by a POSITA as particularly advantageous because it allows for automatic or manual modifications to the touch thresholds, increasing usability by making the device more adaptable and customizable to the user. *Id.*, ¶¶94-95; EX1006, [0014], [0042]; [0046-0052] (explaining that touch thresholds can be changed automatically or manually).

5. Claim Element Analysis

(a) Claim 1

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

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.pre]. For example, per Blumenberg, the Combination includes “a portable *electronic device*.” EX1004, [0009], [0020], Figures 1-2, 5A-5I; EX1003, ¶97.

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

The Blumenberg-Bhumkar-Griffin Combination renders obvious Elements [1.a], [1.b]. EX1003, ¶98. For example, per Blumenberg, the Combination includes “a portable electronic device having a *touch-sensitive display* 112,” which “is sometimes called a ‘touch screen.’” EX1004, [0023]; *see also* [0007-0009], [0022] (describing the “touch screen” as a type of “physical user interface device”), [0025] (identifying “*touch sensitivity* technologies” for “detect[ing] contact and any movement of break thereof” with the surface of the touch screen), [0026] (“Multipoint *Touch Surface* Controller”), Figures 1-2, 5A-5I; EX1003, ¶98 (explaining that a “*touch* screen” is designed to facilitate user input via *touch interactions* on the outer screen *surface*).

Element [1.c] an actuator;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.c]. EX1003, ¶99. For example, as discussed at §VI.A.4.b, the Combination

incorporates Griffin's teaching to give "tactile feedback provided by [one or more] **actuators**" in response to determining that the user's contact on the touch screen has reached a given touch threshold. EX1006, [0034]; *see also* [0014], [0024], [0030], [0032], [0035], [0053], [0057], Figure 1.

Elements [1.d] one or more processors; [1.e] memory; and [1.f] 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 to:

The Blumenberg-Bhumkar-Griffin Combination renders obvious Elements [1.d], [1.e], [1.f]. EX1003, ¶100. For example, the Combination incorporates Blumenberg's description of "a portable electronic device having a touch-sensitive display 112" including "a memory controller 120 [and] one or more data **processors**, image **processors** and/or central **processing units** 118." EX1004, [0023]; *see also* [0009], Figure 1. "The memory controller 120 may be coupled to **memory** 102." *Id.*, [0029]; *see also* [0009]. The memory 102 "**store[s]**" various "sets of **instructions**" in the form of "**programs**, procedures or modules" to perform the functionality described throughout Blumenberg. *Id.*, [0029-0033]; *see also* [0009] ("[A] portable electronic device includes a touch screen display, **one or more processors, memory; and a program. The program is stored in the memory and configured to be executed by the one or more processors.**"), Figure 1.

Element [1.g] display, on the display and via a user interface of a network browser application, a first web page including a hyperlink that identifies a second web page;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.g]. EX1003, ¶¶101-102. For example, the Combination includes Blumenberg’s teaching of “[a] portable device 200 with a touch-sensitive **display** 208 (also known as a touch screen)” configured to “**display a [first] webpage** or some other document 502” including “one or more **links** 504” that **identify** various (**second**) targeted **webpages**.⁴ EX1004, [0044-0045], Figure 5A (annotated below); *see also* [0030] (defining “link” as shorthand for “hyperlink”). As is conventional, webpage content in Blumenberg is “rendered in a web **browser application**.” EX1004, [0036]; *see also* [0002-0005] (describing the disclosure as directed to “web browsing via a wireless **network**”), [0020], [0024], [0030-0031] (the web browser application “render[s] pages written in [various]...languages suitable for composing webpages or other online content”), Figure 1.

⁴ Note that numerical terms like “first” and “second” in the Challenged Claims serve the conventional purpose of distinguishing between otherwise identical nouns like “webpage,” “contact,” etc. *Cf. 3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003).

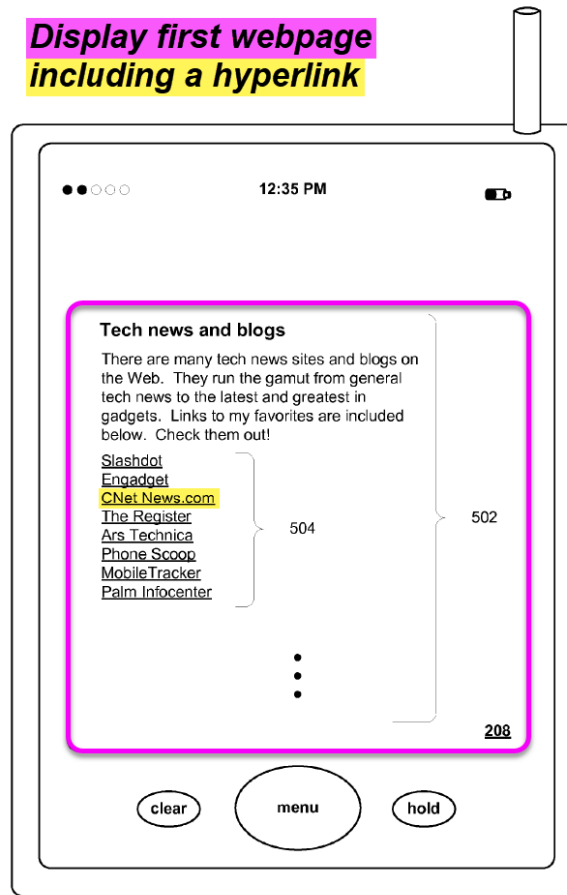


FIG. 5A

EX1004, Figure 5A (annotated).

Elements [1.h] detect a first contact starting at a first contact point at a first contact time on the touch-sensitive interaction surface; [1.i] detect an end of the first contact at a second contact time;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Elements [1.h], [1.i]. EX1003, ¶¶103-106. For example, the Combination includes Blumenberg's description of a process flow where a "[first] contact with the touch screen is *detected*" and a "[first] point within the contact area [of the detected *first contact*] is determined" at a *first contact time*. EX1004, [0036-0038], Figure 3; see

also [0007-0011], [0025], [0029], [0032], [0034], [0042-0043], [0046-0047], [0049], [0051], Figures 3-4; *supra*, Element [1.a] (mapping Blumenberg’s “touch screen” teachings to the *touch-sensitive interaction surface*).⁵ Blumenberg further describes functionality to “*detect [a first] contact* and any movement or break thereof.” *Id.*, [0025]; *see also* [0034] (“selection...occurs when the user breaks contact”), [0051] (“the activation is triggered by breaking the contact”), Cls. 18-20 (“contact is broken”). It would have been apparent or obvious to a POSITA that a “break,” as disclosed by Blumenberg, marks *an end of the first contact at a second contact time*. EX1003, ¶¶104-105.

To the extent Patent Owner disputes the above-discussed teachings of Blumenberg, the notion that a *first contact* at a determined *first contact point* on the touch screen begins at a *first contact time* and ends at a *second contact time* would have been exceedingly apparent and obvious to a POSITA. EX1003, ¶106. First, the POSITA would have appreciated that a touch contact/gesture on a touch screen, like any real-world event, must begin and end at some point in time. *Id.* Second, the POSITA would have understood that detecting an event such as a touch contact,

⁵ Griffin similarly describes that “touch contacts...may be detected” and a processor “may determine attributes of the touch, including a location of a touch.” EX1006, [0023]; *see also* [0034], [0040], Figure 7; *supra*, §VI.A.4.c. (motivation).

as taught by Blumenberg, typically includes identifying when—in time—the event begins and ends. *Id.* Third, the surrounding context of Blumenberg (and Griffin) signals to the POSITA that the device records the start time of the touch contact and the end time of the touch contact in order to determine whether and when a given touch duration threshold is met. *Id.* For at least these same reasons, to the extent *a first contact time* and *a second contact time* is not suggested by or implicit in Blumenberg and/or Griffin (which they are), these trivial features would have been obvious to a POSITA exercising common sense and ordinary creativity, especially given the nature of the problems to be solved in prior art references like Blumenberg (and Griffin) that describe techniques where device functionality is at least in part dictated by touch duration. *Id.*

Element [1.j] determine a duration of the first contact as a difference between the first contact time and the second contact time;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.j]. EX1003, ¶¶107-110. For example, consistent with the discussion at Elements [1.h]-[1.i] above and Elements [1.m.ii], [1.n.ii], [1.o.ii] below, Blumenberg describes a technique where a given web browser functionality is triggered when the “[*first*] *contact* is maintained for [a] predetermined amount of time.” EX1004, [0049]; *see also* [0051]; *supra*, §VI.A.1. From a POSITA’s perspective, Blumenberg’s disclosure of selectively performing specific functions when a touch

contact is “maintained” for a certain amount of time teaches and/or suggests the claimed concept of *determining a duration of the first contact*. EX1003, ¶107 (discussing the “simple design problem of determining when the user’s contact exceeds the ‘predetermined amount of time’”); *see also* ¶¶52-56 (explaining, with corroborating evidence, that duration-based touch gestures were prevalent in the prior art before the ’581 patent).

As discussed at §VI.A.3 and §VI.A.4.c, Griffin provides supplemental and confirmatory teachings to the Blumenberg-Bhumkar-Griffin Combination on *determining a duration of the first contact*. Griffin, for example, describes a 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*.” *Id.*; *see also* [0032], [0037], [0042-0043], [0050]. Later in Griffin’s process flow, the touch duration value is compared to one or more touch duration thresholds to determine whether a particular function should be performed. *See id.*, [0053], [0032], Figure 7 (element 710).

Additionally, consistent with the discussion above at Elements [1.h]-[1.i], it would have been apparent and/or obvious to a POSITA exercising common sense and ordinary creativity that the first contact touch *duration* taught/suggested by Blumenberg and Griffin accounts for the *difference between the first contact time and the second contact time*. EX1003, ¶109. Indeed, the notion of a “touch

duration” in Griffin and a touch “maintained for [a] predetermined amount of time” in Blumenberg contemplates the difference between a start time of the touch contact and an end time of the contact. *Id.*; *see also* ¶¶52-56.

To the extent Patent Owner argues or the Board finds that the Challenged Claims require an explicit calculation of the first contact duration by arithmetically taking the *difference between the first contact time and the second contact time*, Element [1.j] is no less obvious. EX1003, ¶110. Subtracting the start time from a later time, such as the current time during an event or the end time of the event, was a common approach to determining the event’s duration. *Id.* This trivial feature would have been obvious to a POSITA exercising common sense and ordinary creativity, especially given the nature of the problems to be solved in prior art references like Blumenberg and Griffin that describe techniques where device functionality is at least in part dictated by touch duration. *Id.*

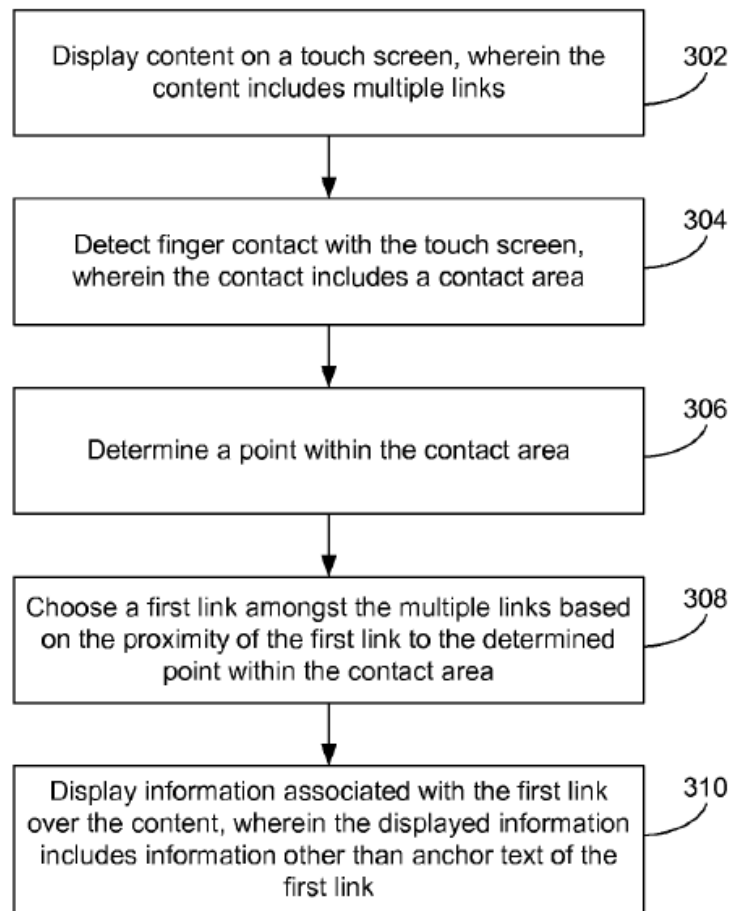
Element [1.k] determine whether there is a contact movement of the first contact between the first contact point and a second contact point;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.k]. EX1003, ¶¶111-112. For example, the Combination includes Blumenberg’s teaching of functionality to “detect *[a first] contact* and any *movement* or break thereof.” EX1004, [0025]; *see also* [0029] (“*determine* one or more *points of contact* and/or their *movement*”), [0046] (explaining that a “*point*” of the contact

“may be re-determined” to account of “***movement*** of the [user’s] finger”), [0049], [0052]. It would have been apparent and/or obvious to a POSITA exercising common sense and ordinary creativity that Blumenberg’s discussion of detecting a contact and tracking its movement provides the feature of determining movement *between the first contact point and a second contact point*. EX1003, ¶112.

Element [1.i] determine whether the first contact point of the first contact corresponds with a location of the hyperlink of the first web page;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.i]. EX1003, ¶¶113-114. As discussed at Element [1.h], the Combination includes Blumenberg’s description of a process flow where a “***[first] contact*** with the touch screen is detected” and a “***[first] point*** within the contact area [of the detected ***first contact***] is determined.” EX1004, [0036-0038], Figure 3 (steps 304, 306). According to Blumenberg, “content is displayed on [the] touch screen” that includes the “***[first] webpage***” featuring “a plurality of links.” *Id.* [0036], Figure 3 (step 302). Later in the process flow, “[a] ***link*** from the plurality of links is chosen...based on at least the proximity to the ***[first] point*** in the ***contact*** area”). *Id.* [0037-0039], Figure 3 (step 308); *see also* [0007-0011], [0032] (“closest link module”), [0041-0048], [0052], Figures 1-5I; *supra*, Element [1.g]. In one example, “[t]he link that is chosen is the one that is the closest to the determined point.” *Id.*, [0039].



EX1004, Figure 3.

It would have been apparent and/or obvious to a POSITA exercising common sense and ordinary creativity that Blumenberg's discussion of selecting a link based on its proximity to the first contact point provides the claimed feature of determining whether the first contact point *corresponds with a location of the hyperlink*.

EX1003, ¶114.

Element [1.m.i] when: the first web page is displayed via the user interface of the network browser application,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.m.i] for at least the same reasons discussed above at Element [1.g]. EX1003, ¶115. Per Blumenberg, ***the first web page is displayed*** during the various scenarios discussed above in Section VI.A.1 and in the mapping analysis below.

Element [1.m.ii] when:...the duration of the first contact is determined to be less than a first user-configurable predefined duration, and the end of the first contact is detected:

Element [1.m.iii] avoid display, on the first web page, a result of any operation based on the first contact;

The Blumenberg-Bhumkar-Griffin Combination renders obvious Elements [1.m.ii]-[1.m.iii]. EX1003, ¶¶116-123.

As discussed, per Blumenberg as supplemented by Griffin, the Combination provides determining ***the first contact duration***, including the ***duration*** between the beginning and ***the end of the first contact***. *Supra*, Elements [1.h]-[1.j]; EX1003, ¶117. Moreover, Blumenberg teaches that information associated with the link will not be displayed until and unless “the contact is maintained for at least a predetermined time (e.g., 0.2 seconds, or another value between 0.1 and 0.25 seconds).” EX1004, [0049]. In effect, Blumenberg’s technique disregards inadvertent contact, such as contact maintained for—i.e., initiated and ended within—an exceedingly short duration. EX1004, [0034] (“inadvertent contact with

an icon may not select a corresponding symbol”); EX1003, ¶¶118-119. As mentioned, this *first* and shortest *predefined duration* in Blumenberg is referenced throughout the Petition as the selection threshold. *Supra*, §VI.A.1.

Consistent with and complementing Blumenberg’s disclosure, Griffin similarly discloses the use of “[b]aseline thresholds...to reduce inadvertent input.” EX1006, [0033]; *see also* [0061]; *supra*, §VI.A.4.c (motivation). Like Blumenberg, Griffin explains that “[a] touch may be considered inadvertent...based on...duration of touch.” *Id.*, [0043]. And touches deemed “inadvertent” may be “disregarded.” *Id.*, [0033]. As such, in Griffin’s process flow, “[w]hen the one or more values related to the touch [e.g., the touch duration] do not meet any touch threshold, the process continues” without performing any functions. *Id.*, [0053], Figure 7.

In sum, per Blumenberg as supplemented by Griffin, the Combination provides the concept of *determining when the duration of the first contact is less than a first predefined duration*. EX1003, ¶121. In this scenario, the contact is deemed inadvertent and disregarded without triggering a function, thus *avoiding display, on the first web page, a result of any operation based on the first contact*. *Id.*; *see also* ¶123.

Finally, the Blumenberg-Bhumkar-Griffin Combination includes Griffin’s teaching of the menial implementation detail that the *predefined* touch *duration* thresholds are *user-configurable*. EX1003, ¶122; *supra*, §VI.A.4.c (discussing

motivation, e.g., increasing usability by allowing customization). For example, Griffin explains that touch thresholds can be modified by “changing the value of one or more characteristics associated with the touch threshold...such as the duration.” EX1006, [0042]; *see also* [0014], [0040-0041], Figure 7. Griffin further describes that touch thresholds can be modified automatically or “based on user parameters such as user history, user profile, and manual threshold settings.” *Id.* [0050]; *see also generally* [0046-0052]. This teaching from Griffin applies equally to the following discussion at Element [1.n.ii] regarding the ***second user-configurable predefined duration***. EX1003, ¶122.

Element [1.n.i] when: the first web page is displayed via the user interface of the network browser application,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.n.ii] for at least the same reasons discussed above at Element [1.g]. EX1003, ¶124. Per Blumenberg, ***the first web page is displayed*** during the various scenarios discussed above in Section VI.A.1 and in the mapping analysis below.

Element [1.n.ii] when...the duration of the first contact is determined to be greater than the first user-configurable predefined duration and less than a second user-configurable predefined duration,...[1.n.v] and the end of the first contact is detected

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.m.ii]. EX1003, ¶¶125-129.

As discussed, per Blumenberg as supplemented by Griffin, the Combination provides determining *the first contact duration*, including the *duration* between the beginning and *end of the first contact*. *Supra*, Elements [1.h]-[1.j]; EX1003, ¶126.

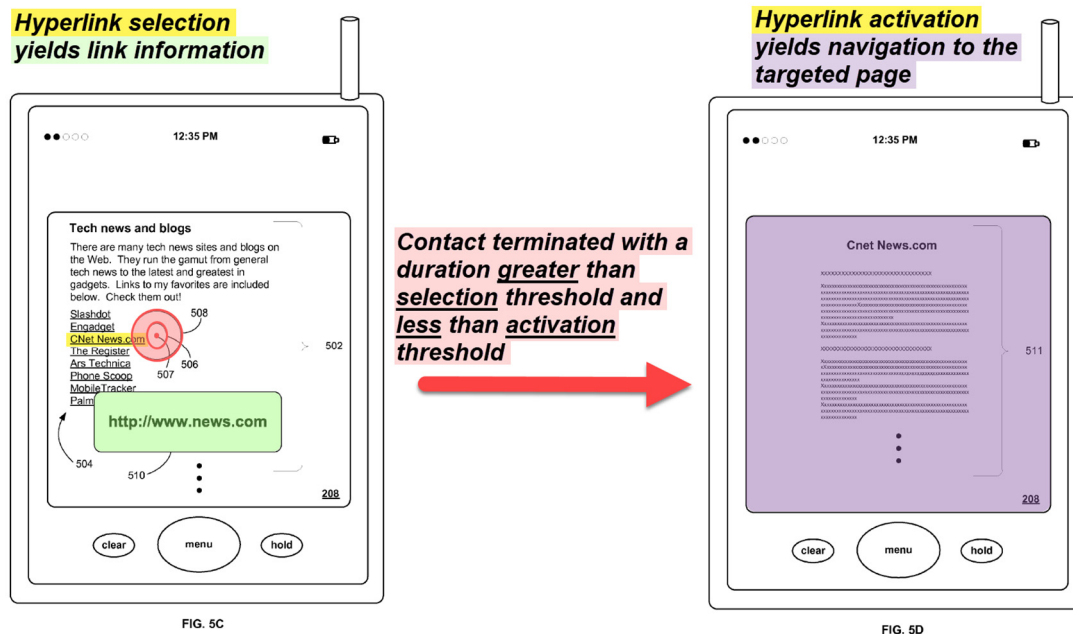
As was also discussed, in the Combination, when the contact at a point associated with a given hyperlink has a duration less than the selection threshold, the link is not selected or activated. *Supra*, Elements [1.m.ii]-[1.m.iii], §VI.A.1 (Blumenberg summary); EX1004, [0034], [0049]; EX1003, ¶127.

When, by contrast, the contact *duration* is *greater than* the selection threshold (*first user-configurable predefined duration*), the link is selected and information associated with the link is displayed. *Supra*, §VI.A.1; EX1004, [0049] (“[T]he information is displayed after the contact is maintained for at least a predetermined time (e.g., 0.2 seconds, or another value between 0.1 and 0.25 seconds)...”).

Beyond the selection threshold, Blumenberg further provides what this Petition refers to as an activation threshold. *Supra*, §VI.A.1. When the user *ends* the contact attributed to a selected link at a *duration* that is *less than* the activation threshold (*second predefined duration*), the selected link is activated and web browser navigates to the target webpage. EX1004, [0051] (“[T]he selected link is activated by a contact break if the link information was displayed *less* than [a]

predetermined amount of time[.]”⁶) (“the activation of the link may be triggered by a gesture, such as a quick tap”).

To summarize, Blumenberg’s teachings in the Combination provide that a link is activated when the user ends the contact with the link at a ***duration*** that is ***greater than*** the selection threshold (***first predefined duration***) and ***less than*** the activation threshold (***second predefined duration***). EX1003, ¶128.



EX1004, Figures 5C-5D (annotated).

⁶ The quoted passage in Blumenberg refers to this particular predetermined time using the descriptor “first” to distinguish it from a distinct “second” predetermined time discussed in the same passage. We remove the word “first” here to avoid confusion with respect to the first/second language in the Challenged Claims.

Finally, as noted at Elements [1.m.ii]-[1.m.iii], Griffin's supplemental teaching that *duration* thresholds are *user-configurable* applies here at Element [1.n.ii] to the activation threshold (*second predefined duration*). EX1003, ¶129.

Element [1.n.iii] when...the first contact point of the first contact is determined to correspond with the location of the hyperlink of the first web page,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.n.iii] for at least the same reasons discussed above at Elements [1.l] and [1.n.ii]. EX1003, ¶130. Per Blumenberg, *the first contact point is determined to correspond with the location of the hyperlink* during the various scenarios discussed above in Section VI.A.1 and in the mapping analysis below. *Id.*

Element [1.n.iv] when...it is not determined that there is the contact movement of the first contact between the first contact point and the second contact point,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.n.iv]. EX1003, ¶¶131-132. As discussed, the Combination includes Blumenberg's description of functionality to *determine whether there is a contact movement of the first contact*. *Supra*, Element [1.k]; EX1003, ¶131. According to Blumenberg, when the user moves their finger, the contact area and the contact point change accordingly. EX1004, [0025], [0029], [0046] (explaining that a "*point*" of the contact "may be re-determined" to account of "*movement* of the [user's] finger"), [0049], [0052]. When the contact point changes, so too may the

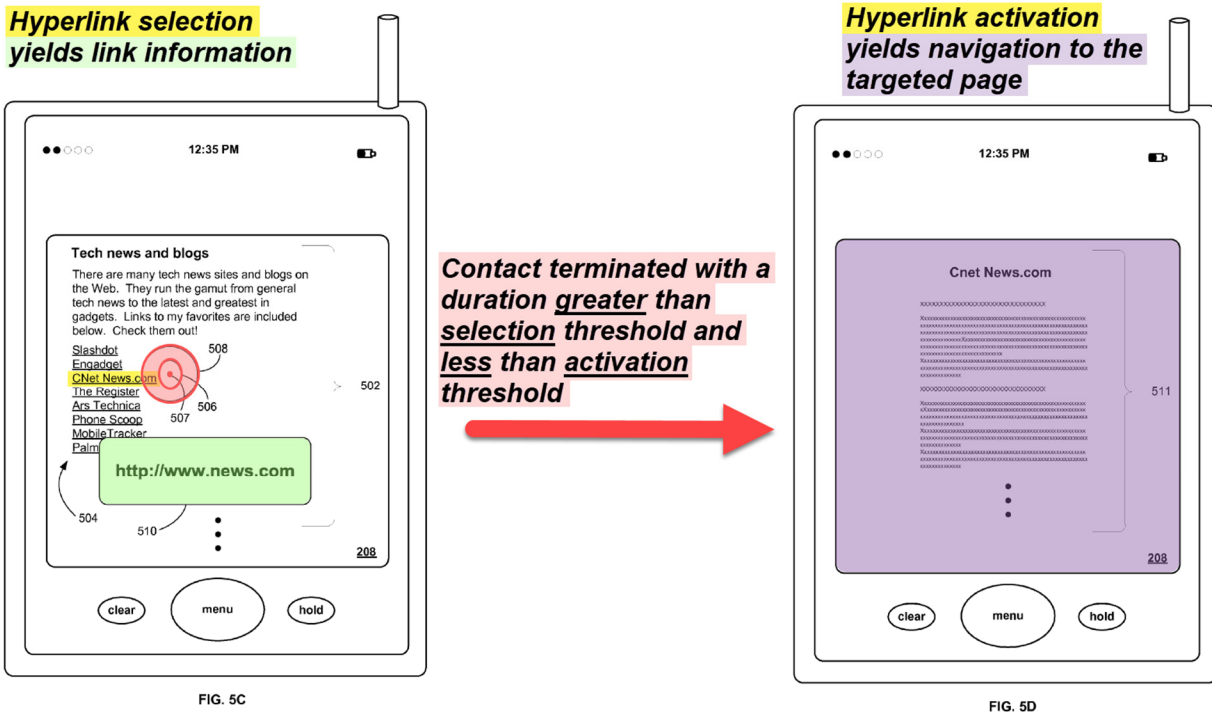
selected/activated link, which, in turn, would change the displayed link information and the target webpage. *Id.*, [0052]; EX1003, ¶131. On the other hand, a POSITA would have understood that Blumenberg also contemplates the alternative scenario of the user **not** moving their finger, with the point of contact and selected/activated hyperlink remaining unchanged. EX1004, [0049] (“if the contact area 506 is **not** moved”); EX1003, ¶132.

Element [1.n.vi] replace the display of the first web page with the second web page via the user interface of the network browser application; and

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.n.vi]. EX1003, ¶133. As discussed, Blumenberg’s teachings in the Combination provide that a link is activated when the user ends the contact with the link at a ***duration*** that is ***greater than*** the selection threshold (***first user-configurable predefined duration***) and ***less than*** the activation threshold (***second user-configurable predefined duration***). *Supra*, §VI.A.1; EX1003, ¶133. When a link is “activated” in this way, “the device navigates to the page to which the [activated] link points and the contents of the linked page are displayed on the device.” EX1004, [0044], Figure 4; *see also* [0030-0031] (explaining that webpage content is rendered by the device’s web ***browser application***), [0036] (similar), [0041] (similar). Accordingly, ***the display of the first webpage***, the page including the activated link,

is replaced by the second webpage, the page to which the activated link points.

EX1004, [0045-0050], Figures 5A-5D; EX1003, ¶133.



EX1004, Figures 5C-5D (annotated).

Element [1.o.i] when: the first web page is displayed via the user interface of the network browser application,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.i] for at least the same reasons discussed above at Element [1.g]. EX1003, ¶134. Per Blumenberg, *the first web page is displayed* during the various scenarios discussed above in Section VI.A.1 and in the mapping analysis below.

Element [1.o.ii] when...the duration of the first contact is determined to be greater than the second user-configurable predefined duration,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.m.ii]. EX1003, ¶¶135-141.

As discussed, per Blumenberg as supplemented by Griffin, the Combination provides determining ***the first contact duration***. *Supra*, Elements [1.h]-[1.j]; EX1003, ¶136. As was also discussed regarding Blumenberg's teachings in the Combination, when the user ends the contact attributed to a selected link at a duration less than the activation threshold, the selected link is activated and the web browser navigates to the target webpage. *Supra*, Element [1.n.ii]; §VI.A.1 (discussing Blumenberg's "second" scenario); EX1003, ¶136. On the other hand, when the user maintains the contact for a ***duration greater than*** the activation threshold (***second user-configurable predefined duration***), the web browser remains on the current page while also previewing the target webpage. *E.g.*, EX1004, [0049], [0051] §VI.A.1 (discussing Blumenberg's "third" scenario); EX1003, ¶136.

Based on the latter scenario, where the user holds the contact until the activation threshold is surpassed, it would have been evident to a POSITA that Blumenberg contemplates tracking the ***first contact duration*** cyclically and continuously for as long as the contact is maintained. EX1003, ¶138.

Griffin's supplemental disclosure is even more express on this point. EX1003, ¶139; *supra*, §VI.A.4.c (motivation-to-combine). Griffin describes a process flow depicted in Figure 7 (below) 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*.” *Id.*; see also [0032], [0037], [0042-0043], [0050]. Later in Griffin's process flow, the touch duration value is compared to one or more touch duration thresholds. See *id.*, [0053], [0032], Figure 7 (element 710). After determining that a given threshold is not met or after performing the functions triggered by meeting a given threshold, Griffin's process flow continues to monitor the touch duration value. *Id.*, Figure 7 (elements 710, 712→ 702, 704).

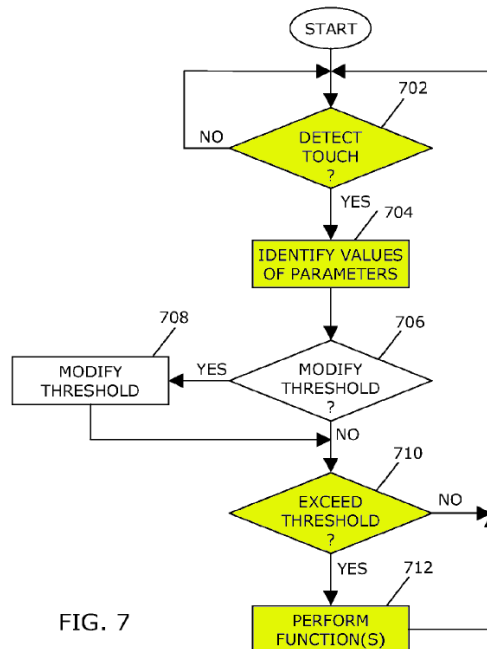


FIG. 7

EX1006, Figure 7 (highlighted).

Accordingly, it would have been apparent or obvious to a POSITA that, in the Blumenberg-Bhumkar-Griffin Combination, the value of the ***first contact touch duration*** is evaluated repeatedly over time until the contact breaks. EX1003, ¶140. This approach is [i] consistent with a POSITA's understanding of Blumenberg's teaching to identify when the user holds the contact beyond the activation threshold, [ii] consistent with Griffin's cyclical process flow; and [iii] consistent with ordinary practice and the common sense of a POSITA. EX1003, ¶¶140-141 (explaining the "common practice" of using "an 'event loop' to monitor input events").

Element [1.o.iii] when...the first contact point of the first contact is determined to correspond with the location of the hyperlink of the first web page,

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.iii] for at least the same reasons discussed above at Elements [1.1], [1.n.ii], and [1.o.ii]. EX1003, ¶142. Per Blumenberg, ***the first contact point is determined to correspond with the location of the hyperlink*** during the various scenarios discussed above in Section VI.A.1 and in the mapping analysis below.

Element [1.o.iv] when...it is not determined that there is the contact movement of the first contact between the first contact point and the second contact point, and

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.iv] for at least the same reasons discussed above at Elements [1.n.iv] (no contact

movement scenario) and [1.o.ii] (contact remains beyond the activation threshold).
EX1003, ¶143.

Element [1.o.v] when...the end of the first contact is not detected:

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.v] for at least the same reasons discussed above at Elements [1.h]-[1.j] (determining contact duration) and [1.o.ii] (contact remains beyond the activation threshold). EX1003, ¶144. As discussed, per Blumenberg as supplemented by Griffin, the Combination provides for cyclically and continuously tracking the contact duration throughout the ***first contact***, from the beginning to the end of the first contact. As a POSITA would have understood, between the beginning and the end of the first contact, Blumenberg's device is in a condition where ***the end of the first contact is not detected***. EX1003, ¶144.

Element [1.o.vi] output, utilizing the actuator, a first feedback that is perceptible by touch and

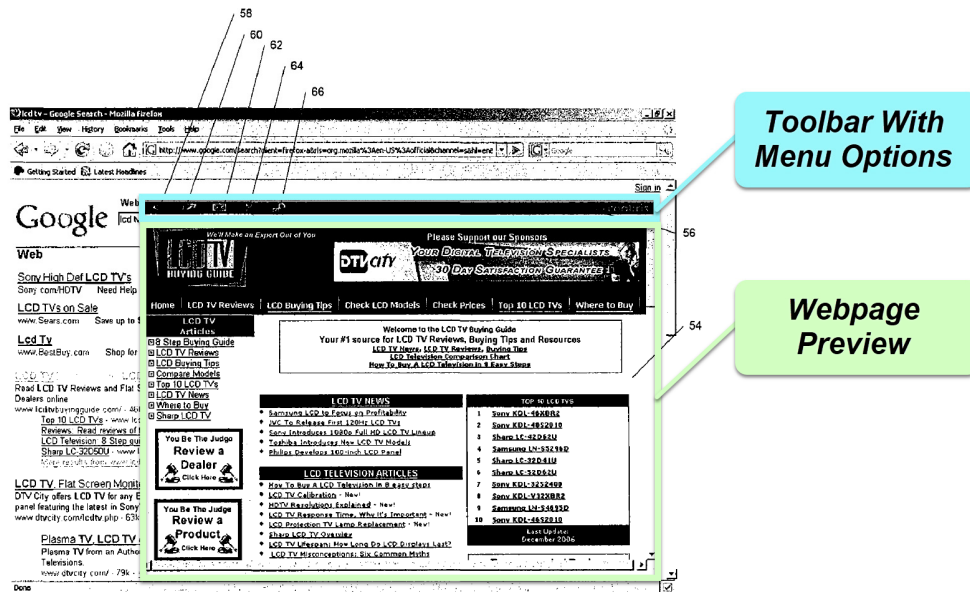
The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.vi]. EX1003, ¶145. For example, the Combination incorporates Griffin's teaching to give "tactile ***feedback*** provided by [one or more] ***actuators***" in response to determining that the user's contact on the touch screen has reached a given touch threshold. EX1006, [0034]; *see also* [0014], [0024], [0030], [0032], [0035], [0053], [0057], Figure 1; §VI.A.4.b (explaining that a POSITA would have been motivated

to implement tactile feedback to signal Blumenberg's activation threshold). As a POSITA would have known, "tactile" feedback connotes *feedback that is perceptible by touch*. EX1004, ¶145; *see also* ¶¶47-51.

Element [1.o.vii] display a menu including at least one option for, in response to detection of a selection thereof, performing an operation on a web address associated with the hyperlink of the first web page, and

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.vii]. EX1003, ¶¶146-149. For example, as discussed, the Combination incorporates Bhumkar's teaching to *display* a *menu* of *options* associated with a webpage preview, such as Blumenberg's "link information." *Supra*, §VI.A.4.a (motivation-to-combine)⁷; EX1005, [0021], [0042-0043] (describing *options displayed* on a "toolbar" *menu* for extracting and sharing "the content of the preview window"), [0071-0075], Figures 5 & 7; EX1004, [0048] (explaining that "[i]nformation associated with the link" may include "a snippet of the content from the page to which the link points"); EX1003, ¶146.

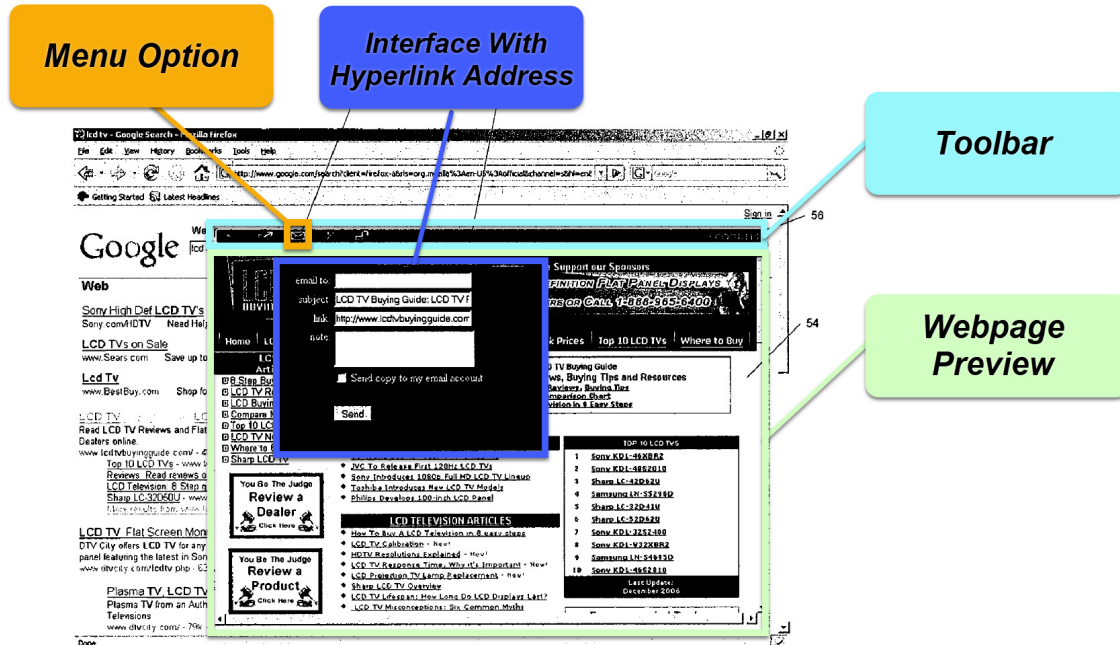
⁷ To the extent a party argues or the Board finds that Claim 1 requires the *menu options* to be *displayed only* when the conditions of Elements [1.o.i]-[1.o.v] occur, this Petition explains why a POSITA would have pursued such a design option. *See supra*, §VI.A.4.a ("Fourth" motivation rationale); EX1003, ¶147.



EX1005, Figure 5 (annotated).

A POSITA would have understood that Bhumkar's *menu*, as integrated in the Combination, includes *at least one option for, in response to detection of a selection thereof, performing an operation on a web address associated with the hyperlink of the first web page*. EX1003, ¶¶148-149. For example, Bhumkar discloses that “*selecting* share icon 62 [(*menu option*)] may open an interface 68 through which a user can share (e.g., via email or other means) the webpage currently displayed in preview window 54 with others.” EX1005, [0074]. As shown below in Bhumkar's Figure 7, the interface 68 includes a “link” field containing the *web address associated with the hyperlink on the (first) webpage* to which the preview window 54 relates. EX1003, ¶148. Accordingly, it would have been apparent or obvious to

the POSITA that launching an interface containing the web address provides the claimed feature of *performing an operation on the web address*. EX1003, ¶148.



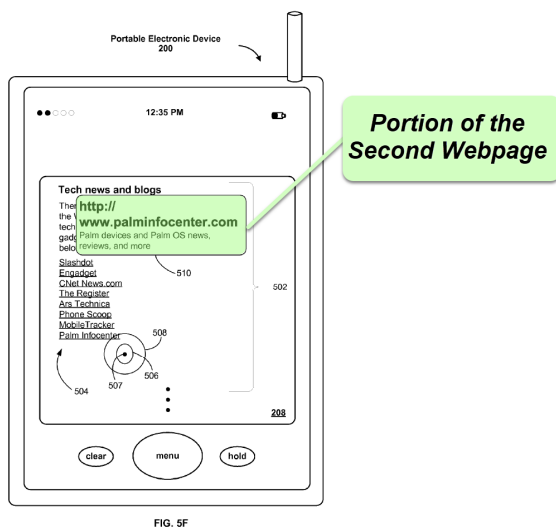
EX1005, Figure 7 (annotated).

As another example, Bhumkar discloses that “*selecting* full screen icon 60 [menu option]” initiates “a full-screen mode to enhance the consumption of information displayed in the current preview window.” EX1005, [0073]. In one particular embodiment, Bhumkar’s full-screen mode “will open a new browser window or tab and direct the browser to the [w]eb address associated with the page currently displayed in preview window 54.” *Id.* It would have been apparent or obvious to the POSITA that navigating to the webpage at the web address corresponds to and provides the claimed feature of *performing an operation on the web address*. EX1003, ¶149.

Element [1.o.viii] further display at least a portion of the second web page, such that at least the at least portion of the second web page is displayed in at least one first virtual display layer which appears above at least one second virtual display layer that includes at least a portion of the user interface of the network browser application that remains at least partially visible.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [1.o.viii]. EX1003, ¶¶150-158.

As discussed at Element [1.o.ii], per Blumenberg, when the user maintains the contact for a duration greater than the activation threshold, the web browser remains on the current page and continues displaying the link information. EX1004, [0049], [0051]. Blumenberg further explains that “the **displayed** [link] information also includes a snippet of the content in [(**at least a portion of**)] the [**second**] webpage or document to which the link links[.]” *Id.*, [0040], [0048], Figures 5C, 5E-5I.



[0040] Information associated with the chosen link is displayed (310). In some embodiments, the link information is displayed by the link information module 136 in conjunction with the touch screen 208. The displayed information includes information other than the anchor text of the link. For example, the displayed information may include the URL of the webpage or document to which the link links, the title of the webpage or document to which the link links. Optionally, the displayed information also includes a snippet of the content in the webpage or document to which the link links, and/or a summary of the content of the webpage or document to which the link links. In some embodiments, the displayed information does not include the anchor text of the link. In other embodiments, the displayed information does include the anchor text of the link. The information may be displayed over the content, e.g., as an opaque or semi-transparent overlay.

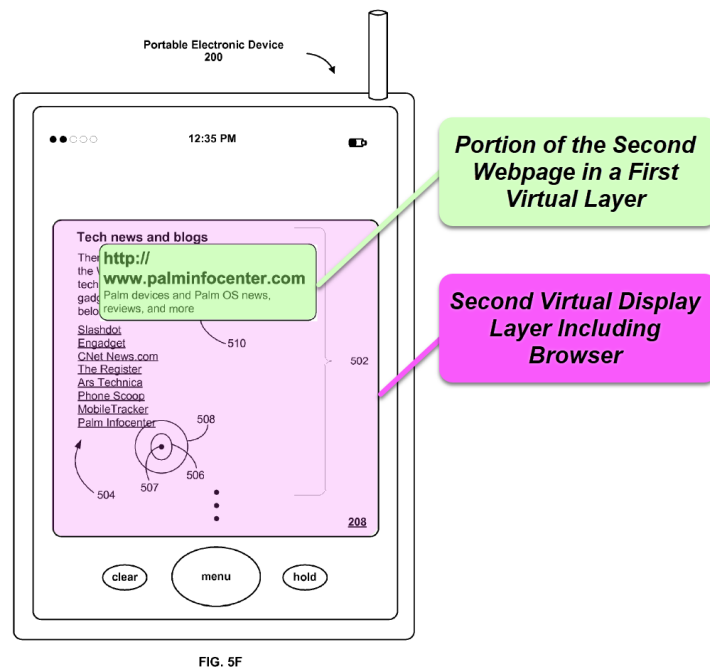
EX1004, Figure 5F (annotated).

Bhumkar provides an alternative basis within the Blumenberg-Bhumkar-Griffin Combination for reaching the feature of *displaying at least a portion of the second web page*. EX1003, ¶152. Similar to Blumenberg’s teaching regarding a snippet of content from the target webpage, Bhumkar describes “a ‘quick view’ or ‘preview’ of a target web site.” EX1005 (Bhumkar), [0038]; *see also id.*, Abstract, [0014], [0017], [0021], [0039-0041], [0047], [0055] (“[T]he basic procedure 30 involved in creating [a] preview is one of capturing content of a target web page...”), [0071], Figures 2, 4, 5, 7. From a POSITA’s perspective, swapping Blumenberg’s snippet for Bhumkar’s preview would have been a simple substitution of known elements to achieve an exceedingly predictable result. EX1003, ¶152.

The Blumenberg-Bhumkar-Griffin Combination further provides that *the portion of the second web page is displayed in at least one first virtual display layer which appears above at least one second virtual display layer*. EX1003, ¶¶153-155. For example, according to Blumenberg, the “link information” (*portion of the second web page*) is “*displayed...as an opaque or semi-transparent overlay*.” EX1004, [0040]. As a POSITA would have known, the notion of an “overlay” in the context of a graphical user interface connotes one virtual layer positioned over another—i.e., *a first virtual layer appearing above a second virtual layer*. EX1003, ¶153; *see also* EX1005, [0054] (“The image of the target web site...is now inserted as a layer onto the displayed search result page.”). Alternatively, this feature would

have been exceedingly obvious to a POSITA exercising common sense and ordinary creativity in the context of the problem of creating an overlay information window. EX1003, ¶154 (explaining that using virtual layers in a GUI to create an overlay information window was common practice in the art at the time of the '581 patent).

The Combination further includes Blumenberg's teaching that, while the "link information" (*portion of the second web page*) is displayed, *at least a portion of the user interface of the network browser application remains at least partially visible*—namely, the portion of the browser displaying the current/first webpage on which the selected hyperlink appears. EX1004, [0054] (explaining that the "link information" is displayed on only "half of the touch screen...so that the user's finger [] does not obstruct the user's view"), Figures 5C, 5E-5I; EX1003, ¶156.



EX1004, Figure 5F (annotated).

* * * * *

The analysis above establishes obviousness under a basic when-then conditional relationship between Elements [1.o.i]-[1.o.v] and Elements [1.o.vi]-[1.o.viii].⁸ And Claim 1 would still be obvious under an interpretation requiring a causal or exclusive conditional relationship between these elements. EX1003, ¶¶157-158.

Simply put, a POSITA would have been motivated to implement the Blumenberg-Bhumkar-Griffin Combination such that the complete set of limitations at Elements [1.o.vi]-[1.o.viii] that constitute the claimed function is caused by and only occurs in conjunction with the complete set of limitations at Elements [1.o.i]-[1.o.v] that constitute the claimed condition. EX1003, ¶158. Specifically, the POSITA would have been motivated to incorporate the supplemental teachings of Griffin and Bhumkar such that the output of *feedback perceptible by touch* (as taught by Griffin) and the display of a *menu* (as taught by Bhumkar) occur in response to the user's contact *duration* exceeding the activation threshold. *Supra*

⁸ Note that the Elements [1.o.i]-[1.o.viii] only recite a basic when-then relationship and do not use typical causal language (such as “in response to”) or exclusive conditional language (such as “only when”) between the stated touch condition at Elements [1.o.i]-[1.o.v] and the stated functionality at Elements [1.o.vi]-[1.o.viii].

§VI.A.4.a (“Fourth” motivation rationale regarding Bhumkar) and §VI.A.4.b (“Fourth” motivation rationale regarding Griffin). Accordingly, while Blumenberg’s link information (*second webpage portion*) is initially displayed before the activation threshold, it would be paired with tactile *feedback* and a *menu* only after and as a consequence of the activation threshold. EX1003, ¶158.

(b) Claim 2

Element [2.pre] The electronic device of claim 1, wherein the electronic device is configured such that: [2.a] the user interface of the network browser is configured for performing an operation in response to it being determined that there is the contact movement of the first contact between the first contact point and the second contact point; and

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [2.pre], [2.a]. EX1003, ¶¶159-161. As discussed, the Combination includes Blumenberg’s description of functionality to *determine that there is a contact movement of the first contact between the first contact point and the second contact point*. *Supra*, Element [1.k]; EX1003, ¶159. Blumenberg goes on to teach an *operation* that is performed *in response to* such movement—e.g., *the user interface of the network browser* updates the selected link in accordance with the change in contact position. EX1004, [0052] (explaining that contact movement means “the link that satisfies the one or more criteria...may change”), Figures 5E-5F; *see also* [0030-0031], [0036], [0041] [0046], Figure 1; EX1003, ¶¶160-161.

Element [2.b] the at least portion of the second web page is displayed in a view that is not configured for performing the operation in response to it being determined that there is the contact movement of the first contact between the first contact point and the second contact point.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [2.b]. EX1003, ¶¶162-165. As discussed at Element [1.o.viii], per Blumenberg, the “link information” (*portion of the second webpage*) is “a snippet of the content” made **viewable** in a first virtual layer. EX1004, [0040], [0048]. It would have been apparent or obvious to a POSITA that Blumenberg’s “snippet of content” involves an image rather than a fully interactive version of the page. EX1003, ¶163; *see also* EX1005, [0016-0017] (explaining that a webpage preview can be provided as a static image or a functioning page), [0047], [0056-0057], [0071]; Element [1.o.viii] (explaining that it would have been a matter of simple substitution to employ Bhumkar’s webpage “preview” in place of Blumenberg’s “snippet of content”).

Blumenberg’s browser ***performs the operation*** discussed above at Element [2.a] ***in response to contact movement*** on the first webpage, not on the link information (*portion of the second webpage displayed in a view*). EX1003, ¶164 (citing EX1004, [0040], [0054]). Accordingly, a POSITA would have understood that Blumenberg’s link information (*portion of the second webpage*) ***is not configured to perform the operation***. EX1003, ¶¶164-165.

(c) Claim 3

Element [3] The electronic device of claim 1, wherein the electronic device is configured such that the first feedback that is perceptible by touch is output prior to the display of the menu.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [3]. EX1003, ¶¶166-169.

For one, and as discussed at §VI.A.4.a and Element [1.o.vii], the Combination incorporates Bhumkar’s teaching to ***display*** a ***menu*** of options associated with a webpage preview in the context of Blumenberg’s “link information.” It was also explained above that a POSITA would have been motivated to introduce Bhumkar’s ***menu*** options after Blumenberg’s activation threshold. *Supra*, §VI.A.4.a (discussing a “Fourth” motivation rationale); EX1003, ¶167.

Additionally, and as discussed at §VI.A.4.b and Element [1.o.vi], the Blumenberg-Bhumkar-Griffin Combination further incorporates Griffin’s teaching to ***output feedback that is perceptible by touch*** in response to determining that the user’s contact on the touch screen has reached a given touch threshold. It was also explained above that a POSITA would have been motivated to implement Griffin’s tactile ***feedback*** to signal Blumenberg’s activation threshold. *Supra*, §VI.A.4.b (discussing a “Fourth” motivation rationale); EX1003, ¶167.

A POSITA would have understood that the tactile ***feedback*** and the ***menu*** display naturally occur around the same time because they are tied to the same

event—the touch contact duration surpassing the activation threshold. EX1003, ¶169. In this context, the POSITA would have faced a rudimentary design problem with three predictable solutions, one of which includes the claimed feature of *outputting the feedback prior to the display of the menu*. *Id.* (outlining the three solutions). When, as here, there is “a design need...to solve a problem and...a finite number of identified, predictable solutions,” *KSR* compels a conclusion that those solutions are obvious. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

Additionally, a POSITA would have deemed the design option of *outputting the feedback prior to the display of the menu* to be particularly effective under the circumstances. EX1003, ¶168. Given the desire to use Griffin’s *feedback* as a signal to the user regarding the change in functionality triggered by Blumenberg’s activation threshold—including the display of Bhumkar’s *menu* options—it would have been obvious to a POSITA as a matter of common sense and ordinary creativity (in view of the problem to be solved) that the *feedback* output should occur *prior to* displaying the *menu*. *Id.* Because the *feedback* confirms/signals a change in state of the device in view of the user’s touch-and-hold gesture and the *menu* is part of the functionality invoked by the change in state, it would have been exceedingly obvious, and even axiomatic, to provide the former before the latter. *Id.*

(d) Claim 21

Element [21.pre] The electronic device of claim 1, wherein the electronic device is configured such that: Element [21.a] the user interface of the network browser is configured for displaying: scrolling of the second web page via the user interface of the network browser application in response to detection of longitudinal contact movement, opening of one or more hyperlinks of the second web page in response to detection of a selection thereof, and opening of one or more manually entered web addresses in response to detection of a manual entry thereof; and

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [21.pre], [21.a]. EX1003, ¶¶170-171. For example, and as discussed at Elements [1.a], [1.b], and [1.g], the Combination includes Blumenberg's description of a device with a touch screen *display* and a *network browser application* that provides a *user interface* for interacting with webpages and other online content. EX1004, [0025], [0030-0031], [0034-0036], Figure 1. As discussed at Element [1.n.vi], Blumenberg's *browser application* is designed to navigate from a first webpage to a *second webpage* upon selection and activation of a hyperlink. EX1004, [0045-0050], Figures 5A-5D. It would have been apparent or obvious to a POSITA that Blumenberg's browser is likewise configured to *open one or more hyperlinks of the second web page in response to detection of a selection thereof*, just as it is configured to do so on the prior first webpage. EX1003, ¶170.

It would have been no less obvious to the POSITA that Blumenberg's browser is further operable to perform the claimed functionality of *scrolling the second web page in response to detection of longitudinal contact movement* and *opening of one or more manually entered web addresses in response to detection of a manual entry thereof*. EX1003, ¶171. Scrolling a webpage in response to a longitudinal drag/slide gesture and opening a webpage according to a manually entered address were conventional functions for web browsers executed on commercially available touch screen devices by 2011. *Id.* The '581 patent reinforces this point by referencing prior art patent publications assigned to Petitioner Apple that describe the claimed functionality for scrolling and manually entering web addresses—e.g., US2008/0094368 [EX1043] and US2008/0168405 [EX1044]. *See* EX1001, 97:12-21, 97:59-67. A POSITA would have expected a web browser like Blumenberg's to have such rudimentary functions. EX1003, ¶171. For one, the browser would be virtually unusable for navigating to and through webpages without them. *Id.* Moreover, Blumenberg describes the user interface elements to perform these functions, including a virtual keyboard suitable (e.g., for entering web addresses) and program modules for detecting contact movement (e.g., to facilitate scrolling via longitudinal slide/drag gestures). EX1004, [0025], [0029], [0034]; EX1003, ¶171.

Element [21.b] the at least portion of the second web page is displayed in a view that is different from the user interface of the network browser application in that the view is configured for not displaying: the scrolling of the second web page via the user interface of the network browser application in response to detection of the longitudinal contact movement, the opening of the one or more hyperlinks of the second web page in response to detection of the selection thereof, and the opening of the one or more manually entered hyperlinks in response to detection of the manual entry thereof.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [21.b]. EX1003, ¶¶172-173. For example, as discussed at Element [2.b] and Element [1.o.viii], in the Blumenberg-Bhumkar-Griffin Combination, the ***portion of the second webpage*** involves an image rather than a fully interactive version of the page. EX1003, ¶172. Accordingly, it would have been apparent or obvious to a POSITA that the ***portion of the second webpage*** is ***different*** from the ***user interface of the network browser application*** discussed above at Element [21.a] and ***not configured*** for facilitating the conventional web browsing functions like ***scrolling*** and ***opening hyperlinks***. EX1003, ¶173.

(e) Claim 29

Element [29] The electronic device of claim 1, wherein the electronic device is configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the second web page is enlarged.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [29]. EX1003, ¶¶174-177. As discussed, the Combination provides an ***electronic device configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer***. *Supra*, Element [1.o.viii]; EX1003, ¶174. The additional claimed functionality of ***enlarging the second webpage in response to detection of a selection of the at least a portion of the second webpage*** would likewise have been obvious to a POSITA. EX1003, ¶174.

As a first example, a POSITA would have been motivated to further integrate Bhumkar’s teaching of functionality to provide an ***enlarged*** view of the ***second webpage***—e.g., a full-screen mode. *E.g.*, EX1005, [0021], [0040], [0073], Cls. 18 and 23. As Bhumkar teaches, this functionality improves the usability of the web browser by giving the user an option “to enhance the consumption of the information displayed in the current preview” because “the content...may be more easily consumed in the full screen.” *Id.* [0040], [0073]; *see also* EX1003, ¶175.

While Bhumkar discloses an example where this full-screen mode is triggered by selection of a menu icon, it would have been at least as effective and equally

obvious to provide the full-screen mode *in response to selection of the at least a portion of the second webpage* (e.g., Bhumkar’s preview window/Blumenberg’s link information including a snippet of webpage content). EX1003, ¶176. Using a displayed object, such as the portion of the second webpage in the Blumenberg-Bhumkar-Griffin Combination, as a selectable element was well known in the art of graphical user interfaces by 2011. *Id.* From a POSITA’s perspective, employing this well-known feature as a predictable alternative to Bhumkar’s menu icon would have been no more than the application of known design option to achieve a predictable result. *Id.* Additionally, the POSITA would have viewed this predictable alternative as advantageous in the context of Blumenberg’s mobile device, e.g., because the larger displayed *portion of the second webpage* would be easier for the user to *select* than a comparably small menu icon. *Id.*

As a second example (independent of the first), a POSITA would have understood that navigating to the second webpage, as Blumenberg teaches, produces an *enlarged* view of *the second webpage* as compared to the lesser portion of the second webpage (e.g., a snippet of content) included in the “link information.” EX1004, [0044], [0048]; *see also supra*, Element [1.g]; EX1003, ¶177. Per Blumenberg, after the activation threshold, the user must execute a confirmatory tap on the link information (*portion of the second webpage*) to activate the link and navigate to the second webpage. *Id.*, [0051] (“[T]he user must break contact and tap

the link information...to activate the selected link”). In this way, Blumenberg’s disclosed navigation to the second webpage occurs *in response to selection of the at least a portion of the second webpage* (“link information”). EX1003, ¶177.

(f) Claim 30

Element [30] The electronic device of claim 1, wherein the electronic device is configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least one first virtual display layer is enlarged.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [30] including for all the reasons discussed above at Element [29], which recites exceedingly similar claim language. EX1003, ¶178. The only difference is that Element [29] requires *enlarging the second webpage*, while Element [30] requires *enlarging the first virtual display layer* of the second webpage, a trivial and obvious distinction. As shown, for example, in Blumenberg’s Figure 5F (annotated below), the link information including the snippet of content (*portion of the second webpage*) is the only element in *the first virtual display layer*. In this context, it would have been apparent or obvious to a POSITA that the *layer* and the *second webpage portion* are coextensive and that both are *enlarged* upon the selection that triggers the full-screen mode (as taught by Bhumkar). EX1003, ¶178; *supra*, Element [29] (“first example”). Moreover, using *virtual layers* to display windowed

content in a GUI was a well-known and widely-used technique by 2011. EX1003, ¶154. The distinction between Element [29] and Element [30] of using a *virtual layer* is obvious. *Id.*

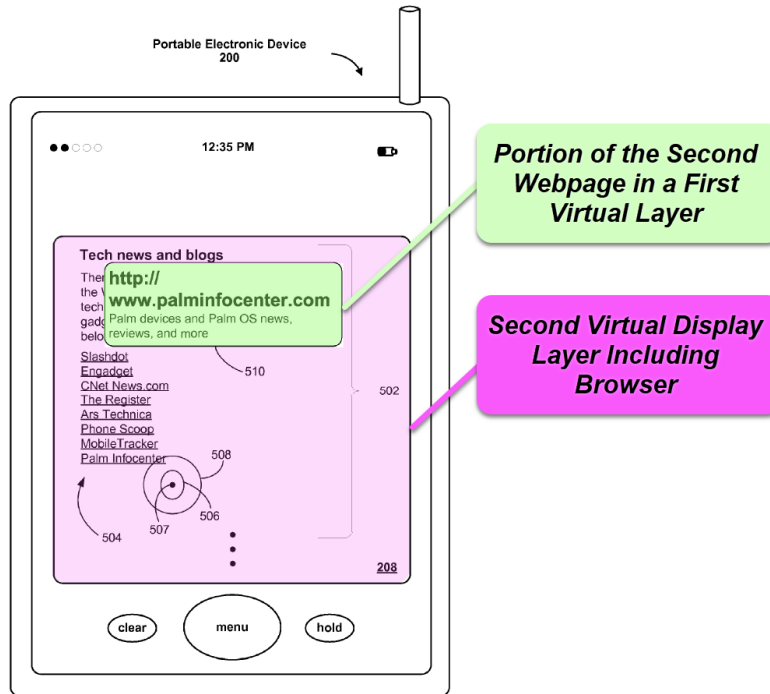


FIG. 5F

EX1004, Figure 5F (annotated).

(g) **Claim 31**

Element [31] The electronic device of claim 1, wherein the electronic device is configured such that the at least portion of the second web page is displayed in the at least one first virtual display layer where, in response to detection of a selection of the at least portion of the second web page, the at least portion of the second web page is displayed via the user interface of the network browser application.

The Blumenberg-Bhumkar-Griffin Combination renders obvious Element [31] for at least same reasons discussed above at Element [29] (discussing a “second

example” featuring Blumenberg’s teaching of a *browser* that navigates to and *displays* the *second webpage*). EX1003, ¶179.

(h) Claims 42-44, 54, 62-65

Claims 42-44, 54, 62-65 are substantially similar to claims 1-3, 21, 29-31, respectively. EX1003, ¶181 (mapping the corresponding claim elements). These two set of claims recite a similar series of steps, the former as an “electronic device” with “one or more programs including instructions” to perform the steps, the latter as a “method” comprised of those steps. Accordingly, the Blumenberg-Bhumkar-Griffin Combination satisfies claims 42-44, 54, 62-65 for the same reasons discussed above regarding claims 1-3, 21, 29-31.

VII. ANALYSIS ON DISCRETION

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

The *Advanced Bionics* framework strongly favors institution. While Blumenberg is one of numerous prior art patent documents that the ’581 patent incorporates by reference, there is no indication in the ’581 patent’s file history that the Examiner substantively considered Blumenberg, much less the above-discussed combinations with uncited supplemental references like Bhumkar 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. For one, although the Applicant never cited Blumenberg in an IDS, the Examiner should have discovered this reference due to its express incorporation by reference in the '581 patent's specification. EX1001, 97:49-57. Had the Examiner identified Blumenberg 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. 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 '581 patent. The '581 patent is the subject of the following co-pending civil action: *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 IPR50095-0170IP1@fr.com.

Respectfully submitted,

Dated: June 27, 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 12,888 words, which is less than the 14,000 allowed under 37 CFR § 42.24.

Dated: June 27, 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 27, 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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