

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: Michael S Smith
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Title: DEVICES, METHODS, AND GRAPHICAL USER
INTERFACES FOR MANIPULATING USER INTERFACE
OBJECTS WITH VISUAL AND/OR HAPTIC FEEDBACK

SUPPLEMENTAL DECLARATION OF DR. ANDREW COCKBURN

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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 41	
[41.pre]	The electronic device of claim 40, wherein the electronic device is configured such that at least one of:
[41.a]	said touch-sensitive interaction surface and the display are components of a touch screen...

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.

I, Andrew Cockburn, PhD, declare as follows:

I. INTRODUCTION

1. I have been retained as a technical expert by counsel on behalf of Apple Inc. (“Apple”/“Petitioner”) in Case No. IPR2024-01090 with respect to U.S. Patent No. 10,725,581 (“the ’581 patent”) (EX1001).

2. I understand that this declaration (“Supplemental Declaration”) will be submitted in support of Petitioner’s Reply to Patent Owner’s Response to the Petition for *inter partes* review of the ’581 patent. This Supplemental Declaration supplements certain portions of my prior declaration in support of the Petition for this IPR Proceeding (EX1003, “Prior Declaration”). In my Prior Declaration, I address many topics, including (but not limited to) my background and qualifications, the level of skill in art, an overview of the ’581 patent, a POSITA’s background knowledge, certain legal standards explained to me by counsel, and a detailed analysis of the prior art against the claim elements of the ’581 patent.

3. I maintain all of my earlier analysis and continue to hold the opinions expressed in my Prior Declaration. This Supplemental Declaration does not replace my Prior Declaration. These declarations are complementary and should be read in tandem. Accordingly, this Supplemental Declaration does not cover every topic addressed in my Prior Declaration.

4. In forming this Supplemental Declaration, I have considered the following: the declaration of Patent Owner's expert Dr. Mahon (EX2008), the Board's institution decision (Paper 8), my knowledge and experience in this field, including my research and work experience in the field, my experience working with others involved in the field, and the third-party documents cited throughout my analysis. *See* EX1003, ¶¶4–18 (discussing qualifications), ¶¶36–37 (discussing the level of skill for a "POSITA"), and ¶¶38–56 (discussing a POSITA background knowledge and understanding).

5. Note that my citations to non-patent literature throughout this Declaration reference the absolute page number added to the exhibit (as opposed to the original pagination of the document). For patent literature, I've used the column/line numbers or paragraph numbers. Also note that, unless I've indicated otherwise, all emphasis (bold/italics/underline) in any quoted text are ones I have added.

6. Although I cite and quote to selected portions of various references in this Supplemental Declaration, the reader should understand that these citations are representative examples. A POSITA would have viewed each reference in its entirety and in combination with other references. Accordingly, I intend the references identified in this Declaration to be viewed as incorporated in their entireties.

7. I am not, and never have been, an employee of Apple. I received no compensation for this Supplemental Declaration beyond my normal hourly compensation based on my time actually spent preparing this declaration. I will not receive any added compensation based on the outcome of any IPR or other proceeding involving the '581 patent.

II. LEGAL PRINCIPLES

8. In forming my analysis and conclusions expressed in this Declaration, I have applied the legal principles described in the following paragraphs, which were provided to me by counsel for the Petitioner.

A. Person of Ordinary Skill in the Art

9. I understand that the factors considered in determining the ordinary level of skill in a field of art include: the level of education and experience of persons working in the field; the types of problems encountered in the field; the teachings of the prior art regarding solutions to such problems; and the sophistication of the technology at the time of the alleged invention. I understand that a person of ordinary skill in the art ("POSITA") is not a specific real individual, but rather is a hypothetical individual having the qualities reflected by the factors above and knowledge of all relevant prior art references, including the references I cite below.

B. Obviousness

10. I have been informed that a patent claim is invalid as “obvious” in light of one or more prior art references if it would have been obvious to a POSITA at the time of the alleged invention, taking into account (1) the scope and content of the prior art, (2) the differences between the prior art and the claims, (3) the level of ordinary skill in the art, and (4) any so called “secondary considerations” of non-obviousness, which include: (i) “long-felt but unresolved need” for the claimed invention, (ii) commercial success attributable to the claimed invention, (iii) unexpected results of the claimed invention, and (iv) “copying” of the claimed invention by others.

11. While I do not know the exact date that the alleged invention of the ’581 patent was made, I do know that the ’581 patent’s earliest claimed priority date is August 5, 2011. For purposes of my obviousness analysis, I have applied a date of August 5, 2011 as the date of the alleged invention (“Critical Date”), although in many cases the same analysis would hold true even if the date of the alleged invention were earlier or later.¹

¹ Note, however, that I do not concede that the ’581 patent is entitled to its earliest claimed priority date.

12. I have been informed that a claim can be obvious in light of a single prior art reference or multiple prior art references. To be obvious in light of a single prior art reference or multiple prior art references, there must be a reason that would have prompted a POSITA to modify or supplement the single prior art reference, or to combine two or more references, in a manner that provides the elements of the claimed invention. This reason may come from a teaching, suggestion, or motivation to combine, or may come from the reference(s) themselves, the knowledge or “common sense” of a POSITA, or from the nature of the problem to be solved, and this reason may be explicit or implicit from the prior art as a whole. I have been informed that, under the law, the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. I also understand it is improper to rely on hindsight in making the obviousness determination.

13. I understand that an obviousness determination also requires that a POSITA would have had a reasonable expectation of success. This concept has been explained to me as relating to the relative likelihood or predictability—from the perspective of a POSITA—of successfully modifying the prior art in a manner that would meet the claimed limitations of the patent being challenged (here the ’581 patent). I understand that the expectation of success need only be “reasonable” and,

thus, does not require the absolute certainty gleaned from physically creating the proposed prior art modification.

C. Claim Interpretation

14. I understand that, for purposes of my analysis in this *inter partes* review proceeding, the terms appearing in the patent claims should be interpreted according to their “ordinary and customary meaning.” In determining the ordinary and customary meaning, I understand that the words of a claim are first given their plain meaning that those words would have had to a person of ordinary skill in the art at the time of the alleged invention. I also understand that the structure of the claims, the specification and file history may be used to better construe a claim. Moreover, I understand that even treatises and dictionaries may be used, albeit under limited circumstances, to determine the meaning attributed by a person of ordinary skill in the art to a claim term.

III. ANALYSIS

15. The analysis and opinions expressed in my Prior Declaration fully explain why [1] each and every feature of the ’581 patent’s challenged claims is in the prior art; and [2] a POSITA would have been motivated to combine the known prior art elements in a manner that reaches the claimed invention. Patent Owner’s expert, Dr. Mahon, has considered my opinions and offered his own, some of which are inconsistent with my view. I will address certain points of dispute below. The

fact that I have not addressed all of Dr. Mahon's opinions should not be interpreted as agreement with any of them.

A. Motivation to Combine the Teachings of Blumenberg, Bhumkar, and Griffin

16. I explain in my Prior Declaration how and why, to a POSITA, 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 about providing menu options for interacting with a webpage preview window corresponding to a hyperlink; [b] Griffin's teachings regarding multiple user-configurable touch duration thresholds; and [c] Griffin's further teachings about triggering selective tactile feedback. *See* EX1003, ¶¶67–96. Dr. Mahon has a different view, particularly regarding the aspect of the combination related to Blumenberg and Bhumkar. I believe Dr. Mahon's position is flawed for several reasons, including those I explain below.

1. Bhumkar Is Not Limited to Previews That Include a Fully Functioning Webpage

17. According to Dr. Mahon: "Bhumkar's focus on rendering an entire functional web page within a preview window is directly at odds with Blumenberg's approach of showing limited textual data to maintain legibility." EX2008, ¶125. Dr. Mahon is incorrect. Bhumkar is not solely focused on rendering an entire fully functioning webpage as the preview. This is clear from the very first page of

Bhumkar, where the Abstract says “[p]reviews of a target web site...are displayed in preview windows, which may have associated toolbars that include functions permitting various manipulations of the content displayed in the preview window.” The very next sentence of the Abstract says, “the target web site is displayed as an image thereof in the preview window.” There is no mention at all in the Abstract of the fully functioning webpage preview that Bhumkar later describes as an alternative embodiment.

18. Examples where the “preview may be [just] an image of a target web page” are described repeatedly throughout Bhumkar and are clearly Bhumkar’s focus. EX1005, [0047]; *see also* [0014]–[0015] (“display an image of content from the second Web page”), [0016] (“The content of the second Web page loaded in the hidden frame may then be converted to an image thereof.”), [0020] (“the image of the content of the second Web page may be displayed according to one or more visual effects”), [0041]–[0043] (“For example, the preview window may return just an image[.]”), [0047]–[0048] (“it is an image of the target web page that is displayed to the searcher”), [0050] (“an image of the actual web page”), [0053] (“render the hidden frame containing the web page into a bit mapped image”), [0054]–[0059] (“Converting the hidden frame to an image (and in doing so potentially clipping only a portion of the entire web page within the hidden frame).”), [0067] (“Therefore, the target web page may be clipped prior to conversion to an image.”), [0089] (“[T]he

image or navigable web page displayed in the preview window may be fetched prior to or concurrently with the display thereof in the preview window.”), cl.1. The notion of providing the “preview window [a]s a fully functioning web page, not merely an image of such a page” is merely an alternative embodiment. EX1005, [0071]; *see also* [0017] (“In some embodiments of the invention, an interactive browsing view, instead of an image representation, may be used to display the second Web page.”), [0090] (“In some embodiments of the invention, the preview window may be used to display an interactive web page rather than just an image thereof.”).

19. Dr. Mahon is also incorrect when he asserts that Bhumkar’s “toolbar is included only in embodiments where the preview window renders a full web page.” EX2008, ¶127. Nothing in Bhumkar supports Dr. Mahon’s view that a non-functional image in the preview window is somehow incompatible with the disclosed toolbar menu. As I’ve explained, Bhumkar’s Abstract directly contradicts Dr. Mahon by describing “associated toolbars” in conjunction with “preview windows” where “the target web site is displayed as an image.” Given that Bhumkar discloses the webpage preview in the context of both a non-functional image and a fully functioning webpage, it makes sense that Bhumkar’s toolbar menu teachings apply to both types of implementations. For example, Bhumkar’s SUMMARY OF THE INVENTION section starts by describing the non-functional image preview

(*see* [0014]–[0016]), next mentions the fully functioning interactive preview option (*see* [0017]), and subsequently introduces the toolbar menu as an additional feature of the preview window (*see* [0021]). By the time the toolbar menu is introduced, it has already been established that the preview window could include either a non-functional image or a fully functioning webpage. *See also* EX1005, [0041]–[0043] (discussing a “toolbar” menu “within the preview window” and explaining that “the preview window may return just an image”), [0067]–[0069] (similar). It makes sense that Bhumkar’s toolbar menu teachings apply equally to the non-functional image and fully functioning webpage embodiments because some of the key menu functions Bhumkar describes—like saving, sharing, and entering a full-screen mode—are useful in either case.

2. Bhumkar Does Not Criticize Blumenberg or Otherwise Disincentivize the Use of a Toolbar Menu with a Webpage Preview Presenting Non-functional Snippets of Content

20. Dr. Mahon says a POSITA would “conclude that Blumenberg’s approach—focused on enlarged, legible snippets—is insufficient to satisfy Bhumkar’s stated objective of providing a meaningful preview to aid user decision-making.” EX2008, ¶125. I disagree.

21. To start, Blumenberg and Bhumkar are mutually consistent and congruent in that both references seek to give the user more information about the target webpage of the hyperlink than what is displayed on the current webpage.

Additionally, Blumenberg and Bhumkar both describe creating snippets or clipped portions of content from the target webpage for the preview. Blumenberg, for example, teaches that “[t]he displayed information [of the webpage preview] includes information other than the anchor text of the link,” such as “the URL of the webpage..., the title of the webpage,” “a snippet of the content in the webpage..., and/or a summary of the content of the webpage.” EX1004, [0040]; *see also* [0048], Figure 5F. This functionality all flows from Blumenberg’s goal to satisfy “a need for a more efficient way[] to convey hyperlink information and select hyperlinks in portable devices.” EX1004, [0005]; *see also* [0057]. Bhumkar explains that the approach of providing merely “a few lines of text clipped from a target webpage...may or may not help the searcher in assessing the relevancy of the returned result.” EX1005, [0005]. Accordingly, Bhumkar teaches the solution of displaying a “quick view or preview [that is] an image of [the] target web page.” EX1005, [0047]. Like Blumenberg’s snippet of content, Bhumkar promotes the idea of “display[ing] ‘select’ information from the underlying content of the target link” by “intelligently pars[ing] out unnecessary or undesired information in the target page to present the user with a focused view of the important or desired information.” EX1005, [0041].

22. Dr. Mahon’s discussion of Bhumkar’s background (which I repeat below for context) seems to miss the point:

In fact, Bhumkar criticizes traditional hyperlink snippets (such as URLs and small excerpts of page text) as providing “little or no information on which to base a decision as to the relevance of the associated web page.” EX1005, ¶[0006]. As Bhumkar further explains, search results typically include only “a few lines of text clipped from the target web page,” which are “usually limited to a few words which may or may not help the searcher in assessing the relevancy of the returned result.” EX1005, ¶[0005].

EX2008, ¶125. Bhumkar is not denigrating the idea of providing less than a complete fully functioning webpage as the preview. Again, as I explained above at Section III.A.1, the majority of Bhumkar’s disclosure is about creating previews using non-functional images that reflect clipped portions of webpages. What Bhumkar’s background discussion is saying is that the extracted text typically provided with conventional search results sometimes fails to provide enough information to the user. Accordingly, Bhumkar teaches the concept of presenting more than just a few words of extracted text and instead, for example, actual images of content from the target webpage.

23. As discussed, Blumenberg promotes the same ideas as Bhumkar. Beyond the information associated with the hyperlink on the current webpage—e.g., the anchor text—Blumenberg teaches that the webpage preview “also includes a snippet of the content from the webpage.” EX1004, [0040], [0048]. It would have been apparent to a POSITA that seeing a portion of the actual content provides additional context, which helps the user decide whether the target webpage is

relevant and whether or not to interact with the target webpage. This clear benefit flows from Blumenberg's overall goal of providing "more efficient ways to convey hyperlink information" and eliminating the "hit-or-miss character" that "can frustrate users and make the web browsing experience on portable devices cumbersome." EX1004, [0004]–[0005]. Thus, it would have been clear to a POSITA that Blumenberg's approach to webpage previews does not leave users uncertain about the relevance of the target webpage. Blumenberg provides a specific feature set to prevent this kind of uncertainty and confusion—e.g., displaying a webpage preview including content from the target page ([0040], [0048]), displaying the content in the preview at a legible size ([0053]), and positioning the preview away from the contact area so it is not obstructed by the user's finger ([0054]).

3. Blumenberg's Disclosure Supports and Facilitates the Concept of Adding a Toolbar Menu like Bhumkar's

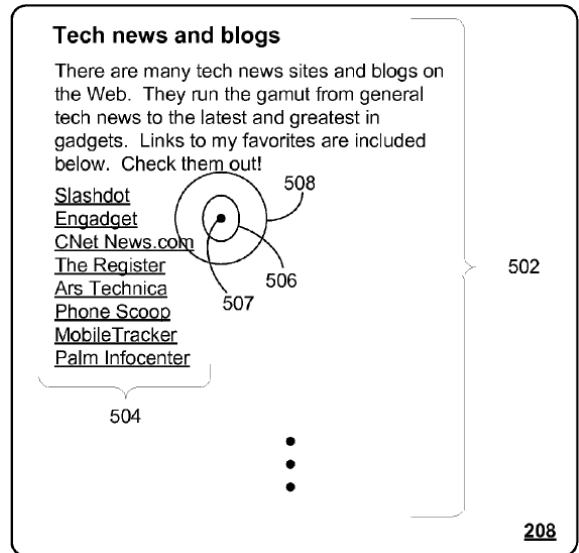
24. According to Dr. Mahon,

Adding a toolbar with "conventional browser functionality," such as the functions listed in Bhumkar (e.g., Back, Share, Full Screen), would introduce additional icons and controls that increase the density of interface elements. A POSITA would recognize that this increase in visual and interactive complexity directly contradicts Blumenberg's core objective of "reducing the chance of inadvertent selection." EX1004, ¶[0004].

EX2008, ¶138. But Dr. Mahon is mistaken. A POSITA using common sense and ordinary creativity would have taken the exact opposite view on this issue.

25. Specifically, the POSITA would have understood that Blumenberg provides a remedy for the problem of interacting with small items on a small-screen mobile device. For example, in the context of hyperlinks, Blumenberg teaches a technique that involves:

- i. Determining a contact area 506 of the user's touch;
- ii. Determining a contact point 507 within the contact area;
- iii. Determine which link satisfies “one or more of the following criteria”—e.g., “being within a maximum distance 508 from the point 507, partially overlapping the contact area 506, and [being] located completely within the contact area 506.”



EX1004, [0045]–[0047], Figure 5B (excerpt); *see also* [0038], [0043], Figure 3. As a result of Blumenberg's technique, “[t]he user is relieved of having to worry about the precision of his finger contact with respect to selection of links,” even when the hyperlinks are “displayed at such a small size that the hyperlinks are illegible or barely legible.” EX1004, [0057].

26. A POSITA contemplating Blumenberg's technique for facilitating the selection of small hyperlinks would obviously understand the challenges raised for users in interacting with small items. The POSITA would therefore also understand that any items presented within a toolbar menu associated with a webpage preview

would provide significant user benefits to the extent the menu items are made easy and intuitive for users to interact with, which would have been well within the skill level of the POSITA to do. In this way, rather than dissuading the POSITA from pursuing a combination with Bhumkar, Blumenberg's teachings actually encourage that combination.

4. Bhumkar's Toolbar Menu Options Provide Easy and Efficient Access to Functionality That Would Be Beneficial in the Context of Blumenberg's Mobile Device

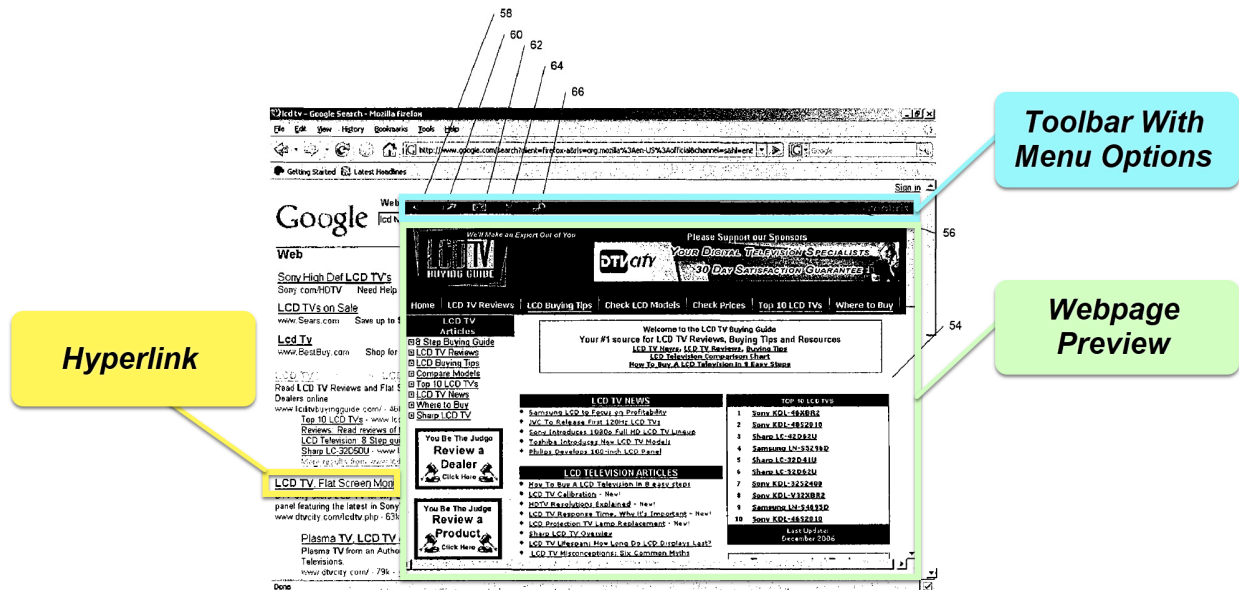
27. As I explained in my Prior Declaration, menus had been a core feature in computer GUIs for nearly half a century before the '581 patent. *See* EX1003, ¶¶40–46. By 2001, virtually all consumer personal computing devices, both mobile and desktop, featured GUIs with menus. *See* EX1003, ¶43. Mobile touch screen devices were no different. Well-known devices like Apple's Newton MessagePad (1993) and iPhone (2007) touch screen mobile device products both heavily utilized menus in their respective GUIs. *See* EX1003, ¶43 (citing EX1022, pp. 128-141 (discussing "list picker" menus); EX1045, pp. 34 (text editing menus), 117 (contextual menu for Maps application), 128 (contextual menu for Voice Memos application)). What made menus such a staple in computer GUIs is no secret—they were considered an effective, time-tested solution to the problem in user-interface design of presenting available actions and functionalities for quick and efficient selection by the user. EX1003, ¶42. A menu is "a list of command options currently

available to the computer user,” (EX1021, p.1), and “making objects, actions, and options visible” to “[m]inimize the user’s memory load” was one of the well-known general principles for user interface design, (EX1054, p.1).

28. No different than any other menu, Bhumkar’s toolbar menu presented with a webpage preview is designed to make it easier and more efficient for users to access available actions, such as “sharing contextual information” about the target webpage with contacts or displaying the content of the preview “in a full screen fashion.” EX1005, [0021]; *see also* [0073]–[0074].

29. Particularly as it relates to sharing webpage content, Bhumkar’s disclosure illustrates how much easier and more efficiently users can access this functionality with the webpage preview toolbar menu. For example, Bhumkar describes the prior state of the art, e.g., where “sharing a link with oneself or others requires a user to copy and paste the link into a new message window in the user’s email client.” EX1005, [0010]. Bhumkar’s goal is “[t]o alleviate [such] problems,” and the solution is to make “sharing information...easier by using options to either selectively, or as a whole, share some or all of the content of the preview window or current page without using the traditional email clients.” EX1005, [0038], [0043]. And Bhumkar makes this sharing functionality easy and efficient to access by displaying it with the webpage preview as a toolbar menu option. EX1005, [0021],

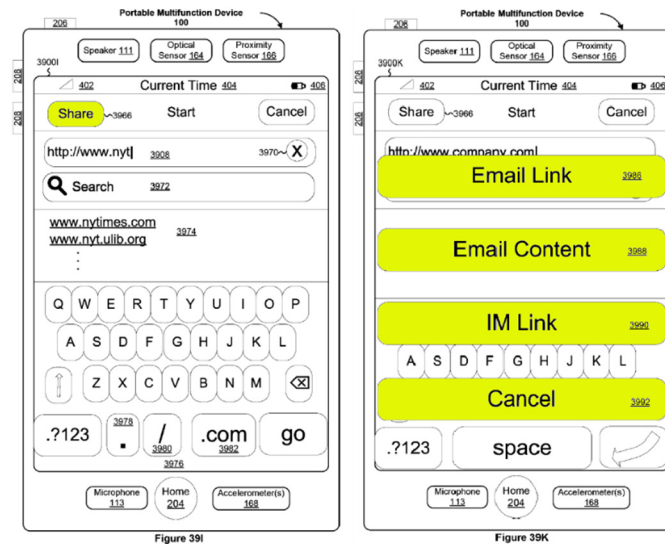
[0071], [0072], Figure 5. As a result, “[t]he user can share links without losing context and/or focus.” EX1005, [0043].



EX1005 (Bhumkar), Figure 5 (annotated)

30. Bhumkar was not alone in desiring a more convenient and efficient mechanism for sharing links and associated content. The inventor of the Blumenberg reference (EX1004)—Chris Blumenberg and others from Apple—disclosed in a 2009 patent the concept of a mobile device with a web browser application featuring a toolbar menu having a “Share icon 3966 (FIG. 39I) that when activated (e.g., by a finger tap on the icon) initiates display of a UI for sharing information with other users (e.g., UI 3900K, FIG. 39K).” EX1023, 62:16–67, Figure 39K; *see* EX1003, ¶44 (discussing EX1023 in my Prior Declaration). The

UI provides options to “Email Link,” “Email Content,” and “IM Link.” EX1023, Figure 39K.



EX1023, Figures 39I and 39K (annotated)

31. While certainly preferable to the unwieldy manual copy-paste sharing functionality that Bhumkar described from the older prior art, the 2009 Apple patent to Blumenberg, et al. still requires the user to select a hyperlink and visit the target webpage before sharing. With Bhumkar’s approach, as discussed, the sharing functionality is presented in a toolbar menu displayed with the webpage preview, allowing the user to share even more easily and efficiently without ever leaving the page displaying the hyperlink.

5. Bhumkar’s Full-screen Mode Has Clear Benefits When Applied to Blumenberg’s Mobile Device

32. As I mentioned above and in my Prior Declaration, Bhumkar’s toolbar menu provides easy and efficient access to useful functionalities regarding the

webpage preview, including sharing the target webpage and viewing the target webpage in a full-screen mode. EX1003, ¶¶148–149; EX1005, ¶¶[0073]–[0074]. Dr. Mahon takes the contrary position that “a POSITA would not have been motivated to add a full-screen mode for Blumenberg’s static hyperlink preview, as doing so would yield no functional benefit.” EX2008, ¶134. According to Dr. Mahon, there would be no benefit because “Blumenberg’s preview contains no such scrollable or dynamic content, and its design is already optimized for clear readability on a compact display.” EX2008, ¶134; *see also* ¶133. I believe Dr. Mahon’s view is inaccurate and does not reflect the understanding of a POSITA. Thus, I cannot agree with his conclusion.

33. It is true that Blumenberg teaches a webpage preview where “the information 510 associated with a respective link is displayed at a legible size, such as 14 point or larger...which enables easy reading of the link information 510 by ordinary users.” EX1004, [0053]. This teaching to make the displayed information readily discernable by most users is simply common sense. But the fact that so-called “ordinary users” can parse the link information displayed in the preview does not mean Bhumkar’s toolbar menu item for entering a full-screen mode “would yield no functional benefit,” as Dr. Mahon contends. EX2008, ¶134.

34. Dr. Mahon misunderstands the testimony in my Prior Declaration and the disclosure I cited from Bhumkar. Specifically, Dr. Mahon inaccurately

characterizes my testimony as being that integrating Bhumkar’s teaching of a toolbar menu item for entering a full-screen mode would merely result in making Blumenberg’s non-functional hyperlink preview—a snippet of content—larger. *See* EX2008, ¶131 (“Dr. Cockburn’s Declaration suggests that this would allow a user to enlarge Blumenberg’s hyperlink preview (i.e., the URL name and snippet of content) for improved readability[.]”). But that is not my testimony, and it is not what Bhumkar teaches. Instead, I explained:

As another example, Bhumkar discloses that “***selecting*** full screen icon 60 [***menu option***] 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.” EX1005, [0073]. It would have been apparent or obvious to the POSITA that navigating to the webpage at the web address corresponds to and satisfies the claimed feature of ***performing an operation on the web address***. Here, the ***operation performed*** involves opening the new browser window/tab, and this operation is performed ***on the web address*** at least in the sense that it involves using the web address to navigate to the corresponding page.

EX1003, ¶149 (quoting EX1005, [0073]).

35. Rather than just making the content snippet in Blumenberg’s preview larger, integrating Bhumkar’s full-screen toolbar menu item would provide an additional mechanism for the user to navigate to the previewed webpage and view that page in a full-screen mode. Dr. Mahon’s discussion about Blumenberg’s webpage preview displaying “all relevant content in a format optimized for small screens” is hardly relevant to Bhumkar’s disclosure about a full-screen mode menu

item. EX2008, ¶133. If pertinent at all to this subject, Blumenberg’s teaching that content in the webpage preview is “at a legible size” proves a POSITA would have understood that Bhumkar’s toolbar menu items could be likewise appropriately sized in a manner that facilitates effective user interaction. EX1004, [0053].

B. Mapping the Claim Elements to the Blumenberg-Bhumkar-Griffin Combination

36. I explain in my Prior Declaration how and why, to a POSITA, the Blumenberg-Bhumkar-Griffin combination provides each and every element of the ’581 patent’s challenged claims. *See* EX1003, ¶¶97–181. Dr. Mahon has a different view on a subset of these elements, including Elements [1.m] and [42.h], Elements [1.n] and [42.i], and Elements [1.o] and [42.j]. I believe Dr. Mahon’s positions are flawed for several reasons, including those I explain below.

1. The First Claimed Scenario: Avoiding Display of Any Operation When the Contact Is Less Than a First Duration (Elements [1.m] and [42.h])

37. In my Prior Declaration, I noted that Elements [1.m] and [42.h] outline a first claimed scenario where the contact duration is less than a first predefined duration and the associated functionality involves avoiding display of any operation. *See* EX1003, ¶¶34–35. Moving on to the Blumenberg-Bhumkar-Griffin combination, I discussed how “Blumenberg’s technique disregards inadvertent contact”—i.e., contact less than a selection threshold (*first duration*)—and, thus,

avoids displaying the result of any operation based on the first contact, as claimed.

EX1003, ¶¶118–119, ¶123. Breaking down this topic in detail, I described that,

Blumenberg explains that “inadvertent contact with an icon may not select a corresponding symbol.” EX1004 (Blumenberg), [0034]. Applying this disclosure to the above-discussed functionality of selecting a hyperlink on a webpage (*supra*, Elements [1.g]-[1.l]), Blumenberg teaches and/or suggests that inadvertent contact at a point that corresponds with the location of the hyperlink will not select or activate the hyperlink. A POSITA would have reached this understanding of Blumenberg’s teachings by applying basic common sense and reasoning. Blumenberg’s statement about disregarding inadvertent contact with icons as a general matter would certainly apply to Blumenberg’s preferred embodiments about hyperlinks. It would not make sense for Blumenberg to make a general statement about selecting GUI elements that is inapplicable to the main GUI element of concern—hyperlinks. Moreover, the purpose of disregarding inadvertent contact logically applies generally to all different types of selectable GUI elements, including hyperlinks. Whether a hyperlink, button, or slider, the POSITA would have appreciated the general aim of Blumenberg’s design is to prevent any/all of those types of GUI elements from being mistakenly selected by inadvertent contact.

EX1003, ¶118.

38. Dr. Mahon argues against my rationale, for example, on the basis that Blumenberg’s Paragraph 34 disclosure is about “a soft keyboard UI, not hyperlink behavior” and, in his view, “[a] POSITA would not equate a virtual keyboard icon with a hyperlink.” EX2008, ¶85. Here, and generally throughout his analysis, Dr. Mahon is interpreting Blumenberg in a cramped and restricted manner that does not reflect the ordinary creativity and common sense of a POSITA. The fact that icons in a soft keyboard UI are associated with different functionality than hyperlinks is

unimportant—they are both selectable GUI items. And in both cases, it makes sense to disregard inadvertent contact so that the device does not take an action—whether entering an alphanumeric key input or navigating to a target webpage—that the user did not intend. In fact, in the case of hyperlinks, the POSITA would have appreciated that it is even more important to disregard inadvertent contact because the consequence of a mistakenly initiated action is more frustrating to the user. Entering a mistaken alphanumeric key input is an error that can be fixed almost immediately. Navigating to an unintended webpage, by contrast, is likely to force the user to sit in frustration through the loading time, which can extend for several seconds. Blumenberg recognized and sought to remedy this “hit-or-miss character” of web browsing on mobile devices “which can frustrate users.” EX1004, [0004]. Accordingly, the common-sense notion of disregarding inadvertent contact on hyperlink icons is an integral and obvious part of Blumenberg’s design goal.

39. I similarly disagree with Dr. Mahon’s inaccurate suggestion that the idea of disregarding inadvertent contact in Blumenberg is somehow limited to “distinguish[ing] between [a] tap and swipe.” EX2008, ¶86. Blumenberg instead states broadly that “inadvertent contact with an icon may not select a corresponding symbol.” EX1004, [0034]. One “example” Blumenberg provides is “a swipe gesture...if the gesture corresponding to selection is a tap gesture.” EX1004, [0034]. But it is just that—an example. Another example that a POSITA would have

immediately envisioned, particularly in the context of the duration-based gestures that Blumenberg describes is a contact that fails to meet a minimum duration threshold.

40. Next, Dr. Mahon says, “there is no technical basis to conclude that a short-duration of under 0.2 seconds would be considered ‘inadvertent’ as Dr. Cockburn assumes.” EX2008, ¶86. I disagree. For one, Blumenberg provides a technical basis for my analysis and conclusions. The disclosure of, “the information is displayed after the contact is maintained for at least a predetermined [touch contact] time (e.g., 0.2 seconds, or another value between 0.1 and 0.25 seconds) for displaying link information” is the lowest duration threshold and the first-in-time functionality in Blumenberg’s discussion of hyperlinks. EX1004, [0049]. Accordingly, a POSITA would have understood that any contact maintained for less than this minimum duration threshold would not invoke any functionality. From the POSITA’s perspective, the reason for not assigning functionality to such a short-duration contact is because it likely represents an accidental touch by the user rather than an intentional gesture.

41. To the extent Dr. Mahon’s position is based on the fact that he believes a 0.2 second minimum duration threshold is somehow categorically out of step with industry practice, I disagree. As a POSITA would have known, duration thresholds are variables that can be adjusted depending on the circumstances. In fact, as I

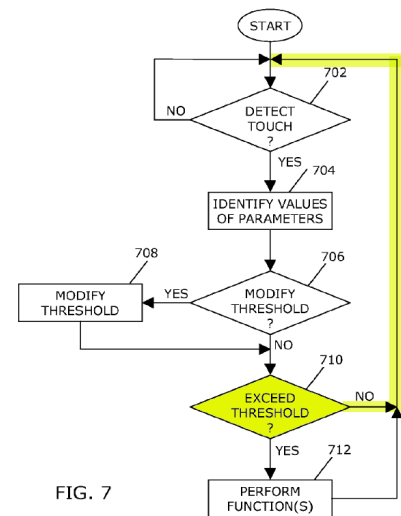
explained in my Prior Declaration, the combination of Blumenberg and Griffin provides duration thresholds that are configurable by the user. *See* EX1003, ¶¶89–95; *see* EX1006, [0033] (“Touch thresholds are modifiable and may be based on the values of any number of parameters[.]”). Accordingly, there is no universally accepted industry practice, as Dr. Mahon seems to suggest, for establishing the signature of an intentional touch with an assigned functionality and an inadvertent touch with no assigned functionality. In addition, Blumenberg is not strictly limited to 0.2 seconds but also mentions in the same phrase any other “value between 0.1 and 0.25 seconds.” EX1004, [0049].

42. To be clear, I do not believe Dr. Mahon’s “Hammer.JS” document is credible evidence in this case, much less evidence of any sort of industry standard. This document appears to be a post from “GitHub,” a web-based collaborative software development platform, that was archived by the Wayback Machine in 2020. *See* EX2005, p.1 (“The Wayback Machine - <https://web.archive.org/web/20201001103751/https://squadette.github.io/hammer.js/understanding-gestures/>). My understanding, however, is that both parties have assumed a Critical Date of 2011. In addition, there is no indication in this document that its disclosure is representative of common or standard industry practice relating to touch gestures. Instead, the document simply explains that the browser it is discussing does not recognize gestures, so “[y]our Javascript application must recognize gestures from

the sequence of touch events,” meaning the application developer needs to “implement a function...with timing information.” EX2005, p.1. As one “example” of such a function, the document mentions that if a touch starts and ends in “less than 100ms...then it looks like a tap.” EX2005, p.1. But, as in *Blumenberg*, this “100ms” value is clearly indicated as being a variable that the developer can select, not any sort of standard. Other documents identify different exemplary thresholds. *E.g.*, EX1035, 11:19–24 (“For example, the gesture recognition unit may detect any non-moving contact with a duration of less than 500 milliseconds as a tap[.]”).

43. Moving on, I see that Dr. Mahon also contests my analysis regarding Griffin’s supplemental disclosure of avoiding inadvertent contact. EX2008, ¶¶88–90. In my Prior Declaration, I explained,

Consistent with and confirming *Blumenberg*’s disclosure, Griffin similarly discloses the use of “[b]aseline thresholds...to reduce inadvertent input.” EX1006 (Griffin), [0033]; *see also* [0061]; *supra*, Section VIII.D.1.iii (motivation-to-combine). 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.



EX1003, ¶120. To reiterate, a POSITA would have been motivated to incorporate Griffin’s supplemental disclosure on avoiding inadvertent contact and minimum

duration thresholds with Blumenberg at least because Blumenberg suggests this functionality, and the POSITA would have looked to a supplemental reference like Griffin that provides additional well-known implementation details. *See* EX1003, ¶¶90–93.

44. Dr. Mahon suggests there would be no motivation to combine Blumenberg and Griffin in this way because “a POSITA would recognize that Blumenberg already solves that problem of inadvertent inputs when a device ‘is carried in a pocket or bag’ by permitting a user to lock the screen.” EX2008, ¶88 (quoting EX1004, [0025]). But a POSITA would have understood that a locking mechanism does not prevent any and all inadvertent inputs. After all, if locking the device were really a complete solution, Blumenberg would not have subsequently disclosed the concept of disregarding inadvertent contact in a later paragraph. *See* EX1004, [0034]. In addition, any POSITA would have known that locking the device is not a failsafe because users can make inadvertent short contacts (or near contacts) with the touch screen while the device is unlocked and actively being used. For example, users may accidentally activate a hyperlink while holding a finger near to the display to conveniently scroll a webpage. Even if such contacts are not likely to occur, there is often no meaningful cost or downside to incorporating a minimum duration threshold to reduce the incidence of accidental activation, especially when this general concept is already part of Blumenberg’s disclosure (as discussed).

45. Furthermore, as before with Blumenberg, Dr. Mahon’s view of Griffin is too narrow and confined. A POSITA would not strictly limit Griffin’s teachings to only “a distinct use case involving accidental touches while a device is concealed in a user’s clothing,” as Dr. Mahon suggests. EX2008, ¶88. Griffin instead broadly teaches that “[b]aseline thresholds may be established, for example, to reduce inadvertent input[.]” EX1006, [0033]. As one example—Griffin uses the common Latin abbreviation “e.g.,”—Griffin identifies “selections resulting when the portable electronic device 100 is carried in a pocket or bag, for instance.” EX1006, [0033]. But there is no language in Griffin that limits the broader “inadvertent input” teaching to this one scenario, nor would a POSITA view this concept so narrowly. Instead, the POSITA would apply the broader teaching to a variety of situations. When considering Blumenberg, the POSITA would naturally apply Griffin’s teaching to set “[b]aseline thresholds” for reducing inadvertent input to the context of Blumenberg’s teaching that “the information is displayed after the contact is maintained for at least a predetermined [touch contact] time (e.g., 0.2 seconds, or another value between 0.1 and 0.25 seconds) for displaying link information.” EX1004, [0049]. Again, this is the lowest duration threshold and the first-in-time functionality in Blumenberg’s discussion of hyperlinks. EX1004, [0049]. In other words, it is the kind of “[b]aseline threshold” that Griffin teaches should be set to avoid “inadvertent input.” EX1006, [0033].

46. Dr. Mahon also conflates Griffin's broad teaching to set baseline thresholds that reduce inadvertent input with Griffin's additional functionality of automatically modifying those thresholds. Specifically, Dr. Mahon points to Griffin's described functionality of "detecting patterns of repeated, unintentional touches that serve as indicators the device is being stored and then responding by increasing a force threshold required for interaction." EX2008, ¶89 (citing EX1006, [0043]). In the paragraph Dr. Mahon cites, Griffin says, "A touch may be considered inadvertent, for example, based on the contact area, number of simultaneous distinct touches on the touch sensitive display 118, duration of touch, and so forth." EX006, [0043]. As related but distinct functionalities, Griffin describes that the device can suspend touch entry or increase touch thresholds "until inadvertent touches are no longer detected." EX006, [0043]. These additional functionalities do not take away from Griffin's clear disclosure of taking no action in response to an inadvertent touch.

2. The Second Claimed Scenario: Replacing the Current Webpage With the Hyperlink Identified Webpage When the Contact Is Greater Than the First Duration and Less Than a Second Duration (Elements [1.n] and [42.i])

47. In my Prior Declaration, I noted that Elements [1.n] and [42.i] outline a second claimed scenario where the contact duration is greater than the first predefined duration and less than a second predefined duration and where the

associated functionality involves replacing the current webpage with the webpage identified by the hyperlink. *See* EX1003, ¶¶34–35. Then, in my prior art analysis, I discussed how Blumenberg and Griffin 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, ¶¶127–128, ¶133.



FIG. 5C

Contact terminated with a duration greater than selection threshold and less than activation threshold

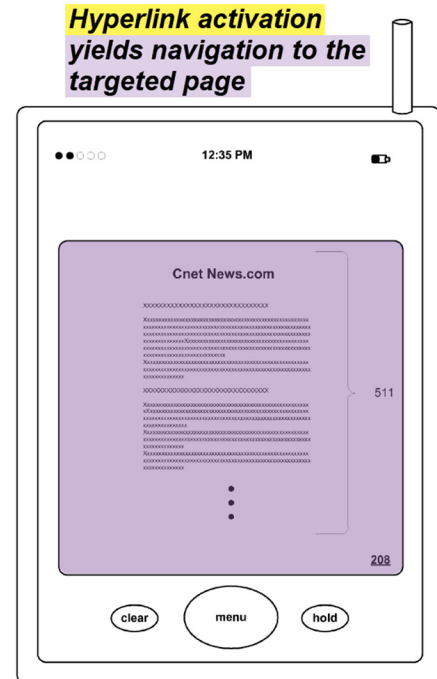


FIG. 5D

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

48. Dr. Mahon contests my analysis on the basis that “this disclosure [above] does not satisfy Limitation [1.n.ii] or the corresponding portion of [42.i], because the claims do not turn on how long the hyperlink preview is displayed, but

rather on how long the user maintains the first contact with the touchscreen.” EX2008, ¶98. Specifically, Dr. Mahon seems to believe that Blumenberg’s “logic centers around how long preview information is displayed—not how long the user maintains physical contact with the touchscreen.” EX2008, ¶98 (citing EX1004, [0051]). I do not find support for Dr. Mahon’s position in Blumenberg. More than just unsupported, I believe Blumenberg directly contradicts Dr. Mahon.

49. The paragraph of Blumenberg that Dr. Mahon cites is about triggering “activation of the link” by “breaking the contact before or after a []² predetermined amount of time has elapsed.” EX1004, [0051]. Here and throughout Blumenberg, the “time” that matters is the touch contact duration. Nevertheless, Dr. Mahon reaches a different conclusion by isolating the following clause from the rest of Blumenberg: “the selected link is activated by a contact break if the link information was displayed for less than a first predetermined amount of time.” EX2008, ¶98 (quoting EX1004, [0051]). In doing so, Dr. Mahon singles out and relies heavily on the word “displayed,” suggesting (inaccurately) that Blumenberg teaches some kind of display duration, rather than a touch contact duration.

² I omit the word “first” from the Blumenberg quotes to avoid confusion with labels “first” and “second” in the claim language.

50. But reading small, isolated pieces of text in a vacuum and drawing broad conclusions from them is not what a POSITA would have done. A POSITA would have instead read all of Blumenberg’s disclosures in context of the document as a whole. For example, the POSITA would have recognized that the sentence in which Dr. Mahon’s isolated clause appears refers to “a combination of such activation criteria” as were described in the preceding sentences about touch durations. EX1004, [0051] (“the contact is held”).

**Touch
Duration
Discussion**

[0051] The activation of the link may be triggered in a variety of ways. In some embodiments, the activation is triggered by breaking the contact. For particular embodiments, the activation may be triggered after the breaking of contact before or after a first predetermined amount of time has elapsed. In some other embodiments, the activation of the link may be triggered by a gesture, such as a quick tap on the touch screen 208 after breaking contact. Furthermore, in some embodiments, if the contact is held for longer than a second predetermined amount of time, whatever link information that is displayed is removed from display and the link is not activated. In some embodiments, a combination of such activation criteria are used: the selected link is activated by a contact break if the link information was displayed less than the first predetermined amount of time, and if the link information was displayed for more than that amount of time, then the user must break contact and tap the link information (which is continued to be displayed after the contact break) to activate the selected link.

**The Sentence Dr.
Mahon Quotes
Refers Back to and
Extends the Touch
Duration Discussion**

EX1004, [0051] (annotated). The same is true of the earlier antecedent paragraph, where Blumenberg teaches that link information is displayed “after the contact is maintained for at least a predetermined time.” EX1004, [0049]. In short, Blumenberg never describes the concept of link activation based on a display duration that is divorced from touch contact duration.

51. Regardless, even if I were to adopt Dr. Mahon’s view that Blumenberg describes a display duration instead of a touch duration (which I do not), that would not change my opinion that the Blumenberg-Bhumkar-Griffin combination satisfies Elements [1.n] and [42.i]. For example, Griffin supplements Blumenberg’s teachings and makes clear that the durations being monitored are touch contact durations. As I explained in my Prior Declaration, “Griffin further provides an exemplary process flow with implementation details associated with tracking touch contact, comparing the contact to predetermined touch duration thresholds,” and “a POSITA would have had multiple reasons to pursue a predictable combination that applies Griffin’s rudimentary implementation details in the context of Blumenberg’s disclosure.” EX1003, ¶89; *see also* ¶¶103–106, ¶¶125–129.

3. The Third Claimed Scenario: Outputting Tactile Feedback, Displaying a Menu, and Displaying a Portion of the Hyperlink Identified Webpage When the Contact Is Greater Than the Second Duration (Elements [1.o] and [42.j])

52. In my Prior Declaration, I noted that Elements [1.o] and [42.j] outline a third claimed scenario where the contact duration is greater than the second predefined duration and where the associated functionality involves outputting tactile feedback, displaying at least one selectable menu option, and displaying a portion of the webpage identified by the hyperlink. *See* EX1003, ¶¶34–35. In my corresponding analysis of the prior art, I explained,

[I]n 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. *E.g.*, EX1004 (Blumenberg), [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.

EX1003, ¶151.

That Blumenberg’s link information (*portion of the second webpage*) is initially displayed before the activation threshold does not change my analysis or conclusions regarding Element [1.o.viii]. As I have explained, Blumenberg’s link information remains on the display after and as a result of the user maintaining contact for a duration greater than the activation threshold, which plainly satisfies a basic when-then conditional relationship, and even a causal conditional relationship, between Elements [1.o.i]-[1.o.v] and Elements [1.o.vi]-[1.o.viii].⁸

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].

EX1003, ¶158.

53. Dr. Mahon disputes my analysis, taking the position that the menu and webpage preview of link information in the Blumenberg-Bhumkar-Griffin combination both “occur before such a determination is ever made in relation to an ‘activation threshold.’” EX2008, ¶¶106–107; *see also* generally ¶¶103–108. In other words, says Dr. Mahon, “the alleged display of the menu ([1.o.vii]) and display of the second web page ([1.o.viii]) are not triggered in response to contact [that]

exceeds the ‘the second user-configurable predefined duration.’” EX2008, ¶106. Thus, the underlying premise of Dr. Mahon’s position is that Elements [1.o] and [42.j] require the display of a menu and a portion of a second webpage “in response to” or “triggered [by]” a contact exceeding the claimed second duration.

54. I disagree with Dr. Mahon that the claim term “when” is equivalent to the narrower phrase “in response to.” See EX2008, ¶51 (Dr. Mahon alleging that a POSITA “would not distinguish” between “when” and “in response to”). As I explained in my Prior Declaration, “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].” EX1003, ¶158 n8.

55. Dr. Mahon suggests my view “contradicts the basic principles of programming logic and, as a result, is inconsistent with the claim language, which recites ‘one or more programs including instructions to’ cause the device to perform a specified action ‘when’ it determines that the relevant preconditions are satisfied,” EX2008, ¶47. However, the ’581 patent’s claims are not transformed into “programming logic” merely because they recite the generic phrase “instructions to”; they are still just patent claims. And these patent claims broadly recite an electronic device storing one or more programs in memory, where the programs

include some set of unspecified instructions to carry out three different scenarios, each involving a set of touch contact limitations and one or more functions that are performed “when” the corresponding touch contact limitations are met.³

56. All of Dr. Mahon’s discussion about “programming practice” and “software engineering” stems from his fundamental misunderstanding that the claims are some kind of code or pseudo code—which they are not. *See* EX2008, ¶¶51–52. Neither the structure nor the words of the ’581 patent’s claims resemble code or pseudo code. For example, broad functional phrases like “avoid display[ing]...a result of any operation,” “replace the display of the first web page with the second web page,” and “display at least a portion of the second web page” are simply describing a result of executing code; they are not themselves representative of any underlying code.

57. In addition, the word “when” does not carry a narrow or special meaning of “in response to” to those of ordinary skill in the art, nor is “when” a common keyword in popularized programming languages. “When” is simply a conjunction used in everyday conversation to mean, for example, “at or during the time that.” EX1055, p.3; *see also* EX1056, p.3 (similar). I see no reason why a

³ I note that Independent Claim 1 uses the term “when” and Independent Claim 42 uses the phrase “based on detected usage where.” Dr. Mahon interprets these claims as having effectively the same meaning, as do I.

POSITA would limit their understanding of the broad term “when” to the more specific and narrower phrase “in response to.”

58. Dr. Mahon also suggests that his “interpretation is further supported by the specification’s repeated emphasis on the use of decision-tree logic to detect pattern-based user gestures and trigger corresponding system responses.” EX2008, ¶50. Here, although he identifies a series of passages from the ’581 patent, none of them describe the three claimed scenarios outlined in the ’581 patent’s claims.

59. For example, the text Dr. Mahon cites at 54:19–20 says “[i]f a gesture has been detected, then an associated action is performed,” but the broader discussion makes no mention of any “action” that resembles the ’581 patent’s three claimed scenarios. *See* EX1001, 53:7–54:34. Equally important, the cited text at 54:19–20 is about gesture recognition; however, the broad independent claims of the ’581 patent do not include any such claim limitations. Gesture recognition limitations are instead recited in certain narrower dependent claims—e.g., dependent claims 32–39 and 66–71.

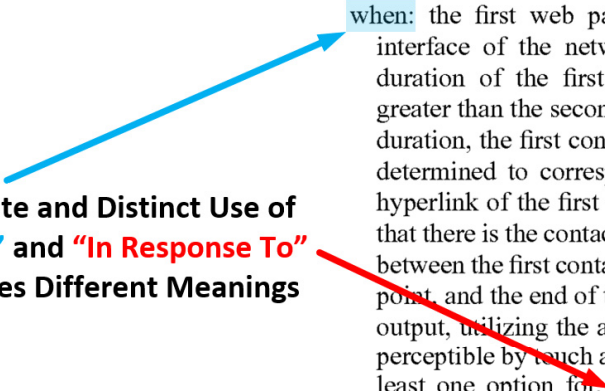
60. Dr. Mahon also cites text at 57:9–10 that says “[o]nce the gesture has been identified, the corresponding operation is performed.” Again, though, the discussion does not mention the specific operations in the ’581 patent’s claims and the discussion invokes gesture recognition, which is not an element of the broad independent claims.

61. Dr. Mahon’s last citation is 25:28–32, a passage that reads: “If it is determined that the selection establishment conditions have not been met, the selection is updated in a loop through performing operations...The selection may continue to vary as a function of user input until the selection establishment conditions have been met.” This passage is even less relevant than the passages I discussed above. The ’581 patent’s broad independent claims are not about “selection establishment conditions,” a term that “refer[s] to one or more predefined conditions whose satisfaction may cause the selection state to switch from ‘dynamic’ to ‘static,’” meaning “the selection may no longer vary with contact pressure levels.” EX1001, 24:35–44.

62. A more careful reading of the ’581 patent supports my interpretation that “when” just means “when,” not “in response to.” For example, the ’581 patent’s claim language in the third scenario of Independent Claim 1 uses “when” and “in response to” separately and in different contexts:

**Separate and Distinct Use of
“When” and “In Response To”
Indicates Different Meanings**

when: 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: output, utilizing the actuator, a first feedback that is perceptible by touch and 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 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.



EX1001, 103:33–55 (annotated). The only reasonable inference one could draw from the different usage in such close proximity is that “when” and “in response to” have different meanings in the ’581 patent.

63. In addition, I find it notable that Dependent Claim 41 further limits Independent Claim 1 by reciting the feature that “each instance of said when includes while.” EX1001, 111:37; *see also* 123:22–23 (Dependent Claim 73 further limited Independent Claim 42 in the same way). My understanding from Petitioner’s counsel is that an independent claim impliedly embraces more subject matter than its narrower dependent claim. Accordingly, Independent Claim 1 must at least include within its scope embodiments where “when includes while” and, thus, is not constrained to the narrow phrase “in response to.” Relatedly, Dependent Claim 41

recites the feature “each instance of said when includes an entirety of a duration” (with similar language in Dependent Claim 73). Thus, the “when” of Independent Claims 1 and 42 must be at least broad enough to encompass “an entirety of a duration,” and not be restricted to the narrow phrase “in response to.”

64. Turning to the specification, I find that the only disclosure resembling the claim language appears in a “Brief Summary” section that the patentee added by amendment during prosecution. EX1001, 1:41–2:27; EX1002, 482–484. But there is a material distinction between the claim language and the language in the “Brief Summary,” which Dr. Mahon does not discuss. Where Claim 1’s third scenario broadly recites the function of “further display at least a portion of the second web page,” (EX1001, 103:48–49), the specification more narrowly says “further subsequently display at least a portion of the second webpage,” (*id.*, 103:16–17). The same distinction appears when comparing the ’581 patent’s issued claims to a set of proposed claims that were proposed but never entered during prosecution. *Compare* EX1002, 475–478 (amendment dated Jan. 30, 2020), *with id.*, 427–430 (amendment dated Apr. 27, 2020). The specification language and the proposed-but-not-entered claim language includes an additional temporal limitation—“subsequently”—that does not appear in the third scenario of Independent Claim 1. This fact supports my understanding that the ’581 patent’s independent claims are

intentionally broad and the conjunction “when” is not intended to carry any additional implicit temporal or conditional limitations.

65. Lastly, although I disagree with Dr. Mahon’s interpretation of the word “when,” my conclusion that the Blumenberg-Bhumkar-Griffin combination satisfies Elements [1.o] and [42.j] would not change even if I adopted his view. As I explained in my Prior Declaration, “Blumenberg’s link information remains on the display after and as a result of the user maintaining contact for a duration greater than the activation threshold, which plainly satisfies a basic when-then conditional relationship, and even a causal conditional relationship, between Elements [1.o.i]-[1.o.v] and Elements [1.o.vi]-[1.o.viii].” EX1003, ¶157; *see also* ¶¶135–141, ¶¶150–151. In other words, Blumenberg teaches that the webpage preview is maintained on the display, not merely as a random happenstance but “in response to” / “triggered by” a determination that the user’s touch contact has been held for a time period beyond the activation threshold (*second user-configurable predefined duration*).

66. I also separately explained in my Prior Declaration, as an alternative basis of satisfying a narrow causal relationship, that “a 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.” EX1003, ¶158. “In other words, the 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] is caused by and only occurs in conjunction with the complete set of limitations at Elements [1.o.i]-[1.o.v],” meaning Blumenberg’s webpage preview and link information “would be paired with tactile *feedback* and a *menu* only after and as a consequence of the activation threshold.” EX1003, ¶158.

IV. CONCLUSION

I declare that all statements made in this Declaration of my own knowledge are true and that all statements made on information and belief are believed to be true. I further declare that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both (under Section 1001 of Title 18 of the United States Code).

Executed this 19th day of July, 2025.

A handwritten signature in black ink, appearing to read 'Andrew Cockburn', written over a horizontal line.

Andrew Cockburn