UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner

v.

SMITH INTERFACE TECHNOLOGIES, LLC

Patent Owner

IPR2024-01083
Patent 10,642,413

PATENT OWNER SUR-REPLY

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Shorthand	Description
2001	Declaration	Declaration of Marc Davis, Ph.D.
2002	CV	CV of Marc Davis, Ph.D.
2003	JCC	Excerpt of Joint Claim Construction Chart Exhibit A.
2004	Stay Order	October 2, 2024, Order Granting in Part Apple's Motion to Stay in *Smith Interface Technologies, LLC v. Apple Inc.*, 3-23-cv-01187, S.D. Cal (Dkt. No. 127).
2005	Terveen	Transcript of the April 11, 2025, Deposition of Loren Terveen, Ph.D.
2006	Declaration	Declaration of Craig Rosenberg, Ph.D.
2007	CV	CV of Craig Rosenberg, Ph.D.
2008	918 Provisional	Provisional Patent Application 61/581,918
2009	Jono	Jonathan ("Jono") Xia*, Pie in the Sky*, Mozilla Labs (Archived July 21, 2011 and available online at https://web.archive.org/web/20110721001737/https://jonoscript.wordpress.com/2008/10/28/pie-in-the-sky/)
2010	Meadowcroft	Ben Meadowcroft, *Pie Menus a Brief Examination*, (Archived March 8, 2011 and available online at https://web.archive.org/web/20110308003423/https://www.benmeadowcroft.com/reports/piemenu/)
2011	Meadowcroft Bio	Ben Meadowcroft CV (Archived June 17, 2011 and available online at https://web.archive.org/web/20110617040542/http://www.benmeadowcroft.com:80/about/)
2012	Schuderer	Andreas Schuderer, *Pie menus on the Web*, Experiments (Archived March 3, 2011 and available online at https://web.archive.org/web/20110303221610/http://www.schuderer.net/experiments.shtml#readingmore)
2013	Callahan	J. Callahan, et. al. *An empirical comparison of pie vs. linear menus* (1988). CHI'88: Proceedings of the SIGCHI Conference on Human Factors in Computing

		Systems, May 1988, ACM, 95-100, (full version available online at https://archive.org/details/humanfactorsinco0000chic_c8g7/page/n1/mode/2up)
2014	Grouchnikov	Kirill Grouchnikov, *The usability of radial menus*, Pushing Pixels, (Archived July 28, 2012 and available online at https://web.archive.org/web/20120728140221/https://www.pushing-pixels.org/2012/07/25/the-usability-of-radial-menus.html)
2015	Grouchnikov Bio	Kirill Grouchnikov, *About me*, Pushing Pixels, (Archived July 1, 2011 and available online at https://web.archive.org/web/20110701062127/http://www.pushing-pixels.org/about-me)
2016	Jono Bio	Jonathan ("Jono") Xia, *About me*, Work Press, (Archived July 21, 2011 and available online at https://web.archive.org/web/20110721001007/https://jonoscript.wordpress.com/tag/blogging/)
2017	Ahn EP	European Publication App. No. EP08101835.0 to Hye Sang Ahn et al. ("Ahn EP")
2018	Terveen II	Transcript of the September 11, 2025, Deposition of Loren Terveen, Ph.D.

I. INTRODUCTION

Rather than meaningfully engage with Patent Owner's arguments, Petitioner introduces new theories to try to match the plain language of the claims. And, instead of explaining why its initial showing was sufficient, Petitioner attempts to obfuscate that its combination is not the 'simple substitution' the Petition presented it to be. Petitioner ultimately fails to meet its burden and all claims should be upheld.

II. PETITIONER FAILS TO ESTABLISH THAT HINCKLEY DISCLOSES LIMITATIONS [1.e.i-iii]

Limitations [1.e.i-iii] recite detecting "a first duration of contact" and performing two operations "in response to ***the*** first duration of contact" surpassing/not surpassing a threshold.[1] The Petition identifies "tapping the icon 1712" as the claimed "first duration of contact" for "the first operation." Pet., 49-51; POR, §§VI.A.1-2.a. Petitioner identifies a different (*i.e.*, second) contact—"a tap-and-hold gesture ***on*** the radial menu icon 1714"—as the claimed "first duration of contact" for "the second operation." *See id*. Because these ***two distinct*** instances of contact cannot disclose programming logic performing different operations "in response to ***the*** first duration of contact," Petitioner's theory must fail.

A. Petitioner Must Address All Conditional Limitations

Petitioner must show the prior art discloses logic programmed to process user input ("a first duration of contact") and perform ***both*** recited operations (Limitations

[1] All emphasis added unless otherwise noted.

[1.e.ii]-[1.e.iii]) when their respective preconditions apply. POR, §IV.A. Petitioner does not dispute that each Limitation must be shown in the art.

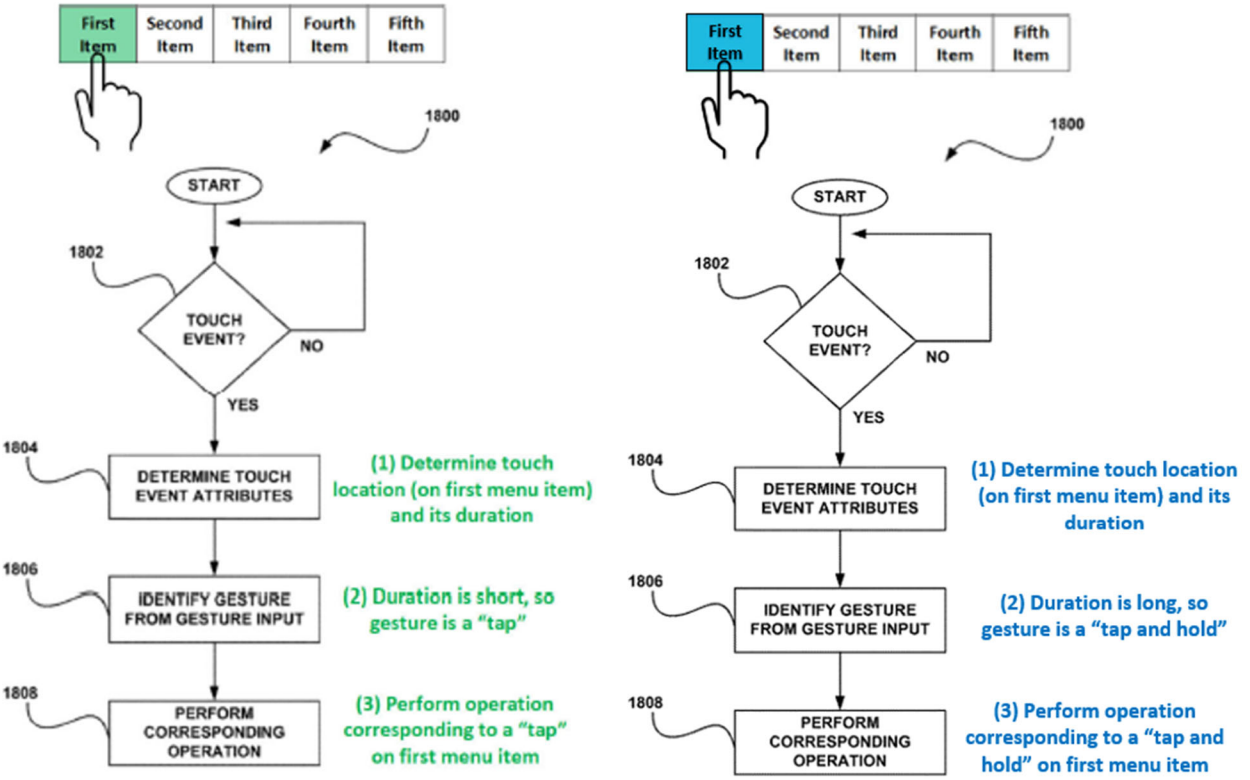
B. Petitioner's "Narrow Construction" is the Plain Meaning

Continuing its Petition theory, Petitioner contends "***the*** first duration of contact" can be separate instances of contact. Reply, 3-7. But the claim requires programming logic that detects "a first duration of contact on at least one of the one or more first menu items" and performing first and second operations "in response to ***the*** first duration of contact on ***the*** [same] at least one of the one or more first menu items" surpassing/not surpassing a threshold. EX2006, ¶83; *see Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1342–43 (Fed. Cir. 2008) ("the" is an "anaphoric phrase[ ], referring to the initial antecedent phrase").

Petitioner incorrectly asserts the term "at least one," which modifies the first menu item(s), necessitates a construction that would enable "***the*** first duration of contact" in Limitation [1.e.ii] to be met by a *different* contact than "***the*** first duration of contact" in Limitation [1.e.iii]. Reply, 4. But the term "at least one" modifies the "first menu items"—not the first duration of contact, and the claims do ***not*** recite "at least one duration of contact."

Petitioner's citations to the specification do not contradict the plain claim language—two available operations responsive to a single contact depending on "duration of contact." EX2006, ¶83. FIG. 18 of the '413 Patent (annotated below)

is consistent with the plain meaning of Limitations [1.e.i-iii]. *See* EX2018, 32:20-33:2 (Limitations [1.e.i-iii] "could be satisfied by a contact on the same items.")



Petitioner attempts to reframe Patent Owner's common-starting-point argument as dependent on the claims reciting "the same menu item"—instead of "at least one ... menu item." Reply, 7 (emphasis in original). But ***the*** contact being on ***the*** same menu item(s) is precisely what the claim requires. *Limitations [1.e.i]* (introducing "a … contact on at least one … menu items"); *Limitations [1.e.ii-iii]* (referring to "***the*** … contact on ***the*** at least one … menu items").

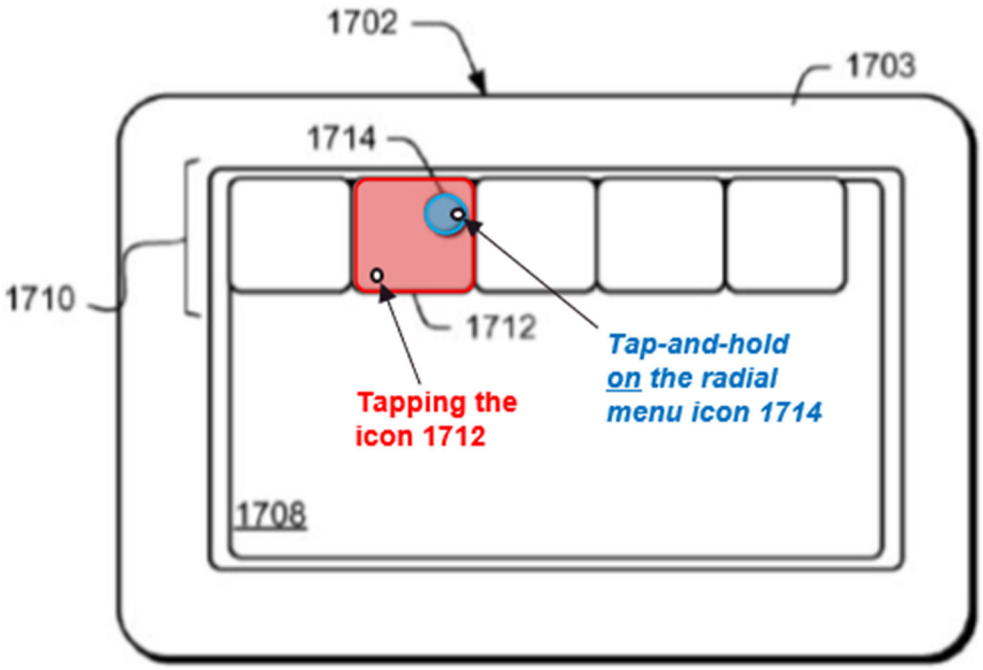
C. The Reply Theories Fail

1. Petitioner's Mappings are New

Section II.B of Petitioner's Reply abandons the Petition's theory and shifts to new theories based on a mutually exclusive embodiment of Hinckley that was intentionally excluded in the Petition. Hinckley states: "In some embodiments, tapping on the radial menu icon triggers a default action which may or may not be different than the action associated with tapping on the bezel menu slot." EX1006, ¶[0107]. Dr. Terveen concludes this "may or may not" language provides alternative, mutually exclusive embodiments. EX1028, 60:1-62:3 ("It's got to be one or the other.").

a. Petition

The Petition's theory relies on the ***different*** default action embodiment. Pet., 50 ("selecting 'the radial menu icon [1714] triggers a default action which ***may***…***be different*** than the action associated with ***tapping*** on the bezel menu slot [1712].'") (quoting EX1006, ¶[0107]) (emphasis in original). The Petition identifies the "default action" as "opening the radial menu 1715." *Id.* From this, the Petition contends that "***tapping the icon*** [1712] would have triggered one action, while a ***tap-and-hold on the radial menu icon portion*** [1714] of that same icon would have triggered a different action." Pet., 53-54



b. Reply

The Reply's theory relies on the ***same*** default action embodiment. Reply 8 ("'tapping on the radial menu icon [1714] triggers a default action which … ***may not*** be different than the action associated with tapping on the bezel menu slot [1712].'") (quoting EX1006, ¶[0107]). Thus, Petitioner shifts to the embodiment it explicitly eliminated in the Petition. *Compare* Pet., 50-51 *with* Reply 8.

Petition, 50-51	Additionally, selecting "the radial menu icon [1714] triggers a default action which may…be different than the action associated with tapping on the bezel menu slot [1712]." EX1006, [0107]. From at least these teachings, a POSITA would have found obvious that, in at least one implementation of Hinkley's menus and gestures, tapping[2] the icon 1712 would have triggered one action, while a tap-and-hold gesture on the radial menu icon 1714 portion of icon 1712 would have triggered a different action (i.e., opening the radial menu 1715). EX1006, [0107]; EX1003, ¶[107].
Reply, 8	Specifically, Hinckley teaches that "the radial menus 1715 can be accessed through a tap and-hold of the pen or finger on or near the radial menu icon 1714," whereas "tapping on the radial menu icon triggers a default action which...may not be different than the action associated with tapping on the bezel menu slot." EX1006, [0107]. In other words, tapping anywhere inside menu slot 1712, including radial menu icon 1714, would activate a common default action ([1.e.ii]), whereas tapping and holding on or near the radial menu icon 1714 of menu slot 1712 opens the radial menu 1715 ([1.e.iii]). EX1023, [19]-[20].

On Reply, the default action of radial menu icon 1714 no longer "open[s] the radial menu;" instead, it "activate[s] a common default action." *Id.* And instead of "tapping the icon 1712,[2]" the Reply relies on "tapping … radial menu icon [1714]." *Id.*

[2] The Petition unequivocally uses icon 1712 to refer to the portion outside of radial menu icon 1714.

The Petition emphasized the default action was "***different***" from a tap on icon 1712 and purposefully excluded the embodiment where the default action could be the same. Now, Petitioner purposefully excludes its original position and must argue that the default action is ***the same*** as a tap on icon 1712. This is undeniably a new theory.

The Reply also asserts the tap-and-hold can be *near* the radial menu icon 1714 (Reply, 8); however, the Petition was explicit that its theory relied on "a tap-and-hold gesture ***on*** the radial menu icon" 1714. Pet., 51, 53 (same), 54 (same), 55 (same). Petitioner could have made this mapping in the Petition but it chose not to. EX20108, 27:13-20 (Dr. Terveen confirming his original position did not include the "or near" language); *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) ("the expedited nature of IPRs bring with it an obligation for petitioners to make their case in their petition to institute."); 35 U.S.C. § 312(a)(3).

These shifts in theory are too late and, if allowed, would unjustly deprived Patent Owner of an opportunity to meaningfully respond with evidence. *Apple Inc. v. eWatch, Inc*., IPR2015-00412, Paper 50, 44 (PTAB May 6, 2016) ("'Respond,' … does not mean embark in a new direction with a new approach as compared to the position originally taken in the Petition. Accepting such belatedly presented new arguments would be unjust to the Patent Owner….").

The POR does not propose a construction[3] that would justify Petitioner's change in theory. The Board cited to *Axonics* to support Petitioner's shift as proper. Paper 19, 2. In *Axonics*, both the Petitioner and PO "adopted a 'one-input' claim construction" and the Board found "no term requires express construction." *Axonics, Inc. v. Medtronic, Inc.*, 75 F.4th 1374, 1378. PO then advanced an alternative "two-input construction" in the POR that "***largely abandoned***" the "one-input construction." *Id.*, 1378-1379. The Court found Petitioner's shift in Reply acceptable where PO "first proposes a claim construction" in the POR. *Id.*, 1384; *see id.*, 1380 (addressing "specific question" "where a patent owner offers a new claim construction for the first time in its response."). Here, the POR only asserts the "plain language" advanced by all parties throughout the proceeding. POR, 26; D.I., 9 ("We agree with the parties that no terms need to be construed").

The straightforward application of the principle of antecedent basis is not a new construction—unlike the alternative two-input construction in *Axonics*—and cannot support Petitioner's shift in theories. D.I., 9 ("no terms need to be construed"); POR, 26-27 (addressing "plain language" of the claims). Nor can Petitioner claim that the antecedent basis rule was unforeseeable. CTPG at 73 (Nov.

[3] The Reply cannot be responsive to the ***undisputed*** "conditional limitations" (§II.A) which is distinct from the plain language of Limitations [1.e.ii]-[1.e.iii].

2019) ("Petitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g., to make out a prima facie case of unpatentability."). The POR explains the deficiencies in Petitioner's mapping and, instead of responding, Petitioner changes it theory depriving Patent Owner of the opportunity to respond with evidence and expert testimony. "Shifting arguments in this fashion is foreclosed by statute, [Federal Circuit] precedent, and Board guidelines." *Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272, 1286–87 (improper to "effectively abandon[] its petition in favor of a new argument").

2. Petitioner's New Theories Are Incorrect

a. Tapping Radial Icon

According to Dr. Terveen, Hinckley discloses mutually exclusive embodiments where the default action of radial menu icon 1714 is different/not different before the radial menu is opened. EX1028, 59:16-62:3. The Reply asserts "tapping on the radial menu icon triggers a default action which...***may not be*** different than the action associated with tapping on the bezel menu slot." Reply, 8.[4] If Dr. Terveen's interpretation of Hinkley is credited, then Petitioner has impermissibly changed its mapping.

[4] Petitioner couches its theory as tapping "anywhere inside" icon 1712, but tapping anywhere outside of radial menu icon 1714 fails to meet the claim. POR, §VI.A.1.

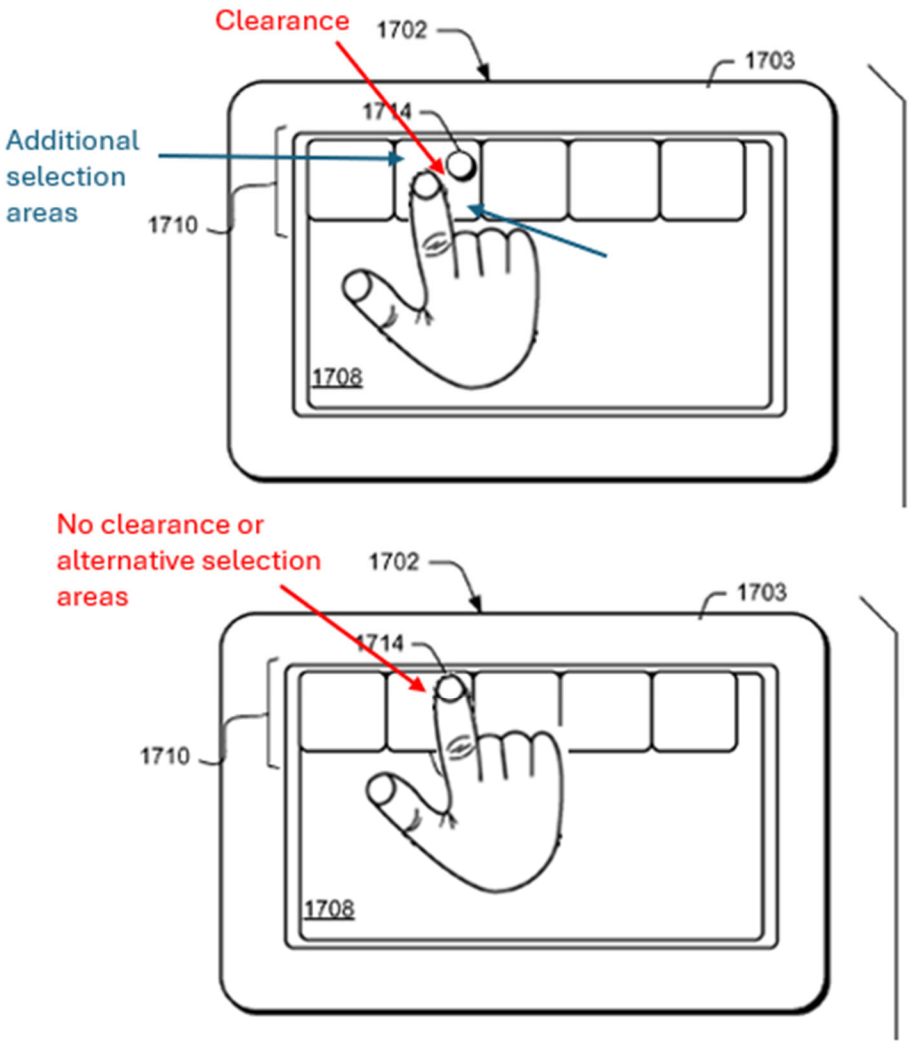
Regardless, as Dr. Rosenberg explained, Hinckley does ***not*** disclose that the default function of radial menu icon 1714 is accessible ***before*** the radial menu is deployed. EX1006, ¶[0107]; EX2006, ¶97 (tapping on the radial menu icon in paragraph [0107] "describes an operation ***after*** the radial menu 1715 is open"). Context also confirms that a POSITA would have understood 1714 to be non-responsive to simple taps before radial menu 1715 is opened.

First, a POSITA would have recognized that it was undesirable to tap radial menu icon 1714 to achieve a different function than icon 1712 *when radial menu 1715 is not deployed*, because—as ***both experts agree***—attempted selection of radial menu icon 1714 ***before*** radial menu 1715 is open would cause errors. EX2006, ¶¶99-100; EX1023, ¶22 ("leads to error where the functions are different").

Second, A POSITA would have recognized that there is no need for tapping radial menu icon 1714 to achieve the same function as icon 1712 *when radial menu 1715 is not deployed*, because the much larger icon 1712 is already available to activate that function. *See* EX2018, 56:15-57:24. Moreover, adding a default function (other than opening radial menu 1715) that is selectable *when radial menu 1715 is not deployed* would introduce needless ambiguity by eliminating the spatial differentiation between icon 1712 and radial menu icon 1714 for its designated function of opening the radial menu 1715.

Petitioner disagrees because this operation purportedly "would create an unintuitive dead-zone" leading to error rates. Reply, 9. But Hinckley teaches otherwise—explicitly contemplating regions that are insensitive to certain gestures (i.e., dead zones) to prevent preventing "inadvertent operations." EX1006, ¶[0061] (some operations "may be left unassigned or may be insensitive to touch-and-hold, so that inadvertent operations will not be triggered"); *see* EX2006, ¶¶99-101; EX2018, 38:9-21 ("a designer—being guided by Hinckley's teaching … might decide not to assign, or to make particular parts … insensitive to any gestures").

Additionally, Dr. Terveen fail to explain how this dead-zone would increase error rates. His sole reasoning is that "users could accidentally tap [radial menu icon 1714] when trying to tap icon 1712." *See* EX1023, ¶23. But, as illustrated below, this error would be extremely avoidable. And Dr. Terveen concedes that it would be more difficult for a user to tap radial menu icon 1714. EX2018, 56:15-57:24. Thus, as explained above and in the POR, a POSITA would have understood Hinckley's disclosure to refer to tapping radial menu icon 1714 *after* the radial menu 1715 is open.



EX1006, FIG. 17 (top half, duplicated and annotated).

Finally, Petitioner contends the description of radial menu 1715 being exposed in [0108] of Hickley contradicts Dr. Rosenberg's interpretation. Reply, 9-10. However, Hinckley does *not* disclose that tapping radial menu icon 1714 occurs when the radial menu is closed. It is undisputed that (1) paragraph [0107] discloses opening radial menu 1715 ***before*** disclosing tapping on the radial menu icon and (2) radial menu icon 1714 receives inputs while the radial menu 1715 is open. EX1006,

[0107]-[0108]. Hinckley describes accessing (i.e., opening) radial menu 1715, provides three methods for opening radial menu 1715, describes one gesture (e.g., tap) that can occur on radial menu icon 1714, and then provides other gestures (e.g., strokes) that can occur on radial menu icon 1714.

> with this particular icon or slot. In the illustrated and described embodiment, the radial menu **1715** can be accessed in any suitable way, e.g. through a pen or touch. For example, in at least some embodiments, the radial menu **1715** can be accessed by hovering a pen over or near radial menu icon **1714**. Alternately or additionally, a pen or finger can be used to pull down the radial menu **1715**. Alternately or additionally, the radial menus **1715** can be accessed through a tap-and-hold of the pen or finger on or near the radial menu icon **1714**. In some embodiments, tapping on the radial menu icon triggers a default action which may or may not be different than the action associated with tapping on the bezel menu slot.
>
> **[0108]** Once the radial menu **1715** is exposed, the user can access various functionalities or commands by touching down on or near radial menu icon **1714** and stroking in a particular direction. In the illustrated and described embodi-

Id.

Hinckley only suggests "tapping on the radial menu icon" in between discussions of ***opening*** and ***interacting with*** the radial menu 1715. Petitioner's interpretation requires that after four sentences explaining how to open radial menu 1715, Hinckley abruptly provides a sentence unrelated to the open radial menu 1715 and then transitions again back to the radial menu 1715. That is illogical.

Overall, Petitioner turns away from its original mapping—where both experts agree errors would occur if "tapping" occurred before radial menu 1715 is open—

and relies on a new embodiment that it fails to show would operate differently. A POSITA plainly would have understood [0107] to disclose that tapping on the radial menu icon occurs ***after*** radial menu 1715 has been accessed. EX2006, ¶¶98-101; EX1006, ¶[0061]. This is especially so given the context of radial menu 1715 being *first* opened in [0107] and Hinckley's avoidance of inadvertent operation by leaving options unassigned. *Id.*

b. Tap-and-hold Near Radial Icon

Petitioner provides its full theory in two sentences of its Reply (which Dr. Terveen parrots verbatim):

> Indeed, because Hinckley describes that "a tap and-hold of the pen or finger on **or near** the radial menu icon 1714" results in accessing the radial menu, there would even be a portion of menu slot 1712 outside of radial menu icon 1714 that could be tapped and held to access the radial menu 1715. EX1023, [21]. Conversely, tapping menu slot 1712 would activate a default operation—other than opening the radial menu—and Hinckley does not limit this tapping to only those portions of menu slot 1712 a certain distance from radial menu icon 1714. *See* EX1006, [0107]; EX1023, [21].

Reply, 8-9; EX1023, ¶21.

There is no evidence that a tap (on the same spot as the tap-and-hold *near* radial menu icon 1714) would perform any action, as opposed to being unassigned as explained in Section II.C.2.a. If Hinckley was programmed to recognize a tap-

and-hold ***near*** radial menu icon 1714 as being equivalent to a tap-and-hold ***on*** radial menu icon 1714, then it would also treat a tap ***near*** radial menu icon 1714 as being equivalent to a tap ***on*** radial menu icon 1714. Petitioner's only support for its position is that "Hinckley ***does not limit*** this tapping to portions of menu slot 1712 a certain distance from radial menu icon 1714" (*i.e.*, Hinckley is silent on this operation). Reply, 8-9. But the law is clear that Petitioner cannot manufacture disclosure from silence. *Wasica,* 853 F.3d at 1284 ("[a]mbiguous references do not anticipate a claim."); *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1376 (Fed. Cir. 2016) ("***no burden shifts from the patent challenger to the patentee***. This is especially true where the only issues to be considered are what the prior art discloses"). And Dr. Terveen's single conclusory sentence parroting the Reply cannot meet Petitioner's evidentiary burden. *TQ Delta, LLC v. Cisco Sys*., 942 F.3d 1352, 1359 (Fed. Cir. 2019).

III. PETITIONER'S MOTIVATIONS ARE DEFICIENT

A. Petitioner Shifts the Burden to Mask the Petition's Flaws

The Petition touts the "similarit[ies]" between Ahn and Hinckley's menus for its conclusion that implementation of the "radial menu[] would have been a simple substitution of one known element for another to obtain predictable results." Pet., 26 (identifying "displaying user interface elements such as menus" as shared

problems); *see also id.*, 24 (alleging Hinckley's and Ahn's menus are "similar"), 52 (alleging Hinckley's and Ahn's menus are "consistent").

PO directly undermined these alleged similarities and explained why the substitution of Ahn's menu for Hinckley's menu would eliminate (POR, §VI.B.2.a) or reduce (POR, §VI.B.2.b) functionality. The POR thus establishes the identified menus and techniques were ***not*** "known alternatives" (Pet., 52) and, instead, were known to be dissimilar. EX2006, §§VI.D, VII.B.2.c). Petitioner does not rebut these dissimilarities and, thus, cannot show implementing Hinckley's radial menu is a "simple substation" or would "obtain predictable results" (Pet., 26). EX2006, ¶72; *Comcast Cable v. Rovi Guides, Inc*., IPR2017-00941, Paper 70 at 42-43 (PTAB Sept. 7, 2018) (finding non-obviousness where Petitioner fails to establish its "substitution" would be a "simple substitution").

Instead of engaging with the known complexities of radial menus, Petitioner attempts to reframe PO's rebuttal as "premised on the bodily incorporation of the two references" "without the ordinary creativity recognized in POSITAs." Reply 19. But Petitioner's reframing is objectively wrong. "Although proof of physical or bodily incorporation is not required, a satisfactory explanation of 'how the combination of the . . . references [is] supposed to work' ***is necessary*** to support 'a conclusion that a relevant skilled artisan would have been motivated to make the combination and reasonably expect success in doing so.'" *Visa, Inc., v. Cortex MCP,*

Inc., IPR2024-00488 Paper 31 at 44 (PTAB July 22, 2025) (quoting *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017)); *see also TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066-69 (Fed. Cir. 2016) (affirming Board's requirement of petitioner to explain ***how a POSITA would have implemented*** petitioner's proposed substitution). Petitioner provides no such explanation here and relies only on conclusory accusations.

PO does not argue Hinckley's menus must be bodily incorporated into Ahn to establish obviousness; rather, that the "substitution" of Hinckley's menus for Ahn's menus (as Petitioner contended) would not have been "simple" or obtained "predictable results"—revealing Petitioner's motivations as conclusory and deficient. Dr. Rosenberg testifies that a POSITA would not make the alleged substitution because of the lack of advantages raised by Petitioner (EX2006, ¶¶104-112) and the known unpredictability radial menus posed (EX2006, ¶¶71-79). He demonstrates this unpredictability would apply to Ahn's interface (*id*, ¶114-131)—which Petitioner does not dispute. Petitioner does not articulate any other "simple substitution" or the "ordinary creativity" that would avoid the issues identified in Dr. Rosenberg's explanation. Instead, Petitioner parrots legal quotes while omitting the context that it was Petitioner's burden to establish an evidentiary basis for its foundational assertion that Hinckley's radial menu would have been a "simple substitution." Without that foundation, Petitioner fails to support any legal

conclusion that "there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR*, 550 U.S. at 418 ("a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art."); *Comcast*, IPR2017-00941, Paper 70 at 42-43.

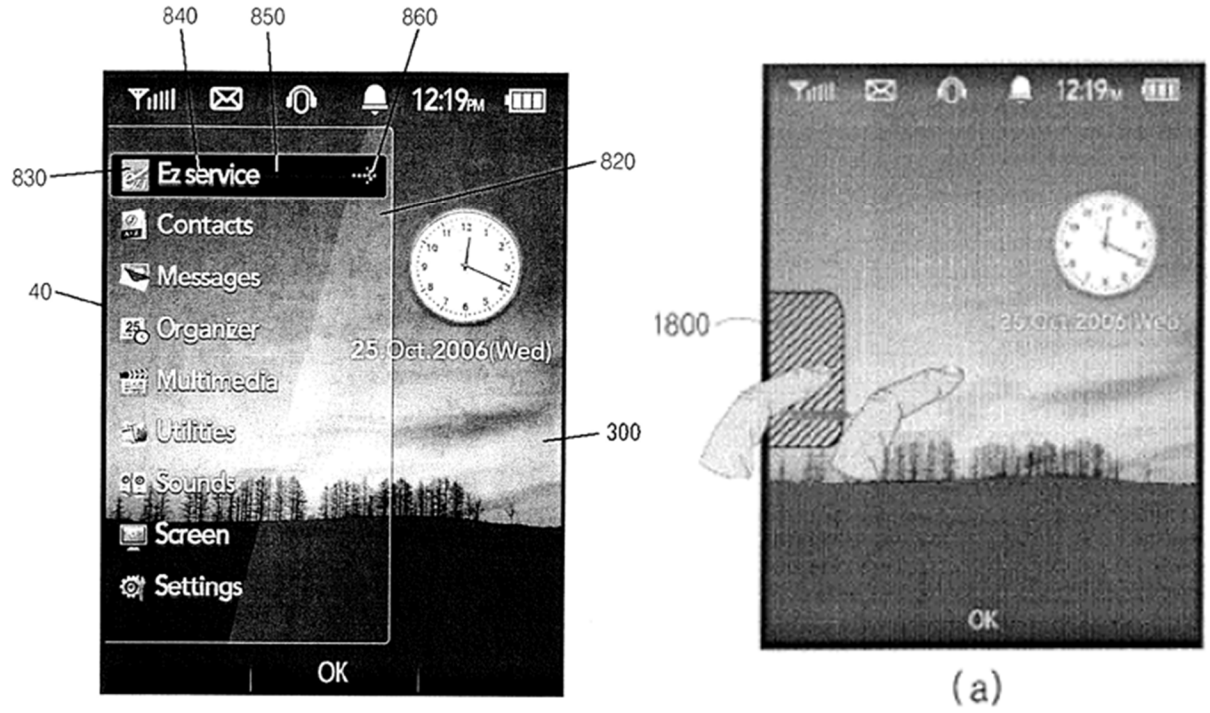
B. Petitioner's Combination Lacks Any Evidenced Benefit

The Petition provides no appreciable benefit for its modification to implement the radial menu icon into Ahn. Pet., 24-27, 47-55 *See* POR, §VI.B ("Petitioner's Second Modification"). On Reply, Petitioner advances two theories; both of which fail.

First, Petitioner contends "the bezel menu and the radial menu benefit[s] from novice and expert modes" and that the "novice mode … is beneficial because it provides unfamiliar users with visual guidance." Reply, at 16-17. Any alleged benefits from Hinckley's bezel menus and bezel gestures are not related to implementation of the radial menu. EX1028, 54:13-21 (novice/expert mode of bezel menu independent of radial menu); *see e.g.,* Pet., 23-26 (discussing techniques and benefits related to "bezel menus" and "bezel gestures," ***not*** radial menus) Further, that a radial menu can have novice/expert modes (or that the novice mode provides visual guidance that a radial menu is available) wholly fails to explain *why* a POSITA would implement a radial menu into Ahn in the first place.

Every menu necessarily "provides unfamiliar users with visual guidance" (i.e., a novice mode) and this cannot explain why a POSITA would choose to implement a radial menu in Ahn's interface—which already provides visual guidance. As shown in Ahn's FIG. 8C and 18a (below), Ahn provides icons 830 that indicate specific functionality, an arrow icon 860 that "identif[ies] for the user the presence of a sub-menu" (EX1003, ¶327; EX2005, ¶¶119-120), and "a specific icon for notifying a start position of the touch and drag operation" (EX1004, ¶[0117]).

FIG. 8C



A POSITA would not implement a radial menu and radial menu icon to provide unfamiliar users with visual guidance when Ahn already provides such guidance for its ***own menu***.

Second, Petitioner identifies the benefits of "marking menus"—which are distinct from Hinckley's "radial menu" and, thus, irrelevant to Petitioners modification. EX2006, ¶72 n.3 ("Marking menus … are not referenced in this record and distinct from the radial menu described in Hinckley"); EX1031, 1 (Distinguishing marking menus from radial menus: "Marking menus are ***a variant*** of pie or radial menus" and "marking menus have significant ***advantages*** over ***regular pie/radial menus***" like Hinckley's); *see e.g.,* EX1028, 2-3 (disclosing marking menu "at the center of the screen" as opposed to the edge menus in Ahn and Hinckley). EX1026, FIGs. 1-2 (depicting disparate menus and gestures); EX1027, FIG. 2 (same).

Cited Marking Menu Gestures

EX1026



Fig. 1. Pigtail splits the user's gesture into a lasso, which here selects the ink, and a mark, which here chooses the *Copy* command from 8 possibilities.



Fig. 2. Drawing the tail in different directions chooses other commands. *Left*: Cut is north; *Right*: Move is east.

EX1027



Figure 2. Free-form| gestures (left) incl. pigtail [35], spiral [36], downward caret [17], Z [37], X [38], upward caret [38], "delete" [38], "squiggle" [17], and "redo" [28]. Mark-based gestures (right). Dots indicate start of each gesture.

Petitioner concedes radial menus advantages were "depend[ent] on the circumstance" (Reply, 18), yet provides no explanation of how any specific advantage would apply in its proposed combination. The benefits of radial menus are not readily transferable (EX2006, ¶103) and Petitioner fails to explain how any such benefits would apply in the context of Ahn's device.

Petitioner also fails to show radial menus, like Hinckley's, were suitable for Ahn. *See e.g.*, EX2009 at 3-5 (attempting to implement pie menu and finding "[no] good solution"). Petitioner and Dr. Terveen provides no genuine analysis weighing the advantages and disadvantages of radial menus to support that a POSITA would implement one in Ahn. *See* EX1023, ¶33 (analyzing "radial/marking menus" in the abstract and not how they would be implemented in Ahn).

Petitioner merely identifies Hinckley's radial menu and concludes it obvious to implement into Ahn, supplying only generic reasons for the combination without explaining ***how*** or ***why*** a POSITA would have done so. This is not sufficient. *See In re Kahn*, 441 F.3d 977, 986 (Fed. Cir. 2006) (stating that "mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole"). "Without any explanation as to how or why the references would be combined to arrive at the claimed invention, we are left with only hindsight bias." *Metalcraft of Mayville, Inc. v. The Toro Company*, 848 F.3d 1358, 1367 (Fed. Cir. 2017).

IV. PETITIONER'S SLIDING THEORY IS DEFICIENT

A. Ahn Theory[5]

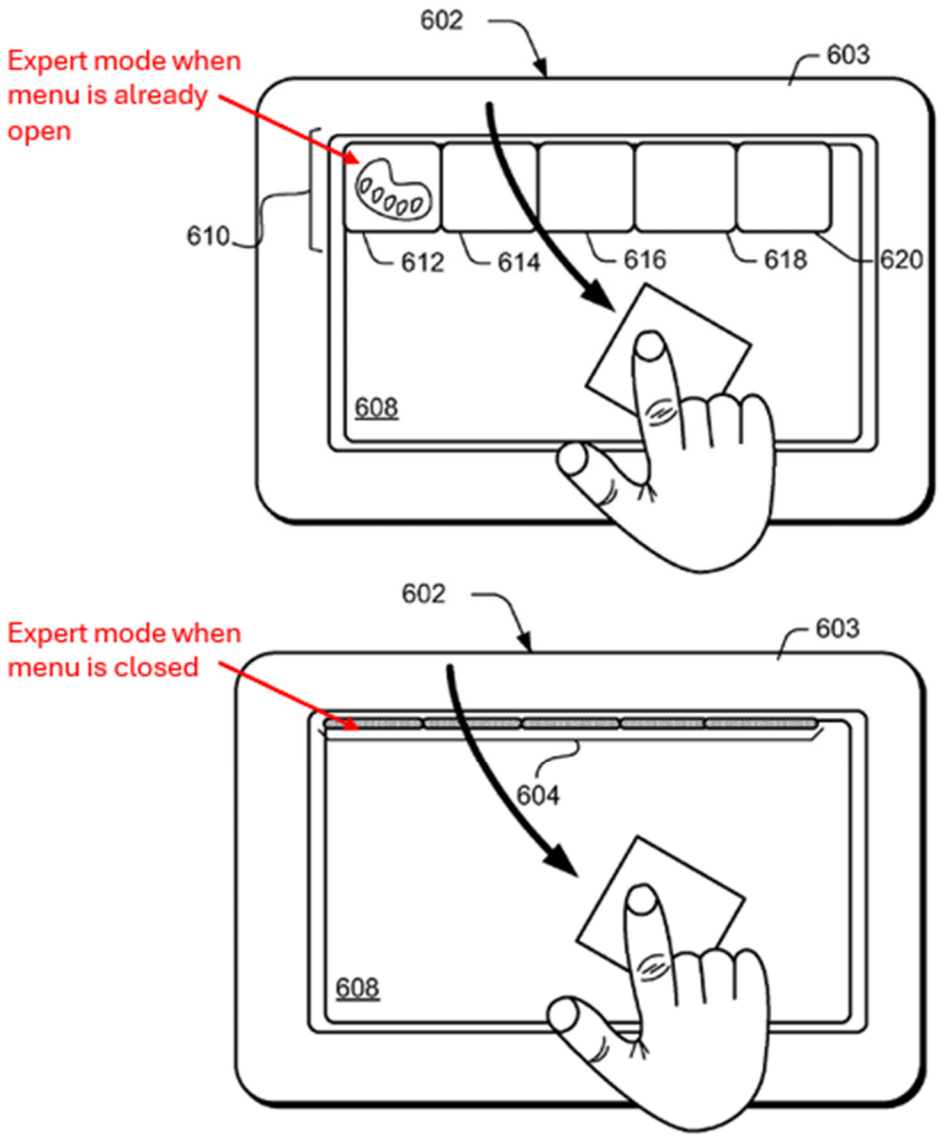
Petitioner mixes disparate portions of Ahn's paragraphs [0118]-[0119] to construct a combination that is not disclosed by Ahn—"***as*** the user" "drags in a right direction" while "press[ing] the graphic 1800" (Reply 20-21). EX1028, 70:10-22 (Figures 18(a)-(b) disclose "two different operations or gestures"). Ahn's Paragraph [0119] describes a "touch drag[] to the left" with the menu "emerging from the left side"—***not*** following the user's finger. Ahn's Paragraph [0118] describes a touch drag "in a right direction," which is a different gesture than described in paragraph [0119] (where the user "may press the graphic"). Petitioner's unexplained amalgamation of "two different gestures" to arrive at the claimed feature is legally and technically deficient. *Abbott Labs. v. Sandoz, Inc*., 544 F.3d 1341, 1348 (Fed. Cir. 2008) (We must "guard against slipping into use of hindsight and to resist the temptation to read into the prior art the teachings of the invention in issue.").

[5] The Petition does not rely on an obvious theory to modify Ahn based on EX1010 or EX1011, which were used to understand "the term 'drag'" "[i]n the context of Ahn." Pet., 36. Petitioner's assertion of a "straightforward design choice" (Reply, 21) is also absent from the Petition and irrelevant to what Ahn discloses.

Petitioner's disparagement of Dr. Rosenberg's interpretation is inappropriate because (1) it is irrelevant to whether the menu follows the finger and (2) is consistent with Ahn disclosure of graphic 1800 appearing after a swipe gesture. EX1004, ¶[0118] ("***if*** the user drags in a right direction after touching the screen, [then] a graphical shadow 1800 is displayed"); EX1024, 100:3-101:11; *cf* EX1028, 76:8-16 (Dr. Terveen ***not*** interpreting Ahn's "paragraph 117 or 118 literally"), 81:1-17 (same).

B. Hinckley's Menu Does Not Follow a User's Finger

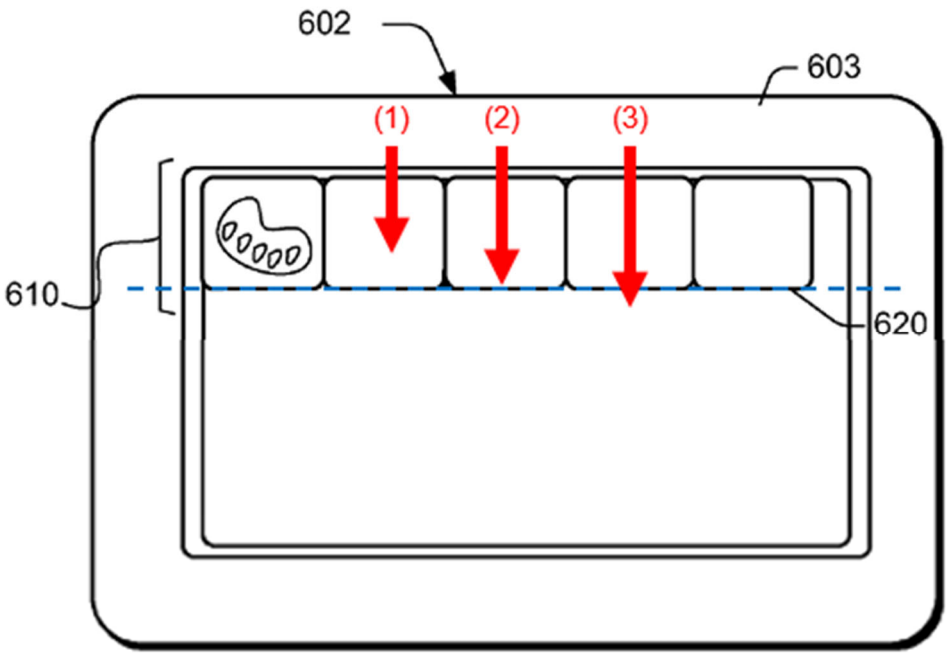
On Reply, Petitioner misconstrues Hinckley's disclosure to "track[] with the user's finger" as the menu following the user's finger. Hinckley's paragraph [0080] differentiates between the terms "track" and "follow" and is clear that the menu does not follow the user's finger. EX2006, ¶147 n.14. Dr. Terveen also relies on the "***other embodiments***" (*non-timer* embodiments) described in paragraph [0078]—which were never cited in the Petition and, thus, a new theory—for a continuous finger-drag that crosses through the slot 614 (shown below). EX1023, ¶37. But this swipe "cross[ing] through" slot 614 occurs ***after*** the menu is displayed. *Id.*, ¶¶[0078], [0088]; FIGs. 7-8 (annotated below).



See also id., FIG. 9 (depicting expert-mode swipe ***after*** menu is displayed), FIGs. 10-11 (using different "gesture input[s]" for displaying the menu and accessing functionality).

Expert mode simply allows users to access the functionality ***and*** position the object using the same gesture—not change when the menu is opened. *See* EX1028, 42:8-43:4. If the menu followed the user's finger in the non-timer embodiments

(¶[0078]), which Hinkley does ***not*** disclose, the only way to access the menu would be to perform a slide gesture that is ***exactly*** the height of the menu ((2) below)—any shorter gesture ((1) below) would not fully display the menu and any longer gesture ((3) below) would invoke the expert mode. *Id.*, ¶[0078].



Dr. Terveen confirms this operation is not what Hinckley discloses. EX1028, ¶53:4-7. Further, Petitioner's reference to "contemporaneous publications" do not provide any evidence of what a POSITA would have understood Hinckley to disclose and, thus, are irrelevant to Petitioner's position.

V. PETITIONER'S AHN-CHAUDHRI THEORY IS DEFICIENT

Petitioner points to Chaudhri's "fade in" and "fade out" animation effect[6]—which occurs ***after*** the gesture is complete—to support its combination. This cannot establish 'blurring' as a function of a magnitude of the first gesture. EX1005, ¶[0079] (fade "as the user transitions" between applications "over a predetermined time interval" not as a function of the gesture), ¶[0076] (transitioning "[u]pon completion" of the gesture in FIGs. 5C-5D), FIG. 3 (depicting transition ***after*** unlock gesture is complete—annotated below).

[6] The effect is described in Chaudhri's paragraph [0079] which was never cited in Petitioner's analysis (Pet., 19-23, 42-45) and is in a separate section of Chaudhri. *Compare* EX1005, ¶[0052]-[0079] *with id.*, ¶[0080]-[0096].

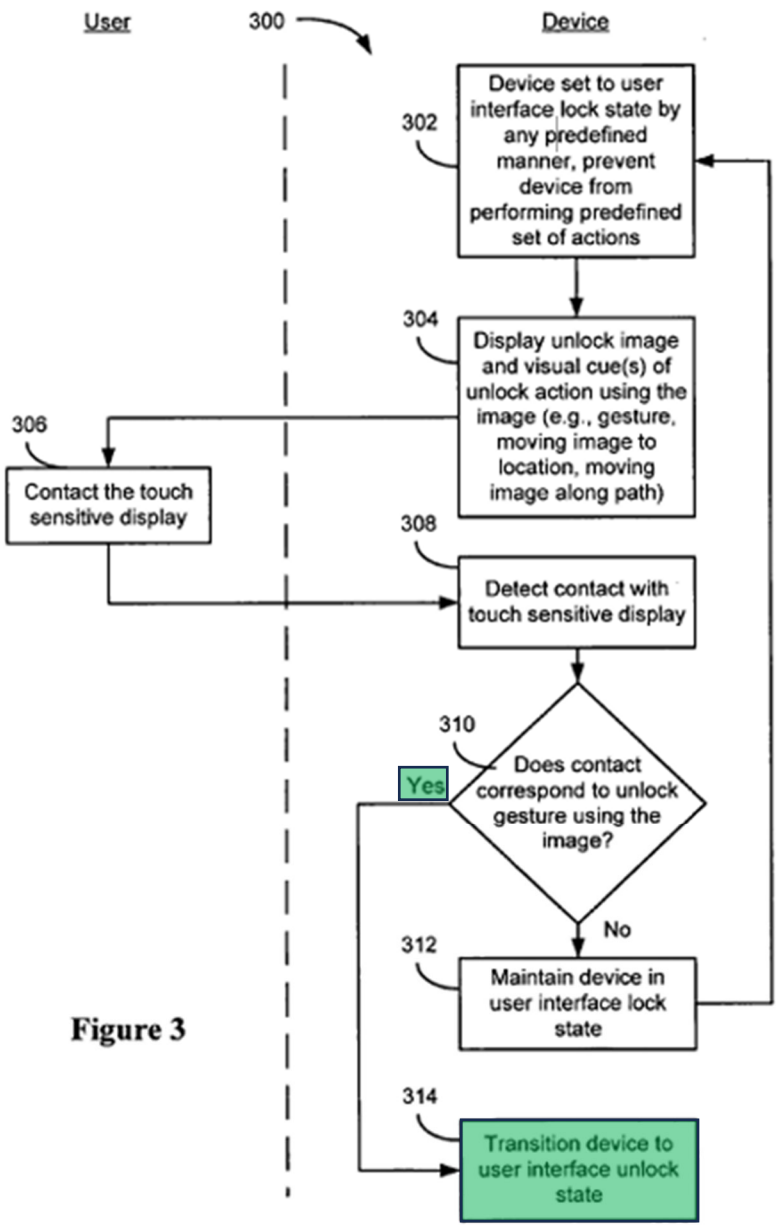


Figure 3

This animation occurs after the gesture is completed and cannot show progress of the gesture as Petitioner's motivation contends. *Id.*

Additionally, Petitioner's 'obvious to try' analysis is deficient. "To prove obviousness under an obvious to try theory, [Petitioner] must show (1) a design or market need to solve a particular problem, ***and*** (2) that 'there are a finite number of

identified, predictable solutions' that would lead to an expectation of success." *Grunenthal GMBH v. Alkem Labs. Ltd.*, 919 F.3d 1333, 1345 (Fed. Cir. 2019); *Uber Technologies, Inc. v. X One, Inc.*, 957 F. 3d 1334, 1339 (Fed. Cir. 2020) (Petitioner established (1) the prior art references and the challenged patent "***all attempt to solve the same problem***" and (2) there existed only two possible methods of achieving the identified solution). Here, Petitioner fails to articulate a design need or problem (Pet., 22-23), rendering its analysis legally deficient. *Virtek Vision Int'l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 888 (Fed. Cir. 2024) (rev'g PTAB obviousness finding based on "no evidence of a design need or market pressure"). Further, Ahn's "problem" cannot be how to implement blurring, which Ahn already achieves in "at least two ways" (Pet., 8).

Further, Dr. Terveen's framing of blurring as being 'binary' (EX1003, ¶62) is incorrect and unsupported. There are numerous ways to 'blur' an object that are not progressively as a function of the user's gesture. For example, blurring after a keypad input (EX1004, ¶¶[0049]-[0051]); providing an intermediate animation before the blurring operation (EX1004, FIG. 4A); blurring the object instantaneously at the start of the gesture, during the gesture, or after the gesture is complete; blurring gradually at the start of the gesture or after the gesture, blurring over a predetermined time (EX1005, ¶[0079]) at the start, during, or after the gesture. Dr. Terveen's blatant neglect of alternatives does not somehow narrow the choices to two.

Moreover, if the problem/solution is viewed without hindsight narrowing (e.g., diminishing an object's presence when opening a menu), there are countless alternatives to blurring which further undermine Dr. Terveen's false binary.

VI. THE PETITION FAILS TO SHOW CLAIM 101 IS UNPATENTABLE

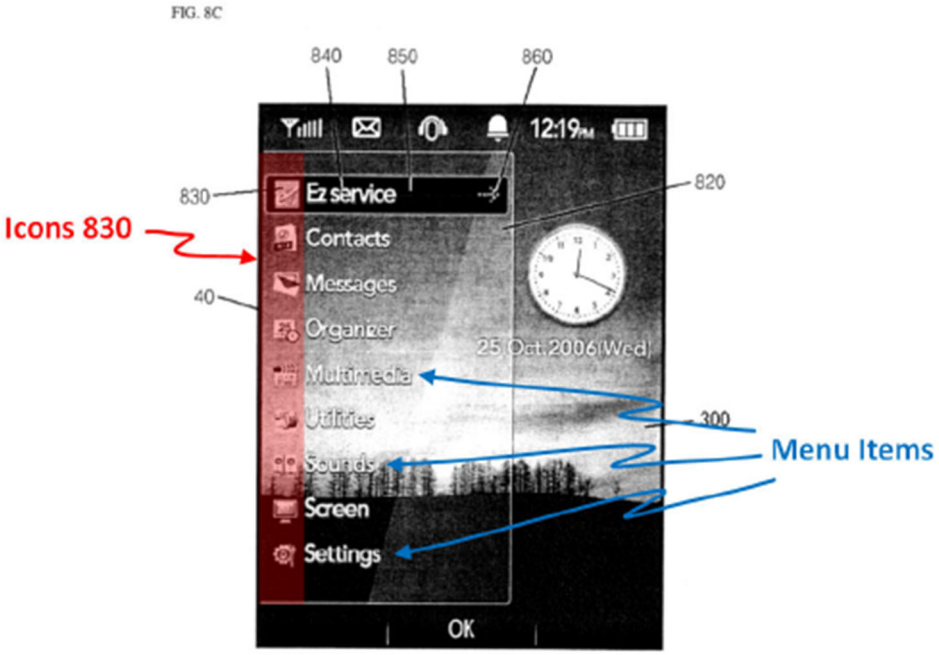
A. [101.e.iv]

Petitioner does implement its new Reply theories for Limitation [101.e.iv] rendering the mapping inconsistent and relying on two mutually exclusive embodiments. *Supra*, §II.C.1; EX1028, 60:1-62:3 ("It's got to be one or the other.").

Further, Dr. Terveen contradicts the Petition's reliance on Hinckley's novice mode—alleging (1) a tap-and-hold ***on*** radial menu icon 1714 and (2) sliding the finger "while his/her finger is still in contact with the display" (Pet., 80). EX1028, 65:1-19 (user must lift finger after tap-and-hold). And any reliance on the radial menu's expert mode requires "a ***quick*** touch-and-stroke gesture" (EX1006, ¶[0110]) that would not teach a slide gesture after a tap-and-hold. Thus, neither of Hinckley's novice or expert radial menu operations disclose Limitation [101.e.iv].

B. [101d]

Petitioner identifies "Ahn's [***right***] Menu 1300" as the first menu. Reply, 25. Petitioner also identifies two icons from ***left*** menu 820—"Contacts" and "Messages"—as the "particular application icon" of the first menu because they "would have launched an application associated with that functionality." Pet., 78.



EX1004, FIG. 8C (annotated).

Petitioner now contends these icons were applicable to menu 1300 despite these 'application icons' performing different functions ("launch[ing] an application"(*id.*)) than the icons of menu 1300 ("enter a menu in which the user frequently uses" while maintaining visibility of the standby screen (EX1004, ¶[0051])). *See* EX1004, ¶¶[0052]-[0057]. This theory is absent from the Petition (EX1003, [155]) and inconsistent with Ahn's disclosure (EX1004, ¶[0048]).

Petitioner does not articulate how its combination—presumably Ahn's "Contacts" or "Messages" menus implemented in menu 1300 with Hinckley's radial menu icon—would arrive at Limitations [101.e.iii]-[101.e.iv]. For example, Petitioner fails to explain how or why a POSITA would include a radial menu on these application-launching icons. The launching of a separate application and the

launching of a radial menu perform distinct functions and their combination would have been "inappropriate." EX2006, ¶¶122-125; *Visa*, IPR2024-00488 Paper 31 at 44 (a satisfactory explanation of how the combination of the references is supposed to work is necessary and separate from bodily incorporation). Petitioner simply treats Ahn's icons of menu 820, Ahn's separate menu 1300, and Hinckley's radial menu as puzzle pieces to be rearranged at whim to meet the claim, but fails to explain how or why a POSITA would have done so.

VII. DR. ROSENBERG'S TESTIMONY IS CREDIBLE

Petitioner provides no evidence that Dr. Rosenberg's declaration testimony is different than his deposition interpretations. Reply, 11-16 (not citing EX2006).

Dr. Rosenberg did not testify about the boundaries of graphic shadow 1800 emphasized by Petitioner's first two 'inconsistencies' (Reply, 12-13). EX1024, 70:20-71:17 ("not something I analyzed"). Further, Dr. Rosenberg's interpretation of the "ambiguity"[7] in Ahn's paragraph [0118]-[0119] is consistent with his opinion that Ahn's menus do not progressively slide. EX1024, 107:5-109:6; EX2006, ¶143-146. Petitioner must selectively quote the transcript to manufacture inconsistencies.

[7] Dr. Terveen confirms this language is "funny" (EX1028, 74:7-75:4), could have been "written clearer" (*id.*, 81-1-82:9), and required him to ***not*** interpret the disclosure literally (*id.*, 76:8-16).

For example, Petitioner casts Dr. Rosenberg's testimony regarding a tap on graphic shadow as inconsistent (Reply, 13 (citing EX1024, 88:4-9, 88:14-93:12)); however, Dr. Rosenberg clearly states "tapping" is not an example of opening the menu "***described in [paragraph] [0118]***" and then clarifies that "in reading further, actually [paragraph] [0119] … is describing a press operation." EX1024, 87:8-90:1. There is nothing inconsistent or inaccurate about this testimony. *See* EX1028, 70:10-22 (paragraphs [0118]-[0119] disclose "two different operations").

Additionally, Petitioner asserts Dr. Rosenberg's testimony is improper because he does not consider background knowledge, inferences, and creative steps a POSITA would employ. Reply, 14-16. This is false. EX1024, 74:11-77:5 (explaining a POSITA would use "their education and training … to interpret what they are reading"), 86:5-87:17 ("POSITAs can be creative"); EX2006, ¶32-34 (providing understanding of a POSITA used in his declaration).[8]

[8] A single imprecise formulation of the legal construct of a POSITA—an individual evaluating conflicting ideas—as multiple individuals evaluating conflicting ideas is not a credible basis to discard the entirety of Dr. Rosenberg's testimony. *See* EX1024, 66:13-67:1 ("we need to go back go back to just a [singular] POSITA with the qualifications that are described in terms of their educational background and their experience.").

At no point did Petitioner ask Dr. Rosenberg about any modifications or motivations at issue. Instead, Petitioner advances incomplete hypotheticals and asks Dr. Rosenberg to determine the obviousness—a legal conclusion—of modifications not disclosed in Ahn without providing any underlying reasoning to evaluate such a determination. *See e.g.,* EX1024, 70:7-9 (Q: "***Just looking at Ahn***, what would a POSITA have found obvious when looking at Ahn with respect to the graphical shadow"); 70:20-71:2 (Q: "would a POSITA have found it obvious to give some leeway … about where the start position is with respect to the graphical shadow"). Consistent with the obviousness framework, Dr. Rosenberg responds that there is no motivation to change Ahn in Petitioner's incomplete hypotheticals. EX1024, 120:13-124:19 (distinguishing undisclosed possibilities of what a POSITA ***could*** do from motivations); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) ("Obviousness concerns whether a skilled artisan not only ***could have made*** but ***would have been motivated to make*** the combinations or modifications of prior art to arrive at the claimed invention.") (emphasis in original).

VIII. CONCLUSION

For the foregoing reasons, the Petition should be denied.

Dated: September 23, 2025

Respectfully submitted,

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Reg. No. 61,361

Lead Counsel for Patent Owner

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(a)(i), the undersigned certifies that this Paper—exclusive of the table of contents, table of authorities, certificate of service, and this certificate of word count—includes 5,599 words. The undersigned relies upon the word count generated by Microsoft Word.

/Eagle H. Robinson/
Eagle H. Robinson (Reg. No. 61,361)

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on September 23, 2025, complete copies of this Patent Owner Sur-Reply and EX2018 were served on Petitioner via email (by consent), at the following email address(s):

IPR50095-0163IP1@fr.com

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