

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

MAXELL, LTD.,
Patent Owner

Inter Partes Review No.: IPR2024-0082
U.S. Patent No. 8,982,086

REPLY DECLARATION OF DR. SETH JAMES NIELSON, PH.D.

I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the patent which is under review in this proceeding.

Dated: April 17, 2025

By: 
Seth James Nielson, Ph.D.

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I, Seth James Nielson, declare as follows:

I. INTRODUCTION

1. I have been asked by Petitioners, Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (“Petitioners”), to provide my expert opinions in support of the above-identified petition for *inter partes* review (IPR2024-00828), challenging claims 1, 2, 4-7, and 9-12 (the “Challenged Claims”) of U.S. Patent No. 8,982,086 (“the ’086 patent”).

2. Specifically, I provide herein my expert opinions regarding the evidence submitted by Patent Owner Maxell, Ltd. (“PO”) in support of the Patent Owner’s Response (“POR”), including the opinions expressed in the declaration submitted by PO’s expert Dr. Jacob O. Wobbrock (EX2005).

3. As stated in my previous declaration submitted in this matter (EX1003), I am being compensated for my time at the rate of \$700 per hour. This compensation is not contingent upon my performance, the outcome of this matter, or any issues involved in or related to this matter.

II. SUMMARY OF OPINIONS

4. After considering the POR and all supporting evidence, it remains my opinion that the Challenged Claims of the ’086 patent would have been obvious to a person of ordinary skill in the art (“POSITA”) as of the earliest priority date to which those claims are entitled based on the following Grounds.

Ground	Claims	Basis	Prior Art
1	1, 2, 4-7	§ 103	Rogers, Rosenberg
2	9-14	§ 103	Rogers, Rosenberg, Miyazawa
3	1, 2, 4-7	§ 103	Rogers, Rekimoto
4	9-14	§ 103	Rogers, Rekimoto, Miyazawa

5. The basis for my opinion is set forth in this declaration as well as my initial declaration submitted in this matter (EX1003).

III. QUALIFICATIONS

6. My qualifications and *curriculum vitae* (CV) were provided in my initial declaration (EX1003), and are incorporated by reference here.

IV. MATERIALS CONSIDERED

7. The analysis that I provide in this declaration is based on the evidence submitted in these proceedings to date and identified in my initial declaration (EX1003), as well as evidence submitted by PO in connection with the POR along with the transcript from the deposition of PO's expert Dr. Wobbrock (EX1018).

V. LEGAL STANDARDS

8. The applicable legal standards as I understand them have been set forth in my initial declaration (EX1003), and are incorporated by reference here.

VI. DEFINITION OF ONE OF ORDINARY SKILL IN THE ART

9. It is my understanding that Dr. Wobbrock shares my opinion that a person of ordinary skill in the art ("POSITA") at the time the first priority application to the '086 patent was filed (on or around February 9, 2011) would have at least a

Bachelor's Degree in electrical engineering, computer engineering, computer science, or a related field, with at least one to two years of experience in the field of computing devices with touch interfaces, and that additional education or experience might substitute for the above requirements. *See* EX2005, ¶ 77.

10. As stated in my initial declaration (EX1003), at the relevant time I would have exceeded the qualifications of a POSITA under the above definition.

VII. CLAIM CONSTRUCTION

A. “first registering mode” and “second registering mode”

11. I understand that PO and Dr. Wobbrock propose constructions for the “first registering mode” and “second registering mode” limitation [1f] terms as set forth in the table below. *See* POR 10-21; EX2005 ¶¶ 82-92.

Term	PO's Proposed Construction
“first registering mode for inputting input information by a pad of the finger”	“a first operational state for registering in which information is input by a pad of the finger”
“second registering mode for inputting input information by an end of the finger”	“a second operational state for registering in which information is input by an end of the finger, the first registering mode and the second registering mode being different operational states”

12. Additionally, I understand that PO and Dr. Wobbrock interpret the proposed constructions above to require a system state such that the same action has different results or effects based on the current value of the system state. *See* POR 36; EX2005, ¶ 130; EX1018, 37:12-44:6.

13. For the reasons discussed herein, I disagree with the proposed constructions of PO and Dr. Wobbrock.

1. The Claims Do Not Support PO's Proposed Construction

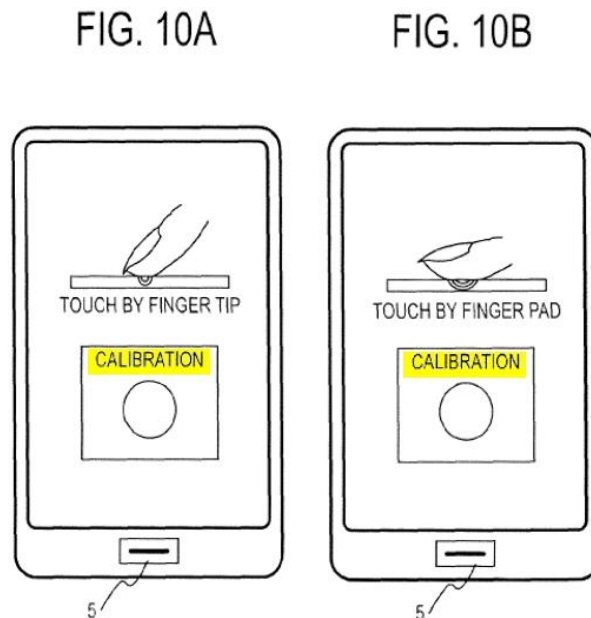
14. The claim language is inconsistent with PO's proposed construction. PO and Dr. Wobbrock point to limitation [1c] reciting the "identification mode" and "registering mode" as "operating modes" and conclude that the first and second registering modes of limitation [1f] must also be "operating modes." POR 10-11; EX2005, ¶ 83. I disagree. If the patentee had intended for the first and second registering modes of limitation [1f] to be "operating modes" then the patentee would have drafted the claims to include this requirement. Instead, the claims describe the first and second registering modes as "mode[s] for inputting input information" either "by a pad of the finger" or "by an end of the finger."

15. PO's and Dr. Wobbrock's proposed construction would also render superfluous the word "operating" in the claim term "operating mode." At his deposition, Dr. Wobbrock confirmed that PO's definition of "mode" by itself is a type of "operational state." *See, e.g.*, EX1018, 40:2-3 ("A mode is an example of an operational state."). He also confirmed that "operating mode" as recited in the claims is "interchangeable" with the concept of an "operational state." *See, e.g.*, EX1018, 48:6-18. Thus, according to PO and Dr. Wobbrock, the claim's recitation of an "operating mode" would be no different than if the claim had simply recited a

“mode” in limitation [1c]. The word “operating” would therefore be superfluous under PO’s and Dr. Wobbrock’s proposed construction.

2. The Specification Does Not Support PO’s Proposed Construction

16. The specification does not support PO’s proposed construction. PO and Dr. Wobbrock rely on Figures 10A and 10B as support for their proposal. POR 11-13; EX2005, ¶¶ 84-85. However, these figures show “calibration,” which the specification defines as “an operation of setting a threshold value that is used for determining a contact range” to distinguish finger tip and pad inputs. EX1001, Figs. 9 (S2001-S2004), 10A, 10B, 3:59-60, 4:61-5:19. Indeed, the patent (1) describes Figures 10A and 10B as “typical screen image[s] displayed during calibration,” and (2) labels the figures as relating to the “calibration” disclosures in the specification.



EX1001, Figs. 10A, 10B (annotated with highlighting), 6:16-51.

17. In the specification, password registration occurs *after* calibration. EX1001, Fig. 9 (S2006-S2010), 6:28-7:7. The patent discloses separate figures for registration—Figures 11A, 11B, and 11C—labels each figure with the words “password registration,” and describes the figures as (for 11A) “a screen that prompts the user to register a password” and (for 11B and 11C) as “screen[s] displayed during password registration to inform the user that a finger [pad/tip] input has been made.” EX1001, 2:34-47. These three figures are shown below.

FIG. 11A

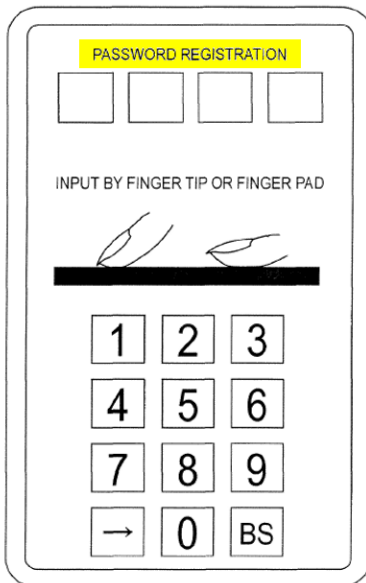


FIG. 11B

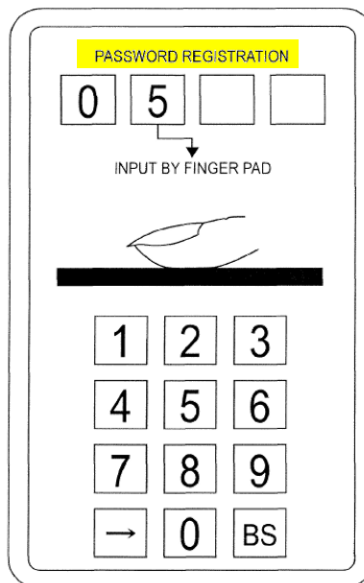
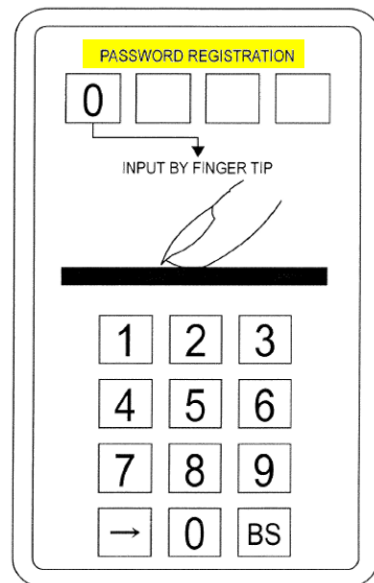


FIG. 11C



EX1001, Figs. 11A, 11B, 11C (annotated with highlighting). Notably, during re-examination of the '086 patent, the patentee cited Figures 11A, 11B, and 11C above as support for new claim 5, which recites “a first image and first descriptive text associated with the first registering mode” and “a second image and second

descriptive text associated with the second registering mode” of limitation [1f].

EX1004, 4 (new claim 5), 75 (identifying support for new claim 5).

18. As described in the specification, the “numeric string of four input numerals” entered by the user during the process shown in Figures 11A-11C above “is registered as the password as shown in FIG. 12A” below.

FIG. 12A

DIGIT	1	2	3	4
PASSWORD	0	5	2	8
INPUT METHOD	FINGER TIP	FINGER PAD	FINGER PAD	FINGER PAD

EX1001, Fig. 12A, 7:2-4; *see also id.* at Fig. 12B.

19. Thus, a POSITA would have understood that the first and second registering modes of limitation [1f] do not need to be distinct “operational states” according to the interpretation advanced by PO and Dr. Wobbrock. Instead, consistent with the claim language, a POSITA would have understood the first and second registering modes to simply be input modes, wherein the device recognizes two different types of touch input for the password entries. EX1001, 6:52-7:7.

3. The Additional Evidence and Argument Submitted by PO Do Not Support PO’s Proposed Construction

20. In view of the evidence from the claims and specification, it is my opinion that the “first registering mode” and “second registering mode” require no

construction, and that the terms' plain and ordinary meaning would have been apparent to a POSITA without reference to additional evidence.

21. In any event, I disagree with the conclusions drawn by PO and Dr. Wobbrock from the additional evidence submitted in the POR. The dictionary definitions identified by PO do not limit the meaning of "mode" to the narrow "interpretation" offered in the POR. A POSITA would not have understood the definition of "mode" in EX2012 to be as narrow as PO proposes, and there is no evidence that a POSITA would have been aware of the PCMag definition of "mode" (EX2011), which is dated January 21, 2025 (two days before the POR was filed), nor is there evidence that the PCMag webpage identified by PO and Dr. Wobbrock was available in the relevant 2011 timeframe.

22. I also disagree with PO's proposal because its ambiguity leads to inconsistent results. For example, the POR distinguishes Rogers' modes because they lack "different UIs" (POR 40-41), even though Dr. Wobbrock himself concedes that different UIs are not required by the claims. EX1018, 58:14-59:9.

23. Even PO's Caps Lock analogy fails to adequately capture the claim terms' meaning. For example, PO argues that, in the '086 patent, the same action A ("touching the screen") registers a "fingertip" value or "finger pad" value depending on the registering mode. POR 44; EX2005, ¶ 88. But there are two different ways of "touching the screen" in the '086 patent, and they are differentiated by their input

contact range. See EX1001, Figs. 5A, 5B, 9 (S2006-S2009). In fact, during calibration, if the user **does** perform exactly the same action twice—i.e., if he/she presses the same portion of the finger to the screen during the calibration steps depicted in Figures 10A and 10B—then calibration resets until the device can correctly distinguish the finger tip and pad inputs as different touch input actions. EX1001 Fig. 9 (step S2003), 6:42-45. The '086 patent, in other words, does not accord different results to the same action depending on the mode, it differentiates the results because the user inputs are themselves different.

24. At his deposition, Dr. Wobbrock explained why his analogy fails to adequately describe the '086 patent or differentiate the Rogers disclosures. He stated that “modes” can be “passive” or “active,” where an example of the former is pressing the Caps Lock key **before** entering an input value (e.g., pressing Caps Lock and then subsequently pressing the “s” key on the keyboard), and an example of the latter is pressing the Shift key **while** entering an input value (e.g., simultaneously pressing Shift and “s” on the keyboard). EX1018, 44:8-47:13. His example of an “active” mode does not involve a situation where the user inputs are the same: either the user presses **only** “s” on the keyboard, or the user presses **both** Shift **and** “s” on the keyboard. The inputs are different, and as a result the modes for recording the input are different, too. Thus, according to Dr. Wobbrock’s concessions at

deposition, the opinion in his declaration is based on an incomplete summary of how a POSITA would have understood a “mode.”

25. For these additional reasons, I disagree with PO’s and Dr. Wobbrock’s proposed constructions.

VIII. GROUND 1 – ROGERS AND ROSENBERG RENDER CLAIMS 1, 2, AND 4-7 OBVIOUS

A. [1e] – Rogers Discloses or At Least Renders Obvious the Claimed “Second Controller” Even Under PO’s Interpretation

26. My initial declaration explains why Rogers discloses or at least renders obvious limitation [1e]. I incorporate that discussion by reference here.

27. I understand that PO and Dr. Wobbrock have taken the position that Rogers does not disclose or render obvious this limitation because a “processor” is not a “controller.” POR 24; EX2005 ¶ 111. I disagree.

28. As an initial matter, I understand PO’s and Dr. Wobbrock’s position to be inconsistent with past arguments and opinions that both have offered. *See, e.g.*, POPR (identifying no dispute for either “controller” limitation); EX1004, 86-88 (Examiner non-final findings during re-examination, stating that both controllers would have been obvious in view of Bayram’s disclosure of “processor 110”), 76-80 (PO response not disputing the findings regarding the controller limitations), 27-39 (Dr. Wobbrock declaration not disputing the controller limitations); EX1018, 59:10-15 (Dr. Wobbrock conceding at deposition that Rogers’ processor constitutes

the claimed first controller); EX1020, 6-7 (PO arguing that a controller could consist of “one or more processors”); EX1013, 3-5 (PO citing to a “processor” in the prior art for the controller limitation); EX1017, ¶ 65 (Dr. Wobbrock stating that “a controller is a component of a computer system that controls, via using a processor (e.g., CPU), the operation of a subsystem within the computer system”); EX1017, ¶¶ 61-62 (Dr. Wobbrock identifying a “microprocessor” and “processing logic or processor” as exemplary controllers in the prior art); EX1017, ¶ 31 (Dr. Wobbrock opining that a controller must consist of “at least a processor”). These prior admissions confirm that a POSITA would have understood Rogers to disclose or at least render obvious limitation [1e].

29. Even under Dr. Wobbrock’s interpretation of the requirements for the claimed “second controller,” a POSITA would have understood that Rogers discloses or at least renders obvious this limitation.

30. In the POR and supporting declaration (EX2005), PO and Dr. Wobbrock argue that a controller must have “at a minimum... processing, input/output (I/O), and memory.” POR 25-27; EX2005, ¶¶ 106-111. Dr. Wobbrock also appears to suggest that a program counter is a necessary element of any controller. EX2005, ¶ 109. At deposition, Dr. Wobbrock clarified that the claimed second controller only needs “access” to these functionalities. EX1018, 72:5-80:14. Furthermore, Dr. Wobbrock stated that the “first controller” and “second controller”

can consist of discrete sets of program code that are “swapped” onto a single processor for execution, and that all other structural requirements (e.g., memory, I/O, and program counter) can otherwise be shared. EX1018, 72:5-80:14.

31. In view of these alleged requirements, Rogers discloses or at least renders obvious limitation [1e]. Rogers discloses a “processor 71” that Dr. Wobbrock and PO concede executes the requisite functions of limitations [1c] and [1e]. *See, e.g.*, EX1018, 63:5-17. Rogers also discloses a memory—not only as a discrete component, but also as part of an ASIC or as a combined component wherein “the storage medium may be integral to the processor.” EX1006, 14:56-15:4. Rogers states that the various functions and algorithms disclosed in its embodiments may be embodied in one or more software modules stored in memory and executed by the processor. EX1006, 14:41-64. Rogers also teaches that the memory may also include program counter “registers.” *Id.* In any event, program counter registers would have been inherently present in any processor, as conceded by Dr. Wobbrock. EX1018, 70:10-72:4. Finally, as shown in Figure 1 of Rogers, the processor 71 includes numerous inputs and outputs, including to/from touch screen display 40, keypad 76, navigation pad 77, radio communications transceiver 75, and “cable to cable connector (e.g., a FireWire or USB connector)” 79. EX1006, Fig. 1, 5:6-11, 5:33-38. Thus, a POSITA would have understood that Rogers discloses or renders obvious the use of a “second controller” even under the incorrect

construction offered by Dr. Wobbrock, either as separate physical components or as separate sets of program code.

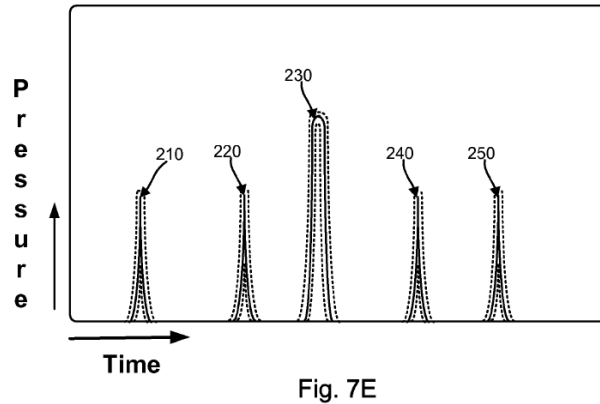
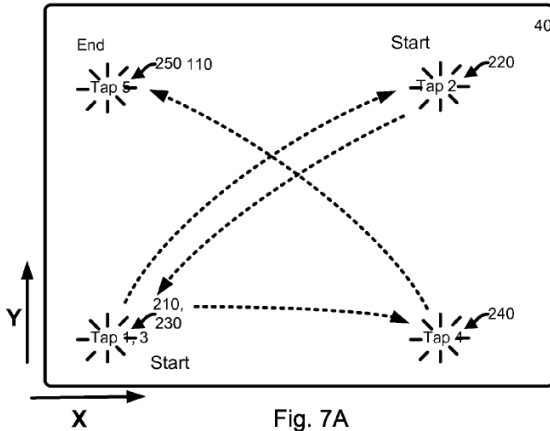
32. Moreover, to the extent that Rogers does not disclose the second controller, a POSITA would have been motivated to modify Rogers to have the second controller in order to, for example, enhance device security by having security-related processes executed by a second controller. As admitted by Dr. Wobbrock at deposition, a POSITA would have had all the necessary skills to implement such a configuration, and a POSITA would have understood the value of carrying out certain password-related “secure information” separately and “in a secure way.” EX1018, 73:2-75:3, 80:16-81:7. This modification would have taken no more than basic programming skills to achieve the configuration described by Dr. Wobbrock at deposition, wherein the second controller code exists as “a conceptual unit” consisting of source code that gets “swapped” onto the existing processor of Rogers for execution. To the extent that the modification involved physically separate controllers, a POSITA would have also been capable of making such modifications, as admitted by Dr. Wobbrock at deposition. *Id.*, 23:10-25:22.

B. [1f] – Rogers and Rosenberg Render Obvious the Claimed First and Second Registering Modes Even Under PO’s Proposed Construction of “Modes”

33. Under the plain and ordinary meaning of the first and second registering mode terms, Rogers discloses or at least renders obvious limitation [1f]. Rogers and the '086 patent discloses similar processes for password registration.

34. In the '086 patent, the “process for password registration” uses numbers entered by one of two distinguishable types of touch input, i.e., finger tip or pad input (EX1001, Fig. 9 (S2007-S2010)), at the location on the touch screen where the desired number is located (e.g., FIG. 11B). *Id.* 6:45-7:7 (“The user selects and touches any numbers among numbers 0 to 9 displayed on a touch panel 1 by either the finger tip input or the finger pad input.”). After recording four inputs, registration ends and a passcode is generated. *Id.* 7:2-27; Fig. 12A.

35. In Rogers, the password registration mode uses location-specific touches entered by one of two distinguishable types of touch input, i.e., finger pad and stylus input. EX1006, 3:32-39, 4:15-19, 7:56-67; EX1003, ¶¶ 116-21. Figure 7 from Rogers illustrates this process in the related context of high- and low-pressure touch inputs, showing a registration mode consisting of five taps on the screen (Fig. 7A), wherein each tap corresponds to a low or a high pressure (Fig. 7E).



EX1006, Figs. 7A, 7E. Rogers discloses that—instead of pressure—the size of the touch input contact range can be used, and gives the example of “discriminat[ing] between a large fingertip and a small stylus tip” as a potential alternative to high- and low-pressure inputs. *Id.* 4:15-19, 7:56-67; EX1003, ¶ 121. Figure 7A and 7E therefore disclose—in the context of fingertip and stylus tip input modes—entering a password consisting of five taps, each associated with finger tip or stylus input. EX1003, ¶ 121. Thus, Rogers discloses a password registration mode provided with a first and second registering mode for inputting information according to two distinguishable types of touch input (e.g., finger tip and stylus tip input).

36. Although PO and Dr. Wobbrock argue that Rogers is distinguishable because it “compar[es] scalar values within tolerance envelopes” (POR 38) and fails to “use[] the term ‘threshold’” (POR 41), these arguments mischaracterize both Rogers and the '086 patent. Rogers discloses that a “training” session can occur “within the initialization [registration] procedure” (EX1006, 7:9-11), similar to the

'086 patent's calibration process. EX1001, Fig. 9 (S2001-S2004). And Rogers states that—when training the device to distinguish the contact range of finger tip and stylus input—the “measured contact area” may be required to be “greater than or less than a certain size” (EX1006, 7:63-67), i.e., the two input types can be distinguished by comparison against a certain threshold. This, too, is similar to the '086 patent, which discloses “compar[ing] the contact range [of a touch input] with the threshold value,” and determining that it is a finger tip input “[w]hen the contact range is equal to or smaller than the threshold value,” or a finger pad input “[w]hen the contact range is larger than the threshold value.” EX1001, 6:55-64. Given that PO and Dr. Wobbrock do not dispute the obviousness of substituting finger tip/end inputs for Rogers finger tip and stylus inputs, these disclosures clearly render limitation [1f] obvious under the plain and ordinary meaning of the claim terms.

37. I disagree with PO that Rogers is similar to the Bayram reference considered during re-examination. In Bayram, the signature registration process recognizes differences in the non-centroid shapes formed by the user's touch interaction. EX2004, 242-44. Bayram does not—as Rogers does—use those differences to distinguish between two discrete types of touch input and record the touch input of the graphical passcode as being entered by one method or the other depending upon the size of the contact area as compared against a threshold (e.g., by

finger tip or stylus as in Rogers). Thus, it is my opinion that the re-examination history as to Bayram has no bearing on Rogers.

38. Even under PO's incorrect proposed construction of the first and second registering modes in limitation [1f], Rogers and Rosenberg disclose or at least render obvious this limitation. As conceded by Dr. Wobbrock at deposition, a "mode" can be categorized as a "passive mode" or an "active mode," wherein the former is similar to pressing the Caps Lock key **before** providing user input, and the latter is similar to pressing the Shift key **while** providing user input. EX1018, 44:8-47:13. Both types of "modes" are distinct operational states. *Id.*

39. Under Dr. Wobbrock's proposed construction, a POSITA would understand that the disclosures of both the '086 patent and Rogers could be viewed as "active" first and second registration modes, similar to pressing the Shift key in Dr. Wobbrock's example at deposition. In the '086 patent, entering a number input would be like pressing "s" on the keyboard, and the type of touch input accompanying that touch (finger tip/end input) would produce a different result depending on the input mode, similar to pressing Shift on the keyboard. In Rogers, the same user action of tapping the screen would similarly produce a different result based on the mode state of the touch input used to tap the screen (in other words, whether the user enters the touch input in the finger/stylus mode setting).

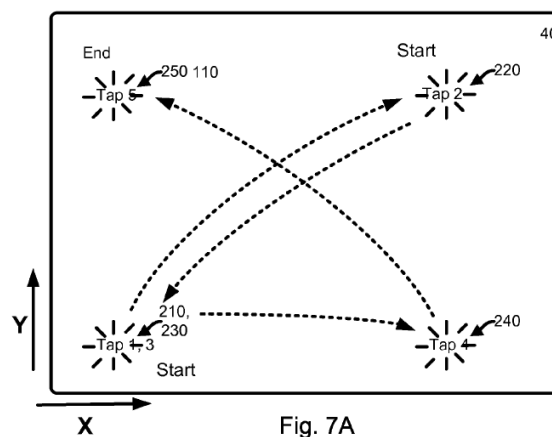
40. Thus, even under PO's and Dr. Wobbrock's incorrect proposed construction, Rogers and Rosenberg still render obvious limitation [1f].

C. [1d] – Rogers Discloses the Claimed Memory

41. Dr. Wobbrock argues only that Rogers fails to disclose this limitation because the graphical password allegedly is not generated in the first and second registering modes recited by limitation [1f]. EX2005, ¶¶ 150-55. It is my opinion that this is incorrect for the reasons already discussed above.

D. Rogers and Rosenberg Render Obvious Claim 5

42. With respect to claim 5, Dr. Wobbrock asserts that “Rogers offers no discussion of any particular graphical user interface implemented to register the graphical password.” EX2005, ¶ 158. However, Rogers states that Figures 2A, 6A, 7A, and 8A each “illustrate[] an exemplary graphical passcode” registered by a user. EX1006, 2:20-43. Figure 7A below shows an example of the graphical passcode inputs on the “touchsurface” of the Rogers device.



EX1006, Fig. 7A. Rogers also teaches that the graphical passcode entered by the user can be accompanied by visible indicators such as “an ‘X’ or target symbol.” EX1006, 8:1-5. As explained in my initial declaration, these disclosures from Rogers—combined with Rosenberg’s disclosures regarding a similar touchsurface that can display “icons” and other “graphical elements”—would have provided more than a sufficient basis to render obvious the elements of claim 5.

43. Dr. Wobbrock also argues that there is no “reason for why different forms of input would require different images and text *during a registration process.*” EX2005, ¶ 159. But in my initial declaration, I explained that it would have been obvious to display an image and descriptive text during registration to confirm for the user the location and touch input type registered by the device (e.g., to confirm, in Figure 7A above, the location of each tap and that the tap was registered as a tip/pad input). EX1003, ¶¶ 134-38. By providing visual confirmation of the location and input method of each registration input, the device would improve the accuracy of passcode registration and subsequent authentication. *Id.*

IX. GROUND 2 – ROGERS, ROSENBERG, AND MIYAZAWA RENDER CLAIMS 9-14 OBVIOUS

44. Dr. Wobbrock relies entirely on his Ground 1 arguments regarding claim 1 to dispute the validity of claims 9-14. EX2005, ¶ 161. I explained above why Dr. Wobbrock is incorrect and incorporate that discussion by reference here.

X. GROUND 3 – ROGERS AND REKIMOTO RENDER CLAIMS 1, 2, AND 4-7 OBVIOUS

A. [1e] – Rogers Discloses or At Least Renders Obvious the Claimed “Second Controller” Even Under PO’s Interpretation

45. Dr. Wobbrock relies entirely on his Ground 1 arguments regarding limitation [1e]. EX2005, ¶¶ 163-64. I explained above why Dr. Wobbrock is incorrect and incorporate that discussion by reference here.

B. [1f] – Rogers and Rosenberg Render Obvious the Claimed First and Second Registering Modes Even Under PO’s Proposed Construction of “Modes”

46. Dr. Wobbrock relies primarily on arguments made in Ground 1 to dispute Rogers’ disclosure of the first and second registering modes of limitation [1f]. Thus, PO’s arguments fail for reasons already discussed.

47. Regarding Rekimoto, Dr. Wobbrock does not dispute the obviousness of combining Rekimoto with Rogers to achieve a graphical passcode registration process that relies on finger tip and finger pad inputs (i.e., the obviousness of modifying Rogers so that instead of using finger/stylus touch inputs, the disclosed device performs registration using finger pad and finger end inputs). Combined with Rogers’ disclosure of the other elements of [1f], this concession establishes that Rogers and Rekimoto render limitation [1f] obvious.

48. Dr. Wobbrock offers two additional criticisms of Rekimoto that I disagree with.

49. First, Dr. Wobbrock argues that Rekimoto’s disclosed finger tip and finger pad input methods are not “modes” because “these inputs are not a state of the system such that the *same* input results in *different* responses.” EX2005, ¶¶ 168-70. This argument is based on Dr. Wobbrock’s incorrect claim construction position regarding the first and second registering modes, which is incorrect for the reasons discussed above and incorporated by reference here.

50. Alternatively, even if PO’s proposed construction of “modes” were adopted, Rekimoto’s input methods—like those of Rogers, which I discussed above—would disclose limitation [1f] because they constitute “active” input modes (similar to pressing the shift key along with the touch input) according to the description provided by Dr. Wobbrock at deposition.

51. Second, Dr. Wobbrock again offers his “scalar quantity” argument when addressing Rekimoto, attempting to distinguish Rekimoto and the fact that it “maps different contact areas of different touch inputs to different functions.” EX2005, ¶ 168. But Dr. Wobbrock again overlooks that the ’086 patent discloses an identical method for distinguishing finger pad and tip inputs. EX1001, 3:1-13, 4:44-50, 6:52-7:7. In the ’086 patent, the disclosed device uses scalar quantities (e.g., contact area of the touch input as compared against a threshold value) to determine whether a finger tip input or finger pad input has been entered by the user during password registration. *Id.*, 6:52-7:7.

C. [1d] – Rogers Discloses the Claimed Memory

52. Dr. Wobbrock argues only that Rogers fails to disclose this limitation because the graphical password allegedly is not generated in the first and second registering modes recited by limitation [1f]. EX2005, ¶¶ 174-78. It is my opinion that this is incorrect for the reasons already discussed above.

D. Rogers and Rosenberg Render Obvious Claim 5

53. Dr. Wobbrock relies entirely on his Ground 1 arguments regarding claim 5. EX2005, ¶¶ 179-82. I explained above why Dr. Wobbrock is incorrect and incorporate that discussion by reference here.

XI. GROUND 2 – ROGERS, REKIMOTO, AND MIYAZAWA RENDER CLAIMS 9-14 OBVIOUS

54. Dr. Wobbrock relies entirely on his Ground 1 arguments regarding limitation [1e]. EX2005, ¶ 183. I explained above why Dr. Wobbrock is incorrect and incorporate that discussion by reference here.

XII. CONCLUSION

55. The foregoing represents my opinion to date but as discussed above I reserve the right to supplement my opinion if, among other things, further evidence or information becomes available.

56. In signing this declaration, I understand that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I acknowledge that I may be subject to

cross examination in the case and that cross examination will take place within the United States. If cross examination is required of me, I will appear for it within the United States during the time allotted for cross examination.