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Paper 9
Date: November 4, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD., and
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioner,

v.

MAXELL, LTD.,
Patent Owner.

IPR2024-00828
Patent 8,982,086 B2

Before TERRENCE W. MCMILLIN, KEVIN C. TROCK, and JASON W. MELVIN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background and Summary

Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. ("Petitioner")[1] filed a Petition for *inter partes* review of claims 1, 2, 4–7, and 9–14 of U.S. Patent No. 8,982,086 B2 (Ex. 1001, "the '086 patent"). Paper 3 ("Pet."), 1. Maxell, Ltd. ("Patent Owner")[2] filed a Preliminary Response. Paper 7 ("Preliminary Response" or "Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020) ("The Board institutes the trial on behalf of the Director."). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that *inter partes* review may not be instituted unless "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." After considering the Petition and the Preliminary Response, as well as the evidence of record, we institute an *inter partes* review as to claims 1, 2, 4–7, and 9–14 of the '086 patent.

B. Related Proceeding

The parties identify the following district court matter related to the '086 patent: *Maxell, Ltd. v. Samsung Electronics Co. Ltd.*, Case No. 5:23-cv-00092 (E.D. Tex.). Pet. 81; Paper 5, 1.

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[1] Petitioner identifies Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. as the real parties-in-interest to this proceeding. Pet. 81.

[2] Patent Owner identifies Maxell, Ltd. as the real party-in-interest to this proceeding. Paper 5, 1.

In addition, Patent Owner identifies the following proceedings related to the ’086 patent: IPR2021-00362; and Reexamination No. 90/014,638. Paper 5, 1.

C. The ’086 Patent (Ex. 1001)

The ’086 patent is titled “Information Processing Apparatus.” Ex. 1001, code (54). The ’086 patent relates to “an information processing apparatus” that includes “a touch panel which displays a plurality of pieces of identification information including letters, figures, and symbols, and for detecting a contact of the panel with a finger of a user or other objects.” *Id.* at 1:42–46. The apparatus can determine which identification information is contacted and whether the area of the detected contact matches a stored reference area range. *See id.* at 1:46–64. More specifically, an embodiment for an enhanced security function “incorporates a four-digit password and a difference in the contact range.” *Id.* at 6:17–18. This embodiment stores a registered password as well as an input method for each password number, where the input method may be either a fingertip input or a finger pad input. *Id.* at 7:53–55, 8:20–22.

Figure 11A, reproduced below, illustrates an embodiment of the ’086 patent for registering a password. Ex. 1001, 2:40–41.

FIG. 11A

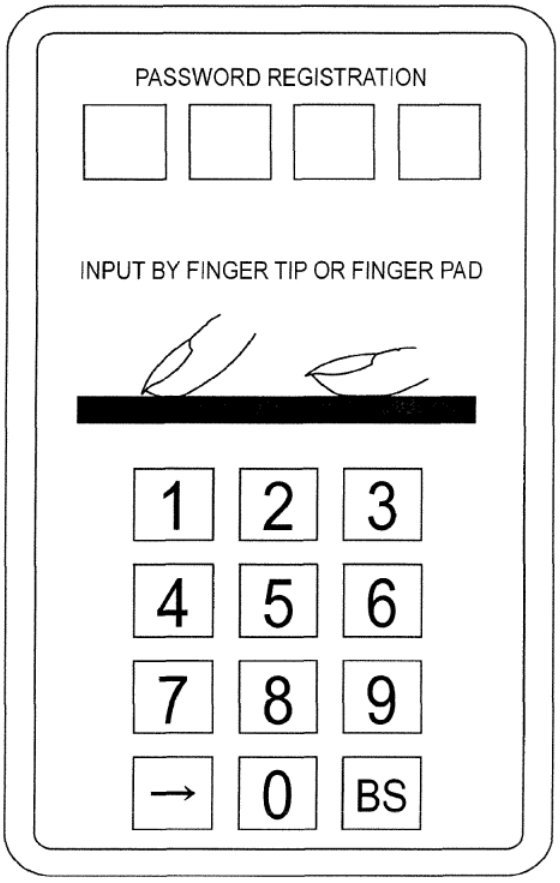


Figure 11A depicts the screen of an information processing apparatus. *Id.* As shown in Figure 11A, a user may be prompted by a portable terminal to input a password using either a fingertip or finger pad for any of numbers 0 through 9, for each of the four numbers in a password. *See id.*at 6:47–54. When entering selected numbers, a control unit compares a contact range with a threshold value determined during a calibration process, in order to determine whether a fingertip or finger pad was used for selecting the number. *See id.* at 6:55–64, 6:29–45. For example, as shown in Figures 11C and 11B, reproduced below, the portable terminal determines that a

fingertip was used for selecting the first number 0, and a finger pad was used for selecting the second number 5. *See id.* at 6:59–67.

FIG. 11B

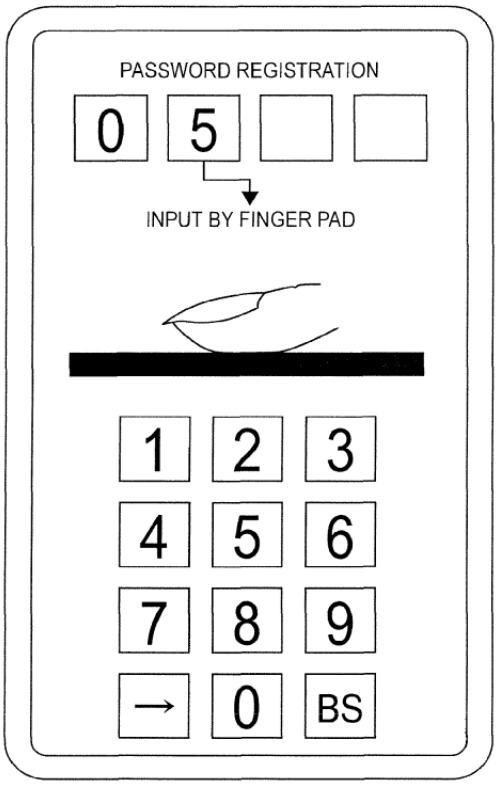
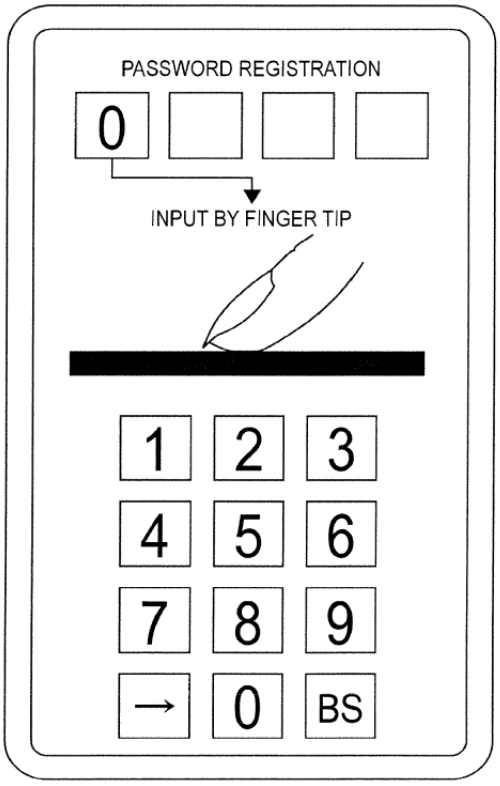


FIG. 11C



Figures 11B and 11C depict further screens to inform the user whether a finger pad input of a fingertip input has been made. *Id.* at 2:42–47. The result of registering a password as shown in Figures 11A through 11C may be stored as in the table shown in Figure 12A, reproduced below.

FIG. 12A

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

Figure 12A shows "data consisting of a password and a set of corresponding input method[s]." *Id.* at 6:23–24; *see also id.* at 7:2–6. According to the '086 patent, this embodiment enhances security "by only storing, in addition to the password registered, the input method for each of the password numbers," and "[f]rom the view of a user, the user only needs to remember the input method for each password number to unlock the portable terminal." *Id.* at 7:53–59.

D. Challenged Claims

Petitioner challenges claims 1, 2, 4–7, and 9–14 of the '086 patent.[3] Pet. 1. Claim 1 is independent, and recites:

> 1. An information processing apparatus comprising:
>
> a touch panel configured to detect a contact of a finger of a user;
>
> a detector configured to detect first information necessary for an identification of the user when the contact is detected between the touch panel and the finger of the user;
>
> a first controller configured to control the information processing apparatus to operate into two operating modes: at least an identification mode and a registering mode, as the operating mode thereof;
>
> memory that is configured to store second information relating to the identification of the user, which is stored in advance;

[3] Claims 5–15 of the '086 patent were added during reexamination. *See* Ex. 1004 (file history for Reexamination No. 90/014,638), 4.

> and a second controller configured to execute a specified process when said first information and said second information are coincident within said identification mode, wherein:
>
> in said registering mode, there are provided a first registering mode for inputting input information by a pad of the finger, and a second registering mode for inputting input information by an end of the finger, and said second information relating to the identification of the user is produced upon basis of the input information, which is inputted at least in the first or second mode.

Ex. 1001, 8:36–60; Ex. 1002, 21 (Certificate of Correction dated May 28, 2019).

E. The Asserted Grounds

Petitioner challenges claims 1, 2, 4–7, and 9–14 of the '086 patent based on the grounds set forth in the table below.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis[4]
1, 2, 4–7	103(a)[5]	Rogers[6], Rosenberg[7]
9–14	103(a)	Rogers, Rosenberg, Miyazawa[8]

[4] Petitioner contends that the cited art qualifies as prior art under applicable law. *See* Pet. 9–10. Patent Owner does not dispute the prior art status of the cited art. *See* Prelim. Resp. We preliminarily determine that the cited art qualifies as prior art.

[5] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. § 103, and was effective on March 16, 2013. The application for the '086 patent is a continuation of U.S. Application No. 13/366,983, filed on February 6, 2012, and also claims priority to a foreign application filed on February 9, 2011. Ex. 1001, codes (22), (63), (30), 1:5–8. Because the application for the '086 patent claims a priority date before the effective date of the applicable AIA amendment, the pre-AIA version of § 103 applies for purposes of institution.

[6] US 8,683,582 B2, issued Mar. 25, 2014, filed Jun. 16, 2008 (Ex. 1006).

[7] US 2007/0097096 A1, published May 3, 2007 (Ex. 1007).

[8] US 8,633,909 B2, issued Jan. 21, 2014, filed Dec. 29, 2010 (Ex. 1008).

Claims Challenged	35 U.S.C. §	Reference(s)/Basis[4]
1, 2, 4–7	103(a)	Rogers, Rekimoto[9]
9–14	103(a)	Rogers, Rekimoto, Miyazawa

Pet. 1.

Petitioner supports its showing of unpatentability of the challenged claims of the '086 patent with the Declaration of Seth James Nielson, Ph.D. (Ex. 1003). Patent Owner has not filed a declaration or other testimony in support of the contentions in the Preliminary Response.

II. OBVIOUSNESS ANALYSIS

A. Principles of Law

Under 35 U.S.C. § 103(a), "[a] patent claim is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (similar language). The question of obviousness involves resolving underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and when presented (4) objective evidence of non-obviousness (not presented here). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Further, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *See KSR*, 550 U.S. at 418.

[9] US 8,477,115 B2, issued Jul. 2, 2013, filed Jun. 7, 2006 (Ex. 1010).

B. Level of Ordinary Skill in the Art

Petitioner contends that

> A person of ordinary skill in the art ("POSITA") at the time of the alleged invention of the '086 patent would have had 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.

Pet. 6 (citing Ex. 1003 ¶ 45). Petitioner further contends that "[a]dditional education or experience might substitute for the above requirements." *Id.* Patent Owner agrees with Petitioner's assessment of the level of ordinary skill at this stage. Prelim. Resp. 25.

Determining the level of ordinary skill in the art involves various factors, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). The prior art of record also reflects the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For purposes of this Institution Decision, we adopt the assessment offered by Petitioner, as it is not disputed by the Patent Owner and is consistent with the '086 patent and the asserted prior art.[10]

[10] No matter how designated in this Decision, any determination (except our decision to institute trial) is preliminary and non-binding. We wish to have the full record as developed during trial before rendering any binding determination, finding, or conclusion.

C. Claim Construction

In *inter partes* reviews, the Board construes claims using the same claim construction standard employed in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2023). The "words of a claim 'are generally given their ordinary and customary meaning,'" as would have been understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp*., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc*., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc*., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–1317).

Petitioner proposes two claim constructions, and contends the remaining claim terms "should be construed according to their plain and ordinary meaning to a POSITA." Pet. 7. For *"first information necessary for an identification of the user"* as recited in claim 1, Petitioner contends that this term means "information sufficient for the identification of the user, but not including information about a user's fingerprint." *Id.* For *"second information relating to the identification of the user" as recited in claim 1,* Petitioner contends that this term means "information related to the identification of a user, but not including information about a user's fingerprint." *Id.* at 8.

However, for both proposed constructions, the Petition states, "Petitioners propose this construction to be consistent with their proposed

construction in the concurrent litigation," but "that the Board need not rule on this construction because the prior art cited herein discloses the components" whether or not the construction is adopted in this proceeding. *Id.* at 8, 9.

Patent Owner contends Petitioner fails to meet its burden to "explain how the construed claim is unpatentable under" its proposed constructions. Prelim. Resp. 29 (citing 37 C.F.R. § 42.104(b)(4)). Patent Owner, however, "simply applies Petitioner's own constructions to show how the Petitioner has not met its burden," "to minimize the disputes that the Board needs to address at this preliminary stage." *Id.* Patent Owner presents no argument that is related to the constructions discussed in the Petition. *See generally id.* Patent Owner does not the dispute the showings in the Petition as to either "*first information necessary for an identification of the user"* or "*second information relating to the identification of the user." See generally id.*

Accordingly, at this stage, no need exists to expressly construe any claim terms to resolve the parties' disputes.[11] *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co*., 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("[W]e need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy.'" (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

[11] If either party contends that explicit claim construction is necessary in order to make a final determination whether or not any challenged claim is unpatentable based on the arguments and evidence presented, it should clearly explain why during trial and provide a clear and unambiguous construction with supporting evidence including specifically identifying the challenges, claims, and limitations to which the construction is necessary.

D. Asserted Obviousness of Claims 1, 2, and 4–7 Based on Rogers and Rosenberg

Petitioner challenges claims 1, 2, and 4–7 as being obvious over Rogers and Rosenberg. *See* Pet. 1, 11–46. We start with a description of the disclosures of Rogers and Rosenberg and then consider the arguments and evidence presented by the parties.

1. Rogers (Ex. 1006)

Rogers is titled, "Method and System for Graphical Passcode Security." Ex. 1006, code (54). Rogers observes that typical alphanumeric passwords for computer security "are easily forgotten or confused between different devices," and recognizes "a need for secure access methods that facilitate easily remembered and intuitive passcodes and personal identifiers." *Id.* at 1:20–29. Accordingly, Rogers discloses "methods and systems for reliably and rapidly identifying graphical passcodes and/or identifiers entered on a touchscreen or touchpad of an electronic device." *Id.* at 1:35–38. In particular, "a user may create a graphical passcode by touching the touchpad in a memorable manner one or more times and storing the resulting information." *Id.* at 1:46–49. "[A]n envelope is defined for a measurable parameter (e.g. pressure, speed) of the stored graphical passcode." *Id.* at 1:50–52. "When a user requests access to the secured electronic device" and "inputs the graphical passcode . . . in the same memorable manner," if the measurable parameter for the input graphical passcode falls within the envelope, the user is provided access to the device. *Id.* at 1:53–61. "In some embodiments, authentication of the subsequently inputted graphical passcode may employ a measurement of a size (i.e., area) of the object or fingertip applied to the touchsurface." *Id.* at 7:56–59. The area difference "between a large fingertip and a small stylus tip," in one

example, may be used "as a measured parameter that can be compared against the template graphical passcode for authentication." *Id.* at 7:59–62.

Figure 1 of Rogers, reproduced below, illustrates an exemplary device capable of using graphical passcodes. Ex. 1006, 2:16–18.

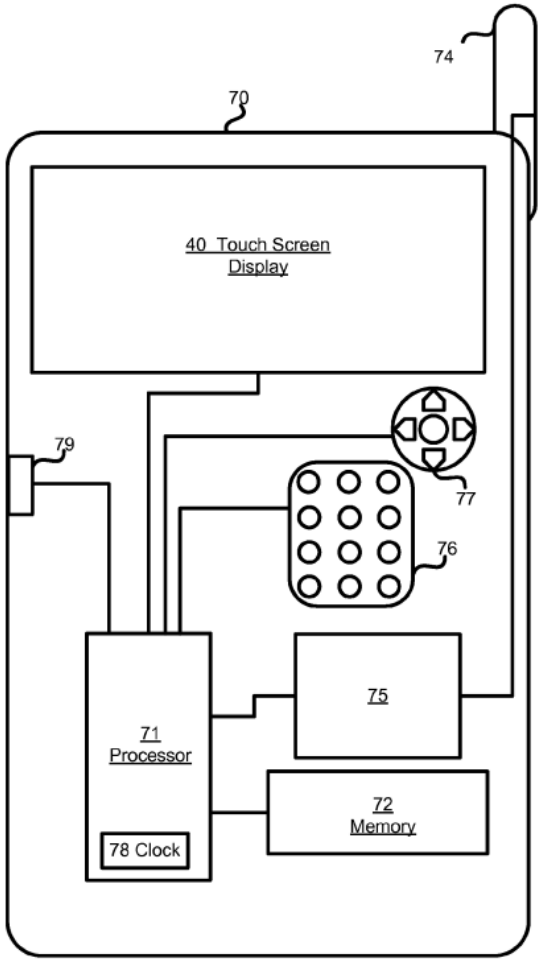


Fig. 1

Figure 1 depicts electronic device 70 that comprises touch screen display 40, processor 71, and memory 72. *Id.* at 5:6–11. "During an initialization procedure, the user can execute a graphical passcode to be used as a template graphical passcode on the touch screen display 40." *Id.* at 5:16–19. "[E]ach time a user wishes to access the electronic device 70, the user[]

provides the graphical passcode." *Id.* at 5:21–23. "[E]lectronic device 70 may include sensors for detecting and measuring the pressure or force applied to the touchscreen 40," and this measurement may be "plotted or correlated as a function of time or position." *Id.* at 5:39–44.

Figure 4 of Rogers is reproduced below.

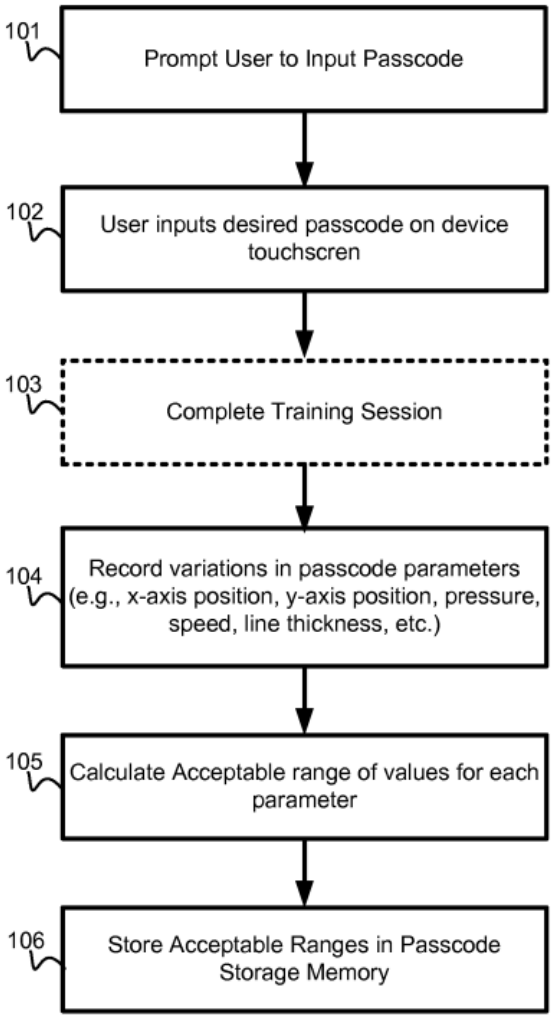


Fig. 4

Figure 4 depicts a process flow diagram for creating and storing a desired graphical passcode. Ex. 1006, 2:30–31. As shown in Figure 4, after

prompting in step 101, a user may input a graphical passcode in step 102, "such as by drawing a finger tip across the touchsurface in the appropriate manner." *Id.* at 8:44–49. Optionally, the user engages in a training session, in step 103, by entering the passcode multiple times in order to "generate the necessary parameter envelopes." *Id.* at 8:49–54. In step 104, electronic device 70 records at least one characteristic parameter of the passcode, for example, "X-axis position, Y-axis position, pressure, speed, line thickness, etc." *Id.* at 8:55–61. In steps 105 and 106, processor 71 of the device calculates "an acceptable envelope or range of values for each characteristic parameter within the passcode template," and "the acceptable envelope values are stored in the memory 72 as part of the passcode template." *Id.* at 9:1–25. "The passcode template and its acceptable envelope values are used by the processor 71 to determine the authenticity of a subsequently inputted graphical passcode." *Id.* at 9:25–28.

2. Rosenberg (Ex. 1007)

Rosenberg is titled "Bimodal User Interface Paradigm for Touch Screen Devices." Ex. 1007, code (54). Rosenberg relates to "a unique targeting methodology for GUIs implemented upon touch screen devices." *Id.* ¶ 8. Specifically, Rosenberg describes "a bimodal targeting paradigm in which a user may naturally and intuitively select between two targeting modes, a traditional targeting mode (referred to herein as direct-targeting) and a modified targeting mode (referred to herein as offset-targeting)." *Id.* "[D]irect-targeting is particularly well adapted for user interaction with large graphical elements" and this mode may be "engaged when it is determined that the user is tip-pointing upon the touch screen." *Id.* "Offset-targeting is well adapted for user interaction with small graphical elements" and this

mode may be "engaged when it is determined that the user is pad-pointing upon the touch screen interface." *Id.* Rosenberg provides "a variety of methods for distinguishing between finger-tip interactions and finger-pad interactions, including as assessment of the finger contact area size, shape, and/or orientation." *Id.* ¶ 27.

3. Analysis of Claim 1

For the reasons that follow, we are persuaded that Petitioner establishes sufficiently for the purpose of this institution decision that the subject matter of independent claim 1 would have been obvious in view of the combination of Rogers and Rosenberg. Our limitation-by-limitation analysis of the showing in the Petition for claim 1 is provided below.

An information processing apparatus comprising:

Petitioner does not take a position as to whether the preamble of claim is limiting. Pet. 15 ("To the extent that the preamble is limiting, Rogers discloses it.") (citing Ex. 1003 (Nielson Decl.) ¶ 92). The Petition states, "Rogers discloses that its embodiments may be implemented 'on various computer or electronic devices, including cellular phones, laptop computers, personal digital assistants (PDAs), smart phones, desktop computers, gaming consoles and the like.'" *Id.* (quoting Ex. 1006, 1:62–66) (also citing *id.* at 3:14–28, 5:6–48, Fig. 1).

Patent Owner does not dispute that the cited art discloses the preamble. *See generally* Prelim. Resp.

We determine that the cited art discloses "[a]n information processing apparatus."

a touch panel configured to detect a contact of a finger of a user;

Petitioner relies on Rogers for this limitation. Pet. 16–17 (citing Ex. 1003 (Nielson Decl.) ¶¶ 93–94; Ex. 1006, code (57) (Abstract), 1:35–38, 1:45–50, 3:32–39, 5:6–27, 7:56–62, 8:44–49, 10:4–10, Fig. 1). Figure 1 of Rogers is reproduced below.

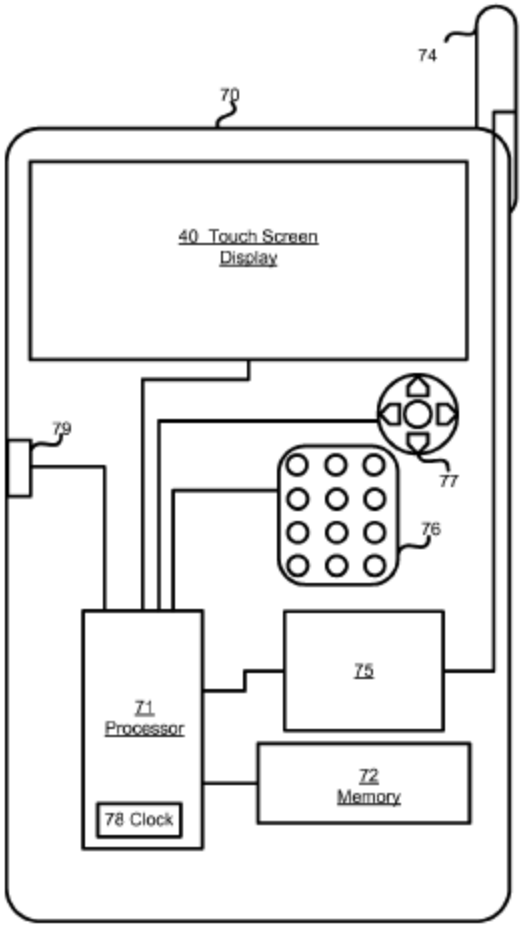


Fig. 1

"Figure 1 depicts typical components of a[n] electronic device 70." Ex. 1006, 5:6. The depicted device includes touch screen display 40. *Id.* at 5:10–11. Rogers provides that "[t]he touch screen display 40 can be any type of touch screen, such as a resistive-sensing touchscreen, capacitive-sensing touchscreen, infrared sensing touch-screen, acoustic/piezoelectric sensing touchscreen or the like." *Id.* at 5:11–14. Rogers discloses that "[i]n

some embodiments, the electronic device 70 may include sensors for detecting and measuring the pressure or force applied to the touchscreen 40." *Id.* at 5:39–41.

With regard to this limitation, the Petition states:

> Rogers discloses that the "touch screen display 40 can be any type of touch screen," and explains that a user may "draw[] a finger tip across the touchsurface" to "input[] a graphical passcode." EX1006, 5:11-27, 8:46-49. For example, Rogers discloses, "[a] method and system for electronic access security [that] uses touchesand movements on a touch sensitive surface to determine graphical passcode that are used in a manner similar to passwords." EX1006, Abstract. "Various embodiments provide methods and systems for reliably and rapidly identifying graphical passcodes and/or identifiers entered on a touchscreen or touchpad of an electronic device." EX1006, 1:35-38; *see also* 1:45-50; 3:32-39; 7:56-62; 8:44-49; 10:4-10.

Pet. 17.

Patent Owner does not dispute the showing for this limitation. *See generally* Prelim. Resp. Patent Owner acknowledges that "Rogers describes a method and system for electronic access security that uses touches and movements on a touch sensitive surface to determine graphical passcode that are used in a manner similar to passwords." *Id.* at 26.

We determine that Rogers teaches this limitation.

a detector configured to detect first information necessary for an identification of the user when the contact is detected between the touch panel and the finger of the user;

Petitioner relies on Rogers for this limitation. Pet. 18–20 (citing Ex. 1003 (Nielson Decl.) ¶¶ 95–99; Ex. 1006, 1:46–61, 5:28–30, 7:56–59, 9:1–28, 13:28–68, Fig. 5).

With regard to "*first information necessary for an identification of the user*," as recited in claim 1, the Petition states:

> Rogers discloses the claimed "first information," particularly, the "graphical passcode" entered by the user's finger touch and captured by the device during an "authenticating" process illustrated in FIG. 5. EX1003, ¶96. Rogers discloses that "when a user requests access to the secured electronic device, the user is prompted to enter the graphical passcode." EX1006, 1:53-55. "The user then inputs the graphical passcode *by touching the touchscreen or touchpad* in the same memorable manner" that matches the same "measurable parameters" as the user's previously registered passcode stored in memory. EX1006, 1:46-55. "The measurable parameter of the input graphical password is measured, and compared with the envelope [(e.g., pressure, speed)] of the parameter stored in memory." EX1006, 1:57-60. This matching process is used to identify the user: "Access is provided if the measured parameter falls within the envelope." EX1006, 1:45-61. . .
>
> Rogers further discloses that the processor 71 measures the parameters of the inputted graphical passcode for comparison with the graphical passcode template that was previously stored. EX1006, 9:1-28. Regarding the user's finger, Rogers discloses taking "a measurement of a size (i.e., area) of the object or fingertip applied to the touchsurface." EX1006, 7:56-59.

Pet. 18, 20 (bracketed material in original). With regard to "*a detector configured to detect . . . when the contact is detected between the touch panel and the finger of the user*" as recited in claim 1, the Petition states:

> Rogers discloses that the electronic device 70 can include "sensors for *detecting* and measuring the pressure or force applied to the touchscreen 40." EX1006, 5:28-30. With respect to the user's finger and detecting finger contact, Rogers discloses taking "a measurement of a size (i.e., area) of the object or fingertip applied to the touchsurface." EX1006, 7:56-

> 59. Rogers thus explicitly discloses that the sensors are detectors configured to detect first information necessary for an identification of the user when the contact is detected between the touch panel and the finger of the user. EX1003, ¶97.
>
> Moreover, Rogers at 13:28-59 discloses support for additional sensing technologies that "touchscreen 40" may use for detecting the input of a user's graphical password, including "resistive, Surface Acoustic Wave, Capacitive, Infrared, Strain Gauge, Optical Imaging, Dispersive Signal technology, acoustic pulse recognition, and frustrated total internal reflection." EX1006, 13:30-35. Rogers also discloses:
>
> > Regardless of which touchscreen technology is implemented, when a user touches a particular point on the touchscreen 40 panel, an *electrical signal may be sensed and converted into an interrupt signal by a hardware driver layer 50*. The hardware driver 50 is a firmware program that converts signals from the touchscreen 40 into data signals which can be stored and interpreted by software applications.
>
> EX1006, 13:60-68. . . .
>
> Thus, Rogers discloses that the sensors of the touchscreen 40, the sensors in conjunction with the hardware driver layer 50, and/or the sensors in conjunction with the hardware driver layer plus the processor 71 are configured to detect the graphical passcode when the contact is detected between the touch panel and the finger of the user. EX1003, ¶¶98-99.

Id. at 18–20.

Patent Owner does not dispute the showing for this limitation. *See generally* Prelim. Resp.

We determine that Rogers teaches this limitation.

a first controller configured to control the information processing apparatus to operate into two operating modes: at

> *least an identification mode and a registering mode, as the operating mode thereof;*

Petitioner relies on Rogers for this limitation. Pet. 20–24 (citing Ex. 1003 (Nielson Decl.) ¶¶ 100–103; Ex. 1006, code (57) (Abstract), 1:45–61, 2:32–33, 3:57–4:14, 5:16–27, 8:42–67, 9:22–36, 9:38–42, 9:50–10:1, Figs. 1, 4, 5).

Petitioner identifies processor 71 (*see, e.g.,* Fig. 1 (reproduced *supra*)) as taught by Rogers as the recited controller. Pet. 20. Petitioner identifies the process taught in the flow chart of Figure 5, reproduced below, as the recited identification mode. *Id.* at 21.

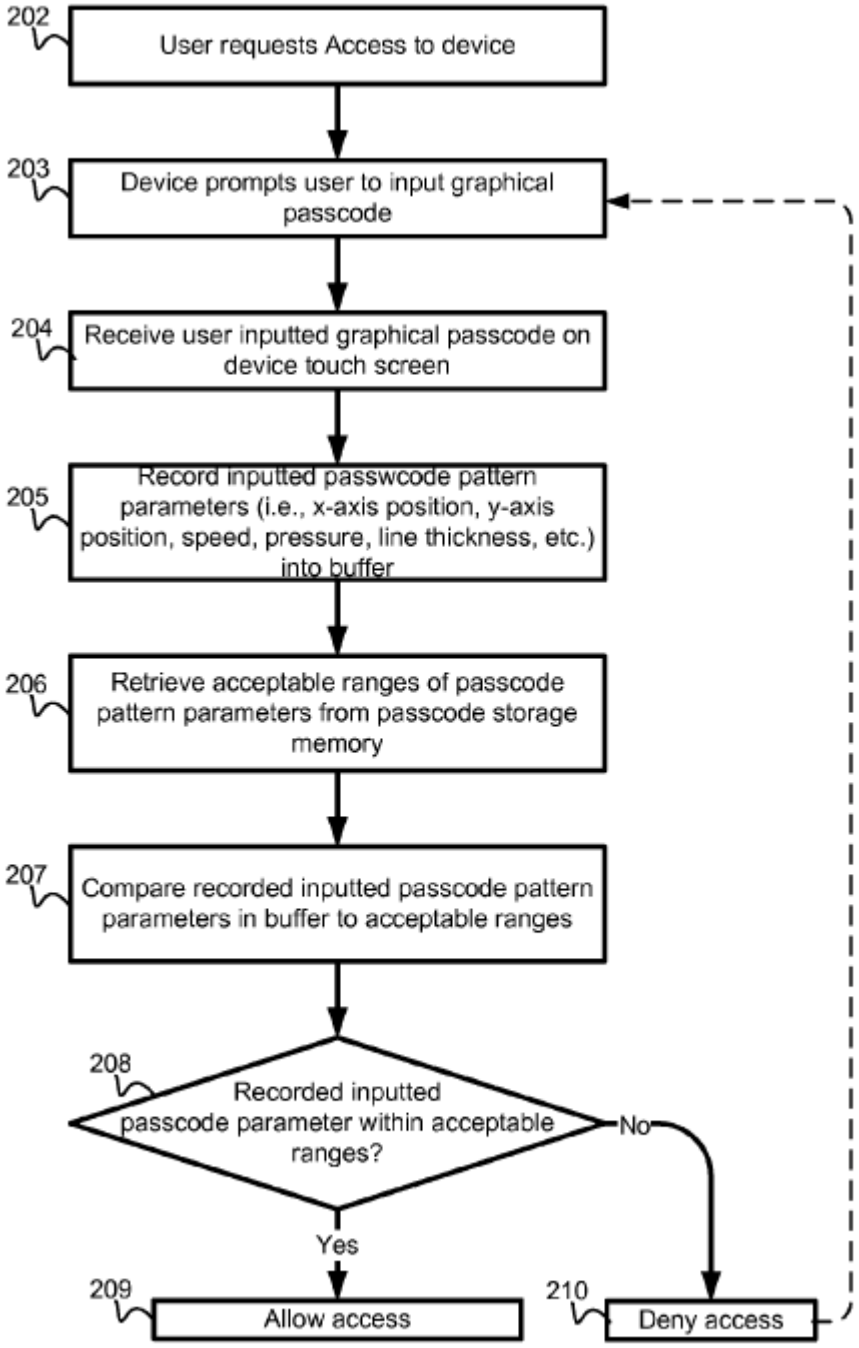


Fig. 5

Figure 5 depicts "a process flow diagram . . . for authenticating a graphical passcode." Ex. 1006, 2:32–33. The detailed description of Figure 5 in Rogers states that "[t]he electronic device 7 via the processor 71 and display 40 prompts the user to input a graphical passcode that is being used as an

authentication credential, step 203." *Id.* at 9:33–36. With regard to the process depicted in Figure 5 of Rogers, the Petition provides:

> As part of an authentication process, the user enters a graphical passcode on the touch surface, and "processor 71 measures various characteristic parameters (*e.g.*, pressure, force, speed, X or Y coordinate data) of the inputted graphical passcode and stores the measured parameter values in a memory buffer, step 205." EX1006, 9:38-42. At step 207, the entered graphical passcode and parameters are compared to the "graphical passcode template" that was previously stored. EX1006, 9:54-57. And at step 208, the processor 71 determines whether the inputted graphical passcode matches or is coincident to the graphical passcode template. EX1006, 9:57-60. If there is a match, the user is allowed access to the device, and if there is no match, the user is denied access. EX1006, 9:50-10:1. EX1003, ¶102.

Pet. 22–23.

Petitioner identifies the process taught in the flow chart of Figure 4 of Rogers, reproduced below, as the recited registration mode. Pet. 23.

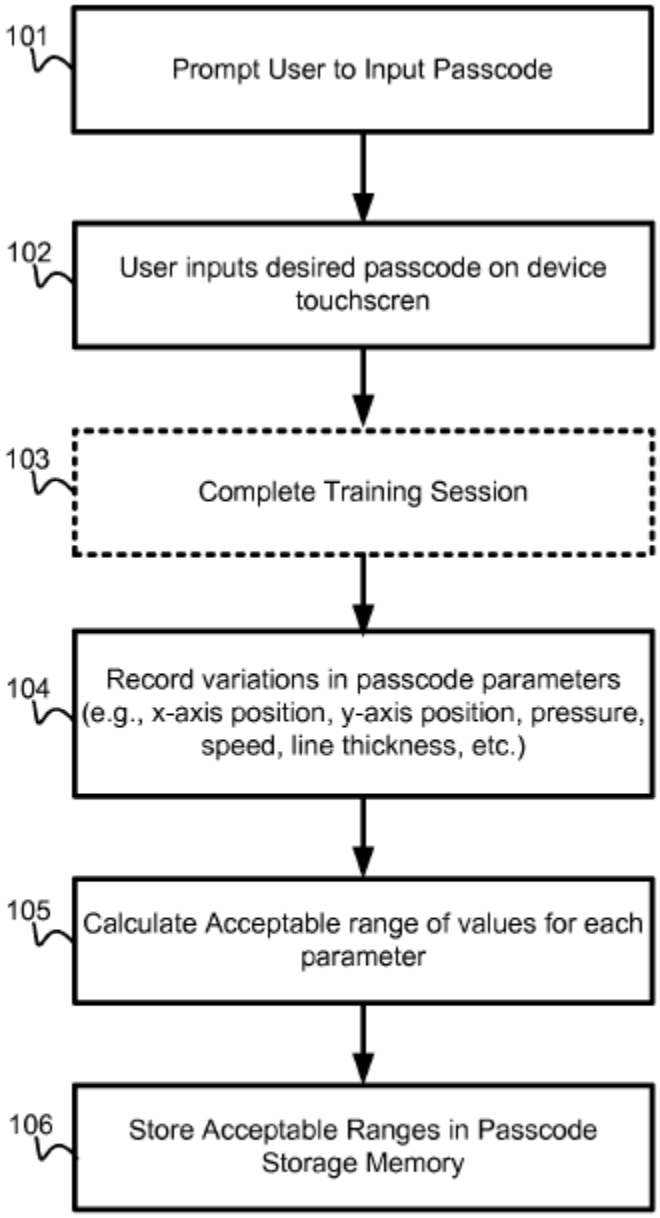


Fig. 4

Figure 4 depicts "a process flow diagram . . . for creating and storing a desired graphical passcode." Ex. 1006, 2:30–31. The detailed description of Figure 4 in Rogers states that "[t]he electronic device 70 via the

processor 71 and display 40 may prompt a user to input a desired graphical passcode, step 101." *Id.* at 8:44–46. With regard to the process depicted in Figure 4 of Rogers, the Petition provides:

> At step 102, "the user inputs a graphical passcode to be used as a passcode template, . . . such as by drawing a finger tip across the touchsurface in the appropriate manner." EX1006, 8:42-49. At steps 103 and 104, the process is repeated several times in a training session so that the device can measure and learn the typical variations when the user enters the graphical passcode. EX1006, 8:49-67. Once the graphical passcode and parameters are determined, the graphical passcode is stored in memory. EX1006, 9:22-25. "The passcode template and its acceptable envelope values are used by the processor 71 to determine the authenticity of a subsequently inputted graphical passcode" (in the identification mode). EX1006, 9:25-28.

Pet. 23.

Patent Owner does not dispute the showing for this limitation. *See generally* Prelim. Resp.

We determine that Rogers teaches this limitation.

memory that is configured to store second information relating to the identification of the user, which is stored in advance;

Petitioner relies on Rogers for this limitation. Pet. 24–27 (citing Ex. 1003 (Nielson Decl.) ¶¶ 104–107; Ex. 1006, code (57) (Abstract), 3:32–39, 5:6–11, 5:19–27, 8:41–67, 9:22–28, 9:36–51, 13:14–20, Figs. 1, 4).

As depicted in Figure 1 (reproduced *supra*) of Rogers, electronic device 70 comprises memory 72. And, the detailed description of Figure 1 states, "[t]he electronic device 70 has . . . a computer readable memory 72." Ex. 1006, 5:7–9.

With regard to storing in advance information relating to identification of the user, Rogers teaches that "[d]uring an initialization procedure, . . . The template graphical passcode and associated plots or datasets are stored in the non-volatile computer readable memory 72" (Ex. 1006, 5:16–19) and "[t]he electronic device 70 processor 71 measures at least one characteristic parameter of the inputted template graphical passcode and stores the measured at least one characteristic parameter in the internal memory 72 as at least part of the passcode template, step 104" (*id.* at 8:51–59; *see also id.* at 5:21–27, 9:22–28).

Patent Owner does not dispute the showing for this limitation. *See generally* Prelim. Resp. Indeed, Patent Owner acknowledges that Rogers discloses that "[a] user's selected graphical passcode is stored in memory for comparison to subsequent entries of graphical passcode in order to authenticate the users." *Id.* at 26.

We determine that Rogers teaches this limitation.

and a second controller configured to execute a specified process when said first information and said second information are coincident within said identification mode, wherein:

Petitioner relies on Rogers for this limitation. Pet. 27–30 (citing Ex. 1003 (Nielson Decl.) ¶¶ 108–114; Ex. 1006, 5:16–27, 8:42–10:3, 13:21–27, 14:28–15:4, Fig. 5).

Petitioner relies on the disclosure in Rogers that the hardware may be "processing element***s***" (plural) and "may be performed by circuitry that is specific to a given function." Pet. 27–28 (citing Ex. 1006, 13:21–27). The Petition states:

> A POSITA [person of ordinary skill in the art] would have understood that Rogers discloses that the separate

> processes performed by processor 71 are disclosed as being performed by separate processing elements, each of which could be run on a separate module. A POSITA would have understood that these multiple processing elements running on separate modules are the claimed multiple controllers.

Id. at 28 (citing Ex. 1003 ¶ 111).

With regard to "*execut[ing]e a specified process when said first information and said second information are coincident within said identification mode*" as recited, the Petition provides:

> Rogers discloses that a processing element of processor 71 ("second controller") unlocks the electronic device 70 ("specified process") when the entered graphical passcode ("first information") matches the stored graphical password template ("second information"). EX1006, 5:16-27; *see also* 8:42-9:28, and FIG. 4 (registration of graphical password template); 9:29-10:3, and FIG. 5 (authentication of user to unlock device by matching entered graphical password to previously stored graphical password template). EX1003, ¶112.

Pet. 28–29.

Patent Owner does not dispute the showing for this limitation. *See generally* Prelim. Resp.

We determine that Rogers teaches this limitation.

> *in said registering mode, there are provided a first registering mode for inputting input information by a pad of the finger, and a second registering mode for inputting input information by an end of the finger, and said second information relating to the identification of the user is produced upon basis of the input information, which is inputted at least in the first or second mode.*

Petitioner relies on a combination of the teachings of Rogers and Rosenberg for this limitation. Pet. 1, 30–38 (citing Ex. 1003 (Nielson Decl.) ¶¶ 115–129; Ex. 1006, 1:66–2:3. 3:3–13, 3:32–39, 3:52, 4:15–19, 5:11–14, 7:56–67. 8:42–67, 10:4–15, 10:44–48, 13:27–35, 13:51–59, Figs. 6A–6E, 7A–7E; Ex. 1007 ¶¶ 27, 28, 30, 45, 50, Figs. 6, 8A, 8B). The showing in the Petition as to this limitation is lengthy, detailed, and well-supported. *See id.*

As discussed above, the Petition (Pet. 23) provides a showing that Rogers teaches two operating modes including a registering mode as depicted in Figure 4 of Rogers and described as "a process flow diagram . . . for creating and storing a desired graphical passcode." Ex. 1006, 2:30–31. With regard to inputting the graphical passcode, Petitioner relies on the disclosure in Rogers of using the size or area of the object or fingertip applied to the touch surface. Pet. 31–34.

Petitioner acknowledges that Rogers does not explicitly disclose two modes of inputting information using both the pad of the finger and the end of the finger (fingertip) or distinguishing between these two different specific modes of inputting information. *See* Pet. 36 (citing Ex. 1003 ¶¶ 126–129) (To the extent P[atent] O[wner] argues that Rogers does not disclose [this] limitation . . . because Rogers does not explicitly recite the use of 'finger pad' and 'finger tip' inputs, Rogers in view of Rosenberg renders this limitation obvious."). For these explicit teachings, the Petitioner relies on Rosenberg. *Id.* at 36–38. With regard to Rosenberg, the Petition provides:

> Rosenberg discloses inputting input information by a pad of the finger ("pad-pointing") and inputting input information by an end of the finger ("tippointing"):"embodiments of the present invention are operative to distinguish between finger-tip interactions (referred to herein as "tip-pointing") where the user

> engages the touch screen with the tip of his or her finger and finger-pad interactions (referred to herein as "pad-pointing") where the user engages the touch screen with the pad of his or her finger." EX1007, ¶30. According to Rosenberg, "a variety of methods for distinguishing between finger-tip interactions and fingerpad interactions, including an assessment of the finger contact area size, shape, and/or orientation" are used to "enable mode selection in a particularly natural and intuitive manner, based upon the orientation in which the user's finger engages the touch screen." EX1007, ¶¶27, 28, 45.

Id. at 36. And, Petitioner relies on Figures 8A and 8B, reproduced below, and the related description in Rosenberg as providing teachings related to the finger pad and fingertip modes of inputting information. *Id.* at 37–38.

Fig 8a

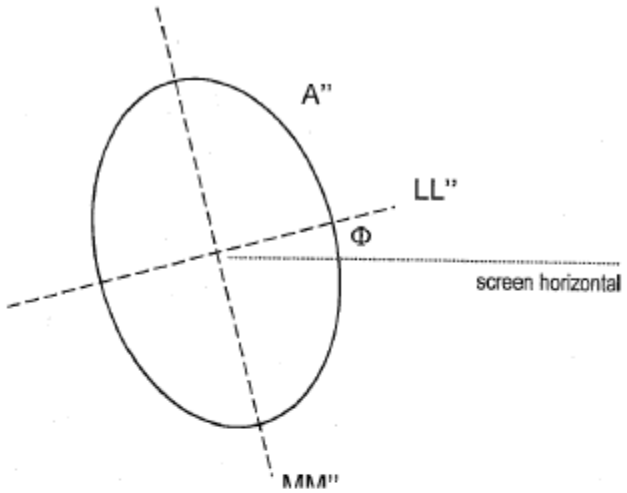
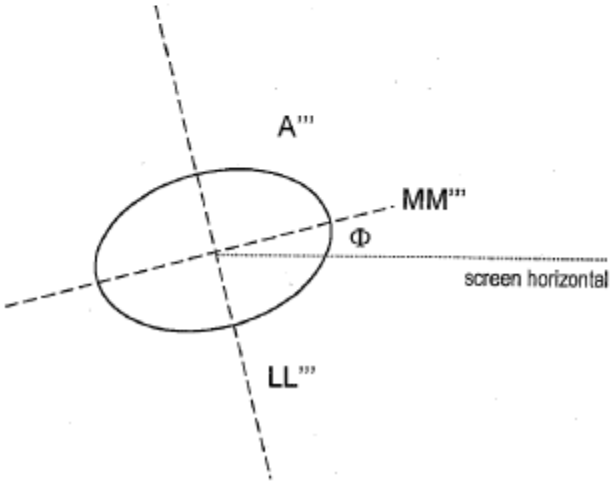


Fig 8b



Figures 8A and 8B depict "two example finger contact areas shown as they might be detected by touch screen sensor hardware." Ex. 1007 ¶ 22. Figure 8A "represents a characteristic finger contact area for a **pad**-pointing interaction caused by an index finger of a typical user." *Id*. ¶ 50 (emphasis added). Figure 8B "represents a characteristic finger contact area for a **tip**-pointing interaction as caused by an index finger of a typical user. *Id*. (emphasis added). With regard to figures 8A and 8B, the Petition provides:

> The tip-pointing interaction (FIG. 8B) "is substantially smaller in size (both area and circumference), more eccentric in

> shape (i.e., less rounded), and is oriented such that the major axis MM''' is oriented closer to the reference screen horizontal." EX1007, ¶50. The pad-pointing contact (FIG. 8A) "is substantially larger in size (both area and circumference), is less eccentric in shape (i.e., more rounded), and is oriented such that the minor axis LL" is oriented closer to the reference screen horizontal." EX1007, ¶50. "Thus, each of the size, shape, and/or orientation of the detected finger contact area may be used alone or in combination by the routines of the present invention to distinguish between a tip-pointing interaction and a pad-pointing interaction." EX1007, ¶50; EX1003, ¶129.

Id. at 38.

Patent Owner disputes whether the cited art teaches this limitation. Specifically, Patent Owner argues that the cited art fails to teach two registering modes.[12] Prelim. Resp. 30–35. However, all of Patent Owner's arguments are directed against Rogers. *Id.* And, with regard to Rosenberg, the Preliminary Response states:

> Rosenberg discloses a touch screen device that provides bi-modal user interaction. The touch screen device includes (a) a touch screen interface, (b) a detector to detect an area of finger interaction with the touch screen surface, and (c) a processor. The processor determines, based on at least one of a size, a shape, and an orientation of the detected area of finger interaction, whether a current finger interaction is of one of: a finger-tip interaction type and a finger-pad interaction type.

[12] As discussed above with regard to the previous limitation of claim 1 which recites, "*operat[ing] in[ ] two operating modes, at least an identification mode and a registering mode*," Patent Owner does not dispute Petitioner's showing that Rogers teaches two operating modes including a registering mode as depicted in Figure 4 of Rogers and described as "a process flow diagram . . . for creating and storing a desired graphical passcode." Ex. 1006, 2:30–31. Indeed, as discussed above, Patent Owner has not disputed that Rogers teaches the preamble and all the elements of the other limitations of claim 1.

> The processor also selects and implements, based on a determined interaction type, one of **two different targeting modes, including a first targeting mode selected and implemented in response to a determined finger-tip interaction type and a second targeting mode selected and implemented in response to a determined finger-pad interaction type**.

Prelim. Resp. 27 (emphasis added). Thus, Patent Owner acknowledges that, in a context analogous to the claimed invention, Rosenberg teaches two modes—a first fingertip interaction mode and a second finger pad interaction mode. As Patent Owner's argument fails to adequately address the combined teachings of Rogers and Rosenberg and is inconsistent with Patent Owner's own description of the cited art, we determine that this argument lacks merit.

We determine that the combination of Rogers and Rosenberg teaches this limitation.

Motivation to Combine the Teachings of Rogers and Rosenberg

Petitioner articulates with supporting reasoning and evidence why a skilled artisan would have been motivated to combine the relied-on teachings of Rogers and Rosenberg. Pet. 11–15 (citing Ex. 1003 (Nielsen Decl.) ¶¶ 86–91; Ex. 1006, code (57) (Abstract), 3:4–10, 4:15–19, 4:48–62,7:59–62, Figs. 1, 2A; Ex. 1007, code (57) (Abstract), ¶¶ 30, 49, 50, Fig. 1). With regard to motivation to combine, the Petition provides:

> Both references are directed to allowing users to input information via touchsurface technology and are analogous art to the '086 patent. . . .
>
> [A] POSITA would have found Rogers and Rosenberg to be compatible because of the technical similarity of their teachings, and a POSITA would have further recognized that

> Rosenberg's finger orientation disclosures, applied to Rogers' graphical passcode disclosures, would facilitate a "natural and intuitive" means of implementing the teachings of Rogers. A POSITA therefore would have been motivated to look to Rosenberg to improve Rogers, and vice-versa. . . .
>
> A POSITA . . . would have considered the disclosures in Rosenberg and been motivated to modify Rogers' "large fingertip and a small stylus tip" example so that it instead used the "natural and intuitive" finger pad versus finger end distinction discussed in Rosenberg. A POSITA would have found this modification to be a simple substitution of elements well known in the art and would have had a reasonable expectation of success in achieving the benefits disclosed in Rosenberg by making the modification, which involved only routine skill. . . .
>
> [A]dding finger end and finger pad touch detection to Rogers would involve no more than applying a known technique (i.e., finger end and finger pad touch detection/distinction as taught by Rosenberg) to a known device ready for improvement (Rogers' apparatus having "large fingertip and a small stylus tip" capabilities) to yield predictable results (simple to use touch screen interface with multipoint targeting and multi-finger gesturing). . . .
>
> It also would have been obvious to combine Rogers with Rosenberg because both references disclose touch screen interfaces that detect a contact area of a finger. . . .
>
> A POSITA would have considered Rosenberg's disclosures and been motivated to modify the "graphical passcode" features of Rogers so that the disclosed device is capable of detecting information input by a pad or end of a finger, because it would provide a "generally easily distinguishable" basis upon which to program the device disclosed in Rogers to detect a "measurable parameter" based on "contact area."
>
> A POSITA would have further recognized that these features of Rogers and Rosenberg could be successfully

> combined because both references teach a "calibration" mode in which the user trains the device to recognize a specific range of input parameters that allows for some variation in input while remaining within acceptable tolerances. . . .
>
> A POSITA would have had a reasonable expectation of success in modifying Rogers in this manner for at least the same reasons.

Id. (footnote and citations omitted).

Patent Owner does not dispute Petitioner's showing as to motivation to combine the relevant teachings of Rogers and Rosenberg. *See generally* Prelim. Resp.

We determine that Petitioner establishes motivation to combine the relevant teachings of Rogers and Rosenberg.

4. Summary as to Claim 1

Petitioner has shown that the combination of Rogers and Rosenberg teaches all the limitations of claim 1. Petitioner provides articulated reasoning with rational underpinnings to support combining the relevant teachings of Rogers and Rosenberg. We determine that there is a reasonable likelihood that Petitioner will prevail with respect to the unpatentability of claim 1.

5. Claims 2 and 4–7

Petitioner also asserts that dependent claims 2 and 4–7 are obvious in view of a combination of the teachings of Rogers and Rosenberg. Pet. 1, 38–46. The Petition provides a detailed and well-supported showing that the additional limitations recited in dependent claims 2 and 4–7 are taught by Rogers and Rosenberg. *Id.*

Patent Owner does not specifically address the showing in the Petition as to dependent claims 2 and 4–7. *See generally* Prelim. Resp.

We determine that there is a reasonable likelihood that Petitioner will prevail with respect to the unpatentability of claims 2 and 4–7.

E. Asserted Obviousness of Claims 9–14 Based on Rogers, Rosenberg, and Miyazawa

Petitioner challenges dependent claims 9–14 as being obvious over Rogers, Rosenberg, and Miyazawa. *See* Pet. 1, 46–63.

1. Miyazawa (Ex. 1008)

Miyazawa is titled "Information Processing Apparatus, Input Operation Determination Method, and Input Operation Determination Program." Ex. 1008, (code 54). Miyazawa relates to an information processing apparatus with a touch panel that detects touch positions and can determine, for example, when "flicking is performed," which is detected by "movement of the touch position while the operation surface is touched with [an] instruction object," or when "tapping is performed," which is detected when there is no movement of the touch position. *Id.* at 1:46–57. Miyazawa's apparatus can also determine "whether two fingers are moved on the surface parallel to the operation surface based on both the touch position and the proximity position detected after the touch of the finger, and determines whether the two-point tapping is performed or the pinch-in or pinch-out is performed." *Id.* at 15:44–49.

2. Claims 9–14

The Petition provides a detailed and well-supported showing that the additional limitations recited in dependent claims 9–14 are taught by Rogers, Rosenberg, and Miyazawa. Pet. 49–63. Petitioner articulates with supporting reasoning and evidence why a skilled artisan would have been

motivated to combine the relied-on teachings of Rogers, Rosenberg, and Miyazawa. *Id.* at 46–49.

Patent Owner does not specifically address the showing in the Petition as to dependent claims 9-14. *See generally* Prelim. Resp.

We determine that there is a reasonable likelihood that Petitioner will prevail with respect to the unpatentability of claims 9–14.

F. Asserted Obviousness of Claims 1, 2, and 4–7 Based on Rogers and Rekimoto

Petitioner challenges claims 1, 2, and 4–7 as being obvious over Rogers and Rekimoto. *See* Pet. 1, 63–75. For claim 1, Petitioner relies on Rekimoto for the same limitation (the last limitation of claim 1) for which Petitioner relied on Rosenberg. *Id*. at 68–71.

1. Rekimoto (Ex. 1010)

Rekimoto is titled "Input Device, Information Processing Apparatus, Information Processing Method, and Program." Ex. 1010, code (54). Rekimoto describes a problem relating to an input device that uses a pressure value "to zoom in or out on an image of a map in a navigation system or the like." *Id.* at 1:47–48. Namely, "a user can increase or decrease his/her pressing force to increase the zoom percentage from 0 (no zoom in/zoom out), or to step back to 0 (no zoom in/zoom out), but cannot zoom out from 0 (no zoom in/zoom out)." *Id.* at 1:48–52. Rekimoto states it is desirable to provide a solution to "control an input in both positive and negative direction from zero without changing the position of a finger or the like." *Id.* at 2:1–5. Rekimoto proposes using "two kinds of values, namely a contact area and a pressing force by a finger or an input device," where "the detected contact area is discriminated by a predetermined threshold [and] the detected pressure value can be interpreted in one of two directions, a positive

or a negative direction from zero." *Id.* at 2:8–15. In an embodiment, by pressing the input device "with a fingertip, the user can perform first processing for zooming in on an image in response to the pressing force," and by pressing the input device "with the finger pad, the user can perform second processing for zooming out on the image in response to the pressing force." *Id.* at 5:31–37.

2. Claim 1

For the preamble and all the limitations of claim 1 except the last limitation, Petitioner relies on Rogers as discussed above. *See* Pet. 67. Patent Owner does not dispute the Petitioner's showing for the preamble and these limitations. *See generally* Prelim. Resp.

For the Rogers and Rekimoto combination (as for the Rogers and Rosenberger combination), the only disputed limitation is the last limitation of claim 1. The Petition provides a showing that the combination of Rogers and Rekimoto teaches all the elements of the last limitation of claim 1. Pet. 67–71 (citing Ex. 1003 (Nielsen Decl.) ¶¶ 177–181, Ex. 1010, 5:13–37, Figs. 2A, 2B, 3A, 3B). Patent Owner argues that the cited art fails to teach two registering modes. Prelim. Resp. 30–35. However, all of Patent Owner's arguments are directed against Rogers. *Id*.

The last limitation of claim 1 is:

> *in said registering mode, there are provided a first registering mode for inputting input information by a pad of the finger, and a second registering mode for inputting input information by an end of the finger, and said second information relating to the identification of the user is produced upon basis of the input information, which is inputted at least in the first or second mode.*

Ex. 1001, 8:54–60. With regard to Rogers, the Petition provides:

> As shown above in Ground 1 [Rogers/Rosenberg combination], Petitioners submit that Rogers alone renders obvious a registering mode providing a first registering mode for inputting input information by a pad of the finger, and a second registering mode for inputting input information by an end of the finger, and said second information relating to the identification of the user is produced upon basis of the input information, which is inputted at least in the first or second mode.

Pet. 67–68. Petitioner acknowledges that "Rogers does not explicitly recite the use of finger pad and fingertip inputs" and relies on Rekimoto for these teachings. *Id.* at 68. The Petitioner contends, "Rekimoto discloses inputting input information by a pad of the finger ('finger pad') and inputting input information by an end of the finger ('fingertip')." *Id.* Petitioner relies on Figures 2A, 2B, 3A, and 3B, reproduced below, and the detailed description of these figures in the Specification of Rekimoto. *Id.* at 68–71.

FIG.2A

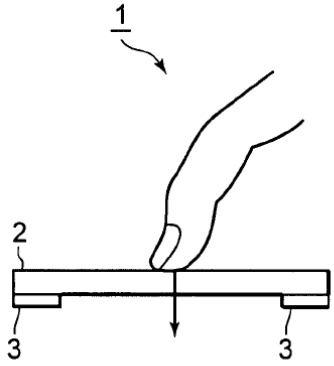


FIG.2B

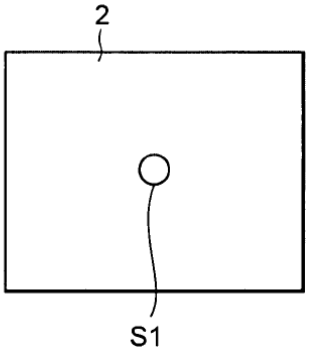


FIG.3A

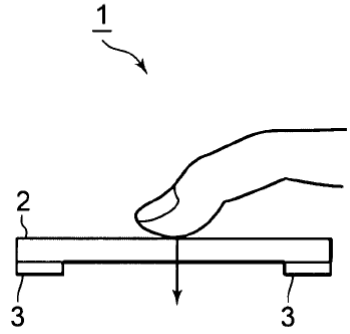
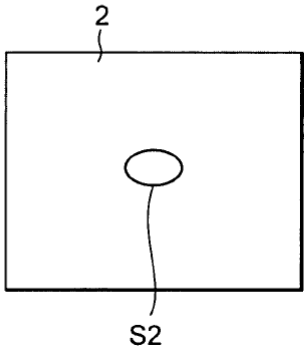


FIG.3B



Figures 2A, 2B, 3A, and 3B depict examples of input operations using a finger. Ex. 1010, 5:12–13. The relied-on passage in the Specification of Rekimoto states:

> FIGS. 2A and 2B are a schematic sectional view and a plan view both showing the control panel (the surface of the contact sensor section 2) of an input section of the input device 1 which a user presses by erecting a finger and thus with a **fingertip**. During the input operation, the contact area of the contact sensor section 2 occupied by the **fingertip** equals a small area Sl such as shown in FIG. 2B. FIGS. 3A and 3B are a schematic sectional view and a plan view both showing the control panel (the surface of the contact sensor section 2) of the input device 1 which the user presses by laying down the finger and

> thus with the **finger pad**. The contact area of the contact sensor section 2 touched by the **finger pad** equals a large area S2 such as shown in FIG. 3B. That is, compared with the area Sl, which is an area of the contact sensor section 2 surface touched by the **fingertip**, the area S2 touched by the **finger pad** is larger (wider). These areas Sl, S2 can be clearly distinguished by using a threshold St of a specified area as a boundary. Therefore, by pressing the input device 1 by erecting a finger and thus with a **fingertip**, the user can perform first processing for zooming in on an image in response to the pressing force. Similarly, by pressing the input device 1 by laying the finger down and thus with the **finger pad**, the user can perform second processing for zooming out on the image in response to the pressing force.

Id. at 5:13–37 (emphasis added). We determine that Rekimoto teaches two input modes—a fingertip mode and a finger pad mode. As Patent Owner's argument fails to adequately address the combined teachings of Rogers and Rekimoto, we determine that its argument relating to the last limitation of claim 1 lacks merit.

We determine that the combination of Rogers and Rekimoto teaches the last limitation of claim 1.

Petitioner articulates, with supporting reasoning and evidence, why a skilled artisan would have been motivated to combine the relied-on teachings of Rogers and Rekimoto. *See* Pet. 63–67 (citing Ex. 1003 (Nielsen Decl.) ¶¶ 164–170; Ex. 1006, code (57) (Abstract), 4:15–19, Figs. 1, 2A; Ex. 1007, code (57) (Abstract), 1:53–67. 5;18–31, Fig. 1). With regard to motivation to combine, the Petition provides:

> It would have been obvious to a POSITA to combine the teachings of Rogers and Rekimoto because both references share the same field of inputting information via touchsurface technology, which makes them analogous art to the '086 patent. . . Additionally, Rekimoto discloses its fingertip and

> finger pad touches as a solution to provide "continuous and smooth operation," which was a problem with certain operations at the time . . . and a POSITA would have understood that this would have added a benefit to Roger's device. . . .
>
> [A] POSITA would have found the combination obvious to try due to the similarity of the technical teachings of the art, and also because a POSITA would have recognized that Rekimoto's disclosures, applied to Rogers, would facilitate "continuous and smooth operation" for certain touch functions in Rogers. A POSITA therefore would have been motivated to look at Rekimoto to improve Rogers, and vice-versa. . . .
>
> [A] POSITA would have recognized that the disclosure in Rogers of distinguishing between a "large fingertip and a small stylus tip" based on "area difference[s]" between the two input types would have been better accomplished through Rekimoto's disclosure of its fingertip and finger pad distinction technique. . . .
>
> A POSITA therefore would have considered the disclosures in Rekimoto and been motivated to modify Rogers' "large fingertip and a small stylus tip" example so that it instead used the finger pad versus fingertip distinction disclosed by Rekimoto. A POSITA have found this modification to be a simple substitution of elements well known in the art and would have had a reasonable expectation of success in achieving the benefits disclosed in Rekimoto by making the modification, which involved only routine skill. . . .
>
> Moreover, adding Rekimoto's fingertip and finger pad touch detection to Rogers would simply involve applying a known technique (i.e., fingertip and finger pad touch detection/distinction as taught by Rekimoto) to a known device ready for improvement (Roger's apparatus having large fingertip and a small stylus tip capabilities) to yield predictable results (simple to use touch screen interface with multipoint targeting and multi-finger gesturing). . . .

> It also would have been obvious to combine Rogers with Rekimoto because both references disclose touch screen interfaces that detect a contact area of a finger. . . .
>
> A POSITA would have further recognized that these features of Rogers and Rekimoto could be combined because the fingertip and finger pad are distinguishable inputs for a user, and because Rekimoto teaches the ability to "clearly distinguish[]" between the two, it would have been obvious to modify Rogers (to the extent not already taught) to receive input information including a pad or tip of the finger. . . . Because Rogers also teaches the contact area on the touchscreen may be one of the parameters for the graphical passcode, Rogers expressly suggests to a POSITA the ease of making the modification to detect the tip/pad of the finger and that the area of contact is a desirable parameter for inputting an authentication passcode. . . . A POSITA would have had a reasonable expectation of success of modifying Rogers in this manner for at least the same reasons.

Id. (citations omitted).

Patent Owner does not dispute Petitioner's showing as to motivation to combine the relevant teachings of Rogers and Rekimoto. *See generally* Prelim. Resp.

We determine that Petitioner establishes motivation to combine the relevant teachings of Rogers and Rekimoto.

Petitioner has shown that the combination of Rogers and Rekimoto teaches all the limitations of claim 1. Petitioner provides articulated reasoning with rational underpinnings to support combining the relevant teachings of Rogers and Rekimoto. We determine that there is a reasonable likelihood that Petitioner will prevail with respect to the unpatentability of claim 1.

3. Claims 2 and 4–7

Petitioner also asserts that dependent claims 2 and 4–7 are obvious in view of a combination of the teachings of Rogers and Rekimoto. Pet. 1, 72–75. The Petition provides a showing that the additional limitations recited in dependent claims 2 and 4–7 are taught by Rogers and Rekimoto. *Id.*

Patent Owner does not specifically address the showing in the Petition as to dependent claims 2 and 4–7. *See generally* Prelim. Resp.

We determine that there is a reasonable likelihood that Petitioner will prevail with respect to the unpatentability of claims 2 and 4–7.

G. Asserted Obviousness of Claims 9–14 Based on Rogers, Rekimoto, and Miyazawa

The Petition provides a showing that the additional limitations recited in dependent claims 9–14 are taught by Rogers, Rekimoto, and Miyazawa. Pet. 78–79. Petitioner articulates with supporting reasoning and evidence why a skilled artisan would have been motivated to combine the relied-on teachings of Rogers, Rosenberg, and Miyazawa. *Id.* at 75–78.

Patent Owner does not specifically address the showing in the Petition as to dependent claims 9-14. *See generally* Prelim. Resp.

We determine that there is a reasonable likelihood that Petitioner will prevail with respect to the unpatentability of claims 9–14.

III. DISCRETIONARY INSTITUTION

A. 35 U.S.C. § 314(a)

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 314(a) to deny institution. *See* Prelim. Resp. 14–20. Petitioner contends that discretionary denial is not warranted. Pet. 79–80.

Under Section 314(a), the Director has discretion to deny institution. *See* 35 U.S.C. § 314(a) (stating "[t]he Director *may not* authorize an inter

partes review to be instituted unless the Director determines that the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition") (emphasis added); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) ("[Section] 314(a) invests the Director with discretion on the question whether to institute review." (emphasis omitted)); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) ("[T]he agency's decision to deny a petition is a matter committed to the Patent Office's discretion."); *Harmonic Inc. v. Avid Tech, Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) ("[T]he PTO is permitted, but never compelled, to institute an IPR proceeding."). We make the determination as to whether to exercise our discretion to deny institution consistent with the USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation ("Guidance Memo") (June 21, 2022).[13]

The Guidance Memo provides that "the PTAB will not discretionarily deny institution of an IPR or PGR in view of parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition." Guidance Memo 7. Petitioner has presented such a stipulation in this proceeding. Paper 8 (Petitioner's *Sotera* Stipulation). Petitioner's Stipulation states:

> In accordance with the Board's precedential decision in *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper

[13] Available at http://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

> 12 at 18-19 (PTAB Dec. 1, 2020), Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (Petitioners) stipulate that if the Board institutes *inter partes* review in this proceeding, IPR2024-00828, then Petitioners will not pursue in the parallel district court proceeding, *Maxell Ltd. v. Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc*., Case No. 5:23-cv-00092-RWS, the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.

Id. at 1.

For this reason, we do not exercise our discretion to deny institution under Section 314(a).

B. 35 U.S.C. § 325(d)

Patent Owner argues that we should exercise our discretion under 35 U.S.C. § 325(d) to deny institution. *See* Prelim. Resp. 2–14. Petitioner argues that "the Board should not exercise its § 325(d) discretion to deny institution." Pet. 80.

Section 325 of Title 35 of the United States Code deals with the relation of proceedings before the Board with other proceedings in the Office. Section 325(d) provides, in part, that "[i]n determining whether to institute or order a proceeding under this chapter, chapter 30, or chapter 31[14], the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office." In evaluating arguments under Section 325(d), we use

> [a] two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were

[14] Chapter 31 (35 U.S.C. §§ 311–319) relates to *inter partes* review.

> presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, IPR2019-01469, Paper 6 at 8.

1. Part One of the Advanced Bionics Framework

Petitioner argues:

> [N]one of the challenges are substantially the same as those considered during prosecution. While Rogers was "considered," it was not considered formally or in view of the Grounds present herein. Moreover, while Rosenberg was considered in combination with Bayram, whether Rosenberg discloses fingertip and finger pad touches was not formally addressed. None of the other art cited herein was considered during the prosecution of the '086 patent.

Pet. 80. None of the references on which the challenges presented in this proceeding are based (*see* Pet. 1) were cited during the original prosecution of the '086 patent. *See* Ex. 1001, code (56) (References Cited).

Patent Owner contends that Rogers and Rosenberg "were previously presented to and considered by the Office during reexamination of the '086 patent." Prelim. Resp. 4 (citing Ex. 1004, 30–33, 77–79, 85–98, 158–162, 176–271). However, none of the cited pages show that Rogers or the combination of Rogers and Rosenberg was given any consideration by the Office during the reexamination of the '086 patent. Indeed, the only references to Rogers in the file history of the reexamination of the '086 patent that the Patent Owner directs our attention to are found in two paragraphs of a lengthy declaration (96 pages, 104 numbered paragraphs) submitted by the requestor of the reexamination. *See* Prelim. Resp. 4 (citing Ex. 1004, 176–271), 6–7 (citing Ex. 1004, 197), 7–8 (citing Ex. 1004, 234–

235). Patent Owner has not established that Rogers, the primary reference relied on in all the asserted grounds in the Petition (*see* Pet. 1), was "previously fully considered by the Office." *See id.* at 13. This contention is not well supported.

2. Part Two of the Advanced Bionics Framework

With regard to whether the Office erred in a manner material to the patentability of challenged claims, Petitioner contends that "the examiner has made a clear error in allowing the claims" over the prior art and that "this is at least because the challenges in this Petition satisfy the compelling merits standard,[15] and allowing the claims over such prior art is therefore clear error." Pet. 81. Patent Owner argues that Petitioner failed to make a showing of material error. Prelim Resp. 13–14. Specifically Patent Owner argues that "Petitioner's attempt to detail material error is cursory" and that "Petitioner's lack of analysis is insufficient to meet the second part of the *Advanced Bionics* test." *Id.*

We have considered all the passages from the prosecution of the '086 patent and the related applications to which the parties have directed our attention. We have found no evidence that any of the Examiners handling these matters appreciated that the art cited in this proceeding taught all the

[15] According to the Director's Guidance Memo, "[c]ompelling, meritorious challenges are those in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence." Guidance Memo 4. And, the Director stated in *OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102, 49 (PTAB Oct. 4, 2022) (precedential) that, "[a] challenge can only 'plainly lead to a conclusion that one or more claims are unpatentable' . . . if it is highly likely that the petitioner would prevail with respect to at least one challenged claim."

elements of any challenged claim, particularly claim 1.[16] And, we agree with Petitioner and determine that the challenges to the claims, particularly claim 1, are compelling. We determine, as alleged by Petitioner, that the Office erred in issuing the challenged claims.

For these reasons, we do not exercise our discretion to deny institution under Section 325(d).

IV. CONCLUSION

For the foregoing reasons, we determine that trial should be instituted on claims 1, 2, 4–7, and 9–14 of the '086 patent.

V. ORDER

Upon consideration of the record before us, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1, 2, 4–7, and 9–14 of U.S. Patent No. 8,982,086 B2 is instituted with respect the grounds set forth in the Petition (*see* Pet. 1); and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 8,982,086 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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[16] The only evidence cited in the section of the Preliminary Response in which Patent Owner argues that "Petitioner Fails to Demonstrate a Material Error by the Office" is Exhibit 1005 at pages 158–160. Prelim. Resp. 13. Pages 158–160 of Exhibit 1005 are a passage from a Japanese Patent Publication (*see* Ex. 1005, 102–104) in Japanese from the file history of US RE48830 (*see id.* at 1), "the reissue proceedings of the '086 Patent's parent application, U.S. Patent No. 8,654,093 ('parent reissue')" (Prelim. Resp. 6). We do not discern how this passage supports Patent Owner's argument that Petitioner failed to show error by the Office.

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