

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

CHIAN CHIU LI,
Patent Owner.

IPR2023-00560
Patent 11,016,564 B2

Before THU A. DANG, GARTH D. BAER, and JASON W. MELVIN,
Administrative Patent Judges.

MELVIN, *Administrative Patent Judge.*

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

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–6, 8–12, 14–16, and 18–20 of U.S. Patent No. 11,016,564 B2 (Ex. 1001, “the ’564 patent”). Chian Chiu Li (“Patent Owner”) filed a Preliminary Response. (Paper 5, “Prelim. Resp.”). Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review.

An *inter partes* review may not be instituted unless “the information presented in the petition . . . and any response . . . 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.” 35 U.S.C. § 314(a). For the reasons set forth below, we conclude that Petitioner has shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim, and we institute *inter partes* review.

A. REAL PARTIES IN INTEREST

Each party identifies itself as the real party in interest. Pet. 65; Paper 3, 1 (Patent Owner’s Mandatory Notices).

B. RELATED MATTERS

The parties identify the following related district-court litigation involving the ’564 patent: *Apple Inc. v. Chian Chiu Li*, No. 3:22-cv-02956-TLT (N.D. Cal.). Pet. 65; Paper 3, 1.

C. THE ’564 PATENT

The ’564 patent is titled “System and Method for Providing Information” and relates to presenting information using an electronic device that starts showing content when it detects a user gazing at the idle device. Ex. 1001, codes (54), (57).

The patent discloses transitioning to show information “when a user shakes, taps, or speaks to a standby or idling device, and then looks at it.” *Id.* at 2:36–41.

As the specification describes, the device may include multiple sensors, including “sensor 10 which tracks the eye of a user using mature eye-tracking technologies” (*id.* at 3:65–66), and “sensor 20 which functions as a motion detector, [and]which is well known in the art and employed at some devices already” (*id.* at 4:12–14). The device may include “sensor 24 to detect its own movement by sensing acceleration, deceleration, and rotation,” thus “detecting device shaking, device vibration, user running, user walking, and so on.” *Id.* at 4:22–28.

Thus, “[w]hen a user approaches a device, sensor 20 may detect it and then the system may activate sensor 10 to detect the user’s gaze direction.” *Id.* at 6:33–35. Detecting gaze only after detecting movement provides a benefit according to the ’564 patent: “Since a motion detector may consume less power than an eye-tracking sensor, it saves energy and extends the battery life of a device.” *Id.* at 6:40–42. In another embodiment, the device uses sensor 24 to detect the user’s desire to “make use of standby or idle device in a simple and convenient manner.” *Id.* at 6:50–52. To that end, “a circuitry may be configured such that shaking may activate a gaze sensing system.” *Id.* at 6:64–66. The patent explains that using sensors to detect movement before activating gaze detection “avoids content shows caused by unintended gaze” and “saves energy as a gaze sensing system may be off most of the time unless getting activated upon receiving shaking signals.” *Id.* at 7:7–12.

D. CHALLENGED CLAIMS

Petitioner challenges claims 1–6, 8–12, 14–16, and 18–20. Pet. 4–5. Claim 1 is independent and is reproduced, below:

1. A method for presenting information at an electronic device, comprising:
 - 1) detecting an act made by a user involving physical contact with the electronic device or physical movement of the electronic device when a display of the electronic device has an idle screen or a screen in standby mode, inactive mode, or screen-saver mode;
 - 2) performing gaze detection only after detecting the act;
 - 3) ascertaining whether the user looks at a direction toward the electronic device;
 - 4) determining whether the user is recognized via a recognition mechanism; and
 - 5) presenting a plurality of content items when the user is recognized via the recognition mechanism and it is ascertained that the user looks at a direction toward the electronic device.

Ex. 1001, 12:56–13:4. Claims 8 and 14 are independent, and recite limitations similar to claim 1’s, with claim 8 reciting a method and claim 14 reciting an electronic device. *Id.* at 13:24–39 (claim 8), 14:6–25 (claim 14). The other challenged claims depend directly from one of the independent claims.

E. PRIOR ART AND ASSERTED GROUNDS

Petitioner asserts the following unpatentability grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1–5, 8, 9, 11, 12, 14–16, 18, 20	103	Ryu, ¹ Hodge ²
1, 6, 8, 10, 14, 19	103	Ryu, Hodge, Stallings ³

¹ US 10,540,013, issued Jan. 21, 2020 (Ex. 1004).

² US 2010/0079508, published April 1, 2010 (Ex. 1005).

³ US 8,331,992, issued Dec. 11, 2012 (Ex. 1006).

Pet. 3. Petitioner also relies on the Declaration of Benjamin B. Bederson. Ex. 1003.

II. ANALYSIS

A. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner asserts that an ordinarily skilled artisan would have had “at least a bachelor’s degree in computer science, software engineering, or an equivalent degree with at least one year of experience in the fields of human computer interaction, software engineering or computer engineering in either a research or work capacity.” Pet. 3–4 (citing Ex. 1003 ¶ 30–32). Petitioner adds that, “this hypothetical person would have experience with user interface design, user interface/mobile device software, and user interaction techniques, or their equivalent.” *Id.* at 4. Patent Owner does not address the level of skill in the art.

For purposes of institution, we adopt Petitioner’s definition. To the extent either party believes the level of skill affects this proceeding, that party should explain how in the instituted trial.

B. CLAIM CONSTRUCTION

Neither party argues for an express claim construction at this stage. *See* Pet. 5; *see generally* Prelim. Resp. We do not construe the claims for this decision. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those 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)).

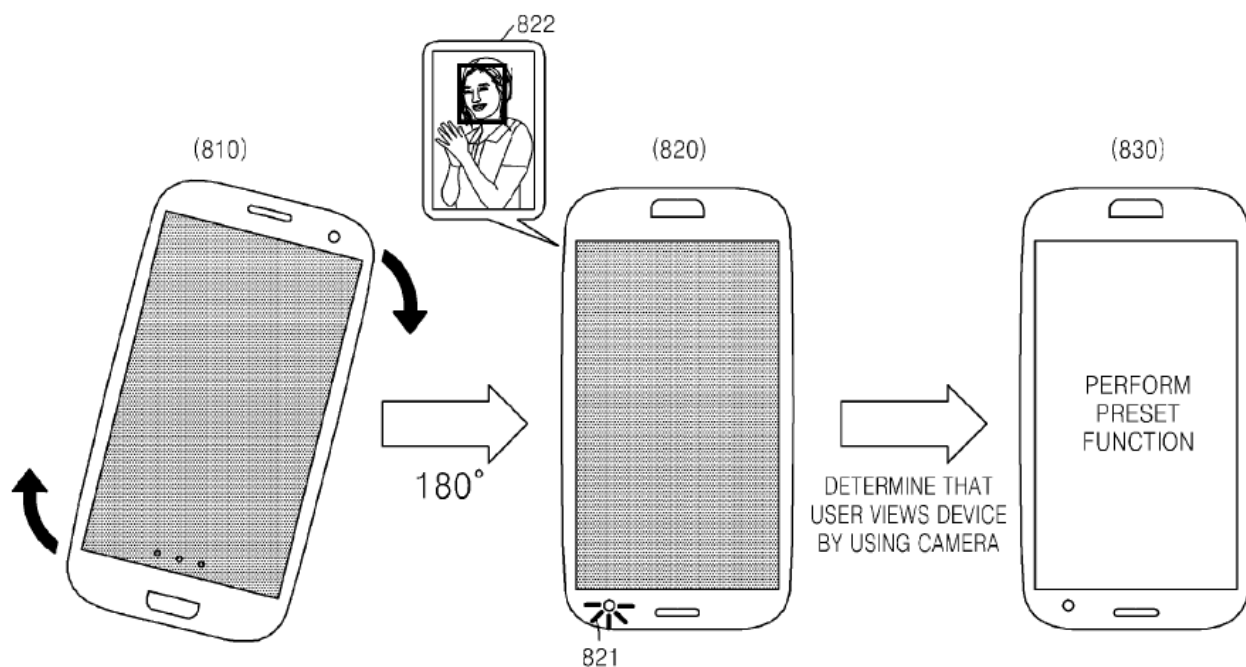
To the extent the scope of a particular claim term impacts a party’s argument during trial, the party should propose an express construction and show how the record supports it.

C. OBVIOUSNESS OVER RYU AND HODGE

Petitioner asserts that claims 1–5, 8, 9, 11, 12, 14–16, 18, and 20 would have been obvious over Ryu and Hodge. Pet. 5–51. Petitioner relies on Ryu for performing gaze detection based on device motion when in standby mode. Pet. 5–8. Petitioner relies on Hodge for gaze detection that recognizes an authorized user (*id.* at 8–9), and submits that skilled artisans would have used Hodge’s teachings to “improve the security and privacy of Ryu’s device.” *Id.* at 13; *accord id.* at 10–15 (explaining the combinability, benefits, and reasonable expectation of success). Because Petitioner shows a reasonable likelihood that it will prevail as to at least one challenged claim, we institute review.

Ryu discloses a method of performing a device function “based on motion information of the device in a standby mode.” Ex. 1004, code (57). Ryu’s Figure 8 is reproduced below:

FIG. 8



Ryu's Figure 8 shows "screens activating a preset function performed by the device 100." *Id.* at 19:49–50. In the depicted process, device 100 displaying a blank screen 810 detects that it has been rotated and "activates a function of a front camera 821" in which camera 821 obtains image 822 and the device "determines whether the user looks at the device 100 before performing the present function." *Id.* at 19:51–67, 19:4–6. Ryu discloses using sensor 101 to detect movement of its device, and explains that sensor 101 may include a number of different sensors to perform that function. *Id.* at 6:61–7:10.

Hodge discloses an electronic device with "gaze detection capabilities that allow the device to detect when a user is looking at the device." Ex. 1005, code (57). Hodge discloses that, in its visual user identification, the device "may distinguish between authorized users and unauthorized users based on image sensor data." *Id.* ¶ 116. And Hodge states that "user-specific gaze detection functionality may be used for all gaze detection operations." *Id.*

Patent Owner disputes whether Ryu discloses the claimed "gaze detection only after" device contact or movement. Prelim. Resp. 13–18. In Patent Owner's view, Ryu's device detects gaze detection in other circumstances, i.e., not only after detecting contact or movement. *Id.* Patent Owner points out that the challenged claims preclude gaze detection that is either continuous or triggered by a user's presence (as opposed to touching or physically moving the device). *Id.* at 4–5.

For detecting the claimed contact/movement, Petitioner relies on Ryu's sensor 101, which detects device motion. Pet. 17–20. Patent Owner points out that Ryu also discloses a proximity sensor (Prelim. Resp. 6–7) and argues that Ryu's device uses the proximity sensor to perform gaze detection when a user approaches (not only after physical contact, as claimed) (*id.* at 13–14). Patent Owner asserts

the Petition “ignores the proximity sensor and excludes scenarios using the proximity sensor.” *Id.* at 13–14. Patent Owner submits that “a person of ordinary skill in the art would have understood that [Ryu’s] sensor 101, like sensor 1102, also has a proximity sensor.” Prelim. Resp. 8. That assertion is not supported by the record.

Ryu’s Figure 1 embodiment includes sensor 101, which “may include a plurality of sensors of various types to sense movement of the device 100.” Ex. 1004, 4:63, 5:15–16; *accord id.* at 6:61–7:10 (describing a variety of sensors that sensor 101 may include, none of which detect a user’s proximity). Ryu’s description of sensor 101 does not encompass a proximity sensor.

When Ryu discloses sensor 1102 that may include both a proximity sensor and a motion sensor, it does so as part of “another exemplary embodiment,” thus distinguishing that approach from Ryu’s primary embodiment, which does not include a proximity sensor. *Id.* at 21:37–38, 22:30–31. And only within that separate embodiment does Ryu disclose that its sensor detects users approaching but not touching the device. *See id.* at 22:31–47. Based on Ryu’s disclosures, we do not agree with Patent Owner that Ryu includes a proximity sensor in all embodiments. Similarly, Patent Owner’s arguments that rely on Ryu’s asserted behavior in response to a proximity sensor are inapposite. *See* Prelim. Resp. 8–10, 13–15.

Patent Owner argues also that Ryu does not disclose that its camera obtains an image of the user and determines whether the user is looking at the device, as claimed. Prelim. Resp. 14–15. According to Patent Owner, Ryu’s “processor merely activates an undisclosed function of the front camera, executes an undisclosed application, and outputs a black screen.” *Id.* at 15; *accord id.* at 16 (asserting Ryu falls short of the claim language by disclosing “execute an

application related to the front camera 821 as shown by a screen 820”). We agree with Petitioner that Ryu discloses the claimed gaze detection, because Ryu discloses that the “application related to the front camera” includes gaze-detection. Ex. 1004, 19:64–67 (“The processor 103 may determine whether a user looks at the device 100 according to the above-described face recognition or eyes estimation regarding an image 822 obtained by using the front camera 821.”), 19:4–6 (“[T]he processor 103 determines whether the user looks at the device 100 before performing the preset function”); Figs. 7, 8.

At this stage, Patent Owner does not otherwise contest Petitioner’s assertions. We have reviewed the record and conclude that Petitioner has shown a reasonable likelihood it will prevail with respect to unpatentability of claim 1, claims 8 and 14 reciting similar limitations to claim 1, and claims 2–5, 9, 11, 12, 15, 16, 18, and 20 depending respectively from claims 1, 8, and 14, over Ryu and Hodge.

D. OBVIOUSNESS OVER RYU, HODGE, AND STALLINGS

Petitioner asserts that claims 1, 6, 8, 10, 14, and 19 would have been obvious over Ryu, Hodge, and Stallings. Pet. 52–61. Petitioner relies on Stallings disclosing Really Simple Syndication (RSS) feeds as a service providing multiple content items to be displayed on a mobile device once woken by a user. *Id.* at 52–55. Petitioner reasons that incorporating Stallings’s RSS feeds for content would have improved the functionality of the Ryu–Hodge combined device. *Id.* at 55–57. In particular, Petitioner asserts that using Stallings’s feeds would “allow for a user to be presented with various pieces of information (content) on the gateway screen that the user would find relevant prior to performing a function.” *Id.* at 55; *accord*

id. at 56 (“a quick and concise overview of pertinent information that would allow a user to be informed or notified of any changes”).

Patent Owner does not contest Petitioner’s assertions regarding Stallings other than to note that Petitioner does not rely on Stallings as “performing gaze detection only after detecting the Given Act.” Prelim. Resp. 18–19. We have reviewed the record and conclude that Petitioner has shown a reasonable likelihood it will prevail with respect to unpatentability of claims 1, 6, 8, 10, 14, and 19 over Ryu, Hodge, and Stallings.

III. CONCLUSION

For the reasons discussed above, we conclude Petitioner has shown a reasonable likelihood of prevailing with respect to at least one claim. We have evaluated all of the parties’ submissions and determine that the record supports institution.

Our determination at this stage of the proceeding is based on the evidentiary record currently before us. This decision to institute trial is not a final decision as to patentability of any claim for which *inter partes* review has been instituted. Our final decision will be based on the full record developed during trial.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of claims 1–6, 8–12, 14–16, and 18–20 of the ’564 patent is instituted on the grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this decision.

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