



Inter Partes Review U.S. Patent No. 11,016,564

Oral Argument, April 24, 2024

Apple Inc. v. Chian Chiu Li
Case No. IPR2023-00560

Petitioner's Demonstrative Exhibits – Not Evidence

Petitioner's DX-I

IPR2023-00560
Apple EX1011

Grounds

1. Ground 1: Claims 1–5, 8, 9, 11, 12, 14–16, 18, and 20
 - ▶ *Ryu* (Ex. 1004) in view of *Hodge* (Ex. 1005)
2. Ground 2: Claims 1, 6, 8, 10, 14, and 19
 - ▶ *Ryu* in view of *Hodge*, in further view of *Stallings* (Ex. 1006)

Key Limitations

'564 Patent, Claim 1

- ▶ 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.

Key Limitations

'564 Patent, Claim 8

- ▶ 8.A method for presenting information at an electronic device, comprising:
 - 1) monitoring the electronic device or physical movement of the electronic device to sense an act made by a user 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 sensing the act;
 - 3) determining whether the user is recognized via a recognition mechanism;
 - 4) detecting whether the user looks at a direction toward the electronic device; and
 - 5) presenting a plurality of content items when the user is recognized via the recognition mechanism and it is detected that the user looks at a direction toward the electronic device.

Key Limitations

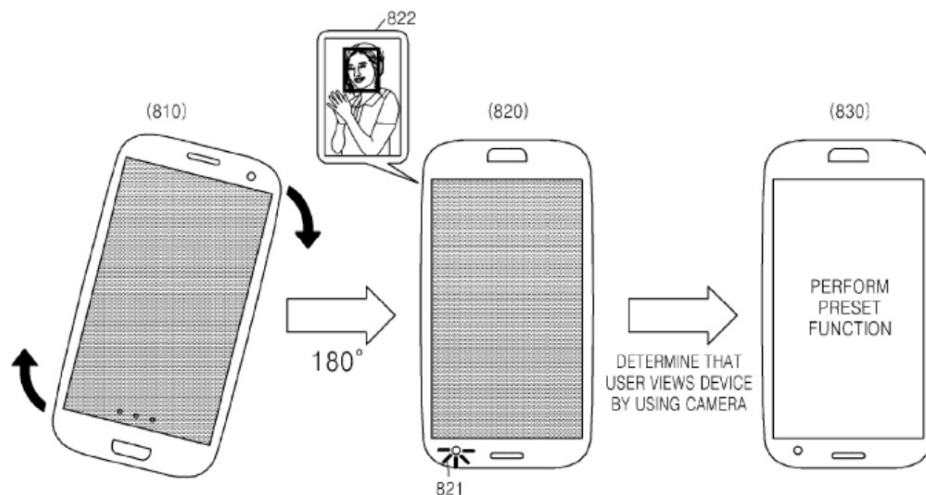
'564 Patent, Claim 14

- ▶ 14. An electronic device comprising: a processor, a recognition mechanism, and a memory or memory unit coupled to the processor, the processor operable when executing certain instructions to:
 - 1) detect 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) perform gaze detection only after detecting the act;
 - 3) determine whether the user looks at a direction toward the electronic device;
 - 4) determine whether the user is recognized via the recognition mechanism; and
 - 5) present a plurality of content items when it is determined that the user looks at a direction toward the electronic device and the user is recognized via the recognition mechanism.

Apple's Combination of *Ryu* and *Hodge*

- ▶ *Ryu* teaches every limitation of the independent claims except for determining whether the user is recognized, which *Hodge* teaches.

FIG. 8



Ryu (Ex. 1004), at Fig. 8

[0116] The gaze detection capabilities of device 10 may, if desired, include visual user identification capabilities (e.g., face recognition). In this type of arrangement, device 10 may distinguish between authorized users and unauthorized users based on image sensor data. For example, device 10 may recognize an authorized user and may unlock itself whenever the authorized user is detected by the device's gaze detection circuitry (e.g., camera 30). If desired, when device 10 detects that the authorized user's gaze has been diverted from device 10, device 10 may lock itself to prevent unauthorized users from using device 10. This type of user-specific gaze detection functionality may be used for all gaze detection operations if desired. By making gaze detection specific to particular users, device 10 will not inadvertently transition from standby mode to active mode if a person in the user's vicinity happens to glance at the user's device.

Hodge (Ex. 1005), at [0116] (annotated)

Motivation to Combine *Ryu* and *Hodge*

- ▶ The combination would have improved the security and privacy of *Ryu*'s device.
- ▶ The functionality of *Ryu* would have been improved by making the device able to distinguish between authorized and unauthorized users.
- ▶ These modifications only involved simple programming techniques because both *Ryu* and *Hodge* use similar camera capture systems for gaze detection.

Sole Dispute Relates to the “Only After” Limitation

- ▶ PO argues the Challenged Claims must be incapable of performing gaze detection in any scenario except touching or physically moving the device.
- ▶ PO’s support is “another exemplary embodiment” of *Ryu* that includes sensor 1102, which may include both a proximity and motion sensor.

Apple Did Not Rely on *Ryu*'s Figure 1 Embodiment

- ▶ Apple relied on *Ryu*'s Figure 1 embodiment and sensor 101.
- ▶ Sensor 101 does not include a proximity sensor.
- ▶ Apple never mapped sensor 1102.

Ryu teaches that “the device 100 includes a sensor 101,² a storage 102, a processor 103, and an information input/output unit 104 ...” *Ryu*, 4:63–65. Further, the “sensor 101 may include a plurality of sensors of various types to sense movement of the device 100.” *Id.* at 5:15–16, 6:61–7:10 (further teaching that the sensor 101 may include a gyro for sensing rotation, an accelerometer for sensing direction based movement and movement distances, a magnetic field sensor for sensing rotation direction, an orientation sensor for detecting an inclination direction, a GPS sensor for detecting location, a gravity sensor for detecting a gravity direction, and a rotation number sensor for detecting the number of rotations the device may perform.). Fig. 1, depicted below, shows a block diagram of device 100 as including a sensor 101:

Petition, at 17 (annotated)

Ryu's Fig. 11 Embodiment is a Different Embodiment

- ▶ Sensor 1102 is part of Figure 11.
- ▶ Figure 11 is “another exemplary embodiment.”

FIG. 11 is a block diagram of a device 1100, according to another exemplary embodiment. Referring to FIG. 11, the device 1100 includes an information input unit 1101, a sensor 1102, a touch screen 1103, a camera 1104, an audio input unit 1105, an audio output unit 1106, a storage 1107, a wireless communication interface 1108, a wired communication interface 1109, a processor 1110, and a power supply 1114. However, elements of the device 1100 are not limited to those shown in FIG. 11. That is, the device 1100 may include more or fewer constituent elements than those shown in FIG. 11. Also, the device 1100 may not include, for example, the wired communication interface 1109.

Ryu (Ex. 1004), at 21:37–38 (annotated)

Ryu's Fig. 11 Embodiment is a Different Embodiment

- ▶ Sensor 1102 “may include a proximity sensor and a motion sensor.”
- ▶ This is the *only* embodiment where *Ryu* discloses proximity detection with no touch.
- ▶ PO submits no evidence that sensors 101 and 1102 operate similarly.

The sensor 1102 generates a signal for sensing a location of the device 1100, whether there is any user contact, an orientation of the device 1100, an acceleration or deceleration of the device 1100, etc. The sensor 1102 may include a proximity sensor and a motion sensor. The proximity sensor is a sensor for detecting whether an object approaches a previously set detection surface or whether the object is present nearby by using a force of an electromagnetic field or an infrared ray without any actual physical touch. Examples of the proximity sensor include a transparent photoelectric sensor, a direct reflective photoelectric sensor, a mirror reflective photoelectric sensor, a high frequency oscillation photoelectric sensor, a capacitive photoelectric sensor, a magnetic photoelectric sensor, an infrared photoelectric sensor, etc.

Ryu (Ex. 1004), at 22:30–33 (annotated)

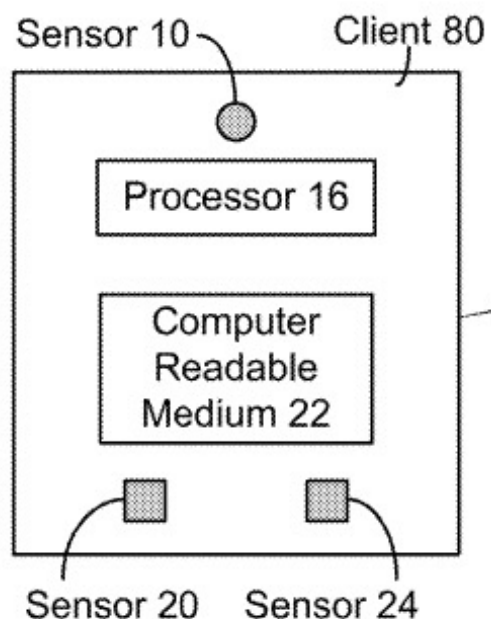
Separately, PO Reads the Claims Too Narrowly

- ▶ None of the '564 Patent's gaze detection scenarios preclude the device from also performing proximity detection.
- ▶ Consistent with the '564 Patent's express teachings, the “only after” limitation does not preclude the electronic device from also performing proximity detections.
- ▶ There is no dispute that *Ryu*, as modified in view of *Hodge* as proposed by Apple, teaches the “only after” limitation when properly construed.

The '564 Patent's Four Gaze Detection Scenarios

- ▶ The '564 Patent teaches four gaze detection scenarios:
 - ▶ Scenario #1 – Gaze detection is performed continuously (*'564 Patent* (Ex. 1001), 4:29–6:30)
 - ▶ Scenario #2 – Gaze detection is performed after a user approaches the device (proximity event) (*Id.*, at 6:31–35)
 - ▶ Scenario #3 – Gaze detection is deactivated when sensor 24 detects the device's position is unstable (*Id.*, at 6:43–46)
 - ▶ Scenario #4 – Gaze detection is performed when sensor 24 detects the device is shaken or physically moved in a number of ways (*Id.*, at 6:58–7:14)

The '564 Patent Expressly Teaches its Device Can Perform any of the Four Gaze Detection Scenarios Described



'564 Patent (Ex. 1001), at Fig. 1

- ▶ “[P]hysical movement of a user may be considered as a user input to control the device[.]” ’564 Patent (Ex. 1001), at 6:35–36.
- ▶ “Besides shaking . . . tapping, scribbling or sliding on a touch-sensitive screen, or tapping on [a] certain area of the device . . . may also be incorporated as a first step[.]” *Id.* at 7:13–20; see also *id.* at 6:58–59.
- ▶ Which of these applies “may depend on a specific app or program to specify what kind of physical move may be taken as an input for the device. If there is more than one option, **a user may select [the] method** which may seem more convenient and effective.” *Id.* at 7:20–24.

Nothing in the Claims Precludes the Capability to Perform Proximity Detections

- ▶ Nothing in the Challenged Claims excludes the capability to *also* perform proximity detections.
- ▶ The “only after” limitation places a temporal requirement on the claims regarding when a certain sequence of events must take place.
- ▶ See *Boesen v. Garmin Int’l, Inc.*, 455 F.App’x 974, 977 (Fed. Cir. 2011)
 - ▶ “Both independent claims 1 and 10 are open ended ‘comprising’ claims . . . The district court correctly explained that as long as the [accused] navigation system can—and does—perform the claimed input method, it is of no consequence that it can also perform other input methods.”

There Is No Dispute That *Ryu* In View Of *Hodge* Renders Obvious The Properly Construed Challenged Claims

- ▶ PO admits that *Ryu* teaches performing gaze detection after detecting the claimed act, as required by the Challenged Claims.
- ▶ PO has not challenged Petitioner's motivation to combine *Ryu* and *Hodge* as proposed in the Petition.