UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/782,071	03/01/2013	Bryan Yurasits	26141.0074U1	6560

16000 7590 06/22/2020

Comcast
c/o Ballard Spahr LLP
999 Peachtree Street, Suite 1000
Atlanta, GA 30309

EXAMINER	
JARRETT, RYAN A	

ART UNIT	PAPER NUMBER
2116	

NOTIFICATION DATE	DELIVERY MODE
06/22/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USpatentmail@ballardspahr.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRYAN YURASITS, DAVID MAYS, and JONATHAN MOORE

Appeal 2018-008897
Application 13/782,071
Technology Center 2100

Before JUSTIN BUSCH, LINZY T. McCARTNEY, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

AMUNDSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] seeks our review under 35 U.S.C. § 134(a) from a final rejection of claims 1–4, 6, 21–24, 26, 34, 36–38, and 40–45, i.e., all pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42 (2017). Appellant identifies the real party in interest as Comcast Cable Communications, LLC. Appeal Br. 1.

STATEMENT OF THE CASE

The Invention

According to the Specification, the invention concerns "methods and systems for managing device controls and control relationships between one or more devices (e.g., content device, user device, computing device) and a controller." Spec. ¶ 2; *see id.* at 31 (Abstract).[2] The Specification explains that one method includes "determining an orientation of a controller and comparing the orientation of the controller and an activation orientation." *Id.* at 31; *see id.* ¶¶ 6–8. "If the orientation of the controller substantially matches the activation orientation, a control relationship between the controller and the user device may be automatically activated, and if the orientation of the controller does not substantially match the activation orientation, control options to a user of the controller." *Id.* at 31.

Exemplary Claim

Independent claim 1 exemplifies the claims at issue and reads as follows:

> 1. A method comprising:
>
> determining a first direction of orientation of a controller;
>
> determining, from a first plurality of user devices associated with the first direction of orientation, a first user device based on a location of the controller;

[2] This decision uses the following abbreviations: "Spec." for the Specification, filed March 1, 2013; "Final Act." for the Final Office Action, mailed August 15, 2017; "Advisory Act." for the Advisory Action, mailed December 8, 2017; "Appeal Br." for the Appeal Brief, filed April 9, 2018; "Ans." for the Examiner's Answer, mailed July 16, 2018; and "Reply Br." for the Reply Brief, filed September 17, 2018.

activating a control relationship between the controller and the first user device by configuring the controller to control the first user device;

determining a second direction of orientation of the controller;

determining, from a second plurality of user devices associated with the second direction of orientation, a second user device based on the location of the controller; and

activating a control relationship between the controller and the second user device by configuring the controller to control the second user device.

Appeal Br. 9 (Claims App.).

The Prior Art Supporting the Rejections on Appeal

As evidence of unpatentability, the Examiner relies on the following prior art:

Alberth, Jr. et al. ("Alberth")	US 2014/0226851 A1	Aug. 14, 2014 (filed Feb. 13, 2013)

Hsiao-Han Chen et al., *Direction-Based Wireless Remote Controller: A Smartphone Application*, 2 Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications 33–45 (June 2011) ("Chen")

The Rejections on Appeal

Claims 1–4, 6, 21–24, 26, 34, 36–38, 41, 43, and 45 stand rejected under 35 U.S.C. § 102(b) as anticipated by Chen.[3] Final Act. 3–5.

[3] On March 16, 2013, the amendments to 35 U.S.C. §§ 102 and 103 in the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (2011), became effective. Because the filing date of Application 13/782,071 predates the AIA's amendments to §§ 102 and 103, this decision refers to the pre-AIA versions of §§ 102 and 103.

Claims 40, 42, and 44 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Chen and Alberth. Final Act. 5–6.

ANALYSIS

We have reviewed the rejections in light of Appellant's arguments that the Examiner erred. For the reasons explained below, we agree with the Examiner's unpatentability determinations. We adopt the Examiner's findings and reasoning in the Final Office Action, Advisory Action, and Answer. *See* Final Act. 2–6; Advisory Act. 2; Ans. 4–9. We add the following to address and emphasize specific findings and arguments.

The § 102(b) Rejection of Claims 1–4, 6, 21–24, 26, 34, 36–38, 41, 43, and 45

CLAIM 1: DEVICE SELECTION BASED ON BOTH AN "ORIENTATION" AND A "LOCATION" OF A CONTROLLER

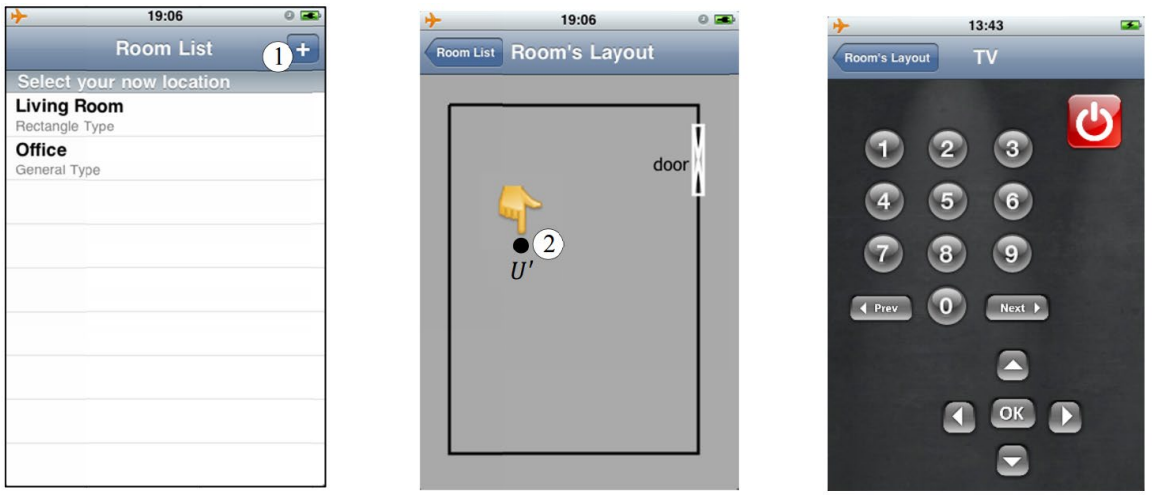
As noted above, the § 102(b) rejection of claim 1 rests on Chen. *See* Final Act. 3–4. Appellant argues that the Examiner erred in rejecting claim 1 because Chen fails to disclose the following limitations in claim 1: "determining a first direction of orientation of a controller" and "determining, from a first plurality of user devices associated with the first direction of orientation, a first user device based on a location of the controller." *See* Appeal Br. 5–6; Reply Br. 1–2.

Appellant concedes that Chen discloses "using the angle (orientation) of a controller to select a device for controlling." Appeal Br. 6. But Appellant contends that Chen does not disclose "using the combination of both an 'orientation' and a 'location' of a controller as claimed." *Id.* Further, Appellant asserts that Chen "is silent as to using the location of a controller at all in device selection." *Id.* According to Appellant, Chen

"limits its discussion to the use of an 'assumed location' of a user for the purpose of calculating angles between the 'assumed location' and a device." *Id.*

We disagree with Appellant that Chen does not disclose the disputed limitations in claim 1. *See* Final Act. 2–4; Advisory Act. 2; Ans. 4–5, 8–9. Chen describes a Point-and-Control ("PnC") system that employs a smartphone and an angle-based positioning algorithm. Chen 33–35; *see id.* at 43–44. The PnC system "allows a user to select a home appliance by pointing the smartphone to that home appliance." *Id.* at 33 (Abstract). Hence, "when the user wants to control a particular appliance," the user "just points toward [the] appliance and its control interface will show on the [smartphone's] screen." *Id.* at 35.

Chen's Figure 3 (reproduced below) depicts three smartphone displays.



(a) Room List page (b) Room's Layout page (c) Remote control interface for TV

Figure 3: Screenshots of the PnC

Figure 3(a) shows a Room List page that lists the rooms configured for the PnC system. Chen 35. Figure 3(b) shows a Room's Layout page that

permits a user to specify the user's approximate position U' in a room. *Id.* at 35–36. Figure 3(c) shows a remote-control interface after appliance selection, i.e., a remote-control interface for a television. *Id.* at 36.

To configure a room, the PnC system "creates a coordinate system, and maps the room's layout to this coordinate system by the compass orientations of four pre-defined reference points." Chen 35; *see id.* at 36–37. Then, "the user adds the home appliances in this room and the PnC calculates" the coordinates of the home appliances. *Id.* at 35; *see id.* at 37–38.

"If the user is in a configured room," the user "can control home appliances by selecting the room from the list" on the Room List page. Chen 35, Figure 3(a). When the user selects the room from the list, "the PnC enters the remote control phase." *Id.* at 35. In that phase, "the PnC shows the room's layout on the screen and then the user touches the screen to indicate" the user's approximate position U' in the room. *Id.* at 35–36, Fig. 3(b); *see id.* at 38. "The PnC assumes that U' is the actual position of the user." *Id.* at 36. "When the user points the smartphone to a home appliance," the PnC system determines the appliance to control based on the user's approximate position U' and the smartphone's angular orientation. *Id.* at 38–39.

Chen's Figure 6 (reproduced below) illustrates appliance selection according to Chen's angle-based positioning algorithm.

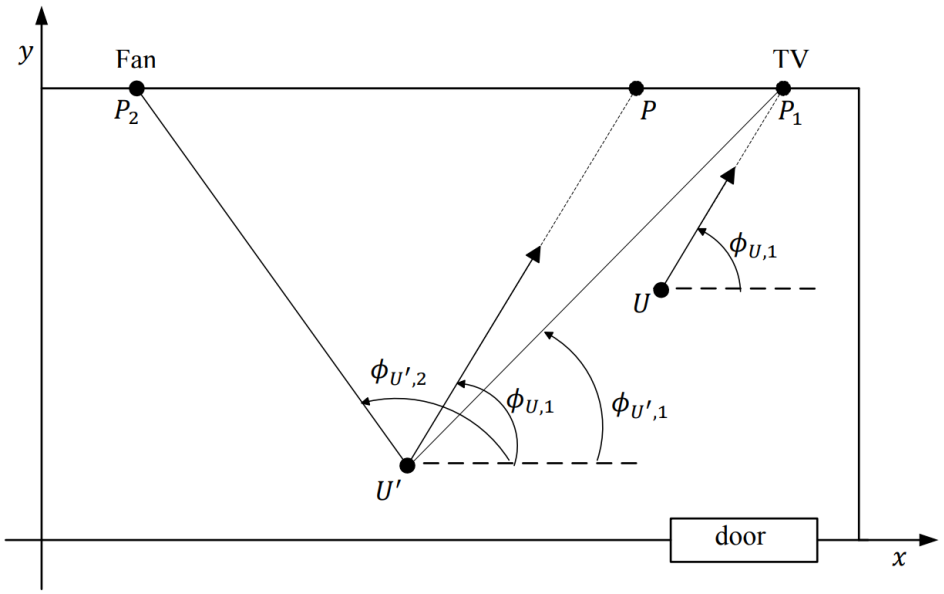


Figure 6: Home appliance selection

Figure 6 shows the user's approximate position U', the user's actual position U, TV position P_1, fan position P_2, and point P at the room's perimeter where the user has pointed the smartphone. Chen 38–39.

Chen recognizes that the user's approximate position U' may differ from the user's actual position U and that "point P may not be the position of the pointed home appliance." Chen 38; *see id.* at 39. The PnC system accounts for that potential error by analyzing various angles. *Id.* at 38–39. In particular, the PnC system analyzes (1) the angle between the x-axis and point P at the room's perimeter where the user has pointed the smartphone and (2) the angles between the x-axis and appliance positions $P_1, P_2, \ldots P_K$. *Id.* at 38–39, Fig. 6. The PnC system identifies the appliance to control by selecting the best match between the angle for point P and the angles for appliance positions $P_1, P_2, \ldots P_K$. *Id.* at 38–39.

In Chen's Figure 6, for example, $\phi_{U,1}$ corresponds to the angle between the x-axis and point P at the room's perimeter where the user has

pointed the smartphone, $\phi_{U',1}$ corresponds to the angle between the x-axis and TV position P_1, and $\phi_{U',2}$ corresponds to the angle between the x-axis and fan position P_2. Chen 38–39, Fig. 6. In this example, "the PnC selects the TV at P_1" instead of the fan at P_2 because "$\phi_{U,1}$ is closer to $\phi_{U',1}$ than to $\phi_{U',2}$." *Id.* at 38.

When the PnC system analyzes the angle between the x-axis and point P at the room's perimeter where the user has pointed the smartphone, the PnC system "determin[es] a first direction of orientation of a controller" according to claim 1. *See* Final Act. 2–4; Advisory Act. 2; Ans. 4, 8–9.

Moreover, when the PnC system identifies the appliance to control by selecting the best match between the angle for point P and the angles for appliance positions $P_1, P_2, \ldots P_K$, the PnC system "determin[es], from a first plurality of user devices associated with the first direction of orientation, a first user device based on a location of the controller" according to claim 1. *See* Final Act. 2–4; Advisory Act. 2; Ans. 4–5, 8–9. In particular, the "first plurality of user devices associated with the first direction of orientation" reads on the two appliances with angles for their respective positions closest to the angle for point P. *See* Final Act. 2, 4; Advisory Act. 2; Ans. 4–5, 8. From those two appliances, the PnC system selects the appliance with the closer angle as the appliance to control. Chen 38–39.

Further, claim 1 requires device determination "based on a location of the controller." Appeal Br. 9. Chen's appliance selection is "based on a location of the controller" because (1) the PnC system analyzes angles based on the user's approximate position U' and (2) the user has the smartphone, i.e., the claimed "controller." Chen 35–36, 38–39, Fig. 3(b). The PnC system "assumes that U' is the actual position of the user." *Id.* at 36. As the

Examiner properly reasons, "there is nothing in the claim that precludes using an 'assumed location' versus an 'actual location'." Final Act. 2; Advisory Act. 2; Ans. 8. During "examination proceedings, claims are given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000).

Hence, contrary to Appellant's contention, Chen discloses "using the combination of both an 'orientation' and a 'location' of a controller as claimed." *See* Appeal Br. 6.

Chen discloses the claimed arrangement for another reason. Specifically, appliance selection depends on the room that a user selects from a list of rooms on the Room List page. Chen 35, Fig. 3(a). Then, "when the user wants to control a particular appliance," the user "just points toward [the] appliance and its control interface will show on the [smartphone's] screen." *Id.* at 35. The room that a user selects corresponds to the claimed "location," and pointing toward the appliance corresponds to the claimed "orientation." For this reason too, Chen discloses "using the combination of both an 'orientation' and a 'location' of a controller as claimed."

For the reasons discussed above, Chen discloses the disputed limitations in claim 1. Hence, we sustain the § 102(b) rejection of claim 1.

INDEPENDENT CLAIMS 21 AND 34 AND
DEPENDENT CLAIMS 2–4, 6, 22–24, 26, 36–38, 41, 43, AND 45

Appellant does not argue patentability separately for independent claims 21 and 34 or dependent claims 2–4, 6, 22–24, 26, 36–38, 41, 43, and 45. *See* Appeal Br. 5–7; Reply Br. 1–2. Hence, we sustain the § 102(b)

rejection of these claims for the same reasons as claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The § 103(a) Rejection of Claims 40, 42, and 44

Claim 40 depends indirectly from claim 1; claim 42 depends directly from claim 21; and claim 44 depends indirectly from claim 34. Appellant does not argue patentability separately for these dependent claims. *See* Appeal Br. 5–7; Reply Br. 1–2. Hence, we sustain the § 103(a) rejection of these dependent claims for the same reasons as the base claims. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

We affirm the Examiner's decision to reject claims 1–4, 6, 21–24, 26, 34, 36–38, and 40–45.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4, 6, 21–24, 26, 34, 36–38, 41, 43, 45	102(b)	Chen	1–4, 6, 21–24, 26, 34, 36–38, 41, 43, 45	
40, 42, 44	103(a)	Chen, Alberth	40, 42, 44	
Overall Outcome			1–4, 6, 21–24, 26, 34, 36–38, 40–45	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED