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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte AMIT KALHAN¹

Appeal 2018-001671
Application 12/267,365
Technology Center 2400

Before ROBERT E. NAPPI, BARBARA A. BENOIT, and
SCOTT B. HOWARD, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–3, 5–10, and 16–39. Claims 4 and 11–15 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

¹ According to Appellant, Kyocera Corporation is the real party in interest. App. Br. 3.

INVENTION

Appellant's claimed invention is directed to a wireless communication device configured to receive a device beacon transmitted by another wireless communication device at a time specified by a beacon transmission time parameter and in accordance with wireless wide area network timing information. *See* Abstract; Spec. ¶ 30. Claims 1 and 29 are illustrative of the subject matter on appeal and are reproduced below:

1. A wireless communication device comprising:

a wireless wide area network (WWAN) transceiver configured to receive WWAN signals from a base station, at least one of the WWAN signals comprising a beacon transmission time parameter; and

a device beacon detector configured to apply the beacon transmission time parameter and WWAN system timing information derived from the WWAN signals to receive a device beacon transmitted by another wireless communication device at a time specified by the beacon transmission time parameter and in accordance with the WWAN system timing information, the device beacon detector comprising an uplink WWAN receiver configured to receive the device beacon transmitted by the another wireless communication device.

29. A mobile wireless communication device comprising:

a wireless wide area network (WWAN) receiver configured to receive WWAN downlink signals from a WWAN;

a device beacon generator configured to generate a device beacon signal based on a WWAN system timing derived from the WWAN downlink signals to generate the device beacon signal;

a transmitter configured to transmit the device beacon signal within a WWAN uplink channel; and

a searcher configured to search for femtocell signals transmitted by a femtocell transceiver and responsive to a search signal transmitted in response to detection of the device beacon

signal at the femtocell transceiver by adjusting a searching scheme of searching for the femtocell signals by changing searching parameters increasing the likelihood for detecting the femtocell signals.

App. Br. 20, 24 (Claims App.).

REJECTIONS AT ISSUE²

The Examiner has rejected claims 1, 5, 6, 8–10, 16–22, 24, 28, 30–33, 35, and 39 under 35 U.S.C. § 103(a) as unpatentable over the combination of Li (US 7,961,708 B2, June 14, 2011) and Corson (US 2007/0254596 A1, Nov. 1, 2007). Final Act. 4–6.

The Examiner has rejected claims 2 and 3 under 35 U.S.C. § 103(a) as unpatentable over the combination of Li, Corson, and Jacobsen (US 7,260,361 B2, Aug. 21, 2007). Final Act. 6–7.

The Examiner has rejected claims 7, 23, 25–27, 34, and 36–38 under 35 U.S.C. § 103(a) as unpatentable over the combination of Li, Corson, and Dalsgaard (US 2010/0183031 A1, July 22, 2010). Final Act. 7–8.

The Examiner has rejected claim 29 under 35 U.S.C. § 103(a) as unpatentable over the combination of Li, Corson, and Saksena (US 2008/0096553 A1, Apr. 24, 2008). Final Act. 8–9.

ANALYSIS

We have reviewed Appellant’s arguments on pages 9 through 19 of the Appeal Brief, and pages 2 through 6 of the Reply Brief, the Examiner’s rejections, and the Examiner’s response to Appellant’s arguments.

² Throughout this Decision we refer to the Appeal Brief (App. Br.) filed April 6, 2017, Reply Brief (Reply Br.) filed December 4, 2017, Final Office Action (Final Act.) mailed August 29, 2016, and Examiner’s Answer (Ans.) mailed October 5, 2017.

Appellant’s arguments have not persuaded us of error in the Examiner’s rejection of claims 1–3, 5–10, 16–28, and 30–39. Appellant’s arguments have persuaded us of error in the Examiner’s rejection of claim 29.

Claims 1–3, 5–10, 16–28, and 30–39

Claim 1 recites a “beacon transmission time parameter” that is applied to “receive a device beacon transmitted by another wireless communication device at a time specified by the beacon transmission time parameter.” App. Br. 20 (Claims App.).³ The Examiner finds the combination of Li and Corson teaches this limitation. Final Act. 4–5; Ans. 2–5. Specifically, the Examiner finds Li’s WWAN signals may be in the form of a beacon and contain a common clock reference. Final Act. 4; Ans. 3–4, Li 6:56–61, 7:29–33, 8:4–20. The Examiner further finds Li’s common clock reference teaches the claimed timing beacon parameter because Li’s wireless devices utilize the common clock reference to determine the start and finish times of peer (e.g., other wireless devices) discovery intervals. Final Act. 4; Ans. 3–5; Li 7:29–33, 8:4–20. The Examiner additionally finds Corson teaches peer-to-peer communications via beacons. Final Act. 4–5; Ans. 2–5; Corson ¶¶ 7–11.

Appellant contends the Examiner erred, arguing there is no teaching that Li’s broadcast signals sent to the wireless terminals actually contain a beacon transmission time parameter. App. Br. 10; Reply Br. 3–4. Appellant

³ With respect to independent claims 10, 20, and 30, Appellant’s arguments present the same issues as independent claim 1. App. Br. *passim*; Reply Br. *passim*. No separate arguments are presented for the dependent claims 5, 6, 11–15, and 20–23, which fall with independent claims 1, 10, and 20. App. Br. *passim*; Reply Br. *passim*; 37 C.F.R. § 41.37(c)(1)(iv). Except for our ultimate decision, these claims are not discussed further herein.

further contends that Li's generic broadcast signals cannot be reasonably interpreted to contain a beacon transmission time parameter because Li's wireless terminals must determine the timing for various functional intervals based on Li's broadcast signals. App. Br. 10–11; *see* Reply Br. 3–4; *see also* Li 7:52–8:24. We are not persuaded of Examiner error.

The determination of timing intervals by Li's wireless terminals does not preclude Li's broadcast signals comprising a beacon transmission time parameter. Rather, as explained by the Examiner, Li's wireless terminals utilize timing information (i.e., the common clock reference) contained in Li's broadcast signals in order to determine timing intervals. *See* Ans. 3–4. Thus, we agree with the Examiner's finding that Li teaches a beacon transmission time parameter, as recited in claim 1. *See* Final Act. 4–5; *see also* Ans. 2–4. Moreover, Li further supports the Examiner's finding, by disclosing that “the wireless terminal may determine the transmission time(s) . . . to transmit based upon an identifier and/or a notion of time (e.g., derived from a received Beacon).” Li 10:6–11. Accordingly, a skilled artisan would find Li teaches a beacon transmission time parameter, as recited in claim 1.

Appellant additionally argues that the Examiner erred because Li and Corson do not teach that the beacon transmission time parameter is received from a base station. App. Br. 11–12; Reply Br. 3–4. To the contrary, as found by the Examiner, “Li explicitly states that timing information is broadcast from a base station to a wireless device in order to synchronize signals between the wireless device and another wireless device (i.e. peer-to-peer signaling).” Ans. 3; Li 7:29–33, 8:4–12, 10:13–15, 43–45. Thus, we are not persuaded of Examiner error.

In addition, Appellant argues, for the first time in the Reply Brief, that based on the principles of claim construction, the recited “system timing information” and the recited “beacon transmission time parameter” are two separate distinct claim features, and the Examiner erred because the Examiner has not presented evidence of prior art that teaches or suggests each of: (1) WWAN system timing information derived from the WWAN signals and (2) a beacon transmission time parameter. Reply Br. 2–3. This new argument could have been presented in the Apply Brief, was not prompted by the Examiner’s Answer, and is not based on any new arguments or grounds of rejection in the Examiner’s Answer. As a result, Appellant has waived such untimely argument because Appellant has not shown good cause for belatedly raising the new argument. *See* 37 C.F.R. § 41.41(b)(2).

Nevertheless, Appellant’s argument is not persuasive. Appellant’s argument does not address the Examiner’s specific findings. The Examiner finds “Li explicitly states that timing information is broadcast from a base station to a wireless device in order to synchronize signals between the wireless device and another wireless device (i.e. peer-to-peer signaling).” Ans. 3. The Examiner also finds Li’s “WWAN signals received from the base station include a time parameter that specifies a time for peer-to-peer discovery signaling.” *Id.* Thus, the Examiner finds that Li’s broadcast timing information *includes* a timing parameter. *See id.* Accordingly, we are not persuaded by Appellant’s argument that the Examiner has not presented evidence teaching both WWAN system timing information derived from the WWAN signals and a beacon transmission time parameter. Reply Br. 2–3.

Claim 29

The Examiner finds claim 29 is rendered obvious in view of the combination of Li, Corson, Jacobsen, and Saksena. Specifically the Examiner finds that “Jacobsen teaches device search and alteration to search as well as indication of beacon reception (e.g., col. 2, lines 1–49, col. 3, lines 16–27, col. 4, lines 25–67, col. 5, lines 1–7, and figures 1–2.)” Ans. 6–7. The Examiner further explains that Jacobsen is relevant to the rejection of claim 29 “because it demonstrates the responsive functionality; that is, searching (or modifying search) in response to device detection.” Ans. 6–7. Appellant argues the Examiner erred because Jacobsen fails to teach performing any action in response to detecting a device beacon signal. App. Br. 18; Reply Br. 4–6. Appellant’s argument is persuasive.

Jacobsen is directed to detecting an interfering device in a wireless network by comparing modulation adaptations in the uplink and downlink directions of a communication channel between wireless terminals. Jacobsen, Abstract. We agree with the Examiner that Jacobsen teaches device searching and modifying search schemes. Ans. 6–7. The Examiner, however, has not shown that the combination of Li, Corson, Jacobsen, and Saksena teaches that a device search is conducted in response to detection of a device beacon signal. *See* Final Act. 8–9; *see also* Ans. 6–7. Accordingly, we do not sustain the rejection of claim 29.

DECISION

We affirm the Examiner’s rejections of claims 1–3, 5–10, 16–28, and 30–39 under 35 U.S.C. § 103(a).

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We reverse the Examiner's rejection of claim 29 under
35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with
this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.
§ 1.136(a)(1)(iv)(2015).

AFFIRMED-IN-PART