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EXAMINER
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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* KEE-BONG SONG and SYED A. MUJTABA

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Appeal 2016-002045  
Application 13/204,617  
Technology Center 2400

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Before JOHNNY A. KUMAR, LINZY T. McCARTNEY, and  
JAMES W. DEJMEK, *Administrative Patent Judges*.

McCARTNEY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a rejection of claims  
1–21. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

## STATEMENT OF THE CASE

The present patent application “relates generally to wireless communications circuitry, and more particularly, to electronic devices that have wireless communication circuitry with multiple antennas.” Spec. 2:3–5. Claim 1 illustrates the claimed subject matter:

1. A method of operating an electronic device that has one antenna serving as a currently active antenna that is currently handling wireless communications traffic for the electronic device and that has at least one other antenna serving as an alternate antenna for handling wireless communications traffic for the electronic device, the method comprising:

receiving frames of data using the currently active antenna, wherein the frames of data include a plurality of time slots having a traffic channel time slot assigned to the electronic device;

during at least a first of the frames, measuring beacon channel signal strength for signals received with the currently active antenna;

during at least a second of the frames, measuring beacon channel signal strength for signals received with the alternate antenna;

determining whether to use the alternate antenna in place of the currently active antenna in handling wireless communications traffic for the electronic device based at least partly on comparisons of the beacon channel signal strength measurements for the signals received with the currently active antenna and the alternate antenna;

wherein if the beacon channel signal strength for signals received with the currently active antenna is greater than a first predetermined threshold and if an electronic device output power level is less than a second predetermined threshold, the electronic device continues using the currently active antenna; and

wherein only one of the currently active antenna and the alternate antenna is actively operated during reception of the frames of data.

## REJECTIONS

Claims 1–21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over various combinations of Saed et al. (US 2004/0266374 A1; Dec. 30, 2004), Walton et al. (US 2005/0135318 A1; June 23, 2005), Shapira (US 2003/0073463 A1; Apr. 17, 2003), Toda et al. (US 2010/0183099 A1; July 22, 2010), Beerends et al. (US 2012/0148057 A1; June 14, 2012), Mullins et al. (US 2007/0121537 A1; May 31, 2007), Hui et al. (US 2010/0220673 A1; Sept. 2, 2010), and Laroia et al. (US 2006/0203709 A1; Sept. 14, 2006)

## ANALYSIS

Appellants contend Shapira does not teach or suggest the following method step recited in claim 1: “wherein if the beacon channel signal strength for signals received with the currently active antenna is greater than a first predetermined threshold and if an electronic device output power level is less than a second predetermined threshold, the electronic device continues using the currently active antenna.” *See* App. Br. 7. In particular, Appellants argue “Shapira nowhere teaches or suggests comparing . . . ‘device power’ to a threshold. Nor does Shapira teach or suggest basing antenna selection on such ‘device power.’” *Id.* Appellants also contend the Examiner’s motivation for combining Shapira with Saed, Walton, and Laroia “would fail to lead one of ordinary skill in the art at the time of [Appellants’] invention to arrive at the embodiment of claim 1.” *Id.* at 8; *see also* Reply Br. 2–3.

We find Appellants’ arguments unpersuasive. The disputed method step is conditional: “*if* the beacon channel signal strength for signals received with the currently active antenna is greater than a first predetermined threshold and *if* an electronic device output power level is less than a second predetermined threshold” the claimed method “continues using the currently active antenna.” App. Br. 11 (emphases added). The broadest reasonable interpretation of claim 1 includes situations that fail to satisfy one or both of these conditions precedent, and in these situations the disputed conditional method step does not need to be performed. *See In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (“During examination, claims . . . are to be given their broadest reasonable interpretation consistent with the specification . . . .” (quotation marks omitted)); *Ex parte Schulhauser*, No. 2013-007847, 2016 WL 6277792, at \*3–6 (PTAB April 28, 2016) (concluding the broadest reasonable interpretation of a claim encompassed situations in which conditional method steps “need not be reached”) (precedential). Because the broadest reasonable interpretation of the claim does not require performing the conditional method step at issue, the Examiner did not need to present evidence of obviousness for this step. *See Schulhauser*, 2016 WL 6277792, at \*4 (“The Examiner did not need to present evidence of the obviousness of the remaining method steps of claim 1 that are not required to be performed under a broadest reasonable interpretation of the claim.”).

As for the Examiner’s combination of Shapira, Saed, Walton, and Laroia, the Examiner found a combination Saed, Walton, and Laroia teaches or suggests each limitation recited in claim 1, except for the “electronic device output power level” portion of the conditional method step at issue.

*See* Final Act. 4–7. The Examiner found Shapira teaches this aspect of the method step and concluded it would have been obvious to combine the teachings of Shapira, Saed, Walton, and Laroia in the claimed manner. *Id.* at 7. Even assuming the Examiner’s finding and conclusion with respect to the disputed method step are erroneous, we would not agree the Examiner erred because, as discussed above, the Examiner was not required to provide evidence of obviousness for this step. *See Schulhauser*, 2016 WL 6277792, at \*3–6. As also noted above, the Examiner concluded a combination Saed, Walton, and Laroia teaches the remainder of claim 1, and Appellants have not persuasively challenged this conclusion or its underlying findings.

For the above reasons, we sustain the Examiner’s rejection of claim 1. Because Appellants have not presented separate, persuasive patentability arguments for the remaining claims, we also sustain the Examiner’s rejections of these claims.

#### DECISION

For the above reasons, we affirm the rejections of claims 1–21.

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).

AFFIRMED