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Paper 43
Entered August 27, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner,

v.

XR COMMUNICATIONS, LLC d/b/a VIVATO TECHNOLOGIES,
Patent Owner.

Case IPR2018-00762
Patent 6,611,231 B2

Before BARBARA A. PARVIS, TERRENCE W. McMILLIN, and JAMES J. MAYBERRY, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Inter Partes Review
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Cisco Systems, Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") to institute an *inter partes* review of claims 1–9 and 12 of U.S. Patent No. 6,611,231 B2 (Ex. 1001, "the '231 patent"). XR Communications LLC d/b/a Vivato Technologies ("Patent Owner") filed a Preliminary Response (Paper 8, "Prelim. Resp."). We instituted this review. Paper 10 ("Inst. Dec.").

Subsequent to institution, Patent Owner filed a Patent Owner Response. Paper 17 ("Resp."). Petitioner filed a Reply. Paper 25 ("Reply"). Patent Owner filed a Sur-Reply. Paper 32 ("Sur-Reply"). Petitioner filed a Sur-Sur-Reply. Paper 39 ("Sur-Sur-Reply"). An oral argument was held on June 18, 2019, and a transcript was entered. Paper 42 ("Tr.").

Patent Owner has also filed a Motion to Strike directed against new arguments and evidence presented in the Reply. Paper 27 ("Motion to Strike"). Petitioner filed an opposition to the Motion to Strike. Paper 30. Patent Owner filed a Reply in Support of its Motion to Strike. Paper 31.

This Final Written Decision is entered pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, Petitioner has not established by a preponderance of the evidence that any of the challenged claims of the '231 patent are unpatentable.

A. Related Matters

The parties indicate that the '231 patent has been asserted in the following litigations:

XR Communications, LLC d/b/a Vivato Technologies v. ARRIS International plc, 8-18-cv-00192 (C.D. Cal.), filed February 2, 2018; *XR Communications, LLC d/b/a Vivato Technologies v. Aruba Networks, Inc.*, 2-17-cv-02945 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. Newo Corp. d/b/a Amped Wireless*, 5-17-cv-00744 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. ASUS Computer International*, 2-17-cv-02948 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. Cisco Systems, Inc.*, 2-17-cv-02951 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. Extreme Networks, Inc.*, 2-17-cv-02953 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. NETGEAR, Inc.*, 2-17-cv-02959 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. Ruckus Wireless, Inc.*, 2-17-cv-02961 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. Ubiquiti Networks, Inc.*, 2-17-cv-02968 (C.D. Cal.), filed April 19, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. Belkin International, Inc.*, 8-17-cv-00674 (C.D. Cal.), filed April 13, 2017; *XR Communications, LLC d/b/a Vivato Technologies v. D-Link Systems, Inc.*, 8-17-cv-00596 (C.D. Cal.), filed April 3, 2017; and *XR Communications, LLC d/b/a Vivato Technologies v. Xirrus, Inc.*, 3-17-cv-00675 (C.D. Cal.), filed April 3, 2017. Pet. 8–9; Paper 5, 2–4.

The ’231 patent was also challenged in IPR2018-00701 and IPR2018-01016. A Decision Denying Institution of *Inter Partes* Review (Paper 10) was entered in IPR2018-00701 on August 27, 2018. A Decision Denying

Institution of *Inter Partes* Review (Paper 17) was entered in IPR2018-01016 on October 31, 2018.

B. The '231 Patent

The '231 patent is titled, "Wireless Packet Switched Communication Systems and Networks Using Adaptively Steered Antenna Arrays." Ex. 1001, (54). The described apparatus "includes an adaptive antenna that is configurable to receive a transmission signal from a transmitter and in response transmit corresponding outgoing multi-beam electromagnetic signals exhibiting a plurality of selectively placed transmission peaks and transmission nulls within a far field region of a coverage area." *Id*. at (57) (Abstract). Figure 2 of the '231 patent is reproduced below.

Fig. 2

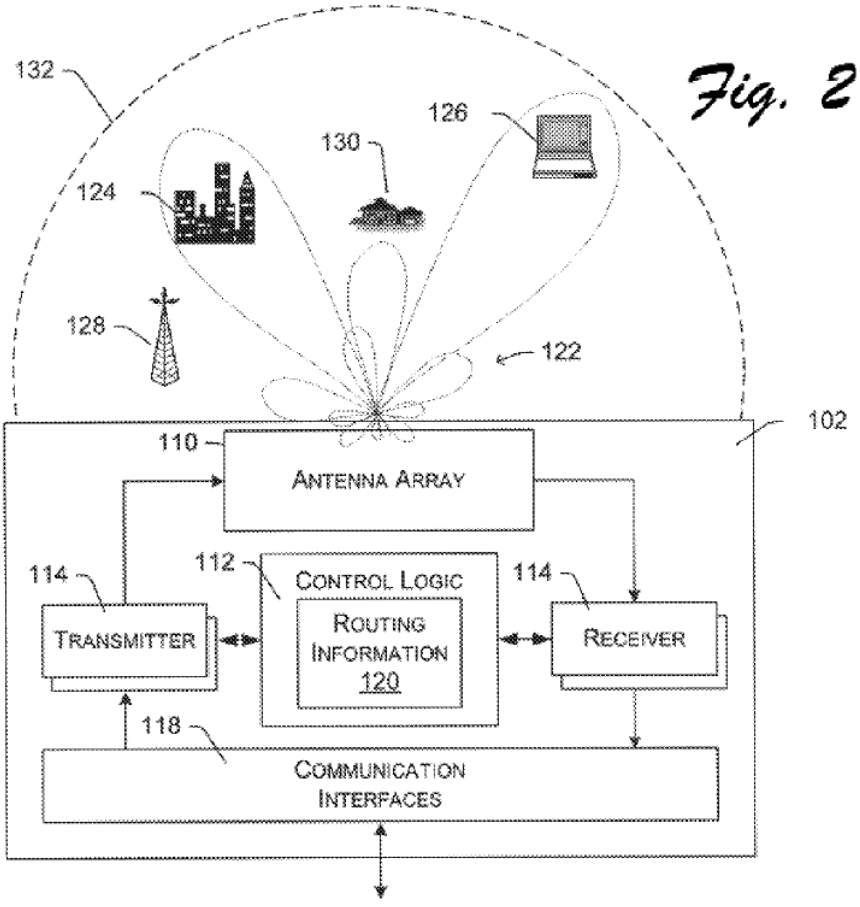

Figure 2 depicts a "wireless routing device 102 having an adaptive antenna comprising an antenna array 110 and control logic 112." *Id*. at 7:1–3. Control logic 112, which includes routing information 120 and the antenna array, is coupled to a receiver and transmitter. *Id*. at 7:3–7. The lobes of multibeam pattern 122 emanate from antenna array 110. *Id*. at 7:15–16. Transmission peaks "illuminate buildings 124 and a mobile user 126 with transmitted energy" and transmission nulls "to not significantly illuminate an external transmitter 128 and a residence 130." *Id*. at 7:16–20.

C. Illustrative Claim

Petitioner challenges claims 1–9 and 12 of the '231 patent. Pet. 7–8. Claim 1 is the only challenged independent claim. Claims 2–9 and 12 depend directly or indirectly from claim 1. Independent claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. An apparatus for use in a wireless routing network, the apparatus comprising:
>
> an adaptive antennas;
>
> at least one transmitter operatively coupled to said adaptive antenna;
>
> at least one receiver operatively coupled to said adaptive antenna;
>
> control logic operatively coupled to said transmitter and configured to cause said at least one transmitter to output at least one transmitter signal to said adaptive antenna to transmit corresponding outgoing multibeam electromagnetic signals exhibiting a plurality of selectively placed transmission peaks and transmission nulls within a far field region of a coverage area based on routing information; and
>
> search receiver logic operatively coupled to said control logic and said at least one receiver and *configured to update said routing information based at least in part on cross-correlated*

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