

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMMSCOPE TECHNOLOGIES, LLC
Petitioner,

v.

COMMUNICATIONS COMPONENTS ANTENNA INC.,
Patent Owner.

Case IPR2016-00999
Patent 8,311,582 B2

Before JEFFREY S. SMITH, TRENTON A. WARD, and PETER P. CHEN,
Administrative Patent Judges.

SMITH, *Administrative Patent Judge.*

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, Commscope Technologies, LLC, filed a Petition for *inter partes* review of claims 1–28 of U.S. Patent No. 8,311,582 B2 (Ex. 1001, “the ’582 patent”). Paper 1 (“Pet.”). Patent Owner, Communications Components Antenna Inc., filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); *see* 37 C.F.R. § 42.108.

Upon consideration of the Petition and the Preliminary Response, we are not persuaded Petitioner has demonstrated a reasonable likelihood that it would prevail in establishing the unpatentability of claims 1–28 of the ’582 patent. Accordingly, we do not institute an *inter partes* review.

A. Related Matters

Neither party identifies any other matter related to the ’582 patent.

B. The ’582 Patent

The ’582 patent is titled “Asymmetrical beams for spectrum efficiency,” and relates generally to improving sector capacity and throughput in an established network without creating coverage holes. Ex. 1001, 1:6–8. A sector antenna of a base station for a cellular network is replaced with a sub-sector antenna that generates a plurality of sub-sector coverage areas that collectively substantially cover the coverage area of the replaced sector antenna. *Id.* at Abstract. Figure 2 of the ’582 patent is reproduced below.

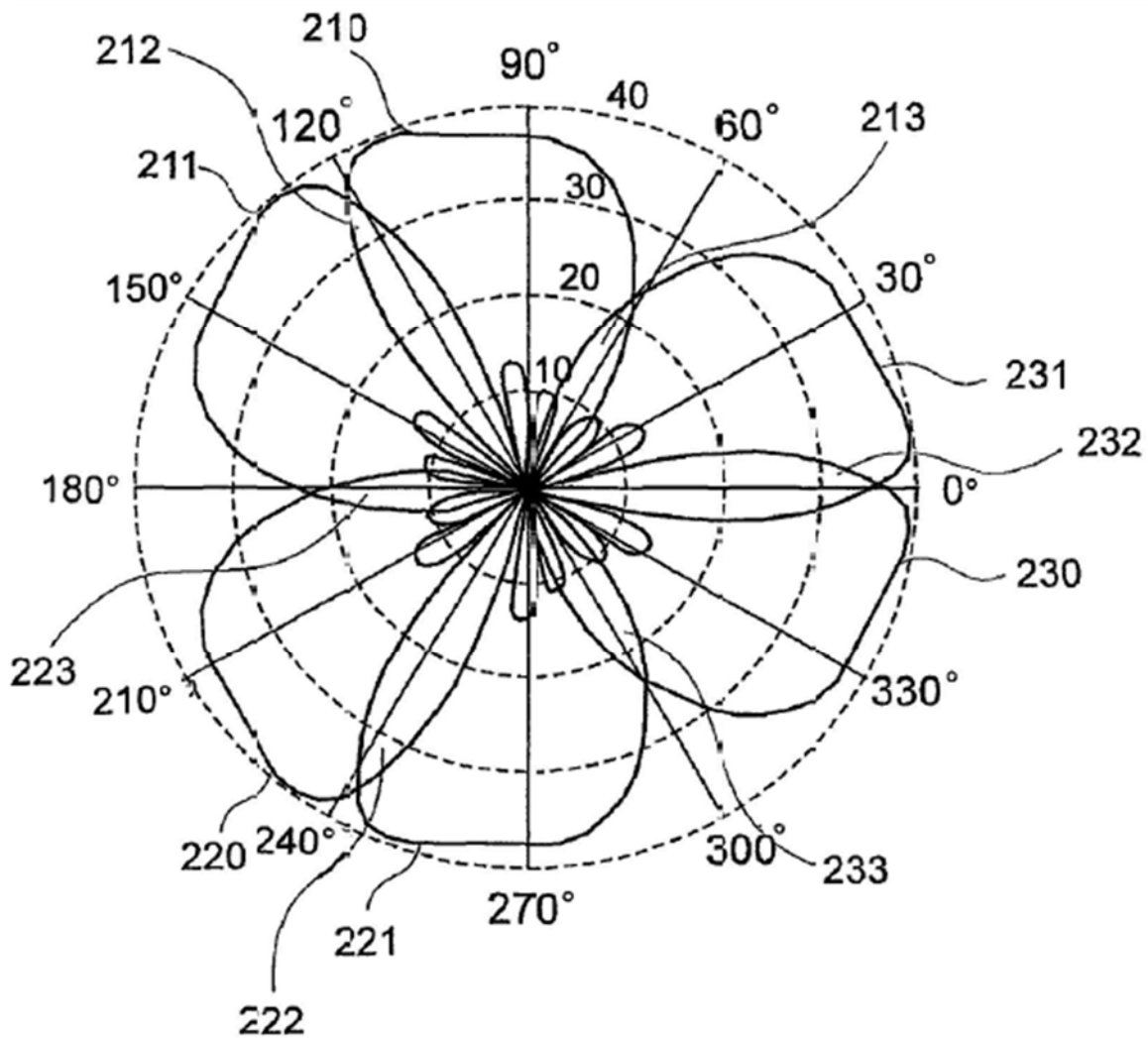


Figure 2

Figure 2 above shows three mirror-image pairs (210, 211), (220, 221), (230, 231) of asymmetrical sub-sector beams to replace a traditional three sector configuration with a six sub-sector configuration. *Id.* at 5:10–14. The use of asymmetrical beams ensures handover region reduction by means of low overlap 212 of adjacent pairs of sub-sector beams 210, 211 and low overlap 223 between sub-sector beam 211 of a first pair and sub-sector beam

220 of a second pair. *Id.* at 5:14–19. Figure 3 of the '582 patent is reproduced below.

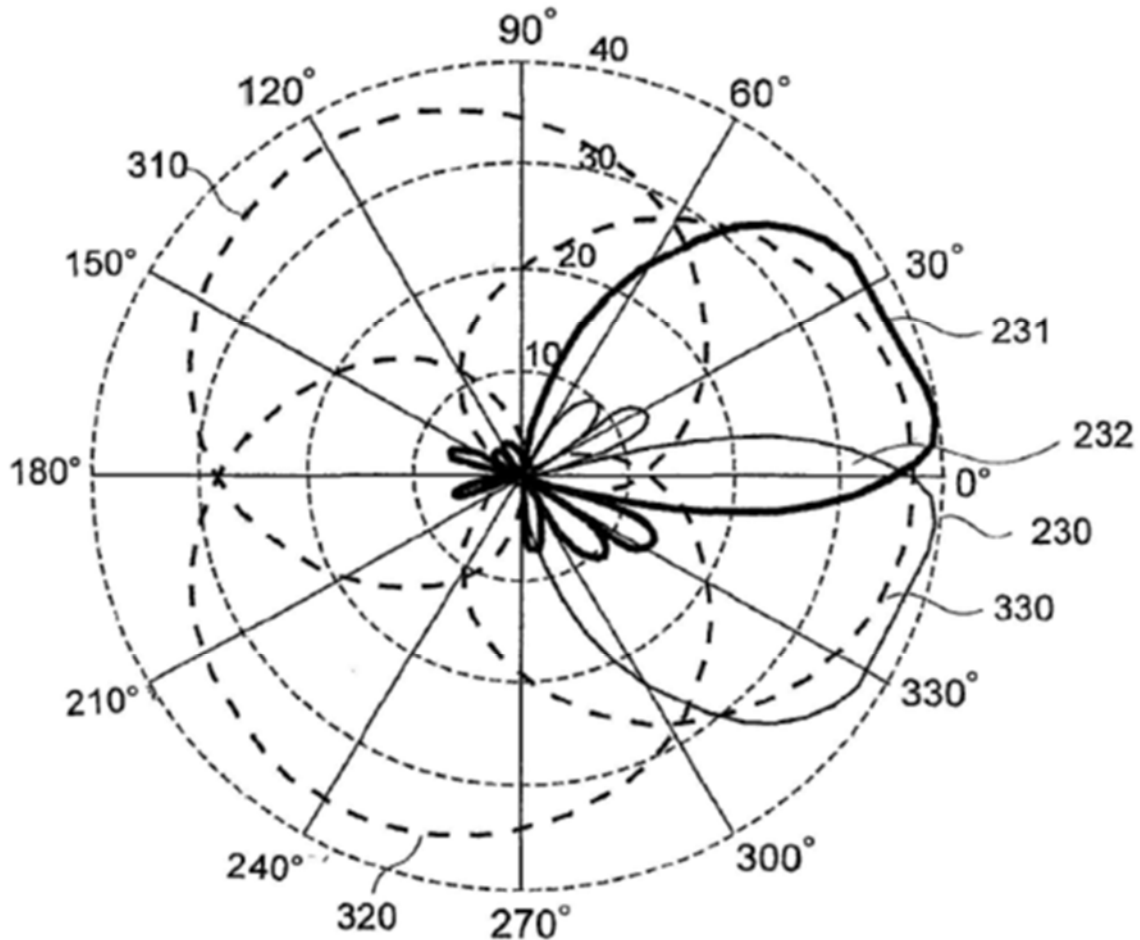


Figure 3

Figure 3 above shows sub-sector beams 230, 231, overlaying conventional full sector beam patterns 310, 320, 330 shown in dashed outline. Ex. 1001, 5:27–30. The beam patterns of the new antenna

corresponding to a sector to sub-sector upgrade have largely the same overall beam pattern as the antenna being replaced. *Id.* at 5:64–67.

According to the '582 patent, the use of the sub-sector antenna permits the selective replacement of a single sector antenna rather than replacement of all sector antennas in a region, leading to lower transitional costs. *Id.* at Abstract.

C. Illustrative Claim

Claims 1, 13, and 20 of the '582 patent are independent. Claim 1 is illustrative of the claimed subject matter:

1. A method for increasing subscriber capacity in a sectorized cellular communications network having a plurality of subscribers and a base station supporting at least one sector, each of the at least one sector having one or more associated sector antennae at the base station having a critical coverage area extending therefrom and overlapping neighbouring sectors thereof in a sector handover zone, the method comprising a step of:

replacing the associated one or more sector antennae for a given sector with a split-sector antenna having a plurality of sub-sector coverage areas extending therefrom, at least one of which is asymmetrical, each corresponding to a sub-sector and overlapping a neighbouring sub-sector coverage area in a sub-sector handover zone, whereby a total critical coverage area provided by the plurality of sub-sector coverage areas is substantially equivalent to a critical coverage area of the replaced one or more associated sector antennae, wherein said at least one asymmetrical sub-sector coverage area reduces overlap with said neighbouring sub-sector coverage area comparing to overlap of the replaced antennae while maintaining the critical coverage area of the replaced antenna.

Ex. 1001, 10:3–23.

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