

Title (en)

Method and device for enlargement of the radiation diagram for an active antenna

Title (de)

Verfahren und Vorrichtung zur Verbreiterung des Strahlungsdiagramms einer aktiven Antenne

Title (fr)

Procédé et dispositif d'élargissement du diagramme de rayonnement d'une antenne active

Publication

**EP 0703638 A1 19960327 (FR)**

Application

**EP 95402101 A 19950919**

Priority

FR 9411377 A 19940923

Abstract (en)

The method involves dividing an antenna into a number (n) of adjacent parts. A number of elements of a divided signal are applied to the parts according to a predetermined phase law. On reception, a number of beams are formed simultaneously. Each beam formed has an angular width equal to n times the angular width for the complete antenna. The relative dephasing of the beams is because each beam follows a different law. The beams are displaced to cover the angular domain desired.

Abstract (fr)

Le procédé d'élargissement de l'invention consiste à diviser l'antenne radar en n groupes de colonnes de modules actifs (MA), à appliquer, en émission, une loi de phase linéaire différente à chaque groupe, et en réception à former n<sup>2</sup> faisceaux simultanés, chacun ayant la largeur angulaire nominale de l'antenne complète, et à déplacer globalement ces faisceaux pour couvrir le domaine angulaire dans lequel l'énergie a été rayonnée à l'émission. <IMAGE>

IPC 1-7

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IPC 8 full level

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Citation (search report)

- [A] DUFORT: "Low Sidelobe Electronically Scanned Antenna Using Identical Transmit/Receive Modules", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, vol. 36, no. 3, NEW YORK US, pages 349 - 356, XP001382412
- [A] HALL ET AL.: "Integrated Multiple Beam Microstrip Arrays", MICROWAVE JOURNAL, vol. 35, no. 1, DEDHAM US, pages 103 - 114, XP000297304
- [A] MAILLOUX: "Antenna Array Architecture", PROCEEDINGS OF THE IEEE, vol. 80, no. 1, NEW YORK US, pages 163 - 172, XP000294639

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