

Title (en)

Method for enlarging the radiation diagram of an antenna array with elements distributed in a volume

Title (de)

Verfahren zur Verbreiterung des Strahlungsdiagramms einer Gruppenantenne mit verteilten Elementen in einem Volumen

Title (fr)

Procédé d'élargissement du faisceau d'une antenne stérique

Publication

**EP 0762534 B1 20001122 (FR)**

Application

**EP 96401829 A 19960827**

Priority

FR 9510167 A 19950829

Abstract (en)

[origin: EP0762534A1] The method involves use of an electronic scanning aerial with radiating elements which are distributed inside a volume to be arranged over a reflecting surface. This surface may be plane or a surface of revolution. The width of the beam is widened in a given direction, without causing asymmetric deformations or significantly increasing the secondary lobes. A phase excitation pattern is applied to the radiating elements and an index value is taken for each radiating element according to the expression  $n = (2\pi/\lambda)P_n + 2k\pi$ , where  $\lambda$  is the wavelength of the radiation emitted or received and  $P_n$  is the distance between the radiating element of index  $n$  and the point on the outside of the aerial situated on the directional axis on the opposite side from the aimed direction.

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IPC 8 full level

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CPC (source: EP US)

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