

Title (en)

Multi-mode beam forming networks for multi beam reflector antenna.

Title (de)

Netzwerk zur Strahlformung für eine Mehrmoden-Mehrstrahl-Reflektorantenne.

Title (fr)

Réseau de formation de faisceaux pour une antenne multifaisceaux à modes multiples à réflecteur.

Publication

**EP 0504552 A1 19920923 (EN)**

Application

**EP 92101034 A 19920123**

Priority

IT RM910050 A 19910123

Abstract (en)

This invention concerns a partially overlapped beam antenna system, formed by a reflector, an array of radiating elements and a beam-forming network, all in a peculiar configuration which is the most innovative feature of this invention. The configuration consists of a double cascade which exploits all possible degrees of freedom applicable to the optimisation of the radiating element excitation coefficients. The optimisation of such coefficients in a multi-feed reflector system, with two or more overlapping beams, only the orthogonality of the exciters has to be ensured, each for its own coverage. This invention belongs to the electronic antenna field, with a particularly favourable application in space-borne platforms. <IMAGE>

IPC 1-7

**H01Q 3/40**

IPC 8 full level

**H01Q 3/40** (2006.01); **H01Q 25/00** (2006.01)

CPC (source: EP)

**H01Q 3/40** (2013.01); **H01Q 25/007** (2013.01)

Citation (search report)

- [Y] EP 0313057 A2 19890426 - HUGHES AIRCRAFT CO [US]
- [Y] US 4710776 A 19871201 - ROEDERER ANTOINE G [NL], et al
- [Y] EP 0261983 A2 19880330 - COM DEV LTD [CA]
- [Y] US 4633259 A 19861230 - HRYCAK PETER D [US]
- [A] US 4638317 A 19870120 - EVANS GARY E [US]
- [A] US 4231040 A 19801028 - WALKER SCOTT H

Cited by

EP0834955A3; EP1398849A1; EP0734093A1; US6922116B1

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