

Title (en)  
Orientable antenna with maintenance of the polarisations axes

Title (de)  
Orientierbare Antenne mit Bewahrung der Polarisationsachsen

Title (fr)  
Antenne orientable avec conservation des axes de polarisation

Publication  
**EP 0656671 B1 19960814 (FR)**

Application  
**EP 94402741 A 19941130**

Priority  
FR 9314452 A 19931202

Abstract (en)  
[origin: EP0656671A1] The antenna of the invention is orientable, directional, and capable of operating either in transmission, or in reception, or both. The antenna comprises at least one reflector, at least one electromagnetic radiation source comprising means of exciting this source with two linear orthogonal polarisations, and mechanical means for positioning and maintaining the source and the reflector. According to the invention, the orientation of the antenna is broken down into aiming-off and rotation around a favoured direction of propagation of the radiation, and the mechanical means making it possible to effect this rotation while maintaining the source fixed, thus preserving the orientation of the linear orthogonal polarisation axes. In a preferred embodiment, the antenna of the invention comprises a main parabolic reflector and an auxiliary hyperbolic reflector arranged in a Cassegrain geometry, and the mechanical means make it possible to effect rotation of the two reflectors about the favoured direction of the radiation, while keeping the source fixed, thus preserving the linear orthogonal polarisation axes of the beam. Applications in radar, direct broadcast by satellite, and telecommunications by radio, with frequency reuse by polarisation diversity, which is particularly advantageous for space or airborne applications. <IMAGE>

IPC 1-7  
**H01Q 3/16**

IPC 8 full level  
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