

Title (en)  
Space-filling miniature antennas

Title (de)  
raumfüllende miniaturantennen

Title (fr)  
antennes miniatures de remplissage d'espace

Publication  
**EP 2267838 A3 20110504 (EN)**

Application  
**EP 10180798 A 20000119**

Priority  
• EP 05012854 A 20000119  
• EP 00909089 A 20000119

Abstract (en)  
[origin: EP1699110A2] A novel geometry, the geometry of Space-Filling Curves (SFC) is defined in the present invention and it is used to shape a part of an antenna. By means of this novel technique, the size of the antenna can be reduced with respect to prior art, or alternatively, given a fixed size the antenna can operate at a lower frequency with respect to a conventional antenna of the same size.

IPC 8 full level  
**H01Q 1/36** (2006.01); **H01Q 1/24** (2006.01); **H01Q 1/38** (2006.01); **H01Q 9/04** (2006.01)

CPC (source: EP)  
**H01Q 1/243** (2013.01); **H01Q 1/246** (2013.01); **H01Q 1/36** (2013.01); **H01Q 1/38** (2013.01); **H01Q 9/0407** (2013.01)

Citation (search report)  
• [XY] WO 9706578 A1 19970220 - FRACTAL ANTENNA SYSTEMS INC [US], et al  
• [X] WO 9927608 A1 19990603 - COHEN NATHAN [US]  
• [X] US 4843468 A 19890627 - DREWERY JOHN O [GB]  
• [X] EP 0969375 A2 20000105 - SUN MICROSYSTEMS INC [US]  
• [Y] ES 2112163 A1 19980316 - UNIV CATALUNYA POLITECNICA [ES]  
• [A] EP 0253608 A2 19880120 - BRITISH BROADCASTING CORP [GB]  
• [X] HEINZ-OTTO PEITGEN, HARTMUT JURGENS, DIETMAR SAUPE: "chaos and fractals, new frontiers of science", 1992, SPRINGER, new york, ISBN: 0-387-97903-4, XP002608394  
• [X] HANS LAUWERIER: "fractals, endlessly repeated geometrical figures", 1991, PRINCETON UNIVERSITY PRESS, new jersey, ISBN: 0-691-02445-6, pages: 1, XP002608395

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**EP 1699110 A2 20060906; EP 1699110 A3 20061115**; EP 1724874 A2 20061122; EP 1724874 A3 20070725; EP 2267838 A2 20101229; EP 2267838 A3 20110504

DOCDB simple family (application)  
**EP 06007350 A 20000119**; EP 06120498 A 20000119; EP 10180798 A 20000119