

Title (en)  
IMPROVED MICROCELL SYSTEM FOR CELLULAR TELEPHONE SYSTEMS

Publication  
**EP 0502019 A4 19930804 (EN)**

Application  
**EP 90917097 A 19901018**

Priority  
US 43280089 A 19891107

Abstract (en)  
[origin: WO9107043A1] An improved microcell system for cellular telephone systems has a plurality of contiguous cells (201, 202, 203, etc.), wherein the cells are configured in a plurality of clusters (241-246, etc.) with each cell in a cluster having a different assigned set of transmission frequencies. Each frequency is assignable to a given mobile telephone within the cell for all locations of the mobile telephone within the cell. Frequency handoffs are provided for maintaining continuous communication from cell to cell. Each cell is provided with antennas (13, 15, 17) arranged and configured to limit propagation of signals substantially to one of a plurality of regions within the boundaries of the cell. Transmission at any one frequency is confined to the zone (132, 152, 172) wherein the strongest signal is received from the mobile telephone. Accordingly, the clusters of cells may be arranged with a frequency reuse pattern of three (200) and a ratio of co-channel separation to cell radius of less than four.

IPC 1-7  
**H04M 11/00**; **H04B 7/00**

IPC 8 full level  
**H01Q 21/22** (2006.01); **H04B 7/26** (2006.01); **H04W 16/02** (2009.01); **H04W 16/12** (2009.01); **H04W 16/24** (2009.01); **H04W 16/32** (2009.01); **H04W 36/18** (2009.01); **H04W 88/08** (2009.01)

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Citation (search report)  
[X] THE BELL SYSTEM TECHNICAL JOURNAL vol. 60, no. 8, October 1981, US pages 1891 - 1904 HENRY ET AL. 'A New Approach to High-capacity Digital Mobile Radio'

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