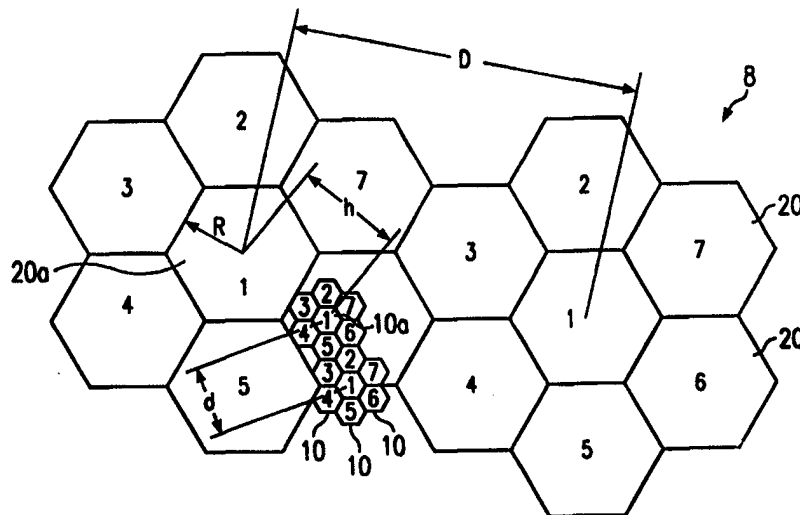




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Title: METHOD AND APPARATUS FOR CONFIGURING PN-OFFSETS FOR A NON-UNIFORM CDMA CELLULAR NETWORK



## (57) Abstract

A method for configuring a spread spectrum cellular network for small-cell inclusion, by providing a finite series of PN-offsets, each PN-offset is separated by a constant value that is allotted to the spread spectrum cellular network (8). The finite series is portioned into a first and a second set. The second set subsequent to the first set and having sufficient PN-offset elements for a PN-offset reuse pattern having a plurality of cells (20), each cell having similar transmission characteristics. The second set is assigned to the PN-offset reuse pattern, deploying the cellular reuse pattern for a cellular network. Small cells (10) are insertable into the spread spectrum cellular network by assigning the first set to a PN-offset reuse pattern having a plurality of small cells (10) arranged in a small-cell reuse pattern, and deploying the small-cell reuse pattern. In another aspect, the method for configuring the spread spectrum cellular network involves sectoring each cell of the plurality of cells into a plurality of sectors. The sectored cells are assigned PN-offsets adjacent in the finite series together in each sector of the sectored cell while maintaining sufficient distance between cells that reuse an assigned PN-offset.

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 98/08726

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 6 H04Q7/36

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 95 22210 A (QUALCOMM INC) 17 August 1995  see abstract see page 6, line 30 - page 7, line 23 see page 8, line 4 - line 23 see page 10, line 23 - page 11, line 5 see page 17, line 36 - page 18, line 15 ---	1, 13, 14, 18, 19, 24, 28
A	WO 93 21699 A (ERICSSON TELEFON AB L M) 28 October 1993 see abstract see page 3, line 27 - page 5, line 7 see page 7, line 14 - page 8, line 34 see figure 2  --- -/--	1, 14, 19, 24, 28

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	<p>CHANG C R ET AL: "PN OFFSET PLANNING STRATEGIES FOR NON-UNIFORM CDMA NETWORKS" 1997 IEEE 47TH. VEHICULAR TECHNOLOGY CONFERENCE, PHOENIX, MAY 4 - 7, 1997, vol. 3, no. CONF. 47, 4 May 1997, pages 1543-1547, XP000738621                      INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS                      see page 1544, left-hand column, line 13 - line 28                      see page 1545, right-hand column, line 11 - page 1546, right-hand column, line 30                      see figures 1-6</p> <p style="text-align: center;">-----</p>	<p>1-5,7, 9-14,16, 18</p>

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