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(54) Title: TAILORED COVERAGE AREA FOR ADAPTIVE ANTENNAS

(57) Abstract: A method and system for tailoring the coverage area of one or more cells in a radiocommunication system is disclosed. Cell coverage is tailored through the definition of a cell profile which may include a power profile and/or a hysteresis profile. Use of a cell power profile permits the system operator to adjust the antenna radiation patterns of appropriate base stations throughout the network. Use of a cell hysteresis power profile further permits the system operator to make additional adjustments to the borders of cells, for the purpose of hand-off, beyond the cell border adjustments implemented by the cell power profile. Definition of power and/or hysteresis profiles advantageously allows the system operator to tailor the borders of each cell in the network without necessarily having to add or relocate base stations.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/00722

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC7: H04B 7/005, H04Q 7/38  
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)

IPC7: H04B, 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 practicable, 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.
X	Eighth International Conference on Antennas and Propagation, 1993, pages 72-75, vol. 1, Arowojolu, A.A. et al: "Controlling the coverage area of a microcell". --	1-32
X	IEEE 38th Vehicular Technology Conference, 1988, pages 340-343, 15-17 June 1988, D.Munoz-Rodriguez et al: "Forecasting techniques in call hand-offs for cellular communication". --	1-32
X	1999 IEEE International Conference on Personal Wireless Communication, pages 436-440, P. Marichamy et al: "On threshold setting and hysteresis issues of handoff algorithms", see abstract, page 437, part 2 --	1-32

Further documents are listed in the continuation of Box C.       See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search <b>1 Sept 2000</b>	Date of mailing of the international search report <b>19. 10. 2000</b>
Name and mailing address of the ISA/ European Patent Office  Facsimile No.	Authorized officer  <b>FREDRIK BLOMQUIST/AE</b> Telephone No.

## INTERNATIONAL SEARCH REPORT

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PCT/SE 00/00722

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5432842 A (Y. KINOSHITA ET AL.), 11 July 1995 (11.07.95), abstract  --	1-32
A	EP 0911992 A2 (HUGHES ELECTRONICS CORPORATION), 28 April 1999 (28.04.99), column 2, line 48 - column 3, line 33; column 4, line 31 - column 5, line 47  -- -----	1-32

## INTERNATIONAL SEARCH REPORT

Information on patent family members

08/05/00

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5432842 A	11/07/95	JP 4290098 A	14/10/92
EP 0911992 A2	28/04/99	CA 2250650 A	17/04/99