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[Continued on next page]

(54) Title: METHOD FOR RESOURCE UNIT ALLOCATION FOR WIRELESS COMMUNICATION, SUBSCRIBER STATION AND BASE STATION

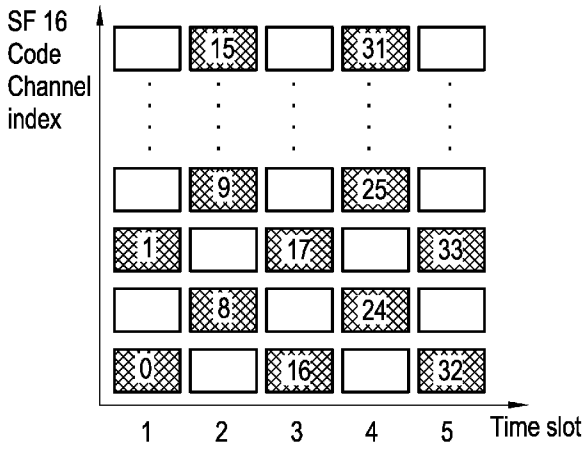


Fig. 5

(57) Abstract: A method for wireless communication between a base station and a plurality of subscriber stations is described wherein a communication capacity is partitioned in resource units at least by code multiplexing, which resource units are distributed by the base station over said devices, wherein data from each subscriber station is spread by means of a signature sequence, characterized in that multiple resource units assigned to a common subscriber station have the same signature sequence. According to another embodiment, at least one resource unit distributed over time slots and code channels is assigned two or more signature sequences.

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FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/051016

A. CLASSIFICATION OF SUBJECT MATTER
INV. H04B1/707 H04J13/00

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)
H04B H04J

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)
EPO-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"LCR TDD: Structure and Coding for E-AGCH and E-HICH" 3GPP TSG RAN WG1#46, [Online] 1 September 2006 (2006-09-01), XP002492387 Tallin, Estonia Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/wg1_rl1/TSGR1_46/Docs/> [retrieved on 2008-08-14] paragraphs [2.1.2], [03.2]; figures 4-6; table 1 ----- -/--	1,2,7,8

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

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"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)

"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

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 August 2008	04/12/2008

Name and mailing address of the ISA/	Authorized officer
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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2008/051016

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"LCR TDD: Structure and Coding for E-HICH" 3GPP TSG RAN WG1#47BIS, [Online] 19 January 2007 (2007-01-19), XP002492388 Sorrento, Italy Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/wg1_rl 1/TSGR1_47bis/Docs/> [retrieved on 2008-08-14] paragraph [02.1]; figures 1-4 -----	1,2,7,8
A	SOYOUNG PARK, MINJUNG KIM AND NAK-MYEONG KIM: "An Enhanced Adaptive Time Slot Assignment using Access Statistics in TDKDMA TDD System" VTC, [Online] 2001, XP002492389 ISSN: 0-7803-6728-6 Retrieved from the Internet: URL:http://ieeexplore.ieee.org/iel5/7508/2 0442/00944895.pdf?arnumber=944895> [retrieved on 2008-08-14] the whole document -----	1,2,7,8

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2008/051016

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1,2,7,8

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,2,7,8

Claims 1, 7 and 8 relate to the fact that a communication capacity is partitioned in resource units at least by code multiplexing, which resource units are distributed by the base station over said devices, wherein data from each subscriber station is spread by means of a signature sequence and multiple resource units assigned to a common subscriber station have the same signature sequence. Claim 2 further relates to the fact that two or more resource units in mutually adjacent code channels share the same signature.

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2. claim: 3

Claim 3 relates to the fact that multiple resource units assigned to a common subscriber station have the same signature sequence and two or more resource units in the same code channel and in mutually adjacent time-slots have the same signature.

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3. claims: 4-5

Claims 4 -5 relate to the fact that multiple resource units assigned to a common subscriber station have the same signature sequence and the number of signature sequences is limited to a predetermined maximum.

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4. claim: 6

Claim 6 relates to the fact that at least one resource units is assigned two or more signature sequences.
