

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 January 2009 (22.01.2009)

PCT

(10) International Publication Number  
**WO 2009/012322 A3**

- (51) **International Patent Classification:**  
*H04B 7/26* (2006.01)
- (21) **International Application Number:**  
PCT/US2008/070203
- (22) **International Filing Date:** 16 July 2008 (16.07.2008)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**  
11/779,201 17 July 2007 (17.07.2007) US
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, 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).

**Declarations under Rule 4.17:**

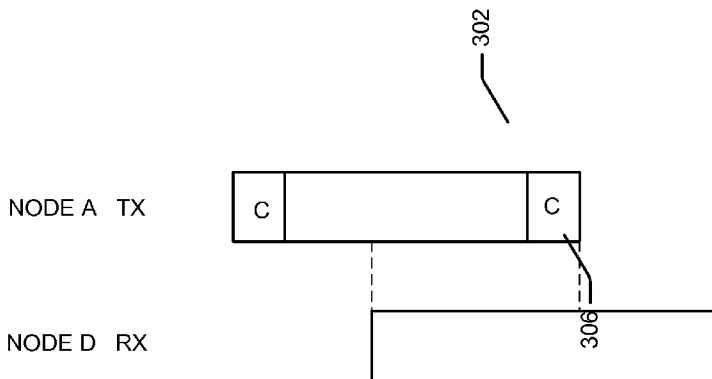
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

**Published:**

- with international search report

[Continued on next page]

(54) **Title:** CONTROL INDICATIONS FOR SLOTTED WIRELESS COMMUNICATION



**FIG. 3**

(57) **Abstract:** Multiple control indications are transmitted within timeslots defined for a slotted communication system. For example, a wireless node may transmit a control indication at a beginning of a timeslot and at an end of a timeslot. A control indication may comprise a resource utilization message that a node generates in an attempt reduce interference at the node that is caused by transmissions by neighboring nodes. A node also may synchronize to a received timeslot of another node based on the position of one or more control indications within the timeslot. Here, each control indication may include information that indicates the position of the control indication within the timeslot.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

**(88) Date of publication of the international search report:**  
30 July 2009

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/070203

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. H04B7/26

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 H04Q H04W 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, WPI Data, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 035 667 A (INMARSAT LTD [GB] INMARSAT GLOBAL LTD [GB]) 13 September 2000 (2000-09-13)	1-3,7, 11-13, 17, 21-23, 27, 31-37, 43,44, 48, 50-53, 59,60, 64, 66-69, 75,76, 80,82-84
A	abstract	4,14,24, 38,41, 42,54, 57,58, 70,73,74
	-/--	

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.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

9 June 2009

Date of mailing of the international search report

17/06/2009

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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/070203

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	paragraph [0010] paragraphs [0030] - [0032] paragraphs [0054] - [0060] figures 6a, 9a, 9b, 9c ----- US 2002/009065 A1 (MOLKO CHRISTOPHE [FR]) 24 January 2002 (2002-01-24)	1-3, 7, 11-13, 17, 21-23, 27, 31-37, 43, 44, 48, 50-53, 59, 60, 64, 66-69, 75, 76, 80, 82-84
X	abstract paragraph [0008] paragraph [0013] paragraphs [0016] - [0019] paragraph [0026] paragraph [0043] paragraph [0052] figures claims ----- WO 2004/032380 A (ARRAYCOMM INC [US]) 15 April 2004 (2004-04-15)	1-3, 7, 11-13, 17, 21-23, 27, 31-37, 43, 44, 48, 50-53, 59, 60, 64, 66-69, 75, 76, 80, 82-84
	abstract page 27, lines 1-24 figure 2 ----- -/--	

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2008/070203

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/109988 A1 (SAMPATH ASHWIN [US]) 17 May 2007 (2007-05-17)	1,5,10, 11,15, 20,21, 25, 30-34, 39,49, 50,55, 65,66, 71,81-84
A	abstract  paragraph [0006] paragraphs [0008] - [0013] paragraph [0033] paragraphs [0037], [0038] paragraphs [0044] - [0051] paragraph [0063] paragraph [0066] paragraph [0071] paragraph [0079] paragraph [0082] paragraphs [0099], [0100] -----	6,16,26, 40,56,72
A	US 2007/105574 A1 (GUPTA RAJARSHI [US] ET AL) 10 May 2007 (2007-05-10) cited in the application  the whole document -----	5,6,15, 16,25, 26,39, 40,55, 56,71,72
A	WO 99/12273 A (ERICSSON TELEFON AB L M [SE]) 11 March 1999 (1999-03-11)  abstract page 5, lines 18-22 page 6, lines 11-24 page 7, lines 2-20 -----	8,9,18, 19,28, 29, 45-47, 61-63, 77-79
A	WO 00/57581 A (SIEMENS AG [DE]; KOEHN REINHARD [DE]; ULRICH THOMAS [DE]; KLEIN ANJA []) 28 September 2000 (2000-09-28)  the whole document -----	8,9,18, 19,28, 29, 45-47, 61-63, 77-79

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2008/070203

## 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 report covers 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.:

### 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:

1-4,7,11-14,17,21-24,27,31,32,33,34-38,  
41-44,48,50-54,57-60,64,66-7  
0,73-76,80,82,83,84

interference management in wireless communications  
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2. claims: 5,6,15,16,25,26,39,40,55,56,71,72

resource utilization management in wireless communications  
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3. claims: 8,9,18,19,28,29,45-47,61-63,77-79

Providing information relative to the position of control  
information within a timeslot  
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4. claims: 10,20,30,49,65,81

Duplexing method in wireless slotted communications  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2008/070203
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