

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 May 2004 (21.05.2004)

PCT

(10) International Publication Number  
WO 2004/043128 A3

(51) International Patent Classification<sup>7</sup>: H04Q 7/38

(21) International Application Number:  
PCT/US2003/034502

(22) International Filing Date: 29 October 2003 (29.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/422,656 30 October 2002 (30.10.2002) US  
10/447,630 28 May 2003 (28.05.2003) US

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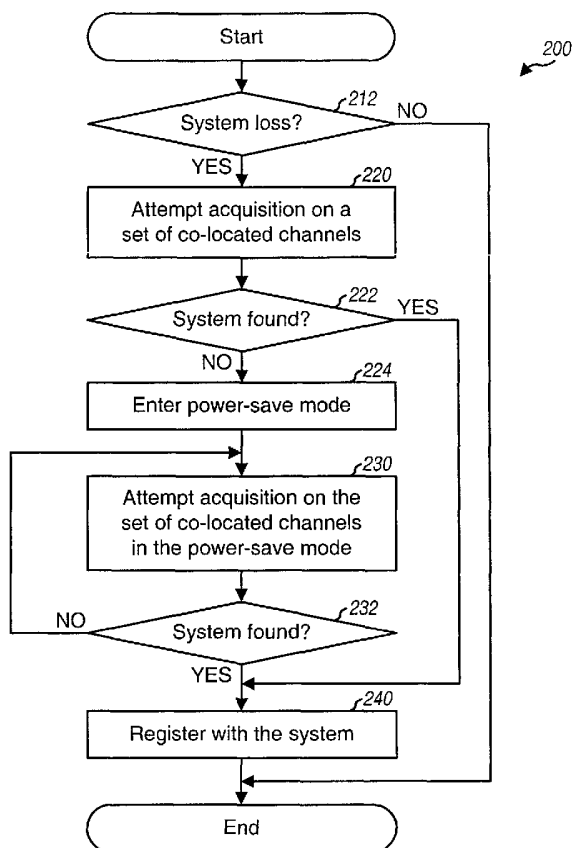
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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR PERFORMING ACQUISITION IN POWER SAVE MODE FOR WIRELESS COMMUNICATION SYSTEMS



(57) Abstract: Techniques to efficiently attempt acquisition of a packet data system (e.g., an IS-856 system). If a terminal has acquired one or more channels in a voice/data system (e.g., an IS-2000 system), then it can attempt acquisition on channels in the packet data system that are co-located with the acquired channels in the voice/data system. Multiple acquisition modes may be used, and on-going acquisition attempts on the co-located channels may be performed using one acquisition mode at a time in order to reduce power consumption. Acquisition attempts may be performed in a "ping-pong" manner to improve the likelihood of acquisition. For a ping-pong search, an acquisition attempt is made on the most recently acquired channel prior to an acquisition attempt on each of the remaining channels. Received signal strength estimates may also be obtained for selected channels and may be used to determine whether or not to attempt acquisition on these channels.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**(88) Date of publication of the international search report:**  
3 February 2005

**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 03/34502

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04Q7/38

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)  
IPC 7 H04Q H04B

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 924 038 A (UISTOLA ARI) 13 July 1999 (1999-07-13)	1-3, 5-14
Y	column 1, line 6 - column 4, line 23 column 5, line 4 - column 6, line 65 claims 1-4 figures 1-4	4
X	----- US 6 343 070 B1 (KLAS KEVIN ET AL) 29 January 2002 (2002-01-29)	23-25
Y	column 3, lines 17-53 column 4, lines 28-64 column 5, lines 8-13 column 7, line 2 - column 11, line 5 figures 2-7  ----- -/--	4

Further documents are listed in the continuation of box C.       Patent family members are listed in annex.

° Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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.</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search  <b>25 October 2004</b>	Date of mailing of the international search report  <b>04. 11. 2004</b>
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <b>Pérez, M</b>
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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 03/34502

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 5 517 677 A (MOON BILLY G) 14 May 1996 (1996-05-14) figures 3-6 column 3, line 39 - column 5, line 54 claim 21 -----	23-25
X	WO 01/76088 A (QUALCOMM INC) 11 October 2001 (2001-10-11)	26,27, 30-34
Y	page 5, line 22 - page 6, line 10 page 8, line 1 - page 9, line 24 page 10, line 5 - page 11, line 16 page 13, line 19 - page 18, line 4 page 22, line 29 - page 23, line 25 figures 5,8 -----	28,29
A	US 5 781 543 A (AULT JAN C ET AL) 14 July 1998 (1998-07-14)	15-22
Y	column 1, lines 6-10 column 3, lines 6-60 column 6, line 2 - column 9, line 60 figure 3 -----	28,29
A	US 5 805 648 A (SUTTON TODD R) 8 September 1998 (1998-09-08) column 2, lines 87-37 column 3, line 30 - column 4, line 19 column 5, line 8 - column 7, line 35 figures 1,3,5 -----	15-22

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 03/34502

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 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 all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
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.

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: 1-14:23-25

1.1. claims: 1-14

In a multisystem environment; the channels on which the wireless device can make an efficient acquisition attempt on a second (preferred) wireless communication system, are determined based on information obtained from the first (acquired) system.

1.2. claims: 23-25

Channel acquisition attempts in a system. The channels are ranked in a list according to the elapsed time since the channels were last acquired and the acquisition attempts are made following the ranking-list.

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2. claims: 15-22

Channel acquisition attempts in a system, using different acquisition modes.

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3. claims: 26-34

Channel acquisition attempts in a system. The acquisition attempts is made based in the signal strength of the channel.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/34502

Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date
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