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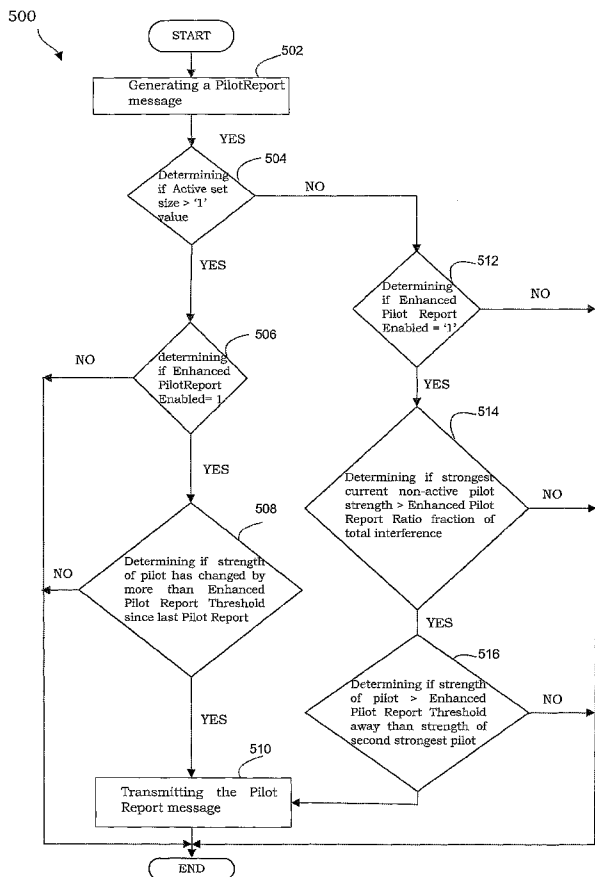
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**Declarations under Rule 4.17:**

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

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR TRANSMITTING A PILOTREPORT MESSAGE IN A WIRELESS COMMUNICATION SYSTEM



(57) Abstract: A method and apparatus for transmitting a PilotReport message is provided, comprising generating the PilotReport message and determining if an Active Set Size value is greater than one. In an embodiment, the access terminal will send a PilotReport message if one of the following conditions occurs : If the Active Set Size is greater than one, and EnhancedPilotReportEnabled = 1, and The strength of a pilot in the active set has changed by more than an EnhancedPilotReportThreshold since the last PilotReport was sent . If the Active Set Size is one, and EnhancedPilot ReportEnabled = 1, and The strongest current non-active pilot (for example, pilot j) has strength more than the EnhancedPilotReportRatio fraction of the total interference, and The strength of pilot j is more than EnhancedPilotReportThreshold away than the strength of the second strongest pilot at the time the last pilot report was sent.

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— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

**(88) Date of publication of the international search report:**  
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# INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> INV. H04L12/28 ADD. H04Q7/38				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) H04Q H04L				
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				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
Y	3GPP2: "cdma2000 High Rate Packet Data Air Interface specification, chapter 9: Connection Layer" C.S0024-A, VERSION 1.0, March 2004 (2004-03), pages 9-1-9-143, XP002424014 paragraphs [9.7.6.1.2.5], [9.7.6.1.5.1], [9.7.6.1.6.5]	1-9		
Y	US 2002/119787 A1 (HUNZINGER JASON F [US]) 29 August 2002 (2002-08-29) paragraph [0024] - paragraph [0027] paragraph [0034] - paragraph [0036] paragraph [0043] - paragraph [0046]	1-9		
A	WO 00/18173 A (QUALCOMM INC [US]) 30 March 2000 (2000-03-30) page 8, line 1 - page 9, line 31	1-9		
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.				
<input checked="" type="checkbox"/> See patent family annex.				
* Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                     *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                 </td> <td style="width: 50%; border: none; vertical-align: top;">                     *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.                      *&amp;* document member of the same patent family                 </td> </tr> </table>			*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
*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			
21 March 2007	28/03/2007			
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  <p style="text-align: center; font-weight: bold;">Bösch, Michael</p>			

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International application No  
PCT/US2006/042599

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/043251 A (SIEMENS AG [DE]; KERN RALF [DE]; BOLINTH EDGAR [DE]) 22 May 2003 (2003-05-22) page 2, line 22 - page 3, line 26 page 13, line 11 - line 26 page 38, line 1 - line 28 -----	1-9
P,X	TOMCIK J ET AL: "QFDD and QTDD: Proposed Draft Air Interface Specification, chapter 6, Lower MAC Control Sublayer" IEEE C802.20-05/69, XX, XX, 28 October 2005 (2005-10-28), pages I-XXXI,1, XP002423447 paragraph [6.6.5.7.3] -----	1-9

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2006/042599
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002119787	A1	29-08-2002	NONE
<hr/>			
WO 0018173	A	30-03-2000	AT 349146 T 15-01-2007
			AU 764067 B2 07-08-2003
			AU 6155099 A 10-04-2000
			BR 9913883 A 16-10-2001
			CA 2344482 A1 30-03-2000
			CN 1322450 A 14-11-2001
			EP 1116407 A1 18-07-2001
			ID 28725 A 28-06-2001
			JP 2002526000 T 13-08-2002
			NO 20011432 A 22-05-2001
			RU 2233560 C2 27-07-2004
			UA 64012 C2 17-09-2001
			US 2002049060 A1 25-04-2002
			US 6360100 B1 19-03-2002
<hr/>			
WO 03043251	A	22-05-2003	AU 2002358513 A1 26-05-2003