



**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US07/11878

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC: **H04B 7/14(2006.01);H04B 3/36(2006.01)**  
  
 USPC: 370/279,315;455/7,20  
 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)  
 U.S. : 370/279,315;455/7,20

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)  
 EAST

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2004/0185794 A1 (JEONG et al) 23 September 2004 (23.09.2004), abstract, figure 1, paragraph 0135, figure 5.	1-2, 4-5, 7, 11, 15-16, 20, 33-34
Y	US 2004/0047319 A1(ELG) 11 March 2004 (11.03.2004), Title, abstract, paragraphs 0008, 0009, 00038.	1-2, 7-9, 11, 16, 18-20, 25, 27, 33
Y	US 2006/0098715 A1 (AMANO) 11 May 2006 (11.05.2006), abstract, paragraphs 0007 - 0013.	3, 6, 17, 24, 27
Y	US 2002/0028655 A1 (ROSENER et al) 07 March 2002 (07.03.2002), Title, abstract, paragraphs 0003, 0011, 0014, 0039, 0044, 0048, 0049, claim 68.	10, 26
Y	US 2005/0157674 A1 (WENTINK) 21 July 2005 (21.07.2005), paragraph 0041.	14, 23

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"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: 24 August 2008 (24.08.2008)      Date of mailing of the international search report: 11 SEP 2008

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