(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 4 September 2003 (04.09.2003)

PCT

(10) International Publication Number WO 2003/073665 A3

(51) International Patent Classification⁷:

H04J 13/00

ham

[US/US]; 20 East University Drive, Suite 210, Temple, AZ 85287 (US).

(74) Agent: PECK, John, W.; Christie, Parker & Hale, LLP,

(21) International Application Number:

PCT/US2003/005541

350 West Colorado Boulevard, Suite 500, Post Office Box 7068, Pasadena, CA 91109-7068 (US).

(22) International Filing Date: 22 February 2003 (22.02.2003)

(25) Filing Language:

(81) Designated States (national): CA, JP, US.

(26) Publication Language:

English

English

(30) Priority Data:

60/358,893 22 February 2002 (22.02.2002) US 60/362,532 6 March 2002 (06.03.2002) US (84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR).

Published:

with international search report

(71) Applicant (for all designated States except US): ARIZONA BOARD OF REGENTS [US/US]; P.O. Box 873511, Tempe, AZ 85287-3511 (US).

(88) Date of publication of the international search report:

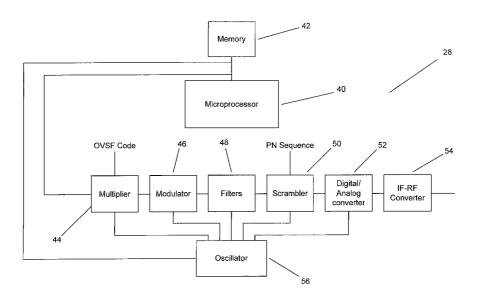
22 January 2004

(72) Inventor; and

(75) Inventor/Applicant (for US only): CAM, Hasan

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.

(54) Title: NONBLOCKING OVSF CODES FOR 3G WIRELESS AND BEYOND SYSTEMS



(57) Abstract: Methods and apparatus are described for transmitting data using a wideband code division multiple access (WCDMA) transmission scheme that utilizes OVSF codes that are assigned in ways that do not result in underutilization of the network due to code blocking. One embodiment of the invention includes a WCDMA transmitter (28) configured to spread data using an orthogonal variable spreading factor (OVSF) code (44) and to periodically transmit the spread data for a predetermined time until all of the data has been transmitted. In some cases, the amount of time in each period that is assigned for transmission of the spread data is determined based on the quality of service requirements of the data.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/US03/05541

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : H04J 13/00		
US CL : 370/335, 342		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
	In all a distributions are hole)	
Minimum documentation searched (classification system followed by classification symbols)		
U.S. : 370/335, 342		
Documentation searched other than minimum documentation to the	avitant that much documents are included in the fields searched	
Documentation searched other than minimum documentation to the	e extent that such documents are included in the fields seatened	
Electronic data base consulted during the international search (nar	ne of data base and, where practicable, search terms used)	
Please See Continuation Sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category * Citation of document, with indication, where ap	propriate, of the relevant passages Relevant to claim No.	
X, P US 2003/0031158 A1 (KASTURI et al) 13 February	7 2003 (13.02.2003), paragraphs 0021 1, 2, 4-6	
and 0024.		
mid 002 11		
,		
	•	
Further documents are listed in the continuation of Box C.	See patent family annex.	
* Special categories of cited documents:	"T" later document published after the international filing date or	
Special categories of cited documents.	priority date and not in conflict with the application but cited to	
"A" document defining the general state of the art which is not considered to	understand the principle or theory underlying the invention	
be of particular relevance	were	
war and a self-reliance research whilehold on or often the international filing	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive	
"E" earlier application or patent published on or after the international filing date	step when the document is taken alone	
	•	
"L" document which may throw doubts on priority claim(s) or which is cited	"Y" document of particular relevance; the claimed invention cannot be	
to establish the publication date of another citation or other special reason	considered to involve an inventive step when the document is combined with one or more other such documents, such	
(as specified)	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		
Date of the actual completion of the international search	Date of mailing of the international search report	
Date of the actual completion of the mornational society	No real	
21 September 2003 (21.09.2003)	♥₫ NOV 2002	
Name and mailing address of the ISA/US	Authorized officer	
	Melvin Marcelo UGIMA ZOGAN Telephone No. 703-305-4/00	
Mail Stop PCT, Attn: ISA/US Commissioner for Patents	Melvin Marcelo /////	
P.O. Box 1450		
Alexandria, Virginia 22313-1450	Telephone No. 703-305-4700	
Facsimile No. (703)305-3230	/ "	

Form PCT/ISA/210 (second sheet) (July 1998)

	DCT (1002/05544
THE DALLES OF THE OWN DESIGNATION OF THE OWN	PCT/US03/05541
INTERNATIONAL SEARCH REPORT	
	•
Continuation of B. FIELDS SEARCHED Item 3:	
EAST	
search terms: ovsf, orthogonal variable spreading factor, cdma, wcdma	
scarch terms. Ovsi, orthogonal variable spreading factor, edina, wednik	
	•
· ·	
	·
	1