(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 22 April 2004 (22.04.2004)

PCT

(10) International Publication Number WO 2004/034618 A3

(51) International Patent Classification⁷: H04B 007/212

(21) International Application Number:

PCT/US2003/031674

(22) International Filing Date: 6 October 2003 (06.10.2003)

(25) Filing Language:

(26) Publication Language: English

(30) Priority Data:

10/266,079 7 October 2002 (07.10.2002) US

- (71) Applicant: TANTIVY COMMUNICATIONS, INC. [US/US]; 1450 South Babcock Street, Melbourne, FL 32901 (US).
- (72) Inventors: JOHNSON, Kevin, P.; 605 Pinehurst Circle N.E., Palm Bay, FL 32905 (US). ROUPHAEL, Antoine, J.; 3503 Wild Oak Lane, Escondido, CA 92027 (US). NEL-SON, George, Rodney, Jr.; 207 Sykes Loop Drive, Merritt Island, FL 32953 (US).
- (74) Agents: THIBODEAU, David, J., Jr. et al.; Hamilton, Brook, Smith & Reynolds, P.C., 530 Virginia Road, P.O. Box 9133, Concord, MA 01742-9133 (US).
- (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.

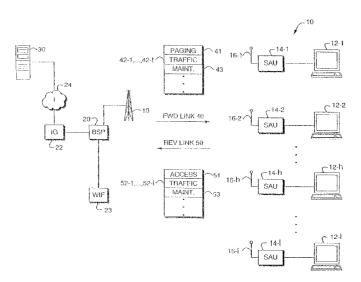
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- 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: 10 June 2004

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: RECEIVER FOR TIME DIVISION MULTIPLEX SYSTEM WITHOUT EXPLICIT TIME SLOT ASSIGNMENT



(57) Abstract: A technique for a time division multiplex system in which access to shared broadcast communication media is granted on a demand basis. Particular connections are assigned slot times at the transmitter based on demand. However, no specific information regarding the assignment of time slots need be communicated to the receivers. The transmit side employs a forward error correction technique followed by multiplication by a cover sequence unique to each connection. All receivers listen to the broadcast transmission channel all of the time. The receiver assigned to each connection decodes the data associated with that connection. Data frames that fail the forward error correction process are discarded, and only those frames which are successfully decoded are passed up to a higher layer.





INTERNATIONAL SEARCH REPORT

International application No.
PCT/US03/31674

A. CLASSIFICATION OF SUBJECT MATTER IPC(7) : H04B 007/212 US CL : 370/442,347 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.: 370/442,347			
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)			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where ap		Relevant to claim No.
X Y	US 6,463,074B1 (JOHNSON et al) 08 October 2002, col. 2 line 51-56		1,2,5-12,16,17,23- 24,27,28,29,31,32,34, 38,39,40
			3,4,13-15,19- 21,22,25,26,35-37,41- 44
х	US 4,480,155 (COSTES et al) 28 February 1989, col. 16, line 60- col. 17 line 2		3 and 4,25,26
Y	US 6,381,211B1 (LYSEJKO et al) 30 April 2002, col. 16, line 60- col. 17 line 2		13,14 and 15,35-37
A US 5,398,247A (DELPRAT et al) see entire document			
		•	
	τ		
<u> </u>			
	documents are listed in the continuation of Box C.	See patent family annex.	
opolia enegoties of once accumum.		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the	
"A" document defining the general state of the art which is not considered to be principle or theory underlying the invention of particular relevance			
"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			
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family	
Date of the a	ctual completion of the international search	Date of mailing of the international sea	rch report
26 March 2004 (26.03.2004)		26 APR 2004	
Name and mailing address of the ISA/US		Authorized officer Level - Puly	
Mail Stop PCT, Attn: ISA/US		KENNETH WIEDER	
P.O. Box 1450		U	/
Alexandria, Virginia 22313-1450 Foresimile No. (703) 305-3230			

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