${\bf (19)}\ World\ Intellectual\ Property\ Organization$

International Bureau





(43) International Publication Date 12 October 2006 (12.10.2006) CT (10) International Publication Number WO 2006/107852 A3

(51) International Patent Classification: *H04B 15/00* (2006.01)

(21) International Application Number:

PCT/US2006/012264

(22) International Filing Date: 31 March 2006 (31.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/667,969 4 April 2005 (04.04.2005) US

(71) Applicant (for all designated States except US): THAT CORPORATION [US/US]; 45 Sumner Street, Milford, Massachusetts 01757-1656 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): BARNHILL, Matthew [US/US]; 3570 Hermitage Drive, Duluth, Georgia 30096 (US).

(74) Agents: KUSMER, Toby, H. et al.; MCDEROMOTT WILL & EMERY LLP, 28 State Street, Boston, Massachusetts 02109 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, 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, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (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: 18 October 2007

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.



A3

(54) Title: SIGNAL QUALITY ESTIMATION AND CONTROL SYSTEM

(57) Abstract: A signal quality estimation and control system for controlling a signal having noise. The system may include a signal strength determination system having an input configured to receive the signal and an output configured to output information indicative of the strength of the signal, a noise strength determination system having an input configured to receive the signal and an output configured to output information indicative of the strength of the noise in the signal, and a signal quality evaluation system. The signal quality evaluation system may have an input configured to receive the output of the signal strength determination system, an input configured to receive the output from the noise strength determination system and the output from the noise strength determination system and the output from the noise strength determination system and the output from the noise strength determination system.

INTERNATIONAL SEARCH REPORT

International application No. PCT/US06/12264

Α.	CLASSIFICATION	OF SUBJECT	MATTER
Α.	CLASSIFICATION	11 20 Direct	MILLITER

IPC(8) - H04B 15/00 (2007.01)

USPC - 381/94.1

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(8) -H04B 15/00, A61F 11/06, H04N 17/00, G10L 11/00, H03D 3/00, H03D 1/00, H03B 29/00, G06F 15/00 (2007.01) USPC - 381/94.1, 381/71.1, 348/180, 704/200, 329/315, 329/347, 381/71.11, 381/71.12, 708/322

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)

USPTO Delphion (German (Apps), German (Grntd), European (Apps), European (Grntd), INPADOC, Abstracts of Japan, US (Grntd), WIPO PCT Publications, US (Apps)), MicroPatent (US Granted US Applications EP-A EP-B WO JP (bibliographic data only) DE-C,B DE-A DE-T DE-U GB-A FR-A), IP.com, DialogPro, IEEE Xplore, PAJ, ESP@CENET

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X - Y	US 5,808,671 A (MAYCOCK et al) 15 September 1998 (15.09.1998) entire document	1-3
X Y	US 6,055,318 A (WHITECAR) 25 April 2000 (25.04.2000) entire document	7 14, 16, 17
X Y	US 5,214,708 A (MCEACHERN) 25 May 1993 (25.05.1993) entire document	24-26 14
Y	US 6,324,382 B1 (DOLDER) 27 November 2001 (27.11.2001) entire document	6, 17
Υ	US 5,319,453 A (COPRIVIZA et al) 07 June 1994 (07.06.1994) entire document	16
Α	WO 01/58162 A2 (RODRIGUEZ et al) 09 August 2001 (09.08.2001) entire document	1-26
Α	US 6,434,622 B1 (MONTEIRO et al) 13 August 2002 (13.08.2002) entire document	1-26
A	US 6,816,003 B2 (KRISHNAPURA et al) 09 November 2004 (09.11.2004) entire document	1-26
Α	US 5,842,119 A (EMERSON et al) 24 November 1998 (24.11.1998) entire document	1-26

A		05 5,842,119 A (EMERSON et al) 24 November 1990	(, 1990) entire document			
Further documents are listed in the continuation of Box C.						
*	Special	categories of cited documents:	"T"	later document published after the international filing date or priority		
"A"	"A" document defining the general state of the art which is not considered to be of particular relevance			date and not in conflict with the application but cited to understand the principle or theory underlying the invention		
"E"			"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"			"Ү"	document of particular relevance; the claimed invention cannot be		
"O"	docume means	nt referring to an oral disclosure, use, exhibition or other		combined with one or more other such documents, such combination being obvious to a person skilled in the art		
"p"	docume the prio	nt published prior to the international filing date but later than rity date claimed	"&"	document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report				
04 May 2007		09 AUG 2007'				
Name and mailing address of the ISA/US		Authorized officer:				
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents		Blaine R. Copenheaver				
P.O. Box 1450, Alexandria, Virginia 22313-1450		PCT Helpdesk: 571-272-4300				
Facsimile No. 571-273-3201		PCT OSP: 571-272-7774				