(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 20 December 2001 (20.12.2001)

PCT

(10) International Publication Number WO 01/97476 A3

(51) International Patent Classification⁷: H04L 25/49

(21) International Application Number: PCT/US01/18792

(22) International Filing Date: 12 June 2001 (12.06.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

09/592.250 12 June 2000 (12.06.2000) US 09/638.192 15 August 2000 (15.08.2000) US

(71) Applicant (for all designated States except US): TIME DOMAIN CORPORATION [US/US]; 7057 Old Madison Pike, Huntsville, AL 35806 (US).

(71) Applicants and

(72) Inventors: ROBERTS, Mark, D. [US/US]; 416 Zandale

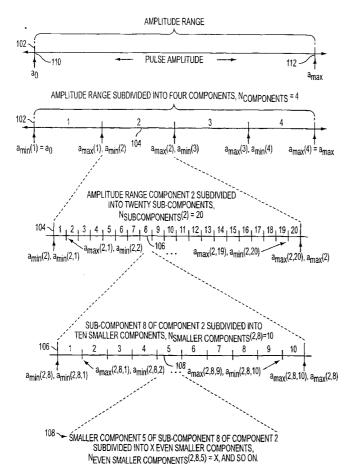
Drive, Huntsville, AL 35801 (US). **PENDERGRASS, Marcus, H.** [US/US]; 1102 Bluefield Avenue, Huntsville, AL 35801 (US). **FULLERTON, Larry, W.** [US/US]; 120 Wimbledon Drive, Brownsboro, AL 35741 (US).

(72) Inventor; and

- (75) Inventor/Applicant (for US only): COWIE, Ivan, A. [US/US]; 418 Eastview Drive, Madison, AL 35758 (US).
- (74) Agent: BABAYI, Robert, S.; Venable, Baetjer, Howard & Civiletti, LLP, Suite 1000, 1201 New York Avenue, NW, P.O. Box 34385, Washington, DC 20043-9998 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

[Continued on next page]

(54) Title: A METHOD FOR SPECIFYING NON-TEMPORAL PULSE CHARACTERISTICS



(57) Abstract: A code, comprised of at least one code element, specifies at least one non-temporal characteristic of at least one pulse. element can be mapped to a value within a layout, comprising a range of pulse characteristic values, divided into components and sub-components. The code element can be an integer, or a floating-point number, and may be used in conjunction with an absolute or relative offset value. The code element values can be subdivided into parts, that individually, or in combination, specify non-temporal pulse characteristics. The code element can be used to specify a number of characteristics of a pulse, including pulse polarity; pulse amplitude; pulse width; pulse type; and pulse position in time. The type of the pulse indicates whether the pulse is a square wave pulse, sawtooth pulse, Haar wavelet pulse, gaussian monopulse, doublet pulse, triplet pulse, or set of wavelets.

WO 01/97476 A3 |||||||||||



(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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: 6 June 2002

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.

INTERNATIONAL SEARCH REPORT

Int rional Application No

			01, 00 01, 10, 32							
A. CLASSI IPC 7	FICATION OF SUBJECT MATTER H04L25/49									
According to International Patent Classification (IPC) or to both national classification and IPC										
B. FIELDS SEARCHED										
IPC 7	ocumentation searched (classification system followed by classificate H04B G01S H04L									
	lion searched other than minimum documentation to the extent that s									
EPO-In	ata base consulted during the international search (name of data ba	se and, where practical, se	earch terms used)							
С. ДОСИМ	ENTS CONSIDERED TO BE RELEVANT									
Category °	Citation of document, with indication, where appropriate, of the rel	evant passages	Relevant to claim No.							
X	US 6 026 125 A (FONTANA ROBERT J 15 February 2000 (2000-02-15) column 1, line 24 - line 32 column 3, line 6 - line 11 column 11, line 21 - line 41 column 12, line 4 - line 15 figures 1,3,6	1-50								
X	US 5 677 927 A (FULLERTON LARRY W 14 October 1997 (1997-10-14) column 6, line 35 -column 28, lir	1-50								
E	WO 01 99305 A (PULSE LINK INC) 27 December 2001 (2001-12-27) the whole document 		1,26							
Further documents are listed in the continuation of box C. Patent family members are listed in annex.										
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 cited to understand the principle invention "X" document of particular relevance cannot be considered novel or of involve an inventive step when the constitution 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			of in conflict with the application but e principle or theory underlying the relevance; the claimed invention novel or cannot be considered to tep when the document is taken alone relevance: the claimed invention to involve an inventive step when the d with one or more other such docu— tion being obvious to a person skilled							
Date of the a	he same patent family international search report									
4	April 2002	15/04/200	15/04/2002							
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 Kampouris	Authorized officer Kampouris, A							

INTERNATIONAL SEARCH REPORT

Information on patent family members

In' ational Application No
PC I / US 01/18792

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 6026125	Α	15-02-2000	NONE	4 4 4 TO 14 1 TO 1 TO 1 TO 1 TO 1 TO 1 T	
US 5677927	A	14-10-1997	 AU	712260 B2	04-11-1999
			AU	3685595 A	09-04-1996
			CA	2200475 A1	28-03-1996
			CN	1169220 A	31-12-1997
			EP	0782791 A1	09-07-1997
			JP	10508725 T	25-08-1998
			WO	9609694 A1	28-03-1996
			US	5832035 A	03-11-1998
			US	6031862 A	29-02-2000
			US	5963581 A	05-10-1999
			US	5995534 A	30-11-1999
			US	5960031 A	28-09-1999
WO 0199305		27-12-2001	WO	0199305 A2	27-12-2001