

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/089516 A3

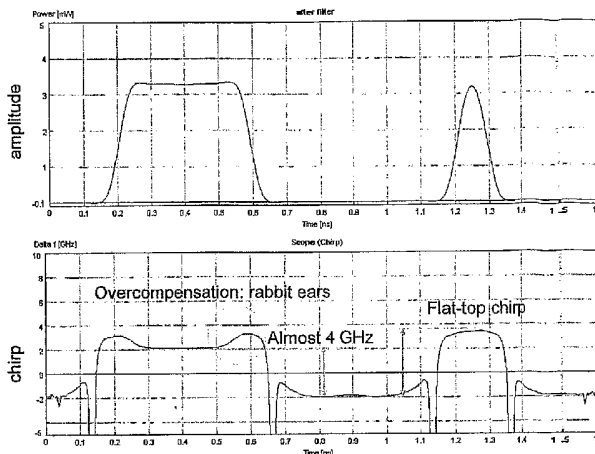
- (51) International Patent Classification:
H04B 10/04 (2006.01) *H04B 10/18* (2006.01)
H04B 10/155 (2006.01)
- (21) International Application Number:
PCT/US2005/009399
- (22) International Filing Date: 18 March 2005 (18.03.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/554,243 18 March 2004 (18.03.2004) US
60/566,060 28 April 2004 (28.04.2004) US
60/569,769 10 May 2004 (10.05.2004) US
60/569,768 10 May 2004 (10.05.2004) US
11/068,032 28 February 2005 (28.02.2005) US
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- (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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, 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, 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

[Continued on next page]

(54) Title: FLAT-TOPPED CHIRP INDUCED BY OPTICAL FILTER EDGE



Amplitude and frequency profile of pulses after an OSR. The single bit has flat-top chirp, while the 1111 bit sequence has rabbit ears.

(57) Abstract: A fiber optic communication system comprising: an optical signal source adapted to produce a binary amplitude modulated signal; and an optical spectrum reshaper adapted to receive the amplitude modulated signal (fig.3) and to change the instantaneous frequency of the signal at its 0-to-1 and 1-to-0 transitions so as to change the instantaneous frequency of the signal so that it is substantially constant across the 1 pulse. A method for transmitting a signal through a fiber, comprising: generating a second signal from the signal, wherein the second signal comprises a intensity profile and an adiabatic frequency profile; generating a third signal from the second signal, wherein the third signal comprises a intensity profile and a flat-topped frequency profile (fig.1).

WO 2005/089516 A3



— *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:
19 October 2006

(15) Information about Correction:

Previous Correction:

see PCT Gazette No. 04/2006 of 26 January 2006

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

International application No.

PCT/US05/09399

A. CLASSIFICATION OF SUBJECT MATTER IPC: H04B 10/04(2006.01),10/155(2006.01),10/18(2006.01) USPC: 398/147,149,183,186,188,192,193,398147,149,183,186,188,192,193,201 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. : 398/147, 149, 183, 186,188,192, 193, 201 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) Please See Continuation Sheet		
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 5,974,209 A CHO et al, 26 October 1999, figure 1 and figure 4 and column 4, lines 11-20.	1-4, 10-12,40,42-45 ----- 5-9,13-27,30-37,41
Y	US 6,331,991 B1 (Mehgerfteh)18 December 2001, column 10, lines 30-37; column 9, lines 58-60; column 12, lines 41-42, 45-48 and 59-60; column 4, lines 7-9 and 13-20; column 7, lines 26-28; column 2, lines 46-48 and figures 4-6.	5-9, 13-27,30-37,41
Y	US 2004/0008937 A1 (MAHGEREFTEH) 15 January 2004, see claim33, figure 7B, paragraph 57.	8,13-19
Y	YU et al, Optimization of the Frequency Response of a Semiconductor Optical Amplifier Wavelength Converter Using a Fiber Bragg Grating, JOURNAL OF LIGHTWAVE TECHNOLOGY, February 1999, Vol. 17, No.2 pp 308-315.	20,22
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Date of the actual completion of the international search 23 June 2006 (23.06.2006)	Date of mailing of the international search report 23 AUG 2006	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner of Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Leslie Pascal <i>Ruqenia Zogjan</i> Telephone No. 703-305-4700 571-272-2600	

INTERNATIONAL SEARCH REPORT

PCT/US05/09399

Continuation of B. FIELDS SEARCHED Item 3:

IEEE

search terms: instantaneous frequency