

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 February 2003 (20.02.2003)

PCT

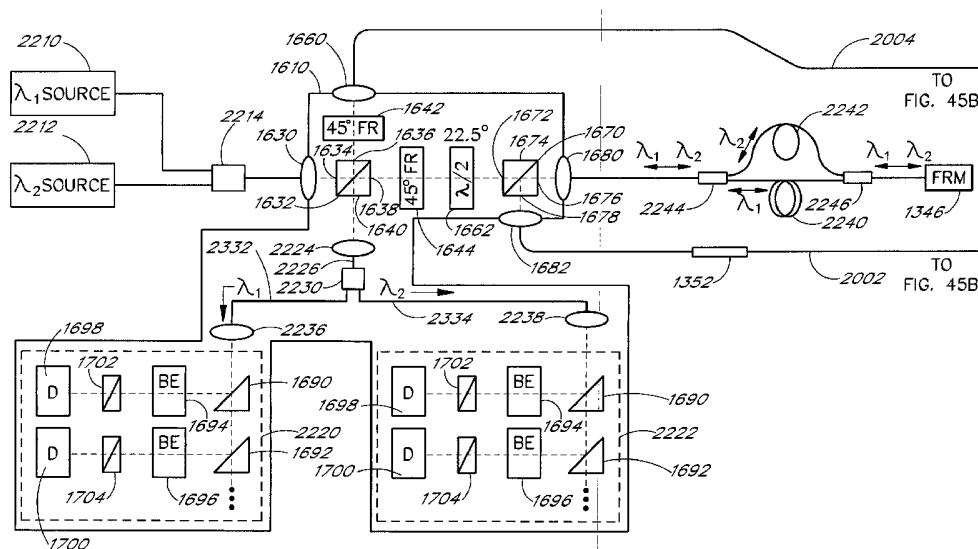
(10) International Publication Number
WO 03/014674 A3

- (51) International Patent Classification⁷: H04R 1/44, G02B 6/00
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- (21) International Application Number: PCT/US02/25246
- (22) International Filing Date: 7 August 2002 (07.08.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

60/311,757	10 August 2001 (10.08.2001)	US
60/311,874	13 August 2001 (13.08.2001)	US
60/355,657	7 February 2002 (07.02.2002)	US
- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), 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, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK (utility model), SK, SL, 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, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
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[Continued on next page]

(54) Title: TWO DELAY COIL SAGNAC-BASED SENSOR ARRAY



(57) Abstract: A folded Sagnac fiber optic sensor array uses a common delay path to reduce distributed pickup in download fibers. The sensor array is used to detect perturbations (e.g., acoustic waves in water). By basing the folded Sagnac sensor array on operating principles similar to the Sagnac interferometer the sensor array has a stable bias point, has reduced phase noise, and allows a broadband signal source to be used rather than requiring a more expensive narrowline laser. A large number of sensors can be multiplexed into the architecture of the sensor array. In one particularly preferred embodiment, the sensor array is configured with couplers and amplifiers selected to direct substantially equal portions of an input light signal to each sensor in the array. In another particularly preferred embodiment, first and second delay paths (2240 & 2242) are provided for light at first and second wavelengths (2210 & 2212) to increase the dynamic range of the sensors.

WO 03/014674 A3



Published:

— *with international search report*

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.

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

28 August 2003

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/25246

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04R 1/44; G02B 6/00
 US CL : 367/149; 385/12, 13; 250/227.14, 227.15, 227.16

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. : 367/149; 385/12, 13; 250/227.14, 227.15, 227.16

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 appropriate, of the relevant passages	Relevant to claim No.
A,P	US 6,278,657 B1 (VAKOC) 21 AUGUST 2001 (21.08.2001), ABSTRACT.	1-4

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 priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"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	

Date of the actual completion of the international search 28 October 2002 (28.10.2002)	Date of mailing of the international search report 30 MAY 2003
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