

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 November 2006 (02.11.2006)

PCT

(10) International Publication Number
WO 2006/116747 A3

(51) International Patent Classification:
H04B 10/06 (2006.01)

(21) International Application Number:
PCT/US2006/016463

(22) International Filing Date: 28 April 2006 (28.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/675,785 28 April 2005 (28.04.2005) US
11/413,675 27 April 2006 (27.04.2006) US

(71) Applicant (for all designated States except US): **SIOPTICAL, INC.** [US/US]; 7540 Windsor Drive, Lower Level, Allentown, Pennsylvania 18195 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DAMA, Bipin** [US/US]; 5 Purcell Road, Bridgewater, New Jersey 08807 (US). **SHASTRI, Kalpendu** [US/US]; 5529 Willow Way, Orefield, Pennsylvania 18069 (US). **PIEDE, David** [US/US]; 11 Jade Lane, Allentown, Pennsylvania 18104 (US).

(74) Agent: **KOBA, Wendy, W.**; Po Box 556, Springtown, Pennsylvania 18081 (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).

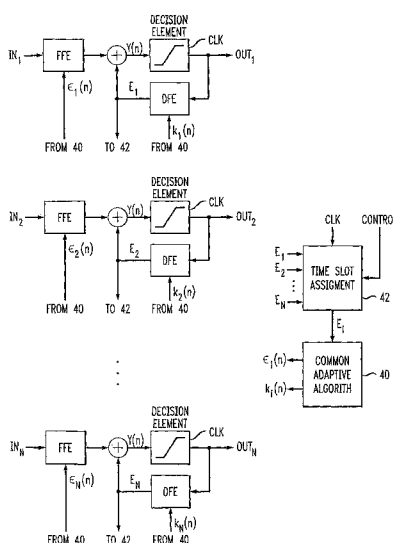
Published:

- 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:
15 November 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.

(54) Title: COMMON ELECTRONIC DISPERSION COMPENSATION ARRANGEMENT FOR USE WITH MULTIPLE OPTICAL COMMUNICATION CHANNELS



(57) Abstract: An electronic dispersion compensation (EDC) arrangement for a multi-channel optical receiver utilizes a time division technique to "share" a common adaptive algorithm block between a plurality of N separate channels. The algorithm block (40) embodies a specific algorithm associated with correcting/updating tap weights for the delay lines forming the equalizing elements, and a time slot assignment element (42) is used in conjunction with the algorithm block (40) to control the access of the various channels to the algorithm block. In situations where certain channels experience a greater degree of dispersion than others the time slot assignment element (42) may be configured to allot a greater number of time slots to the affected channels.

WO 2006/116747 A3