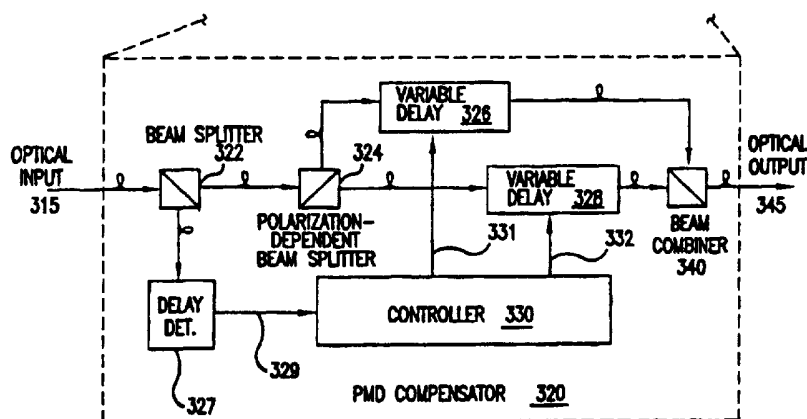




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<p>(21) International Application Number: PCT/US97/11123 (22) International Filing Date: 26 June 1997 (26.06.97) (30) Priority Data: 08/670,686 26 June 1996 (26.06.96) US (71) Applicant: MCI COMMUNICATIONS CORPORATION [US/US]; 1133 19th Street, N.W., Washington, DC 20036 (US). (72) Inventors: ROBINSON, Andrew, Niall; 1500 Preston Road #312, Plano, TX 75093 (US). FEE, John, A.; 2517 Regal Road, Plano, TX 75075 (US). (74) Agents: KESSLER, Edward, J. et al.; Sterne, Kessler, Goldstein & Fox P.L.L.C., Suite 600, 1100 New York Avenue, N.W., Washington, DC 20005-3934 (US).</p>		<p>(81) Designated States: AU, CA, JP, MX, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i> (88) Date of publication of the international search report: 19 March 1998 (19.03.98)</p>

(54) Title: METHOD AND SYSTEM FOR EQUALIZING PMD USING INCREMENTAL DELAY SWITCHING



(57) Abstract

A polarization mode compensation system and method using optical switch elements to establish incremental delays between different polarization modes of an optical data signal is provided. A polarization mode separator (324) separates the optical data signal into first and second orthogonally polarized optical signals. A first variable switching delay element (326) provides a first incremental propagation delay for the first polarized optical signal. A second variable switching delay element (328) provides a second incremental propagation delay for the second polarized optical signal. The first and second variable switching delay elements (326, 328) consist of a series of optical switches optically interconnected by different incremental lengths of optical fiber. For example, 2 x 2 optical switches are provided for switching between a reference fiber segment and a respective delay fiber segment to provide a relative incremental propagation delay. A controller (330) controls optical switches in the first and second variable switching delay elements to set first and second incremental propagation delays.

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