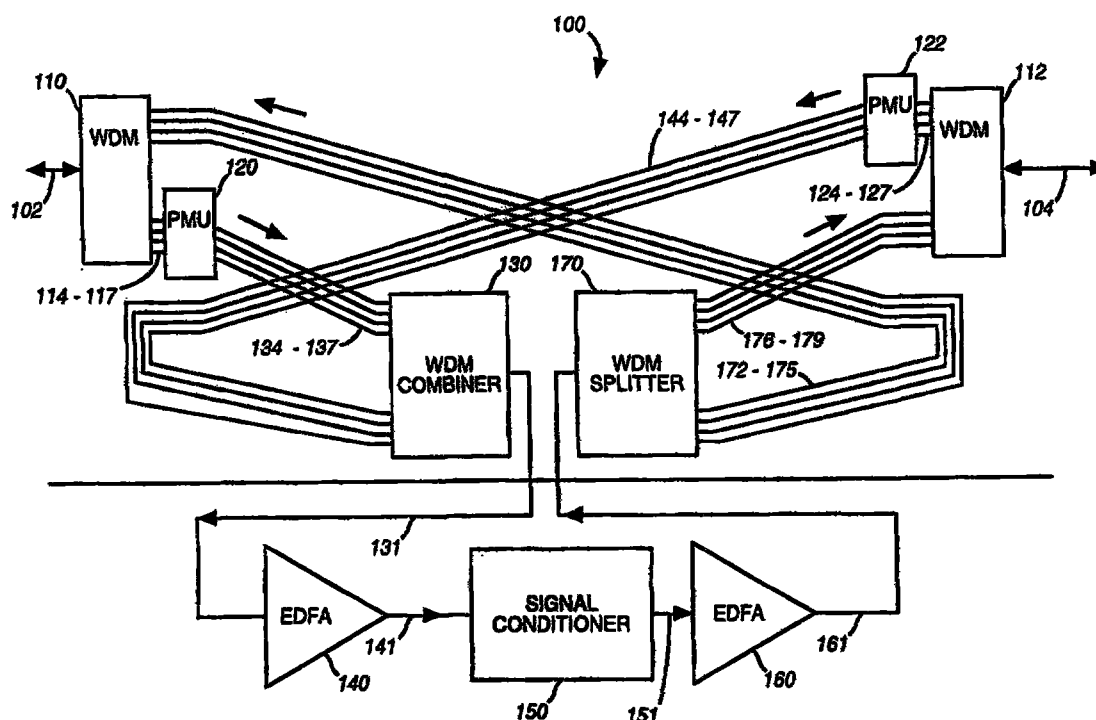




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁶ : G02B 6/28, H04J 14/00, 14/02, H04B 10/20	A1	(11) International Publication Number: WO 99/22259 (43) International Publication Date: 6 May 1999 (06.05.99)
(21) International Application Number: PCT/US98/22353 (22) International Filing Date: 22 October 1998 (22.10.98) (30) Priority Data: 08/947,678 24 October 1997 (24.10.97) US (71) Applicant: MCI WORLD COM, INC. [US/US]; 515 East Amite Street, Jackson, MS 39201 (US). (72) Inventor: MAO, Xiaoping, Charles; 7308 Family Farm Road, Plano, TX 75024 (US). (74) Agents: GROLZ, Edward, W. et al.; Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY 11530 (US).		(81) Designated States: CA, JP, MX, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published With international search report.

(54) Title: MULTIPLE WAVELENGTH BIDIRECTIONAL LIGHTWAVE AMPLIFIER



(57) Abstract

A system and method for optimizing the performance, in a multichannel optical transmission system, of (100) an optical regenerator, by compensating for input signal power fluctuation and for output signal gain change, and by mildly filtering individual wavelengths (110 and 112) between gain block (140) stages. A system and method to provide amplification and refinement of a bidirectional optical signal (100) in a signal amplification and refinement stage.