

TRENDS IN HIGH-SPEED FIBER OPTIC COMMUNICATION SYSTEMS

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With the steady growth of the telecommunications market, the need for high bit-rate, long distance communications has made fiber optic solution one of the best candidates for this purpose. Recently, explosion of data communications, mainly due to the Internet, has boosted the fiber optic communications capacity. Since the development of fiber optic amplifiers called Erbium Doped Fiber Amplifiers (EDFA), fiber optic communications link have been extended to thousands of kilometer for both terrestrial and trans-oceanic applications. As for the capacity, the most important enabling technology responsible for making such a capacity upgrade possible is Wavelength Division Multiplexing (WDM). State-of-the-art systems use bit-rates in the order of hundreds of Giga bits per second. Some of the key optic devices and technologies for amplified WDM systems will be addressed