

OPTICAL FIBER SERVICES BASED ON A PASSIVE OPTICAL NETWORK WITH WAVE DIVISION MULTIPLEXING

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Optical fibers are widely used in data transmission systems due to their ability to transfer massive amounts of data and their dielectric nature. It is a critical component of the worldwide broadband network infrastructure. Optical fibers offer a vast and unique transmission bandwidth with very low latency. With Multiple wavelengths per optical fiber network topologies are utilized in central, metropolitan, and broad area applications to connect thousands of users with a wide range of transmission speeds and capacities. A powerful feature of an optical communication link is sending several wavelengths through the 1300-1600 nm range of a fiber simultaneously and the ability to communicate in real time.

The main purpose of this research (and its contribution) is to predict when optical fiber communications networks will be implemented in the future. This means that large amounts of data may be transported using the most basic and low-cost devices with little power consumption.

Topics

Session C. Applied optics and engineering

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