

OPTICAL TECHNOLOGY AND NETWORKS

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Abstract

An optical technology uses light instead of electricity (i.e.photon rather than electrons) to manipulate, store and transmit data. Photons have fundamentally different physical properties than electrons, and researchers have attempted to make use of these properties to produce computers with performance and/or capabilities greater than those of electronic computers. Most research projects focus on replacing current computer components with optical equivalents, resulting in an optical digital computer system processing binary data. Optical network is a network of the fiber optics cables in which data travels on the thin fibers at the speed of the light. Today, many ISPs, corporate Offices, LANS and even home networks are connected through the fiber optics though it's still very costly but it provides a high bandwidth and data transfer capacity. Fiber optic cables act as a backbone when they connect different ISPs with each other and in case of any breakdown or any kind of problem in the backbone results in a communication failure at very large scale.

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