Multicast Problems in Optical Networks

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ABSTRACT

ABSTRACT Optical Networks based on Wavelength Division Multiplexing （WDM）are the most promising candidates for the next generation backbone networks. It offers a large bandwidth and stability. Moreover, since multicast applications become increasingly popular, supporting multicast at the WDM layer becomes an important topic. In this thesis, the construction of light-trees for multicast communication in WDM networks with spare light splitting is studied. A. Zsigri et al【1】proposed the S3P algorithm to solve this problem. Although some wavelengths are saved in this algorithm, it often generates a large source-destination delay. Therefore, we will propose a new algorithm SPTR to improve the S3P algorithm. Key words：Wavelength Division Multiplexing, multicast, sparse light splitting, wavelength channel.

Keywords : Wavelength Division Multiplexing ; wavelength channel ; multicast ; sparse light splitting

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