A scheduling algorithm for WDM optical networks

ABSTRACT

This paper proposes a scheduling algorithm for time-slotted WDM broadcast-and-select optical networks. The algorithm is free from collision and supports a particular class of quality of service (QoS), namely constant bit rate (CBR). The running time complexity of the algorithm is O(Mlog2N)1, where M and N are the number of packets used for scheduling and the number of nodes, respectively. This running time can be improved to O(log3N) by parallel processing.

Keyword: WDM optical networks; Scheduling algorithm