عنوان مقاله:

DIM: A New Scheduling Algorithm for Agile All Photonic Networks

محل انتشار:

نخستین کنفرانس بین المللی فناوری اطلاعات (سال: 1394)

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خلاصه مقاله:

An optical overlaid star network is a class of agile all photonic networks that consists of one or more core node(s) at the center of the network and a number of edge nodes around the core node. In this architecture, a core node may use an scheduling algorithm for transmission of traffic through the network. A core node is responsible for scheduling optical packets that arrive from edge nodes and sends them toward their destinations. Nowadays, most edge nodes use virtual output queue (VOQ) architecture for buffering client packets to achieve high throughput. This paper presents an efficient scheduling algorithm called Discretionary Iterative matching (DIM). This scheduler finds maximum matching in a small number of iterations. It provides high throughput and incurs low delay. The number of arbiters in this scheduler and the number of messages exchanged between inputs and outputs of a core node are reduced. We show that DIM can provide better performance in comparison with iterative round-robin matching with .(SLIP (iSLIP

کلمات کلیدی:

Scheduling Algorithm, Matching, Core Node, Edge Node, Established