

## عنوان مقاله:

An Improved Resource-based Performance Model for Optical Core Switches

## محل انتشار:

چهاردهمین کنفرانس بین المللی سالانه انجمن کامپیوتر ایران (سال: 1388)

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## خلاصه مقاله:

The evolution of optical technology has resulted in the emergence of several promising paradigms so as to realize the next generation Internet backbone infrastructure. Among all the existing switching techniques, optical burst switching (OBS) has shown to support the bursty nature of diverse IP traffic classes more efficiently. Nevertheless, with increase in realtime applications over the Internet, devising mechanisms that guarantee quality of service (QoS) and efficient bandwidth utilization within the OBS network has become a major endeavor. In the literature, resource allocation-based QoS management has been investigated as a possible solution to overcome this necessity. However, to the best of our knowledge, the resource-based technique has not been analytically studied for any arbitrary number of traffic classes taking both, wavelengths and fiber delay lines (FDLs) into account. In this paper, we present a novel mathematical model for the resource-based approach with two service classes namely, real-time (H) and non real-time (L) classes. We then extend the model to cover any number of classes. The effectiveness of the .model is justified through simulation experiments

## کلمات کلیدی:

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