

عنوان مقاله:

Impact of Routing Strategies on Economic Design of Wavelength-Routed Optical Networks

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خلاصه مقاله:

Routing and wavelength assignment, known as RWA problem, is an important issue for cost effective utilization of network resources, in wavelength-routed optical networks (WRNs). The factor of minimizing one critical cost element with ignoring other cost elements under certain unrealistic assumptions in publications leads the network design not cost effectively at all, since in reality after discarding the unrealistic assumptions, optimization of one critical cost element might imply and increase in other cost elements. Herein, we have simulated the design of a WRN using different routing optimization strategies, particularly our new proposed one in our previous work. In our proposed routing strategy, which consists of a comprehensive cost model and an efficient routing algorithm, the routing optimization strategy is to minimize the network total cost, which includes all of the cost elements in the network. In order to evaluate our routing optimization strategy's efficiency, we compared routing results from our and previous routing optimization strategies in different scenarios, to find out which routing method yields the most economical network design solution in all of the scenarios.

کلمات کلیدی:

wavelength-routed optical networks, routing optimization strategy, routing algorithm

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