论文

WDM网络中静态流量的最少费用疏导策略

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摘要
为了解决WDM网状网络中的静态流量疏导问题，基于收发器节约辅助图模型，该文提出了一种最少费用疏导策略。它同时考虑收发器和波长链路两种网络资源的费用，为每条流量计算出一条费用最少的路径，以获得网络总费用最少的解决方案。根据两种资源费用的比值关系，给辅助图中的每条边分配不同的权值，使得路径的总权值最小代表了该路径的费用最少，从而就能够轻易地实现该策略。仿真结果证明，不管两种资源的费用比值如何变化，该策略的网络总费用始终是最少的。

关键词　　光纤通信；疏导策略；最少费用；辅助图；流量疏导

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Minimizing Cost Grooming Policy for Static Traffic in WDM Networks

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Abstract
To solve the static traffic grooming problem in WDM mesh networks, a minimizing cost grooming policy is proposed based on the transceiver saving auxiliary graph model. The policy considers the costs of both two network resources of transceivers and wavelength links. It searches a least-cost path for each traffic request in order to get the optimized solution with the lease network cost. It assigns different values to edges of the auxiliary graph according to the cost ratio of the two resources. Minimizing the weight of a path means minimizing the resource cost of this path, and then the policy is easily achieved. Simulation results show that the network cost of the policy is always the least despite different cost ratios of the two resources.

Key words　Optical communication　Grooming policy　Minimizing cost　Auxiliary graph　Traffic grooming

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