

网络、通信、安全

c-HyLabs混合光交换网络上的多播机制研究

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摘要 在WDM网络中有两种全光多播方式, 一种是OCS(光电路交换)网络中基于光树的多播, 另一种就是在OBS(光突发分组交换)网络中基于突发分组的多播。这两种方式都有各自的优缺点。在分析这两种交换技术优缺点的同时, 提出了一种采用混合交换技术的新型光交换网络(c-HyLabs), 并提出了在此网络上实现光多播的机制。通过OPNET的仿真表明, 该混合光交换网络在相同条件下其延时及丢包率等性能均优于OBS网络多播。

关键词 [混合光交换网络\(c-HyLabs\)](#) [光多播](#) [光突发交换](#) [光电路交换](#)

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WDM multicast research over c-HyLabs

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Abstract

There are two all-optical multicast schemes in WDM networks: One is light-tree based multicast in OCS (Optical Circuit Switching) networks, and another is packet based multicast in OBS (Optical Burst Switching) networks. However, both of them have disadvantages. This paper analyzes the disadvantages of the OCS and OBS multicast schemes; and then proposes a Hybrid optical switching network called c-HyLabs (Cycle based Hybrid Light-path and Burst Switching), and proposes an efficient multicast scheme on c-HyLabs. Simulation demonstrates that the c-HyLabs multicast scheme performs better than OBS multicast scheme in terms of packet loss probability and packet latency.

Key words [Cycle based Hybrid Lightpath and Burst Switching \(c-HyLabs\)](#) [WDM multicast](#)
[Optical Burst Switching \(OBS\)](#) [Optical Circuit Switching \(OCS\)](#)

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