

講題: A High-Performance Medium Access Control Scheme with QoS Assurance for an Optical Packet-Switched WDM Metro Ring Network

講綱:

For future WDM MANs, optical packet switching has been considered to be a promising paradigm that efficiently supports a wide range of Internet-based applications having time-varying and high bandwidth demands and stringent delay requirements. This article presents the design of an experimental testbed system for a high-performance optical packet-switched WDM metro ring network, HOPSMAN. HOPSMAN boasts three crucial features. First, it has a scalable architecture in which the number of nodes is unconstrained by the number of wavelengths. Second, HOPSMAN nodes are equipped with high-speed photonic hardware components, including fast tunable receivers and optical slot erasers, capable of performing speedy optical packet-switching operations. Third, HOPSMAN incorporates a MAC scheme that embodies efficient and dynamic bandwidth allocation, resulting in exceptional delay-throughput performance. The article presents the key hardware components by highlighting the challenging issues we faced and the solutions we proposed for the testbed implementation. Finally, to demonstrate the feasibility of HOPSMAN, the article describes the experimental setup and presents the results obtained from running a commercially available remote media player application on the system.

## 演講 講員基本資料

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