

GUEST EDITORIAL

High speed networks have developed rapidly in recent years. This issue brings together six papers covering a broad spectrum of the current research on high speed networking.

The AURORA project, a R&D testbed funded through CNRI was established to study high speed networking hardware. Cidon *et al.* describe components that were deployed in a series of field trials in 1992 in their paper "The plaNET/ORBIT High Speed Network." This paper provides a general overview of how the components operated and how they interacted with each other.

La Porta and Veeraraghavan's paper "Evaluation of Broadband UNI Signaling Protocol Techniques," compares several distinct approaches for providing user–network signaling in B-ISDN. This paper concludes that while the protocols may be similar in terms of functionality, much room still exists for the comparisons of their differences in other areas.

Huang and Sheu propose a new, flexible, bandwidth allocation scheme for the handling of multi-priority traffic in the Distributed Queue Dual Bus (DQDB) Media Access Control (MAC) in their paper entitled "A General Bandwidth Allocation Scheme for Multi-Priority Traffic on DQDB Networks." In this paper, Huang and Sheu show that this scheme for traffic-handling is suitable for solving problems such as bandwidth domination, priority domination, and priority capturing.

In Huang and Chiou's "An Efficient Slot-Reuse Scheme for CRMA High-Speed Networks," the proposed scheme is shown to be an improvement over the original CRMA (Cyclic-Reservation Multiple-Access) reservation scheme, a scheme for high speed local and metropolitan area networks based on a slotted unidirectional dual-bus structure.

Forward error control (FEC) use is analyzed in the paper of Ayanoğlu *et al.* "Performance Improvement in Broadband Networks Using Forward Error Correction for Lost Packet Recovery."

In Bolot's paper entitled "Characterizing End-to-End Packet Delay and Loss in the Internet," packet delay and loss measurement is achieved using round trip delays of small UDP (User Datagram Protocol) probe packets sent at regular time intervals. Bolot demonstrates that his observations on network performance agree with the results obtained by others using simulation and experimental approaches. This paper was first presented at SIGCOMM '93.

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