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Technologies for Telecommunications

Premkumar G.

Iowa State University, prem@iastate.edu

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Technologies for Telecommunications

G. Premkumar
347 Carver Hall
Iowa State University
Ames, IA 50011
Email prem@iastate.edu

In this session I plan to present some of the newer telecommunications technologies for wide area networking and the role of these technologies in the national information infrastructure or information superhighway. In the last two years there has been a dramatic growth in the services offered for wide area networking. A wide variety of new technologies have been commercialized by service providers. Also, there has been a tremendous spurt in the demand for these services from customers, leading to greater market acceptance of these technologies. The growth in demand has also led to economies of scale resulting in reasonable prices for these services. Organizations have different data communication requirements due to varying information characteristics. Each of these technologies have different communication characteristics and economic implications. Network planners have to develop a portfolio of these technologies that will provide a good fit to their communication requirements at the minimum cost. Hence, an appreciation of the technologies and their relative pros and cons helps to make informed decisions. This session will help to achieve that objective. Some of the technologies that will be discussed include traditional packet switched network services (X.25), Integrated Services Digital Network (ISDN), Frame Relay, Switched Multi-megabit Data Services (SMDS), Asynchronous Transfer Mode (ATM), Broadband ISDN, and a variety of circuit switched services. The presentation will highlight the basic technologies used in these services, the relative advantages of one over the other, the cost of these services, the applicability of each technology for different types of telecommunications applications, and their role in establishing the national information infrastructure. The implications of these technologies for network planning in organizations will also be discussed.