COMMUNICATIONS CAPABILITY

Dr. Aubry Bush
Director
Advanced Networking Infrastructure and Research Division
National Science Foundation

ABSTRACT

Dr. Bush described the National Science Foundation's Advanced Networking Infrastructure and Research program. His division includes two lines of effort under this program: (1) networking research which is at the point of explosive growth and is supported under the Federal Information Technology Initiative and (2) networking infrastructure which is at a point of major redefinition and refocus. Fundamental research in networking deals with ways of extending the reach of networking through pervasive and ubiquitous networking of heterogeneous devices. These devices perform a variety of services in office, industry, and home environments. NSF plans to build the scientific basis for future developments in networking and to maintain our leadership capability in networking. Networking infrastructure is the tool for enabling research and education. NSF will stimulate and contribute and then make available to the research and education community the very latest in high performance networking capability.

NSF has supported the vBNS Production Network from 1995. It connects various U.S. educational and research entities with the latest technology. Another NSF, commercial, and member supported network is the ABILENE Network. It connects major cities across the Nation and is used for education and research purposes. The ABILENE Network will be upgraded soon to transmit up to 10 gigabits of data. In the international arena, the STARTAP and ITN Connections provide access to numerous other networks via a free switching center for science technology and research oriented efforts. These networks use open standards and IP retrieval protocols.