

# Multimedia Networks

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During the past few years, we have all witnessed a phenomenal growth in the deployment and use of the Internet by businesses and individuals. The end-to-end network bandwidth has had to grow, and the basic data networks have had to evolve into "multimedia networks" to enable new capabilities. New types of media such as voice, video, and 3D (in addition to the traditional text and graphics) are now part of the networks and the content you and I use. As a result, new demands have been placed on the scalability, fidelity, quality of service and the overall real-time behavior of the content and the multimedia networks. A number of solutions are also under development to deliver high-speed Internet connections for the consumer. Most promising are fiber optic and "wireless fiber" links for medium to large businesses, and cable modems, xDSL and third-generation wireless for the mass market.

Intel's strategic interests and leadership in "multimedia networks" go back a few years. As early as 1994, Intel has been working on technologies, standards, and industry-enabling programs to accelerate the availability of scaleable content, quality of service, high performance multimedia and real-time communication networks and broadband access. More recently, Intel has increased its focus on "multimedia networks" silicon, consumer and business communication equipment products, and the Internet infrastructure and services to help

meet Intel's "billion connected computers" vision.

One group of Internet services that is gaining considerable interest is based on real-time communication technologies and involves capabilities such as multimedia telephony. This class of applications and services pose exciting challenges to the engineering community in providing real-time performance on the Internet infrastructure that was originally designed for non-real time communications and for such services as email. In this Q3'99 issue of the *Intel Technology Journal*, authors have identified a few key problems of real-time communication applications and multimedia networks and they discuss practical solutions being implemented in Intel products and industry solutions for this market segment.

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