Creating an Open Internet for a Secure World

Hisao Iizuka
Executive Vice President
Network Management Value President
Innovative IP Architecture Center, NTT Communications, Corp.

The Innovative IP Architecture Center was set up in May 2002 to further strengthen the development functions of NTT Communications, Corp. in the field of advanced Internet protocol services. NTT Communications' technical strategy is based on looking ahead to the future while taking a comprehensive view of networks, equipment, and services. "Architecture" is what we call the technologies or mechanisms that make this strategy possible. Seen from this angle, the primary mission of the center is to create new IP services in coordination with the NTT Group's R&D and our global partners to maintain our leading technical and developmental capabilities.

The context to our mission is the major, qualitative transition that the Internet is undergoing. While the Internet boomed because of its openness and easy extensibility, concerns about reliability and security are mounting as it permeates our lives. For many users, the Internet has not yet become essential. Hence, there are fears that if the status quo remains unchanged, issues concerning the use of IP services will paralyze efforts to create attractive services and will curb the development of the Internet as an intrinsic element of our lives.

To overcome these problems, we have chosen four key terms—security, comfort, ease and convenience, and attractiveness—to express the direction of services we cover. Specifically, the center targets safe services that can be used securely, high-quality services that can be used comfortably, services that can be easily and conveniently assimilated into people's lives, and attractive services that deliver true value. Operating under the slogan "an open Internet for a secure world," we strive to offer high-added-value services for the Net to create more comfortable, Net-centric lifestyles. To achieve this goal, we evaluate leading technologies from the perspective of market trends and create front-running architectures and develop pilot products.

Some specific R&D initiatives we are pursuing include: voice-collaboration architectures based on voice-recognition technology; IP-collaboration architectures aimed at creating new services that combine images, voice, and data; media asset management (MAM) architectures looking to the future fusion of communications and broadcasting; IPv6 and ubiquitous architectures beginning with the development of platforms such as a unified authentication platform for integrating various IP services and a service-coordination platform promoting the coordination of business systems; next-generation-network architectures based on technologies and multiprotocol label switching (MPLS) or generalized MPLS (GMPLS), which will form the core of future IP services such as security-management platforms; and secure archive architectures focusing on content security. NTT Communications is also pushing ahead with product development in close contact with business departments in service areas being tackled as a general corporate strategy. Some products under development include voice-over-IP (VoIP) systems for the migration of conventional telephone services to the IP world and digital-television relay networks to support the changeover of television broadcasting from analog to digital signals.