

### Toward Broadband Ubiquitous Services

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The Service Integration Laboratories is responsible for devising an R&D strategy for making broadband ubiquitous communication a reality and applying it in order to coordinate development efforts. In the “NTT Group’s Medium-Term Management Strategy” announced in November 2004, NTT stated its intention to build a high-quality, flexible, and secure next-generation network and develop and implement broadband ubiquitous services that meet diversified customer needs by integrating fixed and mobile communications. To develop such a communication infrastructure, we are trying to design a network and service architecture that will help to define what both networks and services should be like. For the architecture, we are evaluating products and technologies created both within and outside NTT Laboratories and conducting a strategic investigation to select R&D themes that are pertinent to global technological and market trends.

Since the next-generation network will be even more global, consisting of multiple interlinked networks owned by different operators, cooperation and collaboration between network operators are essential issues, and we are actively working on the standardization and globalization of our products and technologies. We have joined ETSI’s TISPAN\*<sup>1</sup> project and ITU-T’s\*<sup>2</sup> Focus Group on Next-Generation Networks (FGNGN) to standardize the next-generation network architecture. For globalization activities, we are conducting discussions about implementation specifications and interoperability tests with overseas carriers and vendors in venues such as the Multiservice Switching Forum (MSF). In the service specifications area, we have proposed ITU-T audiovisual quality assessment and quality control criteria for videophones, which are considered to be fundamental communication tools on the broadband networks, and we have joined EPCglobal to standardize technologies related to RFID (radio frequency identification) focusing on the promising market of ubiquitous services.

These days, it is essential to turn R&D results into business quickly and efficiently. For major commer-

cial developments involving a number of laboratories, we bring together researchers from different laboratories to accelerate the process of creating new businesses. Among our projects that are currently under development are:

- a resource reserved video communication system on IPv6 (Internet protocol version 6) networks for video delivery/communication services,
- multi-application smart cards and a system for managing them for authentication services,
- a “welderly”<sup>\*3</sup> communication system for providing easy-to-use video communication between healthy elderly people and their children who live apart from them.

We are also striving to promote R&D activities with universities through an agreement for comprehensive academic and industrial collaboration, which will promote joint R&D projects systematically and assist in efforts to improve their efficiency and productivity.

The research staff of the Service Integration Laboratories represents a wide range of technical expertise and can thus conduct many activities from strategic R&D planning and basic research to commercial development.

\*1 ETSI: European Telecommunications Standards Institute; TISPAN: Telecommunication and Internet Converged Services and Protocols for Advanced Networking

\*2 ITU-T: International Telecommunication Union Telecommunication Sector

\*3 “welderly” is a recent coinage that means healthy (well) elderly people.

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