Section 7
Promotion of Research and Development (R&D)

1. Research and development strategy to enhance the international competitiveness of Japan

The Ministry of Internal Affairs and Communications (MIC) has been promoting R&D in accordance with the 3rd Science and Technology Basic Plan (Cabinet decision in March 2006) and the Sector-wise Promotion Strategy (Council for Science and Technology Policy, March 2006) formulated for the strategic prioritization of the plan. Considering the marked decline in Japan's international competitiveness in recent years, it is expected that a more competitive ICT industry will have a vital role to play in reviving the international competitiveness of the nation as a whole.

With this in mind, the MIC is making efforts to promote enhancement of Japan's international competitiveness and the quick resolution of social issues, in coordination with the government's overall science and technology policy and New Growth Strategy (Basic Plan) (December 2009 Cabinet decision), and in accordance with the Future Reform Policy for generation of new industry based on the main pillars of "Green Innovation" (aiming to realize a low-carbon society through improved energy efficiency of ICT systems and broader utilization of ICT) and "Life Innovation" (aiming to boost the benefit, safety and security of electronic services and foster the utilization of ICT in the healthcare, nursing care and health fields.)

(1) New-generation networks

The MIC has been intensively promoting research and development of the new-generation network technology. Specifically, the following are some examples of what has been undertaken: R&D concerning new-generation network infrastructure technology, R&D concerning next-generation photonic network technology, R&D concerning quantum information communications network technology, R&D on ubiquitous platform technology, and R&D concerning terahertz wave technology.

(2) Safe and secure ICT

In the area of ICT safety and security, the MIC promotes research and development activities to overcome various problems with ICT, including disaster prevention, the natural environment, and social welfare to realize a safe and secure society and to provide a dependable ICT infrastructure so that anyone can use ICT effectively. Specifically, R&D activities are being carried out in several areas, including space communication technology, remote sensing technology, information security technology.

(3) Universal communications

With regard to the field of universal communications, the MIC promotes research and development activities to realize communications technologies that promote intellectual creativity and communications technologies friendly to people, including the elderly and the challenged who can then overcome age, physical, language and cultural barriers through the use of the most advanced ubiquitous networks in the world. Specifically, the research and development activities being carried out include universal auditory/linguistic communications technology, technology for Super High Definition video and super reality communication technology through innovative three-dimensional video technology.

2. Development of a research and development environment

In order to promote the R&D strategy outlined above, the MIC has been making efforts to promote not only individual R&D programs, but also development of an R&D environment conducive to efficient and effective R&D bringing together all of Japan's available resources. Specifically, this entails the construction of the JGN2plus advanced R&D testbed network through the Strategic Information and Communications R&D Promotion Programme (SCOPE) and National Institute of Information and Communications Technology (NICT).