

CHAPTER

3

**Trends in Information
and Communications Policy**

The Government's Efforts to Bring About an Advanced Information and Communications Network Society

1 A Policy Package for New Economic Development toward the Rebirth of Japan

The government adopted its Policy Package for New Economic Development toward the Rebirth of Japan in October 2000. The new development policies place emphasis on four areas: (1) Aggressive promotion of the IT revolution; (2) Responding to environment issues including the construction of a recycling society; (3) Measures concerning the elderly in pursuit of a future society with abundant vitality; and (4) Development of urban infrastructure that seeks convenience and amenity. Information and communications is among the four areas and is a key item that serves as a pillar of the policies.

2 New Action Plan for Economic Growth

In response to the Policy Package for New Economic Development toward the Rebirth of Japan, the Cabinet adopted a New Action Plan for Economic Growth in December 2000. This plan comprises five key areas including the development of environment to promote creative economic activities by enterprises and the creation of new industries as well as promotion of a business environment that fosters international competitiveness. The discussions of the IT

Strategy Council are reflected in the plan to the greatest possible extent.

3 Internet Fair 2001 Japan

The Internet Fair 2001 Japan (INPAKU) is an Internet-based fair that will be held for one year beginning on December 31, 2000 as a part of the New Millennium Projects included in the Policy Measures for Economic Rebirth adopted by the Ministerial Meeting on Economic Measures in November 1999. The government provides a server that corresponds to the fair grounds; the national government and local governments as well as enterprises, non-profit organizations, and individuals can create home pages (pavilions) to exchange various types of information on the Internet.



Promoting Information and Communications Reform

1 Introduction of a new tariff system

In May 1998, the Ministry of Posts and Telecommunications (MPT; now the MPHPT) revised the Telecommunications Business Law so that fees for services provided by Type I telecommunications carriers are simply reported to the ministry. The MPT also decided to introduce a “price cap system” in which reasonable basic fees levels are set for services for which there is little competition. If a carrier sets its basic fee for a given service at or below the preset level, the reporting requirement holds; if it sets the fee higher than the preset level, the fee must be approved by the MPT.

2 Dialing parity system

In the past, when a telephone user made a telephone call from a telephone registered with NTT using another carrier, the user had to dial a carrier identification number (a four-digit number beginning with “00”). There were concerns that this would hinder fair competition between NTT and other carriers, so the MPT (now the MPHPT) began investigations into a dialing parity system. In response to the results of these investigations, a dialing parity system (known as MY LINE) was introduced in May 2001.

3 Telephone number portability

A telephone number portability system that enables a user to keep the same telephone number even when changing the contracted telecommunications carrier was introduced in March 2001 based on a report of the Telecommunications Council.

4 Review of the connection system

In order to decrease further charges for connecting between two NTT companies (East and West) and other carriers, the Telecommunications Business Law was revised in May 2000 and a review was conducted for the introduction of a long-run incremental cost method (LRIC). Also, with respect to reducing charges for connections between carriers, the Japan–United States Deregulation Talks reached an inter-governmental agreement in July 2000 that process would be reduced by 22.5% over three years.

In addition, in December 2000, the Telecommunications Council submitted its first report discussing the thoughts on the handling of the facilities of mobile telecommunications carriers and the fiber-optic facilities of NTT East and NTT West with respect to connectivity and expanding the reduction of rates between carriers.

In order to promote new business in the information and communications field, the MPHPT conducts a number of support measures including financial support through the Telecom Venture Investment Partnership Fund, support for venturing on a new business based on innovative technology through the advanced technical research and development subsidy fund system (telecom incubation), and establishment of the Information and Communications Venture Subsidy Fund System.



Advances in Networks

1

Development of network infrastructure

A proposed revision to the Provisional Measures Law for Telecommunications Infrastructure that adds fixed wireless access (FWA) system to the subjects of that law was submitted to the 151st session of the Diet and adopted. The ministry is promoting research and development on next-generation fixed wireless access (FWA) systems and is investigating further addition and allocation of bandwidth.

With regard to the next-generation cell phone, namely International Mobile Communications-2000 (IMT-2000), the ministry has taken various action including the adoption in March 2000 of guidelines concerning the introduction of such phones, and introduction of IMT-2000 is scheduled to begin in major cities including the Tokyo metropolitan region starting in May 2000.

2

Eliminating differentials in information and communications

The proportion of expenditures and national subsidies from public utility related expenses was increased from one-third to one-half in 2001 for the project for construction of transmission towers for mobile telecommunications in depopulated regions in order to rectify differentials between regions in cell

phone services. In addition, the project for construction of transmission towers for mobile telecommunications in expressway and other tunnels and underground shopping centers was put into practice as a new frequency shelter countermeasure project starting in 1999.

Furthermore, in areas where reception is poor because of geographic characteristics, as project for ensuring equal access to telecommunications infrastructure, support is being provided to local public bodies coping with such a reception and transmission problem.

3

Promotion of safety, reliability, and crisis management measures

The MPT (now the MPHPT) has promoted information security measures including the addition of various standards such as standards for hacker and virus countermeasures, mobile Internet reliability improvement countermeasures to the Information and Communications Network Safety and Reliability Guidelines. Also, in order to respond to accidents such as interruptions of service as a result of the effects of natural disasters, the MPHPT is working to secure the safety and reliability of information and communications by conducting on-site surveys.

Moreover, the Communications Research Laboratory began development of an inquiry information and registration system for

disaster victims (IAA system: 'I am alive' system) in 1999 in order to utilize the Internet as information network infrastructure in the event of a large-scale natural disaster.

4 Promoting advances in broadcasting

The digitization of broadcasting contributes to the overall improvement of services that utilize electromagnetic waves for the general public through the efficient use of the spectrum and offers many benefits to the public, making it an important issue for Japan.

Terrestrial digital television broadcasting is scheduled to begin in the Kanto, Chukyo, and Kinki regions by 2003, and ¥12.3 billion was allocated in the fiscal 2001 budget to cover necessary expenses for modifying the frequencies of existing analog broadcasting in some regions. In addition, a proposed revision of the Radio Law was submitted to the 151st session of the Diet and adopted in June 2001, and systems necessary for terrestrial digital voice broadcasting is under development.

Concerning satellite broadcasting, BS TV stations began digital broadcasting in December 2000. Also, progress is being made towards the start of digital broadcasting from the N-SAT-110 communications satellite which was launched in October 2000 and is positioned at the same 110 degrees east longitude as the Second Launched BS-4 satellite currently used for BS digital broadcasting.

Undertakings are also way to develop a system of cable TV to retransmit these broadcasting and provide multi-channel, high-quality, high-performance digital broadcasting services.

In addition, considering changes in the

broadcasting environment including the advance of digitization of all broadcasting media and advances in the Internet, the MPHPT established a Study Group on Broadcasting Policies in May 2000 in order to organize broadcasting concepts and investigate overall broadcasting policies including the best forms of both private and public broadcasting. The study group will conduct its work for a period of two years.



Promotion of Contents Production

1 Advancement of environment for contents production

In conjunction with advances in the Internet and the proliferation of digital broadcasting, the development of an environment that can support the provision of extensive and varied contents is necessary for users to enjoy these benefits to the maximum possible degree. The MPHPT is taking action to promote the advancement of environment for contents production in order to achieve this objective.

2 Formation of a contents distribution market

The MPHPT is undertaking various actions in order to promote the development of an environment to ensure the smooth distribution of contents that can respond to the increase in media types and the number of channels as a result of the digitization of broadcasting and the use of broadband Internet access.

3 Promotion of mobile web contents

As the business of web contents using mobile networks becomes more advanced and diverse, the quality of web contents and the best methods of protecting its users are coming into question. With the future launch of the IMT-2000 next-generation mobile com-

munications system services, there are concerns that the issues will become even more complex and serious, so the MPHPT is conducting research into development of the environment necessary for the mobile web contents business to maintain the trust of the public and continue growing.



Promoting Research and Development

1 Open topic proposal method

In order to gather a broad range of research and development topics and provide funding to the best of them, the MPHPT created an R&D promotion system within the Telecommunications Advancement Organizations of Japan (TAO) and promotes outsourced research on information and communications technologies with abundant originality and innovation.

2 Cooperation between industry and university

In order to enhance Japan's R&D capabilities in the information and communications technology field and promote the creation of new industries, the MPHPT created the Project of Research and Development for Industry-Academia Cooperation Support Model and Young Researcher Support Model within the TAO in 1999. The TAO also organized joint-use R&D facilities in Honjo City, Saitama Prefecture, in March 2001 in order to encourage permanent cooperative relationships between industry and university.

3 Creative information and communications systems

The MPHPT began promoting the Project of Research and Development for Result

Development Model through the TAO in 1997 with cooperation from local public bodies, universities, and enterprises in order to promote the combination of existing basic and elemental IT technologies to develop telecommunications systems with more advanced functions.

4 Next-generation Internet

To contribute to the healthy spread and development of Internet-based business application programs, the MPHPT is promoting R&D of technologies related to a next-generation Internet that will make possible highly secure and reliable, high-speed, high-volume communications.

5 Super Internet

The MPHPT is conducting R&D to establish basic technologies necessary for the realization of smooth distribution of highly-varied web contents through the utilization of household appliances and the Internet so that all electronic devices have functions for Internet connectivity and all persons can enjoy all Internet services from "any place" and at "any time."

6 Japan Gigabit Network

In 1998, the TAO created for R&D purposes a Japan Gigabit Network (JGN) comprising an ultra-high-speed fiber-optic network and joint use R&D facilities. Additional measures were implemented in 2000 in order to promote R&D using the JGN and to strengthen R&D on technologies for the operation and management of gigabit networks.

7 Ultra-high-speed photonic network technologies

The MPHPT is promoting R&D within the TAO concerning technologies for the high-quality and efficient information transmission and processing in the optical field from one end to another on backbone and access networks in order to realize ultra-high-speed networks.

8 Basic technology for petabit-level networks

The Communications Research Laboratory is promoting R&D on basic technology necessary for the realization of a petabit-level network. Such a network will make possible information transmission speeds that are one million times faster than the gigabit network using photonic technologies.

9 Quantum information and communications technologies

Quantum information and communications technologies, which use the quantum mechanical properties of photons, are revolu-

tionary technologies that will make possible the creation of ultra-high-speed communications and are a focus of attention throughout the world. In light of the report of the Study Group on the Application of Quantum Mechanical Effect to Information and Communications Technology and Its Future Prospects created by the MPT (now the MPHPT) in June 2000, the ministry is strategically and comprehensively promoting R&D on quantum information and communications technologies through a division of roles and cooperation at the industry, university and government.

10 New-generation mobile communications system

In order to achieve a new-generation (fourth generation) mobile communications network, it is necessary to investigate immediately the basic concepts of such a system, topics for R&D, issues concerning standardization, and policies for promoting such a system, so in October 2000 the MPHPT submitted to the Telecommunications Technology Council the question of “the future prospects of a new-generation mobile communications system.”

11 Intelligent traffic systems

Intelligent traffic systems (ITS) are comprehensive information and communications systems concerning road traffic that are believed to be a key element in resolving road traffic problems that people face in their day-to-day lives, such as alleviating traffic congestions, and improving the global environment. The MPHPT has joined forces with other

involved ministries and agencies and is undertaking R&D to promote the widespread adoption of ITS.

12 Stratospheric platforms

The MPHPT began conducting R&D in fiscal 1998 under the direct authority of the TAO in pursuit of the rapid implementation of stratospheric platforms. Since such platforms can enable the utilization of ultra-high-speed Internet and multimedia mobile communications throughout the country, they are expected to serve as a new communications infrastructure.

13 Maritime intelligent traffic systems

In order to investigate measures using IT to resolve various issues concerning maritime transport, including increasing navigational safety and alleviating maritime traffic congestion, the MPHPT has engaged in a variety of undertakings, including production of a report in October 2000 to promote the construction of Maritime Intelligent Traffic Systems (Maritime ITS).

14 Global multimedia mobile communications technology

The MPHPT has been promoting R&D on global multimedia satellite-mediated mobile communications technology (next-generation low-earth orbit) since fiscal 1997 under the direct authority of the TAO. The ministry is also conducting R&D on mobile satellite-mediated communications systems using low-earth orbit satellites to enable high-speed

access to the Internet and video transmission from small mobile terminals.

15 Space Internet technology

The MPHPT is working in cooperation with the Ministry of Education, Culture, Sports, Science and Technology to promote R&D by the Communications Research Laboratory on technology necessary for the construction of an ultra-high-speed satellite communications system and held the Asia-Pacific International Advanced Satellite Communications Forum at the end of November 2000 to discuss the application of ultra-high-speed satellite communications to the Internet.

16 Engineering Test Satellite VIII

In cooperation with the Ministry of Education, Culture, Sports, Science and Technology, the MPHPT is conducting R&D within the Communications Research Laboratory on the Engineering Test Satellite VIII (ETS-VIII) towards the creation of S-band (the band with a wavelength of 2.6 GHz) mobile communications, which will allow the use of cell phones from any part of the country.

17 Sub-zenith satellite system

In order to develop new orbits to supplement the geostationary orbit, where a very large number of satellites are positioned, and achieve high-elevation angle, high-quality mobile satellite communications, the MPHPT began R&D at the Communications Research Laboratory on sub-zenith satellite systems in 1999.

Advancing satellite communications, broadcasting, and in-orbit maintenance

The MPHPT, through the Communications Research Laboratory, is promoting research necessary for the realization of high-speed optical space communications using laser light, and is promoting trial evaluations of an optical communications device that is to be installed on the International Space Station currently under construction.

In addition, the 21-GHz bandwidth, which has not been used for satellite broadcasting, makes possible transmission of large volumes of data and is expected to allow higher quality and greater diversity of functions through highly-detailed broadcasting and three-dimensional television broadcasting, and consequently, the ministry is conducting R&D on basic technologies.

Also, in 1996 the Communications Research Laboratory began R&D on a remote examination service that can approach satellites that have malfunctions, diagnose the status of the satellite, and restore it to operation, and an in-orbit satellite maintenance system that can eliminate space debris.

19 Earth observation technology

The technologies and knowledge acquired from the development of information and communications technology, such as radar that utilizes radio waves or laser light, are extremely effective for measuring the global environment. The Communications Research Laboratory is conducting R&D intended to promote the preservation and improvement

of the global environment and an understanding of current conditions through the use of artificial satellites to measure water and energy cycles, clouds and radiation, trace gases in the ozone layer, and so on using cutting-edge radio and optical technologies.

20 Comprehensive promotion of R&D

In order to encourage continuous economic development through the promotion of the economy and industry and to enable people to live safe lives with a sense of security, it is necessary to conduct active and strategic investment in key technology areas to promote R&D. The Science and Technology Basic Plan adopted by the Cabinet in March 2001 places emphasis on four areas including information and communications and allocates priority for R&D investments.

Laying the Groundwork for Advanced Information and Communications

1 Measures concerning the elderly and disabled

In order to eliminate the digital divide as it concerns the elderly and disabled, the MPHPT is engaging in a variety of undertakings designed to create communications and broadcast systems that respond to the range of obstacles confronting the elderly and disabled. The TAO is also cooperating with local public bodies to conduct R&D intended to create information and communications systems that have advanced functions necessary in social welfare fields. In addition, the ministry is implementing programming production support measures in order to provide the closed captioning, explanatory broadcasts, and sign language broadcasts essential for the visually and hearing impaired to understand television broadcasts.

2 Telework and SOHO

Telework and small offices/home office (SOHO) work are forms of remote work that utilize information and communications technology. These work models offer a variety of benefits including alleviation of commuting burdens, promoting greater compatibility between work and childcare and nursing care for elderly, creating more opportunities for women, the elderly, and the disabled to work, and stimulating local economies. In order to

promote the widespread adoption of telework and SOHO work, the MPHPT is promoting a number of initiatives including: (1) development of local facilities; (2) R&D on and construction of information and communications systems; and (3) tax benefits and financial support.

3 Improving telecommunications usage environment

The MPHPT created the Telecommunications Consumer Consultation Center to receive complaints from and provide consultations for users concerning telecommunications services, and in 1994 set up a Telecommunications Service Monitoring Institution to obtain a broad spectrum of users' opinions concerning telecommunications services so that they can be reflected in future telecommunications policy. Activities such as e-commerce on the Internet have grown rapidly in recent years, and the Law Concerning Electronic Signatures and the Certification Business was enacted in April 2001 to ensure that users can confirm the other party's identity and to clarify the legal effect of electronic signatures and certifications, which ensure that the content of data has not been modified en route.

4

Improving radio wave usage environment

The MPHPT is working hard to maintain the sound utilization of the electromagnetic spectrum. With respect to the problem of unwanted radio waves, the ministry is adopting or revising the standards regarding technical conditions on radio wave interference in compliance with International Special Committee on Radio Interference (CISPR). Also, in response to concerns that the radio waves generated by radio facilities have a detrimental effect on human health, the ministry adopted radio wave protection standards for wireless devices such as cell phones and applies them as guidelines for the manufacturing of wireless devices. Furthermore, since interference from the improper use of radio waves is occurring frequently, development of a radio wave monitoring system (DEURAS; Detect Unlicensed Radio Stations) has been underway since 1993, radio wave monitoring activities have been reinforced, and enforcement against illegal radio stations has been conducted together with investigatory agencies.

5

Ensuring the sound development of broadcasting

In order to develop a solid relationship between youth and broadcasting, the MPHPT engages in activities intended to raise consideration of youth by broadcasters and to increase the media literacy of youth and their guardians. Also, when a violation of rights occurs as a result of a false broadcast, the harm can be considerable, so a revised broad-

cast system was created by the Broadcast Law (a person whose rights were infringed including defamation by a false broadcast can demand a revision of rescission within three months of the broadcast), and the ministry has worked to promote acceptance of the system among the people.

Advances in Digitization of Public Areas

1 Laying the groundwork for electronic certification

With respect to construction of the certification system necessary for processing applications and notices online, three ministries including the MPHPT established a Certificate Authority for the various ministries and agencies, and the ministry also constructed a bridge certificate authority in March 2001. For the early realization of electronic government, the ministry will promote systems that utilize the ministry's Certification Office for applications and notice online. Also, many local public bodies are developing organizational certification infrastructure that is compatible with the Government Public Key Infrastructure (GPKI) and are conducting systematic investigations into construction of public certification infrastructure for individuals.

2 Development of public systems

The Telecommunications Advancement Organizations of Japan (TAO) is conducting R&D on telecommunications systems (designated Joint Operation Initiative with Network Technology) for public procedures on consignment under the general expenditures of five ministries and agencies including the MPHPT. Also, the MPHPT is constructing a Residents Basic Registers Network System as a

structure to process matters concerning residents basic registers that go beyond the regions of city or village and to provide personal identification information to national agencies based on the recently-added resident code. In addition, the government is also promoting construction of a geographic information system (GIS) in a liaison conference with other involved ministries and agencies.

3 Local development through IT

The MPHPT is promoting the Digital Museum Concept, which will allow anyone to access by network digital information on cultural assets accumulated in local cultural facilities. The concept is designed for supporting the preservation and public dissemination of local tangible and intangible cultural assets and historical legacies, the preservation and continuation of which can often be difficult for local public bodies. Also, as one aspect of the policies for the development of Okinawa, the ministry proposed the Okinawa Multimedia Special District Concept in 1996 and is implementing a variety of measures to make Okinawa an information and communications hub for the Asia Pacific region.



Measures for Globalization

1 International policies

International awareness concerning elimination of the digital divide and utilization of digital opportunities has heightened rapidly in recent years, and in July 2000 the IT Charter was adopted at the Kyushu-Okinawa Summit whereby the heads of G8 agreed to undertake various actions to eliminate the digital divide based on a common understanding. At the APEC Telecommunications and Information Industry Ministers Conference held in Mexico in May 2000, the Cancun Declaration concerning the promotion of e-commerce was adopted. In addition, a final decision was made concerning the privatization of INTELSAT in July 2001.

2 International cooperation

In cooperation with the Ministry of Foreign Affairs, the Japan International Cooperation Agency (JICA), and the Japanese Bank for International Cooperation (JBIC), the MPHPT contributes to the continuous development of information and communications fields in developing countries through official development assistance (ODA). In light of the IT Charter adopted at the Kyushu-Okinawa Summit, the ministry plans to take aggressive action towards eliminating the international digital divide.

3 Promoting international standardization

The International Telecommunication Union (ITU) plays a central role in international standardization in the telecommunications field. Within the ITU, the Telecommunications Standardization Sector (ITU-T) and the Radio Communications Sector (ITU-R) engage in standardization activities.

4 Responding to the international distribution of telecommunications devices

Against the background of globalization including the international distribution of telecommunications devices, there have been international calls for Japan to relax its certification standards for telecommunications devices, and the MPHPT has promoted mutual approval. The ministry also promotes the overseas utilization of telecommunications technology, an area in which Japan is competitive, and contributes to the enjoyment of the IT revolution by persons throughout the world including the diversification of devices that can be used including devices manufactured overseas.

Use of the Post Office Network and Service Upgrades

1 One-stop administrative services at post offices

The MPHPT is working to make post offices—the closest point of contact with the national government for most people—into one-stop administrative service offices. As one aspect of these developments, trials began in 1997 of a service that allows users to request a variety of administrative services provided by local public bodies using information and communications technology and terminals installed in post offices, and tests of administrative services provided by nearby cities and town were conducted. In 1999, TV phone functionality was added to the terminals to allow testing of consultation services. Also, in 2000, prefectural government were add to the local governments to enable regional services to be provided at post offices.

2 Postal savings network services

In order to increase convenience to postal savings users, the MPHPT has implemented a number of measures that enable various services to be utilized without going to the post office including: (1) linked ATM services and reciprocal funds transfer services; (2) debit card services; and (3) trials of postal savings IC cards.

3 Support for the elderly

To support the use of information technologies such as PCs and the Internet, the ministry's Postal Services Agency began holding free PC lessons for the elderly in cooperation with local public bodies in 1998 as one part of its local post office services.

4 Improvement of postal operations through a new network

In order to improve operations and reduce costs, the ministry's Postal Services Agency is adopting the information, communications, and distribution technologies to construct a logistics system and construct a new general postal information and communications system.