



## Section 2

### Development of Information and Communications Policies

#### 1. Development of telecommunications

##### (1) Establishment of fair competition rules

###### A. New competition promotion program 2010

In response to the change in the market environment along with the advancement of broadband and IP networks, in September 2006, the Ministry of Internal Affairs and Communications (MIC) formulated a New competition promotion program 2010 (Program 2010), which is a roadmap for the development of rules for fair competition to be implemented by the beginning of the 2010's in the telecommunication field and also a concrete implementation plan for the Process Program for the Reform of the Communications and Broadcasting Field (September 2007) in the ICT sector. The purposes of Program 2010 include promotion of further competition in the telecommunication market and protection of user benefits. The MIC is presently committed to steady promotion of Program 2010.

###### B. Promotion of competitiveness in mobile communications market

The recent rapid advancement of technological innovation, broadband and IP in the mobile communications market brings about business opportunities that go well beyond a conventional market framework, such as integration of fixed and mobile communications markets and penetration of vertically-integrated business models. In response, the MIC established the Mobile Business Study Group in January 2007, aiming for economic vitalization and for the improvement of user benefits through the growth of new mobile business and the final report was released in September 2007. Based on the final report, the MIC announced the Mobile Business Revitalization Plan in September 2007, which was formulated as a roadmap for programs to be implemented by the target year of 2011, in order (1) to review sales models for the mobile business, (2) to promote new market entry by MVNOs, and (3) to promote development of market environment aimed at revitalizing the mobile business.

###### C. Development of an environment for the realization of IP communications terminals

Since November 2007, discussions from various perspectives have been conducted on future visions, functions and necessary measures to promote the

broad and smooth utilization of IP communications terminals by establishing the Development and Promotion Working Group and Responsibility Sharing Model Working Group under the IP Terminal Group of the Next Generation IP Network Promotion Forum, which comprises industry, academia and government. Furthermore, the MIC established the Panel on the Telecommunications Service Users in April 2008 and a report was prepared in February 2009.

###### D. Review of universal service system

Based on the report of the Study Group of the Future Visions on the Universal Services System compiled in December 2007, with regard to the review of universal systems responding to IP telephony, the MIC made inquiries to the Information and Communications Council in April 2008 and received a report in December 2008.

In order to respond to the issues that may arise with the advancement of IP telephony and in view of achieving stable operation of the system, the report introduced concepts of the institutional review during 2009 and 2011: (1) although it is appropriate to basically continue the operation of the existing systems, (2) cost accounting modification is desirable so as to add the number of lines which have been switched from subscription lines to optical IP phones to the number of subscription lines, while following the existing cost accounting method. Based on this report, the MIC revised ordinances concerning the modification of the cost accounting method (above (2)) in May 2009.

###### E. Development of environment towards ensuring neutrality of networks

The MIC established the Working Group on Network Neutrality in December 2006 in order to deliberate the "neutrality" of networks as IP networks proliferate, such as fairness of network use and fairness of the cost burden of networks, and the final report was released in September 2007.

Furthermore, the MIC established the Panel on Internet Policy in February 2008, in order to extract and summarize policy issues and to organize the directions of future policy for securing network neutrality and the sound development of the Internet from the various viewpoints of the stakeholders, and a report was compiled in January 2009.

## **F. Consideration for enhancement of platform collaboration**

The MIC set up the Study Group on Communications Platform in February 2008 with the aim of considering issues involved in developing a market environment and future visions to enhance collaboration of platform functions (authentication/billing) essential for smooth distribution of contents applications through the broadband network and to create new business, and a report was compiled in January 2009.

## **(2) Advancement of network**

### **A. Promotion of network advancement**

IPv4 has been used for IP addresses that identify computers connected to the Internet. In order to respond to the exhaustion of IPv4, possibly in early 2011, it is necessary to shift to IPv6. The MIC has held the Study Group on High Level Utilization of the Internet through IPv6 since February 2009 and formulated the Basic Guidelines concerning Advance Utilization of the Internet Service, etc.

### **B. Developing regulations concerning telecommunication numbers**

IMSI that internationally and uniquely identifies terminals, such as mobile phones, and conducts authentication of contractors, had been assigned to mobile phone operators under Article 8 of the regulations concerning telecommunication numbers. With the revision of ITU-T Recommendation E.212 of May 2008, the conditions for the use of IMSI have been made more flexible. Since IMSI is expected to be used for BWA, XGP and WiMAX in Japan, the provisions concerning IMSI in the rules concerning telecommunication numbers were revised in December 2008. This enabled IMSI to be used for services other than mobile phones, and allowed telecommunications operators without a wireless station license for their base station to use IMSI when they install facilities that identify terminal devices connected to telecommunication line facilities.

### **C. Proper management of IP address/domain name**

Currently, the international management and coordination of Internet resources has been conducted by a private non-profit organization named ICANN, and the MIC, as an official member of the Governmental Advisory Committee (GAC) of ICANN, has been working on creating an international cooperation system. With regard to domain names, in 2001 it became possible to use Japanese characters as part of the domain name, except for the top domain: for example, it is now possible to use domain names such as “総務省.jp”. Since June 2008, discussions

started at ICANN about specific ways to introduce country-specific multilingual top domains, which is expected to be introduced as early as the end of 2009. In response, discussions are now under way about new top domains in Japan at the Internet Infrastructure Group, Information and Communications Policy sectional meeting of the Information and Communications Council.

## **(3) Dispute settlement between telecommunications business operators**

The Telecommunication Business Dispute Settlement Commission is endowed with the following three functions: (1) to implement mediation and arbitration procedures, (2) to conduct investigation and submit reports on orders and awards made by the prime minister when consulted, and (3) to make the necessary recommendations to the MIC on the development of rules, etc. concerning the items within its vested powers. Besides these functions, the Commission has set up a consultation desk for telecommunication business operators to offer advice and answer questions on connections and issues among telecommunication business operators.

## **2. Development of broadcast policy**

### **(1) Summary of broadcast policy**

#### **A. Revision of Broadcast Law**

A drastic revision was made in 2008 with respect to broadcasting. In response to this, NHK on-demand services were launched on December 1, 2008. This is a range of fee-paying on-demand services such as a Missed Program Service and Special Selection Library Service, which allows viewers to watch via the Internet programs that have already been broadcasted on NHK.

International programs for foreigners started under a new system under the amended Broadcast Law in February 2009.

#### **B. Re-licensing of broadcast stations**

The MIC re-issued a license dated November 1, 2008, to broadcast stations and broadcast satellite stations whose license expires as of October 31, 2008.

At the time of reissuance, the MIC requested the following of all broadcast operators, including NHK: (1) compliance with Broadcasting Law and program standards, (2) setting up of as many closed-caption and audio description programs as possible, (3) enhancement of disaster broadcasting and (4) active efforts for digitization.

## **(2) Promoting the advancement of broadcasting**

### **A. Promoting the transfer of terrestrial broadcasting from analog to digital format**

Terrestrial analog broadcasting will end and be completely replaced by a terrestrial digital service by July 24, 2011. Terrestrial digital TV broadcasting was launched in the three largest metropolitan areas, Tokyo, Osaka and Nagoya, in December 2003, and in December 2006, the service was started in all prefectural capitals. As of the end of FY2008, about 48 million households (97% of all households) have access to digital services, and the number of shipments of terrestrial digital radio receivers constitutes about 449.69 million sets. The number of households with cable TV connections is 22.4 million (as of September, 30, 2009).

### **B. Promotion of satellite broadcasting policy**

Japan's satellite broadcasting is a pioneer in high-function broadcasting, such as the provision of various special broadcasting services and high-definition TV programs. Particularly, the number of shipments of special satellite receivers (BS and 110 CS digital broadcast) constitutes about 50.1 million sets (as of end-FY2008) and the number of households connected to special satellite broadcasting is about 20.9 million (as of end of FY2007).

## **3. Promotion of radio policy**

### **(1) Summary of radio policy**

#### **A. Formulation of the Radio Utilization Vision in the 2010s**

It is expected that the quality and quantity of Japan's radio wave utilization will balloon in the future and radio wave utilization in new areas will emerge, including responses to deal with the aging society with fewer children, creation of new industries, revitalization of local economies and responses to environmental issues, in addition to the realization of systems and services that use new wireless technologies.

The MIC has clarified its vision for Japan's radio wave utilization in 2010s and issues involved in realization of this vision, in view of the future progress of radio wave utilization technologies and international trends. The Radio Wave Policy Council was established in October 2008 with the aim of discussing measures for the effective utilization of radio wave in the 2010s.

#### **B. Efforts for transfer and reallocation of radio spectrum**

In order to secure radio spectrum that allows installment of new radio wave utilization systems, the MIC carries out an annual investigation and evaluation

of the utilization status of radio wave and has formulated the Action Plan for Spectrum Reallocation, which sets out a vision for the transfer/reallocation of spectrum. Based on the results, Minister of Internal Affairs and Communications prepared the spectrum allocation plan.

With respect to the reallocation/transfer of spectrum, it has been decided that the utilization efficiency of spectrum will be increased through digitization, thereby (1) responding to increasing needs through a capacity increase, and principles will be developed for a fundamental revision of the allocation of medium- and long-range spectrum and the spectrum allocation plan will be revised on an as-needed basis, thereby (2) allowing the installation of a new radio wave utilization system that uses free spectrums. It is still necessary to install new systems and carry out the dynamic transfer and reallocation of spectrum, responding to increasing spectrum demand.

The radio waves to be reallocated after completion of the transfer to terrestrial digital TV broadcasting in July 2011 will be used for the following purposes: (1) broadcasting of multi-media for mobile matters, (2) independent communication that allows broadband communication to realize a safe/secure society, (3) telecommunications for mobile phones that are required to secure spectrum as a result of increased demand and (4) ITS necessary to create a safer traffic society. With respect to spectrum band for these four purposes, discussions are currently under way in view of their use in 2011 or 2012.

### **(2) Approach to advancement and diversification of radio usage**

#### **A. Advancement of mobile communication system and wireless access system**

The MIC has been making efforts toward the introduction of a wide-area mobile wireless access system, such as WiMAX and the next-generation PHS, and the advancement of a third-generation mobile communication system. With the aim of realizing the practical application of so-called fourth generation mobile telecommunications systems, the one that follows the third generation mobile telecommunications systems, in and around 2011, the MIC is actively promoting efforts for research and development and international standardization with industry-academia-government cooperation.

Also, with respect to a high output wireless access system that uses 5GHz band, the MIC introduced a register system in December 2005 in a number of metropolitan areas (Tokyo, Nagoya, Osaka and surrounding areas) where high demand is expected, prior to nationwide installation. The period of use for the fixed station for telecommunications services expired at the end of November 2007, when the use of the

wireless access system become possible. Thus, the MIC has been developing the relevant regulations and expanding eligible areas for a nationwide registration system (except for some regions) from December 1, 2007.

#### **B. Advancement of independent mobile communications system**

Low-power 950MHz band active wireless systems and 950 MHz band passive tag systems are expected to play an important role in a wide range of areas including production, distribution, medicine and transportation. The MIC has developed relevant regulations at the advice of the Information and Communications Council concerning the Technological Conditions for Low-power 950MHz Band Active Wireless Systems and Technological Conditions Necessary to Advance 950 MHz Band Passive Tag Systems.

In recent years, independent mobile communications, such as MCA wireless and simple wireless stations, have been used in wide areas since they involve inexpensive and easy systems tailored for users' needs. At the advice of the Information and Communications Council, the MIC developed relevant regulations in August 2008 concerning the digitization of simple wireless stations, animal position detection/reporting systems using radio waves. These regulations aim to further the utilization and advancement of small-scale systems used mainly for medium- and small-sized corporations and individuals.

In March 2009, the MIC developed relevant regulations in response to discussions by the Information and Communications Council concerning the high-quality digital sound systems for specified wireless radio microphones often used in theaters.

#### **C. Promotion of ITS**

The MIC established the Study Group on Advancement of ITS Wireless System in October 2008 to deliberate its vision for the utilization of the Wireless ITS Safe Driving Support System, its functions and required specifications and technological issues and promotional measures for its realization.

In order to achieve the goal of creating the world's safest roads, which is listed in the New IT Reform Strategy, the ITS Promotion Council, comprising ITS-related ministries and agencies (Cabinet Office, National Police Agency, MIC, Ministry of Economy, Trade and Industry, and Ministry of Land, Transport, Infrastructure and Tourism), Nihon Keidanren, and ITS-Japan, conducted large-scale demonstration experiments in FY2008 at nine sites throughout the country for the purpose of technological development envisioning commercialization and verification of operational compatibility of systems. At the end of February 2009, the safe driving support system was

taken for a test drive on public roads and exhibitions and symposiums were held, mainly in the new Tokyo waterfront sub-center (Odaiba).

### **(3) Development of radio usage environment**

#### **A. Efforts concerning effects of radio waves on the human body and medical equipment**

The MIC has conducted research on the effect of the radio spectrum on the human body to protect the human body from the effect of the radio spectrum. Using the research results and international guidelines as a reference, the MIC has established safety standards (Safety Guidelines for Use of Radio Waves) to be applied in Japan. The MIC also evaluates and analyzes domestic and international research on the effects of the radio spectrum on the human body, promotes studies by extracting research themes to be addressed by Japan and has held meetings of the Committee on Bioelectromagnetic Environment since June 2008 with the aim of creating a society where people can use radio spectrum safely. Furthermore, since concerns about the effects of radio waves on implantable medical devices, such as cardiac pacemakers, have increased in recent years, the MIC has conducted studies on the effect of radio waves on medical equipment since FY 2000, and has amended the Guidelines to Prevent Effects of Electromagnetic Waves from Various Types of Equipment on Implantable Medical Devices (established in August 2005, revised in May 2009).

#### **B. Measures for unnecessary radio waves**

As electrical and electronic equipment become more widespread, there are growing concerns that the use of wireless is affected by electromagnetic interference from unnecessary radio waves emitted by various types of equipment and facilities.

The MIC has set up the International Special Committee on Radio Interference (CISPR) within the Information and Communications Council, and through national discussions that also have a bearing on discussions on international standards at the CISPR, has established Electro Magnetic Compatibility (EMC) Standards.

#### **C. Appropriate surveillance and supervision of radio waves and correct management of wireless stations**

The MIC conducts investigations to immediately remove spectrum interference caused by illegal wireless stations that is affecting wireless communication designated as critical wireless communication, including communication related to telecommunications activities, broadcasting activities, the protection of life and property, the maintenance of order, meteorological activities, electricity supply and rail trans-

port. Also, in cases where illegal wireless stations have been set up and have been conducting unlicensed operations, the MIC investigates, presses charges and takes corrective measures against stations that have committed violations.

Since FY 2006, the MIC has been implementing publicity and enlightenment campaigns to promote Radio Law and regulations concerning the utilization

of radio waves for electronics retail stores and retailers of electromagnetic equipment and at the same time, has been implementing publicity and enlightenment campaigns to create awareness of the fact that the use of radio waves requires a license and that wireless equipment is required to bear an appropriate technology mark, .