

**Priority Policy Program 2008**

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**IT Strategic Headquarters**

# Priority Policy Program 2008

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## I Basic Principles in Implementing the Priority Policy Program

### 1. Introduction

In order to realize the objectives set forth by the "New IT Reform Strategy" (January 19, 2006), the Priority Policy Program 2006 was decided on by the IT Strategic Headquarters in 2006 as the government began its effort to engage in the issue. In the following 2007, the "New IT Reform Strategy Policy Package" (April 5, 2007) ("Policy Package," henceforth) was formulated, which composed a policy that will expedite the New IT Reform Strategy and act as a driving force for pioneering reforms and innovation that create new possibilities. Along with the Policy Package, the IT Strategic Headquarters drew up the Priority Policy Program 2007 that was specified the measures to promote such policy.

This year marks the third year since setting forth the New IT Reform Strategy as well as the intermediary year towards 2010, the year around which the Japanese Government aims to complete the implementation of such policy. Thus, it is required to take accurate stock of the progress so far and promote further reforms and improvements on what we are behind in, based on the evaluation report made by the Expert Evaluation Committee on the New IT Reform Strategy.

To this end, taking the aforementioned perspectives into consideration, IT Strategic Headquarters formulated the "IT Policy Road Map" in order to make sure that the goals set forth by the New IT Reform Strategy will be reached, while also presenting the future perspectives and goals beyond 2010 as well as the road map to successfully reaching those further goals.

The Priority Policy Program 2008 has been formulated so as to implement the policy set forth by the IT Policy Road Map, in addition to realizing the policy as proposed by the New IT Reform Strategy and its Policy Package.

This year, the Japanese government will make sure to implement the policy set forth by this Priority Policy Program as well as the measures prioritized for the FY2008 in the "Urgent Program for Revitalizing Local Communities through IT" that was finalized by the IT Strategic Headquarters earlier this February.

Furthermore, in view of utilizing the world's leading information technology and telecommunications infrastructure to promote further development of various industries and organizations in Japan and to

enable people to fully benefit from the convenience it offers, the IT Strategic Headquarters will implement the full examination of the challenges faced by the current systems, policies, and institutions from a citizen's and user's point of view.

## **2. Basic Guidelines**

### **2.1 Policy aspects**

In order to realize the policy set for the by the IT Policy Road Map in addition to the policy laid out by the New IT Reform Strategy and its Policy Package, the Priority Policy Program 2008 has organized, in accordance with each of the fifteen classified fields of evaluation examined by the Expert Evaluation Committee on the New IT Reform Strategy, the "Basic Principles" to which the policy implementation should comply.

Furthermore, this Priority Policy Program has selectively focused on the policies which, in accordance with the Basic Principles; 1) are targeted at actualizing the stated goals of the New IT Strategy, 2) promote structural reform through IT, from a user and public oriented standpoint, and strengthens competitiveness, and 3) have clearly stated aims and deadlines, so that adjustments can be made within the PDCA cycle. In addition, with respect to the prioritized measures introduced in accordance with the IT Policy Road Map and the Policy Package, we have distinguished them by appending denotation of "RM" and "PKG" respectively.

### **2.2 Enhancing and strengthening the assessment and implementation systems**

The success of the New IT Reform Strategy and this Priority Policy Program will be measured through the evaluation of the implementation of various government policies in accordance with their performance targets. For this reason, the Expert Evaluation Committee on New IT Reform Strategy, made up of experts from the private sector, will contribute to the IT Strategic Headquarters from the standpoint of private sector, as wheel s of a car, by evaluating the state of the government's operations, evaluating from a user-oriented-standpoint and suggesting some actions against the prioritized tasks, etc.

Since its inauguration in August, 2006, the Expert Evaluation Committee on New IT Reform Strategy has actively provided valuable evaluation, and in March of this year, has drafted the Evaluation Report for the FY2007, which they have reported to the IT Strategic Headquarters. For the FY2007, the Expert Evaluation Committee focused on 1) to fully enforce the user-oriented standpoint, 2) a close

examination of a User Experience Index, and 3) the full realization of total optimization as their action policy. Based on this policy, the Expert Evaluation Committee provided evaluation in such fields as education and human resources, IT business management and telework that were set up as semi-prioritized fields, in addition to the prioritized fields such as healthcare and e-Government. In the report, the general evaluation is given that while some progress has been made to establish the IT usage environment after two years since the New IT Reform Strategy was set forth, it has not necessarily led to the situation that public can appreciate the benefit of such progress. The report also makes the propositions with regard to the tasks that are faced in each of the prioritized fields and the direction that should be taken to overcome these tasks.

To make these actions truly meaningful, it is necessary that the contents of this report are appropriately reflected on the imminent IT policies, and that it contributes to the C(Check) to A(Action) to P(Plan) procedure, and acts to facilitate the stabilization of the PDCA cycle. Therefore, in compiling the Priority Policy Program 2008, Japanese Government treated the proposition of the Expert Evaluation Committee on New IT Reform Strategy sincerely and made efforts to reflect this proposition on the policy measures wherever possible.

This Priority Policy Program itself will be evaluated by the Expert Evaluation Committee on New IT Reform Strategy, and based on the report made by the Expert Evaluation Committee, the IT Strategic Headquarters will seek the judgment of the ministers in charge on the related policies and establish the PDCA-cycle system, including the mechanism of improvement indications against the policy measures, if needed. Since it is of the utmost importance to work in close coordination with the Council on Fiscal and Economic Policy and Council for Regulatory Reform, and to focus on the truly effectual policies, the policies outlined in this Priority Program will be effectuated under the leadership of the IT Strategic Headquarters.

## II Priority Policy Program

### 1. Pursuit of IT Structural Reform Capabilities

#### 1.1 Structural reform of healthcare through IT

-Full online processing of all medical insurance claims  
and lifetime self healthcare management-

##### <Basic Aspects>

In the context of the rapidly aging population amid extremely low birthrates that is progressing at speeds unseen anywhere else in the world, which has resulted in the rise of medical expenses, we face the challenges such as the improvement in the quality and efficiency of health care, the optimization of medical fees, and the eradication of healthcare disparity. To solve these challenges, the National Health Information Infrastructure is to be constructed in order to realize, through the digitization of health information and its effective utilization, healthcare that enables 1) individuals to take control over their own health records and, by presenting them to doctors, receive medical care that is particular to their own constitution and medical history, 2) consistent medical treatment with prevention of interruptions in exchanging the health information of patients between various medical institutions, and 3.) doctors to provide EBM (Evidence Based Medicine) which medical care is based on the analysis of health information.

Steady progress has been made until now in the effort to realize the principle of full transition to online processing of medical insurance claims (billing statements for the medical treatment and prescription fee) in principle by the FY 2011 and in promoting the development of regional medical institutions and telemedicine. In addition to these efforts so far, the necessary measures are to be promoted steadily from now on to realize the infrastructure that enables individuals to review and manage their own health records, and the infrastructure that enables the analysis of health information nation wide as the National Health Information Infrastructure.

Furthermore, for the realization of social security services according to the citizen's standpoint, it is our goal to establish an environment that enables individuals to browse and manage the

information related to social security through the implementation of the "Social Security Card (provisional title)" that will act as a pension book, health insurance as well as a nursing-care insurance card. Moreover, the deliberation will be promoted in order to realize "e-PO Box (provisional title)" that allows individuals to actively use their own records and information.

#### **1.1.1 The advancement of IT in the medical fields**

##### **① A cross-boundary grand design for medical fields**

Promote organized and effective computerization for all medical, healthcare, nursing care, and social welfare fields.

#### **<Priority Policies>**

##### **(1) Steady execution and reassessment of the grand design for computerization (Ministry of Health, Labour and Welfare)**

Steadily execute policies based on the grand design for the computerization across the medical, healthcare, nursing care, and social welfare fields established in FY2006. In addition, understand and review the achievements of the policies, manage its advancements on an annual basis, and reassess the grand design as needed.

##### **(2) Evaluation conducted by Healthcare Evaluation Committee (Cabinet secretariat)**

The Healthcare Evaluation Committee will conduct research in order to identify user needs and responses, as well as evaluation about issues and achievements of policy milestones by each ministry.

##### **② Support advanced preventive healthcare by utilizing health information and high quality medical care realized by medial institutions**

Provide by FY2010, an infrastructure for managing "lifetime" self healthcare information and support people to utilize their own health information to enhance well-being, and also realize advanced health guidance by insurers. Foster growth of medical information systems such as electronic charts, and significantly promote the advancement of medical quality, the securing of medical safety, the coordination between medical institutions, and the utilization of national health information.

**<Priority Policies>**

**(1) Establish a common infrastructure for the computerization of healthcare**

**(a) Operate the authentication infrastructure for healthcare professionals (Ministry of Health, Labour and Welfare)**

In order to promote the expansion of the use of the HPKI (Healthcare Public Key Infrastructure) certification authority that allows verification of official certification of healthcare professionals, we will start deliberating upon the measures to increase the number of electronic certifications issued for healthcare professionals in FY2008, and take necessary measures.

**(b) Create a safe and inexpensive large capacity network (Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry)  
PKG**

Fully notify medical institutions of unified security requirements to ensure a safe and smooth flow of health information. Furthermore, to make better use of public networks, the Internet, and mobile communication webs, work towards the connection of differing networks, in compliance with the above mentioned security requirements.

**(c) Promote standardization of medically related computerization (Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade, and Industry)**

With regard to the standardization of health information data exchange, we will promote the measures for the standardization process to ensure inter-institutional/intra-institutional interoperability and consistency of information systems and to allow information exchange and sharing among the institutions. In collaboration with the organizations in the private sector related to the health information regarding the standardization in the medical fields, we will promote the process regarding the standards that are required in the healthcare field today, as we try illuminating the standards of which it is necessary for us to notify medical institutions. Furthermore, with regard

to the related international standardization process, we will work in collaboration with the organizations related to the health information in the private sector to continue making efforts to have the state of our nation's healthcare be reflected in the international standards.

We will continue our deliberation on a maintenance system that would allow timely updates on standards based on responses from healthcare professionals in the field.

**(d) Promote standardization of the names of diseases on the description attached to the pharmaceuticals (Ministry of Health, Labour and Welfare)**

In FY2008, with regard to the diseases susceptible to treatment which are listed on the description attached to the pharmaceuticals, we will deliberate on measures and timeframe regarding the correspondence between the names of treatable diseases listed for the newly approved pharmaceuticals and the Japanese Standard Disease Code Master, and reach a conclusion as we take the situations in various other countries into account. In respect of the already approved pharmaceuticals, we will also deliberate on the necessary procedures, taking the aforementioned conclusion into consideration.

**(e) Develop technology to enable sophisticated analysis of health information (Ministry of Health, Labour and Welfare)**

By FY2009, build a healthcare terminology and knowledge database (ontology database) with multi-axial cross reference, which will include disease names and diagnoses, symptoms, and surgical procedures, in order to enable sophisticated analysis of health information obtained, which can be utilized for medical support, epidemiological research, and healthcare policies.

**(2) Establish medical information systems within hospitals and localities, and promote its interconnection**

**(a) Support computerization in medical institutions (Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry)**

In continuation of our efforts so far, for diffusion and

promotion of the medical information system, we will continue standardizing its data format and rules for data exchange, and basically pre-installing these standards to the medical information system.

In order to clarify the options of medical information systems that medical institutions can incorporate, and thereby promote the diffusion of the standardized information system, we will support the effort to examine the possibilities of the joint operation of the healthcare information system and to publicly present the results of the examination to the users, i.e., medical institutions.

Furthermore, regarding the indices (the evaluation system) to appropriately evaluate the necessity and utilization of computerization depending on the objective, with regard to the functions, size, and characteristics of medical institutions, we will try and diffuse such indices so as to enable medical institutions to promote the appropriate computerization process by utilizing these indices.

**(b) Promote and support information linkage between medical institutions within localities (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry) PKG**

Support will be given to medical institutions in providing themselves with the equipment and software that are necessary for the development of higher quality healthcare in the localities by utilizing treatment information, such as text and images, exchanged or referred to as necessary between other medical institutions.

Furthermore, in respect of the operation to enable the creation of the medical trace reports that comply with standard Medical Information Exchange regulations, in order to facilitate the coordination of medical information, we will promote and disseminate its effectiveness.

In FY2008, we will examine the requisites for the establishment of a system which is necessary for the coordination among medical institutions that utilize a public network, and continue to deliberate on its standardization.

**(c) Train human resources for medical computerization (Ministry of Health, Labour and Welfare)**

Medical institutions will be advised and counseled regarding computerization, and the development and training of human resources will be promoted that can make local contributions to medical computerization within the medical department of municipalities, to help increase the potential of the medical computerization infrastructure.

**(3) Promote the analysis and utilization of health information on a nationwide scale**

**(a) Establish an evaluation structure and the role of nationwide health information that should be collected (Ministry of Health, Labour and Welfare) RM PKG**

With due consideration to the protection of personal information, in order to help medical insurance claims data collected from around the nation be used academically and epidemiologically and also be utilized for medical policies, also factoring in the deliberation and results in FY2007, we will deliberate on the concrete method and execution of analysis and, while delivering certain results, establish a system for the collection and analysis of medical insurance claims data and specific health checkup results on a national scale in FY2008.

While settling on the future course to take regarding a database that enables to utilize medical insurance claims data and specific health checkup results as a basis for medical treatments and medical measure within FY2008, set up such database by FY2010. Furthermore, starting in FY2011, we will analyze accumulated medical insurance claims data and specific health checkup results, making their results public for citizens, medical institutions, and insurers, and, from FY2011 onward, in the light of improving the quality of healthcare, we will deliberate on the expansion of the scope of subjects to collect data from.

Accumulated medical insurance claims data will be widely used with respect to such things as security and public benefit.

**(4) Promote the collection of health information and its utilization for preventive medicine by individuals**

- (a) Establish a system that enables personal management of one's health information to utilize in health monitoring, etc. (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and Ministry of Health, Labour and Welfare) RM PKG**

To allow individuals to obtain health information electronically and utilize it for their personal health management or for its presentation at medical examinations, we will provide a basic direction for the rules to obtain and manage health information and a mechanism of its provision scheme by FY2008 in coordination with the deliberation on the Social Security Card (provisional title) and e-PO Box (provisional title). Targeting FY2011, we aim to organize a system in which the insurers are provided with information through organizations that provide such information, and to establish an environment that enables the requesters to take a look at such information electronically.

In respect of particularly delicate information such as medical trace reports, we will begin the operation in FY 2008 to prove that the National Health Information infrastructure enables individuals to securely and safely collect and utilize these medical records, sorting out the challenges regarding the technical and management aspects of it by FY2010.

In terms of medical checkup results other than the one for the specific health checkup, we will deliberate on the standardization of data as well as the necessity and the current condition of the electronic inspection or provision of such data as we take into consideration the implementation status of specific health checkups, and reach a certain conclusion by FY2010.

**③ Realize full transition to online medical insurance claims**

By early FY 2011, we will streamline national healthcare costs by greatly reducing the cost of healthcare insurance administration as a result of full online preventive care by epidemiologically utilizing the databases accumulated from medical insurance claims.

**<Priority Policies>**

**(1) Promote full online submission and reception of medical insurance claims**

**(a) Full online exchange of medical insurance claims between medical institutions, pharmacies and screening and payment institutions (Ministry of Health, Labour and Welfare)**

We will steadily realize the principle of full online processing of medical insurance claims prior to the beginning of FY2011 at the latest through the thorough advertising and dissemination of the principle to medical institutions and pharmacies. In addition, all items on medical insurance claims shall be in an analyzable data format that are provided and accepted online or through electronic medium by medical institutions, pharmacies, and screening and payment institutions.

**(b) Full online exchange of medical insurance claims between screening and payment institutions and insurers (Ministry of Health, Labour and Welfare)**

In order to smoothly realize the principle of online processing of medical insurance claims prior to the beginning of FY2011, we will notify and disseminate the full computerization efforts to insurers, and advise insurers to engage in online processing as soon as possible. In addition, all items on medical insurance claims that screening and payment institutions and insurers provide and accept online or via electronic medium shall be in an analyzable data format.

**(2) Encourage a smooth transition to full online processing of medical insurance claims (Ministry of Health, Labour and Welfare)**

In FY2008, we will deliberate on the online processing of medical insurance claims return and reexamination claims among medical institutions, pharmacies, screening and payment institutions, and insurers as we engage in further improving the convenience of online submittal.

**(3) Install standard codes for billing computer systems (Ministry of Economy, Trade and Industry)**

In order for medical institutions to manage the necessary system introduction and modifications at a fair price, we advise that at the latest by FY2010, all billing computer systems sold will have the basic master of electronic billing processing preinstalled as a standard code.

**(4) Establish a computerized medical treatment fee scale (electronic medical fee scale) (Ministry of Health, Labour and Welfare) RM**

While being mindful of accurately evaluating medical expertise and expert opinion of those related to the development of medical insurance claims processing computers, we will work as it seems fit to clarify regulations regarding calculation and to simplify checkup payments and the calculation logic involved. Moreover, in regard of the electronic medical fee scale created in accordance with the medical treatment fee revision in 2008, we will continue to review the way to alleviate the cost it will cause medical institutions as the necessity arises when it is time for the revaluation of medical treatment fee in FY2010. In addition, in order to enable screening committees to focus on the medical/scientific aspects in making their decisions, we will advance the technical aspects (such as automatic inspections) of screening and payment institutions through computerization.

**(5) Establish an instant online reference system for the eligibility of insured persons at medical institutions (Ministry of Health, Labour and Welfare)**

To coincide with the principle of full online processing of medical insurance claims by early FY 2011, necessary measures will be promoted that allow medical institutions to access insurer-managed registers of insured persons online, using the Social Security Card (provisional title), as a means of instantly checking for insurance eligibility at the time of consultation.

**④ Realize more effective communication in healthcare**

Remote healthcare will be promoted, and disparities in medical standards between localities eliminated, including advanced treatments. Terrestrial digital broadcasting, etc. will also be utilized to realize effective patient guidance and consultation during emergencies.

<Priority Policies>

**(1) Strengthen collaboration between medical institutions and promote diagnostic assistance in the remote healthcare field (Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry)**

Using cerebral strokes and other illnesses as case studies, we will conduct verification tests in the actual field in FY2008, which requires the speedy and secure exchange of dynamic images necessary to support advanced operations and diagnostic imaging assistance performed among medical institutions through the standardization of communication procedures. We will deliberate on expanding the application outside the actual area of verification operation.

**(2) Utilization of ubiquitous network technology in the fields of healthcare and medicine (Ministry of Internal Affairs and Communications and Ministry of Health, Labour and Welfare)**

To support individuals to manage their own health, we will develop a system that enables the easy recording, accumulation, and management of one's vital data anywhere, any time, through the utilization of the ubiquitous network technology. In addition to it, we will conduct a verification test as we construct a model regarding the healthcare support operation in which medical institutions conduct health guidances using the accumulated vital data as a reference.

Furthermore, to help attain a high level of medical safety and efficiency in services, we will develop and verify a system that enables and utilizes electronic recording and management of the traceability of pharmaceutical producers to patients as well as the related information.

Altogether, we will try to educate and disseminate the utilization of ubiquitous network technology in order to improve the level of medical safety and efficiency in services through symposiums held for medical institutions and such.

**(3) Promote telemedicine to support the full development of regional medical institutions (Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry)**

Based on the "Interim Report" (July 31, 2008) compiled at a meeting of the Panel on Telemedicine Promotion Measures jointly

held by both Ministers of Internal Affairs and Communications and of Health, Labour and Welfare, which panel was established to deliberate on the way to utilize telemedicine and telecare technologies in help enhancing medical care in regional areas as well as measures to promote such use, we will implement Telemedicine Model Projects starting in FY2008, examine the necessity and effectiveness of telemedicine technologies, and deliberate on the clarification of the role of telemedicine as well as the utilization of financial support measures.

**1.1.2 Realization of an environment that enables the active use of information for the social welfare services from the citizen's perspective**

**① Realize the Social Security Card (provisional title)**

Implement the Social Security Card (provisional title) that will act as a pension book, health insurance card, and nursing-care insurance card by around FY2011.

**<Priority Policies>**

**(1) Deliberation on the realization of the Social Security Card (provisional title) (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, and other related government agencies) RM**

We will deliberate on the basic plans for the system related to the issue of the Social Security Card (provisional title) by FY 2008, conferring with the other related organizations. Taking the results of such deliberation into consideration, we will set out to develop the system, while developing necessary regulations for it.

Furthermore, the deliberation on the Social Security Card (provisional title) shall be promoted in accordance with the deliberation on the dissemination of the Basic Residential Registers Card and the public personal identification system.

**(2) Prepare a system to promote the measures for the informatization of the social security field (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, and other**

**related government agencies) RM**

We will develop a system to enable each measure and concept related to the informatization of the social security field that is deliberated upon by each government agency to work in cooperation with each other by FY 2008.

**② Realize an environment that enables the public to obtain and manage own information including social security information.**

In order to realize social security system that enables citizens to obtain, review, and utilize their own information with security and ease, we will deliberate on the e-POBox (provisional title) that allows citizens to obtain and manage the information that is currently managed respectively by medical institutions and health insurers, aiming for the start of its service around FY2010.

**<Priority Policies>**

**(1) Develop an environment that enables the public to reach information on social security (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Finance, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, and other related government agencies) RM PKG**

In respect of obtaining information through the use of the Social Security Card (provisional title) regarding medical insurance claims data, specific health checkup results, and pension information, in FY 2008, we will deliberate on how a system should provide individuals such information. By around FY2011, we will develop a system in which information is offered by such organizations as the insurers that provide it, aiming to establish an environment that allows those who desire to review such information electronically. Our deliberation will be promoted in accordance with the aforementioned 1.1.1 ② "Promote the collection of health information and its utilization for preventive medicine by individuals."

In terms of medical checkup results other than the one for the specific health checkup, or of information on pensions other than the public pension, we will deliberate on the necessity and the ideal situation of standardization of data as well as the electronic inspection of provision of such data as we take into consideration the implementation status of specific health

checkups, reaching a certain conclusion by FY2010.

Regarding other social security information, we will sort out various challenges we face such as its system, and deliberate on the measures to deal with them.

- (2) Deliberate upon the digital certification system and the scope of signature verification on-line (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, and other related government agencies) RM**

In order to enable individuals to securely obtain social security information on-line, we will deliberate on the digital certification system and the scope of signature verification on-line, and work on developing regulations and laying down rules that are required.

- (3) Basic design for the e-POBox Interface (provisional title) (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry) RM**

By FY2008, we will work on a basic model for the e-POBox Interface (provisional title) that functions as a medium for the various agencies in the public sector to provide information to the e-POBox (provisional title) securely. Based on how it goes, by FY2010, we will compile specifications and conduct a test trial.

- (4) Research on securing access using networks through diverse means and devices (Ministry of Internal Affairs and Communications)**

With regard to social security services, we will research and conduct a demonstration trial by FY2010 on securing various methods of access using networks, not only through personal computers but also through equipments such as mobile phones and digital broadcast receivers.

- (5) Deliberate on institutional attention to the protection of personal information (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, and other related government agencies) RM PKG**

In respect of the e-POBox (provisional title) regarding social

security information, we will deliberate on institutional attention to the protection of personal information during FY2008, which will be followed by the development of necessary regulations and implementation of the guidelines, starting in FY2009.

**(6)Deliberate on its application to the fields other than social security information (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and other related government agencies) PKG**

We will deliberate on enhancing the application of the e-POBox (provisional title) to the fields other than that of social security information in coordination with the next generation e-administration services that will be realized in the near future. During FY 2008, we will research and deliberate on the coordination with the e-administration services. In addition, we will research and deliberate on the possible applications of the e-POBox (provisional title) service by a private enterprise and the coordination with the utilization of information by private enterprises.

## **1.2 An environmentally-friendly society that utilizes IT**

### **—Efficient use of energy and resources—**

#### **<Basic Aspects>**

It is estimated that CO<sub>2</sub> emission from IT equipment itself will grow five times over by 2025 along with the increase of information and IT equipment in accordance with the growth of IT society and that energy consumption, particularly in developing countries, will increase rapidly. In the face of such challenges, so as to contribute to the realization of a low-carbon society that manages to combat global warming as well as add to economic growth, we will put in full efforts to promote Green IT (Green Computing), domestically and internationally, with the focus on "Reduction of Environmental Load through the Utilization of IT" and "Energy Conservation regarding IT Equipment itself" as they work closely together.

In the area of global warming, we are implementing various environmental measures that utilize IT for energy management in order to meet the target set in the Kyoto Protocol. While we have entered the observation period set by the Kyoto Protocol this year, we must increase our efforts in order to reach the reduction level drawn in the Kyoto Protocol.

Under such circumstances, we must further promote Energy Conservation regarding IT Equipment itself in an effort to minimize higher CO<sub>2</sub> emissions due to the increased number of installed IT equipment and their advanced functions. At the same time, in collaboration with the Global Warming Prevention Headquarters, we will promote the full utilization of IT in office and household energy consumption management, in building systems to facilitate supply chain logistics, and in promoting intelligent transportation systems (ITS).

Furthermore, in the light of promoting efforts and initiatives among every agent and at every sector/level in society, we will organize and provide environmental information through the use of IT. At the same time, with regard to waste and recycling, we will promote Reduction of Environmental Load through the Utilization of IT with public and private sectors in cooperation, as we promote the use of electronic manifests and, in order to balance out such activities as the efficient application of natural resources and the prevention of environmental contamination, also actively support

international resource recycling initiatives that utilize IT.

With such an environmental support in the field of IT, we will contribute to reduce environmental load in the entire Asian region, and in cooperation with the IT companies and consortiums in the world, governmental agencies in each country, and international organizations, we will lead the world in engaging in environmental issues through the use of IT.

<b>① Promote a plan to limit energy consumption by IT equipment.</b>
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**<Priority Policies>**

**(1) Promote a plan to limit energy consumption by IT equipment RM**

**(a) Promote research and development to support energy conservation related to IT equipment itself (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)**

With the progress of information society that has resulted in the rapid increase of energy consumption by IT equipment itself, we will promote "Green IT Initiative," and under Industry-Government-Academia collaboration, promote developing energy saving technology related to IT and its dissemination and education, domestically and internationally, including international collaboration.

In concrete, ①ultra-high efficiency heat recovery system, recycling of waste heat, and optimum data storage system that enables servers and data centers to conserve energy, ②energy conservation related to displays utilizing organic electro-luminescence with high-efficiency light emitting capabilities, ③development of next-generation low power semiconductor, ④development of technology that enables automatic control of energy consumption most effectively regarding heating, lighting, air conditioning systems in factories, buildings, and houses through the use of sensors and wireless systems, and such radical IT development that results in.

①Reducing energy consumption regarding IT equipment  
By 2012, in order to promote radical technological development for energy conservation, we will develop fundamental technology to improve and double the energy consumption efficiency in IT

equipment and system.

Additionally, by FY2008, by making use of the superior characteristics of nanotechnology, we will make efforts to significantly upgrade and lower energy consumption of ultra-high speed optical/electrical interface technology, and establish elemental technology that enables to build the next-generation information and telecommunications network.

Furthermore, by FY2010, we will establish the fundamental technology of optical multiplex processing node systems that enables breakthrough reductions of system switching energy through LSI technology.

**(b) Adopt the "Top runner" system according to the Rationalization in Energy use Law (Ministry of Economy, Trade and Industry)**

We will establish energy-conservation standards for routers, in accordance with the Rationalization in Energy Use Law, during FY2008. Following the target year for achieving energy-conservation standards, in FY2008, a progress analysis will be conducted for electronic calculators and magnetic disc devices. Appropriate measures will be taken based on these results and the Rationalization in Energy Use Law.

**(c) Discover the seeds of innovative technology for fundamental energy conservation (Ministry of Internal Affairs and Communications)**

We will discover the seeds of innovative technology that enables to radically reduce the emissions of greenhouse gases.

<b>② Advanced energy management and efficient physical distribution/traffic flow through IT</b>	
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Lighten the environment-related load on socio-economic activities by creating environmental policies that utilize IT for advanced energy management and efficient physical distribution and traffic flow.	
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**<Priority Policies>**

**(1) Example efforts of efficiency through the utilization of IT such as the Japanese national plan to achieve the goals of the Kyoto Protocol RM**

**(a) Promote IT-utilizing energy demand optimization management in homes and offices (Ministry of Internal Affairs and Communications and Ministry of Economy, Trade and Industry)**

We will popularize BEMS (building energy management system) by supporting civilian enterprises with introductory costs, and by FY2010, establish energy management techniques utilizing BEMS within the public welfare department. By FY2008, we will verify compliance with factory criteria that promote the use of BEMS, by conducting field investigations at the Designated Energy Management Factories. In addition, we will start deliberating on a more efficient energy management technology, while we will also aim to establish and spread HEMS (home energy management system) by working on cozy cutting technical developments.

Furthermore, in order to make progress in our effort to reduce CO<sub>2</sub> emission in companies and homes through the utilization of IT, we will develop an evaluation index of managing CO<sub>2</sub> reduction by IT systems and services, implement verification trials to promote various efforts to utilize IT starting with the "visualization" of energy consumption in companies and homes through the use of PLC (power line communications) and sensor networks, and promote the evaluation, diffusion, and education regarding examples where environmental contribution is made using IT.

**(b) Efficient physical distribution by promoting green logistics (Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure, Transport and Tourism)**

Shippers and physical distributors will work together in promoting development of physical distribution systems with minimal environmental load, by participating in the "Green Physical Distribution Conference." We will provide support and aid superior cases as model businesses that help reduce environmental load through efforts utilizing IT such as electronic tags, publicizing the results widely. In addition, by FY2009, we will create a concise CO<sub>2</sub> emission estimation manual.

**(c) Promote intelligent transportation systems (Cabinet Secretariat, the National Police Agency, Ministry of Internal**

**Affairs and Communications, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure, Transport and Tourism)**

We will reduce emissions of NOx•PM, CO<sub>2</sub>, etc. by alleviating traffic congestion based on information (probe information) collected from automobiles and trucks regarding vehicle location and driving speed through the use of various communication media such as on-board VICS and cell phones.

To this end, in FY2008, road administrators and physical distributors will share road traffic information, and deliberate on improving traffic flows for freight vehicles. We will also deliberate and experiment on the collection and utilization of probe information, testing on the Metropolitan Expressway. Furthermore, we will make a quantitative evaluation of the reduction effect of CO<sub>2</sub> through the operation efficiency of truck companies enabled by the accumulation and utilization of probe information, as we conduct a demonstration experiment. In addition, we will deliberate on the prospect of the system that provides road traffic information as we deliberate on the way probe information should be shared and utilized, which is accumulated by various agents in the acceleration project for returning profits to society.

Furthermore, we plan to make further development in the measures regarding the Expressway fee as well as the smart interchange.

We will make a progress in introducing the profile signal control method that can be flexible to rapid changes in traffic volume, thereby contributing to the reduction of CO<sub>2</sub> emission through the alleviation of traffic congestion. With this aim in mind, in order to evaluate the effectiveness of its applicability in relation to roads with varying traffic condition and traffic environment, we will test model operations in several areas, while promoting a nation wide application of such model. In FY2008, we will test model operations outside the control area in middle to narrow range area control, and evaluate the effectiveness of model operations in the previous FY.

<p><b>③ Collect, organize, analyze, accumulate, and provide environmental information using IT</b></p>
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Further promote each sector's efforts and initiatives, addressing environmental issues, through the efficient collection of environmental information and systematic organization, analysis, and accumulation, as well as diverse ways of provision of that information using IT.

**<Priority Policies>**

**(1) Collection, organization, and provision of environmental information, using IT**

**(a) Develop a long term and integral environmental information infrastructure (Ministry of the Environment)**

Set up an information-based environmental administration that formulates and evaluates environmental policies. We will further promote sustainable lifestyles for our citizens, and engage in dealing with environmental issues, while we aim to establish a "society of ubiquitous environmental information."

Therefore, it is necessary that we focus on the promotion of the development of an environmental information infrastructure, user-friendly organization of environmental information, distribution of that information, as well as an internationally linked information infrastructure. By FY2008, we will draw up "Environmental Information Strategy" that formulates a basic policy regarding the development of a lasting and integral infrastructure for environmental information, on which strategy we will start making an effort.

**(b) Promote environmentally-friendly actions through the provision of environmental information (Ministry of Economy, Trade and Industry, Ministry of the Environment, and other related governmental agencies)**

Through such actions as regular updating and organizing of each of the ministries' environment-related websites, we will provide a structure where entrepreneurs, local public entities, and the general public can obtain necessary environmental information whenever desirable.

For example, we will also provide information through websites such as "General environmental database," "Team-6%" and "Global warming prevention portal site," or those such as "Environmental report plaza" and "Environmental report database" which offers information on projects that show consideration to the

environment entrepreneurs are in, and promote environmentally-friendly actions in all sectors as we develop a system wherein small and medium enterprises can actively provide and utilize environmental information as well.

Likewise, local public entities will work to provide appropriate environmental information through the updating and maintenance of their websites.

**(c) Demonstrate and diffuse "An environmental household account book" which promotes each home to take action in the environmental issues (Ministry of Internal Affairs and Communications and Ministry of the Environment)**

Demonstrate and diffuse "An environmental household account book" which further promotes each one of the citizens to take action regarding the environmental issues by "visualizing" the volume of CO<sub>2</sub> emission due to consumer activities in households through the use of IT, and raising environmentally-friendly awareness in each individual.

To this end, during FY2008, we will provide an environmental household account book at the "We are the Ministers of the Environment: Eco-family website," further promoting its dissemination. Furthermore, in FY2008, we will start developing an environmental household account book software using the services such as the ASP and the SaaS as well as the web-enabled POS cash register. By FY2010, in a model ubiquitous community, we will conduct a demonstration trial for a system to visualize household CO<sub>2</sub> emission.

**(d) Research and development on remote sensing technology for greenhouse gases (Ministry of Internal Affairs and Communications)**

By FY2013, we will research and develop a system to measure CO<sub>2</sub> emissions that enables an accurate, three-dimensional measurement of the CO<sub>2</sub> density distribution in the sky, establishing a technology to quantitatively measure and evaluate the process of CO<sub>2</sub> generation, absorption, and dissolution on the spatial scale of cities.

**(e) Develop forest and plantation GIS (Ministry of Agriculture, Forestry and Fisheries and Ministry of the Environment)**

We will support the organizing of forest GIS data, to enable each prefecture to efficiently collect and systematically organize, analyze, accumulate, and provide forest-related information. In addition, we will develop a 1/25000<sup>th</sup> vegetation map by March, 2012 that covers sixty percent of the national land, and while providing such data through the websites, we will promote further organization of GIS.

**(f) Establish an IT-utilizing farming (Ministry of Agriculture, Forestry and Fisheries)**

Through the active use of IT that enables an immediate grasp of farming land condition, we will establish an IT-utilizing farming, reducing environmental load as it allows more efficiency in spraying fertilizers and agricultural chemicals. By FY2008, we will support to establish a model farming system that enables the reduction in the spillage of fertilizer components and the consumption of chemosynthetic pesticide by half.

**(g) International development of the IT environment (Ministry of Internal Affairs and Communications, Ministry of Foreign Affairs, and Ministry of Economy, Trade and Industry)**

With the power of IT environment that enables Japan to keep an international advantage, during FY2008, we will deliberate on the way to contribute to the reduction of environmental load in the entire Asian region where the demand for energy is rapidly increasing in such countries as China and India, through financial and technological cooperations along with the Top runner system.

In addition, in FY2008, as the Green IT International Symposium and the International Symposium on ICTs and Climate Change were held in Japan, we will seize this opportunity to lead the world in engaging in the environmental issues in the light of IT. Furthermore, following the International Symposium on ICTs and Climate Change, we will actively contribute to the international standardization of the evaluation method of the reduction effect of CO<sub>2</sub> emissions through the utilization of IT by ITU (International Telecommunications Union).

**④ Promote electronic manifests**

Through collaboration between the public and private sectors, by FY2010, we will promote the use of electronic tags as we work to digitize 80% of manifests (industrial waste management document) issued to businesses that generate large volumes of waste (50% for all businesses generating waste).

**<Priority Policies>**

**(1) Promoting the diffusion of electronic manifests (Ministry of the Environment and other related government agencies) RM**

We will aim for more than 50% diffusion of electronic manifests by FY2010. In order to achieve this end, throughout FY2008, we will work on spreading the use of electronic manifests while deliberating, planning, and revising the system reformation necessitated by the increased use of electronic manifests.

**⑤ Promote resource recycling by utilizing IT for improving waste traceability**

Promote to secure appropriate resource recycling by improving waste traceability through the utilization of IT, taking into consideration the facilitation of international transfer of waste.

**<Priority Policies>**

**(1) Create an appropriate international resource recycling system through IT RM**

**(a) Implement model operations to improve international waste traceability through the utilization of IT (Ministry of the Environment)**

In FY2008, while taking into consideration the technological and systematic challenges that have come out through past deliberations, we will work on overcoming such challenges in implementing model operations for an IT system that can be utilized in securing international waste traceability. We will then clarify the positioning and directionality of utilization regarding IT systems in creating an effective waste traceability system.

**(b) Promote responsible recycling of products and maintenance of product safety through the utilization of IT (Ministry of Economy, Trade and Industry and Ministry of the Environment)**

In order to address the social challenges of environmental recycling, maintaining product safety, and providing information on contained chemical substances, we will make efforts to construct an information sharing system beyond the boundaries of specific enterprises, markets, and business sectors, and beyond direct business relations, by the use of EDI and electronic tags. Therefore, we will develop the advanced economic society infrastructure and work to enable both efficient use of resources and prevention of environmental pollution at the same time.

Starting in FY2008, we will make efforts to deliberate and demonstrate on the way information that should be shared by affiliated enterprises in electronics industry be distributed and disclosed, or on deliberating upon how to secure product traceability using electronic tags and databases. Furthermore, in regard of environmental recycling, we will promote developing a control system through the deliberation and demonstration on the appropriate way to share information on products from the moment of purchase till the time to be processed for recycling.

### **1.3 The world's leading safe and secure society**

**-Using IT for disaster management, public safety,  
and food safety and security-**

#### **<Basic Aspects>**

We all share the wish to live in a safe and secure society, with special attention to disaster management, public safety, and food safety, as it directly affects our daily lives.

In the field of disaster management, we are in the works for establishing a system that enables the disaster management organizations of the central government to share information for the purpose of immediate response against disaster situations and support of revival/restoration efforts in the event of a disaster. We will continue to promote the development of an integrated system which allows inter-organ sharing of disaster prevention information among the related organizations such as national and local governments. In addition, in terms of providing disaster prevention information, efforts are made such as the introduction of Earthquake Early Warning to the general public. We will further promote our efforts to improve on the speed and accuracy of information provided so that the citizens can appropriately minimize harm, including the elderly and the physically impaired. Furthermore, we will advance/strengthen the shared disaster prevention information platform that supports these efforts.

With regards to public safety, although the constant increase in reported penal offences has been stopped in recent years, there is a limit to take effective existing measures in dramatically restoring safety, and for this reason, promoting new policies to utilize effectually IT would be valid. In particular, because of the cruel crimes involving children in recent times, it is imperative that we maximize the effective use of IT to protect children.

With respect to food safety, we have measures already in place to solidify a beef traceability system. In addition, we are making a progress in diffusing and promoting the efforts to enable checking on the history of production and distribution through the use of IT, as we collect and publicize the cases of IT application in the fields of agriculture, forestry, and fisheries. Going forward, we will continue to substantiate these frameworks and will make it possible to provide online confirmation of production and distribution data

for major domestic perishable foodstuffs with high consumer demand. In addition, in order to enhance public understanding while we aim to achieve plentiful and secure dietary practices, as well as a healthy level of consumer confidence, we will disseminate information on the measures that are being taken to secure food safety.

In the future, it will be necessary to use and fully utilize IT to resolve various problems and to create a safe society where all people can live without anxiety.

**① Reduce disaster damage**

Use IT so that the public can appropriately minimize harm from earthquakes and tsunamis, sources of great concern to the public because of the potential for extensive damage, thereby halving by FY2014 the expected damage from earthquakes in the Tokai, Tonankai, and Nankai ocean regions. And improve public safety by utilizing IT.

**<Priority Policies>**

**(1) Improve the disaster management information infrastructure as a comprehensive system (Cabinet Office and Ministry of Internal Affairs and Communications)**

The Disaster Information Sharing Platform enables cross-institutional information sharing as a comprehensive system which allows the grasp of disaster situation, as well as collaboration and information sharing among rescue-related institutions.

As for this Platform, we will upgrade functions of shared disaster management information and the information collaboration system, etc., heeding the mutual understanding of information items among related institutions.

As for disaster management application, which utilizes public networks and would be equally accessible by regional public bodies, we will decide upon standard specifications in FY2008 based on past achievements, and aim for deployment in all prefectures and municipalities by FY2010, considering the linkage with the Disaster Information Sharing Platform.

**(2) Promoting the provision of information to the public regarding disaster prevention and public security and realizing the technology to reduce damages**

**(a) Provide information to the citizens regarding disaster prevention and public safety (Ministry of Internal Affairs and Communications)**

In order to promptly and accurately transmit disaster prevention information to residents, we will work to develop MCA land mobile communication systems simultaneous transmissive communication systems utilizing regional intranet, in addition to municipal Disaster Management Related Communications Network, and proceed to steadily disseminate and raise awareness of these communication systems.

In addition, we will promptly set up the simultaneous municipal disaster management radio communications so that every municipality can utilize the J-ALERT system which can transmit the emergency information to municipalities instantaneously. Meanwhile, in FY2008, we will also work to improve the stability of such warning systems by doubling the transmission circuit, expand the communication media to provide information to the citizens, and deliberate on widening the scope of information reception for public facilities.

**(b) Provide weather warnings and forecast information such as for gust at the municipal level (Ministry of Land, Infrastructure, Transport and Tourism)**

Regarding weather warnings that are necessary for the head of municipalities to issue an appropriate evacuation advisory, in FY2008, we will work on organizing a support system for forecast operation and developing forecasting technologies, targeting the flooding season in FY2010 to start with the warning issues at the municipal level.

For the short term forecast information such as for gusts which will emerge and expire in an extremely short period, in FY2008, we will deliberate on what information to provide as well as make technical developments for better forecasting, targeting the beginning of FY2010 to start providing it.

**(c) Reduce damage from earthquakes/tsunamis through Earthquake Early Warning (Ministry of Land, Infrastructure, Transport and Tourism)**

The service of the Earthquake Early Warning that gives out warning before the strong earthquake hits has begun to provide

information to the public in October, 2007. We will work further on improving the accuracy of earthquake forecasts, and continue to disseminate and publicize on the Earthquake Early Warning so that upon recognizing them, the public will be able to take appropriate reactions, thereby reducing damage.

**(d) Provide local and detailed disaster prevention information (Ministry of Agriculture, Forestry and Fisheries and Ministry of Land, Infrastructure, Transport and Tourism)**

By the end of FY2008, we will expand on the online provision of every prefecture data regarding river disaster prevention information such as river level and the possible danger of sediment disaster, while we also promote to develop observation facilities such as surveillance cameras and GPS for slope monitoring and optical fibers so as to swiftly provide local residents with various river disaster prevention information. In particular, regarding the designated flood forecasting rivers and rivers with warning river level specified, we will develop observation facilities for river level, etc., as well as a system for collection and transmission of such observation data by FY2009. Furthermore, we will proceed to set up a ubiquitous river information system and interactive platform, and develop technologies to realize more detailed observations in a linear, expansive, or temporal sense. We will implement a system by FY2008 in 40 prefectures that enables to provide local residents and reservoir managers with disaster prevention information concerning reservoir water level.

**(e) Provide information on disaster risks (Ministry of Education, Culture, Sports, Science and Technology and Ministry of Agriculture, Forestry and Fisheries)**

With regard to the disaster risk information platform that distributes risk information on major disasters by displaying it on a map, by FY2010, we will begin a demonstration run of the system following the development of risk evaluation methods and application measures of disaster risk information, and by the end of FY2012, establish the system.

We will develop a homepage by the end of FY2012, where local authorities and residents can share information on disaster prevention in mountainous areas such as those designated as

disaster prone. Meanwhile, we will work on disseminating such information to independent disaster reduction organizations and NPOs by offering seminars, etc.

**(f) Provide public transportation information during disasters (Ministry of Land, Infrastructure, Transport and Tourism)**

We will promote to establish a unified system that collects and provides real-time service information of public transportation during disasters and accidents, as well as work to expand the number of public transport enterprises that participate, targeting the full-fledged operation after FY2008.

**(g) Develop technology that contributes to disaster victim rescue, etc. (Ministry of Internal Affairs and Communications)**

By FY2010, we will establish the basic technology of a system utilizing terahertz waves which can be utilized for obtaining image data in case of limited visibility due to fires or smoke, to aid in victim rescue.

**(3) Advance and strengthen the information infrastructure for disaster management and public safety and provide various related measures**

**(a) Helicopter television system (Ministry of Internal Affairs and Communications and Ministry of Land, Infrastructure, Transport and Tourism)**

In the field of fire protection, we will continue to support municipalities' installation of the helicopter television transmission system. In addition, we will deliberate on introducing a system which sends images directly from helicopters to satellites so that image data can be obtained from anywhere in Japan regardless of the location in which a disaster strikes.

We will deliberate on further development of the system of the image transmission from helicopter, in which real-time scene images of such disasters at sea or of terrorism can be transmitted.

**(b) Prepare the secure communication ways (National Police Agency, Ministry of Internal Affairs and Communications, and Ministry of Land, Infrastructure, Transport and Tourism)**

In respect of police trunk communication, we will advance and strengthen systems by combining existing circuits, as well as introduce successively high-speed circuits such as optical networks.

Targeting the end of May in 2016, we will promote the digitization of the fire defense and emergency radio network.

By FY2015, we will change the circuit of the observation equipment for diastrophism observation into both wired and wireless circuits, and build an observation network which allows real time data collection and communication under the circumstances of disaster.

**(c) Systematic support of disaster management activities (Ministry of Internal Affairs and Communications, Ministry of Land, Infrastructure, Transport and Tourism, and Ministry of Defense)**

We will promote the installation of a positioning system for emergency 119 calls made from mobile phones. Moreover, by FY2010, we will develop a comprehensive system to support effective fire fighting, disaster reduction activities of regional public bodies.

By FY2008, we will aim to create an inter-organ system that can compare marine accident information, position data from 118 calls, and ship movement information using the automatic identification system (AIS), with various information that the Maritime Safety Agency possesses.

By the end of FY2010, we will develop a system that enables the Self-Defense Forces to obtain local information held by related external agencies necessary when dispatched for disaster relief activities, and that enables them to transmit information in real time to the Prime Minister's office and other related agencies. This system begins operating in the beginning of FY2011.

**(d) Disaster management observation information (Ministry of Internal Affairs and Communications and Ministry of Agriculture, Forestry and Fisheries)**

As land improvement facilities play an important part in

disaster management, in FY2008, we will decide on a plan for building a system that provides real-time disaster prevention information such as water levels and rain fall volume to facility managers and administrative institutions.

We will provide observational information from rain gauges and elasticity scales, which will be installed as part of the forest conservation project, to local municipalities.

By FY2013, we will obtain the next-generation atmospheric remote sensing technology to make high-level predictions of sudden climate disasters such as torrential raining and tornados.

**(4) Improve ability to continue crucial operations at the time of disasters (Cabinet Office)**

In order to support the establishment of business continuity plans, we will work to disseminate and publicize the "business continuity guidelines" so that businesses can continue crucial operations even in the event of an unanticipated disaster. We also promote assessment of disaster management measures and the publication of this information.

We will extract the concrete tasks which come out during the process of each agency's decision on its business continuity plans and its execution to operate. By deliberating on measures against these tasks, we will aid each government agency in establishing its plan and in its execution to follow, targeting the summer of 2008.

**(5) Realize a crime resistant society**

**(a) Effective sharing and provision of information regarding children's safety (Ministry of internal Affairs and Communications and Ministry of Education, Culture, Sports, Science and Technology)**

We will promote efforts that IT would be utilized to effectively share information on children's safety among schools and guardians in model areas. In conjunction with it, in FY2008, we will publicize and widely spread the achievement of the model system for child protection most appropriately applied to each area through the use of IT which was implemented in FY2007.

**(b) Utilize IT for management of radioactive sources (Ministry of Education, Culture, Sports, Science and Technology)**

As required under the "Code of Conduct on the Safety and Security of Radioactive Sources" established by the IAEA (International Atomic Energy Agency,) we will organize a radioactive source registration and management system by FY2008 to make it possible to trace radioactive sources in the country by registering their location information. We will begin operating the system by FY2009.

**(c) Utilize IT for making automobile inspections more sophisticated (Ministry of Land, Infrastructure, Transport and Tourism)**

In response to illegitimate car inspections, vehicle theft and dishonesty related to recalls, we will promote sophistication of automobile inspection by use of IT. Inspection data, including image data, acquisition and utilization system will be streamlined and begun operating in inspection branches and inspection registration offices by FY2010.

**(d) Strengthening countermeasures to prevent illegal acquisition of passports by utilizing biometrics (Ministry of Foreign Affairs)**

In order to prevent illegal acquisition and illegal use of passports, we will conduct a survey in FY2008, necessary to promote development of the next generation IC passports by utilizing biometrics and to strengthen countermeasures in the process of passport application acceptance.

**(6) Strengthening the foundation for crime arrests**

**(a) Promotion of online DNA records search systems (National Police Agency)**

We will go only "DNA records search( system" by the end of FY2008 to make it possible to register and search DNA records related to latent materials and suspects. This will allow prefectural police to directly register and reference the information.

**(b) Support of multi-intelligence analysis leading to speedy arrests on significant crime (National Police Agency)**

We will streamline "Criminal Investigation Support-Crime Analysis Tool & System" (CIS-CATS) (provisional title) by FY2008 that will generate analytical data on specs of place, time and suspects by analyzing geographical information of crime statistics and criminal methodology in conjunction with other such information. And, we will verify the effects of introducing the system on criminal investigation.

**(c) Promotion of the use of various image data, such as from security cameras, for criminal investigations (National Police Agency)**

We will continue to enhance function of equipment that sharpens blurred images recorded by security cameras in order to respond to diversified recording methods of image data.

To contribute to individual identification of criminals recorded by security cameras, we will create nationwide databases on the 3-dimensional images of the suspects taken some other times. And we will research about construction of a system that enables search and match particular facial image to many other images when necessary.

**② Enhance the production and distribution data of main foods**

By FY2010, we will make it possible for large portions of the public to confirm production and distribution data for major domestic perishable foodstuffs with high consumer demand, by the Internet and other means, and for the public to use that information in selecting foodstuffs.

**<Priority Policies>**

**(1) Establish the JAS Distribution Standard (Ministry of Agriculture, Forestry and Fisheries)**

We will also continue to proceed with the discussions on target articles regarding JAS standards covering distribution information which the third-party organization certifies, and establish the standard by FY2010.

**(2) Promote awareness of achieving plentiful and secure dietary practices (Ministry of Agriculture, Forestry and Fisheries)**

In order to achieve plentiful and secure dietary practices, we will enhance wide public understanding through measures that promote the dissemination of various efforts to promote the safety

of food, the legal compliance of producers and food companies,  
and establishing relationships between the consumer and the  
producer as personal as meeting face to face.

#### 1.4 The world's safest road traffic environment

—Reducing traffic fatalities to 5,000 or below—

##### <Basic Aspects>

In the field of road traffic, road traffic accident related fatalities were marked at 5,744 lives. In addition to the loss of these precious lives, with traffic related injuries at a high 1 million, resulting in such a severe situation as one in hundred citizens injured and dead every year, it is imperative in this country that we continue to work towards realizing a safe road traffic environment.

The "Cooperative Driving Safety Support Systems that cooperates with traffic infrastructure collaboration" (henceforth, Driving Safety Support System) is expected to contribute to traffic safety by complementing drivers' cognition and judgment capabilities, and preventing mistakes made through negligence. In this regard, FY 2008 marks a significant year in which a large scale field operation test will be conducted in a number of public roads around the nation, with public and private sectors in coordination. It is necessary that this testing operation will, then, lead to its practical application starting in FY2010 under an appropriate division of labor between the public sector and the private. For its realization, we deliberated and decided upon the outline for the operation plan of the large scale field operation test in the ITS Promotion Council by the end of FY 2007. Having made a public announcement on the project in April, 2008, there will be a need for increased coordination among the interested parties to continue to make progress on the project.

Moreover, it is also important to not only take preventative measures to avoid road traffic accidents all together, but in the unfortunate event that an accident does take place, to minimize the damage and impact it causes. In FY2008, we will continue to further diffuse the use of emergency reporting systems and on-the-ground express support systems for ambulances.

##### ① Realize Driving Safety Support Systems

We will reduce the number of traffic fatalities and traffic accidents by realizing the "Driving safety support system that cooperates with traffic infrastructure collaboration," beginning operation in FY2010, which will prevent accidents from happening.

**<Priority Policies>**

- (1) Promote comprehensive measures to realize Cooperative Driving Safety Support Systems (Cabinet Secretariat, National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure, Transport and Tourism) PKG**

In order to realize the implementation of the Cooperative Driving Safety Support Systems starting in FY2010, designating FY2008 as the "Social experiment" year to verify the effects of traffic accident reduction and its compatibility, we will run the large scale field operation tests under the leadership of the on ITS Promotion Council.

In concrete, to enable a quantitative efficiency study and improvements on the quality of the system, we conduct experiments to aid each individual region in its own operation starting in FY2007 (regional field operation tests), and through the focused use of the system established upon these tests, conduct an experiment in a single area (Integrated operation test) so as to verify compatibility and to gain public recognition for the deployment of the system nationwide.

Furthermore, in order to gain wider recognition among the citizens on the Cooperative Driving Safety Support Systems and arouse awareness to prepare for its diffusion following its implementation in FY2010, we will actively promote a public relations campaign, effectively using a common logo, and through homepages and symposia.

- (2) Promote the technical development of Driving Safety Support Systems (National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure, Transport, and Tourism)**

We will work on the technical development of technologies that contribute to the realization of the Cooperative Driving Safety Support Systems such as the detection technology including sensors, the communication technology between pedestrians and vehicles, and the human machine interface technology.

- (3) Promote international standardization of ITS technology (National Police Agency, Ministry of Internal Affairs and**

**Communications, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure, Transport and Tourism) PKG**

By FY2010, within the ISO and ITU, promote the international standardization of various ITS technologies, through the standardization of such information and communication technologies for Driving Safety Support System that Cooperates with Traffic Infrastructure Collaboration and the standardization of a common platform for Internet ITS and the Dedicated Short Range Communication system (DSRC).

**② Prompt rescue of traffic victims**

We will reduce the time it takes from the detection of traffic accidents to the admission of injured persons at medical facilities.

**<Priority Policies>**

**(1) Develop the location information sharing system for use in the event of accidents**

**(a) Enable emergency calls to be made through various information telecommunication means, such as cellular telephones and IP phones (National Police Agency, Ministry of Internal Affairs and Communications)**

We will promote that prefectural police and fire headquarters adopt a system in which each police and fire headquarter will have access to the originating location of 110 and 119 calls, made using cell phones and IP phones.

**(2) Develop a quick-response system for use in the event of accidents**

**(a) Promote dissemination of Fast Emergency Vehicle Preemption Systems (FAST) (National Police Agency and Ministry of Internal Affairs and Communications)**

By FY2010, we will evaluate the impact of Fast Emergency Vehicle Preemption Systems (FAST), which give emergency vehicles priority traffic signal control, and promote its use in major cities.

**1.5 The world's most convenient and efficient e-Government  
-Handling 50% or more of all filings online and  
creating a simple and efficient government-**

**<Basic Aspects>**

We aim to provide the world's most convenient and efficient e-Government services, with the goal to raise online service usages rates to more than 50 % by FY2010. To this end, with regards to the procedures for the government administrative agencies, we established the "Action Plans for Encouraging online Services" regarding the procedures with the most annual applications made, and have worked on specific measures to promote the utilization of these services such as simplifying electronic signatures, having attachment files abridged, reducing the handling fees, and creating the tax system for it. As a result, the online service usages rates have gone up from 11.3 % at the end of FY2005 to 15.3 % at the end of FY2006, and it shows that the use of online services are spreading among the general public, if gradually. However, considering that there are nearly half of all these procedures for which no online application has been made all year around, we are in need of approaches that are more convenient to use from the public's point of view, and that enables the public to recognize the offered convenience.

On the other hand, with regional public bodies, in particular, with basic municipalities, there are many procedures relevant to the public, which makes the role they play quite significant in developing the whole e-administration system. However, in regard of the Basic Resident Registration Card which constitutes the foundation for the concept of e-Government and e-municipalities, its diffusion rate still hovers low (around 1.8 %). Due to the disparity in the condition of the established information and telecommunications infrastructure that enables the use of online services between prefectures and municipalities, not only that the procedures are limited which allow the use of online services, but the scope of such utilization is also dependent on respective regional public bodies under the circumstances.

Therefore, in order to widely improve online services diffusion rate, we will work on making fundamental improvements in expanding the use of online services along with the improvement and diffusion of digital certification infrastructures that constitute a

foundation for the promotion of e-Government. At the same time, as we bring great changes in the existing way of thinking, we will strengthen the efforts to realize the next generation e-administrative services fundamentally, and with hitherto unseen speediness.

In particular, based on the new project guideline regarding the governmental administrative procedures, focusing on target procedures of the project and setting up new goals to pursue, we will compile action plans as the entire government that lay down particular means for improvement in respect to each procedure.

Moreover, we will realize one-stop e-administrative services that enable various administrative procedures for respective life event to be completed in a single spot, the "visualization" of the electronic handling process, and administrative agencies to promote their efficiency through the cooperation between back offices, with the goal to construct a digitized society that is highly characterized by its convenience, transparency, and efficiency. In particular, we will proceed to deliberate on realizing the measures to follow, and to promote one-stop e-administrative services from the public's point of view with the mutual coordination not only between government administrative agencies and regional public bodies, but also between public organizations and private organizations.

**① Create e-Government in which convenience and enhanced services can be experienced.**

With regards to the administrative procedures of the government and of regional public bodies, we will realize e-administration (e-Government and e-municipalities) that enables citizens to benefit from convenience and improved services through the adoption of one-stop services and establishing the coordination of back offices so as to greatly enhance the use of online services.

**<Priority Policies>**

**(1) Deliberate on the realization of an e-administration service information desk that is unrestricted by central/regional government boundaries**

**(a) Promote the next generation e-administration service (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant government agencies) RM PKG**

Based on the "Grand design for the implementation of the next generation administration services (e one-stop services)" that was drafted by the next generation e-administration service basic framework deliberation project team in June 2008, we will begin by proceeding to make one-stop services for the procedures on moving and retiring, targeting FY2010 to construct a standard model, aiming for its implementation. Furthermore, we will establish a new mechanism that allows inter-agency sharing and utilization of various kinds of administrative information among administration agencies in response to the citizens' demand, and proceed to make efforts so as to abolish/abridge the attachments for administrative procedures that have come to burden the public and enterprises.

**(b) Regional Information Platform Promotion Operation (Ministry of Internal Affairs and Communications) RM**

We will conduct verification tests for one-stop services utilizing the "Standard Specifications of Regional Information Platform," which were decided upon as rules on which each system is based, allowing information systems of regional public bodies to make mutual accesses and cooperations. By FY2008, we will identify the challenges that we face in its demonstrative operation among regional public bodies as well as between regional public bodies and the private sector, and propose the measures to overcome these challenges.

In FY2009, we will conduct a demonstration test based on the results of deliberation on providing one-stop services for moving and retirement procedures between the government and municipalities, made by the next generation e-administration service basic framework deliberation project team. Demonstration tests will also be conducted utilizing the standard specifications that are deliberated upon in the fields of medicine and healthcare as well as disaster prevention as a public application. Furthermore, we will support regional public bodies that serve as model cases in their efforts for the standardization of information systems which utilize the "Standard Specifications of Regional Information Platform," by dispatching regional informatization advisors to the region, and engage in constructing a comprehensive national/local e-administrative service.

In addition, while spreading the results of these demonstration experiments to regional public bodies, we will proceed to deliberate on technologies that enable the unification of digital certifications inevitable to realize one-stop services with the coordination of information systems between regional public bodies.

**(c) Promote a one-stop service for the private sector services on moving (Ministry of Economy, Trade and Industry) RM**

With regard to procedures for movement in the private sector, we will sort out the challenges to identify, analyze, and seek measures to overcome that we face in order to enhance the number of companies and areas to receive services, deliberating upon the coordination with administrative procedures for moving, on which, by FY2009, we will run a demonstration experiment for its subsequent implementation. We will thereby promote our efforts to make highly convenient, transparent, and efficient one-stop services out of the private sector procedures.

**(d) Develop a basic framework for the intensified efforts towards e-Government and e-municipalities (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant government agencies) RM**

While making it a principle to handle administrative tasks online, and widely expanding the use of online services for administrative procedures, in order to develop an infrastructure to help realize the next generation one-stop e-Government, we will make an overall revision of the act for the promotion of online use in administrative procedures, developing new regulations to further promote e-Government. We will also strengthen the function as a "control tower" for the entire nation to comprehensively promote e-Government.

In this regard, Cabinet Secretariat and Ministry of Internal Affairs and Communications will prepare the necessary acts (e-administration promotion law [provisional title]) to propose at an ordinary session of the Diet in 2009.

**(2) Promote the use of online application and filing services**

**(a) Fundamental efforts to encourage the use of online services (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant government agencies) RM**

In accordance with the "Action Plans for Encouraging Online Services,"<sup>1</sup> with regard to the national administrative procedures, we will compile the action plans by the end of August this FY as the government before it will be decided upon at the IT Strategic Headquarters. The action plan specifies particular improvement measures such as making the concentrated target procedures into focus and establishing new goals, while abridging attachments in respect of each procedure and reducing the handling fee. In relation to the operations mentioned above, a place will be prepared within the Cabinet Secretariat for the deliberation so as to be reflected in the action plans.

On the other hand, for procedures which have only experienced remarkably low use of online services, and that expect little increase for the time being, while weighing the expense against the effects that can be made, we will proceed to make more varied efforts as a whole, even deliberating on making a fundamental revision, including such as the discontinuation of the system.

With regard to these measures that are incorporated into the action plans, relevant government agencies will promptly start making their efforts beginning in FY2008. In addition, in light of securing the sure implementation of the action plans, the Ministry of Internal Affairs and Communications will work on enforcing their promotion by making a strict examination of the current condition regarding the implementation of these plans. The Ministry will also regularly get hold of and publicize the track record of each procedure on its use online. In conjunction with these, the e-Government Evaluation Committee under the IT Strategic Headquarters will conduct a strict evaluation based on the PDCA cycle.

**(b) Promote effective publicity and dissemination activities to encourage usage of online services (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Justice, Ministry of Finance, Ministry of Health, Labour and Welfare, and other related ministries)**

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<sup>1</sup> Decided by IT Strategic Headquarters on June 11, 2008

Through the coordination of related ministries, we will promote further publicity and dissemination activities even more effective to expand usership, by publicizing the content of the policies that will be implemented to promote the use of online services. In particular, we will continue to engage in activities to further publicize and disseminate the tax system for the promotion of e-Government that was implemented in January 2008, and promote its active use to those who are more likely to make frequent applications such as attorneys, accountants, and business managers.

**(c) Promote one-stop services for procedures related to automobile possession (National Police Agency, Ministry of Internal Affairs and Communications and Ministry of Land, Infrastructure, Transport and Tourism)**

In order to promote one-stop services for procedures related to automobile possession, we will deliberate on the measures to promote their usage, based on the system changes requested by the users.

As for procedures that are not currently served by the one-stop service, we will research predicted user rates and for those services in which convenience and enhanced services can be experienced, and confirm a 50% or more user rate, we will implement those services after FY2009. Meanwhile, requests will be made to each prefecture to take measures that will bring about early implementation and increase in usage rates.

**(d) Promote online application usage by utilizing the comprehensive portal site for e-Government (e-Gov) (Ministry of Internal Affairs and Communications and other related ministries)**

In order to promote the use of online application services using e-Gov, we will implement necessary measures for expanding on useful functions that allow citizens and users to find more useful benefits in e-Gov such as adding the function that allows citizens and users to send separately prepared application forms all at once and make such API (Application Program Interface) open to the public. Moreover, we will further promote the use of e-Gov by adding procedures regarding social insurance and labor insurance to the online application demonstration system which allows users to have a trial experience on online

application procedures using e-Gov, actively using such function in publicizing and dissemination activities.

**(e) Promote online use in local governments (Ministry of Internal Affairs and Communications and other related ministries) RM**

We will continue to promote our efforts based on the "guideline for the promotion of online use in local e-Government" so that our goal will be met to increase by 50 % the use of online procedures in local governments such as for application and filing by FY2010.

Furthermore, in order to promote the use of online services for application and filing procedures as we promote to increase the convenience and enhance the merit of using online services from the users' standpoint, we will implement research on the way we should grant incentives and on making it paperless for documents such as certifications, while we deliberate on the realization of issuing certifications using kiosk terminals at convenience stores.

**(f) Promote digitization for filing local taxes, etc. (Ministry of Internal Affairs and Communications)**

With regard to digitizing the filing of local taxes, by joining the portal system on local taxes (eLTAX), electronic filing of business tax, inhabitant tax, and depreciable property of fixed asset tax, business office tax, and payment report concerning individual inhabitant tax is possible. As of April 2008, all prefectures as well as in all Cabinet Order designated cities and 4 other cities (part of the system is under development) have joined the system. We will further put our efforts in improving convenience for the tax payers and efficiency of administration on tax matters by digitizing public pension payment report between pension underwriters and municipalities regarding individual inhabitant tax. We will aim to increase the number of municipalities joining the system, promote digitization, and will promote coordination between national online report/tax system (e-Tax).

**(g) Establish infrastructure to realize single sign-on services (Ministry of Internal Affairs and Communications)**

We will start in FY2008 to establish infrastructure for the

realization of single sign-on function based on telephone numbers in order to make one-stop services available for online administration services. By the end of FY2010, with the focus on the specified ubiquitous districts, we will run demonstration tests for online application support services.

**(h) Research on securing various means of access concerning the next generation online administration services (Ministry of Internal Affairs and Communications)**

In order to realize the next generation administration services through various channels, we will conduct a research on securing various means of access using networks, not limited to personal computers, but also mobile phones and information and communications equipments such as digital broadcasting reception. By FY2010, we will conduct demonstration experiments.

**(3) Promote the use and utilization of the public personal identification system/Basic Residential Registers Network System**

**(a) Promote the use and utilization of the public personal identification system (Ministry of Internal Affairs and Communications and all other ministries) RM**

In light of increasing the convenience for the public of the public personal identification system, we will deliberate on the necessary measures for improvements and make active efforts to promote its dissemination in accordance with the needs of the public.

In addition to these measures for improvements and dissemination, we will deliberate on specific plans such as increasing the convenience of online administrative procedures in accordance with the public personal identification system and the active promotion of the public personal identification system through various publicity media in order to promote the use and utilization of the public personal identification system.

**(b) Promote the use and utilization of the Basic Residential Registers Network System (Ministry of Internal Affairs and**

**Communications)**

Necessary support will be provided to coordinate between national administrative organs and designated information processing organizations (National Jyuki Network Center), in order to use and utilize the Basic Residential Registers Network System (referred to as "Jyuki Network" from here on) by FY2010, within national administrative organs, while following laws and regulations.

For those handling procedures that have yet to adopt the use of the Jyuki Network despite the fact that it is a lawful possibility, other than those with extremely low incidents, the adoption of the Jyuki Network will be actively utilized and efforts will be made to reduce attachments such as copies of certificates of residence, etc.

Furthermore, users will be notified that the attachment of certificates of residence will be unnecessary, regardless of recording residence codes through the utilization of the Jyuki Network, as part of the publicity measures to promote the use of the network system.

**(c) Promote the dissemination of the Basic Resident Register Card (Ministry of Internal Affairs and Communications) RM**

We will promote the use of the Basic Resident Register Card (referred to as the "Jyuki Card" from here on) for multiple purposes by offering municipalities finances for the cost it takes for the versatile utilization of Jyuki Card and the IC card standardized system for free. In conjunction, with regard to the municipalities that are issuing Jyuki Card without charging fees, we will give them new financial support for three years, starting in FY2008, thereby proceeding with the dissemination of the Jyuki Card through promoting to abolish any charge for issuing cards.

Furthermore, we will deliberate on realizing the system that enables the continued use of the Jyuki Card even after moving. In respect of disseminating such efforts, we will promote our deliberation in conjunction with the discussion on social security card (provisional title).

**(4) Improve the electronic application system in local governments**

**(a) Develop an electronic application system for use in local governments that is compatible with the public personal identification system (Ministry of Internal Affairs and Communications)**

Measures to promote the development of electronic application systems compatible with the public personal identification system will be supported for implementation in all municipalities by FY 2010.

**(5) Promote the electronic provision of administrative information**

**(a) Electronic provision of administrative information (Ministry of Internal Affairs and Communications and all other ministries)**

In order to enable citizens/users to smoothly find necessary administrative information through the comprehensive electronic government portal (e-Gov), we will continuously enforce the provision of relevant information, and promote collaboration with local governments that enables us to provide information regarding their procedures. In addition, necessary measures will be taken in providing prompt replies and guidance at the E-Government Support Center.

**(b) Promote the utilization of geospatial information as a common basis for the provision of administrative information (Ministry of Land, Infrastructure, Transport and Tourism and other related ministries)**

In order to realize a society that utilizes sophisticated geospatial information, individual ministries will promote the policy aiming for implementation around FY2011, based on the "Geospatial information utilization promotion basic plans."<sup>2</sup> The plan focuses on measures to construct guidelines regarding data development, provision, and distribution such as the guidelines for the standardization of geospatial information and for the protection of personal information, to establish and provide the foundational mapping information as a locating standard for geospatial information, to promote the establishment and utilization of the advanced technical foundation for satellite positioning technology, and to

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<sup>2</sup> Decided by Cabinet on April 15, 2008

strengthen the coordination between industries, academia, and the government.

In particular, with regard to the foundational mapping information and other basic geospatial information that serves as a common basis for the provision of geospatial information for individual administrative organs and alleviate the burden of mapping equipment, we will work on the renewal of such information as it seems fit whenever we recognize the changes, working on reducing expenses for each administrative unit.

**(c) Promote the dissemination of electronic voting (Ministry of Internal Affairs and Communications)**

By private testing institutions confirming that the technical conditions of the electronic voting system match their testing standards, through the reporting of the electronic voting system research and deliberation committee established for the improvement of reliability of the electronic voting system, reliability of the system will be enhanced, and in FY2008, we will further pursue the dissemination of electronic voting by supporting local governments that are trying to implement electronic voting system.

**② Promote the optimization of operations and information systems**

We will realize an efficient e-Government through the promotion of early and focused optimization of overall government operations and systems. In addition, we will promote similar activities among local governments.

**<Priority Policies>**

**(1) Promote the optimization of operations and information systems**

**(a) Bring into effect the optimization of operations and information systems (All ministries)**

We will make solid progress in operational processing time and expense reduction for the optimization of each ministry's operations and systems based on the optimization plan. As for system developments based on the optimization plan, development process adjustments, procurement methods will be revised to reflect expense reduction in budgets, and low cost (as much as possible) for the development will be planned by detailed review

of system functions, unit prices, and quantities. For the optimization of individual operations and systems per ministry, information systems will be unified, operational processing, beginning with proposal and approval, will be standardized and automated, while handling processes will be streamlined, and operations that do not necessitate employee judgment will be actively outsourced. Furthermore, regarding the so called legacy system, significant decrease in expenses and streamlined operations will be planned through system building, the review of procurement methods, and thorough operational revisions.

**(b) Evaluation of operation and system optimization (all ministries)**

Operation and system optimization is not a temporary measure and requires uninterrupted improvements using the PDCA cycle, with close attention on recent technological trends, etc. For this reason, the implementation of optimization in each ministry will be conducted and evaluated the status of optimization, according to the "Optimization of Operations/ Systems Guidelines"<sup>3</sup> (Managing ministries will lead implementation for inter-ministry shared operations/ systems and operations/ systems of ministries partly related.) Implementation will be promptly re-examined and plans for optimization revised, depending on evaluation results.

**(c) Monitoring optimization of operations/ systems (Ministry of Internal Affairs and Communications, and other related ministries)**

Under the authority of the CIO Conference, the optimization plans established by each ministry will be identified and adjusted from the viewpoint of their consistency in accordance with the "Optimization of Operations/ Systems Guidelines." And the executions and evaluations of them by each ministry will be monitored by the Ministry of Internal Affairs and Communications. In each system authority, the optimization plan and implementation state will be utilized to manage budget, structure, and number of employees.

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<sup>3</sup> Decided by CIO Conference on March 31, 2006

**(d) Cooperation and coordination for optimization of operations and information systems common to all ministries (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other related ministries)**

In order to bring about smooth and effective development and management of operations and systems common to all ministries, managing ministries will coordinate to utilize the coordination/ adjustment conference for the managing ministry for the development of a common system, and the E-Government Promotion and Management Office (referred to as GPMO hereafter) which is established within the Cabinet Secretariat will continue to, under the cooperated effort between the managing ministry and related ministries, oversee workflow management, necessary adjustments of specifications, and the confirmation of cost-effectiveness. In addition, for those areas that do not have forecasted cost-effectiveness, we will deliberate in the early part of FY2008 on them, including their elimination, and make necessary revisions.

**(e) Consider joint use of systems common to each ministry (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other related ministries)**

Based on the "Optimization Plan for the Shared Infrastructure for Common Governmental Systems,"<sup>4</sup> it will be developed and operated by the end of FY2008. In addition, with regards to the major operations of the shared use system infrastructure, the Ministry of Internal Affairs and Communication will be responsible for the immediate future.

However, from the standpoint of operating the infrastructure efficiently and with certainty, the framework for operations will be considered, including the possibility of outsourcing it to a public entity, along with the deliberation on the "E-administration Promotion Act" (provisional title).

**(f) Promotion of drastic efficiency of business processes in government general affairs for the utilization of IT (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Finance, Ministry of Economy, Trade and Industry,**

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<sup>4</sup> Decided by CIO Conference on February 13, 2008

**and all ministries)**

With regards to business processes in government concerning such as Payment of Travel Expense, Procurement of Goods, Management of Goods and Payment of Rewards, we will formulate the collaborative task force between the private and public sectors and actively promote the business process re-engineering (BPR), based on the "Action plan for the promotion of drastic efficiency of business processes in government general affairs-for the utilization of IT" (Decided on May 30, 2008 by the Team for discussing with the drastic efficiency about government general affairs.)

With regards to Payment of Travel Expenses, we will work on the standardization of regulations and the unification of standards for judgments in each ministry mostly within half a year (aiming for some time within October 2008), based on the "Guideline for Payment of Travel Expenses," and put into effect a radical reduction in the decision making stages. In addition, we will draft operation rules in business travel arrangements such as confirmation of packaged deals and ticket arrangements, and start outsourcing in each ministry from the beginning of FY2009.

With regards to other business processes in government general affairs—such as Procurement of Goods, Management of Goods and Payment of Rewards, we will review these business processes, deliberating in specifics on standardization and operation rules in the collaborative task force of the private and public sectors in FY2008.

In addition, with the aim to develop common information systems for all ministries within two years, the optimization plan for business processes and systems in government general affairs including Payment of Travel Expense and so on will be revised based on the action plan and we will realize the drastic efficiency about them through IT utilization.

**(g) Promote electronic processing of administrative operations (Ministry of Internal Affairs and Communications, and all ministries) RM**

We will promote electronic processing of administrative operations such as electronic approval which can be digitalized in government and conduct a review of the business processes

including the simplification of the decision making stages such as relevant rules and regulations for management of administrative documents.

**(h) Transfer and store official documents and other documents in the form of electronic media (Cabinet Office)**

Taking into account that each ministry will promote electronic processing of administrative operations in future, we will set out to transfer and store electronic official documents that expired their preservation period to the National Archives of Japan in digital format from FY2011.

For that purpose, between now and FY2010, we will proceed gradually with demonstration experiments on and creation of formats appropriate for long-term storage of digital official documents at the National Archives of Japan, deliberation on the rules concerning the transfer and transport of digital official documents, and the establishment of long-term storage system at the National Archives of Japan.

**(2) Improve government procurement**

**(a) Improve government procurement (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and all ministries)**

In regard to information systems targeted for optimization, procurement will be steadily managed by standardized operation/system management methods following the "Optimization of Operations/ Systems Guidelines."<sup>5</sup> In order to further secure transparency and fairness and realizing true competitive environment for procurement, based on the "Basic Guidelines for government procurement related to information systems"<sup>6</sup> separated/ divided procurement, as well as procurement documentation and the clarification of contracts will be steadily implemented according to the procurement plan. In addition, through the expansion of the database of case studies related to government procurement in relation to information systems for the sharing of information regarding procurement documentation, the standardization and efficiency of

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<sup>5</sup> Decided by CIO Conference on March 31, 2006

<sup>6</sup> Decided by CIO Conference on March 1, 2007

procurement operations will be promoted.

**(b) Promote information systems procurement based on open technical standards (Ministry of Economy, Trade and Industry) RM**

In procurement of government information systems, so as to promote it based on an open technical standard instead of relying on a particular enterprise and its specific technology, we will settle on the Technical Reference Model [TRM]) to be used as a reference by those in charge of information systems procurement in each ministry, and deliberate on its dissemination.

**(c) Promote electronic bidding (all ministries)**

The introduction of electronic tendering and bid opening is expected to streamline operations and reduce bidding related costs, as well as prevent fraudulent activities such as bid-rigging, to a certain degree. By fully utilizing IT in these ways, the general handling of electronic tendering and bid opening, as well as disclosure of tenders and successful bids will be promoted.

**(3) Promote efficiency in local governments**

**(a) Active utilization of Kasumigaseki WAN and LGWAN (Ministry of Internal Affairs and Communications, and all other ministries)**

The necessary follow-up field surveys (ministry network surveys) for individual networks that link each ministry with local governments will be conducted, and the institutions concerned will be requested to integrate with the Local Government Wide Area Network (LGWAN) in principle.

In addition, we will utilize LGWAN-ASP system to provide various application services to local governments through the use of LGWAN as a platform, while promoting to establish an environment that enables a smooth provision of the ASP/ SAAS services to local governments.

**(b) Promote cooperation of local government systems (Ministry of Internal Affairs and Communications)**

The utilization of the "Joint Outsourcing Introduction Guideline" formulated under the Joint Outsourcing Promotion

Association will be promoted, as efforts are made to promote the cooperation of local government systems, while we examine the challenges we face in transferring from the legacy system in order to proceed with the promotion of the cooperation of internal management operations and fundamental administrative systems.

In addition, starting in FY2008, we will evaluate and survey the effects of cooperation in respect of improving resident services as well as reforming local government business operations, compile the know-how of the efforts, introduction, and operation to raise such effectiveness, and share the gained insight among local governments.

**(c) Promote the use of ASP/ SaaS services in local governments (Ministry of Internal Affairs and Communications) RM**

We will present on particular measures for local governments to make use of ASP/ SaaS services.

Moreover, in order to support ASP/ SaaS users to compare, evaluate, and select the services, through the dissemination of the "information release authorization system regarding the safety and reliability of ASP/ SaaS services" operated by private organizations based on the "Guidelines for releasing information regarding the safety and reliability of ASP/ SaaS services,"<sup>7</sup> we will aim to promote the use of ASP/ SaaS among local governments, while deliberating on the way we should manage security of information necessary for introducing ASP/ SaaS services as part of public services.

**(d) Promote the mutual utilization of integrated GIS and base map information (Ministry of Internal Affairs and Communications, and Ministry of Land, Infrastructure, Transport and Tourism)**

In order to promote the improvement of efficiency about development of map related information in local governments and the development of integrated GIS, a framework across agencies that provides map information, the Ministry of Internal Affairs and Communications will continue to implement local fiscal measures in FY2008, and provide necessary support for the provision of information through seminars and portal sites in

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<sup>7</sup> Announced by Ministry of Internal Affairs and Communications in November 2007

conjunction with local governments.

In addition, we will complete developing base map information by FY2011 by collecting maps that will be a common foundation for the utilization of geospatial information in the hands of the government as well as local governments, and seamlessly merged through the use of manipulated aerial photos (ortho-image) that are enabled to be laid over on the maps. By FY 2008, we will start the provision of this information on the Internet free of charge.

In order to standardize geospatial information that is required for such a purpose, we will establish a JIS standard required as a domestic standard (geographic information standard), taking into account the trend of the ISO international standard, and promote its dissemination.

**(4) Optimization of operation/ systems of incorporated administrative agencies, etc.**

**(a) Optimization of operation/ systems of incorporated administrative agencies, etc. (Ministry of Internal Affairs and Communications, and other relevant ministries)**

In order to realize optimization of operations/ systems of incorporated administrative agencies, etc. (including national universities), and the reduction of costs related to systems and other measures to make operations more efficient, ministries holding jurisdiction over these institutions will conduct audits on major operations/ systems (annual recurring cost of system operation is 100 million yen or more), request that these institutions engage in and implement revised procurement methodology laid out in the "Basic Guidelines for government procurement related to information systems," established and implemented optimization plans, implement the principle of competitive bidding for systems procurement, deliberate on the unbundalization (separate/ divided procurement) of hardware and software, and the general upgrade of internal personnel.

In order to engage in the computerization of national administration and incorporated administrative agencies in an integrated unified fashion, we will deliberate on the items and milestones that need to be achieved across the board and common themes to be addressed by national administration and

incorporated administrative agencies through the national/ incorporated administrative agencies council for e-Government promotion. The Ministry of Internal Affairs and Communications will review the situation and progress of operations/ systems development among these incorporated administrative agencies on an annual basis.

**③ Improve and strengthen e-Government promotional structure**

Each ministry's structure in procuring and evaluation information systems will be improved, an evaluation structure for information systems of the entire government within the IT Strategic Headquarters will be created, and ceaseless improvements will be made using PDCA cycle. Similar structural improvements in local governments will also be promoted.

**<Priority Policies>**

**(1) Improve and strengthen e-Government promotional structure**

**(a) Establish a human resource development program for internal personnel training (All ministries)**

For the cultivation of personnel responsible for PMO across the government, each ministry will pursue focused training and securing, in accordance with the action plans for training and securing IT personnel that was laid down, based on the "Guidelines for Training and Securing IT Personnel for Administrative Entities."<sup>8</sup>

**(b) Enhancement and strengthening of e-Government promotional structure (All ministries)**

The Program Management Offices (PMO) will be enhanced and strengthened through the utilization and appointment of deputy CIO's as necessary, based on the activities of the office, which was created within each ministry, responsible for overseeing measures related to information system planning, development, operation, evaluation and such, with support and advice from the deputy CIO's, under the authority of the Chief Information Officer (CIO) of each respective office.

**(c) Enhancement and strengthening of GPMO (Cabinet Secretariat and**

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<sup>8</sup> Decided by CIO Conference on April 13, 2007

**related ministries)**

With regards to the realization of the next generation e-administration services and the fundamental promotion of efficiency of the internal management operations, we will continue to gain the participation and cooperation of operational managers in both public and private sectors, while aiming to enhance and strengthen the system of deliberation as the need arises.

**(d) Review evaluation by the e-Government Evaluation Committee (Cabinet Secretariat and Ministry of Internal Affairs and Communications)**

We will conduct research on user needs for the e-Government in succeeding years, in order to visualize the necessary steps for promoting online usage.

With regards to the optimization of operations and information systems in each individual ministry, centered around the inter-ministry shared systems, thought to greatly benefit further efficiency and large individual operation/ systems that have significant effect on society, strict screening and evaluation will be pursued, including aspects of cost benefits, support and recommendations for the planning, development, operation and evaluation of the information system will be conducted, and evaluate the situation of the promotion of online usage, as well as evaluate the activities of each ministry's PMO.

**(e) Local government CIO development program (Ministry of Internal Affairs and Communities)**

In order to train personnel that can make comprehensive contribution in building local e-governments, we will develop a CIO development training curriculum by 2008, regarding such subjects as the optimization of operations/ systems, the advancement of information security, and the strengthening of IT governance, and hold training programs utilizing the developed materials with the staff for mostly medium or larger sized local governments as their main target.

**④ Ensure system reliability/ safety and security enhancement**

Taking the improvement of user convenience into consideration, reliability/ safely will be

ensured and security will be enhanced for national and local government systems, and advanced technology will be nurtured and spread through our country's transformation into an e-Government.

**<Priority Policies>**

**(1) Improve security features of e-Government**

**(a) Strengthen cooperation between the Cabinet Secretariat and deputy Chief Information Officers (CIO's) of each ministry (Cabinet Secretariat and Ministry of Internal Affairs and Communications)**

Regarding the optimization of operations/ systems that are common or partly related to each ministry, in FY2008, the collaboration between the Cabinet Secretariat and deputy CIO's will continue to be strengthened and efficient information security features will be promoted when developing concerned systems.

**(b) Strengthen measures to secure e-Government's information security from the planning/ designing stage (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)**

It is imperative that appropriate information security requisites are incorporated into various operations and systems now in the process of developing as e-Government. We will therefore deliberate on measures to enable planning and designing information systems that incorporate the security of information as the basic concept, which results will then be reflected on government agency policies.

**(c) Develop a next generation OS environment that realizes high security features (Cabinet Secretariat, Cabinet Office, ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)**

As pressing undertaking of secure IT reliability, under the industry-academia-government collaboration, we will promote the development of Virtual Machine (VM) functions as well as the minimum OS functions that allow the operation of such functions (both of which functions put together will be called

"Secure VM"), which can provide information security features independent of the current environment, such as OS, applications, etc., while maintaining it. In FY2008, we plan to improve the capacity of Secure VM as well as to expand its application environment. Meanwhile, we will conduct verification tests on the assumption that it will be used in government agencies, working on sorting out the challenges we face in order to implement its actual operation.

**(d) Give support to strengthen security measures for government administrative agencies that make use of the Basic Residential Registers Network System (Ministry of Internal Affairs and Communications and other relevant government agencies)**

With regards to government agencies and others that will be offered personal identification verification information from the Jyuki Network, we will give support so as to enable each agency to perform self-inspections, distributing "Government Security Checklist for the Administration Agencies" through designated information processing organizations.

**(2) IPv6-ready e-Government and e-municipality systems**

**(a) IPv6-ready e-Government and e-municipality systems (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and all other ministries)**

Taking into consideration that the use of IPv6 in e-Government will strengthen security and be beneficial in establishing an inter-ministry shared use system, and in light of implementing a leading countermeasure against the depletion of IPv4 address, each ministry will make information and telecommunications equipments and software IPv6 compatible, when new information systems are developed (integrated) or updated, by FY 2008 in principle. In addition, we will modify e-Government system to handle IPv6 by 2010.

The following measures will be put in force for a smooth implementation.

i) Each ministry and government agency will proceed to adopt IPv6 for information systems in FY2008, following the "Guideline

for deploying IPv6 networks in e-Government systems”<sup>9</sup> as a reference. Moreover, each regional public body will also proceed with the IPv6 adoption for their systems, following the example government efforts as a reference.

ii) In order to enable access to electronic applications by the public using IPv6, it is necessary for Internet service providers to offer IPv6 connection service for individual users. For this reason, in FY2008, the Ministry of Internal Affairs and Communications will continue to post information on their website regarding the availability of IPv6 connection service offered by Internet service providers.

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<sup>9</sup> Ministry of Internal Affairs and Communications, March 30, 2007

## **1.6 Enhanced business competitiveness through the establishment of management by utilizing IT**

### **–Achieving the world’s leading IT business management–**

#### **<Basic Aspects>**

In order to retain continuous and stable economic growth, the increase of business competitiveness of our country while we face a decrease in population because of declining birth rates and an aging population, “improved productivity” is essential. Although there already are internationally competitive businesses that have actively pursued the utilization of IT synchronized with their management strategies, a majority of businesses suffer from their inability to overcome the “wall of departments”, where introduced IT isn’t fully utilized, or where as information systems are built per division or per factory there lacks a point of view of the total optimization.

Under the circumstances, we have carried out measures such as the establishment of the IT utilization guidelines, we have identified that at the end of FY2007 35% of businesses are actually utilizing IT and practice the IT business management.

Going forward, we will continue to work toward regional revitalization and the enhancement of productivity of our nation’s industry as a whole by utilizing the “connectivity” of IT, and support & implement necessary measures for the active utilization of IT among small and medium-sized enterprises (SMEs) and service businesses that have yet to adopt such environments. Furthermore, we will promote the development of a general-purpose shared infrastructure for electronic-commerce and heighten our national implementation rate of electronic-commerce, for the purpose of improving business productivity and bolstering business competitiveness. In addition, we will support the fostering of human resources with advanced skills in utilizing IT.

#### **① Realize the world’s highest level of corporate management through IT utilization**

By FY2010, we aim to enhance the productivity in every industry sector and of national economy as a whole through measures such as raising the percentage of business enterprises that have optimized corporate management in ways that utilize IT to the world’s highest level. Also, by FY2010, we will increase the percentage of small and medium-sized enterprises (SMEs) of middle scale (enterprises with annual sales of 500 million to 2 billion

yen) that utilize IT for fundamental businesses to 60% or more, and the percentage of SMEs' trade partners engaged in electronic-commerce to 50% or more.

**<Priority Policies>**

**(1) Strengthen the competitiveness and enhance the productivity of our nation's industry as a whole through the utilization of IT**

**(a) Develop a common foundation and promote the standardization for the enhancement of IT investment efficiency (Ministry of Economy, Trade and Industry, and related ministries) RM PKG**

With the aim to promote software development and market access by SMEs and venture businesses in the context of the trends of large-scale software development, we will construct a promotion framework by using the cooperation between academic/industrial/governmental bodies, discriminate between competitive and non-competitive areas concerning high general-purpose software installed in a wide variety of products from information appliances to automobiles, and promote joint development, standardization and open-sourcing of such software. In addition, we will collect various opinions widely from the industrial community in cooperation with private associations and councils which are promoting related measures, and aim to develop an effective framework that employs solutions to specific issues.

**(b) Promote strategic IT investment (Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry) RM PKG**

In order to facilitate IT investment intended to enhance productivity while ensuring information security, we will disseminate the Information Infrastructure Enhancement Tax System that has been extended and improved in the 2008 Tax Reform.

**(c) Create new industries/new services that utilize geospatial information (Ministry of Economy, Trade and Industry) RM**

In FY2008, we will deliberate on the development of the infrastructure/framework and international standardization for the use/utilization by the industrial community of basic

map information that can serve as the basis for geospatial information, and will identify factors necessary for the creation of new industries/businesses that utilizes geospatial information. From FY2009 and onward, we will promote the use/utilization by the industrial community of geospatial information through demonstration experiments on the necessary factors examined in FY2008.

**(2) Assist the development of human resources that can utilize IT**

**(a) Promote the appointment of Chief Information Officers (CIOs) (Ministry of Economy, Trade and Industry)**

In order to strengthen competitiveness of our country's enterprises through IT business management, we will raise awareness of the importance of CIOs and promote their appointment in enterprises through the following measures: by researching and analyzing the differences in rating of management index based on the presence of a CIO; by disclosing results of such analysis via the "IT business management portal site" and "IT management charter"<sup>10</sup>; by launching specific CIO fostering programs. We will also run workshops for SMEs managers covering corporate restructuring realization through IT utilization, and assist in the development of human resources taking on CIO responsibilities.

In addition, we will encourage the utilization of IT in SMEs as well as the fostering of human resources instrumental in promoting IT by providing consulting with intensive dispatch of external CIO who can offer advice from the standpoint of a CIO working in SMEs, such as ex-CIOs and certified SMEs consultants.

**(b) The effective utilization of the know-how and skills offered by the post-retirement workers (Ministry of Economy, Trade and Industry)**

In order to make effective use of the skills and know-how possessed by the post-retirement workers human resources (those who will retire soon or have already retired from major companies etc.) in regional communities and SMEs, and to protect such human

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<sup>10</sup> Decided by IT Management Council on June 20, 2008

resources and their skills and technologies from outward flow, we will develop a framework for developing nation-wide matching system for identifying the needs/seeds of the post-retirement workers human resources and matching between them and SMEs.

**(3) Support the improvement of productivity in the service industry through the utilization of IT (Ministry of Economy, Trade and Industry) RM PKG**

We will make efforts to improve the productivity in the service industry, including dissemination of IT utilization techniques, in cooperation with the "Service Productivity & Innovation for Growth (SPRING)" which was established in 2007 as the platform on which the industry, academia and government work together and discuss various issues in the service industry. We will also collect successful cases of IT management and provide related information that can serve as models and hints for other SMEs.

**(4) Advance IT business management (especially among SMEs)**

**(a) Disseminate general-purpose systems such as ASP and SaaS (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and related ministries) RM PKG**

We will promote the development of an environment for the dissemination of new and easy-to-use services for SMEs, such as SAP and SaaS, by developing shared infrastructure and utilizing cooperation opportunities between the private and public sectors.

**(b) Disseminate "Information Disclosure Certification System for ASP/SaaS Security and Reliability" (Ministry of Internal Affairs and Communications) RM PKG**

In order to make comparison/evaluation/selection of services easier for business corporations planning to use ASP and SaaS, we will, based on the "Policy on information disclosure related to ASP/SaaS security and reliability,"<sup>11</sup> disseminate and utilize the information disclosure certification system for ASP/SaaS security and reliability operated by a private organization.

**(c) Support management innovation by means of the utilization of**

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<sup>11</sup> Announced by Ministry of Internal Affairs and Communications in November 2007

**SaaS infrastructure system (Ministry of Economy, Trade and Industry) RM PKG**

We will develop an infrastructure system to assist SMEs to make their business operations more efficient by utilizing IT with ease and reasonable cost. With this system, we will support the innovation in operations in such processes as finance/accounting, HR/salary, customer maintenance etc., and help facilitate electronic application in transactions with public offices. In addition, we will disseminate "SLA Guideline for SaaS" that describes the policies concerning service levels which both the user and the service provider are advised to agree with, in order that appropriate transaction relationship is secured for business organizations using SaaS.

**(d) Disseminate "IT Management Capability Index" (Ministry of Economy, Trade and Industry) RM PKG**

We will promote self-assessment concerning the degree of IT utilization by disseminating "IT Management Capability Index" formulated in FY2006, and continue with our efforts to grasp the picture of actual IT utilization by private businesses at home and abroad. We will also extract necessary measures to be employed by business owners to overcome "the wall of departments" at the "CIO Strategy Forum" participated by the CIOs of leading companies, and implement actual improvement activities. Furthermore, we will establish the "IT Management Council" composed of management executives with high awareness of IT management practices to have cross-sectoral discussions, and adopt "IT Management Charter" for the sake of IT management practices from the perspective of corporate managers.

**(e) Utilize and disseminate the "Guideline on the enhancement of information system reliability" (Ministry of Economy, Trade and Industry) RM PKG**

We will promote the utilization and dissemination of the "Guideline on the enhancement of information system reliability"<sup>12</sup> and the reliability evaluation index that evaluates the compliance to the Guideline, so as to secure the reliability and security required of any information system.

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<sup>12</sup> Formulated by Ministry of Economy, Trade and Industry on June 15, 2006

**(5) Support small and medium-sized enterprise executives through the "IT Management for SMEs Support Project"**

**(a) Support the promotion of management innovation in small and medium-sized enterprises through the "IT Management for SMEs Support Project" (Ministry of Economy, Trade and Industry) RM PKG**

In order to promote management innovation through IT investments, we will help to create networks ("IT Management for SMEs Support Project") of external experts in the area that understand the actual conditions of SMEs, namely, IT coordinators, public assistance organizations, and private enterprises such as financial institutions, and make efforts to improve a consulting system concerning IT utilization in SMEs. Through such networks, we will provide training courses for SMEs across the nation on concrete methods necessary for IT-based management according to the type and size of business, and will popularize IT utilization in SMEs including the use of ASP and SaaS.

**(b) Release successful cases of IT utilization (Ministry of Economy, Trade and Industry) RM PKG**

In order to promote understanding of the value of introducing IT, primarily to business managers, we will continue to release leading and successful cases of IT business management through the utilization of IT and provide analyses and solutions for the factors hindering utilization of IT in SMEs. Additionally, in order to strengthen the framework for the collection of leading and successful cases, we will continue with "SMEs IT Management Capability Award" established in FY2007, and organize in a simplified manner the IT-based management practice samples collected through the implementation of the above award and provide such information broadly through the Internet and distribution of pamphlets containing the practice samples.

**(c) Support the improvement of small and medium-sized enterprise managers' management capabilities (Ministry of Economy, Trade and Industry) RM PKG**

We will provide training courses to enrich the knowledge of

SME managers, develop advanced and specialized back-up capabilities for those in charge of supporting SMEs, and create a remote learning program through the utilization of the Web.

**(d) Strengthen the IT industry by upgrading regional networks  
(Ministry of Economy, Trade and Industry) RM PKG**

From FY2008, we will seek to strengthen regional IT industries and upgrade the provision capabilities of IT solutions specific to SMEs and the needs of local industries by utilizing the IT Industry Relations Council in each region across the country and the "IT Management for SMEs Support Project," while supporting networking between the vendors and users based in particular region.

**(6) Expand IT use/utilization fields for small and medium-sized enterprises**

**(a) Support the continuation of skills in small and medium-sized enterprises (Ministry of Economy, Trade and Industry)**

By FY2008, we will develop highly versatile software that enables digitization, systemization and accumulation of designing and processing know-how that has been implicit knowledge of individual workers in SMEs until now. Additionally, we will develop a support tool which will enable SMEs, whether they have the knowledge of software designing or not, to create their own commercial software (production management, quality control, and delivery management, etc.) necessary for utilizing the accumulated know-how in production activities. By providing SMEs with these results, we will support the continuation of basic skills in SMEs.

**(b) Streamline the production and distribution of local products (Ministry of Economy, Trade and Industry)**

We will encourage the IT-based streamlining of production and distribution processes for local products. To this end, we will construct an information system for the management of production/distribution processes through IT technologies such as electronic tags during FY2008, and will aim to deploy the said system in a number of regions across the nation from FY2009 onward.

**(c) Support the cultivation of market through IT for local products (Ministry of Economy, Trade and Industry)**

In order to support the cultivation of market through IT for local products and promote sharing/standardization of data equally applicable to the similar efforts that are likely to be implemented in future, in FY2008 we will develop and promote a nation-wide direct-sales system, and support the enterprises that strive to launch direct-sales of local products and thus act as regional trading companies in 30 model districts.

**(d) Promote the establishment of a logistical framework utilizing the electronic commerce system in wholesale markets (Ministry of Agriculture, Forestry and Fisheries)**

We will develop an electronic commerce system for a various types of transactions in the wholesale market, such as auctions, bidding, and negotiated transactions, and realize direct logistical provision from supplier to retailer based on the result of electronic commerce (direct supply of products separate from the transaction). As a result, we will demonstrate and establish a model for logistical framework that enables cost-reduction in transactional operations and market logistics and will disseminate and announce its effectiveness.

**(e) Support the development of an information system for local markets of fisheries products (Ministry of Agriculture, Forestry and Fisheries)**

In order to encourage the fishery cooperative unions to make the logistics from production area to consumption area more efficient, we will support the development of an information system for the introduction of electronic commerce into local markets of fisheries products. We will also support the implementation of proving tests of the system to be developed.

**(f) Promote the creation and distribution of new tourism (Ministry of Land, Infrastructure, Transport and Tourism)**

We will promote the creation and distribution of new tourism by constructing an on-line database for the matching between travel firms and regional communities producing community-based new tourism packages.

**② Construct and utilize a general-purpose shared infrastructure for electronic commerce**

We will construct a general-purpose shared infrastructure that enterprises can jointly use for electronic-commerce and is harmonized internationally (e.g. EDI platforms), and increase the percentage of enterprises that use such shared infrastructure to 60% or more of all enterprises that engage in electronic commerce by FY2010.

**<Priority Policies>**

**(1) Develop electronic commerce and electronic tag platforms as a foundation of the economic society infrastructure**

**(a) Develop electronic commerce and electronic tag platforms as a foundation of the economic society infrastructure (Cabinet Secretariat, Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communications, and other related ministries) RM PKG**

In order to address the social challenges such as environmental recycling, maintaining product safety, chemical control and enhanced productivity, we will develop an advanced economic society infrastructure and promote the enhancement of productivity in the economic society as a whole by promoting the use of EDI and electronic tags, the securement of the interoperability among various code systems identifying company and geographical space, and the construction of a cross-industrial information sharing system.

From FY2008, we will implement measures such as cross-industrial verification and demonstration in the following: methods of disclosure and distribution of shared information in ① electric/electronic industry, ② textile industry, ③ building products/housing equipment industry; methods of utilization of database and electronic tags; development of an open and integrated code system. Furthermore, we will expand these efforts to other fields widely, and will construct a shared infrastructure for the utilization of ecommerce and electronic tags in a cross-sectoral manner by FY2010.

**(2) Develop a code scheme for identification of company and**

**geographical space**

**(a) Secure the interoperability of company codes (Ministry of Economy, Trade and Industry) RM PKG**

Since the company codes currently used for inter-company electronic commerce differ by the type of industry and usage, we will construct an integrated company code search system to upgrade the interoperability of the existing company code and enable more flexible utilization.

**(b) Develop "Company Directory" based on the telephone number etc. (Ministry of Internal Affairs and Communications) RM PKG**

Taking into account the current situation where various codes are allocated to companies differently in the public and private sectors, we will promote coordination among corporate systems by demonstrating the establishment of the cross-sectoral/cross-industrial company ledger (company directory) based on telephone numbers etc., and thus aim to reduce the cost of ID/password management by means of single sign-on in electronic commerce and electronic application etc.

**(c) Develop an environment for the code scheme that identifies geographical space (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry) RM PKG**

We will promote the construction of location code based on the needs of users, and secure the interoperability between various spatial identification codes that describe geospatial information through the standardization of PI (Place Identifier).

**(3) Develop and promote EDI shared infrastructure**

**(a) Develop EDI shared infrastructure for inter-industry transactions (Ministry of Economy, Trade and Industry) RM PKG**

In order to develop the EDI shared infrastructure for transactions between different industries, in cooperation with related businesses, we will discuss issues on the standardization of EDI message and promote its dissemination through seminars and training sessions. We will also support the development and adoption of EDI shared infrastructure to

disseminate EDI systems that enable electronic ordering, the process SMEs have struggled to keep pace with large enterprises.

**(b) Support coordination between EDI system and core business operation of small and medium-sized enterprises (Ministry of Economy, Trade and Industry) RM PKG**

We will provide support in terms of necessary funding for the system construction projects that seek to realize business models contributing to the improvement of productivity in SMEs, such as: system construction for coordination between EDI system and internal core operation system in SMEs; system construction for coordination between core business operation and information sharing/data management that utilizes IT.

**(c) Computerize/standardize distribution systems (Ministry of Economy, Trade and Industry)**

By FY2008, we will standardize product information and data for use from ordering to settlement exchanged in different forms among retail organizations between various retail organizations and wholesalers and manufacturers that provide various products in these retail organizations. In addition, we will set up information infrastructure (operational rules, information system, and so on) that is necessary in data exchange of consumption distribution over the Internet.

**(d) Develop EDI shared infrastructure in the manufacturing industry (Ministry of Economy, Trade and Industry)**

We will continue with our efforts to conduct R&D related to the realization of information coordination of engineering chain (technological information exchanges before placing of an order) and venous system (after purchase of products to disposal), and promote the development of EDI shared information infrastructure (including operation rules etc.) in the manufacturing industry and SMEs, based on the above R&D.

**(e) Promote and disseminate EDI in the construction industry (Ministry of Land, Infrastructure, Transport and Tourism)**

In order to promote further dissemination of EDI that can improve the productivity as well as the transparency in contracting in the construction industry, we will construct an

environment for experiencing EDI through CI-NET (Construction Industry NET work) and conduct demonstration experiments so as to promote dissemination of EDI through CI-NET.

## **1.7 Prosperous lifestyles throughout people's lifetimes**

**—Creating a society in which all people can enjoy  
healthy and prosperous lifestyles—**

### **<Basic Aspects>**

Japan faces various societal challenges such as a rapidly aging population amid extremely low birthrates that is progressing at speeds unseen anywhere else in the world, and social participation of those requiring nursing care, unemployed youth, and the disabled. Through the appropriate utilization of IT, it is essential that we promote social participation by creating environments where all persons including senior citizens, the disabled, caretakers, parents with young children, and unemployed youth can work or educate themselves whenever they desire to do so.

Telework is a flexible way of working that, through the utilization of IT, allows people to be free of time and place constraints and enables the balance of work and life, and creates various employment opportunities, second chances, and new opportunities for entrepreneurs. Hence, within the growing framework of population aging and the decrease of birth rates, the expedient realization of an environment in which individuals such as parents in child-care, caregivers, disabled people, and seniors, can fulfill their desire to work, and fully exert their potential is essential to maintaining family and social vitality.

In the area of services such as welfare and nursing, we will develop a safe network infrastructure, promote quality improvement and efficiency through analyses/utilization of collected data, and engage in the development of new technologies including practical robots to alleviate the burden of caretakers.

Through these comprehensive measures to utilize IT, we will realize social lifestyles where all people can actively and prosperously maximize their capabilities.

<p><b>① By the year 2010, increase teleworkers to 20% of the working population so that an environment can be established in which each individual can maximize their capabilities in a job regardless of their location.</b></p>
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**(1) Steady implementation of the telework population doubling action plan (Cabinet Secretariat and related ministries)**

We will steadily implement measures based on the "Telework Population Doubling Action Plan."<sup>13</sup>

**(2) Develop an environment friendly to telework PKG**

**(a) Structuring a information and communications system platform**

**i) Demonstration experiments for a communal telework system (Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare)**

To promote the spread of telework among small and middle sized businesses, in FY2008 we will continue to conduct the introductory/orientation projects (provision of opportunities for business organizations etc. to experience or experiment with telework) and the advanced telework system model experiments (model experiments designed to demonstrate various social effects enabled by telework that utilizes advanced technology).

**ii) Support the development of a information and communications system (Ministry of Internal affairs and Communications)**

In FY2008, we will continue to provide reductions on fixed asset tax for those who are implementing telework related equipment in accordance with the Telework Environment Preparation Tax System.

**iii) Build the next generation high grade telework system model (Ministry of Internal affairs and Communications)**

We will build a next generation high grade telework system model adapted for our nation's working environment with upgraded security, assurance of QoS, compatibility with the Ubiquitous environment, using our nation's world leading broadband networks and next generation networks such as NGN and next generation mobile communications. To this end, we will conduct demonstration experiments for the building of the model during FY2008.

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<sup>13</sup> Decided by the related ministries liaison conference for the promotion of telework on May 29, 2007

**(b) Organization of labor related regulations (Ministry of Health, Labour and Welfare)**

We will continue the ongoing deliberations on employment systems and employment contracts that contribute to the flexibility and diversity of working formats in teleworking, implement necessary measures, and organize the appropriate labor related regulations for the smooth circulation of teleworking. We will also revise the guideline on telecommuting to clarify the applicability criteria for the deemed working hours outside of the workplace. In addition, to solve the various problems of labor management of telecommuting, we will publicize and disseminate the guideline on telecommuting.

**(c) Create an environment of telework promotion**

**i) Hold promotional events to popularize teleworking (Ministry of Internal Affairs and Communications, Ministry of Land, Infrastructure, Transport and Tourism, and related ministries)**

To promote the implementation of teleworking among corporations and organizations, and for business owners to foster a teleworking environment, we will hold events that exhibit information and telecommunications equipment and introduce case examples of telework implementation.

Furthermore, in FY2008, we will promote and publicize teleworking at seminars in places where demonstration experiments will take place.

**ii) Promote the smooth introduction of teleworking through the cooperation of industry, academia and government (Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism)**

We will continue, throughout FY2008, with the cooperation of the Telework Promotion Forum, to raise awareness and conduct public relation campaigns to promote further popularization of teleworking, by distributing various guidebooks and reporting survey results of the effect of working at home on workers' health and performance. While doing so, we will seek to quantify and visualize the benefits

of telework and provide specific and basic information on the necessary cost to be incurred by the implementation of telework. In particular, in terms of security, we will indicate and disseminate specific measures tailored to corporate needs, actual condition and advanced technologies employed.

**(3) Promotion of telework to all levels of corporations and society**  
**PKG**

**(a) Supporting the implementation of telework by corporations**

**i) The upgrading of implementation support and consulting systems (Ministry of Health, Labour and Welfare)**

In order to ensure the expansion of teleworking under fair and balanced labor management conditions, we will enhance consultation services at the Telework Consulting Center, and improve the support menu for the work-at-home support activities based on the results of on-site investigations. Furthermore, we will upgrade the quality of consulting services on telework implementation by committing such service to organizations with specialist knowledge, conduct customer satisfaction surveys and follow-up to analyze the effects of implementation and the points needing to be improved in counter work, and undertake reviews as needed.

**ii) Demonstration experiments at telework centers (Ministry of Land, Infrastructure, Transport and Tourism)**

We will conduct demonstration experiments at telework centers that have a suitable environment to act as teleworking bases, such as enhanced security, and itemize the issues at hand for the realization of teleworking environments outside of homes.

**(b) The promotion of telework towards UJI turns and dual habitation**

**i) The utilization of telework to vitalize regional communities (Ministry of Land, Infrastructure, Transport and Tourism)**

We will advance the utilization of telework that contributes to the vitalization of regional communities, and

from the standpoint of supporting UJI turns and dual habitation, explore possible environments wherein workers from big cities can be continuously employed in local regions.

**ii) Revitalization and regeneration support programs for farming communities (Ministry of Agriculture, Forestry and Fisheries)**

In order to encourage settlement in fishing and farming communities through the utilization of SOHO, we will support private organizations engaged in the development of the SOHO style habitation programs in fishing and farming communities in cooperation with private-sector businesses.

**(4) Promoting telework for civil servants PKG**

**(a) Promoting telework for civil servants**

**i) Implementation by all ministries (All ministries)**

We will aim to complete the full-scale implementation of telework at all government ministries during FY 2008 by setting specific targets.

Also, we will aim for a smooth implementation by sharing the know-how and efficiency knowledge gathered by the departments that have already begun full-scale implementation at the Liaison Conference of Related Government Agencies on the Promotion of Telework.

**ii) The parallel use of shortened working hours and telework by national government employees (Cabinet Secretariat, National Personnel Authority, and all other ministries)**

To enable the balance of work and childcare as a part of the measures to counter the problem of declining birth rates, in FY2008, we will continue with our efforts to realize diverse and effective working formats through the parallel use of the shortened working hour provision<sup>14</sup> and telework, and aid the further proliferation of teleworking.

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<sup>14</sup> Introduced by a partial amendment to the legislation for the maternity leave of national government employees (2007)

Additionally, we will promote smooth implementation of telework through the monitoring of the implementation status of the parallel use of shortened work-hour and telework, and also through further information sharing by all ministries under the leadership of the Liaison Conference of Related Government Agencies on the Promotion of Telework.

**(b) Raising awareness among local public authorities (Ministry of Internal Affairs and Communications)**

An amendment for the legislation concerning maternity leave for local government has also just been passed in the current Diet session. In order to contribute to deliberation for the implementation of telework by local public authorities, in FY2008 we will continue to provide information such as telework implementation case examples by the national government, such as its parallel use with shortened working hours

**(c) The implementation of a mechanism that is the equivalent of the deemed working hours outside of the workplace (Cabinet Secretariat, National Personnel Authority, Ministry of Internal Affairs and Communications)**

We will deliberate on the implementation of a mechanism that is the equivalent of, "duties performed by workers during working hours outside of the workplace will be deemed to have worked for the scheduled working hours" as stated in Article 38-2 of the Labour Standards Law. We will also continue deliberations on the preparation of arrangements and environment that contributes to the teleworking, such as the discretionary labour system, and utilize the liaison conference of related government agencies as the needs arise.

**(5) Support re-employment of women**

**(a) Promote utilization of the portal site that support reemployment of women (Cabinet Office)**

We will promote the active utilization of the "Women's Re-challenge Support Navi" site, where women considering reemployment or starting a business can access necessary information efficiently, whenever necessary.

<b>② Double the number of participants in lifelong learning that utilize IT by FY2010 through the broadband networked environment and terrestrial digital broadcasting.</b>
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**<Priority Policies>**

**(1) Capacity-building through the utilization of e-Learning, etc.**

**(a) Continuing capacity-development and relearning for engineers (Ministry of Education, Culture, Sports, Science and Technology)**

In order continuously promote the development of our engineers' skills, including the support for a wide range of knowledge such as basic knowledge of scientific techniques and past mistakes, by FY2011, we aim to increase the usage rates of self-learning materials of each scientific field available on the Internet, and database of case studies of past failure, both provided by the Japan Science and Technology Agency, to 1 million hits per annum and 4 million hits per annum, respectively.

**(b) Improve lifelong learning information content (Ministry of Education, Culture, Sports, Science and Technology)**

**i) Promote digital archiving of museum pieces**

We will create and improve digital archives that use the Internet to reproduce study programs, encyclopedia, and field guides of exhibit commentaries, special exhibitions/events in the past, and nature observation meetings hosted by the independent administrative institution, the National Science Museum, as well as improve the system that enables search of information on specimens etc. from national science museums.

**(c) Develop basic technology for ubiquitous learning (Ministry of Internal Affairs and Communications)**

We will develop and demonstrate basic technology that allows simple and effective learning for everyone, anywhere, and at anytime by connecting to computers via portable terminals of cellular phones, etc.

**(d) Establish education information provision system utilizing the Internet (Ministry of Education, Culture, Sports, Science and Technology)**

In FY2008, we will expand the provision of learning opportunities through "el-Net" (education information communication network) that utilizes the Internet and provides information such as the nation's policies regarding education, learning content material produced by individual regional self-governing bodies, and develop an environment in which anybody can easily access national and regional education/learning-related information.

**(e) Establish learning support system for re-challenge (Ministry of Education, Culture, Sports, Science and Technology)**

The establishment of a structure that provides learning content via the Internet and advice relating to learning (the lifelong learning platform), will be supported so that those who wish to re-challenge can access those learning materials whenever and wherever. In FY2008, in order to spread the use of this structure across the nation, we will support the implementation of a system that utilizes IT and provides intermittently learning content and learning counseling services via the Internet.

**(2) Computerize public facilities, such as libraries**

**(a) Promote informatization in libraries (Ministry of Education, Culture, Sports, Science and Technology)**

Through the dissemination the "Libraries in the future – aiming to be information hubs that support localities,"<sup>15</sup> we will promote awareness among local public entities of the necessity of the informatization of libraries. Additionally, in order to adopt capabilities necessary in the informatization through training of librarians and chief librarians, we will continue our efforts in FY2008 to disseminate and educate the need for computerization in libraries, and deliberate on the future of cultivating librarians with the ability to utilize

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<sup>15</sup> The report released by "The future library review collaborators meeting," March 2006

IT to support IT-driven learning.

**③ Develop infrastructure that will support social welfare/nursing care/childcare by local communities and develop new technologies that will support an aging society with a low birth rate.**

**<Priority Policies>**

**(1) Develop an infrastructure for IT utilization in social welfare/nursing care support**

**(a) Develop a safe information network base that social welfare/nursing care service personnel and users can jointly use (Ministry of Health, Labour and Welfare)**

In order to develop a safe network base that realizes an effective and efficient social welfare/nursing care service utilizing IT, we will reach a conclusion during FY2008, based on the deliberations made last year, on the use of open networks, such as the Internet, for invoices relating to nursing care compensation and its actual implementation. year.

**(b) Realize strict identity verification for social welfare/nursing care service personnel and users (Ministry of Health, Labour and Welfare, and other related ministries)**

We will deliberate on the utilization of IC cards in identity verification of personnel involved in the provision of social welfare/nursing care services and users, including the utilization of HPKI certificate authority, to reach a conclusion during FY2008.

**(2) Promote information utilization in social welfare/nursing care**

**(a) Computerize social welfare/nursing care service procedures and business records (Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry)**

By FY2008, we will construct a framework to conduct analysis by utilizing data collected through such systems as that for the benefit payments for the support of the independence of disabled persons. In regards to charts including service plans and practice records relating to nursing care and nursing

prevention, in order to promote data exchange, we will continue deliberations on the standard data format etc., and reach conclusions on the above as well as on dissemination measures during FY2008. Regarding measures on the electronic preparation/management of records of services provided, and IT utilization measures for streamlining of social welfare/nursing care service operations, enhancement of service quality, and reduction of regional disparity, we will aim to reach certain conclusions in FY2009, based on the results of on-site inspections on nursing care service providers to be conducted during FY2008.

Additionally, in promoting the standardization of terminology and codes related to social welfare/nursing care services, we will secure consistency with the standardization of the terminology/codes in the medical field which has already been progressed to some extent, and proceed toward the system revision in April, 2009.

**(b) Promote information utilization by social welfare/nursing care personnel (Ministry of Health, Labour and Welfare)**

In order to enhance the ability of social welfare/nursing care personnel to utilize information and IT, we will promote the introduction of IT/information education within training programs related to social welfare/nursing care national certifications by FY2010.

**(c) Enhance the provision and disclosure of information in order to provide citizens with satisfactory services (Ministry of Health, Labour and Welfare)**

We will work to provide/utilize reliable and useful social welfare/nursing care information and make services more transparent, in hope of the entire nation sharing policy principles. To that end, in FY2008 we continue to promote measures related to a disclosure system for nursing care service information, and enhance information pertaining to nursing prevention, self-reliance support, and community care, as well as expand information and statistical data disclosed by social welfare service providers.

**(d) Active utilization of nursing care insurance information in order to prevent nursing and prevent the deterioration of nursing care condition (Ministry of Health, Labour and Welfare)**

We will expand the nursing care benefit adjustment system functions and begin its operation in FY2008, and notify policyholders of the operation method. Additionally, we will further policy deliberations regarding analysis on national scale, and from FY2008, provide the policyholders and prefectures with the data, such as national median etc., based on the benefits payment results.

**(3) Develop new technologies that will support an aging society with a low birth rate**

**(a) Develop practical robot technologies (Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade and Industry)**

We will develop and conduct proving tests of the technologies to realize robots which ease the burden on the users and providers at social welfare/nursing care sites, in such ways as supporting nursing care personnel in situations causing excessive physical load. By FY2010, we will deliberate on specific utilization measures, such as making effective systems eligible to receive social welfare/nursing care service subsidies etc.

## 2. Development of IT Infrastructure

### 2.1 An IT society that adopts universal design

–Promoting IT development that everyone can use safely  
and enjoy the benefits of–

#### <Basic Aspects>

In order for all people to be able to live securely regardless of their age groups, gender, physical conditions and language capabilities, it is an urgent task to promote social advancement through the introduction of universal design. IT is one of the most crucial tools in realizing a society that utilizes universal design.

Toward that goal, development of IT instruments and services also have to be oriented to such aim. Accordingly, it is imperative that academic/industrial/governmental bodies coordinate in taking part in the technical development and environmental arrangement required.

Specific initiatives that enable indiscriminate information access include the following: the establishment of IT support centers for the disabled; the promotion of subtitles and audio transmission of written information; and policy implementation to develop IT products and services that promote the utility of IT for all people. We will, in addition, utilize leading ubiquitous network technology to realize and develop in various regions, support systems for safe and comfortable transportation so that every person can move around cities smoothly and autonomously. Furthermore, we will also develop communication technologies that will facilitate senior citizens, people with disabilities and foreign nationals to communicate their will and intentions more smoothly by setting up communication methods beyond language, such as gestures, expressions and tactile functions, high-level speech recognition technology, and multilingual translation support systems.

Through such frameworks, we aim to realize the world's first model of an IT society based on the concept of universal design.

#### ① Realization of universal information access and communication

In order for all persons (including the elderly, people with disabilities, and foreign nationals) to be able to live securely regardless of physical, information, or linguistic barriers by FY2010, equal access to information, and smooth communication will be realized.

**<Priority Policies>**

**(1) Promote support centers, support technology, and service development, etc., so IT can be used and utilized by senior citizens and people with disabilities**

**(a) Develop a support system for the establishment and management of the IT Support Center for Persons with Disabilities (Ministry of Health, Labour and Welfare)**

In FY2008, support will continue to be given to those prefectures that are working to expand IT technology access opportunities and utilization capabilities of persons with disabilities and further their social participation, through the training and dispatching of computer volunteers, and establishing/managing the "IT Support Center for Persons with Disabilities," which comprehensively supports IT utilization by the disabled.

**(2) Develop and provide IT products/services that are userfriendly to all, including senior citizens and the disabled**

**(a) Promote the provision and development of communication/broadcast services for senior citizens and the disabled (Ministry of Internal Affairs and Communications)**

The provision and development of communication/broadcast services that increase convenience for the disabled, and the research and development of communication/broadcast technology that leads to improvement of the services for senior citizens and the disabled will continue to be promoted.

Additionally, the aspects of required support will be considered through the collection of case examples, conducted up to FY2007, of when senior citizens and the disabled succeed by using IT, and its value will be assessed and analyzed. Through the dissemination of these results, public understanding will be gained and measures will be promoted under local public entities.

**(b) Develop information appliance sensor/human interface device utilization technology (Ministry of Economy, Trade and Industry)**

By developing speech recognition technology that greatly upgrades the operability of household information appliances and dramatically improves the quality of interface performance, by FY2008, user-friendly basic interface technology will be developed that will enable "everyone," including beginners and senior citizens, to "easily" use the appliances from "any location."

**(c) Promote increased usability of IT products and services for senior citizens (Ministry of Internal Affairs and Communications)**

Guidelines necessary to increase usability of IT products and services for senior citizens have been established by FY2007. We will promote and disseminate these guidelines.

**(3) Promote subtitled television broadcasting, audio conversation of text information, and realize advanced conversion technology**

**(a) Promote the production of television programs with subtitles, sign-language, and video description (Ministry of Internal Affairs and Communications)**

By FY2017, ① the definition of television programs with subtitle option in conventional governmental guidelines will be expanded to actually subtitle all such programs; ② a new governmental guideline on television programs with video description will be established so as to achieve "Guideline for Promotion of Broadcasting for people with visual and hearing disabilities" (established in Oct. 2007) that aims at provision of video description to 10% of the target programs (NHK and 5 key commercial broadcasters) or 15% of the programs (NHK Educational Channel) as part of our efforts to enhance broadcasting for people with visual and hearing disabilities by subsidizing some of the production costs incurred by public-interest corporations creating television programs with subtitles, sign-language, and video descriptions.

**(b) Promote the audio conversion of text information offered by institutions of information services for people with vision and hearing disabilities (Ministry of Health, Labour and Welfare)**

By FY2010, 1,000 or more audio books will be created per year

in Braille libraries, so that the visually impaired can utilize IT to obtain information.

We will also provide a network system that enables people with vision and hearing disabilities to search on library catalogues of Braille libraries across the nation and make on-line reservation of books at home, as well as a system that provides access to daily updates of news formatted in Braille.

To help the hearing impaired utilize IT and obtain information, we will work to expand institutions of information service throughout Japan that offer information through sign-language interpretations, summary transcriptions, and subtitles.

**(4) Realize technology that allows realistic information exchange beyond language, knowledge and physical limitation barriers**

**(a) Research and develop natural communication technology (Ministry of Internal Affairs and Communications)**

By FY2010, the fundamental technology of people-friendly communication will be established, such as natural language analysis technology, multilingual speech recognition/speech synthesis technique at the everyday colloquial level, and recognition technology for nonverbal communication, to enable communication beyond cultural, linguistic and information barriers.

**② Realize universal movement**

By FY2010, universal movement (self-directive and smooth movement) will be realized, so that everyone, including the elderly, people with disabilities, and foreign nationals, can live securely regardless of physical, information, or linguistic barriers.

**<Priority Policies>**

**(1) Promote the support of self-directive and smooth movement by all persons, including the elderly, people with disabilities, and foreign nationals**

**(a) Develop and spread the Free Mobility Assistance System (Ministry of Land, Infrastructure, Transport and Tourism)**

By FY2010, we will establish the Free Mobility Assistance System that utilizes IT-based ubiquitous technology to enable

information access to "anybody, anywhere, and at anytime" movement services regardless of physical condition, age, or language spoken. In FY2008, we will conduct demonstration experiments, participated by both public and private sectors, for future implementation of regular services of the free mobility assistance system.

**(b) Research and development of universal interface technology, etc. (Ministry of Internal Affairs and Communications)**

By FY2008, basic technology for coordination between various robots mediated by sensors and networks will be established in order to provide various services adjusted to the user's situations and tastes. We will also make efforts to implement robot services with increased usability and general application through further collaboration with ubiquitous network technology. Also, by FY2010, sensing technology for the recognition of and adoption to the user's actions will be established.

## **2.2 Development of infrastructure that can easily connect to networks that anyone can use at anytime from anywhere for any purpose and that has no digital divide**

### **-Promoting the Ubiquitous Network Society-**

#### **<Basic Aspects>**

In order to realize an IT society whose benefits can be felt "anytime, anywhere, by whomever," it is imperative that we promote ubiquity, which means, the realization of a foundational infrastructure that enables access "anytime, anywhere, and whoever." On this occasion, it is important to establish the world's most advanced, cost-effective, and highly reliable communication infrastructure, both wired and wireless, and attractive to IT companies worldwide.

By FY2015, through active utilization of such infrastructure, we seek to create the world's IT bases that pioneers in the production of innovative ubiquitous technology and the development of new services/products by attracting IT enterprises both at home and abroad. At the same time, we will utilize strategically the world-class communication infrastructure to renovate existing industries and create new business fields.

Specifically, we will aim to eliminate of areas with zero broadband connections by FY2010 to provide all people with broadband connection accessible "anytime, anywhere." As a result of private sector-led efforts, the rate of the households with broadband connectivity reached 96% as of the end of December 2007.<sup>16</sup> There is continual need to carry out measures to promote telecommunication companies to build on the broadband infrastructures, and to support regional public entities to build regional public networks, as well as, in regions where private sector-led initiatives are difficult to penetrate due to conditional disadvantages such as under-population, we must support regional public entities to establish infrastructures that take into account regionally-specific issues. We must also enhance the overall area network to respond to signal reception needs in order to promote the diffusion of wireless broadband use.

With regard to the issue of IPv4 address vacancy, which is technologically fundamental to the current Internet management but is expected to be depleted by the beginning of 2011, we intend to

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<sup>16</sup> Estimated figure surveyed by Ministry of Internal Affairs and Communications

facilitate the deployment of IPv6 by FY2010.

The rate of the households receiving terrestrial digital television broadcasting, which allows services of region-adapted information "anytime, anywhere," reached 92% as of the end of December 2007, and<sup>17</sup> the coverage is steadily on the rise. It is necessary that we continue to promote structural developments such as transmission sites and the utilization of cable television in preparing for full transition to terrestrial digital television broadcasting by 2011.

Additionally, to realize infrastructure that connects "anything," including objects, we must develop technology that allows the advanced use/utilization of electronic tags, etc., and establish/review guidelines for privacy protection and security from a citizen's or user's point of view, thereby creating a suitable environment.

**① Eliminate areas with zero broadband connections**

By FY2010, we will promote the installation of optical fibers, etc. and eliminate all areas where broadband service remains unavailable.

**<Priority Policies>**

**(1) Take measures to establish the world's most advanced communication infrastructure, including the installation of optical fibers**

**(a) Promote a high-speed/ultra high-speed broadband environment (Ministry of Internal Affairs and Communications) RM PKG**

We will promote a nationwide high-speed/ultra high-speed broadband environment, and by FY2010, will eliminate areas without broadband connections. To achieve this end, we continue to take measures such as subsidization of the interest cost incurred by companies engaged in the optical fiber installations as investment incentive, based on Provisional Measures Law for Telecommunications Infrastructure Improvement, while maintaining a principle of private sector-led initiatives.

Additionally, we will lay down "Digital Divide Elimination

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<sup>17</sup> Estimated figure surveyed by Ministry of Internal Affairs and Communications

Strategy"<sup>18</sup> and based on this strategy we will support for the infrastructure-development in the areas which are conditionally disadvantaged and are thus unlikely to benefit from private sector-led efforts, as well as promote a broadband environment by utilizing technologies relevant to such region's needs and actual conditions and by taking into account investment efficiency.

**(b) Improve the digital divide in disadvantaged areas (Ministry of Internal Affairs and Communications and Ministry of Agriculture, Forestry and Fisheries of Japan) RM PKG**

Disadvantaged areas, such as underpopulated regions, are falling behind in the development of information and telecommunication infrastructure compared to urban areas, and that comes to an issue to be dealt with in promoting the spread of the high-speed/ultra high-speed broadband. We will plainly inform the above issue to the inhabitants of such regions, and will systematically seek to improve the digital divide by FY2009, implementing continuous measures including support for regional public authorities engaged in the development of the information/telecom infrastructure along regional peculiarities, deploying cable TV or optical fiber network as needed, in disadvantaged areas. We will also draw up a roadmap that summarizes numerical targets in the broadband development plan for each prefecture up to FY2010.

**(c) Promote development of regional public networks and nationwide connectivity; promote the private sector's participation (Ministry of Internal Affairs and Communications) RM PKG**

By FY2010, we will encourage regional public authorities to realize nationwide diffusion of regional public networks that connect schools, libraries, community centers and municipal offices at high-speed/ultra high-speed. We will also encourage the entry of the private sector into the regional public network service to support municipal governments' efforts for ensuring the inhabitants' access to the regional public network.

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<sup>18</sup> Formulated by Ministry of Internal Affairs and Communications on June 24, 2008, based on the final report of the Digital Divide Elimination Strategy Conference

**(d) Develop an advisory service system for regional informatization**

To provide general support for regional informatization projects to implement IT infrastructure promotion measures, approximately 50 "Regional Informatization Advisors" will be appointed in FY2008 to be dispatched to relevant regions on demand. Moreover, assessment will be conducted by intellectuals in the private sector at each stage of the setup and implementation of regional informatization projects. The result of the project will be published and presented at seminars etc. to diffuse obtained know-how to other regions.

**(2) Create a fair competitive environment for telecommunication businesses**

**(a) Perform competitive assessment in telecommunication business Fields (Ministry of Internal Affairs and Communications)**

In order to create a fair competitive environment such as broadband market by FY2010, we will steadily perform annual competitive assessment for each market in the telecommunication business fields along with detailed annual assessment on specified items.

**② Realize an ultra high-speed mobile telecommunications system**

By FY2010, a mobile telecommunications system will be realized with 100 times faster data transmission speeds than the current model.

**<Priority Policies>**

**(1) Realize an ultra high-speed mobile telecommunications system and promote construction of wireless communication infrastructure**

**(a) Promote measures aiming to realize the fourth generation mobile telecommunications system (Ministry of Internal Affairs and Communications) RM PKG**

In order to realize, by FY2011, the fourth generation mobile telecommunications system with 100 times faster data transmission speeds than currently available, we will conduct research & development and verification tests of elemental technology, and technical tests concerning frequency shared with other wireless systems, and will actively contribute to

the international standardization activities organized by International Telecommunication Union (ITU), including involvement in decision-making process on frequency band used and concrete consideration of wireless communication system.

**(b) Accelerate the increase in mobile phone coverage areas  
(Ministry of Internal Affairs and Communication)**

Other than promoting the increase in mobile phone coverage areas of telecommunications carriers, between FY2006 and FY2008, we will make it possible to add 200,000+ new mobile phone users in disadvantaged areas, such as under-populated regions, by utilizing mobile telecommunications steel tower facility development projects or the Wireless System Promotion Support Project. We will also establish "Digital Divide Elimination Strategy," and based on this strategy we will increase living space by promoting the development of new technology including simplified inexpensive base station.

**(c) Make signal use faster and more flexible (Ministry of Internal Affairs and Communications)**

By FY2008, we will establish a system that provides building custodians and users with access to signal use, in case of recovery and relocation of very small base stations, so as to eliminate blind zones for mobile telecommunications in areas such as inside high-rises, condominiums, houses and underground arcades where licensed persons are not easily admitted.

**(d) Take measures on the use/utilization and upgrading of owned-and-operated wireless systems (Ministry of Internal Affairs and Communications)**

By the end of FY2008, we will conduct technical reviews and institutionalization of wireless facilities which private businesses can use easily, through the introduction of digital technology including simplified base station. In addition, in order to realize further use/utilization and upgrading of owned-and-operated wireless systems, we will promote technical measures on the frequency sharing with other wireless systems.

**(e) "Furusato" (home town) mobile project (Ministry of Internal Affairs and Communications)**

To facilitate creation of mobile business tailored to regional needs, we will promote "Furusato mobile project" (MVNO - Mobile Virtual Network Operator - for regional use) for mobile communication without own network facilities, based on "Mobile business activation plan."<sup>19</sup> For that purpose, by May 2008, we will revise the MVNO commercialization guideline, promote the establishment of a standard plan on MNO (Mobile Network Operator) wholesale telecom services, and the clarification/announcement of the unified channel for MVNO. In addition, we will formulate "Zero Digital Divide Strategic Plan" and will promote a steady dissemination of "Furusato mobile project" based on the above plan.

**③ Full transition to terrestrial digital television broadcasting**

By July 2011, the harmonization of telecommunications and broadcasting, and full transition to terrestrial digital television broadcasting will be realized.

**<Priority Policies>**

**(1) Promotion of digital broadcasting with the view of establishing the world's most advanced communication infrastructure**

**(a) Full transition to terrestrial digital television broadcasting**

**i) Realize completion of smooth transition to terrestrial digital television broadcasting (Cabinet Secretariat, Ministry of Internal Affairs and Communications and related ministries) RM**

We will launch "Action Plan for the Completion of the Transition to Digital Broadcasting 2008"<sup>20</sup> to facilitate full transition to terrestrial digital broadcasting in FY2011. Specifically, based on that plan, we will promote publicity activities directed to the national audience, the improvement of broadcasting infrastructure, digitalization of public facilities such as schools, and measures taken against malicious commercial practices.

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<sup>19</sup> Formulated by Ministry of Internal Affairs and Communications on September 20, 2007

<sup>20</sup> Decided by the related ministries liaison conference on the completion of the transition to digital broadcasting in July 2008

**ii) Promote digital broadcasting (Ministry of Internal Affairs and Communications) RM**

In order to propel the digitalization of broadcasting including full transition to terrestrial television broadcasting, we will promote the improvement of the transmission environment adjusted to 100% coverage of analog broadcasting areas, as well as of the receiving environment for the shared receiving facilities in remote areas, and provide local residents with support services on the reception status. We will also promote the digitalization of cable TV and support measures to deal with digital interference problems.

**iii) Measures against problems related to analog frequency changes (Ministry of Internal Affairs and Communications) RM**

The actions involving channel changes had been completed in March, 2007, and the set up of the transmission sites to expand terrestrial digital broadcasting areas is continued. We will ensure that the analog reception problem arising in some of the areas is dealt with.

**(2) Promotion of the harmonization of telecommunication and broadcasting**

**(a) Promote renovation in telecommunications and broadcasting fields (Ministry of Internal Affairs and Communications) PKG**

In order to realize diversified services to be provided by the world's most advanced telecommunication/broadcasting infrastructure that is expected to be completed in FY2011, the "First Year of Full Digital," and to make telecommunication/broadcasting industries more competitive, we will further pursue renovation in the telecommunication/broadcasting fields, including development of the legal systems, based on "The Agreement between the Government and the Ruling Parties on the Direction of Telecommunication/broadcasting Fields."<sup>21</sup>

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<sup>21</sup> Agreed by Government and the Government party on June 20, 2008

**④ Realize the advances use/utilization of safe ubiquitous terminals and electronic tags**

By FY2010, we will realize fast, safe, and secure authentication technology for ubiquitous terminals, etc., and privacy protection technology that will allow the provision of only the appropriate information according to the user. We will also construct network technology that enables the simultaneous use of around 10 billion ubiquitous terminals (including RFID tags), and promote its use/utilization in various areas for diverse business fields and nations.

**<Priority Policies>**

**(1) Construct a ubiquitous environment to realize the world's IT bases**

**(a) Deploy IPv6 in the Internet resource management (Ministry of Internal Affairs and Communications) RM**

In order to realize provision for all people of a ubiquitous environment even after IPv4 address depletion due to the increase of Internet users, we will, by the end of FY2010, take measures to deploy IPv6 in the Internet as well as in the services provided on the Internet through coordinated efforts by both public and private sectors.

**(b) Verification experiments to ensure security in constructing an IPv6 based ubiquitous environment (Ministry of Internal Affairs and Communications) RM**

In an ubiquitous environment where various equipment in one's surroundings communicate through the IPv6 Internet network, we will aim to create a system where complicated security measures are not only implemented by the user, but also supported by the Internet network itself, thereby easily ensuring a safe and secure environment without much burden on the user. A model of this usage environment will be created and we will hold verification experiments by FY2009, and we will work to solve security issues in creating an IPv6 based ubiquitous environment.

**(c) Work toward total IP compatible networks through the promotion of technology standards required for that purpose (Ministry of Internal Affairs and Communications)**

By FY2009, we will lay down eco-friendly technical standards for total IP compatible networks and terminals considering reduction of effects on the environment, and by FY2010, will

secure the safety, reliability and quality that these networks/terminals should have, and realize related technology that enables efficient operation/management of the networks/terminals and secures interoperation of the terminals.

**(2) Renovation of existing industries and creation of new business fields**

**(a) Introduce "Special Cyber Zone" (Ministry of Internal Affairs and Communications) RM**

Based on "IT Growth Enhancement Plan,"<sup>22</sup> we will put together a closed community of real name participants in a cyber space so as to facilitate unification of IT and a wide range of industries and organizations in Japan. In that community, we will create a system where services can be tested, and limited incentives can be provided.

**(b) Create IT-based new commercial space (e-space) (Ministry of Economy, Trade and Industry) RM**

To realize an IT-based high-value added space (e-space), we will select concepts and technologies required for that purpose, and in FY2008, will implement an initiative project that serves as a model for e-space. Based on this result, we will deploy verification projects across the nation.

**(3) Improve the environment for the dissemination of electronic tags, and create concurrent business models**

**(a) Improve the environment for the dissemination and advanced use/utilization of electronic tags (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and related ministries) RM**

We will verify the dissemination status and forecast of electronic tags on the basis of the research & development results of ubiquitous network technology, and will promote the dissemination and advanced use/utilization of electronic tags, considering creation of consumer business models.

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<sup>22</sup> Formulated by Ministry of Internal Affairs and Communications on May 23, 2008

In addition, in order to improve the environment for the dissemination of electronic tags, we will implement such measures as the appropriate review and modification of the "Guidelines for Privacy Protection with Regard to RFID Tags,"<sup>23</sup> according to changes in technology and usage environments.

Further, in order to secure both safety and efficiency in international logistics, we will continue verification tests in the areas of exports/imports with the USA and Asian countries in collaboration with relevant ministries, and discuss about concrete measures on the utilization of electronic tags in logistics services.

**(b) Create business models that utilize electronic tags in food distribution (Ministry of Agriculture, Forestry and Fisheries of Japan)**

To realize the efficiency in food distribution, we will construct a distribution management system of new returnable and reusable containers in FY2008, and will create business models that utilizes new technology including electronic tags by FY2012.

**(c) Construct a port logistics information platform (Ministry of Land, Infrastructure, Transport and Tourism)**

We will seek to streamline and visualize the port distribution system as a whole by constructing a port logistics information platform that enables all subjects engaged in port distribution to share necessary information electronically. In FY2008, we will construct the next generation single window and discuss about streamlining the port distribution through utilization of AIS, as well as about the upgrading of the traceability of goods. Furthermore, we will start developing an access control system for smooth and secured management of access to international container terminals.

**(d) Construct a regional information and telecommunication technology utilization models, and diffuse the entire nation-(Ministry of Internal Affairs and Communications)**

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<sup>23</sup> Formulated by Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry on June 8, 2004

We will promote the diffusion of the use/utilization of information and telecommunication technology, based on the development of regional ubiquitous networks and its results, by sponsoring projects in collaboration with related ministries to provide solutions, by means of the active utilization of the said technology, to the tasks defined on the basis of proposals submitted by regions, such as dealing with the regional economic vitalization, dealing with the low birthrate and longevity, recovering regional community, and securing safety and security. From FY2008 onward, we will endeavor to diffuse the relevant model to other regions that have similar issues.

Moreover, we will widely diffuse the information and telecommunication technology utilization models among the parties concerned through a launch of a portal site and consultation services intended for the regional revitalization through the information and telecommunication technology, as well as through organizing competitions of utilization samples.

## 2.3 The world's more secure IT society

**–Leap forward to become an “information security advanced nation”  
and eliminate the occurrence of cyber crimes–**

### **<Basic Aspects>**

Information technology has been developing as an essential foundation for industrial, government, and social activities, as well as for the way we live our lives. At the same time, various issues surrounding the use of IT, such as those concerning information security and illegal/harmful information on the Internet are starting to have a great impact on our lives and socio-economic activities.

Regarding information security measures, in light of the need for rapid and powerful responses for threats such as cyber attacks, information leakage and large-scale system breakdown etc., the “Information Security Policy Council” was established within the IT Strategic Headquarters. In February 2006, “The First National Strategy on Information Security” was formulated, and from FY2006 onward, “Secure Japan,” an execution plan for each fiscal year, has been compiled annually to implement various measures. In FY2008, with “The Second National Strategy on Information Security” (tentative title) in mind, we will formulate “Secure Japan 2008” that features “focused reinforcement of information security infrastructure,” and promote the measures outlined in the plan.

In tackling illegal/harmful information on the Internet, we have put together, through the “IT Reassured Conference,” “concentrated measures concerning illegal/harmful information on the Internet” that have been implemented in coordination with related ministries. However, taking into account the gravity of continuing prevalence of crimes ascribed to illegal/harmful information, and also in view of the “law related to the development of an environment where adolescents can use the Internet safely and securely” that has come into effect, we must realize an environment that sets a standard for the world, where all people can enjoy the convenience of IT securely, through the promotion of comprehensive countermeasures against illegal/harmful information by the government as a whole with heightened cooperation among related ministries.

<p><b>① Through implementation of information security measures in government bodies and local entities</b></p>
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By early FY2009, measures compatible with the requirements of the “Standards for Information Security Measures for the Central Government Computer Systems (Standards for Measures),” will be implemented for all governmental bodies. Information security measures will also be strengthened for local public entities.

**<Priority Policies>**

**The following measures, as well as those established in “Secure Japan 2008,” will be promoted.**

**(1) Creation and establishment of the PDCA cycle based on the “Standards for Measures” and the evaluations and recommendations that follow this**

Efforts will be made to raise the level of the “Standards for Measures” (“Standards for Information Security Measures for the Central Government Computer Systems”<sup>24</sup> to the world’s highest standard by FY2008, and implement measures compatible with the requirement of the “Standards for Measures” for all governmental bodies by early FY2009. In FY2008, based on the knowledge acquired through the implementation of the measures by the governmental bodies, we will review the “Standards for Measures” in accordance with technological and environmental changes, as well as the analysis of results of IT related obstacles that occur within and beyond governmental institutions. In addition, PDCA cycles will be established as a norm for each governmental body and the government as a whole, support will be provided for information security measures based on the “Standards for Measures,” and total information management will be promoted to prevent information leakage caused by computer viruses.

**(2) Improve security measures for independent administrative institutions, etc.**

From the perspective of promoting the increase in information security levels within independent administrative institutions, in FY2008, guided by the governmental “Standards for Measures,” we will develop and review as necessary, as well as support the implementation of an information security policy for such institutions.

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<sup>24</sup> Decided by the Information Security Policy Council on December 13, 2005

**(3) Deliberate and strengthen medium and long-term security measures**

Pursuing our efforts made in FY2007, we will continue to promote cooperation by all government bodies for the following information security measures: implement information security features for common or partly-related operation/systems of ministries that are subject to optimization through the collaboration of deputy CIOs; develop next-generation OS environments that realize high security functions; prevent spoofing in governmental bodies; and promote safe code usage in governmental bodies, and so forth. In FY2008, in order to strengthen the overall information security for the e-Government, we will promote these measures in its totality.

**(4) Strengthen the rapid reaction capacities of governmental bodies against cyber attacks, etc.**

In order to ensure prevention of cyber attacks against governmental bodies and information leakage and/or information system failure in governmental bodies, and respond rapidly and accurately if such incidents occur, we will start the operation of the Government Security Operation Coordination team (GSOC), a rapid-response/monitoring cross-sectoral information security team that has been developed since FY2007, and promote measures such as creation of cross-sectoral crisis analysis function undertaken through mutual cooperation among related government entities at home and abroad (tentatively named "Private-Public Joint Analysis Scheme.")

**(5) Human resources development in government bodies**

To foster and secure human resources with the necessary knowledge and expertise for the government to process with information security measures in a unified manner, in FY2008, we will deliberate on the government-wide foundation for education and training of general staff, senior staff, and information security strategy personnel, and proceed to promote the actualization of such policies where possible. We will also promote the upgrading of the above educational foundation and provide more opportunities for training.

**(6) Strengthen information security measures in local public entities**

From the perspective of strengthening information security

measures in local public entities, in FY2008, we will analyze the situation and define objectives for local public entities that have insufficient information security measures (such as risk analysis of information resources, BCP in ICT Department, and personal information management where operations are outsourced etc.), and draw specific guidelines for integration and operation of necessary measures. We will also assist local public entities with their audit of information security condition by dispatching internal audit advisors, and support the self-governing CEPTOAR, which functions as an information sharing unit regarding information security among local public entities.

**② Thorough implementation of information security measures in critical infrastructures**

By early FY2009, the occurrence of IT malfunctions in critical infrastructures will be reduced to nearly zero.

**<Priority Policies>**

The following measures, as well as those established in "Secure Japan 2008," will be promoted.

**(1) Develop "Safety Standards, Guidelines, etc." for the ensuring of information security in critical infrastructures**

With September 2008 in mind, we will verify and examine safety standards of each critical infrastructure. During the course of FY2008, we will prepare and plan for the investigation of the level of penetration that the safety standards have achieved in each critical area of infrastructure. Furthermore, we will deliberate on the revisions, as needed, of "Principles for Formulating 'Safety Standards, Guidelines, etc.' concerning Assurance of Information Security Policy Council, Infrastructures."<sup>25</sup>

**(2) Strengthen information sharing systems**

There is a need for the timely and appropriate provision of information regarding IT malfunctions from government agencies to critical infrastructure businesses, as well as to strengthen the sharing system of this information between critical infrastructure businesses and also between interdependent critical infrastructure fields. From this standpoint, in FY 2008,

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<sup>25</sup> Decided by the Information Security Policy Council on February 2, 2006

we will make efforts to establish an environment for information provision and communication between the public and private sectors. Moreover, on the basis of the communication system between each critical infrastructure field ("Capability for Engineering of Protection, Technical Operation, Analysis and Response (CEPTOAR)"), that had been developed by FY2007, we will aim to establish the "CEPTOAR-Council," (tentative title) where cross-sectoral information sharing will be possible between each CEPTOAR.

**(3) Implement interdependency analysis**

In order to improve critical infrastructure measures on a national scale, we will, during FY2008, continue to implement interdependency analyses to ascertain the influence of an IT malfunction in one critical infrastructure, on other critical infrastructures.

**(4) Implement cross-sectoral exercises**

Exercises will be held across critical infrastructures, depending on the specific type of assumed threat scenario. In FY2008, themes to be verified as research topics will be established based on given conditions, and exercises will be performed and deepened according to the exercise method (e.g. desk exercise, functional exercise etc.) that is most appropriate to each theme.

**(5) Review the "Action Plan relating to Security Measures for Network Security of Critical Infrastructures"**

During FY2008, with the cooperation of ministries involved with each critical infrastructure, we will proceed with revisions of the "Action Plan relating to Security Measures for Network Security of Critical Infrastructures" (public comments version). To that end, we will deliberate on the finalization of a draft by around September 2008.

**③ Implement corporate information security measures**

By early FY2009, the information security measures in place in Japanese corporations will be at world-class level.

**<Priority Policies>**

The following measures, as well as those established in "Secure Japan 2008," will be promoted.

**(1) Develop an environment in which the information security measures of companies are reflected in market value**

Efforts will be made to build a socially responsible corporate governance structure, and to and operate the internal control structure that supports it, with information security in mind. In FY2008, we will set down guidelines on the management of information and information systems in accordance with existing regulations related to information security, so that corporations can carry out information security measures more efficiently. In addition, with regard to government procurement of information systems, the revision of bidding conditions will be promoted, such as making the evaluation of a bidder's level of information security measures a contingent factor for entering a bid.

**(2) Promote the provision of high quality information security related products and services**

In order to develop an environment where companies implementing information security measures can choose the necessary measures in an easy-to-understand manner, in FY2008 we will continue to promote utilization of third-party evaluation, such as guaranteed information security audit systems and/or evaluation/certification schemes of information security products etc., preferential tax treatment designed to promote information security measures, and use/utilization of electronic signatures.

**(3) Securing and fostering of information security personnel in companies**

In order to promote understanding of information security among top corporate executives, and to foster information security personnel in companies, in FY2008, we will continue to support training operations that foster human resources with specialized knowledge and skills in communications and information field, including security personnel, and also continue to promote information security seminars for small and medium enterprises.

**(4) Strengthen the system for prompt countermeasures against computer viruses and vulnerabilities**

In FY2008, we will deliberate on enhancing information analysis capabilities and reinforcing coordination structure so that we can directly provide information to organizations that are most likely to come under attack. Also, in order to ensure prompt information sharing and smooth handling of the constantly progressing information security issues between information-related businesses and all parties concerned, we will continue to promote the strengthening of the "Information Security Early Warning Partnership" throughout FY2008.

**④ Resolve IT usage anxiety in individuals**

By early FY2009, we aim to reduce the number of individuals who feel "anxious about the use of IT" to nearly zero.

**<Priority Policies>**

The following measures, as well as those established in "Secure Japan 2008," will be promoted.

**(1) Strengthen and promote information security education**

In order to promote information security education from elementary and secondary education and information security literacy across generations, in FY2008, case examples of effective guidance including information morals will be introduced and held as forums, Internet safety classes aimed for the common user will be implemented, e-Net Caravan aimed particularly for guardians and teachers, and a cyber security college will be available for those in the education field, regional public entity employees, and the common Internet user.

**(2) Strengthen and promote public relations, awareness-raising, and information transmission activities**

With the objective of promoting widespread understanding of the necessity for information security measures to all levels of the public, FY2008 will continue to see the promotion of successive nationwide public relations and information distribution activities, implementation of "Information Security Day," and a running publication of web magazines.

**(3) Provide an environment where individuals can use information-related products and services without strains**

In order to promote an environment where information-related businesses develop and provide products and services that individuals can use without strain while enjoying the benefits of advanced information security functions, through FY2008, we will continue to deliberate on technical and policy aspects of countermeasures against computer viruses that cause cyber attacks (bot program), etc., and a comprehensive framework will be built by FY2010. A ubiquitous environment using IPv6 will set out to be built by FY2009. In FY2008, we will continue to promote measures such as conducting verification experiments within usage environment models.

**⑤ Create a cross-sectoral information security platform to eradicate cyber crimes**

Through the strengthening of crackdowns on cyber crimes, with eradication as its goal, along with the creation of a cross-sectoral information security platform to reach the targets outlined under to above, the promotional system of policies, collaboration with other related institutions, and ongoing reform structures will be developed.

**<Priority Policies>**

The following measures, as well as those established in "Secure Japan 2008," will be promoted.

**(1) Promote information security technological strategies**

To promote technological strategies concerning information security, with clearly delineated roles from the private sector measures, in FY2008, together with the Council for Science and Technology Policy, the state of research and technological developments will be explored, the prioritization and establishment of the environment for the technological development of information security will take place, as well as the promotion of discussions surrounding specific themes of the "grand challenge-style" research and technological development, an approach to realize fundamental research and technological innovations from a long term perspective.

**(2) Foster and secure information security personnel**

Alongside the involvement in human resource development for policies in government, critical infrastructures, and

corporations, in FY2008, we will continue to promote the fostering of growth in personnel with multifaceted and comprehensive capabilities in information security-related higher education facilities. Additionally, we will further engage in focused efforts to train and retain information security personnel.

**(3) Promote international cooperation and coordination**

To promote cooperation and coordination in the information security field at a global level, in FY2008, we will continue to promote our efforts towards the establishment of a safe and secure international foundation and environmental development, and promote our contributions to the international community in the information security domain. We will, accordingly, aim to maintain and strengthen the relationships with such areas as the USA, Asian and European nations that have close social and economic ties with Japan. In particular, we will promote information sharing and opportunities for dialogue with Asian regions to facilitate creation of a secure business environment with such areas as they become more important in terms of economic partnership.

**(4) Crackdown on crime and protect/secure people's rights**

In view of the fact that safe, secure and comfortable use of the Internet is a necessity, in FY2008, the foundations for cyber crime arrests and the protection and securing of people's rights will be established, and the development/dissemination of technology that increases safety and reliability of cyber space will continue to be promoted.

**(5) Improve the promotional structure of information security policies**

In order for the government to comprehensively and organically implement information security policies, in FY2008, we will continue to strengthen the National Information Security Center starting from the development of a system for actual operation of GSOC, and enhance the collaboration between other principal bodies and councils, such as the Information Security Policy Council, the Council on Economic and Fiscal Policy, and the Council for Science and Technology Policy.

**(6) Build a lasting remedial structure**

The situations surrounding information security issues change rapidly, and in order to consistently evaluate policy effects and improve them, in FY2008, the implementation of annual strategies and their evaluations, as well as measures that handle emergency situations within the year, and the establishment of evaluation indicators will continue to be promoted.

**⑥ Realize an Internet usage environment that will serve as a model for the rest of the world**

Through the reduction of illegal information on the Internet and the creation of a society where harmful information is blocked from adolescents, and Internet usage environment that can serve as a model for the world will be realized.

**<Priority Policies>**

**(1) Promote comprehensive countermeasures against illegal/harmful information by the government as a whole**

**(a) Further strengthening of coordination among related ministries (Cabinet Secretariat and related ministries) RM**

Early in FY2008, a New "IT Reassured Conference" (director-general level talk) (tentative title), comprising director-generals of related ministries and the Cabinet Secretariat IT Office Head as a chairperson, will be called in order to enhance the cooperation among related ministries. This enhancement of inter-ministry cooperation will also be promoted by the attendance at the Conference, as needed, of the Minister in charge of IT as well as the cabinet members engaged in this issue to facilitate information sharing and communication concerning illegal/harmful information.

**(b) Promote exemplary measures that can serve as a model for the world (Cabinet Secretariat and related ministries) RM**

We will verify the implementation status of the "concentrated measures concerning illegal/harmful information on the Internet,"<sup>26</sup> and based on the opinions by intellectuals and

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<sup>26</sup> Decided by the related ministries liaison conference on illegal/harmful information etc. on the Internet (known as the IT Reassured Conference) on October 15, 2007

discussions made from various viewpoints, more effective and exemplary measures will be formulated as swiftly as possible by the government as a whole.

**(c) Promote the development of an environment in which adolescents can use the Internet safely and securely (Cabinet Office, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and related ministries)**

The implementation of the "law related to the development of an environment in which adolescents can use the Internet safely and securely," that came into effect in June 2008, will be promoted.

**(2) Promote measures such as detection of illegal/harmful information at the earliest stage and swift implementation of actions**

**(a) Strengthen cyber patrolling and outsource Internet "hotline" operations to the private sector (National Police Agency) PKG**

In a joint effort between public and private sectors, we will implement measures against illegal/harmful information on the Internet, through outsourcing of cyber patrolling to the private sector as well as further strengthening of the outsourced Internet "hotline" operations, where reports from Internet users regarding illegal/harmful information on the Internet are accepted, and notification and deletion requests to providers are handled, and information is provided to related agencies overseas.

**(b) Promote measures against illegal/harmful information on the Internet (Ministry of Internal Affairs and Communications) PKG**

Deliberations will be continued on comprehensive countermeasures against illegal/harmful information on the Internet at the "Study Group on Measures against Illegal/Harmful Information on the Internet," which has been held since November 2007. Additionally, we will support the appropriate operations of "Illegal/Harmful Information Counseling Center" that has been established by 4 telecommunication-related organizations in January 2008. Further, we will continue to support adequate application and publicity of the "Guideline for handling of illegal information on the Internet," "Model provisions for

condition of contract concerning the handling of illegal/harmful information," the Provider Liability Limitation Law, and other related guidelines.

**(3) Promote the installation of filtering software for safe use of content**

**(a) Promote dissemination of filtering software and other educational activities (Cabinet Secretariat, National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry, and related ministries) PKG**

Dissemination of filtering software and other educational activities will continue to be promoted in coordination with related business organizations, based on the *Action Plan for the Proliferation of Filtering* compiled by industry organizations in order to raise public awareness of filtering 70%.

**(b) Support the introduction of filtering services by mobile phone companies etc. (Ministry of Internal Affairs and Communications) PKG**

Based on the request made to mobile phone companies etc. in December 2007 concerning promotion for introduction of filtering services, as well as the request made in April 2008 concerning improvement on the filtering services, we will continue promotional activities of filtering services for mobile phone used by adolescents.

**(c) Support actions regarding classification/ranking/certification of content (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and related ministries)**

We will support review and necessary improvement and formulation of new actions on the classification/ranking standard for content selection, adopted by the concerned organizations for the convenience of the filtering users, in response to the diversification of websites such as rapid growth of participatory websites.

We will also promote the private sector's initiatives to develop, for practical use, of a system to enable the sender, after an evaluation by a third-party organization, to indicate the expression level of his/her own content in terms of icons so that the viewer can easily determine if he/she wants to view the website in advance.

**(d) Research and develop universal content technology (Ministry of Internal Affairs and Communications) RM**

In order to realize an environment in which everyone can use/utilize content freely and with trust, by FY2010 we will establish illegal/harmful information analysis/detection technology as well as reliability/credibility evaluation technology for textual, audio, and visual information on the Internet.

**(e) Develop search/analysis technology for diversified content (Ministry of Economy, Trade and Industry)**

In order to develop an environment in which the user can search necessary information safely and securely, we will develop search/analysis technology for providing information according to the user's needs out of diversified content on the Internet such as animations and pictures, etc.

**(4) Promote countermeasures on spam (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)**

In the efforts to deal with increasingly sophisticated and malicious spam that has become pervasive, the revisions of so-called "specified e-mail law" and "special commodity exchange law" have been passed through the Diet with a view to improve the effectiveness of the regulations set forth in these laws. The object of the revisions has been to introduce the opt-in method in which e-mail advertisement is, in principle, sent only to the receiver whose approval is obtained in advance. We will deliberate on the preparation for the steady implementation of these laws and the upgrading of the operations, and take necessary actions accordingly.

As part of the countermeasures against swelling spam from offshore servers, we will promote cooperation with the overseas law enforcement authorities engaged in measures against spam, and

provision of information on the spam from overseas locations that require necessary actions because of their large volume, in addition to information exchange on technical countermeasures against spam.

Furthermore, through collaboration with industry groups such as JEAG (Japan Email Anti-Abuse Group, a private entity formed mainly by major domestic Internet service providers and mobile telephone companies), technological anti-spam strategies such as port 25 blocking and outbound domain authentication technology will be promoted.

In addition, the spam abolishment project that has been started since February 2005, in which Internet services providers will be notified of illegal spam generators so that measures to control their Internet use can be put in place, will continue to be implemented.

**(5) Improvement on the methods of age verification of users by online dating service administrators (National Police Agency) PKG**

To prevent victimization of minors involving their use of online dating service, we will steadily implement the revised online dating service regulation law, designed to reinforce regulations on online dating service administrators by such measures as the introduction of notification procedure, and in 2008FY, take step to implement necessary remedial actions on the methods of age verification by online dating service administrators.

**(6) Response to individual cases involving illegal/harmful information on the Internet (Cabinet Secretariat and related ministries)**

In collaboration with relevant ministries, countermeasures against phishing, suicide alerts/pacts, inappropriate e-Commerce, spam, and human rights violation cases on the Internet have been promoted. Attention will continue to be given to the most recent cases, along with efforts to raise awareness for related policies, and in the event that a new case of illegal/harmful information occurs on the Internet, an IT Reassured Conference will be held in a timely manner to implement appropriate measures.

**⑦ Promote IT moral education**

Enable citizens to take appropriate countermeasures against the improper use of networks, such as illegal and harmful information on the Internet.

**<Priority Policies>**

- (1) Raise public awareness on the issue of illegal/harmful information (Cabinet Secretariat, Cabinet Office, National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry, and related ministries) RM**

We will swiftly spread and expand the "National movement for protection of adolescents from harmful information environment," which has been started as part of the community safety project, and promote public awareness through public recognition and educational activities including seminars and lectures by the government, school officials, parents, and related organizations, and also through continual implementation of and support for measures such as the promotion of the utilization of information moral education materials.

- (2) Promote information moral education (Ministry of Education, Culture, Sports, Science and Technology) PKG**

In FY2008, we will make further commitment to the information moral education about the handling of illegal/harmful information, through issuing of instruction handbook etc. to help teachers with effective guidance, as well as through organizing forums to help children understand the importance of information morality.

- (3) Implement the "e-Net Caravan" (Ministry of Internal Affairs and Communications, and Ministry of Education, Culture, Sports, Science and Technology) PKG**

In collaboration with telecommunications organizations, we will continue to hold courses on the safe and sound use of the Internet aimed at school personnel and guardians at a national level throughout FY2008.

- (4) Promote measures that protect adolescents from harmful environments (Ministry of Education, Culture, Sports, Science and**

**Technology) PKG**

As in FY2007, we will promote on this year to protect adolescents from harmful information through a nationwide network, the "National Conference on the Safe and Secure Use of the Internet" comprised of education related organizations, youth organizations, the PTA, media related organizations, intellectuals and government administrators, as well as at prefectural and city level.

Also, we will enhance public relations activities to raise awareness on the safe and secure use of media, including countermeasures against "Bullying on the Net," by creating and distributing "Home Education Notebook" and a leaflet describing reminders for mobile phone usage, and by creating educational videos on harmful information.

**(5) Strengthen Internet literacy education for parents (Ministry of Economy, Trade and Industry) PKG**

We will run "Check PC! Campaign" to provide comprehensive education on the safe and secure use of media by utilizing portal sites etc. We will collaborate with electronics retail outlets across the nation and other related business organizations in implementing educational activities, mainly for parents, on the dissemination of filtering as well as the countermeasures against illegal/harmful information in order to promote the installation of filtering software at the time of purchase of a PC.

Further, to provide more focused information, we will launch an informational site featuring free download of filtering software, and will also hold seminars for children and parents in the classroom across Japan to promote understanding on the existing condition of illegal/harmful information on the Internet and the necessary countermeasures against them.

**(6) Research and develop IT media literacy training program (Ministry of Internal Affairs and Communications) PKG**

In order to promote healthy use of IT media, such as the Internet and mobile phone, by children, we will further expand and promote the IT media literacy training program which was developed in FY2006 as an instruction manual on general IT media literacy training.

**(7) Strengthen countermeasures against illegal/harmful information on the Internet (National Police Agency) PKG**

To protect children from illegal/harmful information on the Internet, in coordination with schools and related organizations, we will continue public relation campaigns via delinquency prevention classes, the Cyber Security College as well as delinquency prevention booklets, and inform children and their guardians of damage prevention and manners when using the Internet.

## **2.4 Development of human resources bases with an eye towards the next generation**

**–Providing all children and teachers with the best IT environment; aiming for effective education and higher academic skills–**

### **<Basic Aspects>**

Although improvements have been made in IT infrastructure development through various means, the measures as they are now do not seem sufficient to achieve the strategic target, as shown in the case of delays in constructing intra-school LANs and equipping ordinary class-rooms with PCs. Again, along with the improvement in IT infrastructure development, there would be a need to develop a policy to enhance applications to utilize effectively the IT infrastructure in place.

For this reason, we will strongly promote furnishing of hardware through necessary supportive measures and further implementation of the measures for facilitating the IT infrastructure development at schools, such as the release of the implementation condition, municipality-wise, and the publicity on the risks of private information exposure. In terms of software development, in order to further the understanding of elementary and secondary students, we will develop content that attracts them, as well as enhance the IT utilization teaching ability of teachers. We will also reinforce support structure for these efforts so that the computerization of schools will be achieved through the mutual interaction of hardware and software development, and enhance students' academic skills by IT-driven education, as well as increase information utilization capabilities of children who will lead the next generation.

A major revision of Course of Study has just been made as a response to the issues of rapid shift to an information society and negative influence on children of the dark side of the information-driven society. We will take this opportunity to further develop an education to help students cultivate information morality and information utilization capabilities.

Information education will be promoted also from the standpoint of a need to expand high-level IT human resources.

<p><b>① Improve IT infrastructure in schools</b></p>
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<p>Realize computerization in schools by providing one PC per teacher, improving network</p>
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environments, and enhancing support systems for IT infrastructures.

<Priority Policies>

(1) Develop IT infrastructure

**(a) Set up IT environment (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology) RM PKG**

We will aim to connect all elementary, middle and high schools to fiber optical ultrahigh-speed internet by FY 2010, and by upgrading school LANs, enable internet connection from all classrooms.

Also, by installing computers to ordinary classrooms, we will attain a 3.6 to 1 ratio of school children to educational PCs, and promote the implementation of equipment such as projectors by FY2010.

Furthermore, to achieve the above objective, we will promote the measures for the development of IT environment at regional public entities, such as a municipality-wise survey of development status and release of its results, so as to motivate the municipalities, which are falling behind in setting up IT environment, to catch up.

In addition, through FY2009, we will continue to conduct the research, starting from FY2007, on the effective and leading practices relating to the improvement of IT utilization among teachers and promote its effectiveness at a prefectural level.

**(b) Improve IT utilization environments for teachers (Ministry of Education, Culture, Sports, Science and Technology) RM PKG**

We aim to provide PCs to all teachers in public elementary, junior high, and high schools by FY2010, and further the computerization of school affairs. In particular, in order to facilitate the introduction of PCs for school affairs operations to be adequately managed from the standpoint of information security, we will publicize the danger of private information exposure, and issue the current status of information security policy on the prevention of the risks associated with utilization of IT.

Further, we will continue through FY2009 to conduct the

effective and cutting edge practical research, which had been started in FY2007, regarding the computerization of school affairs, and promote its effectiveness at a prefectural level.

**(c) Development of an education application utilizing public networks (Ministry of Internal Affairs and Communications)**

An education application among mayors' offices of regional public entities, board of education and schools that utilizes public networks will be developed. In FY2008, we will deliberate on a model system, and having verified such system by FY2010, it will be distributed and deployed to prefectures/municipalities.

**(d) Promote the educational utilization of terrestrial digital television broadcasting (Ministry of Education, Culture, Sports, Science and Technology)**

Based on the results of the implementation of model operations from FY2007 regarding the effective utilization of terrestrial digital television broadcasting, we will continue through FY2008 to accumulate educationally effective case examples, and promote the utility of terrestrial digital broadcasting in the field of education by publicizing its effectiveness shown by the model operations and case examples.

**(2) Reinforce support structure of the computerization of schools (Ministry of Education, Culture, Sports, Science and Technology)**  
**RM PKG**

Based on the results of the examination of support structure for school computerization conducted in FY2007, we will promote, in FY2008, the achievement made by this effort and implement a practical model operation for systematic and step-by-step computerization of school education to facilitate adoption of support structure for computerization at schools at an early stage.

**② Improve IT utilization capabilities of teachers**

Improve IT utilization capabilities of teachers through the evaluation of these abilities.

<Priority Policies>

**(1) Improve IT utilization capabilities of teachers (Ministry of Education, Culture, Sports, Science and Technology) RM**

In order to enable almost all public school teachers to use computers and utilize IT to teach, the following measures will be promoted in FY2008.

- (a) We will promote the measures undertaken by local public entities by means of a national survey which makes the most of the "IT utilization standards for teachers (Check List)" and the release its results.
- (b) We plan to spread and promote progress made in research relating to the positive effects of utilizing IT in education.
- (c) Through FY2009, we will continue to conduct the research, which was started in FY2007, on the effective and leading practices relating to the improvement of IT utilization among teachers and promote its effectiveness at a prefectural level.

**③ Enrich educational content to improve academic skills of students**

Provide learning opportunities that utilize IT and motivate students to want to learn.

**<Priority Policies>**

**(1) Enhance the function of the National Information Center for Educational Resources (Ministry of Education, Culture, Sports, Science and Technology)**

In FY2006, we conducted research regarding the demands of the types of educational content and educational support information to be provided by the National Information Center for Educational Resources, and established policies for content collection and content development going forward. Based on our findings and policies from FY2006, we will collect and develop these contents in need. In FY2008, we will also conduct system update to improve search operability, and make efforts to comprehend the types of content desired by the users to be reflected in future policies. Further, we will promote the content provided by the Information Center to board of education, school principals and teaches.

In addition, as we aim to double the number of users of lifelong learning information by FY 2010, we will in FY2008 conduct system update to improve search operability and expand the content to reflect the users' needs, so as to promote use/utilization and expansion of the content on lifelong learning information

provided through national program.

**(2) Support development and utilization of course materials on science (Ministry of Education, Culture, Sports, Science and Technology)**

Through close cooperation with universities and research institutes, and through initiative by Japan Science and Technology Agency, digital educational material that utilizes the achievements of cutting-edge R&D to facilitate students' effective learning of science and technology will be further developed and expanded. Such materials will also be provided on "Science Network" in a more user-friendly format. The "Science Network" will also be promoted to teachers and board of education.

**④ Improve information utilization capabilities of students**

Students' information utilization capabilities, including information moral, will be increased through the utilization of IT in course instruction and through information moral education in elementary schools.

**<Priority Policies>**

**(1) Efforts towards the implementation of the newly revised Course of Study (Ministry of Education, Culture, Sports, Science and Technology) RM PKG**

For smooth implementation of the information education based on the newly revised Course of Study, in FY2008 we will deliberate on and formulate guidebooks etc. which will help teachers with effective information education.

**(2) Practical research on leading and effective education (Ministry of Education, Culture, Sports, Science and Technology) RM PKG**

Through FY2009, we will continue to conduct the research, which was started in FY2007, on the effective and leading practices relating to the improvement of IT utilization among teachers, such as the development of effective course methods that improve academic skills by the utilization of IT and the development of leading study methods that relate to student interests, and promote its effectiveness at a prefectural level.

## **2.5 Education and human resource development that will produce human resources that will be competent anywhere in the world**

### **—The establishment of a government-industry-academia partnership system—**

#### **<Basic Aspects>**

The development of information and communications technology relies heavily on human resources and in order for Japan to achieve higher global competitiveness through the increase of productivity in Japan's IT industry & IT-based industries and the realization of ceaseless innovation both groundbreaking and viable, it is essential to cultivate high-level IT human resources who will be capable of creating high added values by using information and communications technology. However, in Japan, there is a lack of such human resources in the industrial field, and it is said that the reason for this state is that there exists a mismatch between the requirements of universities, which cultivate IT human resources, and those of industries, which makes use of these people.

Part of the efforts to resolve this issue, there has been a coordinated effort among the industrial, academic and government bodies to handle parts of this issue through IT education in universities, which is making good progress in general.

Going forward, it is necessary that the current efforts and progress made by the industrial, academic and government bodies thus far be implemented continuously and steadily in universities nationwide. Together with such efforts, a focused and totalized approach will be adopted in the industries as well as elementary, junior high education and universities in order to establish, through the government-industry-academia partnership, a virtuous cycle process of nurturing high level IT human resources at home and utilizing offshore IT human resources in a balanced manner.

Because remote learning using the Internet, or e-learning, enables students to overcome limitations of time and place, it provides diverse opportunities for learning at university institutions and such, it is critical that we utilize it as an effective tool that improves skills for learners including workforce.

<b>① Comprehensive measures toward the cultivation of high-level IT human resources</b>
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The cultivation of advanced IT human resources, such as project managers, IT architects, IT
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coordinators, and experts in the field of embedded software will be promoted to eliminate the mismatch in supply and demand of high-level IT human resources in industry.

**<Priority Policies>**

**(1) Substantialize education in higher education**

**(a) Build world-class high-level IT human resources cultivation centers (Ministry of Education, Culture, Sports, Science and Technology) RM PKG**

The "Advanced IT Specialist Education Program" has been implemented since FY2006, and 6 centers for the development of software experts who will play a pace-setting role in business enterprises etc. were selected and supported in FY2006. In FY2007, 2 more centers for the development of advanced security personnel for the construction of an environment in which all people can utilize IT safely and securely were selected and supported.

From FY2008 and onward, each of the above centers will continue to be supported, while activities to promote a more effective and efficient dissemination of the achievements obtained through the development and implementation of various educational programs at each center, along with the effort to further elaborate educational materials, will be pursued.

At the same time, we will review the curriculum design and the number of credits per course, deliberate on a new system to enable a sustained and stable offering of the courses even after the completion of the program and cooperation between the base research institutions and other graduate schools, and will also seek to publicize the said program to business organizations.

Finally, we will conduct an interim evaluation in FY2008, in which our 2 years' support for each of the centers expires, and also in FY2009.

**(b) Research and development into educational programs for the cultivation of advances information and communications personnel (Ministry of Internal Affairs and Communications) RM PKG**

By FY2008, we will develop, through the cooperation of

academia and government, PBL materials to cultivate IT management personnel who will play a major role in the creation of new business and the information strategy formation in the private sector, and conduct verification tests using the PBL materials that have been developed so far.

**(c) Develop a comprehensive framework for the cultivation of IT human resources utilizing the HR cultivation partnership among academic and industrial bodies (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry,) RM PKG**

Under the HR cultivation partnership among academic and industrial bodies, the Information Technology Engineering sectional committee, which serves as a forum for cooperation between academia and industry, was established in November last year. Deliberations will be continued through FY2008 at the sectional committee on such topics as sharing of ideal personnel profiles in an IT society, high-level IT human resources cultivation methods, development of an environment in which competent human resources can flourish, formulation and dissemination of the curriculum standard, and other issues in industrial and educational fields. Various systems and opportunities will be developed or provided accordingly.

**(d) Develop a framework for the steady and continuous cultivation and provision of high-level IT human resources (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry) RM PKG**

Through a coordinated effort among the industrial, academic and government bodies, a framework for the steady and continuous cultivation and provision of high-level IT human resources to meet the needs in industry will be developed, based on the reports compiled by the Study Group at the Ministry of Internal Affairs and Communications in May 2008 as well as the deliberations on the said framework's function within the National Center initiative.

**(2) Shift to highly profitable business structure**

**(a) Improvement on the transaction practices between the user side and the vendor side (Ministry of Economy, Trade and Industry) RM PKG**

As part of the efforts to visualize the user-vendor transaction in information systems and clarify responsibilities and division of roles, in addition to the "Information System Model Transaction/Contract (first edition)"<sup>27</sup>, a simple and transparent transaction model ("Information System Model Transaction/Contract (supplementary edition)")<sup>28</sup>, which utilizes the "Statement of matters of importance" issued in April 2008 and serves as a transaction model for the "package, SaaS/ASP" type of transaction employed by the majority of small and medium-sized businesses, will be promoted and disseminated. To achieve this end, we will promote comprehensive measures toward environment development such as e-learning training programs and guidebooks on the utilization of the model transaction and contract.

**(b) Deliberations on performance-based contract in the information system transaction and its dissemination (Ministry of Economy, Trade and Industry) RM**

In order to transform the information service industry into more profitable business field, a shift from the existing "unit price by man-month" pricing method to the "performance-based contract" pricing, determined in terms of added value of an information system, will be discussed and promoted.

**(3) Utilization of international human resources**

**(a) Promote international standardization of qualification systems, and increase of the number of high-level human resources who come to work in Japan by accepting private qualifications (Ministry of Justice, Ministry of Health, Labor and Welfare, Ministry of Economy, Trade and Industry) RM PKG**

We will continue to work toward the international standardization of IT skill standard, while securing the equivalency between the Japanese Information Technology

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<sup>27</sup> Formulated by Ministry of Economy, Trade and Industry in April 2007

<sup>28</sup> Formulated by Ministry of Economy, Trade and Industry in April 2008

Engineer Examination and overseas national IT examinations and promoting the expansion/deepening of their mutual certification. We will also further increase the reception slot of foreign nationals who have passed national IT examinations qualified for mutual certification as part of the efforts to deregulate the resident status requirements to be applied to high-level international IT human resources.

**(4) Revitalization of human resource mobility**

**(a) Formulation of skills evaluation standard for the knowledge and ability of human resources (Ministry of Economy, Trade and Industry) RM PKG**

In FY2008, We aim to build a Common Career and Skills Framework based on the profile of the ideal personnel with skills required to contribute to the increase of the competitiveness of the IT industry, and schematize the IT skill standards, Embedded Technology Skill Standards, and Information System User Skill Standards.

**(b) Further popularization of the Information Technology Engineer Examinations (Ministry of Economy, Trade and Industry) RM PKG**

We aim to revise the Information Technology Engineer Examination according to the Common Career and Skills Framework, with a view to implementing the Examination from FY2009 onward.

Of special note is the creation of the IT passport examination that evaluates whether the individual has the minimally required ability to perform as an IT professional.

**(c) Information and communications personnel training support program (Ministry of Internal Affairs and Communications) RM PKG**

In order to eliminate the problem of lacking human resources in the IT field, and to improve the technology and specialist knowledge that will be required in the Ubiquitous Age, continue throughout FY2008 to support programs to cultivated highly skilled IT specialists.

**(5) Early education of highly skilled IT human resources from primary and secondary education levels (Ministry of Economy, Trade and**

**Industry, Ministry of Education, Culture, Sports, Science and Technology) RM PKG**

In order to discover gifted human resources, among high school students, with potentiality to grow into world-class creators, and support their development, in FY2008 we will provide creative learning opportunities by holding training camp style seminars and hands-on curriculums of cutting edge fields taught by University researchers and lecturers.

By FY2010, We will foster 2,000 IT human resources that are in demand from the industry sector through training camp style seminars and lectures that will be offered across the nation for talented high school students.

**② Promote e-learning education using the Internet, etc.**

With an aim to increase more than double the ratio of departments and graduate courses, which implement e-learning education using the Internet, improve cooperation between domestic/international universities and companies as well as promote the further education of members of society through the promotion of e-learning education programs using the Internet at universities, et al.

**<Priority Policies>**

**(1) Promote e-learning education using the Internet at universities, et al. (Ministry of Education, Culture, Sports, Science and Technology)**

In FY2008, we will continue to support the prominent efforts of universities to implement e-learning and educational utilization of IT, the theme for the "Support program for contemporary educational needs" employed in FY2006~FY2007. We will also engage in disseminating the promotion of educational utilization of IT through the National Institute of Multimedia Education.

**(2) Develop foundational technology for a support platform for the cultivation of high-level IT human resources (Ministry of Internal Affairs and Communications)**

By FY2008, we will develop and conduct verification tests of foundational technology for a support platform for the cultivation of human resources that includes e-learning functions and/or systems that allow users to have a sense of immediacy even

from remote locations.

## 2.6 Promotion of R&D that will form the foundations for the next generation IT society

### —Strategic R&D—

#### <Basic Aspects>

Research and development in the IT area has been prioritized as one of the fields to be strengthened under the Science and Technology Basic Plan.

On the other hand, in recent years, global competition involving technical development continues to intensify, and while we work to overcome national issues such as Japan's rapidly aging population, low birthrates, and environmental/energy-related problems, in order for us to maintain international competitiveness, it is imperative that we continue to develop innovative and high-value adding IT capabilities, and to meet this end, strategic R&D measures are required. For this reason, R&D in our country's leading fields, as well as R&D for IT that will be applied in the development of a wide range of fields, such as ultra high-speed calculators, will be promoted, and in tandem, under the cooperation of the Council for Science and Technology Policy, strategic and prioritized R&D of the IT field from a mid- to long-term standpoint, will be promoted. Through the promotion of research implementation system and research evaluation systems as well as utilization policies for results, etc., an R&D environment that is competitive and able to continuously produce new technical innovation, is to be developed.

Furthermore, in light of the increasing significance of IT as a social infrastructure upon which socio-economic activities and daily lives of our citizens are based, efforts will be made in the R&D of safety of IT and securing safety and security in its utilization. Research and development will also be intensively promoted for technology necessary to create an environment where the infrastructure for the next generation IT society, in which anyone, anywhere, at anytime, can experience the benefits of IT, can be developed as well as create a user-friendly interface.

#### **① Maintain and increase industrial competitiveness through groundbreaking IT technology**

Promote R&D of IT technology as an investment toward generating a source of national strength.

**<Priority Policies>**

**(1) Further promotion of R&D in our country's leading fields**

**(a) Research and development of optical and wireless network technology**

**i) Research and development of photonic network technology  
(Ministry of Internal Affairs and Communications)**

Promote research and development of our leading optical technology based on cooperation among industrial, academic and government bodies to achieve larger network capacity and higher level network functions and aim at high electricity efficiency.

By 2010, we will solidify fundamental technology such as elemental technology to realize 100Tbps class optical routers and optical RAM, for the realization of an all-optical network that transmits via optical signals, and have actual demonstration of the technology by 2015. With the attainment of such technology, we will be able to realize a stable, low electricity network in the face of compounding communications traffic.

**ii) Research and development for the expansion of radio wave resources (Ministry of Internal Affairs and Communications)  
PKG**

By 2010, we will conduct R&D for the exploration of unused frequency bands and the upgrading of efficient frequency use technology, in order to realize: technology that enables the easy use of wireless systems for unused frequency bands (millimeter wavebands, etc.): terminal-base station coordination technology that enables flexible use of radio waves through the control of various mobile communication methods.

**iii) Research and development of network device technology  
(Ministry of Economy, Trade and Industry)**

By FY2011, we will develop a traffic measurement/analysis/management technology that can cope

with the traffic speed of more than 40Gbps per channel and a basic technology for the realization of further improvement of traffic speed (of more than 100Gbps).

**(b) Research and development of robots**

**i) Comprehensive research and development of network human interface (Ministry of Internal Affairs and Communications)**

To dramatically improve robot's perception of the real world and ability to communicate with people, basic technology, possible through interactive communication between robots that are connected sensors and networks, will be established by FY2008. In addition, in order to realize robot services with improved usefulness and versatility, further integration with the ubiquitous network technology will be explored.

**ii) Practical application of the next generation robot (Ministry of Economy, Trade and Industry)**

With the aim to implement multifunctional home robots that help people in their daily life at home and in town by 2025, we will develop and demonstrate artificial intelligence technology that ensures successful operations of robots in real environments, and practical technology of robots that perform tasks contributing to people, and will develop common foundations (such as middleware, devices, etc.) and elemental technology (such as sensors, monitors, etc.) necessary in the practical adaptation of robots as we work on system development.

**(c) Research and development for improving information appliances**

**i) Research and develop advanced use/utilization of information appliances (Ministry of Internal Affairs and Communications)**

By 2008, in order to provide a wide variety of safe, secure, and advanced services through information appliances which will be able to offer various services through digitalization and linkage with broadband network, the R&D of necessary technologies will be promoted.

**ii) Research and develop storage technology (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry)**

By FY2010, we will establish a basic technology to develop spin memory which is promising as ultra high-integration and high-speed nonvolatile memory. We will also establish basic technologies to realize spin new-functional devices such as a new storage/memory device, nonvolatile spin photonic device, and spin active device, based on a new principle of action.

By FY2011, we will develop an innovative high-speed/nonvolatile logic-in memory that utilizes spin devices, and also an ultra high-speed large capacity storage system based on the terabit-class next generation vertical recording technique.

**(d) Research and development of devices (Ministry of Economy, Trade and Industry)**

**i) Research and develop 3D semiconductor devices**

With the spread of the use of a semiconductor at an accelerating rate, increasingly more functions are being demanded for semiconductor devices. In order to fulfill multi-functional requirements at the same time, we need to develop a new technology based on a new direction that departs from conventional miniaturization techniques.

By FY2012, we will refine and integrate 3D structuring techniques, and develop an innovative fundamental semiconductor technology.

**ii) Research and develop circuit architecture**

By FY2010, we will create more than 10 circuit architectures for practical use by first soliciting research projects on circuit architecture with less than 65nm process technology from academic associations etc., then conducting evaluation of trial prototypes of semiconductor chips necessary for the R&D of circuit architecture.

**iii) Research and develop basic technology for**

**low-power-consumption semiconductor for the next generation**

By 2010, we will establish a basic technology for high-speed low-power-consumption device using semiconductor miniaturization beyond the 45nm level, and along with it, the corresponding mask design/manufacturing technology, basic manufacturing technology, and basic EUV lithography technology.

**iv) Research and develop basic technology for power electronics inverter**

We will support development of semiconductor devices based on new ideas, and realize low-power-consumption, high-performance devices such as a highly efficient inverter that uses 10w/cm<sup>3</sup> class power device instead of silicon transistor.

**v) Research and develop semiconductor application chips**

By 2010, we will realize semiconductor application chips that save energy and upgrade (multi-functionalize, etc.) information appliances.

**② Realize a research and development platform to materialize ongoing innovation**

For R&D in IT and other fields, an environment in which IT is actively utilized will be created to serve as a basis for materialization of ongoing innovation.

**<Priority Policies>**

**(1) IT as the foundation of research and development**

**(a) Research and develop system integration/cooperative software (Ministry of Education, Culture, Sports, Science and Technology)**

By FY2011, we will develop system software that enables smooth migration among various computers without a need to modify application programs, and also grid software that enables data sharing and efficient utilization of computational resources.

**(b) Research and develop simulation software as an indispensable tool for innovation (Ministry of Education, Culture, Sports,**

**Science and Technology)**

By FY2012, we will develop highly reliable software that enables most advanced, large-scale complicated simulation, specialized in manufacturing fields to reflect the actual needs in industry.

**(c) Development and usage of state of the art, high-performance, general-purpose super computer (Ministry of Education, Culture, Sports, Science and Technology)**

With the aim of starting operations in FY2010 and reaching perfection in 2012, the world's top performance, state of the art, "next generation super computers" will be developed and built, software that will maximize the utility of the next generation super computer will be developed and disseminated, and with such cutting edge computers at the core, we will take a united approach to promote the formulation of the world's highest level super computing research and education centers (COE).

**(d) Research and develop a quasi-zenith satellite system (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry, Ministry of Land Infrastructure, Transport and Tourism)**

In order to further utilize geospatial information obtained from satellite position, R&D and verifications on technology and availability regarding the quasi-zenith satellite system that enables high-accuracy positioning, etc., will be promoted. Based on these results, necessary measures will be implemented to promote usage, and for this purpose, R&D for actual verification experiments will be conducted by FY2010.

**(e) Develop network environment for research and development (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, and related ministries) PKG**

By 2010, we will construct a terabit-class test bed network by introducing optical technology and/or next-generation IP technology, and conduct verification tests in an environment close to actual use.

With the aim to construct "Cyber Science Infrastructure" to share computers, software and content at universities etc. on the network, we will develop an academic information infrastructure equipped with ultra high-speed network etc.

**(f) Promotion of "Strategic Information and Communications R&D Promotion Programme" (SCOPE) (Ministry of Internal Affairs and Communications)**

We will implement unique and innovative R&D projects that will contribute to the realization of a ubiquitous net society through allocation of competitive funds. In particular, we will promote R&D projects proposed by regional universities and/or researchers affiliated with small and medium-sized enterprises.

We will also deliberate on R&D projects, utilization methods and business models on information and communications technology, suitable for a particular region through a coordinated effort among the industrial, academic and government bodies based in that particular region, so as to promote regional information and communications technology.

**(2) Promote utilization of IT**

**(a) Utilization of IT for R&D in life science fields (Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Agriculture, Forestry and Fisheries)**

With the aim to enhance the usability of databases in life science fields, efforts have been made, under the initiative of the Database Center for Life Science, to construct and operate an integrated utilization system through the support given to planning and evaluation of database development strategies, development of a fundamental technology for integration and use/utilization of the databases, and human resources development. By FY2010, the infrastructure that supports a world-class life science fundamental technology will be developed.

In addition, in order to contribute to the development of bioinformatics research, R&D for construction, upgrading and utilization of biological information database including genome information and/or DNA information will be conducted,

while results of such R&D will be published.

**(b) Research and develop high definition 3D visualization software technology (Ministry of Education, Culture, Sports, Science and Technology)**

In order to realize an environment where anyone can receive education and enjoy art & culture anytime anywhere, research and development on high definition 3D visualization software technology and its utilization technique in the field of education will be conducted with a view to making it practicable by FY2008.

**(c) Upgrade air and maritime radio communication (Ministry of Internal Affairs and Communications)**

By FY2010, new radio usage systems for air and maritime radio communication will be realized. In FY2008, we will deliberate on the technical requirements for the use of mobile phone systems on flights. Further, we will conduct deliberations on technical matters and verification tests for easy access to the Internet on shipboard through upgrading of the existing radio communication system or installation of a new radio communication system.

**(d) Develop a new production system for agriculture fields (Ministry of Agriculture, Forestry and Fisheries)**

By FY2011, as part of our nation's research to construct a technological model to reduce production costs and man hours of land-use agriculture in half in an effort to increase competitiveness, we will conduct research and development of cost reduction based on the utilization of remote sensing technology (satellite technology to determine the best period of time for harvest), and of harvest robots that can contribute to making the harvest and produce selection processes more efficient, which will be indispensable as horticulture expands to greater scales.

**③ Realize a society where all people can experience the benefits of IT**

In light of the fact that IT is widely permeating society, active investments will be made in the development of advanced information and telecommunications technology that will become necessary in the future.

**<Priority Policies>**

**(1) Research and develop safe and secure IT and IT that ensures safety and security in society**

**(a) Research and develop optical/quantum communication technology (Ministry of Internal Affairs and Communications)**

We aim to establish the fundamental technology to build a future type optical network by FY2010 that utilizes the characteristics of optical waves and quantum properties to achieve extreme communication speed, function, anonymity and trust, as well as put to practice a certifiably safe quantum coded network. Furthermore, with regards to quantum coding networks, we will conduct strategic and totalized research and development to build fundamental technology, such as quantum relay technology and quantum coding technology in outer space, required for quantum broadcasting for ranges over 100km.

**(b) Research and development on the detection, recovery, and prevention of route hijacks (Ministry of Internal Affairs and Communications)**

By FY2009, a technology to enable detection and recovery of route hijacks within a few minutes, and also prevent its occurrence will be established.

**(c) Research and development for the next generation backbone (Ministry of Internal Affairs and Communications)**

By FY2009, the technology to decentralize traffic exchanges, ensure transmission quality of services provided by different businesses, stably operate the entire IP backbone by detecting and controlling abnormal traffic will be established.

**(d) Research and development of revolutionary virtualization technology (secure platform) (Ministry of Economy, Trade and Industry)**

By FY2009, not only will various information systems be united on a single server, access rights that were previously set up per information system will also be united, and a revolutionary virtualization technology (secure platform) that incorporates

a centralized access rights management function will be developed.

**(e) Research and develop ground/space-based mobile phone system that can be used in times of disaster (Ministry of Internal Affairs and Communications)**

By FY2015, we will establish a mobile satellite communication technology that enables access to both satellite communication network and mobile telephone network from mobile phone terminal which is widely available, so that access to communication is secured without failure from anywhere in times of disaster.

**(f) Research, develop and standardize fundamental technology for unifying networks to enable access from one terminal to various networks such as a mobile phone network and wireless LAN (Ministry of Internal Affairs and Communications)**

By 2010, in order to further facilitate regional use/utilization of IT, we will promote research, development and standardization of the common fundamental technology for mobile network and terminals where one terminal can be used to access mobile phone network and/or wireless LAN.

**(2) Research and development to realize a ubiquitous environment**

**(a) Research and development for ubiquitous platform technology (Ministry of Internal Affairs and Communications)**

By FY2010, we will establish a ubiquitous platform technology to enhance the usability of ubiquitous network technology including electronic tags and sensor network, and realize an environment in which anyone can easily use advanced and seamless services. We will also conduct verification tests in the actual environment of usage, based on the needs for use.

**(b) Research and develop ultra high-speed wireless LAN (Ministry of Internal Affairs and Communications) PKG**

With the aim to realize an advanced mobile computing environment, by FY2010 we will establish a counter-interference/phasing technique and an adaptive high-efficiency modulation technique, etc., required for the realization of ultra high-speed wireless LAN that enables secure

gigabit-class communication at home and office.

**(c) Research and development of the fundamental technology for next generation networks (Ministry of Internal Affairs and Communications) PKG**

By 2010, fundamental technology needed for the creation of next generation networks (NGN), which are completely packet-based, highly functional networks that realize high-quality/highly reliable and advanced mobility and are also compatible with ubiquitous technology, such as electronic tags, etc., will be realized.

**(d) Research and development on the fundamental technology for new generation networks (Ministry of Internal Affairs and Communications) PKG**

With the aim to provide a drastic solution to the problems in service quality and security matters in the existing networks, we will promote development and verification of new network architecture (ground design) toward the next generation beyond the next-generation network (NGN).

By FY2015, we will establish an element technology of "Dynamic Network" to enable increased information transmission efficiency and automatic recovery at times of failure, as well as a fundamental technology of "Virtualization Techniques" in which transmission speed and quality can be configured with perfect freedom.

**(3) Research and development for user-friendly, passible interface technology**

**(a) Research and develop automatic speech translation technology (Ministry of Internal Affairs and Communications)**

As our society is increasingly internationalized, a need for realizing an environment in which communication flourishes freely beyond linguistic barriers and for promoting mutual understanding has grown. To meet this need, by FY2012 we will establish a basic technology that enables accurate and more natural speech translation covering a wide range of conversation contents.

**(b) Research and development of ultra-realistic communication**

**technology (Ministry of Internal Affairs and Communications)**

With the aim to realize ultra-realistic communication as if you are there, by FY2011 we will establish such technologies as three-dimensional imagery display technology, signal processing technologies of ultra high-definition images, and multispectral image acquisition/transmission technology.

### 3. Provision of valued Information to the world

#### 3.1 Enhancement of the presence of Japan in the international competitive society

##### –Provision of Valued Information to the world–

###### <Basic Aspects>

By implementing the New IT Reform Strategy, we have been working to level up Japan's capability to attain the world's recognition through active participation in the global market and the enhancement of the competitiveness of the IT industry. However, in spite of maintaining high technological standard, the fields at which Japan excels have evolved within the domestic market in rather idiosyncratic and isolated manner (so-called "Galapagos").

Nevertheless, information & communication infrastructure development, creation of software that features superior craftsmanship, and our intellectual properties, such as content enriched with Japan's unique culture and traditional cultural resources, have creative potential of their own.

In taking advantage of such potential by consolidating it into actual strength, we will make intensive investment in the areas where Japan demonstrates remarkable strength out of a wide-ranging repertoire of IT products and services, to enhance Japan's presence in the international competitive society and evolve out of what is called "Galapagos" market.

#### ① Strengthen competitiveness of our country's products and services in the international market

Utilizing what is one of the world's most advanced IT environments, including our broadband and mobile Internet environments, etc., as well as one of the world's most advanced markets, Japan will promote international joint research projects for the creation of new technology and services in consideration of global markets. In order to improve the reliability and productivity of software, the promotion of R&D and quality assessment systems' functions enhancement are to be implemented under the cooperation of government, industry, and academia. In addition, technology concerning the accessing of next generation intellectual information, such as image searching, information analysis, etc. shall be strengthened.

<Priority Policies>

(1) Strengthen international competitiveness of ICT industry

**(a) Promote the basic strategy for the enhancement of international competitiveness of the ICT industry (Ministry of Internal Affairs and Communications, and related ministries) RM PKG**

In promoting such projects as the "Specified Ubiquitous district" projects, the Japan Initiative projects that capitalizes on Japan's excellence in certain fields, and the basic strategy underling 3 prioritized areas of "next-generation IP network," "wireless," and "digital broadcasting," in accordance with the "ICT International Competitiveness Enhancement Program,"<sup>29</sup> the overall key strategy for the enhancement of international competitiveness for the ICT industry, we will follow up these measures on a regular basis and work to improve the above Program up to FY2011, the target year of the Program.

Further, in order to provide comprehensive support for the international deployment of the ICT industry, we will promote various public relations activities abroad (seminars, symposiums, dispatch of mission etc.), collect and organize useful information from different countries to be shared among the industrial, governmental and academic bodies, and extract new support projects based on the previous cases of successful international deployment at home and abroad.

**(b) Promote "Specified Ubiquitous district" (Ministry of Internal Affairs and Communications, and related ministries) RM PKG**

Within the "Special Ubiquitous district" established to develop an internationally deployable 'new model' by our nation's initiative, we will conduct development and verification experiments to create new values in the integration of fixed telecommunication, mobile communication and applications, such as "verification of multi-one-segment service," "verification of international distribution efficiency by utilization of location code," "verification of mobile terminal that enables multilingual translation and

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<sup>29</sup> Formulated by Ministry of Internal Affairs and Communications on May 22, 2007

foreign visitors survey" etc. We will also lobby other nations to establish similar specified districts in order to promote international cooperation. Furthermore, along with our policy to enhance our nation's international competitiveness, in FY2008 we will announce newly usable frequencies and create "Enlarged Special Ubiquitous district" for regional revitalization and development of industries, where radio wave is made available for the purpose of creating new businesses and/or regional services.

**(c) Unified promotion of R&D/standardization/intellectual property strategies in the ICT field (Ministry of Internal Affairs and Communications)**

With the aim to enhance our nation's mid-and-long term competitiveness, we will promote R&D/standardization/intellectual property strategies in a unified manner, with possible global deployment of future achievements on the agenda at the early stage of R&D, and with a view toward acquisition of international standard and intellectual property right. We will steadily promote the "ICT R&D/standardization strategy to enhance our nation's international competitiveness."<sup>30</sup>

**(d) Enhance international competitiveness in the next generation IP network field (Ministry of Internal affairs and Communications) RM PKG**

To enhance the international competitiveness of our nation's ICT industry in the field of next generation IP networks, in FY2008 we will take the following actions: 1) dialogues, seminars and workshops with foreign, especially the leading Asian, nations; 2) advanced ICT joint experiments for the formation of hubs of international information network; 3) research and development for a platform to attain a technical standard originating from Japan in the next generation IP network field, and promotion of activities for international standardization; 4) international technology investigations into the field of next generation IP networks.

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<sup>30</sup> Reported by Information Communication Council in June 2008

**(e) Research and development conducive to the enhancement of international competitiveness in the mobile communications field (Ministry of Internal Affairs and Communications) RM PKG**

We will promote the research and development of a common platform that contributes to the development of a mobile phone system that is internationally competitive, that enables the realization of a highly sophisticated mobile communication facility at a low cost by FY 2010. Together with this, we will create a testing environment wherein multiple parties, such as mobile-service provider, manufacturer, software developer, can perform joint verification experiments, and promote the research and development, creation of necessary environment, and international standardization of either an advanced form of the 3<sup>rd</sup> generation mobile phone technology or the elemental technology for 4<sup>th</sup> generation mobile telecommunications systems with a view to realize it by FY 2010.

**(f) Enhance international competitiveness in the digital broadcasting field (Ministry of Internal Affairs and Communications) RM PKG**

In order to contribute to the enhancement of our nation's international competitiveness in the area of digital broadcasting, we will deliberate on an internationally distributable broadcast system which is an expanded version of the Japanese broadcast system, and make efforts to promote the above system through seminars and demonstrations conducted in foreign nations. In FY2008, in the continuation of the above efforts, we will undertake investigations and analyses of the technical issues related to the use of digital broadcasting in foreign countries, and strive for the proliferation of our nation's digital broadcast system overseas, especially in South America.

**(2) Measures to strengthen international competitiveness of software**

**(a) Upgrade of software engineering (Ministry of Economy, Trade and Industry) RM PKG**

We will continue to promote the development and dissemination of advanced development methods of software & tools in the areas of both enterprise and embedded software, along with the

expansion of the use of open source software. Also, during FY2008, we will continue to discuss about specific measures that encourage the alliance among enterprises to create a platform for shared infrastructure software in embedded systems. By FY2009, we will improve the environment for the development of reliable infrastructure software for a vehicle-mounted control system with a view to develop it.

**(b) Develop and disseminate visualization technology for recording of software construction process (Ministry of Education, Culture, Sports, Science and Technology)**

By FY2011, we will develop and disseminate a world-leading technology that enables detailed recording of each process of software creation by designing "software tag" which stores software construction data and evinces the appropriateness of construction procedure by recovering the process.

**(c) Publicize software development capability to the world (Ministry of Economy, Trade and Industry)**

We will publicize our nation's efforts to improve the reliability of information system & software at various meetings related software development such as an OECD/CIIE (Center for Innovation, Incubation and Entrepreneurship) to be held in Tokyo in October 2008. We will also publicize the result of our efforts to develop software that serves as a shared infrastructure in embedded system and to create a development environment, with a view toward international standardization.

**(d) Discover and foster ingenious creators (Ministry of Economy, Trade and Industry) RM**

In order to foster human resources that can play active roles internationally, approximately 20 individuals with creative skills in the software field ("super creators") will be chosen each year, and an environment that will enable them to realize their full potential will be developed and provided. From FY2008 onward, we will support them with overseas deployment and provide socialization opportunities with CEOs, venture capitalists and marketing experts, along with networking opportunities and other necessary information.

**(3) Support for IT venture businesses (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)**

We will support technological development and offshore deployment of small and medium-sized IT venture businesses which have excellent core technologies but are still unrecognized. From FY2009 through FY2009, we will provide incubation support to small and medium-size IT venture businesses that struggles to commercialize their new technologies or business models, such as ASP/SaaS, based on some superior seeds of new technologies. Further, we will provide support for their development efforts to realize advanced/innovative business models in the information and communication field, at both an on-line level where support is given in terms of management information and entrepreneurial opportunities, and at an off-line level where encouragement is given by sponsoring various seminars and events.

**(4) Creation of innovative industry based on digital integration and infrastructure development toward that end (Ministry of Economy, Trade and Industry) RM**

We will expand the initiative projects already in place, or promote new projects, in order to facilitate the creation of an innovative industry through digital integration, and support organizing an overall industrial framework (new frontier explored through IT) that integrates all of such projects. We will also develop an infrastructure required to support the creation of new industry.

**(5) Technological development of the access to next-generation intellectual information (Ministry of Economy, Trade and Industry, and Ministry of Education, Culture, Sports, Science and Technology) RM**

With the aim to fortify our competitiveness in the international marketplace, by FY2009, concise and accurate search and analysis technology will be developed and applied to the various digital information, such as text, image and positioning, that includes but not limited to the information provided on websites.

Also, by FY2011, research and development will be conducted for the fundamental technology for an ultra high quality database, crucial in the strategic utilization of large-scale information. In FY2008, we will conduct research and development according to

the technological architecture which has been established so far.

**② Attain a technical standard originating in Japan**

In order to lead in the effort toward international standardization with respect to technical areas in which Japan has developed ahead of other nations, activities in international standardization organizations, such as IEC, ISO, ITU, etc., will be implemented and cooperation and interaction in the global industrial field are to be promoted under the collaborative efforts of government, industry and academia.

**<Priority Policies>**

We will implement the following measures based on the "International Standardization Comprehensive Strategy"<sup>31</sup> in order to strengthen our nation's efforts towards international standardization.

**(1) Strengthening our nation's international standardization activities (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and related ministries)**  
**RM**

Under the "Action Plan for International Standardization Activities"<sup>32</sup> and "Strategy on ICT R&D/standardization to strengthen our nation's international competitiveness(provisional title),"<sup>33</sup> we will promote strategic activities for international standardization at IEC, ISO, ITU, IETF, etc., such as strategic standardization activities unified with R&D strategy and intellectual property strategy, reinforcement of standardization in Japan through the industry/academy/government partnership, fostering of human resources for international standardization, promotion of further cooperation and interaction in the Asia region, and so on.

**(2) Undertaking international promotion of IT Engineer Examinations and the skill standard (Ministry of Economy, Trade and Industry)**

We will establish our position in Asian region in providing a standard for human resources development and evaluation method, which are: IT Engineer Examinations as an objective evaluation

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<sup>31</sup> Decided by Intellectual Property Strategy Headquarters in December 2006

<sup>32</sup> Reviewed and formulated by Japanese Industrial Standards Committee in June 2007

<sup>33</sup> Reported by Information Communication Council in June 2008

tool of knowledge relating to IT, and the skill standard that offers a framework of skill and career format of a desirable IT talent. We will promote the above by supporting test material development and dispatching hired experts. In FY2008, we will offer training courses for the promotion of Information Technology Engineer Examinations across Asia, and introduce the skill standard to universities etc. in Vietnam and the Philippines.

**(3) Attainment of posts in international institutions (Ministry of Internal Affairs and Communications) RM**

In order to lead activities for international standardization and coordination for the use of radio transmission, we will strengthen our foundation for our activities in international institutions by means of seeking assignment of Japanese nationals to significant posts such as administrative director of an international institution. In FY2008, we will back up the reelection efforts of the Japanese secretary general, elected last year, of the Asia Pacific Telecommunity (APT) in the secretary general election in winter 2008.

**③ Strengthening our country's information provision ability**

The digitization of information about Japan's cultural heritage, such as national treasures and important cultural assets, and the creation of attractive content with consideration to global markets, shall be strategically promoted in order to provide the world with information on Japan's attractions via the Internet, etc.

**<Priority Policies>**

**(1) Promotion "Digital Cultural Enlightenment Project" (Ministry of Internal Affairs and Communications, and related ministries) RM**

Based on the "ICT Growth Enhancement Plan,"<sup>34</sup> digitalization will be promoted by a concentrated effort by the industrial, governmental and academic bodies, and in cooperation with National Diet Library, National Archives of Japan, related ministries, regional public bodies, libraries, museums, art museums, and universities, so as to implement the "Digital Cultural Enlightenment Project" which aims to connect

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<sup>34</sup> Formulated by Ministry of Internal Affairs and Communications on May 23, 2008

intellectual properties across Japan in a totally digitalized format.

**(2) Promotion of digitization and publicity of cultural heritage**

**(a) Promotion of the cultural heritage online initiatives (Ministry of Education, Culture, Sports, Science and Technology) RM**

In order to expand the comprehensive portal site, "Cultural Heritage Online" launched in FY2007, the comprehensive portal site containing the information on our nation's treasured cultural heritage, we will continue to archive cultural heritage including cultural property and art pieces from museums and art galleries nationwide.

**(b) Archive and publication of our nation's rich cultural heritage (Cabinet Office, Ministry of Education, Culture, Sports, Science and Technology) RM**

A part of the important cultural assets and important historic archives that belong to the National Archives of Japan have already been digitalized as high-resolution color images, open to the public. In FY2008, we will continue to promote the digitalization of the cultural assets and expand the content. Also, with the aim to digitize about 30 million images of important historic archives of our country and neighboring Asian nations by FY2012, and having already digitalized about half of such archives to be made open to the public on the website of the Japan Center for Asian Historical Records, we will continue to promote the digitalization during FY2008.

Furthermore, our efforts to archive important cultural assets belonging to national museums and representative of our country to be semipermanently saved as high-resolution digital information will continue through FY2008. The information on these images will be translated into four different languages (English, French, Chinese, and Korean), out of which about 15 items a year will be made public on the website in order to introduce our rich cultural treasures to a wide range of audiences and cultivate their familiarity with and understanding of our culture.

**(c) Comprehensive publicity of Japanese culture (Ministry of Education, Culture, Sports, Science and Technology) RM**

In order to effectively introduce to the world a wide range of Japanese cultural activities, from traditional culture to contemporary culture and art, the information on Japanese culture will be provided to the world in English on the portal site launched and dedicated to that purpose. In FY2008, we will continue to develop content by collecting activity information of art associations etc. in preparation for a test release of the site.

**(3) Promotion of internationalization of contents**

The following measures will be implemented to promote internationalization of our country's content industry.

**(a) Comprehensive publicity of contents (Ministry of Economy, Trade and Industry) RM**

In the continuation of the efforts from last year to promote drastic international deployment of Japanese content, in FY2008, individual events for film, games, music, and animation will be unified in the Japan International Contents Festival to generate information on Japanese contents, labeled as "Cool Japan" from foreign enthusiasts and/or media, in a totalized comprehensive manner, with a view to expand the content market for 5 trillion JPY by FY2015.

**(b) Promotion of the media art vitalization integrated program (Ministry of Education, Culture, Sports, Science and Technology) RM**

In order to promote the cultivation of talent in media arts and formulation as an international stronghold, media arts festivals and overseas exhibitions of media arts will be held, as well as the comprehensive generation of media arts, cultivation of creative talent, and the formulation of a promotional stronghold and network.

**(c) Create new services and content that utilize Internet-ready television (Ministry of Economy, Trade and Industry) RM**

In order to create new services such as IPTV that utilizes an Internet-ready television and new content delivered through

the Internet, we will conduct demonstration experiments with various usage scenes in mind. Specifically, we will conduct experimental provision of new services and content delivery that target specific region or users, and promote innovation by working toward standardization in parallel with the formation of a market for anyone to enter into.

**(d) Building a user agreement system (Ministry of Education, Culture, Sports, Science and Technology)**

In order to promote the swift and smooth network distribution of publications, a concise user agreement system will be set up for the use of these publications over the network by FY2009. In FY2008, we will continue the research to outline the basis of the system, create a test system, and conduct evaluation and analysis of its results.

**(e) Implementation of information publicity activities to the world (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and related ministries) RM**

Based on the 3 year translation establishment plan set forth and revised by the Study Council for Promoting Translation of Japanese Laws and Regulations into Foreign Languages (FY2006~FY2008), conceived for the international understanding and usability of our laws, relevant ministries will move forward with an unified effort to translate Japanese laws and regulations, while also building a user-friendly website, to launch information on the Japanese legal system outward. In FY2008, the standard parallel translation dictionary that includes translation rules will be revised, and approximately 100 laws and regulations will be translated by respective related ministry.

**(4) Promotion of the utilization of broadcast program contents**

**(a) Promotion of a new content distribution model (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology) RM**

From the perspective of improving consumer utility and its balance with the protection of rights involved, with the cooperation of consumers, rights holders, broadcasting

businesses, and manufacturers, we will formulate new rules that reflect our adaptation of the digital age, giving consideration to issues such as the way copyrights of IP multicast broadcasting are processed, the rules surrounding broadcast content protection and its protection measures. We also plan to further develop markets related to content material currently available through broadcasting programs, by expanding the choices of media outlets for consumers, such as IPTV and mobile devices. To this end, we will develop and disseminate new platforms that handle various media such as devices and DRMs. In FY2008, we will deliberate on and conduct verification of technological elements necessary for the realization of more active use of the content (including TV programs) distribution that utilizes our nation's advanced high-speed communication infrastructure.

**(b) Strengthening overseas transmission of broadcast program contents (Ministry of Internal Affairs and Communications) RM**

In order to further understanding by making information about Japanese culture available overseas, a framework for the accumulation and storage of Japanese broadcasting programs will be set up. A new distribution network that appropriately targets overseas audiences, at a time frame and channel that can serve as a "window to Japanese content," will be explored and secured and a framework that will continuously distribute Japanese broadcast content will be established, based on a support and cooperative structure of public and private entities, including corporations that may become overseas media sponsors, broadcasting businesses, program producers and relevant ministries. In FY2008, with the aim to expand the broadcast content market, we will deliberate on the creation of an exchange market specialized in Japanese broadcast content, intended also for overseas entities, through efforts such as adding market functions to the International Drama Festival.

**(c) Promotion of measures that handle rights to the secondary use of past broadcast programs (Ministry of Internal Affairs and Communications)**

In FY2008, we will continue the efforts initiated last year to promote measures related to agreement formulations between the parties concerned and the secondary use of broadcast

programs to utilize broadcast programs owned by NHK Archives and commercial broadcast businesses.

**(d) Strengthening international broadcasting (Ministry of Internal Affairs and Communications, and related ministries) PKG**

In accordance with the results of the deliberations at the Information and Communication Council as well as the revision of the Broadcast Law based on the said deliberations, and through the cooperation with NHK and the private broadcasters, we will aim to launch a new visual international broadcasting from the early FY2009, while we procure necessary funds from the national budget and proceed with the creation of a responsible organization.

**(e) Development of an environment/system that contributes to the formation of an exchange market of broadcast content etc. (Ministry of Internal Affairs and Communications) RM PKG**

With the aim to strengthen the international competitiveness of the content of broadcast programs etc. and share its benefits widely with creators and audiences, we will take the following actions: put together information regarding the rights of relevant content and contact channels; work toward the formation of an open and transparent market for anyone interested in content trading; develop rules & organizations to support smooth content transactions and use/utilization of content, and perform proving tests; develop an environment for proper broadcasting programs production. In FY2008, we will continue to deliberate on the formation of a content exchange market at the Information and Communication Council, and on the formulation and issuance of a guideline on fairer production/trading practices between the broadcasters and the program creators, and development of follow-up procedures of the said guideline. The results of the deliberations will be summarized and implemented.

**(f) Facilitation of content distribution in digital broadcasting (Ministry of Internal Affairs and Communications)**

In order to enhance our nation's information transmission capability to the world by facilitating creation and use/utilization of broadcast content, we will deliberate on

rules concerning protection of digital broadcast content and the means of securing protection. Development of an environment in which the right holder can securely provide content and a question of user-friendliness will also be discussed. In addition, we will facilitate smooth use of content in digital broadcasting by promoting consumer publicity on the issue of illegal copying.

**(g) Verification of IPTV transmission technology in various network environment (Ministry of Internal Affairs and Communications) RM**

With the aim to establish a video delivery technology to realize IPTV services including IP re-transmission of terrestrial digital broadcast in various network environments under various conditions such as size and quality, we will perform verification on the function/technology required of the receiving terminal, the equipment on the sender side and the transmission channel.

**(5) Strengthening measures for the protection of intellectual Property**

**(a) Strengthening measures within Asia (Ministry of Economy, Trade and Industry) RM**

We will implement support activities for companies embroiled in legal cases in the Asian region, including China, lobby the local governments, undertake data gathering and public relations activities, and also reinforce support for the overseas deployment of the content industry by conducting investigations into possible barriers against joint productions with foreign companies and development of an overseas distribution network.

**(b) Promotion of measures against bootleg editions (National Police Agency, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry) RM**

In FY2008, to continue with our efforts to protect culturally creative activities and facilitate interaction among quality content, we will crack down on sales of bootleg editions in Japan and request stricter enforcement of the regulations on bootlegs

with strengthened cooperation with related government agencies in the region/country where copyrights violation arises. In addition, we will implement counter-measures such as: training programs in developing countries; training seminars for customs officers etc. in the countries where violation occurs; support for assertion of rights through booklets and seminars; enhanced coordination between the government and industry; on the extension of conventional anti-piracy campaign seminars, inviting officials from Asian nations which are held responsible equally by the US, Japan and EU.

**(c) Promotion of conclusion of international treaties (Ministry of Internal Affairs and Communications, Ministry of Foreign Affairs, and Ministry of Education, Culture, Sports, Science and Technology) RM**

In order to have copyrights over content protected appropriately, in FY2008 active contributions will be made to deliberations on the early adoption of a treaty to protect broadcasting organizations and audiovisual demonstrations by the World Intellectual Property Organization (WIPO), as well as press for early participation in the "WIPO Copyright Treaty (WCT)" of 1996, and the "WIPO Performances and Phonograms Treaty (WPPT)" at bilateral and multilateral forums. Particularly with regards to Asian nations, we hope to utilize the Free Trade Agreement (FTA) and Economic Partnership Agreement (EPA) as forums for further discussion to promote the early participation. In addition, we will continue to hold talks at various bilateral forums with China and Korea on the issues of copyright protection and possible countermeasures against piracy on the Internet.

**(d) Work toward the early adoption of the "Counterfeit goods/pirated production Anti-proliferation Treaty (tentative title)" (Ministry of Foreign Affairs, Ministry of Economy, Trade and Industry, and related ministries) RM**

We will work toward the early adoption of the "Counterfeit goods/pirated production Anti-proliferation Treaty (tentative title)," proposed by our nation, through continued and accelerated efforts at negotiations with other related nations

**(6) Internationalization of the transmission and distribution of academic information (Ministry of Education, Culture, Sports, Science and Technology)**

In order to support electronic publication of journals by our nation's academic associations, J-STAGE, a comprehensive system that handles paper submission, review, editing, and publication, is developed and operated. By FY2010, major academic journals will be electronically saved and released going back to the first issue.

We will call for new journals to be published through J-STAGE, and promote electronic archive of academic journals selected at a council of external intellectuals, with the aim to publish 500 journals by FY2010.

**④ Securing an IT communication channel via Japan**

Taking on a major role in helping to improve the global network environment, the development of a network to maintain stable communication channels in Asia shall be promoted with Japan serving as one of the world's information hubs.

**<Priority Policies>**

**(1) Research and development on super high-speed Internet Satellites (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology) PKG**

With the aim to realize a nation-wide, Asian, and Pacific-wide super high-speed telecommunications system, we have launched a super high-speed Internet Satellite developed by the Japan Aerospace Exploration Agency (JAXA) and the National Institute of Information and Communications Technology (NICT) in FY2007. In FY2008, in order to establish a technology for communication speed of 1.2 Gbps by FY2010, we will conduct verification of initial functions of satellite mission equipments, and start performing tests, including international joint experiments, related to the satellite communications.

**⑤ Increase of transmission of IT-utilizing information in the field of tourism**

The revitalization of local tourism and the tourist economy, the global dissemination of Japan's various attractions, including Japan's rich cultural heritage, and the enhancement of mutual international understanding will be actively promoted.

**<Priority Policies>**

**(1) Promotion of "Visit Japan Upgrade Project" (Ministry of Land, Infrastructure and Transport)**

By FY2010, with the aim to increase the number of foreign tourists visiting Japan to 10 million, enhance tourists' satisfaction and increase repeat visitors, we will launch "Visit Japan Upgrade Project" to promote and publicize Japan's various attractions.

### 3.2 International contribution by providing problem-solving models —Contributions to other Asian countries using IT—

#### <Basic Aspects>

It is of critical importance for our nation as well as for the world that Asia, now labeled “the world’s progressive center,” to continue to develop as a region with open doors to the world. As the world’s most advanced IT nation, and in order to take an appropriate role in international community, Japan will lead the world by the realization of problem-solving models that utilize IT, and by the provision of its benefits, in order to solve social issues that all nations, including Asian countries, share. So far, there has been verifiable success in utilizing our leading technology to provide international earthquake and tsunami information, and developing IT human resource capacity in individual Asian nations, but as we expect further growth in people, goods, money, services, and the distribution of information in the area, it is essential to make active contributions to the development of the Asian economy through IT.

We will consider each Asian country’s conditions, such as infrastructure development state, IT proficiency, and individual pressing issues, to implement measures in fields and cooperation styles that are suitable to each country. For this purpose, a strategic and comprehensive program for cooperation with Asian nations will be drawn up and promoted, through bilateral and multilateral policy dialogues, etc., to exchange information and opinions.

#### ① **Promote strategic and comprehensive cooperation in the IT field**

For mutual growth of our country and other Asian nations, a comprehensive IT cooperative program will be designed and promoted, in which related ministries and cooperating institutions collaborate in such ways as the promotion of the Asia IT Initiative, etc. And through close coordination with local ODA task forces, a prompt and smooth process will be realized, from planning to implementation of the cooperation project.

#### <Priority Policies>

#### **(1) Promote strategic IT cooperation in Asia (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and other related ministries)**

With the aim to contribute to the improvement of people’s lives in Asian nations, and under close cooperation with related ministries, we will promote financial assistance and technical aid through research on computerization measures taken by each Asian country, bilateral/multilateral policy dialogues, and exchange of information/opinions with local ODA task forces.

**(2) Fostering IT human resources in Asia (Cabinet Secretariat and related ministries)**

We will reinforce technological cooperation with Asian developing countries, such as the Philippines and Vietnam, and promote measures to contribute to the fostering of IT human resources, including provision of Japanese-language education. We will also promote the human resources development that utilizes the OSS (Open Source Software) curriculum.

Furthermore, we will continue to support cooperation in Asia on the implementation and mutual certification of the IT Engineer Examinations and the fostering of IT human resources in Asia, while promoting the dissemination of the IT skill standard through out Asia with a view toward the formulation of a foundation for mutual exchange among IT human resources

**(3) Promote the Asia Broadband Program (Ministry of Internal Affairs and Communications and other related ministries)**

By 2010, in order to promote broadbandization in Asia, following the Asia Broadband Program (revised August 31, 2006), measures related to the spread of broadband and developing its network infrastructure will be implemented. One of such measures, international joint researches using the information and communications technology in which Japan predominates, will be conducted with leading Asian countries.

In addition, through Do Site (Digital Opportunity for Global Community), the provision of information relating to international digital divide and digital archives, will be proactively implemented.

**(4) Promote the knowledge-oriented economy in Asia (Ministry of Economy, Trade and Industry)**

In order to realize the knowledge-oriented economy within the Asian region where production/distribution network and consumer markets in Asia are made seamless, upgraded and revitalized through IT, we will undertake the construction of an electronic supply-chain management system that utilizes electronic tags and EDI within the Asian region, shared legal system that enables cross-border electronic transactions, and highly reliable commercial transaction systems such as trust mark and ADR.

**② Establish IT utilization models (such as for the smooth circulation of people, goods, money, services, and information utilizing IT) in Asia**

The efficient and safe circulation of people, goods, money, services, and information in Asia will be realized through the use of IT.

## <Priority Policies>

### (1) Disaster prevention

#### **(a) Observation of the earth's crust in the Asia Pacific region (Ministry of Land, Infrastructure, Transport and Tourism)**

By FY2015, an observation system of crustal movement will be built through the utilization of space geodesy technology, etc. (SAR interferometry, VLBI observation, GPS observation, gravity observation) to minimize loss of life as well as assets from natural and man-caused disasters. The crustal movement accompanying Pacific plate movements, earthquakes, and volcanic eruptions will be monitored and the obtained information will be provided to disaster prevention agencies in each country.

#### **(b) Support the development of disaster prevention transmission systems (Ministry of Internal Affairs and Communications)**

Under the "Cooperation for the advancement of Asia-Pacific Telecommunication Network," we will support the workshops on disaster prevention transmission organized by Asia Pacific Telecommunity (APT).

### (2) Environment

#### **(a) International cooperation by way of global mapping development and promotion of its use/utilization (Ministry of Land, Infrastructure, Transport and Tourism)**

In order to reach stage 2 (target date FY2012) in the development of a comprehensive global map that covers all lands, which may contribute to further understanding global environmental problems that we face, and for Asian countries to find solutions to their individual issues, we will support each country, in supplying their geological information as data for the global map. In 2008, we will implement measures to promote the use/utilization of the global map, such as holding the "Global Map Forum" in time for the G8 Hokkaido Toyako Summit whose primary theme is environmental protection in order to publicize to the world the release of the 1<sup>st</sup> edition of the global map intended for service in exploring solutions to environmental issues.

### (3) Circulation of people, goods, money and information

#### **(a) Promote mutual agreement on the use of IC passenger ticket for**

**international transportation (Ministry of Land, Infrastructure, Transport and Tourism)**

We will work toward the increase of circulation of people and expansion of economic exchanges within Asia by promoting smooth movement of international tourists and business visitors in commercial and urban districts by means of mutually-agreed use of IC passenger ticket etc. to be issued by transportation companies in Asian countries. Specifically, from FY2008 onward, we will deliberate on the measures to promote the mutually agreed use of IC passenger ticket etc. and conduct verification tests toward the realization of such use of IC ticket.

**(b) Construct a convenient and highly reliable cross-border electronic trading network (Asia Electronic Trading Zone) (Ministry of Economy, Trade and Industry)**

A highly reliable and convenient cross-border electronic trading network (Asia Electronic Trading Zone) will be constructed to as to provide a solution through the utilization of IT to the geographical and temporal restrictions on the circulation of goods, money and information. By introducing such network, we will stimulate new demands and open up business opportunities in Asia, and realize revitalization of Asia as a whole. Additionally, we will invigorate our nation's industry by establishing, in combination with the policy specified in 3.1. ③ (a) above, Japan Brand in Asia as well as concentrating Asian consumer information in Japan through development of demand chain. Specifically, we will perform substantive experiments on export to promote the deployment of the electronic trading in Asian countries, and provide one stop international business information service through JETRO etc.

**③ Eliminate the digital divide, which is created by the diversity of languages and cultures in the Asian region**

Eliminate the digital divide in the Asian region, which is created by the diversity of languages and cultures.

**<Priority Policies>**

**(1) Support the development of information communication environments and international dialogue for the development of information communication policies in order to eliminate digital divide (Ministry of Internal Affairs and Communications)**

In order to eliminate the serious digital divide in the Asia Pacific region, we will provide support to develop tele-centers in conditionally disadvantaged areas and

promote pilot projects, to contribute in such ways as creating opportunities to utilize IT.

Additionally, for the diffusion of broadband in the Asia Pacific region, the fostering of human resources necessary in the development of a competitive environment toward broadbandization, will be supported.