Priority Policy Program 2007

July 26,2007

IT Strategic Headquarters

Priority Policy Program-2007
Table of Contents

2

3. Development of a creative infrastructure

III Measure to promote other policies of the New IT Reform
 Strategy

1. The Pursuit of IT Structural Reform Capabilities

2. Development of IT Infrastructure

3. Provision of valued Information to the world

. Implementing the Priority Policy Program

1. Introduction

  In The New IT Reform Strategy formulated in January 2006, emphasis was placed on engaging societal challenges by focusing on the ability of IT to advance structural reform. From a user-oriented standpoint improvements can be made on the national standard of life and industrial competitiveness through the use of IT, and the Priority Policy Program was drafted in July 2006 to this end.

  Following the drafting of Priority Policy Program 2006, policies aimed at realizing the society which the New IT Reform Strategy strives for, such as giving the Japanese public a real sense of the benefits of IT by the formulation of a multi-disciplinary grand design for digitization in the medical fields and the establishment of the Promotion of Electronic Government Tax System, have just begun to be implemented under the leadership of the IT Strategic Headquarters.

  Subsequent to these developments, the Cabinet resolved in January 2006 the Path and Strategy of the Japanese Economy which aims at realizing a healthy and safe society and a vibrant economy with strong growth potential, by pioneering new possibilities and upholding compassionate reforms for nationals in all walks of life, including those in difficult circumstances, such as regional, middle and small sized enterprises. There is a wide-ranging role to be fulfilled by IT in paving the way forward for Japan and to overcome the immediate difficulties our country faces, such as the problems of declining birthrate the growing proportion of elderly people, and regional social and economic disparities. Consequently, this April, the IT Strategic Headquarters drafted the New IT Reform Strategy Policy Package which outlines the basic direction of IT policies henceforth, and composed a policy that will expedite the New IT Reform Strategy and act as a driving force for pioneering reforms and innovation.

  Outlined hereunder, are provisions that prioritize policy implementations to realize, as proposed by the New IT Reform Strategy and the Policy Package, a progressive society that is creative and vibrant, in which it is possible for any one, at any time and any place can reap the benefits of IT.

2. Basic Guidelines

2.1 Policy aspects

  In order to realize the goals set forth by the New IT Reform Strategy and its Policy Package, the Priority Program 2007 has organized, in accordance with the prioritized tasks and strategy fields cited in the aforementioned New IT Reform Strategy and Policy Package, the basic principles to which the policy implementation should comply.

  Furthermore, this Priority 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, 3.have clearly stated aims and deadlines, so that adjustments can be made within the PDCA cycle.

  In order to implement these policies it is imperative that the problems range across various fields are also addressed. For example, in the engineering of the Personal Identification Platform, which is essential for the proactive use of IT by the public, it is necessary to have a fundamental principle that guides the procedures of identification that guards the freedom and safety of a network society, and that the promotion of policies follow this guideline.

2.2 Enhancing and strengthening the assessment and implementation systems

  The success or failure 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 Committee on IT Strategy Evaluation, made up of experts from the private sector, will serve, as wheels of a car do, to evaluate the state of the government's operations and provide input from a user-oriented standpoint.

  Since its inauguration in August, 2006, the Expert Committee on IT Strategy Evaluation has actively provided valuable evaluation, and has drafted in April this year the 2006 Evaluation Report, which they have reported to the IT Strategic Headquarters. Included in the report were propositions for, 1.BPR (the reform and reevaluation of business processes), 2.the realization of total optimization (the eradication of 'fox holes'), 3.the advancement of the 'visualization' of constraints on reformation, 4.improved inter-ministry and central-regional government coordination, 5.the engineering of a public personal identification system. Furthermore, in order to represent the user benefits, the report advises to implement a User Experience

Index, and in the prioritized fields such as healthcare and e-Government, intense debates were conducted within the respective subcommittees, to provide directional advice on both the challenges and their solutions.

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 2007, diligent care was taken to incorporate the advice of the Evaluation Expert Committee, and to have their views reflected on the policy measures wherever possible.

This Priority Program itself will be evaluated by the Evaluation Expert Committee, and their findings will be reflected on the next Priority Program, thus assuring the further movement of the PDCA cycle. Based on the report made by the Evaluation Expert Committee, the IT Strategic Headquarters will seek the judgment of the minister in charge, and indicate where amendments are appropriate, establish the PDCA cycle, and 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.

Furthermore, it is imperative that a system be designed and provided that is centered upon the public, in various services that are directly related to the lives of the public, such as the social security field, a consolidated government-wide effort in the general improvement of such areas is necessary. Accordingly, a new system will be implemented at the Cabinet Secretariat to promote the structuring of an electronic information service on living.

II. <u>Measures for promoting the Policy Package</u>

1.   Promoting efficiency and productivity and the creation of new values

1.1   The realization of a comprehensive e-Government service for both central and regional governments

<Basic Aspects>

  It is important, in the administration field, through the effective use of IT, to simplify, streamline, and increase the transparency of the administrative process and also to strive for the realization of a seamless e-administration that incorporates both central and regional governments which is user-oriented, useful and continually improving, which truly enables the users to sense the benefits of IT utilization.

  Accordingly, to provide an administration service that is exponentially simpler, convenient, and efficient to both the public and corporations, with the development of an e-administration information desk service that is unrestricted by the central/regional government boundaries in mind and recognizing user needs, we will aim to engineer a standard model for a second generation e-administration service platform that enables various administrative processes to be carried out in basically 'one-stop', by creating a stronger linkage between front and back office and inter-back office operations and in cooperation with private sector processes. Furthermore, advancements will be made to prepare the groundwork for the composition of software manuals for the comprehensive e-administration service to be used by sole proprietors of small businesses.

  The establishment of these platforms, which will alert to the public and corporations the convenience of electronic applications as opposed to paper-based processes, will further promote the structuring of a society that is based on e-administration services.

  Develop a standardized model for an e-administration platform that allows various administrative processes to be carried out in a 'one-stop' process by the 2010 FY, together with preparing the groundwork for the drafting of a user-friendly software manual for the use of the comprehensive e-administration service, accessible to small business owners among others.

---

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

(a) The construction of a basic framework for the next generation e-administration service (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)

In order to identify and analyze the challenges facing the realization of an e-administration service information desk that is unrestricted by central/regional government boundaries, organize the directional approaches to overcoming these challenges, and to draft the basic framework for the next generation e-administration service by the early part of FY 2008, a joint project team comprising of individuals from both the public and private sectors will be established under the authority of E-Government Promotion and Management Office (referred to as GPMO hereafter) which is established within the Cabinet Secretariat, and grounds will be consolidated for systematic deliberation by relevant organizations and intellectuals from both the public and private sectors, and the following actions will be taken.

i) Analysis of behavioral flow and ascertainment of needs based on an user standpoint (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)
Ascertain the present usage of online procedures for application and filing, and from a user standpoint analyze behavioral flow and ascertain needs, and identify and analyze its problem areas by the end of FY 2007. In identifying the problems, rather than a blanket consideration of all procedures, focus will be placed on the truly necessary and potentially effective with high needs.

ii) Coordination of inter-ministry, central/regional back offices (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)
Parallel to the above mentioned identification of problem areas, in order to improve coordination between inter-ministry and central/regional back office operations, an inventory will be taken on the related services of the central and regional governments, and a construct a model workflow by the end of FY 2007.

iii) The standardization of the data stored in the information systems of state and regional public institutions (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)
Reach a conclusion by the end of FY 2007 on the directional path of the standardization of the data stored in the information systems of state and regional public institutions, taking into account the results from 'III.1.5 The World's Most Convenient and Efficient e-Government 2(3)(c)' cited below.

(b)   The construction of a standard model for the next generation e-administration service platform (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)

Identify and analyze the problems specific to individual procedures prior to making it operational by the end of FY 2008. Upon which, starting in FY 2009, select a municipality that can act as a model and perform a demonstration experiment, and aim to construct a standard model for the next generation e-administration service platform taking into account practical problems that may be revealed, by the FY2010, in time for the system renewal.

(2) The advancement of preparations of the groundwork for the drafting of software manuals for the use of the comprehensive e-administration service

(a)   Analyzing the development environment e-administration service related software (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)

In order to advance the preparations of the groundwork for the development of software accessible to small business owners, ascertain the present situation of the development of software that relate to e-administration service use, and identify and analyze the user needs and the problems facing the development of software that address the needs of users, by the end of FY 2007.

(b) Preparing the groundwork for the drafting of software manuals for the comprehensive e-administration service (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other relevant ministries)

In accordance with the analysis of (a.), advance the preparation of the groundwork for the drafting of software manuals for the comprehensive e-administration service.

1.2 Increase in economic and industrial productivity of products and services through IT (Enhanced efforts of small medium-sized enterprises in particular)

<Basic Aspects>

To realize the spread of a world-class IT business management system and promote increases in productivity, it is necessary to further promote the utilization of IT that goes beyond 'divisions' or 'corporations' and that of small and medium-sized enterprises (SMEs) whose IT investment remains at a lower level, and improve IT utilization both in the areas of manufacturing and services.

To this end, we will promote to develop a shared infrastructure for IT utilization in a cross-sectoral manner beyond the boundaries of specific markets and business sectors, improve added-value and cut cost drastically through the improvement of IT investment efficiency. Finally, we will improve the productivity in every industry sector and the economic society as a whole.

> By FY2010, we will raise the percentage of large enterprises and SMEs to the world's highest level that have optimized corporate management by utilizing IT and improve productivity in every industry sector and the economic society as a whole.

<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)

In order to address the social challenges of environmental recycling, maintaining product safety and chemical control, 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 improve the productivity in the economic society as a whole.

In FY2007, in order to promote the realization of an information sharing system beyond the boundaries of specific businesses and business relations, we will lay the groundwork

that enables consensus building in a wide and cross-sectoral
manner in industries, begin advanced efforts in electronics,
textile, construction material and household equipment industries,
and promote to make rules in a wide and cross-sectoral manner in
industries about how the information necessary to share at
affiliated enterprises including small and middle-sized
manufacturers should be disclosed and distributed, how the
database and the electronic tags should be utilized, and the
improvement of an open and generalized code scheme. And we will
expand these efforts to other fields widely, by FY2010, we will
construct a shared infrastructure for the utilization of e-
commerce and electronic tags in a cross-sectoral manner.

**(b) Develop EDI shared infrastructure available to SMEs
(Ministry of Economy, Trade, and Industry)**
  We will also support the development and introduction of EDI
shared infrastructure enabling electronic ordering—a process that
SMEs have struggled to keep pace with large enterprises. We will
work to promote the results achieved through these efforts.
Toward the development of a simple EDI system for SMEs, we will
also promote the creation of ground rules to secure
interoperability between EDI systems in accordance with the
global skill standards on EDI (electronic business eXtensible
Markup Language (ebXML)).

(2)   Advance IT business management (especially among SMEs)

**(a)   Develop and disseminate IT business management support tools
for SMEs (Ministry of Economy, Trade and Industry and the
Ministry of Internal Affairs and Communications)**
  We will draw up, during FY2007, the "Guidance on the IT
Management of SMEs" as a benchmark for IT installation in
proportion to the size and industries of SMEs, and put into
practice the dissemination of the services that SMEs can easily
launch business and financial management operations by utilizing
IT. As a result, we will promote to develop and disseminate IT
business management support tools for SMEs. Furthermore, we will
set up an environment that we will improve a shared
infrastructure for the dissemination of the new services which
have a high degree of usability for SMEs, such as the ASP
(Application Service Provider) and the SaaS (Software as a
Service), and utilize a groundwork for the cooperation of the
public and private sectors.

**(b) Upgrade the IT business management consulting system
(Ministry of Economy, Trade and Industry)**
  From FY2007 onward, we will make efforts to improve a
consulting system, which the problems and challenges on IT
utilization facing SMEs are smoothly solved through dispatching
or stationing the specialists deployed to the area upon request
of SMEs and giving SMEs the relevant guidance and advice.

(c) Further enrich the "IT Management for SMEs Support Project" (Ministry of Economy, Trade and Industry)

 During FY2007, we will review the 'IT Management for SMEs Support Project.' We will set up new workshops for small-scale businesses and the service industry, strengthen the framework for the collection of leading and successful cases, clear up and provide the information needed for SMEs to put IT business management into practice. Also,cases of outstanding IT business management will be recognized in order to heighten motivation among SME managers..

(d) Promote visualization of IT investment value (Ministry of Economy, Trade and Industry)

 During FY2007, we will promote the visualization of returns on investment by utilizing IT and establish guidelines to advance the IT business management and increase effective returns on IT investment. Also, in order to raise interest in the promotion of IT business management on the management level, we will provide business owners with evaluation tools in order for themselves to be able to use the objective evaluation of the degree of observing these guidelines and set appropriate targets.

(e) Improve the productivity among small and medium-sized manufacturers through the installation of the production management systems (Ministry of Economy, Trade and Industry)

 We will help to develop and disseminate the production management system reflecting needs of SMEs, including the cooperation with the shared infrastructure EDI, for small medium-sized manufacturers advancing products in Japan where IT utilization of the fundamental businesses is late. As a result, we will improve the productivity and competitiveness.

(3) Improve the competitiveness and productivity of the total industry of Japan through utilization of IT

(a) Assist shared infrastructure across the enterprises and industries (Cabinet Secretariat, Ministry of Economy, Trade and Industry, and other related ministries)

From FY2007 onward, we will promote the standardization of specific industry sectors and products, lay the groundwork for debates over the standardization and promote relevant research and investigation, and develop the human resources that will enable the development and dissemination of superior software products. Also in the fields of government procurement of software and national research and development, we will streamline the IT investment and improve the productivity and competitiveness of the total industry of Japan through the maximum utilization of the Japanese Bayh-Dole Act to promote the productization, sharing, and reutilization of software.

(b) Carry out the upgrading policy of software engineering (Ministry of Economy, Trade and Industry)

We will continue to promote the development and dissemination of advanced development methods of software by private corporations, and expand the development environment of open source software. Also, during FY2007, we will discuss about the specific measure that encourages the alliance among enterprises to create the platform of a shared infrastructure software in embedded systems, and by FY2009 we will improve the environment for the development of a reliable infrastructure software for a vehicle-mounted control system and develop it.

1.3 Enhancement of the International Competitiveness of the ICT Industry

<Basic Aspects>

It is expected of the ICT industry to be an important vehicle of our nation's economic growth, and along with spearheading economic growth to create a positive cycle of innovation in its field of industrial application. However, in the global market of the ICT industry, the combined total sales volume of the leading Japanese manufacturers falls behind that of a single principal manufacturer based overseas. Thus most of the market is dominated by foreign companies, and the enhancement of the international competitiveness of the ICT industry is an urgent task.

For our nation's ICT industry to sustain its vibrancy and for it start a new trend of growth for the national economy, it is essential that it is guided towards a more internationally-minded stance that aims at the rapidly expanding global market, rather than the present overemphasis on an already mature domestic market, and for it to attain an high level of international competitiveness. To this end, in accordance with the *ICT Reform Development Program* (April 20, 2007), the reforms in the telecommunication and broadcast fields will be accelerated, and the ICT industry's international competitiveness will be enhanced. In addition to this, in cooperation with the Asian nations and Russia, it will be important to aim for mutual development, and in strategic partnership with these nation, to make a positive turn from our status as being on the farthest reach of the world through international information flow.

> Designate the coming 2 years as a Period for the Enhancement of International Competitiveness, in order to enhance the international competitiveness of our nation's ICT industry, a primary vehicle for economic growth, and realize the reinforcement of international competitiveness of the ICT industry by the FY 2011.

<Priority Policies>

(1) The formulation of a basic strategy for the enhancement of the international competitiveness of the ICT industry

(a) The formulation of a basic strategy for the enhancement of the international competitiveness of the ICT industry (Ministry of Internal Affairs and Communications and other related government agencies)
Establish the 'ICT International Competitiveness Council' as a core organization for the continual enhancement of the ICT industry's international competitiveness for both the public and

private sectors, and formulate a basic strategy for the enhancement of international competitiveness for the ICT industry (*ICT International Competitiveness Enhancement Program*). Promote in with the basic strategy, the Japan Initiative Project, which focuses on the fields in which our nation holds an advantage, the development and establishment of a platform that is inexpensive and easy-to-use, the integrated approach to the standardization and intellectual property strategy, and the cultivation of human resources. Furthermore, this initiative will be carried forth in accordance with the *Basic Concept on IT International Policy Centered on Asia* (September 10, 2004) and under the coordination of all relevant government agencies concerning the strategic use of the ODA and OOF, and will integrate international cooperation on research and development, standardization, the securement of intellectual property, and economic policy.

(b) The establishment of "Specified Ubiquitous district" (Ministry of Internal Affairs and Communications and other related government agencies)

To develop an internationally deployable 'new model' by our nation's initiative, "Special Ubiquitous Zone" will be established. Development and verification experiments will be conducted in order to create new values through the integration of services such as fixed telecommunication, mobile communication, digital contents, and applications within the specified district. Furthermore, in order to promote international cooperation, we will lobby other nations to establish specified district that have certain incentives.

(2) The promotion of reforms in our nation's telecommunications and broadcast fields

(a) The nature of telecommunications and broadcast (Ministry of Internal Affairs and Communications)

Promote reforms in the telecommunication and broadcast fields in compliance with the *Government and Leading Party Agreement on the Nature of Telecommunications and Broadcast* (June 20, 2006) in order to make the market adaptable to a global competitive environment, while organizing the groundrules for fair competition in the ICT industry.

(3) The promotion of our nation as a source of the strategic transmission of information

(a) Improving international broadcasts (Ministry of Internal affairs and Communications and other related agencies)

Our nation's international broadcast has traditionally been made through the NHK, but to improve our international public relations strategy and soft power, a new international broadcast targeted at foreigners will be started in the latter half of the FY 2008, which will also be transmitted through the internet. An active government-wide support scheme will be organized for its

realization, but until the start of the new broadcast, the existing international NHK broadcasts will be further revamped.

(b) The organization of a legal system to enhance the competitiveness of broadcast contents (Ministry of Internal Affairs and Communications)

To further improve the international competitiveness of various broadcast contents such as television dramas, variety shows and documentaries and to reallocate the benefits to the creators and the viewers, the windows of negotiation for broadcast contents rights will be consolidated in coordination with contents portal sites. Those that desire such transactions will have wide access within an open market, and a final conclusion will be reached within the FY 2007 on the organization of a legal system to further facilitate these transactions and improve the competitive power of broadcast contents.

(c) Improving the measures for international expanding of the ICT industry (Ministry of Internal affairs and Communication and other related government agencies)

In order to improve the measures for the international expanding of our nation's ICT industry, within the 3 fields of digital broadcast, next generation IP network, and mobile communication, 1. A support and consultation window will be established to aid corporations that are expanding overseas, 2. Various education and dissemination activities (seminars, symposiums, missions) will be conducted oversea, 3. Appropriate information on other countries will be gathered and organized, and the sharing of this information between the academic-industry-government fields will be initiated.

(4) Improvements in the 3 priority fields for the enhancement of international competitiveness of the ICT industry

(a) The international proliferation of the digital broadcast system (Ministry of Internal Affairs and Communications)

To aid in the expeditious adaptation to digital broadcasting in foreign countries, evaluate the development of an internationally distributable broadcast system for developing countries that is expanded our nation's digital broadcast system. Conduct verification experiments between the FYs 2007 and 2009, and promote the standardization of a internationally distributable broadcast system, and strive for the proliferation of our nation's digital broadcast system.

(b) Measures to enhance the international competitiveness in the next generation IP network field (Ministry of Internal affairs and Communications)

To enhance the international competitiveness of our nation's ICT industry in the field of next generation IP networks the following actions will be taken: 1. Dialogues, seminars and workshops with foreign, especially the leading Asian, nations, 2.

An international joint research for the hub formation of next generation IP networks, 3. Research and development for a platform to attain a technical standard in next generation IP networks originating from Japan, 4. An international technology investigation into the field of next generation IP networks.

(c)   Research and development conducive to the enhancement of international competitiveness in the mobile communications field (Ministry of Internal Affairs and Communications)

  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 the FY 2010.

  Together with this, create a testing environment wherein multiple parties can perform joint verification experiments, and promote the research and development and the international standardization of either an advanced form of the 3rd generation mobile phone technology or the elemental technology for 4th generation mobile telecommunications systems and realize it by the FY 2010.

(5)   The construction of a next generation optical broadband network platform that contributes to the enhancement of the international competitiveness of the ICT industry

(a)   The organization of a research and development network environment that includes cutting-edge optical academic network (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology and other related government agencies)

  Formulate a development strategy of a cutting-edge optical academic network platform under the guidance of the relevant government agencies, and in accordance with the strategy, promote the construction of a cutting-edge optical academic network between Japan and Europe, which has been weaker than the Japan-American and America-European equivalents. Also, construct a terabit-class testbed network by making use of optical technology and next generation IP networks and perform verification tests at a near practical level by the FY 2010.

  Furthermore, develop a science infrastructure platform that makes use of an ultra high-speed network that enables the sharing of information between university computers, software and contents in a network environment, and allows for the construction of a Cyber Science Infrastructure.

(b)   Research and development into Ultra High-speed Internet Satellites (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology and other related government agencies)

  To realize a nation, Asian, and Pacific-wide ultra high-speed telecommunications system, launch the Ultra High-speed Internet

Satellite being developed by the Japan Aerospace Exploration Agency and the National Institute of Information and Communications Technology during the FY 2007. Also, by making use of the satellite, establish the technology that enables 1.2 Gbps communication speed by the FY 2010.

(c) The promotion of testing in collaboration with Asian nations of high level IT utilization (Ministry of Internal Affairs and Communications)
  Conduct joint research in the applications of information and communications technology that our nation holds an advantage in with the leading Asian nations, in order to promote the active use of information and the proliferation of broadband to the entire Asian region by the FY 2010.

2. Realization of a healthy and safe society

2.1 Realization of information infrastructure to safely facilitate use of health records of citizens

<Basic Aspects>

  It is anticipated that medical expenses are to rise rapidly in the coming years, and hence the improvement of disease prevention and early detection, the improvement in the quality and efficiency of health care, and the optimization of costs and eradication of health disparity are of pressing importance.

  To achieve these goals measures to promote the advancement of the informatization of health care, the cutting of clerical costs of health insurance, and the further proliferation of telemedicine, together with the digitization of health information will be put in place. These measures will enable 1. Individuals to take control over their own health information and by presenting them to doctors receive care that is particular to their own constitution and medical history, 2. Prevention of interruptions in the health information of patients between various medical institutions, 3. Doctors to provide higher quality medical care based on the analysis of pathologic information and clinical data. To ensure the safety of personal information while pursuing the public good, there will be a close inspection and organization of the system environment, including institutional aspects.

> In order to realize the provisions of 1. Healthcare suited to individual constitution and medical history, 2. Prevention of interruptions in the health information of patients between various medical institutions, 3. Doctors to provide higher quality medical care based on the analysis of pathologic information and clinical data, and to construct a world leading National Health Information Infrastructure we will construct a mechanism that allows for individuals to take control over their own health information, such as diagnoses, and a nation-wide analysis of such information by the beginning of FY 2011.

 <Priority Policies>

(1) The organization of an infrastructure that allows individuals to take control over personal health information

(a) Establishing a mechanism that allows individuals to take control of their own health information and utilize it for healthcare (Ministry of Health, Labour and Welfare)

Provide a basic direction for the rules for a mechanism that allow individuals to obtain health information electronically, and use it for healthcare or for medical examinations by FY 2008.

(2) The promotion of the consolidation of the information infrastructure of medical institutions

(a) The promotion of the creation of standard medical trace reports (Ministry of Health, Labour and Welfare)
Advance the provision of free software to create medical trace reports that comply with standard Medical Information Exchange regulations to facilitate the coordination of medical information. We will also advance deliberations regarding the use of electro-magnetic recordkeeping for the creation, issuance, and certification of signatures for a wider range of medical documents.

(b) Supporting the coordination of information among local medical institutions (Ministry of Health, Labour and Welfare)
To alleviate the costs of installing medical information infrastructure, and to stimulate the local coordination of information, construct a system that, through the use of networks, will allow medical institutions that are in coordination with the central medical institutions of the region, to rapidly and at a low cost, share health information. Alternatively, assist in the development of the equipment and software that are necessary for the building of a system for medical institutions to share health information using local data centers provided by the government.

(3) Promoting the infrastructure to collect and analyze health information nation wide

(a) The establishment of a mechanism for the analyses and collecting of health information from around the nation (Ministry of Health, Labour and Welfare)
Starting in FY 2007, deliberate on and organize the mechanisms for nationwide collection and analysis of health information, their areas of use and limitations, and the ensurement of transparency, with due consideration to the protection of personal information, such as by anonymity, and in accordance with 'III.1.1 (4)(a) Constructing a collection system for diagnoses and receipt data', to be reflected in scientific, epidemiological, health care policies.

(4) Preparation of a system environment that will sustain a world-leading National Health Information Infrastructure

(a) Building a safe, inexpensive and high-capacity network (Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)

Specify unified security requirements to ensure a safe and smooth flow of health information by FY 2007. Furthermore, to widen the scope to public networks, the Internet and mobile communication webs, work towards the connection of differing networks, in compliance with the above mentioned security requirements.

(b) The promotion of the Social Security Card (provisional title) (Ministry of Health, Labour and Welfare)

Implement the Social Security Card (provisional title) that will act as a pension book, health insurance card and nursing-care insurance card by FY 2011. In coordination with the Personal Digital Documentation Box (provisional title) project (see below, II.2.2), reach a conclusion on the basic system concept for the implementation of the mechanism for the browsing and management of health information according to the wish of the individual.

2.2 Realization of social welfare services from the citizen's perspective; creating a Personal Digital Documentation Box (provisional title)

<Basic Aspects>

  In the field of social security, it is important to provide health care that enables a long and healthy life and a caring and reliable social security system that alleviates the anxieties that may arise from the progression of the aging of society.

  At the present time, the individual information of citizens relating to social security is managed separately by institutions such as medical institutions and health insurers. Despite the fact that this information belongs to the citizens, it is inaccessible to them.

  Through the provision of a Personal Digital Documentation Box (provisional title) that enables citizens who so desire to collect and manage their own information, we will realize a society in which the Personal Digital Documentation Box is an important tool that supports everyday life.

> Deliberate on the Personal Digital Documentation Box (provisional title) that allows citizens to collect and manage the information that is currently managed separately by medical institutions and health insurers, and aim for the start of its service in FY2010.

<Priority Policies>

(1) Promotion of the creation of the Personal Digital Documentation Box

(a) Laying the ground works for the formulation of the basic concept (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare and other related government agencies)
  Organize a deliberation framework consisting of relating organizations and intellectuals to discuss the content of the service, the provider of the service, and the technical and systemic difficulties that may arise, in order to realize the Personal Digital Documentation Box.

(b) Formulation of an implementation plan for the realization of the Personal Digital Documentation Box (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and other related government agencies)
  Formulate by the end of FY 2007 a flowchart for beginning the Personal Digital Documentation Box service, taking into account

the issues and basic policies pertaining to the contents and variety of the service (the collection and management of pension information, health information, etc.), the nature of private sector contractors that provide the service, ensurement of a safe and reliable security system.

In doing so, work in close coordination with other projects such as the Social Security Card (provisional title) and pension notification, and conduct an integrated approach to the informatization of social security.

(c) Consideration of application to other fields (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other related government agencies)
Consider the application of the Personal Digital Documentation Box to other fields (e-applications and private sector services, etc.) in coordination with the next generation e-government and e-municipalities that will be realized in the near future. During FY 2007, identify the requirement definition for the electronic administration interface such as e-Gov, assuming the adoption of the Personal Digital Documentation Box for e-applications and finding the technical requirements.

(2) Developing a framework for the creation of the Personal Digital Documentation Box

(a) Developing a framework for the creation of the Personal Digital Documentation Box (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and other related government agencies)
Considering the results obtained from the above (1), develop relating frameworks. During FY 2007, in conjunction with the deliberations in (1), deliberate on the necessary legal frameworks for the realization of a safe, secure and reliable Personal Digital Documentation Box, and organize by the end of FY 2008 the basic aspects for the structure of the framework. Furthermore, perform necessary modifications on the framework during FY 2009.

2.3 Contribute to the reduction of road traffic-related accidents
(Realize a Driving Safety Support System ahead of the rest of the world that contributes to the reduction of traffic accidents)

<Basic Aspects>

The 'Driving Safety Support System that cooperates with traffic infrastructure Collaboration' (Driving Safety Support System) is expected contribute to traffic safety by enhancing drivers' cognition and judgment speeds, and preventing mistakes made through negligence. Also, there is a large potential for a ripple effect towards the entire economy, and there are joint public and private sector efforts being made in America and Europe. For Japan to realize the Driving Safety Support System ahead of the world there will be a need for increased coordination between the related government agencies and private corporations, and a concerted public and private sector policy to realize the system.

For its realization, in accordance with the New IT Reform Strategy, the Council on ITS Promotion was founded in April 2006 with members being selected from both the public and private sectors, and the *Guideline for Demonstration Experiments for the Practical Implementation of the Driving Safety Support System* was drafted in August, which outlined the basic direction of large scale field operation test.

In the future, with its international deployment in mind, we will work towards the practical implementation of the Driving Safety Support System, continually perform system function maintenance and upgrade, and with consideration to these results, conduct large scale field operation test to ascertain its effects on accident reduction and compatibility in public roads of selected areas.

> Work towards the sequential nationwide implementation of the Driving Safety Support System that cooperates with traffic infrastructure Collaboration starting in FY 2010. Reduce traffic accidents and accident related deaths through its use, and as the worldwide frontrunner, lead the international standardization of specifications, and aim for international deployment.

<Priority Policies>

(1) The advancement of a comprehensive approach towards the implementation of the Driving Safety Support System (Cabinet Secretariat, National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport)
Designate FY 2007 as the 'Technical Demonstration Experiment'

year to realize the implementation of the Driving Safety Support System, and advance under the leadership of the Council on ITS Promotion the programs stated below.

Designate FY 2008 as the 'Social Experiment' year to ascertain the effects of traffic accident reduction and compatibility. To enable a quantitative efficiency study and improvements on the quality of the system, starting in FY 2007 conduct experiments weighted towards individual regions (regional demonstration experiments), and using the system built through these experiments conduct an experiment in a single area (joint demonstration experiment) with the goal of verifying compatibility in order to deploy the system nationwide and to gain public recognition.

(a) Function maintenance and upgrading in preparation for a large scale field operation test
To formulate the specifications of the experiments on road-to-vehicle communication system and vehicle-to-vehicle communication system to be conducted in FY 2008, perform functional maintenance and upgrading on technology components such as data format, communication technology specifications, and roadside and onboard units during FY 2007.

Also, to further enhance the effect of the driving safety support, review the coordination procedure among related government agencies concerning the road-to-vehicle communication system and vehicle-to-vehicle communication system, and the public road and highway systems.

Furthermore, conduct experiments on systems that are in the process of development to verify any problems in implementation and performing efficiency studies.

(b) Drafting of the Large scale Demonstration Experiment Plan
Draft an outline for the large-scale demonstration experiment by August 2007 and formulate a common evaluation procedure for the execution plan for the large scale field operation test. Together with this, effectuate a public relations campaign to gain recognition among citizens.

(2) Advancing the development of technology related to the Driving Safety Support System (National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport)
Develop technologies that contribute to the realization of the Driving Safety Support System such as the detection capability of sensors, communication technology between pedestrians and vehicles and human interface technology.

(3) The promotion of the international standardization of ITS

technology (National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport)

 Promote within the ISO and ITU, the international standardization of various TS technology such as the 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.

2.4 Implementation of measures to counter and fundamentally reduce illegal and potentially harmful information on the internet

<Basic Aspects>

Illegal and potentially harmful information are the dark side of the Internet, and both the public and private sectors are cooperating to generate counter measures while taking into consideration the importance of the secrecy of communication and the freedom of expression. Self-regulation by service providers and the expansion of consultation services are currently underway. However, the number of juveniles who fall prey to crimes related to online dating service are in excess of 1,000 every year, and a systematic rectification to enable citizens to use the internet safely has become a pressing issue.

Therefore, the rapid formulation of a concentrated countermeasure to fundamentally reduce the number of these juvenile victims by the IT Reassured Conference comprising of related government agencies, and a concerted government effort in its implementation will be administered. Furthermore, the effective measures will be applied to the wider issue of regulating illegal and harmful information on the internet.

> Administer a concentrated countermeasure to fundamentally reduce the number of juvenile victims of online dating services, and by FY 2010 drastically reduce juvenile victims of illegal and harmful information on the internet.

<Priority Policies>

(1) The promotion of a concerted government to counter illegal and harmful information (Cabinet Secretariat and related government agencies)
In order to promote effective policies against illegal and harmful information such as those found on problematic online dating services, administer the measures stated below and formulate a concentrated countermeasure through the IT Reassured Conference (a liaison conference of related government agencies on illegal and harmful information on the internet) by around September, 2007.

(a) The promotion of the installation of filtering software

i) Proliferating filtering software (Cabinet Secretariat, Ministry of Internal affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry, National Police Agency, and related government agencies)
Provide support from the Ministry of Internal Affairs and

Communications and the Ministry of Economy, Trade and Industry for the revision of the *Action Plan for the Proliferation of Filtering* compiled by industry organizations in order to raise public awareness of filtering 70% by March 2007.

Also, continue on the promotion by related government agencies of the proliferation of filtering, in coordination with related businesses organizations.

ii)   Supporting mobile phone companies in the implementation of filtering (Ministry of Internal Affairs and Communications)
In accordance with the requests made to mobile phone companies in November, 2006 concerning the promotion of filtering service, provide necessary support to mobile phone companies for the installation of filtering to mobile phones owned by juveniles.

(b)   Age verification methods for harmful website administrators

i)   Deliberation on the state of age verification methods for online dating service administrators (National Police Agency)
Deliberate on the state of the explicit notification of the restriction for use by minors, and the verification thereof, as mandated by the online dating service regulation law in 2007, and take appropriate action depending on the findings.

ii)   Deliberation on the nature of the next generation mobile living platform (Cabinet Secretariat, Ministry of Internal affairs and Communications, and related government agencies)
<See II.3.1 Establishment of an infrastructure that enables safe and convenient diverse services of next generation mobile living>

(c)   The promotion of information morals education

i)   Revision of the school curriculum guideline (Ministry of Education, Culture, Sports, Science and Technology)
Revise the school curriculum guideline to promote information morals education within schools, in accordance with the discussions by the Central Education Council, after FY 2007.

ii)   The promotion of information morals education (Ministry of Education, Culture, Sports, Science and Technology)
Deliberate on methods of information morals education, organize the case studies, place them online and disseminate them to educators. Also, hold forums for the wider proliferation of teaching methods of information morals for supervisors and educators.

iii) Conducting the e-net caravan (Ministry of Internal Affairs, Ministry of Education, Culture, Sports, Science and Technology)
In collaboration with telecommunications organizations, continue to hold courses on the safe and sound use of the Internet aimed at school personnel and guardians throughout FY

2007.

iv) Promoting measures to counter environments that are harmful to juveniles (Ministry of Education, Culture, Sports, Science and Technology)

In order to raise further the awareness for the safe and sound use of media, and to aid in the public relations campaign, establish during FY 2007 a 'national level conference' that is comprised of education related organizations, youth organizations, the PTA, media related organizations, intellectuals and government administrators, to form a nationwide network, and at the same time, establish 'regional consortiums' comprised of prefectural and city level organizations.

Also, create a model project to cultivate media relations capability and conduct necessary research during FY 2007 and continue to create and distribute the child-raising hint book *Home Education Notebook* that informs the ways of using mobile phones and personal computers.

v) Research and development into IT media literacy nurturing methods in the age of Ubiquitous Internet access (Ministry of Internal Affairs and Communications)

Distribute in FY 2007 the IT media literacy nurturing program that was developed in FY 2006 which consists of guidance manuals and educational material for promoting the sound use IT media such as the internet and mobile phones by children.

vi) Strengthening measures against illegal and harmful information on the Internet (National Police Agency)

To protect children from illegal and harmful information on the Internet, in coordination with schools and related organizations, continue to hold delinquency prevention classes and public relation campaigns via the Cyber Security College throughout FY 2007, and inform children and their guardians of damage prevention and manners when using the internet.

2.5 Promoting telework to achieve a healthy work/life balance

<Basic Aspects>

  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.

> To realize work/life balance and second chances, aim for 20% of the work force to be teleworkers by FY 2010.

Promote the policies stated below, as well as those referenced in the *Telework Population Doubling Action Plan (tentative)* (enacted 2 May, 2007 at the Liaison Conference of Related Government Agencies on Promoting telework).

(1)   Preparing the environment for the spread of teleworking

(a)   Structuring a information and communications system platform

i)   Demonstration experiments for a communal telework system
  To promote the spread of telework among small and middle sized businesses, conduct demonstration experiments (large scale telework test and orientation projects, advanced telework system model experiments) during FY 2007, for the safe, sound and easy implementation of communal telework systems.

ii)   Support the development of a information and communications system (Ministry of Internal affairs and Communications)
  Starting in FY 2007, in accordance with the Telework Environment Preparation Tax System, provide reductions on fixed asset tax for those who are implementing telework related equipment.

iii) Building the next generation high grade telework system model
  Build a next generation high grade telework system model 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, deliberate on the promotion of demonstration experiments for the building of

the model during FY 2007.

iv) Deliberate on sample cases of telework systems building depending on corporate types

In coordination with the Telework Promotion Forum, deliberate on the security policies and IT tools of sample cases of telework network building for various business categories and scales, and bring the best practice cases to the common domain.

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

Continue the ongoing deliberations on employment systems and employment contracts that contributes to the flexibility and diversity of working formats in teleworking, implement the necessary measures, and organize the appropriate labor related regulations for the smooth circulation of teleworking. Also, to solve the various problems of labor management of at home working, deliberate on the raising of awareness of the guideline for working at home and clarify the applicability criteria for employment insurance.

(c) Creating an environment of telework promotion

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

To promote the implementation of teleworking among corporations and organizations, and for self-employed workers to foster a teleworking environment, hold events that exhibit information and telecommunications equipment and introduce case examples of telework implementation.

ii) Promote the smooth installation 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 and Transport)

Continue throughout FY 2007, 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.

iii) Official commendation for telework implementation (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport)

Starting in FY 2007, give official commendation to individuals and corporations that have made significant improvements in performance or social contributions through the implementation of

telework. Together with this, by using the Prime Minister Award program for persons of merit within the "Challenge Again" Support Plan, raise awareness of the case examples of those who were awarded through the Telework Promotion Forum.

(2) Promotion of telework to all levels of corporations and civil society

(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 takes place under fair and balanced labor management conditions, give appropriate advice and consultation at the Telework Consulting Center. Furthermore, to make work at home a fair and agreeable employment format, administer the Homeworker Support Project. Also, to increase teleworking at the regional level, commission organizations with specialist knowledge to give consultation on telework implementation.

ii) Demonstration experiments for telework centers (Ministry of Land, Infrastructure and Transport)
  Conduct demonstration experiments for telework centers that have a suitable environment to act as teleworking bases, such as enhanced security, and organize the issues at hand for the realization of teleworking environments outside of homes.

(b) The promotion of telework towards women in childcare (Ministry of Health, Labour and Welfare, Ministry of Land, Infrastructure and Transport)
  Compile and provide information on companies that have implemented telework employment through Mothers' Hello Work and Mothers Salon in cooperation with related organizations. Also, operate a comprehensive information service website to support the entrepreneurship of women in childcare and administer referral service projects of mentors who can give advice on management and problem solving know-how.

(c) The promotion of telework towards senior citizens (Ministry of Health, Labour and Welfare)
  Provide temporary, short-term, or undemanding employment opportunities including telework employment, through Silver Human Resources Project, considering both the needs of the senior citizen members and employers. Also, through research into the various forms of senior citizens employment, deliberate on the utilization methods of teleworking that contributes to the employment of senior citizens.

  Furthermore, deliberate on the effects of telework at the "Working Until 70" Promotion Project Committee (provisional title), and promote the popularization of "Working Until 70".

(d) The promotion telework towards Freeters, NEETs, and the disabled (Ministry of Health, Labour and Welfare)

  Continue throughout FY 2007 to support the home employment of the disabled through the Home Workers Support Plan and the Home Working Coordinator Subsidy, as well as provide the necessary advice and consultation, in close cooperation with related organizations, to Freeters and NEETs who desire telework employment.

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

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

  Advance the utilization of telework that contributes to the vitalization of regional communities, and from the standpoint of supporting UJI turns and dual habitation, examine the possibilities of the building of 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)

  Support the formulation of middle and long term visiting programs that make use of telework with the cooperation of related organizations, to realize the prolonged stay of city-dwellers, especially of the baby-boom generation, in fishing and farming communities while retaining their corporate positions.

(3) Promoting telework for civil servants

(a) Promoting telework for civil servants

i) Implementation by all ministries (All ministries)

  Conduct the trial implementation of telework at all government ministries during FY 2007, and in accordance with those results, move on to a sequential full-scale implementation. Also, 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, Ministry of Internal Affairs and Communications, 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, an amendment to the legislation for the maternity leave of national government employees has recently been passed in the current Diet session. From FY 2007 onwards, work towards the realization of diverse and effective working formats through the parallel use of

this shortened working hour provision and telework, and aid the further proliferation of teleworking.

(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.   Starting   in   FY   2007,   provide   information   such   as telework implementation case examples by the national government, such   as   its   parallel   use   with   shortened   working   hours,   to contribute to deliberation for the implementation of telework by local public authorities.

(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)
  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. 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.

3. Development of a creative infrastructure

3.1 Development of a next generation mobile lifestyle platform that enables safe and convenient diverse services

<Basic Aspects>

  The number of mobile phone contracts has exceeded one hundred million, and the age of one mobile phone per individual is fast approaching. Mobile phones continue to amass various functions such as electronic payment, web access and terrestrial digital broadcasting, and have become an integral part of citizens' lives. It is vital that its further upgrading towards a next generation mobile lifestyle platform ahead of the world is pursued.

  To stay at the forefront of mobile technology innovation, based on the high level of technology that is our nation's strength and focusing on the significance of the one mobile phone per individual characteristic, with the utilization of next generation high-speed mobile telecommunications technologies in mind, we will strive to realize the practical application of a high-security user authentication technology. This will enable the development of a cutting-edge next generation mobile lifestyle platform that is paperless, cashless, and will make dramatically safer and easier the use of various network related services such as e-government services and the opening of bank accounts. Create diverse lifestyle and business models through the advancement of these actions, and signal them to the world.

> Develop a cutting-edge next generation mobile lifestyle platform that enables the safe and easy use of various paperless and cashless networks services through mobile phone units by FY 2010.

<Priority Policies>

(1) Deliberations on the shape of the next generation mobile lifestyle platform

(a) Deliberations on the shape of the next generation mobile lifestyle platform (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and related government agencies)
  To realize the next generation mobile lifestyle platform that enables a dramatically safer and easier use of various network services through mobile phone units, including those that require user authentication and age verification, through the cooperation of academia, industry and government, grasp the technology trends of mobile authentication, deliberate on the next generation mobile lifestyle platform by considering technology developments expected by 2010, and cooperate with the private sectors' development of mobile authentication technology, throughout FY 2007. Together with this, deliberate under the leadership of the

37

Cabinet Secretariat and related departments the ways of providing e-government services through the use of mobile authentication technology.

(2) Preparations for the practical implementation of next generation high-speed mobile telecommunications technology

(a) Promote measures aiming to realize the 4th generation mobile telecommunications system (Ministry of Internal Affairs and Communications)

Regarding the 4th generation mobile telecommunications system, which will have 100 times faster data transmission speeds than current models, R&D and verification tests for elemental technology will be conducted, and engineering tests will be performed for frequency sharing with other wireless systems. We will also actively contribute to the international standardization activities of the International Telecommunication Union (ITU), by deciding upon frequency band allocation, and considering specific wireless communication systems, thereby working toward realization by FY2010.

(b) Research and development of ultrahigh-speed wireless LAN (Ministry of Internal Affairs and Communications)

Establish by FY 2010 the interference/fading control technologies and adaptive high-efficiency modulation techniques that are necessary for the realization of ultrahigh-speed wireless LAN that will enable gigabit-class connection, for the realization of a high level mobile computing environment.

(c) Research and development for the expansion of radio wave resources (Ministry of Internal Affairs and Communications)

By FY2010, 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 where mobile terminals can accurately detect radio usage in the surrounding environment and autonomously adjust to it (cognitive wireless communication technology); and technology that enables the easy use of wireless systems for unused frequency bands (millimeter wavebands, etc.).

3.2 Realization of a ubiquitous community in which anybody can benefit from the infrastructure, anywhere, any time

<Basic Aspects>

From the standpoint of the philosophy, "No national vitality without regional vitality", and to recreate "strong regional communities", it is essential that there is a balanced development in both cities and regional communities, through the eradication of the digital divide and the allocation of equal access to information and opportunities through IT infrastructure in the local regions.

In order to achieve this goal, through the active cooperation of academia, industry and government, take progressive action for individuals to feel the benefits of IT in fields that are intimate to their lives, and through the nationwide deployment of the results of these actions, realize a ubiquitous community that is able to solve the problems that are facing regional communities.

> With regard to the needs of regional communities, administer the development of a broadband network platform that anybody at any place and time can use. Build an action model that is intimately tied to local regions, and realize a Ubiquitous Community that can solve the various regional problems by FY 2010.

<Priority Policies>

(1) Building a broadband network platform that is sensitive to the needs of local regions

(a) Promote installations of high-speed and ultra high-speed broadband by private businesses (Ministry of Internal Affairs and Communications)
While principally private sector-initiated, in order to make high-speed/ultra high-speed broadband services available throughout Japan, and eliminate areas with zero broadband connections by FY2010, promotional measures will continue to be implemented, such as subsidized interest, etc., under the Provisional Measures Law for Telecommunications Infrastructure Improvement. This is to grant investment incentives to businesses that are implementing optical fibers, etc.

(b) Promote broadband distribution through industry and government cooperation (Ministry of Internal Affairs and Communications)
Through the cooperation of the national government, local government and telecommunication service providers, by FY2010, promote the implementation of measures based on the process chart

(roadmap) which outlines quantitative milestones for the distribution of broadband per administrative division (city, prefecture, etc.), and also based on the equipment manual for installation and individual handling protocols.

(c) Promote the development of local public networks and nationwide connectivity, as well as its release to the private sector (Ministry of Internal Affairs and Communications)

We will support local public entities and aim to realize the national dissemination of high-speed and ultra high- speed regional public networks that connect schools, libraries, community centers, and municipal offices by FY2010. Standard specifications for connectivity will also be revised, in order to promote development of the nationwide public broadband network through the connection of local public networks and the Prefectural Information Highway.

Furthermore, we will promote the release of local public networks to private businesses, and support municipalities in their measures to secure resident access networks.

(d) The effective utilization of optical fibers (Ministry of Land, Infrastructure and Transport)

Optical fibers exist for the purpose of the effective management of public facilities and the sharing of information, but they have, in so much as they do not interfere with facilities management, been opened to the private sector. In order to further contribute to the formulation of a high level telecommunications network, deliberate on the further opening of fluvial and road management fiber optics to the private sectors, to a degree where there are no interferences to facilities management.

(e) Improve digital divides in disadvantaged areas (Ministy of Land, Infrastructure and Transport, Ministry of Agriculture, Forestry and Fisheries)

The development of telecommunications infrastructure has been lagging in disadvantaged areas, such as underpopulated regions, and proposes a challenge in the promotion of disseminating high-speed/ultra high-speed broadband services. We will clearly provide information on this current state to residents, and for disadvantaged areas, in addition to the above measures, we will systematically improve digital divides by continuing to implement measures in FY2007, that support local public entities working to develop telecommunications infrastructure, such as with cable TV networks and optical fiber networks, which best-suit regional characteristics.

(f) Demonstration experiments for the development of broadband network platforms that are sensitive to regional characteristics (Ministry of Internal Affairs and Communications)

Produce building models and installation costs for the development of broadband networks that make dual use of fixed and wireless lines and efficient use of public facilities in order to develop efficient and region-sensitive networks through the cooperation of the national government, local government and telecommunication service providers, and conduct demonstration experiments during FY 2007.

(2) Developing a progressive action model to solve the various problems facing local regions

(a) Promote Ubiquitous Community Advanced Model Design (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Agriculture, Forestry and Fisheries, Ministry of Land, Infrastructure and Transport, and related government agencies)
While taking local proposals into consideration, we will promote and support the creation of advanced and practical models aiming to solve cross-sectoral issues by using/utilizing IT. Moreover, we will work to spread this model to other areas with similar problems.

Starting in FY 2007, initiate government commissioned model case projects to take action against problematic areas in welfare, education, local industries and local transport systems.

3.3 **Establishment of a virtuous cycle that leads to high-level IT human resources**

<Basic Aspects>

  It has been pointed out that, in our nation, there is a mismatching of the needs of the Universities that cultivate IT personnel and the industries that employ them, which is causing the shortfall in highly skilled IT human resources. In response to this suggestion, there have recently been initiatives made by academia, industry and government for practical education, for example, universities conducting curriculums that make use of actual development projects as teaching material, and actions are being taken to eradicate this mismatch.

> Implement comprehensive, concentrated policy measures such as practical education at the postgraduate level, environment formation through structural reform in the industry sector, and reforms in school education. Create a positive growth cycle through a higher profit-earning capacity and higher social standing which will attract resourceful personnel who will further heighten profits and social value.

<Priority Policies>

  A concerted government effort to promote a comprehensive, concentrated policy towards the cultivation of highly skilled IT human resources (Cabinet Secretariat and related government agencies)
  To create a positive growth cycle for the cultivation of highly skilled IT personnel, it is necessary for government agencies to actively cooperate in the promotion of the policies stated below, as well as promote a panoramic, long-term policy, and to this end, we will draft a flowchart for the measures to formulate a positive growth cycle at the government agencies liaison conference by September, 2007.

(1) Actualization of education in higher education

(a) Accelerating the formation of strategic bases to cultivate highly skilled IT human resources (Ministry of Education, Culture, Sports, Science and Technology)
  Revise and expand the curriculums and educational systems to cultivate world-leading class skilled IT personnel, accelerate the formation of strategic bases upon which a joint academic-government educational program can be conducted.

(b) Research and development into educational programs for the cultivation of advances information and communications personnel (Ministry of Internal Affairs and Communications)

Develop through the cooperation of academia and government PBL material to cultivate highly skilled IT human resources, and distribute them to graduate schools and corporations. Gather information on the present state of IT management personnel, schematize the IT management field, and develop through academic and government cooperation PBL material for the efficient development of skills by FY 2008.

Furthermore, develop a practical educational program for the cultivation of information and communications venture management personnel and their candidates by FY 2008.

(c) Developing a comprehensive framework for the promotion of practical education (Ministry of Economy, Trade and Industry, Ministry of Education, Culture, Sports, Science and Technology)
Deliberate during FY 2007, on the effective academic, industry and government measures to cultivate highly skilled IT personnel through the establishment of an academy, industry and government committee on the cultivation of IT human resources and support for the activities of the professional community, the formulation of curriculum examples and teaching material for practical education, the foundation of a directory for youth cases and skilled personnel, and faculty development.

(d) The promotion of IT education in Universities and Graduate Schools (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Economy, Trade and Industry)
Provide support to University programs that promote socially desirable policy measures such as IT utilization education through the "Good Practice Program", and expand the measures to strengthen the curriculums and education system for the cultivation of world-leading IT human resources during FY 2007.

Also deliberate during FY 2007 on the nationwide deployment of the measures that are in effect in designated special zones for structural reform, such as the partial exemption of the Information Technology Engineer Examination, for those who have completed educational programs that meet specified requirements.

(e) Deliberation on the practical education of highly skilled IT human resources (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)
Coordinate a deliberation on the nature of a practical education system for the cultivation of highly skilled IT human resources at Universities and other human resource development organizations.

(2)   Transition towards a more profitable business model

(a) Reforming the trade practices between user and venture corporations (Ministry of Economy, Trade and Industry)

In consideration of the recent business environment, popularize the model trade and contract documents that contribute to the visualization of information systems, as drafted by the Ministry of Economy, Trade and Industry in April, 2007.

(3) The effective utilization of international human resources

(a) Strengthening of the acceptance of foreign human resources

i) International standardization of qualification systems and the widening of acceptance margins of highly skilled IT personnel through the use of private qualifications (Ministry of Economy, Trade and Industry, Ministry of Justice, Ministry of Health, Labour and Welfare)
Establish equivalency between the Information Technology Engineer Examination and foreign IT national examinations and continue to take action to achieve the international standardization of IT skills standards. Expand the acceptance margin of personnel qualified through foreign IT national examinations, by mitigating the residential status requirements of highly skilled IT personnel from overseas.

(b) Deliberate on a strategic partnership with foreign businesses (Ministry of Economy, Trade and Industry)
Launch a panel on the possible forms of strategic business partnerships within the Asian region, such as the development of software oversea (offshore development), in anticipation of the expansion of the economic partnership agreement with Asian nations.

(4) The revitalization of human resource mobility

(a) The further dissemination of skill standards and the skill standards training road map

i) The formulation of an industry-wide skills evaluation standard for the knowledge and ability of human resources (Ministry of Economy, Trade and Industry)
Build a Common Career and Skills Framework to identify the necessary skill sets for the transition to a high revenue industry during FY 2007 and schematize the IT skill standards, Embedded Technology Skill Standards, and Information System User Skill Standards. Also, during FY 2007, deliberate on an objective human resources evaluation system that makes use of the Information Technology Engineer Examinations.

(b) The further popularization of the Information Technology Engineer Examinations (Ministry of Economy, Trade and Industry)
Revise the Information Technology Engineer Examination according to the Common Career and Skills Framework, and aim to administer them from FY 2008 onwards.

Of special note is the creation of the entry level examination that will evaluate whether the individual has the minimally required ability to perform as an IT professional.

Also, based on the *Government Response to the 9th Proposal Concerning Special Zones for Structural Reform* (ruled September 15, 2006 by the Special Zones for Structural Reform Promotion Headquarters) deliberate and reach a conclusion on the partial exemption of the Information Technology Engineer Examination (high level examination classifications) through private qualifications and seminars.

(c) Information and communications personnel training support program (Ministry of Internal Affairs and Communications)
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 FY 2007 to support programs to cultivated highly skilled IT specialists.

(5) Reforms in primary and secondary education

(a) Enhancing IT related abilities

i) Conduct reviews towards the Revision on the Courses of Study (Ministry of Education, Culture, Sports, Science and Technology)
In response to the changes in information technology, their areas of use, and the possible onset of unexpected social problems, promote the cultivation of problem solving abilities through the use of IT, and systematically revise the official curriculum guidelines concerning information education at all levels of educations.

ii) 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)
Through the formulation of an education program to cultivate IT human resources that are in demand from the industry sector and the administration of training, develop 2,000 of such personnel by FY 2010. Provide creative learning opportunities by holding training camp style seminars and hands-on curriculums of cutting-edge fields taught by University researchers and lecturers during FY 2007.

(b) General improvement in IT related abilities

i) The promotion of a progressive and effective education (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)
Conduct practical research into innovative and effective

educational formats using IT such as the development of teaching methods that incorporate IT to improve academic performance, and evaluate the findings. Also, promote the distribution and use of the IT teaching ability checklist targeted at all teaching personnel.

ii)   Upgrading the IT environment (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)
 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, attain a 3.6 to 1 ratio of school children to educational PCs, and promote the implementation of equipment such as liquid-crystal projectors by FY 2010.

  Furthermore, conduct practical research into the effective education through progressive IT environments in schools, evaluate the findings, and deliberate on an improvement scheme for a support system for teachers comprising of outside personnel to facilitate the computerization of schools.

  Together with this, in order to realize a practical, highly secure IT environment, during FY 2007, aim for the expansion of an effective and ongoing IT environment that answers the needs and realities of the classroom environment.

III. **<u>Measure to promote other policies of the New IT Reform
Strategy</u>**

1. The 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>

  As national healthcare expenditures are expected to continue to rise significantly in the future, issues such as strengthening disease prevention and early detection schemes, improving medical quality and increasing medical efficiency, streamlining healthcare costs and rectifying healthcare disparity, require urgent attention.

  It is necessary to streamline medical fees by advancing IT in the healthcare industry, thereby cutting costs pertaining to insurance claims and other health insurance-related administrative fees. It is also necessary to promote lifetime self healthcare management in order for individuals to actively seek preventive medical support. In order to effectively prevent diseases and increase the quality and efficiency of the healthcare system, there is also a need to conduct a thorough analysis of health information such as check-up records, diagnoses, and insurance claims data on a national level, provided that privacy will be protected by making the statistical sources anonymous. In addition, there is also a need to advance the computerization of healthcare institutions to alleviate the operational burdens of medical staff and to promote institutional coordination and the provision of remote healthcare services.

  In FY2006, we established a grand design for the computerization of the medical fields as well as engaged in the technical developments of a safe network infrastructure that includes the digitization and online processing of medical insurance claims amongst screening and payment institutions, and the insurer.

  In order to maximize the capabilities of the IT structural reform, we will continue to work in tandem with non-IT aspects of healthcare (such as incorporating claiming in each case system) for medical insurance claims, which based on institutional customs rather than IT capabilities), and integrate network and digital certification infrastructures across the board, in a multidisciplinary manner. While we continue to promote the computerization of medical and related institutions, we will also equip facilities so that advancements in institutional coordination, efficient medical insurance administration and the activities of health promotion, can be made.

> **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.

> **Support advanced preventive healthcare by utilizing health information and high quality medical care realized by medial institutions**
>
> Provide by FY2010, and 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, Ministry of Internal Affairs and Communications, and other relevant ministries)
  Promote the expansion of the use of the HPKI (Healthcare Public Key Infrastructure) certification authority that allows verification of official certification of healthcare professionals, and take necessary measures in FY2007 to enable the government to electronically receive these electronically

certified medical documents as attachments to applications and other registration documents.

(b) Create a safe and inexpensive large capacity network (Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens (4) (a)>

(c) Deliberate ways of introducing the IC card into public services such as
healthcare, nursing care, and pensions (Ministry of Health, Labour and Welfare and other relevant ministries)
   Deliberations will be held on introducing IC cards into the fields of healthcare, nursing care, and pension administration, consistent with the way of its introduction to public services (See III.1.5 The world's most convenient and efficient e-Government Ã(1)(h)) and a conclusion must be reached by Summer 2007. At that point, carefully explore the possibility of collapsing it with the Basic Resident Registration Card.

(d) Promote the Social Security Card (tentative name) (Ministry of Health, Labour and Welfare)
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens (4) (b)>

(e) Promote standardization of medically related computerization (Ministry of Health, Labour and Welfare, and Ministry of Economy, Trade, and Industry)
  We will promote the standardization of health information data exchange, namely a standard protocol, to ensure inter-institutional/intra-institutional interoperability and consistency of information systems. We will deliberate on a maintenance system that would allow timely updates on standards based on responses from healthcare professionals, as well as provide governmental support and advice regarding the standardization process. In addition, we will actively participate in the international standardization process and work to have the state of our nation's healthcare be reflected in the international standards.

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

(a) Organize an evaluation index for the computerization of medical institutions
  By FY2007, we will develop indexes to appropriately evaluate the necessity and utilization of computerization depending on the objective, with regard to function, size and characteristic of medical institutions.

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

We will promote computerization in large-scale medical institutions and introduce a comprehensive healthcare information system to most of them with more than 200 beds (by FY2008 for 400 beds or more, by FY2010 for less than 400 beds). In continuation of our efforts from FY2006, 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. A standard code for disease names will also be organized by FY2007.

We will support the examination of the possibilities of vendors to jointly operate the healthcare information system and by the end of FY2007, will publicly present the results of the examination to the users, i.e., medical institutions. Subsequently, we will continue our examination. By publicly presenting these results, we will clarify the options of medical information systems that medical institutions can incorporate, and thereby promote the diffusion of the standardized information system.

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

Support will be given to initiatives of local medical institutions, striving for higher quality healthcare by utilizing treatment information, such as text and images, exchanged as necessary between other medical institutions. Standardization and technological development necessary for this will be worked on.

In FY2007, we will deliberate on the establishing a system that supports a public network that would enable remote image-based check-ups and remote diagnoses, as well as coordination among medical institutions. In FY2008, we will evaluate the effectiveness of the system and formulate a consensus among self-governing bodies, medical institutions and citizens regarding the usefulness of public applications.

(d) Promote a standardized documentation format for the patient check-up records
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens (2) (a)>

(e) Support information linkage between medical institutions within localities (Ministry of Health, Labour and Welfare)
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens (2) (b)>

(f) Train human resources for medical computerization (Ministry of Health, Labour and Welfare)
  Medical institutions will be advised and counseled regarding computerization, and a system to train CIOs within the medical department of municipalities will be developed by FY 2007, to help increase the potential of the medical computerization infrastructure.

(3) Analyze health information on a nationwide scale and promote utilization of results

(a) Develop technology to enable sophisticated analysis of health information (Ministry of Health, Labour and Welfare)
  By FY 2009, build a healthcare terminology and knowledge database (ontology database) with multiaxial 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.

(b) Establish an evaluation structure and the role of nationwide health information that should be collected (Ministry of Health, Labour and Welfare)
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens (3) (a)>

(4) Promote the collection and utilization of information for preventive healthcare by individuals and insurers

(a) Establish a scheme for collecting health checkup results and medical insurance claim data (Ministry of Health, Labour and Welfare)
  We will proceed with measures that support health checkups and guidance by insurers, becoming obligatory by FY2008. To this end, we will examine checkup results that insurers should collect and utilize, such as standard agenda, electronic data format, a scheme of collection, ways to coordinate with medical insurance claim data, treatment information and checkups conducted by those other than the insurer, and reach a conclusion in FY2007, while we test collection and utilization of checkup results. On that basis, discussions will be held about organizing a database to manage the health information.

(b) Establish a system that enables personal management of one's health information to utilize in health monitoring, etc. (Ministry of Health, Labour and Welfare)
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens (1) (a)>

> **Realize full transition to online medical insurance claims**
>
> By early FY2011, 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)

In order to steadily realize the principle of full online processing of medical insurance claims prior to the beginning of 2011 at the latest, we will surely advertise and disseminate the principle to medical institutions and pharmacies, while consulting screening and payment institutions to begin online reception of medical insurance claims as early as possible. In addition to this, all items on medical insurance claims that medical institutions, pharmacies, and screening and payment institutions provide and accept online or via electronic medium, shall be in an analyzable data format.

(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 2011, we will notify and disseminate the full computerization efforts to those concerned, 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)

By FY 2007, we will discuss the standardization of online billing formats for municipal medical care aids as we aim to improve convenience of online submittal. Additionally, we will discuss the possibility of a system allowing online billing of medication by pharmacological effort.

(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) Simplification/computerization of the medical treatment fee scale (Ministry of Health, Labour and Welfare)
  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 to clarify regulations regarding calculation and to simplify checkup payments and the calculation logic involved. We will review the provisional medical fee scale, created in 2006 as a suitable form for computer processing and effective utilization of medical insurance claims data, and in FY2008, by announcing the medical fee scale simultaneous to the notification of the original fee scale, we will alleviate the burden related to the scale. In addition, in order to we will advance the technical aspects (such as automatic inspections) of screening and payment institutions so that screening committees may focus on the medical/scientific aspects in making their determinations. We will reach a conclusion regarding ways to increase efficiency of the technical and operational methods of medical treatment fee administration (such as the pay-as-you-go billing scheme).

(5) Promote academic and epidemiological use of medical insurance claims data (Ministry of Health, Labour and Welfare)
  In order to help medical insurance claims data be used academically and epidemiologically and also be utilized for medical policies, we will deliberate on measures relating to medical insurance claims data collection on a national scale and establish a system for this national medical insurance claims data collection and analysis by FY2008. Accumulated medical insurance claims data will be widely used with respect to such things as public benefit.

(6) 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 FY2011, necessary measures will be promoted that allow medical institutions to access insurer-managed registers of insured persons online, as a means of instantly checking for insurance eligibility at the time of consultation.

(7) Digitalizing prescriptions and sharing prescription content information (Ministry of Health, Labour and Welfare)
  In FY2007, we will deliberate on the premises of how digitalized prescription, the sharing of information regarding a patient's prescription content, and the patient's freedom to choose a pharmacy, will take shape once medical insurance claims are uniformly processed online and the network that ties medical institutions and pharmacies is in place.

> **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, by FY2008, we will conduct verification tests in the actual field, which requires the exchange of dynamic images to support advanced operations and diagnostic imaging assistance. For that purpose we will implement a high-security, standard communication process in FY2007. In addition, we will support the procurement of necessary computer equipment for remote medical assistance for cases such as a remote medical institution seeking expert consultation by electronically sending images, or for chronically ill patients unable to commute to a hospital to receive medical attention via videophone.

(2) Utilization of ubiquitous network technology in medical institutions (Ministry of Internal Affairs and Communications, and Ministry of Health, Labour and Welfare)

By FY2010, education and dissemination will be provided for medical institutions through symposiums and such, regarding the utilization of ubiquitous network-related technology, as in the use of electronic tags to attain a high level of medical safety and efficiency in services. In addition, we will promote new research and development related to the ubiquitous network technology, such as internal detection systems through the use of microcapsules.

1.2 An environmentally-friendly society that utilizes IT —Efficient use of energy and resources—

\<Basic Aspects\>

Through the utilization of IT, we plan to directly and indirectly decrease the harmful effects of socioeconomic activities on the environment, as well as minimize the damages caused by the utilization of IT.

In regards to the environmental issues at large, it is vital to further promote efforts and initiatives among every entity and at every sector/level in society as these are the driving forces in overcoming various environmental problems. We will capitalize on the use of IT to conduct a well-planned, strategic, cross-sectoral collection of environmental information and organize, analyze, and accumulate it. As the government, we will provide the information in a comprehensive and timely manner.

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. However, we must increase our efforts in order to reach the reduction level drawn in the Kyoto Protocol. In addition, we must also engage in efforts to minimize higher CO_2 emissions from the increased volume of IT equipment and their advanced functions. From this standpoint, in collaboration with the Global Warming Prevention Headquarters, we will promote the full utilization of IT in office and household energy consumption management (BEMS and HEMS), and build systems to facilitate supply chain logistics, as well as plan to limit energy consumption by IT equipment.

In the areas of waste and recycling, we will utilize IT to promote practical information management for businesses, and the use of electronic manifests for governmental watchdog organizations. In order to balance out such activities with the efficient application of natural resources and the prevention of environmental contamination, we will also actively support international resource recycling initiatives that utilize IT.

Collect, organize, analyze, accumulate, and provide environmental information using IT

Further promote each sector's efforts and initiatives, addressing environmental issues, through the efficient collection of environmental information and   systematic organization, analysis, accumulation, and provision of that information using IT.

<Priority Policies>

(1) Collection, organization and provision of environmental information, using IT
(a)   Establish a national policy for the collection, organization, and distribution of environmental information (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." We will 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.

(b) Promote environmentally-friendly actions through the provision of environmental information (Ministry of Economy, Trade and Industry, Ministry of the Environment, and related ministries)
  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. We will also provide information through websites as "General environmental database," "Team –6%" "Global warming prevention portal site," and "Environmental report plaza," and promote environmentally-friendly actions in all sectors. Likewise, local public entities will work to provide appropriate environmental information through the updating and maintenance of their websites.

  We will continually implement measures that promote utilization of environmental information by companies, such as, through the designing of a system wherein small and medium enterprises can actively provide environmental information. Furthermore, we will aid in the education and diffusion of "standard environmental management system contents" and "information technology-utilizing environment management system" for each industry, in order to promote the development of an environment management system for small and medium enterprises based on ISO14001 acquisition.

(c) Research environmental sensing network (Ministry of Internal Affairs and Communications)
  Through the utilization of our high-level environment network sensors and micro environmental sensors such as diverse range of wireless access technology, light, CATV, public networks of self-governing bodies, and disaster prevention administration radio, we will conduct research on high-density, high-frequency environmental sensing network that will measure green house gases and air pollution.

(d) Developing forest GIS (Ministry of Agriculture, Forestry and Fisheries)
  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.

Advanced energy management and efficient physical distribution/traffic flow through IT
  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.

<Priority Policies>

(1) Appropriately implement IT-related global warming policies following the Japanese national plan to achieve the goals of the Kyoto Protocol
  We must work to appropriately implement IT-related global warming policies that are included in the Japanese national plan to achieve the goals of the Kyoto Protocol. Specifically, we must impact by utilizing IT: office and household energy consumption management (BEMS, HEMS); telecommuting; alleviation of traffic congestion through the use of intelligent transportation systems (ITS); and, the creation of logistics systems.

(a) Promote IT-utilizing energy demand optimization management in homes and offices, such as BEMS and HEMS (Ministry of Economy, Trade and Industry)
  We will popularize BEMS by supporting civilian enterprises with introductory costs, and by FY2010, establish energy management techniques utilizing BEMS (building energy management system) within the public welfare department. By FY2007, we will verify compliance with factory criteria that promote the use of BEMS, by conducting field investigations at the 1st class Designated Energy Management Factories. We will aim to establish and spread HEMS (home energy management system) by working on cost cutting technical developments.

(b) Promote telecommuting
<See II 2.5 Promoting telework to achieve a healthy work/life balance>

(c) Smooth traffic flow through the use of ITS (ETC, VICS, etc.) (Ministry of Internal Affiairs and Communications, Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure and Transport, and the National Police Agency)
<See III.1.4 The world's safest road traffic environment Ĩ>

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

  Shippers and physical distributors will work together in introducing IT-related equipment and creating physical distribution systems, by participating in the "Green Physical Distribution Conference." We will support superior cases as model businesses, to promote physical distribution systems with minimal environmental impact, through efforts at computerization and increases in efficiency. We will also further promote and spread green logistics through IT by widely publicizing the results. In addition, by FY2009, we will create a concise CO_2 emission estimation manual.

Control energy usage of IT equipment

<Priority Policies>

(1)   Promote research and development of energy saving IT equipment

(a) Establish a plan of action for efficient IT equipment energy use (Ministry of Economy, Trade and Industry)

  In FY2007, establish an action plan to maximize efficiency of energy use of IT equipment while taking into account our strategy for combating global warming, advancements in technical developments and the diffusion of energy-conserving equipment through public private partnership, as well as the promotion of individual use of IT equipment.

(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 FY2006. FY2007 marks the target year for achieving energy-conservation standards and 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) Promote research and development of energy-saving IT equipment such as devices, systems, and networks (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and Ministry of Education, Culture, Sports, Science and Technology)

  By FY2010, we shall create a high performing/energy-efficient device through a 45nm level miniaturization of semiconductors, and energy-conserving technologies (displays, storage, networks, application chips, etc.) for information appliances and information systems.

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

Promote electronic manifests

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

<Priority Policies>

(1) Promoting the diffusion of electronic manifests
(a) Promoting the diffusion of electronic manifests (Ministry of the Environment and other related ministries)
We will aim for more than 30% diffusion of electronic manifests by FY2008. In order to achieve this end, throughout FY2007, related ministries will continue to cooperate in spreading the use of electronic manifests and will test drive an electronic government reporting system which utilizes electronic manifest information, and also look into possible collaboration between electronic manifests and private internal accounting systems.

Promote resource recycling by utilizing IT for improving waste   traceability

Promote fair resource recycling by improving waste traceability using IT, taking into consideration the facilitation of international transfer of waste.

<Priority Policies>

(1) Create an appropriate international resource recycling system through IT
(a) Engage in policy dialogue with other Asian nations to improve international waste traceability through the utilization of IT
Hold policy talks with other Asian nations in FY2007 to begin deliberation on specific projects. From FY2008, we will start model businesses that utilize IT to secure traceability, and its effectiveness and availability in partner countries will be examined. By FY2008, we will run a pilot project of a satellite system that can be utilized in securing international waste traceability, and taking those results into consideration, we will conduct a feasibility study of the satellite system

regarding the technical aspects, our domestic policies, and the level of cooperation with Asian nations. We will then clarify the positioning and directionality of utilization regarding satellite systems, in creating an effective waste traceability system.

1.3 The world's leading safe and secure society
      —Using IT for disaster prevention, 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 prevention, public safety, and
food safety, as it directly affects our daily lives.

  In the field of disaster prevention, we are in the works for
establishing a system that enables the disaster prevention agency
of the central government to share information to enable
immediate response to disaster situations and support of
revival/restoration efforts in the event of a disaster. In the
future, we will continue to promote the creation (?) of a general
system which national and local public disaster prevention-
related entities can utilize in order to share disaster
prevention information in across the board. In addition, for the
public can appropriately minimize harm, , with efforts such as
advance tsunami forecast, we shall modify and expand the system
that will provide the public with higher quality information at a
higher speed, and advance/strengthen the shared disaster
information platform that supports this.
With regards to public safety, although the constant increase in
reported penal offences has been stopped in recent years, there
is a limit to how effective existing measures are in dramatically
restoring safety, and for this reason, realizing new policies
that utilize IT would be valid. In particular, in light 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, while we have measures already in
place to solidify a beef traceability system, in order to further
achieve food safety and security, it is recommended that we
promote policies relating to enhancing our traceability systems.
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 related issues and to create a safe society
where all people can live with a sense of security.

> **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) Create a comprehensive system to serve as a base for disaster prevention information
(a) Create a comprehensive system to serve as a disaster prevention information infrastructure (Cabinet Office, Ministry of Internal Affairs and Communications)

The "shared disaster information platform"* (see below) is a comprehensive system that enables cross-institutional information sharing and understanding of the extent of disasters, and collaboration among rescue-related institutions. While we continue to be mindful of the mutual understanding of information items among related institutions, we will upgrade functions such as those relating to shared disaster prevention information and the information collaboration system. We will start sharing weather and geographic information, etc, within the disaster prevention agencies of the central ministries in FY2007.

We sill create a disaster prevention application, closely dovetailed with the shared disaster information platform, which utilizes public networks and would be equally accessible by regional public bodies. In FY 2007, we will conduct analyses of the data composition of a model that enables the collection and sharing of disaster images. Based on the results, we will decide upon standard specifications by FY2008 and aim for deployment in all prefectures and municipalities by FY2010.

*Shared disaster information platform:
A shared information system that uses national disaster information and collects and shares among agencies, geographic information system (GIS) map data for use by disaster response agencies for responding to natural and other disasters.

(2) Promoting the provision of information regarding disaster prevention to the public and realizing the technology to reduce damage
(a) Reduction of damage from earthquakes/tsunamis through emergency earthquake reports (Ministry of Land, Infrastructure and Transport, Ministry of Education, Culture, Sports, Science and Technology)

To work on confusion prevention, we will raise overall and familiarize the public about emergency earthquake reports, that aim to people of, by using data collected near seismic origins.

Following this, information is scheduled to be provided to the general public by September 2007.

By FY2007, we will develop representative areas such as schools and elevators to be ready to equip systems that automatically runs antidisaster measures through the use of emergency earthquake reports. And also continue to improve on the speed and accuracy of these announcements.

(b) Provide local and detailed disaster prevention information (Ministry of Land, Infrastructure and Transport)

Beginning in FY2007, we will expand on the online provision of prefectures data regarding river disaster prevention information such as river level.

By the end of FY2007, we will equip a sediment disaster alarm system nationwide. The alarm system will be based on collected precipitation data in order to notify the possibility of the occurrence of sediment disaster to municipal and regional residents. Furthermore, we will also equip, by the end of FY2007, a mutual reporting system on sediment disaster prevention that will report precursory signals from regional residents of municipalities, and will communicate evacuation information from the administration.

(c) Provide public transportation information during disasters (Ministry of Land, Infrastructure and Transport)

In FY2007, we will establish necessary measures to equip a unified system that provides real-time service information of public transportation during disasters, to be put in actual operation after FY2008.

(d) Improve the ability to prevent disasters within localities (Ministry of Agriculture, Forestry, and Fisheries)

By FY2008, we will implement a system in 40 prefectures that, should disasters such as reservoir collapses occur, would promptly and accurately communicate damage assessments to reservoir managers and local residents.

We will develop a homepage by the end of FY2009, where local authorities and residents can share information on disaster prevention in mountainous areas.

(e) 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 to obtain image data at times of limited visibility due to fires or smoke, to aid in victim rescue.

(3) Advance and strengthen the information infrastructure for disaster prevention/public safety and offer various related measures

(a) Advance and strengthen the disaster prevention information providing infrastructure for residents, etc (Ministry of Internal Affairs and Communications)

In order to promptly and accurately transmit disaster prevention information to residents, etc., 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. While we proceed to steadily disseminate and raise awareness of these communication systems, in FY2007, we will deliberate on the regulations relating to the integration of municipal Disaster Management Related Communications Network.

We will transmit emergency volcanic alerts, tsunami warnings, and severe weather alerts via artificial satellite and will promptly set up the J-ALERT system (in which emergency earthquake reports, tsunami warning, and weather warnings are transmitted to municipalities through communication satellites and in which broadcast communication systems are automatically started), and improve the municipal Disaster Management Related Communications Network, receiving devices and automatic starting apparatus.Meanwhile in FY2007 we will also add a function that prioritizes the processing of civil protection information among the other emergency information items.

Furthermore, based on the results of the FY2006 test of the transmission of disaster prevention information via terrestrial digital television broadcast waves (to receivers such as mobile devices), conducted by the Ministry of Internal Affairs and Communications, we aim to promote the realization and utilization of this method by notifying the public about the ways emergency signals will be utilized in the collection and distribution of disaster information.

(b) Advance and strengthen the disaster prevention information infrastructure of the government (National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Agriculture, Forestry and Fisheries, Ministry of Land, Infrastructure and Transport, and Ministry of Defense)

We will further digitize and broadbandize the government's disaster prevention information infrastructure as well as strengthen gemination.

i) Helicopter television system

In the field of fire protection, we will deliberate on the technicalities of directly sending images from helicopters to satellites and continue to support municipalities' incorporation of the helicopter television transmission system.

We will aim to further equip the helicopter television system of prefectural police with infrared night-vision capabilities by FY2010.

ii) Satellite communication
  Beginning FY2007, we will operate mobile satellite
communication equipment for the Self-Defense Forces to collect
and communicate necessary information when engaging in disaster
relief activities. By FY2007, the mobile satellite communication
equipment will be set up for communication between the Ministry
of Defense and the official residence.

  By FY2015, we will achieve mobile satellite technology that
will enable satellite communication to widely used mobile
terminals in the event of network congestion or damage on ground
net.

iii) Police basic communication
  By FY2010, we will advance and strengthen systems with high-
speed circuits such as optical networks.

iv) Fire-fighting and disaster prevention information
  We will develop a support system for fire fighting by FY2010.
We will continue to support installing municipal Disaster
Management Related Communication Network, promote connection to
J-ALERT, and aim to digitize the fire defense and emergency radio
transmission by FY2016. We will also promote the incorporation of
a positioning system for emergency 119 calls made from cellular
telephones.

v)   Marine accident information
  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 the Maritime Safety Agency
possesses, by FY2008.

vi) Disaster prevention observation information
  As land improvement facilities play(?) and important part in
disaster prevention, in FY2007, 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.

 As part of the river improvement and management, we will provide
observational information from rain gauges and elasticity scales
to local municipalities.

  By FY2012 we will obtain the next-generation atmospheric remote
sensoring technology to make high-level predictions of sudden
climate disasters such as torrential raining and hurricanes.

  By FY2015, we will build an observation network that operates
on both wired and wireless circuits that will observe

diastrophism, which will collect and communicate real time data even in the event of an emergency.

vii) Making the operations of a radio terminal more flexible in emergency situations

By FY2008 we will establish rules that will allow regional public entities to send out mobile ground terminals to operate as support to aid in event of emergencies relating to disasters.

(4) Improve ability to continue crucial operations during disasters
(a) Adopt and promote dissemination of business continuity plans (Cabinet Office)

To enable businesses to continue crucial operations even in the event of an unanticipated disaster, in order to support the establishment of business continuity plans, we will conduct disseminate and publicize the "business continuity guidelines," promote assessment of disaster management measures and the publication of this information.

(5) Realize a crime resistant society

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

We will promote investigative research where IT would be utilized to effectively share information on children's safety among schools and guardians in model areas and analyze, organize, and widely disseminate results. In conjunction with our steady efforts of the child protection system model operation that we selected in FY2006, we will widely spread the model in FY2007.

(b) Tighten international passenger procedures by utilizing biometrics while securing convenience (Ministry of Justice, Ministry of Land, Infrastructure and Transport, and related ministries)

In conjunction with the mandatory provision of personal identifying information (face and fingerprints) by foreign immigrants, we will begin collation in FY2007 in order to tighten the entry screening, and with the integration of automated gate, we plan to secure convenience and speed up the airport handling process.

By utilizing biometrics, we will be able to increase efficiency of passenger procedures at international airports while securing safety. Based on the results of the deliberation and investigation regarding the optimal model passenger procedures developed with the cooperation with related ministries, airline companies, and airports, we will work towards its realization in FY2008.

(c) 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), in FY2007 we will design and develop a radioactive source registration system to make it possible to trace radioactive isotopes in the country by registering their location information. We will organize and begin operation of the system by FY2008.

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

In response to illegitimate car inspections, vehicle theft and dishonesty related to recalls, we will equip inspection branches and inspection registration offices with more sophisticated IT measures that will enable the acquisition and utilization of image-based inspection data.

(6) Strengthen the foundation of criminal arrests
(a) Promote online DNA records search systems (National Police Agency)

We will register DNA records from information relating to recovered articles and suspects to create an online "DNA records search system" by the end of FY2008, that will allow prefectural police to directly register and access this information.

(b) Support comprehensive analysis of information leading to speedy arrests of significant crime (National Police Agency)

We aim to make police investigations more efficient and sophisticated by preparing an information analysis support system (CIS-CATS) (assumed name) by FY 2008 that will generate analytical data on specs of place, time and suspects in conjunction with a geographical mapping of crime statistics and criminal methodology and other such combinations of information.

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

Regarding equipment that sharpens blurred images recorded by security cameras, etc., we will continue to enhance functionality in devices to respond to diversified image data recording methods.

To contribute to individual identification of criminals filmed on security cameras, we will match the images with other 3-dimensional images of the suspects taken at other times and create a nationwide 3-dimensional facial image database and research ways to create a system that enables search and verification of 1:N facial images when necessary.

(d) Understanding the contribution of IT in improving public safety and order

In order to improve public safety and order by conducting thorough arrests of significant crimes, it is of crucial importance to formulate a general investigative strategy that includes human resources training and gaining an understanding of the state of criminal affairs. Based on such premises, we will take hold of the contributions that the utilization IT has made in promoting safety and order in FY 2007.

Enhance the production and distribution data of main foods

Make it possible by FY2010, 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) Promote dissemination of food traceability systems
(a) Establish guidelines on the introduction of traceability systems (Ministry of Agriculture, Forestry and Fisheries)
In order to promote the spread of food traceability systems, in FY2007, while taking into consideration the balance of costs of data entry work at production sites and the benefits to the producers, we will develop such systems with lower costs that will enable small and medium enterprises to adopt them, systems that can establish traceability even in a complex supply route while coordinating with already existing individual systems. We will also establish guidelines on the introduction of traceability systems for each category of highly necessary perishable foodstuffs.

(2) Enhance the JAS Standard with Production Information, etc.
(a) Enhance the JAS Standard with Production Information, etc. (Ministry of Agriculture, Forestry and Fisheries)
During FY2007, we will establish JAS standards covering production information the third-party organization certifies, for farmed fish in great consumer demand. We will also continue to proceed with discussions about JAS standards covering distribution information the third-party organization certifies.

(3) Promote awareness of achieving plentiful and secure dietary practices
(a) 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 food traceability systems etc., that promote the safety of food and the legal compliance of producers and food companies, and that build close relationships between the consumer and the producer as if their faces are visible, and so on.

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 6,352 lives. The loss of these precious lives, and with traffic related injuries at a high 1.1 million, it is imperative that we continue to work towards realizing a safe road traffic environment. We aim to reduce traffic fatalities to less than 5,000 by the end of 2012.

  It is also important to not only take preventative measures to avoid road accidents all together, but in the unfortunate event that an accident does take place, to minimize the damage and impact on victims. In FY2006 we made progress in outlining a system in which ambulances can be immediately notified of the coordinates of where an accident has taken place via cellular telephones. In tandem, we will continue to further spread the use of emergency reporting systems and on-the-ground express support systems for ambulances.

  In the field of promoting smooth traffic flow, it appears that the utility of IT functions is penetrating the lifestyles of our residents, which is illustrated in instances such as the usage ratio of ETC on express highways rising to 66% by the end of FY2006 — a product of collaboration between related ministries and civilian enterprises. We will continue to advance our efforts in promoting smooth traffic flow by further advocating the use of ETC, and sharpening the road traffic information system such as VICS.

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," beginning operation in FY2010, which will prevent accidents from happening.

<Priority Policies>

(1) Promote comprehensive measures to realize 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 and Transport)
<See II.2.3 Contribute to the reduction of road traffic-related accidents with the development of the world's leading Driving Safety Support Systems (1)>

(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 and Transport)
<See II.2.3 Contribute to the reduction of road traffic-related accidents with the development of the world's leading Driving Safety Support Systems (2)>

(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 and Transport)
<See II.2.3 Contribute to the reduction of road traffic-related accidents with the development of the world's leading Driving Safety Support Systems (3)>

Prompt rescue of traffic victims

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

<Priority Policies>

(1) Develop the location information sharing system for use when accidents occur
(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.

(b) Promote dissemination of the HELP system for Emergency Life saving and Public safety (HELP) (National Police Agency)
  We will further promote dissemination of on-board units that automatically transmit location information, should the vehicle be involved in an accident.

(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. In FY2007, we will verify introductory effects on emergency vehicles in certain areas.

> **Smoother transportation through the utilization of ITS**
>   We will work towards smoother transportation and reduced risk of traffic accidents, while lessening environmental impact, through the provision of accurate traffic information to drivers and stabilization of traffic demand.

<Priority Policies>

(1) Promote the provision of road traffic information, etc.
(a) Promote the provision of highly accurate road traffic information, etc. (National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure and Transport)
  For the provision of more accurate road traffic information, in FY2007, the industrial, academic, and public sectors will collaborate to examine aspects of road traffic information providing service, where information (probe information) is collected from cars with on-board VICS units that correspond with infrared beacon and other radio wave beacons such as Dedicated Short Range Communication (DSRC) and broadcast media.

  We will also discuss aspects of probes that collect information from vehicles using various communication media, such as cell phones, etc.

  Furthermore, in FY2007, we aim to put into practice, through public and private collaboration and thorough testing on the Metropolitan Expressway, a DSRC system that enables the provision of road traffic information via voice and images.

(2) Promote the stabilization of traffic demand
(a) Promote the dissemination of ETC (Ministry of Land, Infrastructure and Transport)
 We will support efforts to increase ETC usage opportunities such as: varied and flexible charge policies for ETC users; subsidies for purchasing units; expansion of one-stop services. We will also promote the use of ETC by equipping the Smart IC (IC exclusively made for ETC), and promoting various ITS service deployments, utilizing on-board ETC, initiated by private companies, and thereby increase ETC users to about 80% of toll road users by the spring in 2008.

(b) Promote advances signal control using the profile signal control method (National Police Agency)
  In order to realize a profile signal control method that is flexible to rapid changes in traffic volume, and to evaluate the effectiveness in usability in relation to traffic condition and roads with varying traffic environment, we will test model operations in several areas by FY2009.

(c) Provide real time location information on buses (Ministry of Land, Infrastructure and Transport)

In order to achieve smoother transportation by increasing convenience of public transportation, we will work to implement a comprehensive system by FY2010, which will provide real time location information of buses form several bus companies in major cities nationwide. We will support the computerization of bus information by each bus company by developing a data format standardization tool and automatic data transmission tool in FY2007.

(d) Promote the establishment of a system to support logistics (Ministry of Land, Infrastructure and Transport)

In order to increase logistical efficiency and to lessen the environmental burden caused by logistic vehicles, in FY2007 we will deliberate on the building a system that will provide information on driving-friendly roads and crossings that place a high burden on the environment.

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>

With the implementation of the New IT Reform Strategy, which promotes the online handling of the administrative procedures and the optimization of administrative operations and information systems, we aim to increase the convenience to individuals and to simplify, increase the efficiency, raise the level, and improve the transparency
of governmental operations while actualizing the "world's most convenient and efficient e-Government."

With regards to the promotion of online usages, we established the "Action Plans for Encouraging Online Services" in March 2006 (revised in March 2007) and have made advancements in areas such as the creation of the tax system for the promotion of e-Government and reduction of handling fees as incentive measures, mandatory abridgment of attachment files, simplified electronic signatures, and system revisions by relevant ministries. We have also worked to promote the implementation of the "guideline for the promotion of online use in local e-Government", established in July 2006, among local governments.

In relation to streamlining and making the government operations more efficient and sophisticated, as well as increasing transparency, we have been working on a framework to reduce operational costs and time spent on administrative tasks in accordance with the operation/system optimization plans for each division to maximize system utility. As for estimated investment costs to realize our plan for optimizing operations and systems, based on the "Basic Policies for Economic and Fiscal Management and Structural Reform 2006" (cabinet council decision reached on July 7, 2006), by the reflection of expense reduction on the budget with making process adjustments and reviewing supply methods, reviewing system functions, unit price, man-hours and etc., we have been able to cut the estimated investment costs budgeted for 2007 by 30%.

In addition, the e-Government Evaluation Committee founded under the Expert Committee on IT Strategy Evaluation in August 2006, has been involved in review and evaluation process in order to make the aforementioned efforts more effective.

In order to make these changes take place faster, and with the results of the e-Government Evaluation Committee in mind, it is crucial that we intensify our efforts such as reforming operations and services from a user's perspective, and coordinated empowerment of the reformations in the front and back offices. To that end, after FY2007, in addition to continuing to

build and strengthen the framework set up so far, we will consider on the realization of e-administration services that is unrestricted by central/local governments' boundaries.

Also, we will add what is commonly referred to as the "Ombudsman function" to the IT Strategic Headquarters which will handle citizens' suggestions, including complaints, regarding the electronic application procedures, and will make details of the report and response to public from FY2008.

Create e-Government in which convenience and enhanced services can be experienced
Create e-Government (on national and local government levels) in which convenience and enhanced services can be experienced, and raise online application/filing services usages rates to at least 50% by FY2010.

<Priority Policies>

(1) Considerations on the realization of an e-administration service information desk that is unrestricted by central/regional government boundaries
<See II.1.1 The realization of a comprehensive e-Government service for both central and regional governments (1)>

(2) The advancement of preparations of the groundwork for the drafting of software manuals for the use of the comprehensive e-administration service
<See The realization of a comprehensive e-Government service for both central and regional governments (2)>

(3) Promote usage of online application/filing services

(a) Steadily implement the "Action Plans for Encouraging Online Services" (related ministries)
In order to achieve the goal of raising online application/filing service usage rates to at least 50% by FY2010, related ministries should continue to vigorously push forward to promote usage under the "Action Plans for Encouraging Online Services." In so doing, based on the recommendations of the e-Government Evaluation Committee, we will also promote revisions being mindful of users' activity flow, make its progress visible, and streamline the steps involved in handling registration information services by utilizing verification code systems.

In addition, we will review the plan as needed, based on the online usership data and implementation progress.

(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)

Through the coordination of related ministries, we will promote further publicity and dissemination activities to expand usership, by publicizing already implemented policies. In particular, in order to maximize its benefits, we will focus on the garnering publicity and dissemination activities for the tax system for the promotion of e-Government that we will implement beginning in January 2008.

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

In order to promote one-stop services for procedures related to automobile possession, we will deliberate on reformulating the systems to enable mass one-time application as well as reviewing identity verification methods, which were changes requested by users.

As for procedures that are not currently in 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.

Also, requests will be made to each prefecture to take measures that will bring about early implementation and increase in usage rates.

(d) Promote computerization of business/company registration and real estate registration application (Ministry of Justice)

Efforts will be made to computerize business/company registration and real estate registration applications in more than 90% of registry offices nationwide prior to the integration of tax exemption measures for registration license tax of online applications that is to take place in January 2008.

(e) 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)

Among the online services being promoted by Action Plans for Encouraging Online Services, in order to steadily meet individual goals for online application procedures that utilize e-Gov as planned, we will successively implement necessary measures for e-Gov and each related ministry's system by the end of FY2008, for the expansion of system functions, with due consideration to user convenience and cost-effectiveness.

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

76

With regards to the promotion of online procedures in local governments , such as for application and filing, in FY2007, efforts based on the "guideline for the promotion of online use in local e-Government" will be promoted, as well as the implementation of research on best practices to maximize the convenience of electronic applications for residents. Measures to promote such research include the provision of advisory guidance to local governments based on results of resident questionnaires, the computerization of issued documents, and communication to mobile devices.

(g) Increase online usage for filing local taxes, etc. (Ministry of Internal Affairs and Communications)

Regarding online filing of local taxes, as of January 2007, electronic filing of business tax, inhabitant tax, and depreciable property of fixed asset tax is possible in all prefectures as well as in 15 Cabinet Order designated cities. Online usage in local governments will continue to be promoted through the Ministry of Internal Affairs and Communications, and the further promotion of electronic filing of local taxes will be requested.

(h) Deliberate optimal methods for introducing IC cards into public sector (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Health, Labour and Welfare, and other related ministries)

In order to promote the safe, rapid, and accurate provision of services using IC cards, not only for national and local governments filing procedures but also in the public sector of healthcare, nursing care, and pensions, related ministries will collaborate to discuss and reach conclusions regarding the optimal methods of introduction, by summer of 2007.

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

(a) Deliberate on the enhancement of convenience of the public personal identification system (Ministry of Internal Affairs and Communications and all other ministries)

Increase the convenience of online administrative procedures compliant to the public personal identification system. Also, in FY2007, specific plans for the improvement of convenience will be deliberated upon, such as widening the usage of electronic certifications in public fields such as social security, healthcare and also in fields such as finance, where a certain level of public interest is required; and the diversification of storage mediums. Based on these discussions, future directions for development will be determined.

Additionally in FY2007, efforts will continue to be made to spread multifarious utilization methods, other than electronic application and filing, such as electronic lockers and personnel identity authentication. The active promotion of the public personal identification system will be further pursued through reinforced thorough training programs geared towards local government employees and through various publicity media.

(b) Promote the use and utilization of the Basic Residential Registers Network System (Ministry of Internal Affairs and Communications and all other ministries)

Necessary support will be provided to coordinate between national administrative organs and designated information processing organizations, in order to use and utilize the Basic Residential Registers Network System by FY2010, within national administrative organs, while following laws and regulations.
For those handling procedures that have yet to adopt the use of the Basic Residential Registers Network despite the fact that it is a lawful possibility, other than those with extremely low incidents, the adoption of the Basic Residential Registers 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 Basic Residential Registers Network, as part of the publicity measures to promote the use of the network system.

(5) 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 prefectures by FY2008, and in all municipalities by FY2010.

(6) Promote the electronic provision of administrative information

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

Information related and relevant to content material that individual ministries produce will be continuously made available in order to enable citizens/users to smoothly find administrative information needed through the comprehensive electronic government portal (e-Gov), and for e-Gov to serve its purpose in

providing administrative information that reflects user needs. Additionally, collaboration with local governments will be promoted in ways such as providing links to procedural guidance information in local government homepages. Furthermore, in order for the "e-government support center" to accurately handle specific inquiries from users concerning e-Gov, from FY2006, through collaboration with related ministries, necessary measures will be taken in providing prompt replies and guidance, one of them being improving the FAQs (frequently asked questions).

Based on results of resident questionnaires, advisory guidance will be provided to local governments so that residents can access information on homepages of local governments in a comprehensible fashion, and to enhance transparency of these entities.

(b) Promote the utilization of geospatial information as a common basis for the provision of administrative information (Ministry of Land, Infrastructure and Transport and other related ministries)
In order to realize a society that utilizes sophisticated geospatial information, based on the "Action Program 2010" that aims to upgrade the foundational mapping information to a suitable standard as a premise, to formulate standards and rules for the promotion of the distribution of geospatial information, and to build a coordinated body of industrial/academic/governmental expertise, individual ministries will promote the policy aiming for implementation in FY2010.

In addition, each administrative unit will plan for expense reduction and 5 year renewal cycle of electronic national land basic information and other basic geographical map information that serves as a common basis for the provision of geospatial information for individual administrative organs and alleviates the burden of mapping equipment .

(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 FY2007, we will further pursue the dissemination of electronic voting by supporting local governments that are trying to incorporate the system.

(d) Transfer and storage of public historical documents et al. in electronic media (Cabinet Office)

The transfer and storage of historical official documents to the National Archives of Japan in digital format will begin in FY2011.

For that purpose, between FY2007 to FY2010, we will gradually experiment and demonstrate formats appropriate for long-term storage of digital official documents at the National Archives of Japan, deliberate rules for the transfer and storage of digital documents, and the establishment of a long-term storage system at the National Archives of Japan.

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 ministries' 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 typical "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" (Decided March 31, 2006 at CIO Conference) (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 necessary adjustments for "Optimization of Operations/Systems Guidelines" – compliance will be made by the Ministry of Internal Affairs and Communications, and the current state of optimization implementation and evaluation will be monitored. In each system authority, the optimization plan and implementation state will be utilized to manage budget, structure, and number of employees.

(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 GPMO 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 of the shared operations system among ministries that do not have forecasted cost-effectiveness, the area will be halted in early FY2007 and whether or not to optimize it will be deliberated upon, and necessary revisions made from the perspective of choice and focus.

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

In aiming for further optimization of operations and systems in the overall government, from the standpoint of eliminating duplicate operations and costs, based on "Policy for reviewing the operations and systems of shared use system infrastructure (Basic Policy for Developing Shared Use" (Decided July 5, 2007 by CIO Conference), a scheme of jointly using systems that are common to each ministry will continued to be considered, and an optimization plan will be established by the end of FY2007, if not sooner.

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 (operations begin January 2009), but after April 2010 when compatible systems are expected to increase, 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. Deliberations will be held primarily by the Ministry of Internal Affairs and Communications, drawing from expert advice, and a conclusion will be reached by June 2008.

(2) Improve government procurement

(a) Improve government procurement (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and all other 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" (Decided March 2006 by CIO Conference). In order to further secure transparency and fairness and true competitiveness in handling procurement, based on the "Basic Guidelines for government procurement related to information systems" (Decided March 2007 by CIO Conference), separated/divided procurement, as well as procurement documentation and the clarification of contracts will be steadily implemented according to the procurement plan. In addition, a database of case studies related to government procurement in relation to information systems will be expanded.

Furthermore, through the expansion of the database containing government procurement relating to information systems for the sharing of information regarding procurement documentation, the standardization and efficiency of procurement operations will be promoted.

(b) 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 the 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 principal.

(b) Promote optimization of operations/systems and data standardization in local governments (Ministry of Internal Affairs and Communications)

In order to promote measures that aim for systemic optimization of operations/systems in local governments (Local Government Enterprise Architecture (EA) Operation), in FY2007, the integration of local government EA will be furthered, based on guidelines for renewal of operations/systems.

(c) Develop a cooperative basis for information systems (Ministry of Internal Affairs and Communications)

By utilizing R&D results on ubiquitous platforms, specifications for the "Regional Information Platform," a cooperative basis for systems supporting efficient and high-quality digitization of local governments, will be drawn up by 2008, in order to realize a ubiquitous environment. And efforts will be made for its national standardization.
By 2010, the spread of applications, which is allowed cooperation by using this standard, will be promoted.
During FY2007, verification tests for one-stop services within local e-governments will be conducted, and the "Standard specifications of Regional Information Platform" will be revised and enhanced. Also, items that will be important in the realization of the one-stop services will be researched.

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

The utilization of the"Joint Outsourcing Integration Guideline" formulated in FY2006 under the Joint Outsourcing Promotion Association will be promoted as measures that cooperate local government systems move forward, and the dispatch of specialists and technicians that assist the integration of a model system will be pursured.
For the promotion of the cooperation of internal management operations and fundamental administrative systems, in FY2007, items that the transfer from the legacy system face, such as financial accounting, personnel compensation, general administration, residency information, taxes and benefits, will be examined.

(e) Create a regional computerization knowledge base (Ministry of Internal Affairs and Communications)

A system which raises leading case examples concerning reginal computerization as shared nation-wide information, will be further enhanced.

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

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 FY2007, and provide necessary support for the provision of information through seminars and portal sites in conjunction with local governments.

With regards to urbanization and urban planning areas, the Ministry of Land, Infrastructure and Transport will, by FY2010, develop a white map (base map information) that will be a common foundation for the utilization of geospatial information, and by FY2011, will develop digital imagery information. In addition, by FY2010, begin the one-stop service of the provision of base map information.

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

(a) Optimization of operations/systems of incorporated administrative agencies, etc. (Ministry of Internal Affairs and Communications, and other related 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," establish and implement optimization plans, implement the principle of competitive bidding for systems procurement, deliberate on the unbundlization (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 e-Government national/incorporated administrative agencies council formed in FY2005. 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.

Improve and strengthen e-Government promotional structure
  Each ministry's structure in procuring and evaluating 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 the 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 (Ministry of Internal Affairs and Communications, and all other ministries)
For the cultivation of deputy CIO level personnel responsible for PMO and PJMO across the government, each ministry will, based on the "Guidelines for Training and Securing IT Personnel for Administrative Entities" (Decided April 13, 2007 by CIO Conference)," as early as possible prior to the end of FY2007, establish the "Action Plan for Training and Securing IT Personnel for Administrative Entities," and pursue focused training and securing.

(b) Enhancement and strengthening of PMO (Program Management Office) (All ministries)
The Program Management Offices (PMO) created within each ministry, responsible for overseeing measures related to system planning, development, operation, evaluation and such, with support and advice from the deputy CIOs,, under the authority of the Chief Information Officer (CIO) of each respective office, will be enhanced and strengthened through the utilization and appointment of deputy CIOs, based on the activities of the office.

(c) Enhancement and strengthening of GPMO (Cabinet Secretariat and related ministries)
The GPMO will be enhance and strengthened by the participation and cooperation of civic operational managers for the further promotion of aforementioned (1) "Considerations on the realization of an e-administration service information desk that is unrestricted by central/regional government boundaries" and (1) (d) "Cooperation and coordination for optimization of operations and information systems common to all ministries"

(d) Cooperation and coordination for optimization of operations/systems common to all ministries (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and other related ministries)
<See III. 1.5 The world's most convenient and efficient e-Government (1)(d)>

(e) Review evaluation by the e-Government Evaluation Committee (Cabinet Secretariat, and Ministry of Internal Affairs and Communications)
Based on the pilot research conducted in FY2006, the e-Government Evaluation Committee will conduct research on user

needs 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 operations/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.

(f) Local government CIO development program (Ministry of Internal Affairs and Communications)
  In order to train personnel that can handle legacy reforms, building local e-governments, appropriate procurement of information systems, and regional computerization, a CIO development training curriculum will be developed by 2008, and deployment will begin in medium to large-size local governments by 2010. In FY2007, training programs will be held using the material developed in FY2005 and FY2006, and educational material will be created on new themes.

Ensure system reliability/safety and security enhancement
  Taking the improvement of user convenience into consideration, reliability/safety 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 to an e-Government.

<Priority Policies>

(1) Improve security features of e-Government

(a) Strengthen cooperation between the Cabinet Secretariat and deputy Chief Information Officers (CIOs) 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 FY2007, the collaboration between the Cabinet Secretariat and deputy CIOs will continue to be strengthened and efficient information security features will be promoted when developing concerned systems.

(b) Deliberate on the building of next generation e-Government (Cabinet Secretariat, and Ministry of Internal Affairs and Communications)
  In building the next generation e-Government, and in promoting a framework for improving overall security functions, necessary

technical and functional deliberations on the building and improving a common platform that will serve as a base for operations/systems of the entire government will be further pursued, and by the end of FY2007, results on these deliberations will be produced.

(c) Establish a rating scale for security quality of OS being used in e-Government (Ministry of Internal Affairs and Communications)

Deliberations held in FY2006 on establishing a rating scale for the security quality of OS that support information systems of e-Government, and the efforts made to establish rating criteria, usable at system procurement, and their respective rating scales. Technical trend research will be conduct in FY2007 to begin actual OS system integration e-Government operations.

(2) IPv6-ready e-Government systems

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

In light of the fact that use of IPv6 in e-Government will strengthen security in preventing information leakage and misuse, make workflow interactive, and be beneficial in building an inter-ministry shared use system, and as an early countermeasure before Ipv4 address depletion expected as early as FY2010, each ministry will make information and telecommunications equipment and software Ipv6 compatible, when new information systems are developed (integrated) or updated, by FY2008 in principle. The following measures will be put in force for smooth implementation.

i) Each ministry will consider the results from each e-Government system's IPv6 readiness following the guidelines established in FY2006, and deliberate on the benefits of making each e-Government system compatible to IPv6 and beginning in FY2007, establish specific plans to attain IPv6 compatibility in various information systems.

ii) In order to enable electronic applications and access by citizens using IPv6, it is necessary for Internet service providers to offer IPv6 connection service for individual users. For this reason, in FY2007, the Ministry of Internal Affairs and Communications will continue to post information on their homepage, regarding IPv6 connection service availability of Internet service providers.

(3) Strengthen information security measures in local governments

(a) Strengthen information security measures in local governments (Ministry of Internal Affairs and Communications)

<See III.2.3 The world's most secure IT society (6)>

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 and increase 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. It is necessary for businesses to produce and practice an IT strategy in line with their management strategy, and to streamline and make efficient their operations through the sophisticated utilization of IT. 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 FY2006 26% of businesses are actually utilizing IT and practice the IT business management.

  Going forward, we will continue to promote measures necessary for businesses to do corporate activities efficiently and effectively by utilizing IT actively, and pursue the establishment of a supportive environment for IT human resource capabilities and the fund-raising through the utilization of IT. 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 conduct measures necessary for the active utilization of IT among small and medium-sized enterprises (SMEs) and service businesses that have yet to adopt such environments.

Realize the world's highest level of corporate management through IT utilization

  By promoting measures supported by both the private sector and the public sector we will spread IT utilization in corporate management. By FY2010, we will raise the percentage of large enterprises and small and medium-sized enterprises that have optimized corporate management in ways that transcend divisions and enterprises and utilize IT to the world's highest level.

<Priority Policies>

(1) Promote structural reform in businesses through IT utilization

(a) Disseminate the "Action Guidelines for the Strategic Introduction of IT" and "IT Management Index" (Ministry of Economy, Trade and Industry)

  We will launch their dissemination of the "Action Guidelines for the Strategic Introduction of IT," which systematizes items that business owners who wish to realize IT business management are recommended to engage in, and the "IT Management Index," based on the action guidelines, that allows for objective evaluation of the degree of IT utilization, through the "IT management portal site" which provides self-evaluation tools to gain understanding of IT utilization level based on the index, as well as making honorable recognition, based on the index, of companies that put outstanding IT business management into practice.

  Additionally, in order to conduct analysis necessary in improving our country's IT utilization standards, based on such action guidelines and index, we will make international comparisons regarding the achievement degree of IT business management in the United States and South Korea and other countries.

(b) Promote visualization of IT investment value (Ministry of Economy, Trade and Industry)

  During FY2007, we will promote the visualization of returns on investment by utilizing IT and establish guidelines to advance the IT business management and increase effective returns on IT investment. Also, in order to raise interest in the promotion of IT business management on the management level, we will provide business owners with evaluation tools in order for themselves to be able to use the objective evaluation of the degree of observing these guidelines and set appropriate targets.

  In addition, in order for the information systems to meet reliability and security levels, we will promote the utilization and dissemination of a reliability index that enables evaluation of the degree of observing the "The Guideline about Reliability of Information System."

  Furthermore, we will promote the visualization of human resources skill through the revision of the information technology engineers' examination system while ensuring consistency with IT skill standards, which clarifies and structuralizes the practical skills necessary in providing information services.

(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 by researching and analyzing the differences in rating of management index based on the presence of a CIO, and disclosing results of such analysis via the "IT business management portal site."

  Furthermore, we will run workshops for SMEs managers covering corporate restructuring realization through IT utilization, and assist in the development of human resources taking on CIO responsibilities.

(b) Disseminate skill standards for human resources of enterprises utilizing IT (Ministry of Economy, Trade and Industry)
  To strengthen IT utilization capabilities in enterprises, within
FY2007, we will establish and disseminate integration guidelines and a training road map to promote the utilization of "Users Information System Skill Standards (UISS)," which systematizes necessary skills for enterprises that utilize information systems.

(3) Improving the financing environment by utilizing IT

(a) Setting up an environment for the promotion of the usage of the electronically-recorded receivables system (Ministry of Justice, Ministry of Economy, Trade and Industry, Financial Services Agency, and other related ministries)
  Based on the enactment of the "Law on electronically-recorded receivables," in order to improve the financing environment of SMEs by utilizing IT, we will set up an environment for the promotion of the usage of the electronically-recorded receivables system that enables electronic transfer of receivables.

(4) Support the improvement of productivity in the service industry through the utilization of IT

(a) Support the improvement of productivity in the service industry through the utilization of IT (Ministry of Economy, Trade and Industry)
  In order to reform the productivity in the service industry through the utilization of IT, in the beginning of FY2007, we will establish the "Service Productivity & Innovation for Growth (SPRING)" as the platform on which the industry, academia and government work together and discuss effective methods of IT utilization in every fields in the service industry. We will also promote the dissemination of best practices through the collection and announcement of cases of outstanding achievement.

> **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 a general-purpose shared infrastructure for electronic-commerce

(a) Promote the development of EDI shared infrastructure for inter-industry transactions (Ministry of Economy, Trade and Industry)

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 within FY2007 and promote its dissemination through seminars and training sessions.

We will also support the development and introduction of EDI systems enabling electronic ordering—a process that SMEs have struggled to keep pace with large enterprises. We will work to promote the results achieved through these efforts.

(b) 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.

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

In order to expand IT utilization for inter-business collaboration in the manufacturing industry, during FY2007, we will promote the standardization of engineering information exchanges during the designing and development stages, where the information of the EDI system is delayed compared to ordering processes.

Additionally, toward the development of a simple EDI system for SMEs, we will promote the creation of ground rules to secure interoperability between EDI systems in accordance with the

global skill standards on EDI (electronic business eXtensible Markup Language (ebXML)).

Promote IT utilization in fundamental businesses and expand electronic commerce in small and medium-sized enterprises

We will increase the percentage of small and medium-sized enterprises of middle scale (enterprises with annual sales of 500 million to 2 billion yen) that utilize IT for fundamental businesses to 60% or more by FY2010. Also by FY2010, we will increase the percentage of the trade partners of small and medium-sized enterprises that engage in electronic-commerce to 50% or more of total trade partners.

<Priority Policies>

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

(a) Release successful cases of IT utilization (Ministry of Economy, Trade and Industry)
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. In FY2007, we will strengthen the framework for the collection of leading and successful cases, clear up the information needed for SMEs to put IT business management into practice, and provide the information over the Internet. Furthermore, cases of outstanding IT business management will be recognized in order to heighten motivation among SMEs.

(b) Support the promotion of management innovation in small and medium-sized enterprises through the utilization of IT (Ministry of Economy, Trade and Industry)
In order to promote management innovation through IT investments, we will help to create networks 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.

(c) Support the improvement of small and medium-sized enterprise managers' management capabilities (Ministry of Economy, Trade and Industry)
We will provide training courses to enrich the knowledge of SME managers according to the characteristic of industries such as manufacturing and services and 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. As a result, during FY2007, we will improve the environmentwhere SME managers can study on a daily basis.

93

(d) Develop and disseminate IT business management support tools for small and medium-sized enterprises (Ministry of Economy, Trade and Industry)
<See II.1.2 Increase in economic and industrial productivity of products and services through IT (Enhanced efforts of small medium-sized enterprises in particular) (2) (a)>

(2) Expand IT utilization fields for small and medium-sized enterprises

(a) Support the development and introduction of systems enabling electronic commerce (Ministry of Economy, Trade and Industry)
  In order to introduce electronic commerce and IT utilization of inter-business transactions and promote advanced IT utilization in SMEs, we will continue to focus on promoting the introduction and use of electronic tags and EDI systems enabling electronic ordering, etc. In these ways, we will support development and introduction of the system by SMEs trying to bring about management innovation through IT utilization, and disseminate the results achieved.

(b) 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, in order to utilize the accumulated know-how for production activities, 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 that is necessary for production management, quality control, and delivery management, etc. By providing SMEs with these results, we will support the continuation of basic skills in SMEs.

(c) Support cooperation between small and medium-sized enterprises in different fields (Ministry of Economy, Trade and Industry)
  In order to promote measures that open new business fields through organic cooperation between SMEs of different fields, and effectively combining managerial resources in new business activities, through the utilization of external experts such as IT coordinators, we will support those SMEs whose Plans of advanced corporate networking under the Act for Facilitating New Business Activities of Small and Medium-sized Enterprises are in the process of being approved or have already received approval.

(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, in a select area, a model for logistical framework that enables cost-reduction in transactional operations and market logistics and will disseminate and announce its effectiveness.

1.7 <u>Prosperous lifestyles throughout people's lifetimes</u>
 —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.

  While there has been an increase in corporations implementing telework – an IT-driven flexible style of working with freedom in time and place—in recent years, introduction delays in comparison to Western nations, and the necessity of adjustments in labor-related regulatory environment have been pointed out. Efforts are underway to promote teleworking, such as the establishment of The "Telework Promotion Forum" in November 2005, publicity efforts for its dissemination through the cooperation of industrial/academic/governmental bodies, and the adoption of telework work styles for public employees, and it is necessary to push forward further measures to fundamentally increase the ratio of teleworkers.

  As for e-Learning and other such methods of upgrading skills and return to learning that utilizes IT, content development and the establishment of required environment are steadily moving forward, and we will continue to further promote the use of e-Learning and expand the contents according to users' needs.

  In the area of services such as welfare and nursing, in addition to nursing compensation invoices, we will further information utilization as we make online invoices for the compensation for the support of disabled people's independence available this year, as the foundation, and we will engage in further establishment of the utilization of information for its upgrades and improved efficiency, as well as engage in new developments for practical robot technology 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.

> **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**

(1) Promote teleworking
<See II.2.5 Promoting telework to achieve a healthy work/life balance>

(2) Support for homeworking of disabled persons

(a) Establish support systems for homeworking disabled persons (Ministry of Health, Labour and Welfare)
  Under the revised Law for Employment Promotion of Persons with Disabilities and as a part of the movement to promote occupational independence for disabled persons, following FY2007 we will utilize support systems for the disabled who homework, as one of the various options of work for disabled persons, and work to expand job opportunities for homeworking disabled persons.

  Regarding the corporate assignment of homeworking coordinators who are in charge of employment/business management of disabled homeworkers, we will expand job opportunities for the disabled in the form of homeworking, through the provision of homeworking coordinator grants under the Disabled Employment Payment System.

(b) A special program promoting homeworking for persons with severe disabilities (Virtual Workshop Support Program) (Ministry of Health, Labour and Welfare)
  To support the employment of homebound disabled persons, in FY2007, the Virtual Workshop Support Program will continued to be positioned as one of the Community Life Support Programs following the Law to Help People with Disabilities to Live Independently, and prepared for national implementation, thereby aim to increase the number of virtual workshop users.

(3) Recruitment/job hunting and incubation

(a) Support re-employment of women

i) Promote utilization of the portal site that support re-employment of women (Cabinet Office)
We will promote the active utilization of the comprehensive support information portal site, where women considering re-employment or starting a business can access necessary information efficiently, whenever necessary.

ii) Enhance the support for women's re-employment/returning to work (Ministry of Health, Labour and Welfare)

From the viewpoint of enhancing support for women raising children, who also want to return to work, in FY2007, we will establish an exclusive site to provide information related to flotation, etc., for women hoping to start a new business. We will also develop/provide an e-Learning program, in which specific re-employment plans can be made while acquiring basic knowledge on the web, and through a website that that supports at-home workers, we will provide various useful information relating to e-Learning, skill upgrading systems, and working from home.

iii) Provide learning and capacity building assistance for women (Ministry of Education, Culture, Sports, Science and Technology)
For women challenging various fields and for career-making through independent choices, we will support learning and provide capacity building information as well as introduce a broad range of role models (cases) through the "Women's career-making support site" hosted by the National Women's Education Center.

(b) Support for business inauguration and flotation

i) Comprehensive support services for business inauguration and flotation (Ministry of Economy, Trade and Industry)
In order to evoke business inauguration and entrepreneurial consciousness at all levels of Japanese society and expand the "horizons of challenge," we will provide comprehensive support services for business inauguration and flotation though the "Initiation/venture citizens forum" that utilize Websites, etc. We will also operate a successor-matching site, which will provide a meeting place for employers looking for successors and vice versa.

In addition, management reform and IT integration consulting will be conducted by a "Special Counselor on Increasing Productivity."

ii) Support for IT venture flotation and commercialization (Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)
Support for technological developments, business expansion, and overseas development will be provided for small and mid-sized IT venture firms that are unable to maximize capabilities despite their superior core technologies. In FY2007, we will find and unmine small and mid-sized IT venture firms that aim to commercialize new business models and utilize technology, such as ASP service, SaaS, and GIS, based on their advanced technological seeds, and support development, commercialization and overseas entry, necessary in the realization of such business models. Additionally, in FY2007, we will also search and find 20 unique, talented individuals ("Super Creators") who can excel internationally, in the field of software, and provide an environment where they can maximize their talents. Furthermore,

through the provision of information on starting and managing businesses through websites, and holding real-world seminars and events, ventures businesses that have unique, cutting edge business models and have made technological advancements in the information and communications field will be supported.

Double the number of participants in lifelong learning that utilize IT by FY2010 through the broadband networked environment and terrestrial digital broadcasting

---

<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) Upgrade contents provided by the National Information Center for Educational Resources
  The National Information Center for Educational Resources will aim to double the number of persons using lifelong learning information by the year 2010, and work to upgrade the lifelong learning information content that should be provided by the country, while promoting its use/utilization. In FY2007, we will develop an use the access management function to track and analyze usage in 2006 and improve content according to users' needs, and look to better the follow-ability through the review of categorization of currently registered information, etc.

ii) 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 exhaustively collect information on specimens, exhibitions, events, and guidance information from national science museums (natural history, technography, etc.), and create a system that

is searchable on the internet, and thereby promote the utilization of digital archives.

(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) Promote the transmission of educational information beyond local boundaries (Ministry of Education, Culture, Sports, Science and Technology)

During FY2007, we will collect, process copyrights, and edit content materials that respond to social requests from different areas, and already existing study content developed by local public bodies, universities, and private entities, and provided them via satellite communication and the Internet, thereby operating a model for sharing
study content materials beyond local boundaries.

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

During FY2007, we will build a education information provision system utilizing the Internet that provides information such as the nation's policies regarding education, learning content material produced by individual regional self-governing bodies, so that an environment in which anybody can easily access national and regional education/learning-related information, can be developed.

(f) 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 continually supported so that those who wish to re-challenge can access those leaning materials whenever and wherever. During FY2007, in order to spread the use of this system, learning management applications necessary for the learning provision system via the Internet will be developed, as well as a manual for the establishment and support of the lifelong learning platform.

(3) Computerize public facilities, such as libraries

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

Through the dissemination of the report, the "Libraries in the future--aiming to be information hubs that support localities--(March, 2006)", released by the "The future library review collaborators meeting," we will to promote and awareness among

100

local public entities of the necessity of the informatization of libraries. Additionally, in order to adopt capabilities necessary in the informatization, during FY2007, through training of librarians and chief librarians, we will also disseminate and educate the need for computerization in libraries, and deliberate on the future of cultivating librarians with the ability to utilize IT to support IT-driven learning.

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 realize an effective and efficient social welfare/nursing care service utilizing IT, we will develop a safe network base by FY2008. As part of such measure, by FY2007, in order to enable the use of open networks such as the Internet for invoices relating to nursing care compensation and benefits provided for the support of the independence of disabled persons, we will deliberate on securing the necessary network and security, system requirements, and the standardization of data exchange between relevant institutions and businesses.

(b) Realize strict identity verification for social welfare/nursing care service personnel and users (Ministry of Health, Labour and Welfare, and other related ministries)
By Summer 2007, 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, in conjunction with deliberations on the aspects of implementing IC cards in public fields (See also 1.5 "The world's most convenient and efficient e-Government" (3)(h)) and reach a conclusion.

(c) Promote the social benefit card (tentative name) (Ministry of Health, Labour and Welfare)
<See II.2.1 Realization of information infrastructure to safely facilitate use of health records of citizens(4)(b)>

(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)

Systems such as the benefit payments for the support of the independence of disabled persons will begin operations in FY2007, and electronic invoices will be promoted, as well as the building of a framework to conduct analysis based on the utilization of collected data by FY2008. In regards to charts including service plans and practice records relating to nursing care and nursing prevention, in order to promote data exchange, in FY2007, we will begin deliberations for standard data format. Within FY2007, we will also reach conclusions regarding policies on the electronic preparation/management of records on services provided, and IT utilization policies pertaining to streamlining operations related to social welfare measures, enhancing service quality, and reducing differences among localities, and their implementation will be promoted. In doing so, we will take into consideration the necessity to develop software that will enable efficient information exchange and sharing, along with the need to develop equipment suitable for onsite data input during home care and facility services.

Additionally, in FY2007, we will deliberate on the standardization of data related to nursing care, such as medical charts, in order to further the standardization of terminology and codes related to social welfare/nursing care services. We will take care to consider securing consistency with standard terminology/codes in the medical field, where such measures have progressed further.

(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 begin the introduction of IT/information education within training programs related to social welfare/nursing care national certifications, and reach a conclusion on specific measures within FY2007.

(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 on providing/utilizing reliable social welfare/nursing care information and increasing transparency in services, in hope of the entire nation sharing policy principles. We will also 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. We will investigate measures to help private businesses highly utilize this information to provide citizens with useful and reliable information, and reach a conclusion by FY2007.

(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 appropriation system functions and begin its operation in FY2008, and notify policy-holders of the operation method. Additionally, we will further policy deliberations regarding analysis on national scale and begin analysis in FY2008.

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

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

We will develop robot technologies that will ease the burden on users and providers at social welfare/nursing care sites, in such ways as supporting nursing care personnel in situations causing excessive physical load. By 2010, we will deliberate on specific utilization measures, such as making effective systems eligible to receive social welfare/nursing care service subsidies and benefits, etc.

(b) Promote lifestyle support systems utilizing information appliances, etc. (Ministry of Economy, Trade and Industry, Ministry of Internal Affairs and Communication, and Ministry of Health, Labour and Welfare)

In order to support independent lifestyles of senior citizens/the disabled and promote the development and growth of lifestyle support systems that utilize various sensors, we will work to establish common basic technology that will secure interconnectability and operability between equipment, and by FY2007, consider plans to support utilization such as making effective systems eligible to receive social welfare/nursing care service subsidies and benefits, 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\>

As our nation becomes the world's most rapidly aging society, in order for the conveniences of IT to benefit all people, we must aim to realize an infrastructure that embraces universal design — design structures that are easily adoptable by a universal sample of people regardless of their age groups, gender, physical conditions and language capabilities. It is imperative that academic/industrial bodies coordinate its efforts to promote such technical roadmap.

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. In FY2006, there was progress in areas of technical development and preparation of facilities for the revision of copyright laws for the online distribution of audio library resources originally created as rental products for the visually impaired. 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.

> **▢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, informational, 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 FY2007, 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 user-friendly 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 developmentof communication/broadcast services that increase convenience for senior citizens and the disabled, or the research and development of communication/broadcast technology that leads to improvement of these services will continue to be promoted.

Additionally, the aspects of required support will be considered through the collection of case examples 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)
In FY2007, guidelines necessary to increase usability of IT products and services for senior citizens will be established and by promoting dissemination of these guidelines to relevant businesses, we aim to realize an IT mediated environment that is truly useful for the elderly.

(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)
Broadcasting for people with visual and hearing disabilities will be enhanced, by subsidizing part of the production costs incurred by public-interest corporations creating television programs with subtitles, sign-language, and video descriptions. By FY2007, with the help of broadcasters, efforts will be made to subtitle all programs with this option available.

(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. 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.

(c) Research and development of universal content technology (Ministry of Internal Affairs and Communications)
In order to realize an environment where everyone, including senior citizens and the disabled, can freely create, use, and utilize content, efforts will be made to locate content suitable for user needs from image, music, book and dictionary-content distributed around the world, and enable display conversions depending on the user environment, while ensuring information reliability. By FY2010, technology that enables collection, accumulation, knowledge extraction, editing and presenting of this content, as well as the technology for its information credibility verification, will be established.

(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, one of which will be developing a multilingual information distribution support system through the R&D of "verbal communication," such as natural language analysis technology. Research and development of multilingual speech recognition/speech synthesis technique at the everyday colloquial level will be promoted, as well as recognition technology for "nonverbal communication," including gestures and facial expressions.

(5) Promote enlightenment and dissemination of universal design

(a) Award and disseminate progressive case examples of IT use/utilization models (Ministry of Internal Affairs and Communications)

Progressive case examples of IT services/systems will be accumulated that solve problems in various daily life and business situations, and exceptional case examples will be awarded as utilization models in ubiquitous network societies (u-Japan best practice), and they will be disseminated to enlighten the public.

▪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 and Transport)

By FY2010, we will establish the Free Mobility Assistance System that utilizes ubiquitous network technology including RFID tags, to enable "anybody, anywhere, and at anytime" to obtain necessary information for seamless movement, such as transfer routes and modes of transportation, regardless of physical condition, age, or language spoken.

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

In an effort to create robots, etc., to watch over senior citizens and support their outdoor activities, by FY2010, universal interface technology and the fundamental technology for situation-adaptive communication will be established that will

enable the recognition and understanding of senior citizen's (user's) actions and their real-life environment, to make the provision of appropriate support possible, according to the user's situation, tastes, and physical abilities.

Efforts will also be made to dramatically improve the robot's perception of the world and ability to communicate with people through bilateral coordination between various robots. By FY2008, basic technology for various functions and services, possible through interactive communication between robots that are connected sensors and networks, 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."

Specifically, as a result of private sector-led efforts to make broadband connection accessible "anytime, anywhere," as of the end of December 2006, there are 30 municipalities and 2.51million households that have zero broadband connectivity. 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. Furthermore, we must enhance the overall area network to respond to signal reception needs in order to promote the diffusion of wireless broadband use.

In addition, as of December 2006, 3,950 households are able to receive terrestrial digital television broadcasting which will allow regional information "anytime, anywhere," and the number 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.

> **◆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)Grant investment incentives to businesses and support the improvement of local information and telecommunications infrastructure
\<See II.3.2 Realization of a ubiquitous community in which anybody can benefit from the infrastructure, anywhere, any time (1) and (2)\>

(2) Create a fair competitive environment for telecommunication businesses

(a)Perform competitive assessment in telecommunication business fields
(Ministry of Internal Affairs and Communications)
We will steadily perform annual competitive assessment for each market in the telecommunication business fields, especially the broadband market, to contribute to measures aiming eliminate areas with zero broadband connections by FY2010.

(b) Develop an environment, such as technological standards, that supports total IP compatible networks (Ministry of Internal Affairs and Communications)
By 2008, we will establish technological standards for networks and terminals compliant to total IP (Internet Protocol) compatible networks, with environmental load reduction in mind, and secure the level of quality, network safety, and reliability that each network/terminal should maintain, while working toward the realization of related technologies, such as efficient network operations and management technology, etc.

(c) Develop an environment for telecommunications businesses to provide apt telecom services (Ministry of Internal Affairs and Communications)
In order to inhibit telecommunications businesses from conducting inappropriate business operations and to handle such, we will seek reform in the area of Telecommunications Business Law, establish guidelines for reporting on collections, and reinforce management procedures.

(3) Promote radio usage that reflects the digital age

(a) Realize new radio usage systems (Ministry of Internal Affairs and Communications)
By FY2010, we will establish interference/fading control technologies and adaptive high-efficiency modulation techniques

needed to realize ultra high-speed wireless LAN with transmission speeds in the gigabit class.

Furthermore, in the air and marine fields, by FY2010, we will work to realize new radio usage systems, through the development of necessary technology that will enable the comfortable use of Internet and mobile phones at sea or in the air. By FY2007, we will also establish ubiquitous ITS technology in the road traffic field, that will make various information accessible without special operations and realize a safe and secure mobile environment.

(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.

(c) Make signal use faster and more flexible (Ministry of Internal Affairs and Communications)
In FY2007, in order to facilitate preparations for opening a wireless terminal while avoiding signal mix-ups with already existing wireless terminals, we will incorporate a third-party reconciliation/mediation system as-needed, and once that system is established, we will review the ways in which that system is used on an annual basis to further substantiate that structure.

By FY2008, we will expand the target areas of the experimental wireless terminal system, and in order to conduct tests on technology that is ready to be materialized and to research needs for new services, we will make the wireless terminal operational.

By FY2008, we will implement a system that enables the operations of registered wireless terminals that have access systems used in wireless broadband services, to be carried out by those other than the registered individual. Once such system is established, we will review the ways in which that system is used and make adjustments as necessary.

(d) Research and development for the expansion of radio wave resources
(Ministry of Internal Affairs and Communications)
<See II.3.1 Establishment of an infrastructure that enables safe and convenient diverse services of next generation mobile living (2) (c)>

(e) Research and development of the ultra high-speed Internet satellite

(Ministry of Internal Affairs and Communications, and Ministry of Education, Culture, Sports, Science and Technology)
<See II.1.3 Enhancement of international competitiveness in ICT industry (5) (b)>

◆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) Promote R&D, verification tests, and international standardization of ultra high-speed mobile telecommunications systems

(a) Promote measures aiming to realize the fourth generation mobile telecommunications system (Ministry of Internal Affairs and Communications)
<See II.3.1 Establishment of an infrastructure that enables safe and convenient diverse services of next generation mobile living (2) (a)>

◆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 the harmonization of telecommunication and broadcasting

(a) The roles of telecommunications and broadcasting (Ministry of Internal Affairs and Communications)
<See II.1.3 Enhancement of international competitiveness in ICT industry (2) (a)>

(2) Develop environment to establish transmission sites, utilize cable television, and use/utilize optical fiber network and communications satellite infrastructure

(a) Full transition to terrestrial digital television broadcasting (Ministry of Internal Affairs and Communications)
In order to realize a full transition to terrestrial digital television broadcasting by FY2011, we will take measures in altering the analog frequency for this change.

To attain 100% coverage of analog broadcasting areas, we will promote the set up of transmission sites and also diversify

112

transmission channels of satellites, cable television, and IP multicasts. In FY2007, we will continue to provide tax/financial support, as well as support the development of digital broadcasting facilities that are needed for terrestrial digital television broadcasting. And in order for cable TV to correspond to this full transition to terrestrial digital broadcasting and the digitization of broadcasting in general, we will continue the tax/financial support in FY2006, in hopes of total digitization of cable by 2010.

  We will widely publicize the merits of digital broadcasting, the schedule, reception methods, and the ending date of analog broadcasting, and with public and private sectors in cooperating, we will work to diffuse digital reception devices to all households in preparation for full transition by 2011. Also, we will confer on the basic aspects of rules regarding content usage in digital broadcasting at the Telecommunications Council in July 2007.

□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 realize 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)Realize network technology and security technology, etc. that support ubiquitous terminals

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

(b) Deliberate on the role of next generation mobile living (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and related ministries)

<See II.3.1 Establishment of an infrastructure that enables safe and convenient diverse services of next generation mobile living (1) (a)>

(c) Research and development of dynamic network technology (Ministry of Internal Affairs and Communications)
<See III.2.6 Promotion of R&D that will form the foundations for the next generation IT society (2) (d)>

(2) Realize technology, handle verification tests and standardization, and enhance the guidelines for privacy protection, to enable the advances use/utilization of electronic tags

(a) Research and development of ubiquitous network technology (Ministry of Internal Affairs and Communications)
  By FY2010, we will conduct R&D to realize the secure collaborative control of around 10 billion ubiquitous terminals (electronic tags, sensors, and information appliances), collection and analysis of real-space marginal environments (context), and adaptive network control based on this information, thereby establish fundamental technology by the end of FY2007.

(b) Research and development regarding the advanced use/utilization technology of electronic tags (Ministry of Internal Affairs and Communications)
  We will research and develop network enhancement technology to realize electronic tag and network integration, establish the elemental technology by FY2007, and aim for practical utilization by FY2010. Additionally, we will cooperate with related ministries to conduct verification tests, keeping user needs and social impact in mind.

(c) Improve the environment for the dissemination of electronic tags (Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)
  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," according to changes in technology and usage environments.

(d) Research and development for ubiquitous sensor network technology (Ministry of Internal Affairs and Communications)
  We will research and develop ubiquitous sensor network technology, in which sensors recognize the situation of people and objects and their marginal environment, autonomously transmit information between them, and make real-time responses to situations possible. We will establish elemental technology by FY2007, and aim for its practical utilization by FY2010.

Additionally, we will cooperate with related ministries to conduct verification tests in the actual environment of usage.

(e) Build a cost-cutting logistics model for the distribution of perishable fresh foods (Ministry of Agriculture, Forestry and Fisheries)

By FY2007, we will build a cost-effective model that diminishes operational costs for the logistics of perishable foodstuff by a quarter. In order to achieve this end, we will develop and test a model centralized around the distribution of perishable foods from wholesale markets, that incorporates the use of electronic tags that utilizes ubiquitous computing technology to manage distribution information and make logistical operations more efficient.

(f) Award and disseminate progressive case examples of IT use/utilization models (Ministry of Internal Affairs and Communications)
<See III.2.1 An IT society that adopts universal design   (5) (a)>

(g) Research and development of the Asian ubiquitous platform technology (Ministry of Internal Affairs and Communications)
<See III.2.6 Promotion of R&D that will form the foundations for the next generation IT society   (2) (f)>

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 inappropriate use of networks are starting to have a great impact on our lives and socio-economic activities.

For this reason, it is necessary for the government and public to cooperate to strengthen measures as a nationwide effort to properly address issues such as cyber attacks on governmental bodies and critical information infrastructures and to minimize the leakage of important information and other damage caused by the inappropriate use of these networks. In addition, it is important to work on problem solving from multilateral, comprehensive points of view, as well as to take into consideration that information security incidents and cases involving the misuse of the Internet have become more diversified and complicated.

Regarding information security measures, in light of the need for rapid and powerful responses for threats that are surfacing, we established the "Information Security Policy Council" within the IT Strategic Headquarters. In February 2006, the council decided on "The First National Strategy on Information Security," and has begun implementation of measures based on Secure Japan 2006," the FY2006 execution plan. In FY2007, based on "Secure Japan 2007," which will be formulated on the progress made in FY2006, focusing on "raising the level of information security measures in the public and private sectors," we will promote measures outlined in the plan. In addition, in FY2008, we will continue to carry on the measures from FY2007, and move forward with the "focused reinforcement of information security infrastructure."

Regarding the misuse of networks, including that of illegal and harmful information on the Internet, we have put together a counter-strategy through the "IT Security Conference," and related ministries have been cooperating to promote filtering software, provide support for voluntary regulations by service providers, enrich moral education, and enhance consultation services. However, taking into account the gravity of rising crime rates relating to online meeting sites, in order to drastically reduce these damages, we must realize a safe and secure network environment by implementing concentrated efforts.

116

> **Through implementation of information security measures in government bodies and local entities**
>
> 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 2007," 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" (Decision by the Information Security Policy Council, December 13, 2005)) 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 FY2007, 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, 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 FY2007, 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.

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

Pursuing our efforts made in FY2006, 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. In FY2008, in order to strengthen the

overall information security for the e-Government, we will approach these measures in its totality.

(4)　Strengthen the rapid reaction capacities of governmental bodies against cyber attacks, etc.
From the standpoint of strengthening the rapid reactions capabilities of government bodies against cyber attacks, etc., in FY2007, we will promote information gathering across the government, conduct analysis of the attacks, provide advice to each of the individual government bodies, and also promote the establishment of Government Security Operation Coordination Team (GSOC) which will facilitate mutual cooperation among the individual government bodies and information sharing. Also in FY2008, we will plan for the steady operation of GSOC so that it can provide each governmental entity with general trends and analysis of the situation regarding cyber attacks, and will also promote the strengthen its capacity to provide information to each entity in order to formulate effective counter-measures.

(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 FY2007, 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.

(6)　Strengthen information security measures in local public entities
From the perspective of strengthening information security measures in local public entities, in FY2007, 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), and draw specific guidelines for integration and operation of necessary measures, audit their information security condition, and support the self-governing CEPTOAR, which functions as an information sharing unit regarding information security among local public entities.

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 2007," will be promoted.

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

118

With September 2007 in mind, we will verify and examine safety standards of each critical infrastructure, and make revisions as necessary. Also during the course of FY2007, we will investigate the level of penetration that the safety standards have achieved in each critical area of infrastructure, and based on results of analyzing the degree of interdependency, we will promote the review of "Principles for Formulating "Safety Standards, Guidelines, etc." concerning Assurance of Information Security Policy Council, Infrastructures" (Decision by the Information Security Policy Council, February 2, 2006).

(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 2007, we will continue to promote: the establishment of an environment for information provision and communication between the public and private sectors; development of a communication system between each critical infrastructure field ("Capability for Engineering of Protection, Technical Operation, Analysis and Response (CEPTOAR)"); and deliberations to establish the "CEPTOAR-Council," 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 FY2007, 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 assume threat scenario. In FY2007, cross-sectoral functional exercises will be implemented to promote the enforcement of countermeasures in each critical area of infrastructure.

(5) Review the "Action Plan relating to Security Measures for Network Security of Critical Infrastructures"
During FY2007, with the cooperation of ministries involved with each critical infrastructure, we will proceed with researching and understanding current information security measures in place to increase effectiveness, in order to review and revise the "Action Plan relating to Security Measures for Network Security of Critical Infrastructures" While doing so, we will also deliberate on a securing an effective collaborative framework/affiliation across relevant ministries, that can respond in events such as disaster emergencies.

> **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 2007," 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 FY2007, we will deliberate on policies for best practices for carrying out corporate information security measures, as well as promote the positioning of information security within private sector organizations. 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 FY2007 we will continue to promote research of quantitative evaluation methods of information security-related risk, third-party evaluation by international standards will be utilized, and preferential tax treatment will be applied to promote information security measures, etc.

(2) 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 FY2007, 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 measures against computer viruses and vulnerabilities

In FY2007, 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 FY2007.

> **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 2007," 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 FY2007, 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, FY2007 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 FY2007, 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 FY2007, we will continue to promote measures such as conducting verification experiments within usage environment models.

> **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 Ā to Ñ 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 2007," 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 FY2007, 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 FY2007, we will continue to promote the fostering of growth in personnel with multifaceted and comprehensive capabilities in information security-related higher education facilities. In FY2008, we will further engage in focused efforts to train and retain information security personnel.

(3) Promote international cooperation and coordination
 To promote international cooperation and coordination in the information security field, in FY2007, 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. In FY2008, basic policies and specific plans regarding strategic implementation of international cooperation and contribution of our government as a whole will be made official and accelerated.

(3) 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 FY2007, the foundations for cyber crime arrests and the protection and securing of people's rights

122

will be established, and the development/dissemination of technology that increases safety and reliability of cyber space will continue to be promoted.

(4) Improve the promotional structure of information security policies

In order for the government to comprehensively and organically implement information security policies, in FY2007, we will continue to strengthen the National Information Security Center and all related ministries, 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.

(5) 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 FY2007, 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.

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 will serve as a model for the rest of the world will be realized.

<Priority Policies>

(1) Promote measures for early detection and prompt reactions to illegal/harmful information on the Internet (National Police Agency and Ministry of Internal Affairs and Communications)

Effective cyber patrolling and Internet "hotline" operations will be promoted, where reports from Internet users regarding illegal and harmful information on the Internet are accepted, and subsequent police notification and deletion requests to providers are handled. Also, in a joint effort between public and private sectors, we will implement countermeasures against illegal/harmful information on the Internet, such as supporting the proliferation and operation of the "Study Group on Countermeasures against Illegal/Harmful Information on the Internet," established by industry entities in November 2006.

(2) Promote the "Action plan for the realization of a safe and secure information economic society" (Ministry of Economy, Trade and Industry)

The government will work on specific measures under the "Action plan for the realization of a safe and secure information economic society," established by the Subcommittee on Basic

Problems of Commerce and Information in Industrial Structure
Council in March 2006, and encourage appropriate measures by
businesses. Follow-ups on the progress and deliberations on new
issues arising from technological development and changes in the
economic society, will be held.

**(3) Dissemination of filtering software (Cabinet Secretariat,
Ministry of Internal Affairs and Communications, Ministry of
Education, Culture, Sports, Science and Technology, Ministry of
Economy, Trade and Industry, National Police Agency, and related
ministries)**
<See II.2.4 Implementation of measures to counter and
fundamentally reduce illegal and potentially harmful information
on the Internet (1) (a) (i) >

**(4) Promote measures on spam (Ministry of Internal Affairs and
Communications, Ministry of Economy, Trade and Industry)**
  The revised Specified Electronic Mail Act of 2005 will continue
to be exercised, while its current level of enforcement will be
examined and necessary measures will be put in place by October
2008.

  In addition, the spam abolishment project, 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 promoted and reviewed as necessary. 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
continue to be promoted in FY2007.

  Furthermore, the deliberation and implementation of specific
international collaborative policies for anti-spam strategies
will continue to be promoted and realized through international
organizations, such as the OECD, and other bilateral discussions.

**(5) Response to individual cases involving illegal and harmful
information on the Internet (Cabinet Secretariat and related
ministries)**
  In collaboration with relevant ministries, the IT Reassured
Conference has been promoting measures against phishing, online
suicide alerts/pacts, e-Commerce, spam, and human rights
violation cases on the Internet. The group will continue to bring
attention to the most recent cases and raise awareness for
related policies, and in the event that a new case of illegal and
harmful information occurs on the Internet, an IT Reassured
Conference will be held in a timely manner to implement
appropriate measures.

> **Promote IT moral education**
>
> Enable citizens to take appropriate measures against the improper use of networks, such as illegal and harmful information on the Internet.

<Priority Policies>

(1) Implement the "e-Net Caravan" (Ministry of Internal Affairs and Communications, and Ministry of Education, Culture, Sports, Science and Technology)
<See II.2.4 Implementation of measures to counter and fundamentally reduce illegal and potentially harmful information on the Internet (1) (c) (iii) >

(2) Promote measures that protect adolescents from harmful environments (Ministry of Education, Culture, Sports, Science and Technology)
<See II.2.4 Implementation of measures to counter and fundamentally reduce illegal and potentially harmful information on the Internet (1) (c) (iv) >

(3) Research and develop new IT media literacy training techniques for the ubiquitous network era (Ministry of Internal Affairs and Communications)
<See II.2.4 Implementation of measures to counter and fundamentally reduce illegal and potentially harmful information on the Internet (1) (c) (v) >

(4) Strengthen measures against illegal/harmful information on the Internet (National Police Agency)
<See II.2.4 Implementation of measures to counter and fundamentally reduce illegal and potentially harmful information on the Internet (1) (c) (vi) >

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 of various IT related facilities in schools have been promoted through the e-Japan Strategy and other methods, computerization in schools cannot be said to have made sufficient progress, as seen in the case of delays in constructing intra-school LANs.

On the other hand, in recent years, there has been progress in the specification and clarification regarding standards for IT utilization teaching ability among teachers, as well as the implementation of establishing guidelines for an information security policy, which are foundational to further policy development.

In the coming years, we will continue to implement supportive measures in the furnishing of hardware, and by heightening the incentives resulting from computerizing schools, such as by clarifying the educational effects of utilizing IT, we will strongly promote implementation. 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. Furthermore, we will 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.

In addition, security functions will be strengthened in schools to be able to properly handle issues regarding personal information leakage of students and illegal/harmful information on the Internet, and IT moral education for children will be enhanced.

Improve IT infrastructure in schools
Realize computerization in schools by providing one PC per teacher, improving network environments, and enhancing support systems for IT infrastructures.

<Priority Policies>

(1) Develop IT infrastructure

(a) Set up IT environment (**Ministry of Education, Culture, Sports, Science and Technology, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)**
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources (5) (b) (ii)> A process chart for the computerization of schools will be drawn by September 2007.

(b) Improve IT utilization environments for teachers (Ministry of Education, Culture, Sports, Science and Technology)
  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. Within FY2007, we will conduct effective and cutting edge practical research regarding the computerization of school affairs and evaluate its effectiveness.

(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.

  Within FY2007, operations that are to be based on the cooperation of mayors' offices of regional public entities, board of education and schools will be analyzed, and following FY2008, a model system based on results of the analysis will be deliberated, investigated, and by FY2010, we aim to distribute and develop the system to prefectures/municipalities.

(d) Promote multiplatforming in elementary and secondary education (Ministry of Economy, Trade and Industry)
  In FY2006, an IT environment with exceptional economic efficiency, safety, and open standard capabilities was integrated in elementary and secondary education levels, and verification experiments to test the adaptability and validity in various scholastic situations, such as educational affairs, school affairs and studying, were conducted. In FY2007, we plan for the national implementation of the progress made, based on experimentation results.

(e) Promote information security measures in schools (Ministry of Economy, Trade and Industry)
  In order to ensure information security in the field of education, in FY2006, guidelines for the establishment of information security policies based on actual situations, after having conducted verification experiments in each of the schools, etc., were created. In FY2007, in preparing for national distribution of these guidelines, we will go through the board of education to distribute them to elementary, junior high, and high schools.

(f) Promote the educational utilization of terrestrial digital television broadcasting (Ministry of Education, Culture, Sports, Science and Technology)

In FY2007, we will continue the implementation of model operations regarding the effective utilization of terrestrial digital television broadcasting. While we accumulate educationally effective case examples, we will create a pamphlet for public relations/dissemination purposes, and distribute them to elementary, junior high, and secondary education levels nationwide to promote the utility of terrestrial digital broadcasting in the field of education.

(2) Deliberations on aspects of support systems, such as external experts in charge of information systems (School Chief Information Officer), etc. (Ministry of Education, Culture, Sports, Science and Technology)

In FY2006, the status of those in charge of information systems in schools and the nature of the position of a school CIO were examined. In FY2007, those results will be compiled and detailed deliberations will be held on the reinforcement of support structure of the computerization of schools.

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)

In order to enable almost all public school teachers to use computers and utilize IT to teach, the following measures will be promoted in FY2007.
(a) Based on the IT utilization standards for teachers that was substantiated and clarified in FY2006, plans for improving IT utilization capabilities of teachers will be deliberated.
(b) We plan to spread and promote progress made in research relating to the positive effects of utilizing IT in education.
(c) We will conduct research on the effective and leading practices relating to the improvement of IT utilization among teachers and examine its effectiveness.

(2) Improve IT utilization environments for teachers (Ministry of Education, Culture, Sports, Science and Technology)
<See II.2.4 Development of human resources bases with an eye towards the next generation (1) (b)>

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. We will also continue our research regarding content that users desire, and future policies will reflect our findings.

We will also deliberate on the current system condition in order for the National Information Center for Educational Resources to be able to provide all their services with stability.

(2) Develop and spread digital education materials to teach advanced technology and science (Ministry of Education, Culture, Sports, Science and Technology)
In FY2007, in continuation of FY2006, through close cooperation with universities and research institutes, digital educational material that utilizes the achievements of cutting-edge R&D will be developed for use by teachers and students, as effective material for advanced technology and science education. This material will also be provided on "Science Network," in order to allow use by many educators, and its utilization in the training of teachers will also be promoted.

> **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) Conduct reviews towards the Revision on Course of Study (Ministry of Education, Culture, Sports, Science and Technology)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources (5) (a) (i)>

(2) Practical research on leading and effective education (Ministry of Education, Culture, Sports, Science and Technology)
We will conduct practical research on leading and effective education utilizing IT 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 examine the effectiveness of such.

(3) Promote education on information morality (Ministry of Education, Culture, Sports, Science and Technology)
<See II.2.4 Implementation of measures to counter and fundamentally reduce illegal and potentially harmful information on the Internet (1) (c) (ii)>

(4) Engage in information exchange with other countries that have leading frameworks for information education (Ministry of Education, Culture, Sports, Science and Technology)
 In FY2007, through hosting an international symposium and such, we will exchange information with other countries that are also promoting the utilization of IT in the field of education, and integrate those learnings in our policies.

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 IT technology relies heavily on human resources and in order for Japan's industries to increase global competitiveness, it is essential to cultivate high-level IT human resources who will be capable of creating high added values by using IT. 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.

While we work towards resolving this issue, there has been progress in recent years as there has been a coordinated effort among the industrial, academic and government bodies to handle parts of this issue through IT education in universities.

Going forward, it is necessary that the current efforts and progress made by the industrial, academic and government bodies thus far be implemented in universities on a nationwide. Furthermore, in additional to such efforts, there needs to be a focused and totalized approach for the formulation of a virtuous cycle of nurturing high level IT human resources in the industrial complex as well as elementary, junior high education and universities.

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.

Comprehensive measures toward the cultivation of high-level IT human resources

The cultivation of advanced IT human resources, such as project managers, IT architects, IT 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) Cooperation among related ministries to create high-level IT human resources development institutions, etc. (Cabinet Secretariat and related ministries)

In order to implement effective measures for advanced IT personnel cultivation with cooperation between government, industry and academia, cooperation will continue to be further enhanced for the following measures.

(a) Cultivation of human resources with practical high-level IT expertise in universities, etc.

i) Accelerating the formation of strategic bases to cultivate highly skilled IT human resources (Ministry of Education, Culture, Sports, Science and Technology)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources (1) (a)>

ii) Research and development into educational programs for the cultivation of advances information and communications personnel (Ministry of Internal Affairs and Communications)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources (1) (b)>

iii) Developing a comprehensive framework for the promotion of practical education (Ministry of Economy, Trade and Industry, Ministry of Education, Culture, Sports, Science and Technology)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources   (1) (c)>

iv) Deliberation on the practical education of highly skilled IT human resources (Ministry of Education, Culture, Sports, Science and Technology, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources   (1) (e)>

(b) Cultivating high-level IT human resources in society

i) The formulation of an industry-wide skills evaluation standard for the knowledge and ability of human resources (Ministry of Economy, Trade and Industry)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources   (4) (a) (i)>

ii) The further popularization of the Information Technology Engineer Examinations (Ministry of Economy, Trade and Industry)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources   (4) (b)>

iii) Information and communications personnel training support program (Ministry of Internal Affairs and Communications)
<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources   (4) (c)>

(c) 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)

<See II.3.3 Establishment of a virtuous cycle that leads to high-level IT human resources　(5) (a) (ii)>

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 FY2007, the improvement of the effective education will be selected as one theme of publicly subscribed themes for the "Support program for contemporary educational needs," and while prominent efforts of universities will continued to be supported, 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)

　Through cooperation among higher education institutions, in order to enable the provision of effective and efficient talent cultivation methods, we will promote the development of foundational technology for a support platform for the cultivation of human resources that will include e-learning functions 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

<center>—Strategic R&D—</center>

\<Basic Aspects\>

  Research and development in the IT area has been prioritized in the e-Japan Strategy and is one of the fields to be strengthened under the Science and Technology Basic Plan, which has led to our country's advancement in technology.

  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 on, 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.

> **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 f optical and wireless network technology

<center>134</center>

i) Research and development of photonic network technology (Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)

  Promote research and development of our leading optical technology based on cooperation among industrial, academic and government bodies to achieve larger network capacity, higher level network functions and the minimization of network electricity consumption.

  By FY2010, we will solidify 100Tbps class optical routers, elemental technology for the development of optical RAM, and foundational technology for the realization of an all-optical network that transmits via optical signals, and have actual demonstration of the technology by FY2015. Also, by FY2011, foundational technology for the development of an optical device necessary for the realization of a 10Tbps plus class, low electric consumption edge router will be developed. With the attainment of such technology, we will be able to realize a stable, ultra 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)
<See II.3.1 Establishment of an infrastructure that enables safe and convenient diverse services of next generation mobile living (2) (c)>

iii) Research and development of network device technology (Ministry of Economy, Trade and Industry)

  By FY2008, elemental technology to be used for the next generation information communications network which will enable dramatically higher level functions and lesser energy consumption based on nano technology, will be developed.

  In addition, we aim to create the following: an energy-saving device using superconductivity by 2007, an optical switching device with transmission capacity at the 10Tb/s level by 2008, a high frequency device at the 350Ghz level by 2010, and foundational device technology for the creation of a 10Tb/s plus class edge router by 2011.

(b) Research and development of robots

i) Research and development of universal interface et al. (Ministry of Internal Affairs and Communications)
<See III.2.1 An IT society that adopts universal design   (1) (b)>

ii) Practical application of the next generation robot (Ministry of Economy, Trade and Industry)

With the aim to implement multifunctional home robots by 2025, we will develop and demonstrate technology that functions to incorporate robots in real environments, and practical technology of robots that perform tasks contributing to people. By FY2010, we will develop common foundations (such as middleware, devices, etc.) and elemental technology (such as sensors, monitors, etc.) necessary in the practical adaptation of robots, and while we work on system development, we will also develop a methodology to safely incorporate robots into our lives.

(c) Research and development for improving information appliances

i) Research and develop advanced use/utilization of information appliances (Ministry of Internal Affairs and Communications)
In order to provide a wide variety of safe, secure, and advanced services through information appliances by 2008, the R&D of fundamental technology enabling information appliances to safely communicate and coordinate, regardless of being indoors or outdoors, will be promoted.

ii) Research and develop next generation display technology including organic displays (Ministry of Economy, Trade and Industry)
By utilizing the energy efficient displays integrated up until 2007, a next generation display utilizing highly efficient display/emission structure from innovative materials will be created by 2011, and energy-efficient technology for large screen, higher definition, and higher performance will be established.

iii) Research and develop storage technology (Ministry of Economy, Trade and Industry and Ministry of Education, Culture, Sports, Science and Technology)

iv) Research and develop semiconductor application chips (Ministry of Economy, Trade and Industry)
Create semiconductor application chips that save energy and upgrade (multi-functionalize, etc.) information appliances, by 2010.

v) Research and develop information appliance interconnection and interoperability technology (Ministry of Economy, Trade and Industry)
By 2012, in order to realize effective interoperability of information appliances, fundamental technology that enables remote management and system integration, while ensuring security, will be developed. And by 2015, computers will be made to recognize speech and different languages.

(d) Research and development of devices

i) Research and development of semiconductor technology (Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Economy, Trade and Industry)

By FY2010, a high-speed, energy-efficient device will be created through a 45 nano m level miniaturization of semiconductors, and corresponding design/development support technology, fundamental manufacturing technology and mounting technology will be established. The development of semiconductor devices based on new ideas will be supported and energy-saving, sophisticated devices, such as high-efficiency inverters by $10W/cm^3$ level power devices that will take the place of silicon transistors, will be realized.

> **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.

(a) Research and develop fundamental technology for the future in super computing (Ministry of Education, Culture, Sports, Science and Technology)

In order to advance computational science technology, by FY2007, efforts will be made to establish fundamental technology for hardware that breaks boundaries of existing technology and causes extensive ripple effects.

(b) Research and development of innovative simulation software (Ministry of Education, Culture, Sports, Science and Technology)

By FY2007, research and development will be conducted for a world's top-class simulation software that will run on ultra high-speed computers, and be used for phenomenon analysis of numerous mutually influencing incidents in a wide range of fields, such as life phenomena, manufacturing, and safety and environment in cities.

(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 at the end of FY2010, 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 development on the quasi-zenith satellite system (Ministry of Internal Affairs and Communications, Ministry of

Education, Culture, Sports, Science and Technology, Ministry of Land Infrastructure and Transport)

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) Research and development of ultra high-speed Internet satellite (Ministry of Internal Affairs and Communications, and Ministry of Education, Culture, Sports, Science and Technology)
<See II.1.3 Enhancement of international competitiveness in ICT industry (5) (b)>

(f) Build network environment for research and development that includes cutting edge optical technology (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology, and related ministries)
<See II.1.3 Enhancement of international competitiveness in ICT industry (5) (a)>

(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)

In regard to the core themes, namely, circulatory/metabolic disorder control and drug effect/side effect prediction, R&D will be promoted by FY2007, for cell/vital function simulation, through the organic cooperation of research centers.

We will conduct research and development for the establishment, upgrade and utilization of a database that contains biological information such as genome and DNA information, in an effort to support the development of bioinformatics, as well as the energetic industries of agriculture, forestry and fisheries, and the creation of new industrial fields. Results of the research and development will be transmitted.

(b) Development and dissemination of foundational software for IT utilization

i) Technical developments relating to next generation intellectual information access (Ministry of Economy, Trade and Industry, and Ministry of Education, Culture, Sports, Science and Technology)
<See III.3.1 Enhancement of the presence of Japan in the international competitive society (1)>

ii) Disseminate development of visualization technology of software building process (Ministry of Education, Culture, Sports, Science and Technology)

By FY2011, we will develop and disseminate the world's first technology for the visualization of software production process, which would record details at each stage of the process and allow, as needed, to reconstruct the various stages in order for developers to be able to determine that the building process is on point.

iii) Policy for higher-level software engineering (Ministry of Economy, Trade and Industry)

<See II.1.2 Increase in economic and industrial productivity of products and services through IT (capacity-building for small-mid sized companies in particular) (3) (b)>

(c) Research and development of high definition 3D visualization software technology (Ministry of Education, Culture, Sports, Science and Technology)

<See III.3.1 Enhancement of the presence of Japan in the international competitive society (5)>

(d) Promote improvement and effective utilization of air and maritime radio communication (Ministry of Internal Affairs and Communications, and Ministry of Land, Infrastructure and Transport)

In order for the comfortable use of Internet and mobile phones at sea or in the air, efforts will be made to realize new radio usage systems by FY2010, through necessary technological developments.

(e) Develop a new production system for agriculture fields (Ministry of Agriculture, Forestry and Fisheries)

By FY2011, as part of our nation's research 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 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 as horticulture expands to greater scales.

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 next five years.

<Priority Policies>

(1) Research and development of IT that ensures safety and security in society and IT

(a) Develop technology that supports disaster victim aid (Ministry of Internal Affairs and Communications)
<See III.1.3 The world's leading safe and secure society (2) (e)>

(b) Research and development on optical/quantum communication technology (Ministry of Internal Affairs and Communications)
We aim to establish the foundational 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 foundational technology required for quantum broadcasting for ranges over 100km.

Also by FY2010, elemental technology for the realization of wireless transmission of quantum coding will be developed.

(c) Research and development for the detection, recovery, and prevention of route hijacks (Ministry of Internal Affairs and Communications)
By FY2009, the technology to enable detection and recovery of route hijacks within a few minutes, and also prevent its occurrence will be established.

(d) 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.

(e) Research and development on fundamental technology for a solid electronic authentication technology (Ministry of Economy, Trade and Industry)
In FY2007, research and development will be advanced in creating a safe computing environment by the utilization of PCs that have integrated code processing function, code key protection function, and TPM (Trusted Platform Module), a security function that tests authenticity of the platform.

(f) 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 a pressing undertaking to secure IT reliability, we will to promote the development of virtual machine capabilities that can provide information security features independent of the current environment, such as OS, applications, etc, while maintaining it. From FY2007, verification tests will be conducted on these partial results and the development of ID management and encrypted communication for fundamental function extension will be promoted.

(g) 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.
(2) Research and development to realize a ubiquitous environment

(a) Research and development for ubiquitous sensor network technology (Ministry of Internal Affairs and Communications)
<See III.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 (2) (d)>

(b) Research and development regarding the advanced use/utilization technology of electronic tags (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology and other related ministries)
 <See III.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 (2) (b)>

(c) Research and development on the fundamental technology for next generation networks (Ministry of Internal Affairs and Communications)
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 of dynamic network technology (Ministry of Internal Affairs and Communications)
Establish the foundational technology necessary in creating a network environment that allows anybody to access information accumulated on the network from various and diverse networks and devices.

(e) Research and development of ubiquitous network technology (Ministry of Internal Affairs and Communications)
<See III.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 (2) (a)>

(f) Internationally implement the Asian ubiquitous platform technology (Ministry of Internal Affairs and Communications)
 Establish fundamental technology for the international implementation of a ubiquitous network technology that allows information that is associated to people or things to be pulled out when necessary, and be sent to necessary recipients via effective use of digital tags.

(3) Research and development for user-friendly, passible interface technology

(a) Research and development of universal content technology (Ministry of Internal Affairs and Communications)
<See III.2.1 An IT society that adopts universal design (3) (c)>

(b) Research and development of natural communication technology (Ministry of Internal Affairs and Communications)
<See III.2.1 An IT society that adopts universal design (4) (a)>

(c) Research and development of common reality technology (Ministry of Internal Affairs and Communications)
 Basic research will be carried out by FY2007, and by 2010, the obtainment, distribution, and emulation technology of cognitive information, including three-dimensional imagery systems, signal processing technologies of ultra high-definition images, multi-spectral image acquisition/transmission technology, and multi-sensory information will be realized.

 Furthermore, by 2015, realistic communication technology will be realized through the establishment of ultra-high realistic sensation audio-visual reproduction systems and the obtainment, emulation, and distribution technology of high-definition three-dimensional imagery.

(d) Research and development of next generation content production and distribution support technology (Ministry of Internal Affairs and Communications)
 By FY2007, establish technology that utilizes the network that enables secure, efficient and effective editing and transmission of ultra high definition visuals (next generation visual content), in order to realize a society in which a wide range of users can experience a rich visual environment.

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>

In regards to the provision of information, we have pushed forward policies that promote the creation and distribution of attractive content through the digitization of cultural heritage, enforcing intellectual property protection, and the cultivation of human resources for content creation, et al. In recent years, our content materials have been well-received, often referred to as "Cool Japan" overseas. However, in order to enhance our presence internationally, we must continue our ongoing efforts, while also engaging in the effective transmission of content material that resonates with the global market and also work to expand the market scale of our content industry.

Within the IT industry, we have placed emphasis on enhancing international competitiveness through improved quality and production of software, discovery and nurturing of unique and original creators, and through the technical developments that enable the utilization of massive amounts of information. However, the United States remains to hold the overwhelming share of the global software business, while China and South Korea are rapidly catching up to us in the areas of information appliances and devices, which have traditionally been our strongholds. In order to increase our competitiveness in the internationally competitive society, we must continue to develop methods to improve the trustworthiness and productivity of software, which serve as a foundation for our competitiveness, support the discovery and cultivation of superior software development talent, promote research and development of hardware, such as the development of devices, upgrade information search technology, develop software parts that are integrated in automobiles and mobile communications devices and information appliances, and strategic promotion while being mindful of the global marketplace.

Additionally, strategies regarding international standardization and intellectual property are very important in the IT field, and we will keep this in mind when implementing measures for new technologies and services.

Strengthen 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 of digitization and dissemination of cultural heritage (Cabinet
Office, Ministry of Education, Culture, Sports, Science and Technology)

(a) Promote online structure of cultural heritage (Ministry of Education, Culture, Sports, Science and Technology)
  In continuation of our efforts in FY2006, we aim to archive our cultural heritage, beginning with aggregating cultural heritage information of cultural property and art pieces from museums and art galleries nationwide, and during FY2007, we will bring the comprehensive portal site, "Cultural Heritage Online," which contains information on our nation's treasured cultural heritage to full operation.

(b) Archive and transmit our nation's rich cultural heritage (Cabinet
Office, Ministry of Education, Culture, Sports, Science and Technology)
  Promote the digitization of important cultural assets and important historic archives belonging to the National Archives of Japan, by use of high-resolution color images, and via Internet, release successively.

  By FY2012, we aim to digitize 30 million images of important historic archives of our country and neighboring Asian nations, and make them available domestically and internationally through the Internet.

  Furthermore, important cultural assets belonging to national museums and representative of our country, will be semi-permanently saved as high-resolution digital information, translated into four different languages (English, French, Chinese, and Korean), and made public on the Internet in order for a wide range of audiences to be introduced to our rich cultural treasures and to gain familiarity and understanding of our culture.

(2) Promote the utilization of broadcast program contents

(a) Promote a new content distribution model (Ministry of Internal Affairs and Communications, Ministry of Education, Culture, Sports, Science and Technology)
  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

144

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.

(b) Strengthen overseas transmission of broadcast program contents (Ministry of Internal Affairs and Communications)

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.

(c) Promote measures that deal with rights handling of the secondary use of past broadcast programs (Ministry of Internal Affairs and Communications)

In order to utilize broadcast programs owned by NHK Archives and commercial broadcast businesses, in continuation of FY2006, measures related to agreement formulations between the parties concerned and the secondary use of broadcast programs will be promoted.

(3) Strengthen measures for the protection of intellectual property (National Police Agency, Ministry of Internal Affairs and Communications, Ministry of Foreign Affairs, Ministry of Finance, Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Economy, Trade and Industry)

Continuing with our efforts in FY2006, we will carry out an anti-piracy campaign in the Asian region so that our country's content businesses can securely develop overseas. Specifically, experts on countermeasures against counterfeit and pirated products will be sent to the Asian region, and in collaboration with local governments, collect and transmit information, provide industrial counseling, and implement enforcement measures. In tandem to the implementation of these countermeasures, proper distribution channels for legitimate products will be cultivated and expanded, impediments will be researched, and necessary information can be provided.

Measures will be implemented to demand stricter regulations by the country where content right infringement occurred, tighten strengthen coordination with the enforcement body in the country where the infringement took place, hold training operations for developing countries, support right holders to exercise their

rights, and strengthen cooperation between the public and private sectors, as well as, in FY2007, hold a "training seminar" for enforcement officials (such as customs officials) of the country where the infringement occurred.

Furthermore, in order to have copyrights over content protected appropriately, 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.

(4) Research and development for next generation video content production and distribution support technology (Ministry of Internal Affairs and Communications)
<See III.2.6 Promotion of R&D that will form the foundations for the next generation IT society　(3) (d)>

(**5) Research and development of high-definition three-dimensional imaging software technology, etc. (Ministry of Education, Culture, Sports, Science and Technology)**
In order to realize an environment where anybody, anywhere, at anytime can have access to education, culture, and art, the technology for three-dimensional imaging software and for its utilization in the educational field will be researched and developed, and a clear idea of its practical realization will be set by FY2008.

(6) Comprehensive transmission of Japanese culture (Ministry of Education, Culture, Sports, Science and Technology)
In order to effectively introduce to the world a wide range of Japanese cultural activities, from traditional culture to contemporary culture and art, by FY2008, the international needs regarding acceptance of Japanese culture will be explored, Japanese culture and art group activities will be researched, and this information will be provided to the world in English via the Internet, etc.

(7) Internationalization of the transmission and distribution of academic information (Ministry of Education, Culture, Sports, Science and Technology)
By utilizing J-STAGE, a comprehensive system that handles paper submission, review, editing, and publication of academic papers for overseas readership, by FY2009, 500 of the major academic journals will be electronically saved and released going back to the first issue, and by doing so, we aim to fortify international

transmission and speed up distribution of our progress in research and development.

(8) Promote internationalization of contents
  The following measures will be implemented to promote internationalization of our country's content industry.

(a) Totalized generation of contents (Ministry of Economy, Trade and Industry)
  Beginning in g FY2007, individual events for film, games, music, animation et al., contents referred to as "Cool Japan," will be unified in the Japan International Contents Festival and generated in a totalized comprehensive manner.

(b) Promote comprehensive media arts revival program (Ministry of Education, Culture, Sports, Science and Technology)
  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) Set up regulatory system to increase competitiveness of contents such as broadcast programs (Ministry of Internal Affairs and Communications)
<See II.1.3 Enhancement of international competitiveness in ICT industry (3) (b)>

(d) Strengthen transmission of broadcast programming contents to overseas (Ministry of Internal Affairs and Communications)
<See III.3.1 Enhancement of the presence of Japan in the international competitive society (2) (b)>

(e) Build an 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. In FY2007, research will be conducted for to outline the basis of the system necessary for its establishment.

(f) Develop information launch activities towards overseas (Cabinet Secretariat, Ministry of Internal Affairs and Communications, and related ministries)
  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 addition, system and content of a comprehensive English
information communication portal site will be reviewed, and a bi-
monthly English newsletter will be published.

Secure 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) Establishment of next generation optical broadband network
infrastructure to help increase international competitiveness of
ICT industries, et al.**
<See II.1.3 Enhancement of international competitiveness in ICT
industry (5)>

**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) Technological development concerning the access to next
generation intellectual information, such as image searching,
information analysis, etc. (Ministry of Economy, Trade and
Industry, and Ministry of Education, Culture, Sports, Science and
Technology)**
  With the aim to fortify our competitiveness in the
international marketplace, by FY2010, concise and accurate search
and analysis technology will be developed and applied to the
various digital information, such as text, image and positioning,
accumulated in diverse, high-function devices such as information
appliances and cellular telephones.

Also, by FY2011, research and development will be conducted for the fundamental elements relating to the structural technology for an ultra high quality database, crucial in the strategic utilization of large-scale information.

(2) Measures to strengthen international competitiveness of software

(a) Policy to upgrade software engineering (Ministry of Economy, Trade and Industry)
<See II.1.2 Increase in economic and industrial productivity of products and services through IT (capacity-building for small-mid sized companies in particular) (3) (b)>

(b) Development and dissemination of visualization technology of the process of software building (Ministry of Economy, Trade and Industry)
<See III.2.6 Promotion of R&D that will form the foundations for the next generation IT society   (2) (b) (ii)>

(c) Increase competitiveness and productivity of national production by the utilization of IT (Ministry of Economy, Trade and Industry)
<See II.1.2 Increase in economic and industrial productivity of products and services through IT (capacity-building for small-mid sized companies in particular) (3)>

(d) Discover and foster ingenious creators (Ministry of Economy, Trade and Industry)
  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.

(e) Totalized software development (Ministry of Education, Culture, Sports, Science and Technology)
  By FY2007, based on needs from industries, research potential of universities and human resources nurturing will be maximized to promote both research and development of software, and the cultivation researchers, together.

(3) Develop the information communications industry in Okinawa (Cabinet Office, Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)
  Based on the model demonstration business of software development and utilization of data centers aimed for the development of the information communications industry in Okinawa, we will deliberate on details regarding the creation of "IT Shinryo Park," which will serve as a centralized stronghold for such activities. The following measures will also be promoted

with consideration of the Okinawa Development Plan and the plan
to make Okinawa a special district for international
communications, etc.

(a) Promote operations for the nurturing of high-level IT human
resources who will contribute to the expand and draw business
assignments and opportunities

(b) Attract and promote growth of IT companies through joint
usages of facilities, etc.

(c) Cooperate with the prefecture and municipalities to promote
the development of both hardware and software information and
telecommunications infrastructure, including the islands.

**(4) Promote the use of Mutual Recognition Agreement (MRA) for
electronic communication devices relating to foreign countries
(Ministry of Internal Affairs and Communications)**
  We will contribute to the fortification of international
competitiveness of electronic communications device manufacturers
by launching various support policies promoting the use of Mutual
Recognition Agreement (MRA), which makes it more convenient for
companies to develop internationally. Specifically, we will
provide information relating to assessment of standards and
conformity, and scrutinize substandard or inappropriate devices
in the domestic market.

**(5) Strengthen international competitiveness of ICT industry
(Ministry of Internal Affairs and Communications)**
<See II.1.3 Enhancement of international competitiveness in ICT
industry>

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" (Decision
made in December 2006 by Intellectual Property Strategy
Headquarters) in order to strengthen our nation's efforts towards
international standardization.

(**1) Strengthen international standardization activities (Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry)**

(a) Strengthen our nation's standardization proposal and promote strategic international standardization activities
  Under the "Action Plan for International Standardization Activities" (reviewed and established by the Japanese Industrial Standards Committee, June 2007), "Strategy on R&D/standardization to strengthen technical competitiveness in the information communication field" (Information Communication Council report, March 2003), and
"R&D Programs for the Ubiquitous Network Society — UNS Strategic Programs" (Information Communication Council report, July 2005), the Japanese proposals for standardization made to IEC, ISO, ITU, IETF, etc., will be reinforced and the further cooperation and interaction in the Asia region will be promoted, to bring about strategic activities for international standardization.

(b) Internationally develop technical testing of information processing and skill standards
  Through a set of skill standards based on technical testing of information processing, which is an objective evaluation tool of knowledge relating to IT, and the framework of skill and career format of a desirable IT talent, and with support for the formulation of test items and support from hired experts, we will establish our position as a standard for human resources development and evaluation method within the Asian region. Together, the international standardization of technical testing of information processing and skill standards will be promoted.

(c) Attain posts in international institutions, et al.
  In order to lead international standardization and make adjustments to the use of wireless, the assignment of a Japanese national to a significant post such as administrative director of an international institution will strengthen our foundation for our activities in international institutions.

(2) 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 and Transport)
<See II.2.3 Contribute to the reduction of road traffic-related accidents with the development of the world's leading Driving Safety Support Systems (3)>

(3) Global dissemination of sea equipment and marine radio equipment
(Ministry of Internal Affairs and Communications, and Ministry of Land, Infrastructure and Transport)
  Deliberations will be held between FY2007 and FY2009 in regard to the establishment of technical standards of IT utilizing sea

equipment and corresponding installation requirements for vessels, and the adoption of universal design in sea equipment. With these results, suggestions will be made to the International Electrotechnical Commission (IEC) and the International Maritime Organization (IMO) to work toward international standardization/canonicalization. By FY2010, deliberations will also be held for technical standards of newer marine radio equipment that utilize IT, etc., and suggestions will be made to the ITU, IMO, etc., to promote international standardization.

Increase 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) A tourist information system utilizing IT (Ministry of Land, Infrastructure and Transport)

In continuation of FY2006, efforts to build a comprehensive tourist information system that links various information delivery channels, from IT equipment, such as mobile phones, to guidance signboards and pamphlets will be promoted, and verification tests that will provide local event information and disaster prevention information to domestic and international tourists will be conducted.

3.2 <u>International contribution by providing problem-solving models</u>
—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.

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) Planning strategic IT cooperation in Asia (Cabinet Secretariat, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and other related ministries)

By utilizing collaborative measures between related ministries and cooperating institutions, such as the Asia IT Initiative, and through research on computerization measures taken by each Asian country, bilateral/multilateral policy dialogues, exchange of information/opinions with local ODA task forces under close cooperation with related ministries, a strategic and

comprehensive program in the IT field that combines various different methods, such as financial assistance or technical aid, will be created.

In addition, through Do Site (Digital Opportunity for Global Community), the provision of information relating to international digital divide and digital archives, as well as the exchange of opinions between IT expert groups and IT policy managers of developing countries will be proactively implemented.

(2) Fostering IT human resources in Asia (Cabinet Secretariat and related ministries)
In order to support the fostering of IT human resources and the expansion of business dealings with Japan in Asian developing countries, such as the Philippines and Vietnam, human resource development operations in the localities or through the use of Japanese higher education facilities will be promoted, with consideration of utilizing the OSS (Open Source Software) curriculum. As the ITPEC (IT Professional Examination Council) promotes the unified Asia examination in countries that have incorporated our IT engineering examination system (such as the Philippines and Vietnam), to be taken at the same time on the same day, we will cooperate in the formulation of a foundation for mutual exchange among IT human resources by providing examination questions and support publicity of the examination and smooth operation going forward.

(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.

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 and Transport)
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)
  Our country's multiple-addressing municipal disaster prevention government radio transmissions systems and broadcast systems are effective information propagation methods during disasters, and the validity and necessity of these systems will be communicated to other countries at various opportunities during FY2006, such as at international conferences and policy dialogues.

(2) Environment

(a) Carry out policy dialogues and model operations in connection with Asian nations in regards to the improvement of international traceability of waste by utilizing IT, and pilot projects utilizing satellites (Ministry of Economy, Trade and Industry, and Ministry of Environment)
<See III.1.2 An environmentally-friendly society that utilizes IT
  (1) (a)>

(b) International cooperation by way of global mapping development (Ministry of Land, Infrastructure and Transport)
  In order to reach stage 1 (during FY2007) and 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. While providing support to others, we will also prepare our nation's stage 2 data. In addition, we will also push forward policies to promote the utilization of global map data, and for each individual Asian nation (particularly developing countries) to develop human resources to become capable of producing the mapping data themselves.

(3) Management of the movement and circulation of people

(a) Tighten international passenger procedures by utilizing biometrics while securing convenience (Ministry of Justice, Ministry of Land, Infrastructure and Transport, Ministry of Economy, Trade and Industry and other related ministries)
<See III. 1.3 The world's leading safe and secure society (5) (b)>

(b) Deliberations on the realization of safe and efficient international physical distribution through the utilization of electronic tags, etc. (Ministry of Internal Affairs and

Communications, Ministry of Land, Infrastructure and Transport, and other related ministries)
  In order to attain both safety and efficiency in international physical distribution, verification tests will continue to be implemented under the collaboration of related ministries regarding import and export between the United States and Asian nations, and specific promotional measures to utilize electronic tags in physical distribution operations will be considered.

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) Development of multi-linguistic processing and OSS foundations in Asia
(Ministry of Economy, Trade and Industry)
  The verification test of OSS (Open Source Software) in the local language, and human resources training for operating OSS, will be conducted in FY2007. We will also provide information regarding the progress made in the localization process in individual countries, OSS usage situation in government, and technical information that OSS-related companies hold, and hold a symposium aimed to promote the continual spread of OSS in the Asian region.

(2) 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 continue to 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.

  Furthermore, the FY2007 APEC/TEL (Asian Pacific Economic Cooperation/Telecommunications Working Group) will be hosted in our country, and we will lead the discussion pertaining to policies and regulations for the next generation network era.