Basic Policy and Action Plan for Building IT Disaster-Management Lifeline

June 28, 2012

IT Disaster-Management Lifeline

Promotion Conference

Introduction

Basic concept

Information and communication technology (IT) is a tool that makes possible immediate exchanges of information among remote locations and plays a crucial role as essential social infrastructure in the day-to-day lives of the public and the economic activities of businesses. The importance of IT as infrastructure for the enjoyment of diverse information and services is growing as broadband infrastructure develops and Internet use grows explosively.

In addition, IT has become indispensable infrastructure during emergencies such as earthquakes and other natural disasters for ensuring the safety of the persons and lives of citizens by conveying emergency information and functioning as a means of communications for confirming the safety of individuals.

While Japan suffered tremendous damage as a result of the Great East Japan Earthquake, IT performed important functions as social infrastructure when the earthquake occurred and during recovery and restoration in the disaster areas.

Communications infrastructure in particular suffered extensive damage, resulting in the loss of means of communications and congestion of communications systems, which led to the currents of numerous instances where conventional means of communications did not function including difficulty making calls to fixed-line and mobile phones. But social network systems (SNS) were utilized for life-saving and other measures and various other services that make use of the Internet were provided and functioned effectively, because Japan's high-speed broadband infrastructure is highly developed, and mobile phone networks that are able to use the Internet have spread extensively.

IT can be used in life-saving activities including as an emergency communications network and for providing location information. IT has become community infrastructure that supports society along with electricity, water, gas, and so on and is now considered as a lifeline for disaster-management and response.

Developing IT-based disaster-management lifelines at the world's highest levels, adopting guidelines for such development, globally disseminating of the knowledge that Japan has acquired, and contributing to the creation of IT-based disaster-management

best practices based on experiences in previous earthquakes is a necessary role for Japan, which has received support from countries around the world.

To achieve these objectives, a decision was made to present a basic policy concerning IT-based disaster-management lifelines that should be implemented by the public and private sectors and a concrete action plan in order to facilitate more effective use of IT as disaster-management infrastructure during normal times and as a lifeline during the occurrence of a disaster.

Scope

The main subjects of this basic policy and action plan are large-scale disasters concerning which the Prime Minister's Response Headquarters is established. Information concerning large-scale disasters is set forth in Attachment 4 to the Detailed Government Initial Mobilization Plan for Emergency Situations (adopted by the Chief Cabinet Secretary). The scope covers areas where, based on experiences since the Great East Japan Earthquake, IT can be effectively used for evacuation site operation and so on immediately following the occurrence of a disaster and for several weeks after as specified in the post-disaster recovery and restoration timeline. This is not intended to preclude adoption of the matters set forth in this action plan in response to other disasters.

The foundations of IT-based disaster-management lifelines must not only consider lifelines based on traditional means of communication, but must also anticipate the Internet uses that functioned effectively during the recent disaster, and it is necessary to make maximum preparations for flexible and optimal communications responses that can prevent the interruption of communications during a disaster. It is also necessary to design network infrastructure that can withstand damage from disasters and takes into consideration security and line quality.

Schedule

The target is to put the action plan into practice by the summer of 2013 in principle, beginning with items that can be implemented quickly.

The status of implementation will be followed up and flexible reviews conducted, taking into consideration ongoing changes in technology and environments.

1. Disclosure and Secondary Use of Disaster-Related Administrative Information

(1) Disclosure and identification of disaster, evacuation, and basic living information necessary after the occurrence of a disaster

【Basic policy】

(i) Identification and organization of necessary disaster-related information

Arrange information necessary during a disaster with respect to the location of the information, the scope of use in advance. Examples of information which should be arranged include evacuation instructions, evacuation recommendation, damage to and restoration of lifelines (telecommunication, electricity, water, gas, transportation, etc.), subsistence goods and safety of residents.

(ii) Actions Prior to the Occurrence of a Disaster

The basic principle is that the possessors of information necessary during a disaster (government ministries and agencies, local governments, private organizations, etc.) gather and disclose the information, but rules will be adopted to specify who will exhaustively gather and disclose information following the occurrence of a disaster and to clarify the disclosure of information that is difficult to disclose to general public (e.g., effective only for internal use).

(ii) Actions at the Time of a Disaster

Gather, distribute, immediately disclose and appropriately update information based on the share of roles among relevant entities from the occurrence of the disaster until restoration and recovery.

【Action plan】

The Cabinet Office, in cooperation with other ministries and agencies, will organize the locations of information with respect to government and private sector information believed to be necessary following the occurrence of a disaster including evacuation instruction information and the basis for such instructions, information on damage to and restoration of lifelines, and basic living information. Following the occurrence of a disaster, geospatial information systems (GIS) will be used to gather, distribute, immediately disclose, and appropriately update information in a timely and appropriate manner based on the roles of each entity. (Cabinet Office (Disaster Management), government ministries and agencies)

(2) Clarification of data locations

(i) Basic development of disaster-related administrative information

【**Basic policy**】

Spread and expand common foundations on which local governments will gather, manage, and distribute disaster-related information necessary at the time of the disaster (evacuation orders, evacuation site information, etc.) and link information issuers and information distributors.

To supplement disaster support agreements between local governmental bodies, expand and enhance disaster support agreements with private sector bodies. In addition, encourage conclusion of disaster agreements between governments and private sector bodies.

Encourage the development of systems for rapid sharing of administrative information with the private sector in order to gather grassroots information at the time of a disaster and perform appropriate matching with rescue and support operations.

Also, encourage the use of SNS as one route for the distribution of necessary information at the time of an earthquake disaster including evacuation instructions, damage information, transportation information, road status information, and so on.

Create databases for the dynamic consolidation and use of various types of data in urban spaces.

【**Action plan**】

Take measures to share and release disaster-related government information using various types of media including private communal media such as SNS and other Internet services, thereby diversifying the channels by which the public can obtain information. (Cabinet Secretariat (Cabinet Public Relations), government ministries and agencies)

Spread and promote "Public Information Commons" [1] and encourage the development of disaster information collection and distribution systems by local governmental bodies. (Ministry of Internal Affairs and Communications)

To supplement disaster support agreements between local governmental bodies, encourage the conclusion of disaster support agreements that include the private sector and the conclusion of such agreements between government and the private sector. (Fire and Disaster Management Agency, Cabinet Office (Disaster Management))

---

[1] Information infrastructure that links "information issuers" that distribute public information such as central government ministries and agencies, local governmental bodies, and transportation operators and "information distributors" that convey that information to the public such as broadcasters, newspapers, and telecommunications operators. As a result, information issued by nationwide information issuers can be distributed to information distributors nationwide at the same time, making it possible for residents to obtain information from a variety of media including television, radio, mobile phone, and portal sites.

Encourage collaboration between the development of common API[2] under the Information Distribution Collaborative Infrastructure Development Project being implemented by the Ministry of Internal Affairs and Communications and the investigation of public information sharing standard schemes (XML[3] based standard data category families) by the Ministry of Economy, Trade and Industry while taking into account international standards and existing domestic formats, investigate how to rapidly provide necessary governmental information during disasters, and implement feasible measures. (Cabinet Secretariat (IT Policy Office), Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, government ministries and agencies)

(ii) Centralization of Points of Contact for the Distribution of Information to the Public
　【**Basic policy**】
　　Create and operate portal sites for one-stop access by the public to public information in times of disaster, make them broadly known, and encourage their use.
　【**Action plan**】
　　Reinforce government publicity and public relations through use of information and communications technologies. (Cabinet Secretariat (Cabinet Public Relations), government ministries and agencies)
　　Make preparations during ordinary times for the creation and operation of portal sites that contain information from various ministries and agencies on the website of the Prime Minister and create links with the sites of local governmental bodies and NPOs during disasters. Also, create links to the information of government ministries and agencies distributed on SNS. (Cabinet Secretariat (Cabinet Public Relations), Cabinet Office (Disaster Management), government ministries and agencies)
　　Investigate and implement measures for improving machine accessibility through the development of common tags (metadata[4]) that explained the details of information on government ministry and agencies websites in order to facilitate across-the-board access to ministry and agency information. (Ministry of Economy, Trade and Industry)

(3) Public release and standardization of API and data formats that make possible secondary use by third parties

---

[2] A collection of commands and functions that can be used when developing software for a specific platform (operating system of middleware).
[3] A markup language (a language that incorporates the meaning of information, structures, embellishments, and so on in other phrases using specific character strings referred to as "tags") for specifying the meaning and structure of phrases and data.
[4] Tags that specify information (meta information) relating to website content for providing information to browsers and search engines.

(i) Public release and standardization of formats

【Basic policy】

Take into consideration convenience to users including enabling secondary use of information provided by administrative agencies.

In addition to establishing uniform formats that are easy to process, use public API and develop and release standardized API for individual applications.

Create definitions of information and embed them into data (organization providing the information, date of provision, etc.) to raise information reliability by recipients.

【Action plan】

Encourage collaboration between the development of common API under the Information Distribution Collaborative Infrastructure Development Project being implemented by the Ministry of Internal Affairs and Communications and the investigation of public information sharing standard schemes (XML based standard data category families) by the Ministry of Economy, Trade and Industry while taking into account international standards and existing domestic formats, investigate how to rapidly provide necessary governmental information during disasters, and implement feasible measures. (Cabinet Secretariat (IT Policy Office), Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, government ministries and agencies)

Conduct investigations, in cooperation with private companies, while taking into account existing formats so that information necessary at the time of the disaster can be provided by local governmental bodies in standard formats. (Cabinet Office (Disaster Management), Ministry of Internal Affairs and Communications)

(ii) Development of rules on the timing of public disclosure

【Basic policy】

With respect to the provision of information by government agencies and private businesses, it is necessary that during a disaster information be provided rapidly and that the provided data be accurate and easy to use. Accordingly, take appropriate measures to protect personal information in publishing government information or using information possessed by private companies. In addition, develop necessary rules (about handling of copyrights etc.) for the use of public data and encourage the standardization of data formats and structures

Standardize terminology, units, and so on among relevant organizations and publicly release the results.

【**Action plan**】

Based on "the e-Government Open Data Strategy", develop rules necessary for public use of data including handling of copyrights at the time of public release of data and establish environments for the standardization of data formats and structures. (Cabinet Secretariat (IT Policy Office), Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, relevant government ministries and agencies)

With respect to the protection of personal information possessed by private businesses, continue investigations by various government ministries and agencies and conduct reviews of guidelines on the protection of personal information as necessary, taking into consideration the opinions of private businesses, experts, and others. (Government ministries and agencies)

Disseminate information to government ministries and agencies so that they can progress investigation. Then, organize the status of their instigation. (Cabinet Secretariat (IT Policy Office), Cabinet Office (Disaster Management), Consumer Affairs Agency)

Summarize examples about usage of personal information, taking into consideration the lessons of the earthquake. (Cabinet Office (Disaster Management))

With respect to third-party provision of personal information in the possession of local government during a disaster, conduct an investigation of local government, provide information to local government based on the results of investigation and encourage autonomous responses by local government. Also, provide the survey results to relevant government ministries and agencies. (Ministry of Internal Affairs and Communications)

(4) Backup of administrative information
【**Basic policy**】

Create backups of the administrative information of central ministries and agencies and local governmental bodies and ensure the continuity of operations by encouraging the use of cloud technologies with the information systems of central ministries and agencies and local governmental bodies, taking into consideration security concerns.

【**Action plan**】

Encourage the use of cloud technologies with information systems, taking into consideration ensuring security, from the perspective of backing up the administrative information of central ministries and agencies and local governmental bodies and insuring continuity of operations. The Ministry of Internal Affairs and Communications

in particular will support measures by local governmental bodies by presenting information on specific examples from local governmental bodies and conducting surveys and research on measures by local governmental bodies. (Ministry of Internal Affairs and Communications, government ministries and agencies)

2. Consolidation of Grassroots Information
(1) Clarification of subject information to the extent possible
【Basic policy】
(i) Identification of public information

Identify information concerning damage to and restoration of lifelines (information and communications, electricity, water, gas, transportation, etc.) and public information (e.g., warning information concerning hazards, information concerning evacuation instructions, transportation information, information on subsistence goods, and other basic living information) necessary following the occurrence of a disaster.

(ii) Identification of Information Holders and Information Gatherers/Disclosers

Identify the holders of various information (government ministries and agencies, local governmental bodies, private organizations, etc.) and who will gather and disclose information following the occurrence of a disaster.

Also, identify who will gather information (government ministries and agencies, prefectural governments, municipal governments, private organizations) that it becomes necessary following the occurrence of a disaster.

【Action plan】

The Cabinet Office will cooperate with relevant ministries and agencies to identify information that should be disclosed and the parties in possession of that information and to clarify disclosure rules with respect to warning information, evacuation instructions information, and information concerning lifelines (information on damage to and restoration of information and communications, electricity, water, gas, transport, and so on). Following the occurrence of a disaster, the Cabinet Office will also use geospatial information systems (GIS) to gather, distribute, disclose and appropriately update information in a timely and appropriate manner. (Cabinet Office (Disaster Management), government ministries and agencies).

Also, develop structures for sharing information concerning inventories and sale of basic living goods so that those goods can be efficiently procured and supplied during an emergency. (Ministry of Economy, Trade and Industry)

(iii) Adoption of disclosure rules

【**Basic policy**】

With respect to grassroots information such as damage, evacuation, and living related information (including the location information of individuals under the consent of the concerned individual), the public and private sectors will develop platforms for gathering, categorizing, and distributing such information in a timely manner and provide those platforms in Japan and overseas.

Encourage the creation of guidelines and the clarification of rules for handling of personal information during a disaster (e.g. the specification of information with high pubic value for disaster management and emergency relief and disclosures of information concerning the safety of individuals by local government).

Also, take measures to prevent unauthorized access to and tampering with data and to ensure the quality and reliability of information.

【**Action plan**】

With respect to the protection of personal information possessed by private businesses, continue investigations by various government ministries and agencies and conduct reviews of guidelines on the protection of personal information as necessary, taking into consideration the opinions of private businesses, experts, and others. (Government ministries and agencies)

Disseminate information to government ministries and agencies so that they can progress investigation. Then, organize the status of their instigation. (Cabinet Secretariat (IT Policy Office), Cabinet Office (Disaster Management), Consumer Affairs Agency)

Summarize examples about usage of personal information, taking into consideration the lessons of the earthquake. (Cabinet Office (Disaster Management))

With respect to third-party provision of personal information in the possession of local government during a disaster, conduct an investigation of local government, provide information to local government based on the results of investigation and encourage autonomous responses by local government. Also, provide the survey results to relevant government ministries and agencies. (Ministry of Internal Affairs and Communications)

(2) Collaboration with grassroots activities

【**Basic policy**】

(i) Centralization of points of contact for the distribution of information to the public

Centralize evacuation information and search information gathered by private

volunteers and make possible rapid searches of that information.

(ii) Development of foundations for distributing grassroots information

Make it possible to use information in the possession of the private sector as shared information. Specifically, make it possible to use the functions of mobile phone handsets and so on to search for missing persons and use information concerning the operation of automobiles owned by private companies to visualize, gather, and provide road traffic information.

Take measures to make available rescue calls to fire departments from the Internet etc. (communication roots other than voice).

Identify and register organizations such as NPOs that perform disaster support operations such that volunteer organizations which perform cloud sourcing and translation can be utilized during an emergency.

Also, develop infrastructure for the distribution of grassroots information such as using the location information of mobile phones owned to search for missing persons, using information concerning the operation of automobiles to visualize, gather, and provide road traffic information, shifting disclosed important information to the cloud and translating by nonprofit organizations, and collecting/analyzing information and providing that information to local governmental bodies by bodies located outside the disaster areas.

(iii) Other

Cooperate with private sector businesses to use information concerning the operation of automobiles owned by such businesses for the rapid creation of effective traffic controls, safe and efficient evacuation, transport of emergency supplies, and so on.

(3) Privacy approval systems

Clarify exclusionary rules concerning the protection of human life with respect to the protection of personal information and handling rules of copyrights during a disaster.

(4) Other

Make it possible for grassroots information and information gathered by the mass media to be distributed through multiple systems and for receiving members of the public to opt out.

【Action plan】

Reinforce government publicity and public relations through use of information and communications technologies. (Cabinet Secretariat (Cabinet Public Relations), government ministries and agencies)

Centralize evacuation information and search information gathered by private volunteers and make possible rapid searches of that information. (Cabinet Office (Disaster Management), government ministries and agencies)

Make it possible to use the functions of mobile phone handsets to search for missing persons by promoting the use of services provided by private businesses and encourage actions by private businesses. (Ministry of Internal Affairs and Communications)

With respect to rescue calls (calls to 119) by non-voice communications, such as the Internet, email, SNS, conduct investigations and take actions that can be implemented easily. (Fire and Disaster Management Agency)

Provide information concerning organizations such as NPOs that perform disaster support operations such that volunteer organizations that perform cloud sourcing and translation can be utilized during an emergency through government operated portal sites. (Cabinet Secretariat (Cabinet Public Relations), Cabinet Office (Disaster Management))

Investigate handling rules of copyrights during disasters and clarify operations of that rules to encourage the use of grassroots information. (Cabinet Office (Disaster Management), Ministry of Education, Culture, Sports, Science and Technology)

Create a system that can gather necessary traffic information from real-time probe information collected independently by private businesses when a disaster occurs, quickly identify roads that are safely passable, and appropriately select roads for priority use by vehicles transporting emergency supplies. (National Police Agency)

In addition, encourage measures by private organizations for combining road transport information in the possession of administrative agencies with road transport information including probe information collected by private businesses to provide information relating to road transportation status, road passage performance, and so on to the general public in real time so that safe and efficient evacuation and transport of emergency materials can be achieved. (National Police Agency)

3. Development of Emergency Transmission and Liaison Networks
(1) Definition of emergency status
(i) Creation of timeline
【Basic policy】
Considering that in each stage of a disaster (rescue, restoration, and recovery) the

optimal methods for handling sensitive information change, divide emergency condition status into three phases—immediately after occurrence of a disaster, rescue, and restoration of lifelines—and facilitate the appropriate use of government and private information for life saving and disaster recovery operations.

【Action plan】

With respect to the protection of personal information possessed by private businesses, continue investigations by various government ministries and agencies and conduct reviews of guidelines on the protection of personal information as necessary, taking into consideration the opinions of private businesses, experts, and others. (Government ministries and agencies)

Disseminate information to government ministries and agencies so that they can progress investigation. Then, organize the status of their instigation. (Cabinet Secretariat (IT Policy Office), Cabinet Office (Disaster Management), Consumer Affairs Agency)

Summarize examples about usage of personal information, taking into consideration the lessons of the earthquake. (Cabinet Office (Disaster Management))

With respect to third-party provision of personal information in the possession of local government during a disaster, conduct an investigation of local government, provide information to local government based on the results of investigation and encourage autonomous responses by local government. Also, provide the survey results to relevant government ministries and agencies. (Ministry of Internal Affairs and Communications)

Divide emergency condition status into phases and facilitate the appropriate use of government and private information for life saving and disaster recovery operations. (Cabinet Office (Disaster Management))

(2) Creation of systems for confirming the safety of individuals by public bodies and private companies

(i) Development of infrastructure for confirming the safety of individuals
【Basic policy】

Introduce systems for disseminating administrative information relating to damage, evaluation, and basic living needs and information with high public utility during emergencies, methods of confirming the safety of individuals in public bodies such as local government, schools, hospitals, transportation organizations, and so on as well as private companies.

Create standard formats for inputting evacuee information on the evacuation site

level and use as basic data for various victim support measures.

Schools and nursery schools will also manage information in the same format (can also be used for responses to seasonal and new types of influenza).

With respect to portable terminals including mobile phones, smart phones, and tablet PCs, create notification systems such as area email that supports various devices and equipment from different makers.

【Action plan】

Investigate private services for confirming the safety of individuals and publicize such services to encourage their active use. (Cabinet Secretariat (IT Policy Office), Cabinet Office (Disaster Management))

(ii) Centralization of points of contact for the distribution of information to the public

【Basic policy】

Establish collaboration between government-operated portal sites (e.g. website of the Prime Minister) and the websites of local governmental bodies. By establishing collaboration between system for confirming the safety of individuals operated by multiple private companies and government-operated portal sites, it will be possible to provide centralized safety information during a disaster.

Clarify the channels for distributing information from the government to the public in times of disaster and make them known among the public.

【Action plan】

Reinforce government publicity and public relations through use of information and communications technologies by the Cabinet Secretariat and government ministries and agencies. (Cabinet Secretariat (Cabinet Public Relations), government ministries and agencies)

Establish collaboration between government-operated portal sites (e.g. website of the Prime Minister) and the websites of local government. (Cabinet Secretariat (Cabinet Public Relations))

Establish collaboration between system for confirming the safety of individuals operated by multiple private companies and government-operated portal sites to make it possible to provide centralized safety information during a disaster. (Cabinet Secretariat (Cabinet Public Relations))

Clarify the channels for distributing information from the government to the public in times of disaster and make them known among the public. (Cabinet Office (Disaster

Management), Cabinet Secretariat (Cabinet Public Relations))

(iii) Creation of certification scheme
【Basic policy】

Take measures such as the creation of certification schemes to prevent spoofing when public agencies use SNS and other media.

【Action plan】

In response to current situation that the number of cyber-attackers targeting SNS has increased in conjunction with the widespread use of SNS, investigate means of ensuring the information security of SNS use and as necessary, disseminate information on matters that need to be taken into consideration. (Cabinet Secretariat (NISC), Ministry of Internal Affairs and Communications, and Ministry of Economy, Trade and Industry)

(3) Use of various private communal media
【Basic policy】

Develop systems for nationwide delivery of content from television, radio, newspapers, and so on via the Internet during emergencies (including simplification of procedures for secondary use licensing).

Use digital signage[5] and car navigation systems to disseminate evacuation guidance information, disaster information, and so on.

【Action plan】

Promote the development of systems for nationwide delivery of content from television, radio, and so on via the Internet during emergencies (including simplification of procedures for secondary use licensing). (Ministry of Internal Affairs and Communication)

Take measures to share and release disaster-related government information using various types of media (including private communal media such as SNS and other Internet services such as digital signage), and diversify the channels by which residents can obtain information.

Organize government-operated portal sites and services and make efforts to ensure that accurate information is distributed to the public. Establish government portal sites as forums for obtaining reliable information and make efforts to ensure their stable

---

[5] Image display equipment such as LCD displays installed outdoors, in shops, and so on.

operation. (Cabinet Secretariat (Cabinet Public Relations), government ministries and agencies)

Disseminate information that can mitigate damage from disasters and enhance information distribution systems by displaying tsunami warnings on car navigation systems when necessary. (National Police Agency)

4. Thorough IT Disaster-Management Drills
(1) Raise information literacy
【Basic policy】

Collaborate with facilities for seniors and children as well as welfare facilities to encourage information literacy education for distributing reliable information and support persons who are unfamiliar with information equipment.

Conduct IT skill training for disaster volunteers, local government employees, and educational personnel.

【Action plan】

Encourage information literacy education so that necessary and reliable information can be obtained during disaster and promote reinforcement of collaboration with IT volunteer activities. (Ministry of Internal Affairs and Communication, Ministry of Economy, Trade and Industry)

【Basic policy】
(2) Supplement disaster-management drill manuals

Investigate the incorporation of content relating to the use and verification of IT in comprehensive disaster-management drill planning and so on to expand the implementation of IT disaster-management drills.

Investigate disaster countermeasures for facilities and equipment to ensure the appropriate handling of information, identify issues, and reflect them in measures.

(3) Implement disaster-management drills in the public and private sectors

In addition to the implementation of joint IT disaster-management drills by the public and private sectors, conduct training such as simulation exercises.

When conducting drills, make use of the Internet and take into consideration circumstances where television and mobile phones cannot be used.

Conduct drills with the participation of and in collaboration with universities, NPOs, and NGOs.

Actively assess and adopt new technologies including means of communication used in drills, protocols,[6] and applications can be used in response to steady advances in technology.

Incorporate assessment and updating systems so information can be efficiently transmitted at all times.

(4) Publicize IT disaster-management drills

Make information concerning IT disaster-management drills widely known among the public.

【Action plan】

Investigate the incorporation of content relating to the use and verification of IT in comprehensive disaster-management drilling plans. (Cabinet Office (Disaster Management))

Conduct investigations in the Cabinet Office concerning the implementation of disaster-management drills that incorporate the use and verification of IT. (Cabinet Office (Disaster Management))

When conducting disaster-management drills, take into consideration the dynamic use of new technologies by government ministries and agencies. (Government ministries and agencies).

Use a website that includes vehicle information concerning which requests were made for use in emergency disaster countermeasures implemented by Headquarters for Major Disaster Management established within the Cabinet Office (currently under development) and conduct drills on confirmation procedures for emergency operation of vehicles. (Cabinet Office (Disaster Management), National Police Agency)

5. Internationalization of Disaster-Management Information Protocols
(1) Expand and enhance the overseas dissemination of information
　【Basic policy】
a. Create multilingual systems

Publicly release API with translating disaster related information into multiple languages and providing that information. Create systems with the participation and cooperation of domestic and overseas nonprofit organizations and others for that purpose.

---

[6] Conventions such as procedures and standards used when computers communicate with each other.

b. Enhance systems for information dissemination

Enhance the dissemination of information including broadcasts for foreign nationals in Japan and overseas broadcasts.

【Action plan】

Establish multi-faceted measures to ensure understanding of government-issued disaster related information for distribution to foreign nationals in Japan and overseas by persons whose native language is not Japanese. (Cabinet Secretariat (Cabinet Public Relations), government ministries and agencies)

(2) International standardization of disaster-management information

【Basic policy】

Propose from Japan methods of using information concerning the safety of individuals and rescue information and encourage the development of networks by countries addressing disasters.

Conduct standardization that takes into consideration international standards with respect to data distribution processes, data formats, and so on in order to rapidly distribute disaster related information and encourage collaboration among related organizations.

Make use of the lessons from the recent earthquake to make proposals from Japan concerning methods of using IT with respect to information regarding the safety of individuals and rescue information and methods of supporting disaster victims and to encourage the development of networks with various countries. Also, encourage international standardization of digital signage use and so on during emergencies.

【Action plan】

Encourage collaboration between the development of common API under the Information Distribution Collaborative Infrastructure Development Project being implemented by the Ministry of Internal Affairs and Communications and the investigation of public information sharing standard schemes (XML based standard data category families) by the Ministry of Economy, Trade and Industry while taking into account international standards and existing domestic formats, investigate the rapid provision of necessary governmental information during disasters, and implement feasible measures. (Cabinet Secretariat (IT Policy Office), Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, government ministries and agencies)

Also, encourage international standardization of digital signage use and so on during emergencies. (Ministry of Internal Affairs and Communications)

(3) Overseas deployment of disaster-management technologies
【Basic policy】

Encourage the adoption of Japan's information and communications technologies that are beneficial for disaster management, particularly in developing and emerging countries, and contribute to raising global disaster-management levels.

【Action plan】

Encourage the use of the quasi-zenith satellite system, which will be effective for disaster-management, and the introduction of satellite system infrastructure, particularly in developing and emerging countries. (Cabinet Secretariat (Strategic Headquarters for Space Development Secretariat), Ministry of Internal Affairs and Communications, Ministry of Foreign Affairs, Ministry of Education, Culture, Sports, Science and Technology, Ministry of Land, Infrastructure, Transport and Tourism, and relevant government ministries and agencies).

Support the introduction of disaster-management systems that use ICT, particularly by ASEAN countries. (Ministry of Internal Affairs and Communications, Ministry of Foreign Affairs, Ministry of Land, Infrastructure, Transport and Tourism, Cabinet Office (Disaster Management))

Encourage the international spread of Japan's terrestrial digital broadcasting formats such as One Seg and emergency warning broadcasts, which have characteristics superior to other formats for disaster-management functions. (Ministry of Internal Affairs and Communications)

6. Ensure Operation of Information Infrastructure during Emergencies
(1) Develop disaster communications infrastructure for use during emergencies
【Basic policy】

Make maximum use of the advantages of the Internet, which allows for use even when communications media such as optical fiber, copper wire, wireless, and satellite change and develop infrastructure to support communications that will not be interrupted during a disaster.

Respond to the adoption of IP for communications infrastructure and for satellite communications lines used for the Anti-Disaster Radio Communications System , respond to congestion, create redundancies in inter-governmental communications

channels, and encourage making commercial WiFi and public wireless LANs available to the public during emergencies.

Make maximum use of Internet infrastructure and establish mutual complementation systems for emergencies. Specifically, standardize independent systems for each purpose and provided service (voice, video, data, etc.).

Use Internet technologies to provide necessary priority to communications traffic and implement security measures.

Develop structures to provide public and private sector IT infrastructure as IT infrastructure for responses during disasters. Develop satellite earth stations that anyone can operate easily and that are reinforced against disaster to ensure that they can be used even during disasters.

【Action plan】

The Cabinet Office will encourage the adoption of IP for satellite communications lines for the Anti-Disaster Radio Communications System. (Cabinet Office (Disaster Management))

Collaborate with satellite communications equipment manufacturers and satellite communications businesses to develop satellite earth stations that anyone can operate easily and that are reinforced against disaster such as making them able to use different communications protocols so they can be provided in domestic and overseas markets. (Ministry of Internal Affairs and Communications)

(2) Individual measures by government and local governmental bodies
(i) Power supply development
【Basic policy】

Develop adequate power sources to enable the provision to organizations and the public of communications functions by the telecommunications carrier equipment that comprises communications infrastructure and the terminal equipment that connects to that infrastructure (Internet equipment used by public and private organizations: routers, wireless LAN stations, printers, computers) to the greatest extent possible during disasters.

Develop wireless stations by deploying portable power supply equipment and large-scale batteries and encouraging the use of renewable energy including solar power to promote the implementation of power supply measures for communications equipment.

With regard to mobile phone base stations, implement power supply measures such

as installing large zone base stations and creating batteries that can operate for 24 hours. In addition, reinforce communications line recovery measures using satellites.

Encourage the installation of backup power supplies such as batteries at IT sites that supply power during disasters: provision during disasters of power supplies to organizations that provide infrastructure (e.g., local governmental bodies and private organizations with high public utility)) during disasters.

Promote the introduction of systems for high-efficiency use of electric power.

【Action plan】

Encourage power supply measures such as the use of batteries to ensure that the telecommunications carrier equipment that comprises communications infrastructure can provide communications functions to the greatest extent possible during a disaster. (Ministry of Internal Affairs and Communications)

(ii) Dispersal
【Basic policy】

Encourage the dispersal of important equipment, which is highly concentrated in the Tokyo Metropolitan region.

Encourage the creation of redundancies in Japan's international Internet communications such as installing multiple undersea cable routes.

【Action plan】

Encourage the creation of redundancies in Japan's international Internet communications such as installing multiple undersea cable routes. (Ministry of Internal Affairs and Communications)

(iii) Utilization of public and private sector IT infrastructure
【Basic policy】

Investigate measures for enabling shared use of undamaged public and private IT infrastructure to ensure the availability of communications lines in disaster areas.

【Action plan】

Investigate measures necessary to use the undamaged communication lines of prefectural governments and make possible shared their use between governmental bodies and public and private sector organizations to ensure the availability of communications lines in disaster areas. (Cabinet Office (Disaster Management),

Ministry of Land, Infrastructure, Transport and Tourism)

(iv) Technology development
【Basic policy】
　　Use private sector capabilities while incorporating a broad range of private-sector opinions from Japan and overseas and while taking into consideration international technology market developments to reinforce telecommunications network resistance to damage during disasters through research and development so that communications infrastructure will be available even in the event of a large-scale disaster.

【Action plan】
　　The Ministry of Internal Affairs and Communications will use private sector capabilities while incorporating a broad range of private-sector opinions from Japan and overseas and while taking into consideration developments in international technology and markets to reinforce telecommunications network resistance to damage during disasters through research and development so that communications infrastructure will be available even in the event of a large-scale disaster. (Ministry of Internal Affairs and Communications)

(3) Develop rule systems for infrastructure restoration
【Basic policy】
　　Develop rules concerning entry into areas under evacuation orders as an exceptional measure, taking into consideration safety, when emergency restoration of telecommunications infrastructure is needed.
　　Encourage website measures by administrative and public agencies that received concentrated access during disasters.
　　Promote the development of systems for rapid provision of PCs, printers, LAN equipment and so on and implementation of support for network equipment in a disaster area.

【Action plan】
　　Investigate measures for taking into consideration the safety of operators when communications infrastructure is restored at government request and implement starting with measures that can be implemented immediately. (Cabinet Office (Disaster Management), government ministries and agencies)
　　The Cabinet Secretariat and relevant government ministries and agencies will

investigate and implement necessary countermeasures and develop and review systems and plans for continuous operation of government information such as websites during the occurrence of a disaster. (Cabinet Secretariat (NISC), government ministries and agencies)

Create rapid-response collaborative and cooperative systems between government and private IT companies relating to the provision of information and communication equipment in disaster areas. Cabinet Secretariat (IT Policy Office), relevant government ministries and agencies)