Japanese Government Measures for Promoting Universal Design (Correction of Digital Divide)

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The Japanese Government formulated the e-Japan Strategy In January 2001 under the Basic Law on the Formation of an Advanced Information and Telecommunications Network Society (IT Basic Law). This strategy sets a goal for Japan to become the world's most advanced IT nation by 2005. Since then, the Government has introduced detailed measures to be implemented expeditiously and intensively under annual e-Japan Priority Policy Programs. Especially, correction of the Digital Divide has consistently been specified as a cross-cutting issue to be resolved by implementation of the e-Japan Strategy. As the e-Japan Strategy has progressed, IT utilization has spread on a large scale. It is increasingly important to create an environment where everybody can actively use the various advanced services that are important in their lives and reach their individual potentials through information networks. This paper introduces the policies and measures for universal design of various Japanese ministries, including the Ministry of Internal Affairs and Communications; the Ministry of Economy, Trade and Industry; and the Ministry of Land, Infrastructure and Transport. These policies and measures are based on the concept that all citizens, regardless of age and physical circumstances, should be able to easily use IT services.

1. Introduction

The Basic Law on the Formation of an Advanced Information and Telecommunications Network Society (IT Basic Law) enacted by the Japanese Government stipulates that easy access to IT for all citizens is a basic universal design (UD) concept for promoting an IT-based society. Under this law, in January 2001, the Japanese Government formulated the e-Japan Strategy,[1] which set the goal of making Japan the world's most advanced IT nation by 2005. Since then, the Government has taken concrete measures to correct the gaps in opportunities to use IT (called the Digital Divide) according to the annual e-Japan Priority Policy Programs,[2]-[5] which introduced detailed measures that should be expeditiously and intensively implemented.

Preceding the target year, the Government formulated the e-Japan Priority Policy Program - 2004[5] in 2004 to make a final push for the set goal. An advanced IT-based society is a community that has not only the required IT infrastructures but also electronic government and municipalities, electronic commerce, and various types of sophisticated IT services. In an advanced society, services should be easy to use, regardless of the user's age and physical abilities.

This paper introduces Japanese policies and measures for correcting the Digital Divide under the e-Japan Strategy. It also describes the Japanese trend toward UD that will follow the e-Japan Strategy.

2. Japanese IT policies and positioning of UD

The e-Japan Strategy formulated in January 2001 was realized through implementation of the measures mapped out by the e-Japan Priority

Policy Program, which can be regarded as an implementation program for the strategy. This strategy first yielded results in 2002 in the field of IT infrastructure, including the world's lowest fee for an always-on connection to the Internet (¥2500/month) and the connection of all public schools (40000 throughout Japan) to the Internet.

In July 2003, the Government announced the e-Japan Strategy II,[6] the target of which evolved from previous IT infrastructure development to realize effective IT use. This strategy defined seven leading areas in the promotion of effective IT use for realizing an energetic, worry-free, exciting, and more convenient society. The leading areas were medical services, food, everyday living, small and medium enterprise financing, knowledge, employment and labor, and public services, which are familiar and important to IT users. The strategy includes detailed policies for enabling networking and external storage of electronic patient information for medical services, supporting the development of traceability systems for domestic beef to ensure food safety, and other activities. Measures have been steadily taken to realize a society in which every citizen can benefit through the effective use of IT.

On the other hand, since 2001, the annual e-Japan Priority Policy Programs have consistently stipulated that correcting the Digital Divide is a cross-cutting issue to be resolved through the e-Japan Strategy.

In the age of full-fledged, effective IT utilization, it is increasingly important to develop an environment in which everybody can actively use the various advanced services that are important in life and perform to the best of their potential through information networks. From this perspective, the Government's basic principle is that IT should be available and usable by all citizens regardless of their location, age, and physical circumstances.

The annual e-Japan Priority Policy Programs have stipulated that the Government must promote barrier-free access to information and the consideration of older persons and persons with disabilities in the development of information and telecommunications equipment and systems. These programs have also implemented policies and measures for attaining four objectives: 1) barrier-free access to information, 2) barrier-free public spaces, 3) barrier-free schools, and 4) development of information and telecommunications equipment and systems for older persons and persons with disabilities. The next section describes the implementation of these policies and measures.

In June 2004, the Japanese Cabinet endorsed the "Basic Policies for Economic and Fiscal Policy Management and Structural Reform 2004" proposed by the Council on Economic and Fiscal Policy.[7] These policies were set up in parallel with further promotion of the e-Japan Strategy and specify measures for implementing the u-Japan Strategy, which aims to realize an IT society in which older persons and persons with disabilities can also actively participate. The u-Japan Strategy was proposed by the Ministry of Internal Affairs and Communications to give a picture of the IT society in 2010. The letter "u" in "u-Japan Strategy" stands for "ubiquitous" (implying a society in which IT equipment is widely interconnected) and also denotes "universal" (implying a society in which all citizens, including older persons and persons with disabilities, can actively participate). These developments show there is an underlying trend toward UD in Japanese IT policies.

3. Overview of Japanese policies and measures for UD

This section summarizes the policies related to UD stipulated in the e-Japan Priority Policy - 2004, which was formulated in June 2004. It also outlines the measures for each implementation policy and describes the major policies of Government agencies for promoting UD in fiscal 2005.

3.1 Barrier-free access to information

The Government has announced two measures for promoting barrier-free access to information. One is to make administrative information services accessible. The other is to create an environment in which persons with visual and hearing disabilities can enjoy broadcast services. The first measure is described in this section, and the second is described in Section 3.4.

The first measure consists of two parts:

1) Making information services of e-government accessible

All ministries and agencies must ensure that systems and Websites related to e-government that are based on the e-Government Construction Plan (to reform administrative work and apply IT systems to procedures) give due consideration for older persons and persons with disabilities.

2) Making public services provided by local public agencies accessible (to be implemented by the Ministry of Internal Affairs and Communications)

The Ministry of Internal Affairs and Communications launched the Study Group on Ensuring/Improving Accessibility in the Public Sector in November 2004. The Ministry also plans to help local public agencies attain and improve the accessibility of public services by establishing a model method of evaluating Websites, public-service applications, and IT-related equipment and systems by October 2005.

3.2 Barrier-free public spaces

1) Research, development, and installation of support systems for older persons and persons with disabilities so they can move about safely and conveniently and the formulation of standard specifications for these systems (to be implemented by the National Police Agency, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure and Transport)

The Ministry of Land, Infrastructure and Transport promotes the Autonomous Movement Support Project[8] for effective use of cutting-edge IT technology (e.g., ICs and personal digital assistants) in coordination with academic, business, governmental, and civic circles such as related government agencies, a local public agency in Kobe City, academic experts, about 60 private enterprises, and ordinary citizens (e.g., volunteers and nonprofit organizations [NPOs]).

This project is intended to create a UD-based environment in which everybody, regardless of their physical and Japanese-language abilities can use movement-related information anytime and anywhere and move about safely and conveniently.

2) Preliminary tests in 2004 and full-scale tests in 2005 in Kobe City

These tests will be conducted to realize a new service system in which IC tags (which are usually attached to objects) provide spoken information at various locations.

The Ministry of Land, Infrastructure and Transport expects that, as roads and other infrastructures develop, this project will provide a wider range of benefits, for example, barrier-free movement from train stations to facilities.

3.3 Barrier-free schools

The measures to promote barrier-free schools include the preparation of barrier-free educational environments for children with disabilities (by the Ministry of Education, Culture, Sports, Science and Technology). The projects described below have been formed in line with this measure.

The Ministry of Education, Culture, Sports, Science and Technology continues to promote development of advanced IT equipment for use by children and students with disabilities. The Ministry also provides education materials for persons with visual disabilities through a special educational information network for such persons that is operated by the National Institute of Special Education.

In fiscal 2004, the Ministry established a

system for delivering information to in-service teachers and the general public in the above research laboratory. The system has a portal Website for the education of children and students with disabilities and for delivering lectures.

3.4 Development of information and telecommunications equipment, systems, and services for older persons, persons with disabilities, and children

The measures for developing information and telecommunications equipment, systems, and services for older persons, persons with disabilities, and children include measures for 1) developing and providing communication and broadcast services for older persons and persons with disabilities and 2) research and development of human-network interface technology (by the Ministry of Internal Affairs and Communications).

In association with the above two measures and measure to create an environment in which people with visual and hearing disabilities can enjoy broadcast services, the Ministry of Internal Affairs and Communications has planned other measures for fiscal 2005. These include:

• Funds for research and development to enhance communication and broadcast services for older persons and persons with disabilities
• Promotion of the development and provision of communication and broadcast services for people with physical disabilities
• Promotion of the production of broadcast programs with closed captions and explanatory titles.

4. Promotion of information accessibility standardization

This section describes Japanese approaches to the standardization of information accessibility in order to correct the Digital Divide.

In May 2004, as part of the development and establishment of the Japanese Industrial

Standards (JIS) related to barrier-free access to information, the Ministry of Economy, Trade and Industry established JIS X 8341-1, "Guidelines for older persons and persons with disabilities - information and communications equipment, software and services - Part 1: Common Guidelines," and also Part 2 of this JIS: "information processing equipment." Then, in June 2004, the Ministry established Part 3 of this JIS: "Web content." [9]

Part 1 of this JIS systematically defines common standards for all IT fields. Parts 2 and 3 specify detailed requirements that should be met when developing and designing products. This JIS is therefore a concrete step toward realizing the Basic Programme for Persons with Disabilities[10] of December 2002, which calls for the creation of IT products and services with due consideration for older persons and persons with disabilities.

The accessibility of non-text information on Web pages cannot be achieved simply by standardizing PC hardware. Therefore, the JIS concerning Website content gives detailed requirements that must be met by information (content) provided on Web pages so it becomes more accessible.

5. Conclusion

This paper introduced Japanese policies and measures for correcting the Digital Divide under the e-Japan Strategy. It also described the Japanese trend toward UD that will follow the e-Japan Strategy.

Implementation of these policies and measures for UD will become increasingly important and emergent in Japan, which has a rapidly aging population resulting from a declining birthrate.

These circumstances require us to focus on passive measures for paying adequate attention to eliminating restrictions related to age and physical ability when providing IT-based services. They also require us to take active measures to support older persons and persons with disabilities through full use of advanced information and

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communications technologies. One example of such an active measure is the Autonomous Movement Support Project of the Ministry of Land, Infrastructure and Transport described in Section 3.2.

It is unfortunate that current IT products and services are not friendly to all users. Therefore, activities to promote UD must be continued and cover areas other than just product development, for example, the provision of solution services.

As a corporate citizen, Fujitsu will fully recognize the importance of UD and always consider all citizens, including older persons and persons with disabilities, when it develops IT products.

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