III-6-1 Policies for introducing next-generation IT into local communities

III-6

Promotion of IT in the public sector

The Telecommunications Council submitted a report in May 1999

As the 21st century fast approaches, local communities in Japan are tackling growing challenges: a society with a declining birth rate and an aging population; the gradual shift of authority from central to local governments; revitalization of local economies; environmental issues, and the strengthening of cooperation within and among communities.

At the same time, in the field of telecommunications, the era of the "advanced, global info-communications society" is becoming a reality, in which all kinds of information is instantaneously distributed through networks thanks to advances in IT, including digitalization.

For the purpose of constructing an IT infrastructure, MPT has been promoting IT-related industries, developing and distributing IT applications, and constructing IT facilities.

However, ensuring the highly-advanced utilization of info-communications is indispensable for making local communities more vital toward the next century. To help achieve this goal, it is necessary to formulate policies for promoting local info-communications with the long-term point of view, taking into account the technological innovations and their use.

Accordingly, in October 1998, MPT asked the Telecommunications Council to investigate desirable policies for introducing next-generation IT to local communities (Fig.). As part of its inquiry, the communications policy committee of the council consulted IT-related organizations in each region of the country. The council submitted a report in May 1999, titled "Vision for the Next-Generation Local Information Community; ICANN 21 Strategic Plan."

Fig. Outline of the Telecommunications Council's analysis of policies for introducing IT into local communities (May 1999)
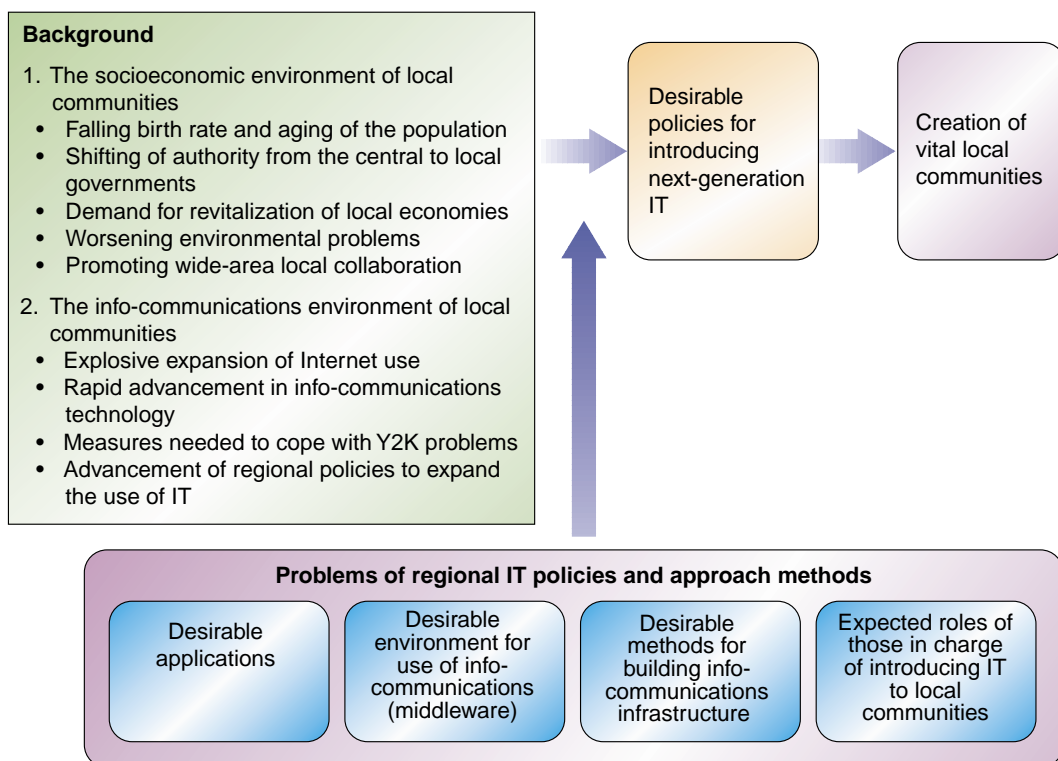
III-6-2   Promotion of local informatization

Local public bodies are being supported by MPT in their introduction of IT.

By encouraging the construction of a nationwide, advanced info-communications network, MPT has been supporting the use of IT by local public bodies, thus also promoting the use of info-communications technology at the community level (Refer to Appendix 45). As part of this effort, the following major polices were implemented during fiscal 1998:

1. Construction of advanced info-communications systems in pilot cities

The "Advanced Info-communications System Model City Construction Program" is a joint project between MPT and the Ministry of International Trade and Industry. Under the project, municipalities designated by the ministries will build advanced and comprehensive info-communications systems with multiple functions of administration, education, medical assistance and disaster prevention, and will be allocated subsidies to cover part of their costs. The ministries invited applications for the program in June and December 1998, and chose 14 projects (Refer to Appendix 46).

2. Enhancing local information infrastructure to provide better public services

i) Local Government Networks Construction Support Project

This project provides subsidies to local governments that construct advanced information networks aimed at improving administrative, educational, medical and welfare services, by linking city halls, schools, hospitals and other public facilities. Since fiscal 1994, a total of 68 local projects have been designated and at the end of fiscal 1998, 50 projects were underway (Refer to Appendix 47).

ii) Central Districts Revitalization Multimedia Project

In July 1998, a "Law to Integrally Promote Central District Reconstruction and Shopping District Reinvigoration" was enacted to promote the redevelopment and revitalization of city centers and commercial districts. The law was drafted by MPT jointly with the Ministry of Construction, the Ministry of International Trade and Industry, the Ministry of Home Affairs, the Ministry of Transport and the Ministry of Agriculture, Forestry and Fisheries, with the aim of tackling the "hollowing-out" of city centers as more shopping facilities are built in the suburbs.

As a measure to revitalize city centers using info-communications technology, MPT launched the Central District Revitalization Multimedia Project in fiscal 1998. This will subsidize the construction by local public bodies of comprehensive facilities with applications suitable for the commercial and administrative fields, as well as for raising public awareness of multimedia technology. The goal is to encourage a stronger flow of visitors to the central districts of a city, and two projects were designated in fiscal 1998 (Photograph and Refer to Appendix 47).

iii) Regional Intranet Infrastructure Construction Support Project

MPT launched this project in fiscal 1998. It provides subsidies to local public bodies, third-sector corporations, or public corporations that construct high-speed LANs linking regional public facilities using Internet Protocol (IP) technology, (regional Intranets), aimed at providing more advanced public services in education, administration and welfare, as well as disaster prevention. Seven projects were designated in fiscal 1998 (Refer to Appendix 47).

Photo Outline of a Central Districts Revitalization Multimedia Project in Sumoto City, Hyogo Prefecture

III-6-3 Promoting joint development of public-sector telecommunications systems

Use of IT in the public sector is being promoted through cooperation among ministries and agencies.

The "Action Plan for Economic Structural Reform" in May 1997 stated that increasing the use of IT in the public sector would be the driving force for increasing its use throughout Japan's entire economic and social system. Accordingly, the Cabinet decided to vigorously use IT in the public sector.

As part of this effort, the government will formulate policy measures that cross the borders separating each ministry and agency, by creating joint projects, by sharing the fruits of collaborative research and by promoting close communication among the ministries and agencies.

Against this background, the "Law Regarding the Promotion of Research and Development on Joint Operation Initiatives Dealing with Network Technology," which MPT drafted in cooperation with the Ministry of Education, the Ministry of Transport and the Ministry of Agriculture, Forestry and Fisheries, was enacted in November 1998.

In line with the law, the Telecommunications Advanced Organization of Japan (TAO) is promoting the use of IT in the public sector by launching integrated R&D efforts combining telecommunica-tions, broadcasting and technology in specified public services: in this case, telecommunications systems used for public services such as educational support and an online system for administrative procedures, introduced to improve efficiency in the area of transport management.

The "Basic Guidelines on the Promotion of an Advanced Info-Communications Society," approved by the Advanced Info-Communications Society Promotion Headquarters after the enforcement of the new law, also said that ministries, agencies and local public organizations should comprehensively collaborate in promoting the use of IT in the public sector (Refer to III-1-1).

In fiscal 1999, MPT, in cooperation with the National Police Agency and the Ministry for Home Affairs, submitted to the 145th Diet session a bill to amend the "Law Regarding the Promotion of Research and Development on Joint Operation Initiatives Dealing with Network Technology," in order to add provisions concerning systems that ensure the security of police telecommunications, as well as a system to monitor and forecast damage during a natural disaster (Fig.).

Fig.   Example of specified public-sector telecommunications systems (added under the revised law in fiscal 1999)
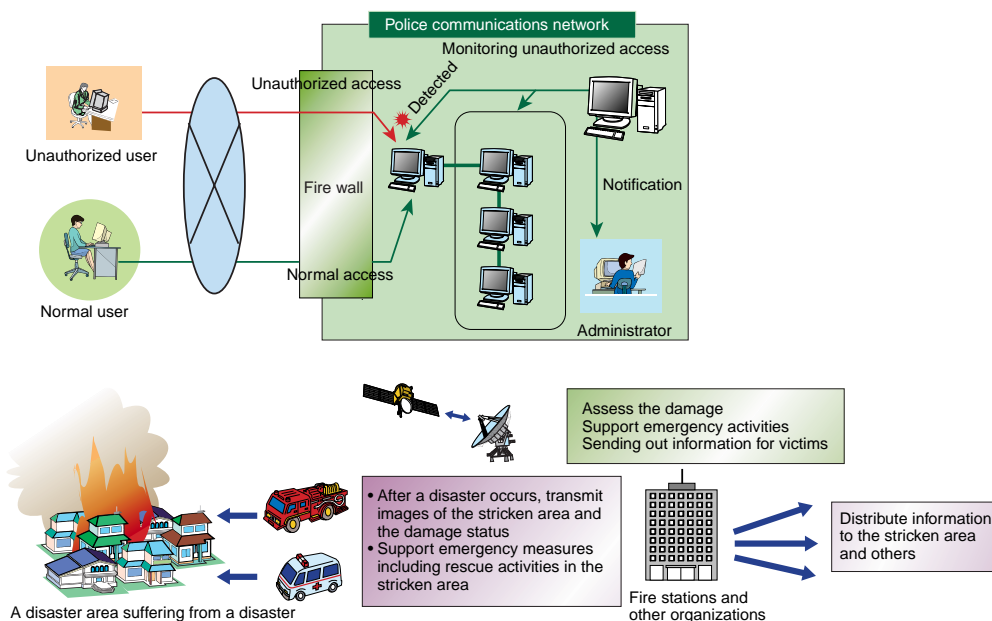
Related sites: Telecommunications Advancement Organization of Japan (TAO) (http://www.shiba.tao.go.jp/); "Basic Guidelines on the Promotion of an Advanced Information and Telecommunications Society" (http://www.kantei.go.jp/jp/it/981110kihon.html)

III-6

Promotion of IT in the public sector

III-6-4   Promotion of ITS

It has been estimated that the ITS market will be worth some 60 trillion yen by fiscal 2015, and create 330,000 jobs by fiscal 2005.

Intelligent Transport Systems (ITS), by integrating information on vehicles, roads and human beings through state-of-the-art info-communications technology, are expected to achieve higher safety and efficiency in transport, provide users with more convenient services and contribute to the preservation of the environment (Fig. 1).

The five ministries and agencies in charge of ITS in Japan (MPT, the National Police Agency, the Ministry of International Trade and Industry, the Ministry of Transport and the Ministry of Construction) formulated a "Comprehensive Plan for ITS in Japan" in July 1996. These five ministries and agencies are now working to determine the specific goals of ITS development for the next 20 years (Refer to Appendix 48).

Meanwhile, certain forms of ITS have already been partially implemented. Since fiscal 1996, the Vehicle Information and Communications System (VICS), which conveys real-time information to cars, such as notification of traffic jams, has been implemented in Japan on a large scale. In addition,

the Electronic Toll Collection (ETC) systems that facilitate the collection of expressway tolls without the need for vehicles to stop, is planned for launching during fiscal 1999 (Refer to Appendix 49).

The five ministries and agencies also established a "Committee to Study the Feasibility of Regional ITS Pilot Projects," and in September 1998, the committee selected five Japanese regions that will conduct ITS experimental projects (Refer to Appendix 50).

Since each intelligent transport system requires different advanced communications technologies according to the system's features, MPT asked the Telecommunications Technology Council about "Info-communications Systems of ITS (Intelligent Transport Systems); Inquiry No. 101 of April 1998." The council submitted a report to MPT in February 1999, presenting the ideal future shape of info-communications systems for ITS, as well as expected applications. The council estimated that the ITS market will grow to become worth about 60 trillion yen by fiscal 2015 and will create some 330,000

Fig. 1   A future ITS network
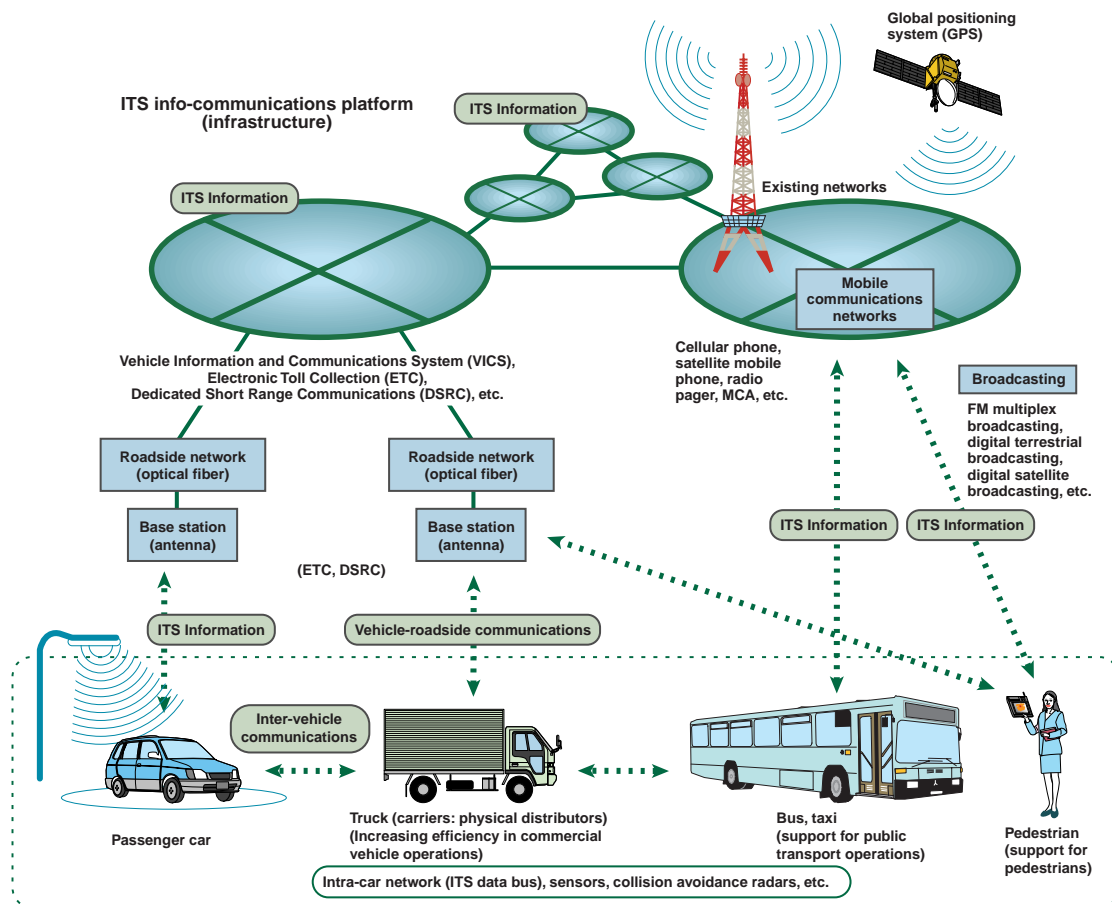
jobs by fiscal 2005 (Fig. 2).

In addition, the report identified a variety of problems in the areas of research and development and standardization that have to be cleared before ITS can be fully put into practice. It also recommended ways in which info-communications systems for ITS can be comprehensively promoted (Fig. 3).

Fig. 2 Market forecast for ITS fields

1. A huge market for ITS-related services will be created, due to the construction of infrastructure and widespread use of terminals. Opportunities for creating new businesses will expand to meet the need for a variety of applications.
- The total market for info-communications related to ITS will be worth an accumulated 60 trillion yen by fiscal 2015 (plus a stimulus effect of about 100 trillion yen on industry as a whole)
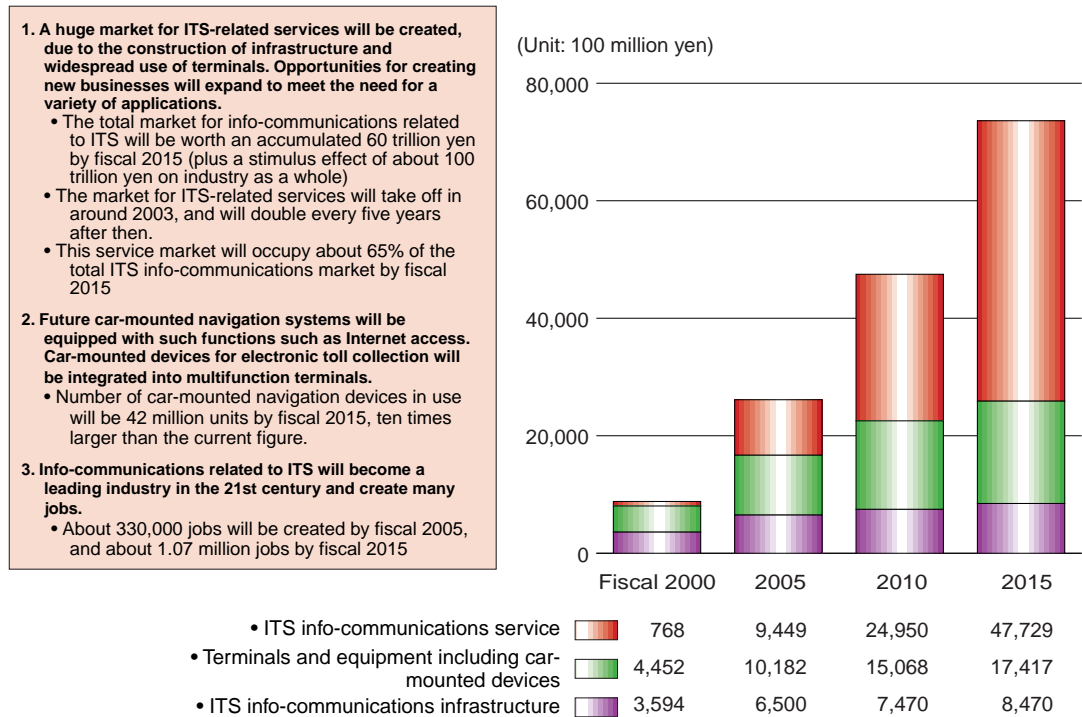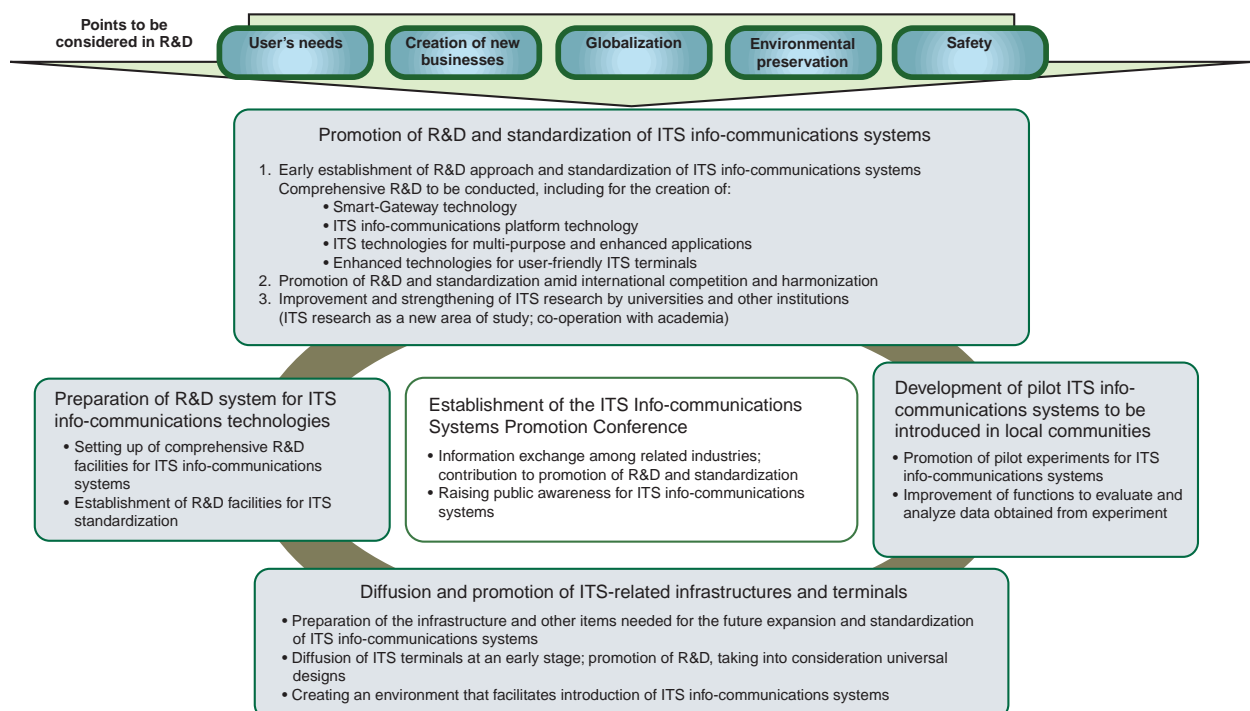- The market for ITS-related services will take off in around 2003, and will double every five years after then.
- This service market will occupy about 65% of the total ITS info-communications market by fiscal 2015

2. Future car-mounted navigation systems will be equipped with such functions as Internet access. Car-mounted devices for electronic toll collection will be integrated into multifunction terminals.
- Number of car-mounted navigation devices in use will be 42 million units by fiscal 2015, ten times larger than the current figure.

3. Info-communications related to ITS will become a leading industry in the 21st century and create many jobs.
- About 330,000 jobs will be created by fiscal 2005, and about 1.07 million jobs by fiscal 2015

(Unit: 100 million yen)

	Fiscal 2000	2005	2010	2015
• ITS info-communications service	768	9,449	24,950	47,729
• Terminals and equipment including car-mounted devices	4,452	10,182	15,068	17,417
• ITS info-communications infrastructure	3,594	6,500	7,470	8,470

Note: Calculations of market size were based on the following premises:
1. **"Total market for info-communications related to ITS" consists of ITS info-communications services; terminals and equipment, including car-mounted devices, and ITS info-communications infrastructure.**
2. **Estimated between fiscal 2000 and 2015**
3. **Investment in facilities and equipment that are not exclusively used for ITS, such as next-generation cellular phones, satellite broadcasting and Internet terminals, are excluded from the calculations.**

Fig. 3 Comprehensive policy for promotion of ITS info-communications systems

Points to be considered in R&D

User's needs | Creation of new businesses | Globalization | Environmental preservation | Safety

Promotion of R&D and standardization of ITS info-communications systems

1. Early establishment of R&D approach and standardization of ITS info-communications systems
   Comprehensive R&D to be conducted, including for the creation of:
   - Smart-Gateway technology
   - ITS info-communications platform technology
   - ITS technologies for multi-purpose and enhanced applications
   - Enhanced technologies for user-friendly ITS terminals
2. Promotion of R&D and standardization amid international competition and harmonization
3. Improvement and strengthening of ITS research by universities and other institutions
   (ITS research as a new area of study; co-operation with academia)

Preparation of R&D system for ITS info-communications technologies
- Setting up of comprehensive R&D facilities for ITS info-communications systems
- Establishment of R&D facilities for ITS standardization

Establishment of the ITS Info-communications Systems Promotion Conference
- Information exchange among related industries; contribution to promotion of R&D and standardization
- Raising public awareness for ITS info-communications systems

Development of pilot ITS info-communications systems to be introduced in local communities
- Promotion of pilot experiments for ITS info-communications systems
- Improvement of functions to evaluate and analyze data obtained from experiment

Diffusion and promotion of ITS-related infrastructures and terminals
- Preparation of the infrastructure and other items needed for the future expansion and standardization of ITS info-communications systems
- Diffusion of ITS terminals at an early stage; promotion of R&D, taking into consideration universal designs
- Creating an environment that facilitates introduction of ITS info-communications systems

III-6-5 Promotion of telework

Constructing infrastructure for expanding telework in local communities and strengthening supportive policy measures

Using info-communications to work away from the office - so-called Telework -- has many benefits. It lightens the burden of commuting, allows people to work while taking care of their children, the elderly or a sick family member, and gives more job opportunities to people with disabilities or the elderly. Overall, telework can help to revitalize local communities, as well as prevent global warming by cutting commuter traffic.

As part of its efforts to expand and promote telework, MPT is pursuing the following policies:

1. Promotion of infrastructure to expand telework in local communities

i) Project to build telework centers

Under the project, subsidies are provided for municipal governments or third-sector corporations at city, town and village level, to construct centers for public use as hubs for telework. As of the end of fiscal 1998, five communities in Japan were carrying out such projects (Fig. and Refer to Appendix 47). In fiscal 1999, prefectural governments also became eligible to apply for the project.

ii) Project to build information barrier-free telework centers

This project, established in fiscal 1998, provides subsidies for prefectural governments, municipal governments, third-sector corporations or public corporations that build telework centers specifically designed to allow elderly or disabled people to work in a suitable environment. As of the end of fiscal 1998, two communities were carrying out work under this project (Refer to Appendix 47).

2. Expanded support for the promotion of telework

i) Tax incentives for promoting telework

New taxation measures were introduced in fiscal 1998 aimed at promoting telework. When a company or individual begins telework at a satellite office, the fixed-assets tax imposed on their telecommunications facilities is reduced for the first five years.

ii) Promotion of IT in the home, aimed at increasing telework

MPT plans to launch research and development of next-generation info-communications systems that can be used at home, thus facilitating and promoting telework.

Fig.   Outline of a telework center construction project

Exchange of work through info-communications network

Companies or other organizations

Telework center