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—Official Development Assistance in the IT Field Also Helps Japan—

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Even in the face of its current financial difficulties, Japan needs to continue providing official development assistance (ODA), as such grants clearly offer advantages to Japan as well. In particular, what we are calling "eODA" (i.e., official development assistance in information technology (IT)) should be positioned as one of the core areas for support. At the same time, moreover, it is important to provide ODA in a format that yields highly visible returns in order to make it politically possible for Japan to continue providing substantial support for developing countries despite the severe financial conditions plaguing its own economy.

Based on this precept, this paper introduces some ideas for eODA projects that can be beneficial to developing countries as well as which promise some advantages to Japan. The requirements for implementing such eODA grants include: (1) eliminating vertical divisions and providing across-the-board support covering various fields; (2) working towards a greater diffusion of systems and standards; (3) ensuring continuous support; (4) meeting accelerated technological innovation; and (5) giving consideration to narrowing the digital divide (information gap) in developing countries.

I Why eODA Now?

From the standpoint of giving a greater focus to IT as a core field for providing official development assistance to developing countries, this paper proposes a conceptual outline for a number of useful projects and attempts to both identify the problems and propose possible solutions for the issues that must be dealt with in implementing projects of this nature. In laying the groundwork for proceeding with these attempts, this section first examines the question of why eODA should be provided.

1 IT That Changes Business

IT is expected to bring about a major historic transformation in the socioeconomic activities of today ("e-Japan strategy") that will be equivalent to the changes ushered in by the Industrial Revolution of the 18th century.[1] To begin with, the dramatic transformations to be wrought by IT will permit the instantaneous transmission and reception of text, image and voice information anywhere throughout the world, which will bring about reforms in all human fields—such as society, business, education and medicine. In short, the impact will be nothing less than an "IT Revolution."

A specific example is the change in the format of business-to-business (B2B) transactions. Let's consider the case of a company that wants to procure a certain component and turns to the network to find a supplier. The buyer transmits the product specifics, the required quantity and timing to various component manufacturers, and waits for replies that indicate the quantity and pricing of the components that can be delivered by the requested timing. On the basis of these proposals from multiple component manufacturers, it becomes possible for buyers to set up the most efficient distribution channels and procure components from various manufacturers.

The 2000 Communications White Paper estimates that Japan's B2B transactions via the Internet totaled ¥14.4 trillion in 1999.[2] While this figure represented only about 3.3 percent of all inter-company transactions for that year, the report projects that this figure will reach ¥103.4 trillion by 2005.

As would be expected, world-class companies that procure components from worldwide sources and sell their products in international markets are one step ahead in pursuing this trend. Examples include the joint procurement of components on a networked basis by GM, Ford Motors, and Daimler Chrysler, and a procurement site for steel materials operated by a partnership between Mitsubishi Corporation and Mitsui & Co., Ltd.

2 IT That Changes International Conferences

IT is clearly bringing forth changes in not only the business arena, but also in the ways official international conferences are organized and managed. As meetings where members gather together are usually limited to only several times a year, a huge volume of data is exchanged via the Internet in the intervals between such meetings. This method of managing conferences has been firmly established by such international organizations as the Asia-Pacific Economic Cooperation (APEC) Forum and the International Organization for Standardization (ISO).

When some issues are left unresolved at actual meetings, for example, the chair may use email to solicit comments from each member and distribute revisions and comments via individual emails or post the latest updates (plus requests for further comments) on the organization's Website. By going through these procedures several times, it becomes possible to work towards a consensus among members before the next meeting takes place. This method has already become the standard operating procedure for many organizations.

3 Success or Failure Determined by Ability to Utilize IT

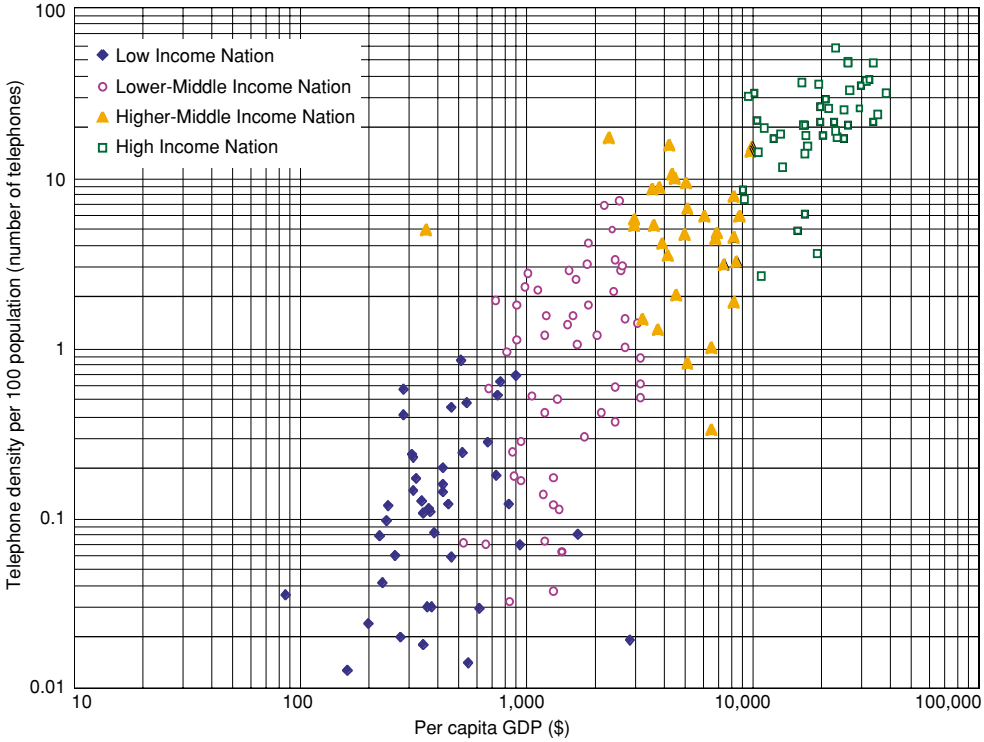
A common factor shared by these two examples is that participation in B2B transactions and international conferences is practically impossible without Internet access. In short, this means that the digital divide between companies and countries can have dire consequences: those companies and countries with environments that permit easy access to the Internet and have a wealth of human resources with a good command of such technology will grow and develop even more than before; conversely, companies and countries suffering from a lack of such environments and a shortage in trained human resources will fall further behind. If companies in developing countries learn to easily access the network sites where components and/or raw materials are procured, this will inevitably widen the selection and increase the possibility that Japanese companies will be able to procure components and/or raw materials at lower prices.

4 Developing Countries Lag Behind in IT Diffusion

Developing countries clearly face a number of problems in using IT. As shown in Figure 1, even such basics in terms of communications infrastructure as telephone density are insufficient—to say nothing of the Internet diffusion ratio. This delay in setting a well-ordered environment for IT development means that providing support to approaches aimed at realizing an IT-focused society in developing countries through eODA assistance in terms of funding, human resource development, intellectual support, etc., will constitute an extremely important issue for ODA in the future.

In fields other than the Internet, moreover, using IT provides efficient ODA support. IT can be used with such applications as distance learning via satellites and/or cellular

Figure 1. Basic Telephone Density by Nation's Development Stage (1998)



Source: "Application of Advanced Information Technology to ODA Projects: Phase 2," April 2000, Japan International Cooperation Agency.[3]

telephones as the basic telephone infrastructure to promote telephone service to rural areas. For these reasons, we consider that providing support in the IT field though eODA projects will play a vital role in ODA in the future.

5 Three Fields for eODA Support

Support by means of eODA can be categorized into the following three fields:[4]

- ODA that supports the realization of an IT-based society (Aid for IT).
- ODA that supports the efficient implementation of policies by means of IT (Aid by IT).
- ODA that promotes efficient IT applications and utilization in linkage with aid for businesses in fields other than IT by eliminating the barriers among fields (Aid with IT).

Aid for IT means the category where support is provided directly for the realization of IT. This includes the development of communications infrastructures, the establishment of multi-purpose IT centers, etc., and support for nurturing human resources trained in IT.

Aid by IT means efforts to efficiently provide support by using IT. Assistance in this category will be provided together with support in the Aid for IT category. Representative examples include the development and utilization of Local Area Networks (LANs) designed to improve efficiency in administration and providing support for distance learning and telemedicine.

The third category, Aid with IT, includes the laying of optical fiber cable in linkage with road construction and/or the establishment of multi-purpose IT centers. The combination of road construction in conjunction with optical fiber cable has already been implemented in Japan, and can be seen in such examples as the Information Box Project undertaken by the Ministry of Land, Infrastructure and Transport (which involves installing conduits at the time of road construction that will later be used to house fiber optic cable).

II Approaches to eODA by the World's Aid Organizations

As part of examining appropriate approaches to eODA in Japan, this section provides an overview of eODA activities by international organizations and aid organizations in other countries. The three organizations selected for this purpose are the World Bank, the United Nations Development Programme (UNDP) and the United States Agency for International Development (USAID). The basic features of the approaches adopted by these organizations include the following:

- Stressing support for the formulation of policies in developing countries.
- Implementing eODA by involving the private sector, such as investment and loans for private companies.
- Emphasizing projects that enable anyone to access the Internet, such as the setting up of Internet providers.

1 The World Bank

While the World Bank has long provided support in the IT field including the broadcasting and communi-

cations sectors, in January of 2000 it formed the Global Information and Communication Technologies (GICT) Department within the International Finance Corporation (IFC), which is part of the World Bank Group, and began to implement explicit approaches to eODA. The GICT, which is comprised of the Policy Division (public sector assistance), the Investment Division (private sector assistance) and InfoDev (public and private sector ICT grant facility), sees its basic mission as follows:[5]

- To accelerate the participation of target countries in the global information economy.
- To promote private sector investment in developing countries which will reduce poverty and improve people's lives.
- To promote innovative projects on the use of information and communication technologies for economic and social development (with a special emphasis on the needs of the poor in developing countries).

For these purposes, the GICT engages in the following:

- Providing advice on policies and loans in the fields of communications, postal and broadcast services, and e-government.
- Investment in the fields of communications and the Internet.
- Providing grants for ICT projects.

2 The United Nations Development Programme (UNDP)

Since 1993, the UNDP has been dealing with the development and promotion of information and communications technologies to support socio-economic growth in developing countries, and has declared information and communications technologies as one of its areas of focus, together with HIV/AIDS countermeasures and environmental preservation. The UNDP has achieved the following results through various activities under its Sustainable Development Networking Programme, the Small Island Developing States Network, and the Asia-Pacific Development Information Programme.[6]

- Provided support for Internet connectivity in more than 15 countries; set up the first Internet provider in more than 40 countries.
- Implemented training for more than 25,000 organizations.
- Created more than 5,000 Websites for government and civil groups.
- Established more than 3,000 national/regional agency networks using the Internet tools.

3 The United States Agency for International Development (USAID)

USAID, an aid organization in the US, has also given considerable attention to eODA, as it considers that information distribution is extremely important for progress and growth in developing countries. Its major activities include the following:[7]

(1) The Internet for Economic Development (IED) Initiative
This initiative is designed to facilitate the expanded use of the Internet and specific Internet applications, including e-commerce, distance education, telemedicine, and environmental surveillance. At present, support is being provided in 13 countries, and an expansion of target countries is planned.

(2) AfricLink
USAID is engaged in a number of initiatives to facilitate access to the Internet in Africa.

(3) Leland Initiative
This is a five-year plan with a budget of $15 million to extend Internet connectivity to more than 20 African countries.

III Approaches to eODA in Japan

Turning now to approaches towards eODA being taken in Japan, we begin by noting that at the G8 Summit in Okinawa in July 2000, then Prime Minister Mori announced a five-year comprehensive package amounting to $15 billion in ODA and non-ODA grants focused on narrowing the digital divide. The four specific areas of cooperation included in this initiative are as follows (extracted from the official Website of the Ministry of Foreign Affairs):[8]

(1) Improving the recognition that "IT presents opportunities" and making intellectual contributions to determining policies and systems.
Supporting the formulation and implementation of policies by developing countries in the area of determining policies facilitating the diffusion of IT, establishing related laws and preventing electronic information crimes.

(2) Nurturing human resources (training, human resource development)
Providing support for training and human resource development for more than 10,000 persons in the next five years, mainly through technical cooperation.

(3) Facilitating the development of infrastructure and networking
Providing cooperation for the development of information and communications infrastructures in developing countries through cooperation in not only IT itself, but also in the field of communications technology surrounding IT. Cooperation will also be pro-

vided for promoting inter- and intra-regional networking.

(4) Promoting IT utilization in providing assistance
In implementing assistance, promoting IT utilization in such applications as remote training, distance education and telemedicine in Japan as well. As a trial for this purpose, using training centers in developing countries as the bases for IT utilization.

The eODA programs originated by Japan focus on the above four areas. As part of the specific measures for these purposes, a new ODA category known as "information technology grants" was established with ¥6.5 billion appropriated under the Ministry of Foreign Affairs budget for fiscal 2001.[9] Since the latter half of 2000, moreover, the Japan International Cooperation Agency (JICA) has conducted a number of surveys and research projects concerning IT in developing countries as development and survey projects.[10,11] In July 2000, an international symposium on "IT and Development and Cooperation" was held under the joint auspices of the Ministry of Foreign Affairs, the former Ministry of Finance, the UNDP and the World Bank, and discussions between developing countries and developed countries have been held concerning "Developing Countries and IT." As such, eODA programs initiated by Japan have just made a beginning and are expected to contribute significantly to developing countries in this area.

IV Proposals for eODA Projects Originated by Japan

As Japan is expected to make a full-scale approach to eODA in the future, what types of projects can specifically be considered? Based on a nation's social/economic situation and its communications infrastructure, it is of

Table 1. Examples of eODA Projects Applicable to Both Less-Developed and Semi-Developed Countries

Aid for IT Projects	**<Fostering Highly Qualified IT Personnel>** • **Establishing a Policy and System Research Center for IT Society at the Asian Institute of Technology (AIT)** - Using funding from Japan to set up an IT-related Policy and System Research Center at the Asian Institute of Technology (AIT: a university established in a Bangkok suburb with multilateral funding as an organization designed to nurture highly qualified engineers in Asia). - Providing assistance to Asian countries for the formulation of IT policies and the establishment of IT systems. • **Dispatch of experts in IT policies and systems** - Dispatching experts in IT policies and systems to government agencies to provide assistance for the creation of policies and systems for the target country. **<Improving IT Literacy of General Public>** • **Projects to translate IT-related manuals and textbooks into local languages** - Translating IT-related manuals and textbooks into local languages in order to expand the pool of IT personnel in each country.
Aid by IT Projects	**<Industrial Development by IT Utilization>** • **Implementing IT-based management training programs for small and medium-sized companies** - Providing general IT training programs to small and medium-sized companies with few opportunities to use IT. - Improving IT literacy among the management of small and medium-sized companies in order to foster SME growth and development. • **Transferring IT-based company-fostering programs to local chambers of commerce and industry whose members consist of small and medium-sized companies** - Transferring IT-based company-fostering programs to local chambers of commerce and industry whose members consist of small and medium-sized companies in order to promote industrial development through fostering SMEs in the same way as above. **<Improving Efficiency in Social Services through IT Utilization>** • **Distance education support projects** - Efficiently providing education to isolated islands, etc., through distance education using satellites and Websites. • **Telemedicine support projects** - Providing support for telemedicine in order to improve the health and medical service standards in rural areas, isolated islands, etc., such as assisting diagnoses by medical facilities in remote areas via IT from the major medical facilities and providing advice and consultation to medical staff members.
Aid with IT Projects	**<Support for the Efficient Realization of IT-Linked Societies>** • **Projects to lay cable and optical fiber cable in linkage with the development of transportation networks, etc.** - Installing cable and optical fiber networks in linkage with projects to develop network-type infrastructures such as transport networks (e.g., roads, railways) and sewerage. • **Projects to establish and operate multi-purpose IT centers in linkage with the establishment of universities and schools** - Establishing multi-purpose IT centers in linkage with the establishment of educational facilities (universities, schools, etc.) and local community centers. - Improving accessibility to the Internet, etc., by the general public.

Note: SMEs = Small and Medium-Sized Enterprises.
Source: Nomura Research Institute.

Table 2. Examples of eODA Projects for Less-Developed and Semi-Developed Countries

	For Less-Developed Countries	For Semi-Developed Countries
Aid for IT Projects	**<Development of IT Infrastructure>** • **Projects for the development of high-speed communications infrastructure connecting major cities** - Providing assistance for the development of high-speed communications infrastructure connecting major cities as the core communications infrastructure of the country. - Also giving consideration to linkages with projects for road development and improvement. • **Projects for the establishment and operation of multi-purpose IT centers in major cities** - The communications infrastructure that is developed will be used to set up and operate multi-purpose IT centers. - Providing IT-related education and training at such IT centers. • **Basic telephone development projects using cellular (or satellite) communications** - Developing basic communications infrastructure at low cost in areas where wired communications networks cannot be economically justified (such as isolated islands and agricultural or fishing villages). • **Projects to set up Internet providers** - Providing assistance to foster Internet providers in terms of funding and technology in countries where Internet providers are not developed.	**<Not Widening the Digital Divide Within the Country>** • **Projects to develop and operate multi-purpose IT centers in regional cities** - Establishing multi-purpose IT centers in regional cities to avoid widening the digital divide between urban and regional cities. - Operating such IT centers as facilities to provide training functions in regional cities.
Aid by IT Projects	**<Improving Efficiency in Administrative Activities through IT Utilization>** • **Projects to support the development of central and local government LANs** - Providing support for the development of government LANs to improve efficiency in administrative activities. • **Providing IT training for government employees** - Providing IT training for government employees to improve efficiency in work using LANs.	**<Improving Efficiency in Administrative Activities through IT Utilization>** • **E-government projects** - Assisting the improvement of efficiency in administrative activities through promoting e-government projects in semi-developed countries. **<Industrial Development by IT Utilization>** • **Venture capital investment and dispatching personnel for developing countries** - Making venture capital investments for the development of IT-related industries. - At the same time, dispatching personnel to operate venture capital startups and provide guidance for the management of such companies. • **Projects to develop B2B business infrastructure in Asia** - Developing infrastructure for B2B transactions mainly targeted at small and medium-sized companies in Asia. - Projects that contribute to the industrial development in developing countries, while at the same time aimed at expanding the business possibilities of Japanese companies.

Note: B2B = Business to Business; LAN = Local Area Network.
Source: Nomura Research Institute.

course obvious that certain eODA projects are suitable for less developed countries, while others are more attuned to the needs of semi-developed countries. Tables 1 and 2 show the projects classified into the three categories of Aid for IT, Aid by IT and Aid with IT that are applicable to both less developed and semi-developed countries, and those that should properly be targeted at countries in accordance with their degree of development.

Accordingly, these tables describe projects at random that can be considered on a general basis in terms of the development level of a recipient country and the three categories of Aid for IT, Aid by IT and Aid with IT. However, we would also like to discuss in the following section two examples of appropriate approaches to eODA that are desirable not only to developing countries but also to Japan.

1 Fostering Small and Medium-Sized Companies by eODA Project Packages

We will first consider eODA projects for fostering small and medium-sized companies in developing countries that can bring advantages to the manufacturing sector in Japan. The format of the relationship between industries in developing countries and those in Japan mainly involves the procurement of raw materials and/or components from developing countries and the manufacture of products by Japanese firms. There are also many cases in which local subsidiaries or local factories of Japanese companies procure raw materials and/or components from manufacturers in developing countries. Regardless of the format, however, this represents a relationship in which Japanese companies engage in procurement and companies in developing countries undertake supply.

When this relationship is taken into account, an advantage to Japanese companies would ensue if companies in developing countries were able to develop their abilities to produce and supply good-quality products at low prices as scheduled, and if Japanese companies were able to exclusively use these companies. On the other hand, one of the major advantages of the IT society is that it enables anyone to have access to anybody. Accordingly, it would appear contradictory to consider

that only Japanese companies would be able to exclusively use such capable suppliers while supporting the realization of an IT society that provides for open access.

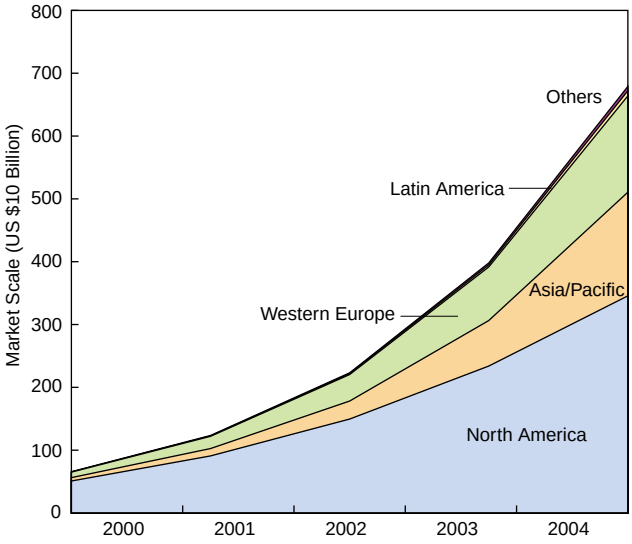
However, even if Japanese firms cannot use these companies exclusively, we think it may be possible to channel the output of such suppliers to a substantial extent in practical terms by developing an e-marketplace (e-commerce market) that is easy for companies in developing countries to use while preserving their commercial practices and languages, and by benefiting from such e-marketplaces. Moreover, as e-commerce markets in Asia are projected to grow at the high rate of some 110 percent to 150 percent annually (including those in Japan, NIEs and Australia), it is considered that such highly capable suppliers will be the first to enter the e-commerce field (Figure 2).

What we assumed on the basis of these preconditions is the eODA project package presented in Figure 3. This assumes cases in which small and medium-sized companies in the capital or major cities of Asian countries with a per-capita GDP of about $1,000 or more are fostered through such aid, and in which Japanese companies can benefit from the results.

This package consists of the following four elements, each of which has its respective purpose.

- A group of projects for the pure purpose of simply fostering small and medium-sized companies without adhering to eODA.

Figure 2. E-Commerce Market Scale (B2B and B2C)



Note: B2C = Business to Consumer.
Source: Forester Research.
(http://www.forester.com/ER/Press/ForrFind/0.1768.0.FF.html)

Figure 3. Overview of Assistance Packages to Foster Small and Medium-Sized Companies

Assistance to Foster Small and Medium-Sized Companies by Non-eODA
- Providing support in formulating and implementing policies to foster small and medium-sized companies
- Providing guidance by experts for the management of small and medium-sized companies

Assistance to Foster Small and Medium-Sized Companies

Organizing Environment for IT Access by Small and Medium-Sized Companies (Aid for IT)
- Providing IT training to management and employees of small and medium-sized companies
- Supporting the creation of loan systems for IT introduction by small and medium-sized companies
- Assisting chambers of commerce and other public organizations in setting up and operating high-speed ISP businesses
- Assisting in strengthening the communications infrastructure in SME industrial parks
- Supporting the establishment and operation of multi-purpose IT centers in SME industrial parks, chamber of commerce buildings, etc.

Assistance for the Management of Small and Medium-Sized Companies by IT (Aid by IT)
- Providing assistance for various management-related information database firms by chambers of commerce and other public organizations
- Providing assistance for remote management guidance business by chambers of commerce and other public organizations

Exclusive Use of Highly Capable Local Companies
- Providing assistance to firms that can introduce capable suppliers to Japanese companies
- Providing assistance to create a local language version of e-marketplaces by Japanese companies
- Providing assistance to create e-marketplaces in the local language by local chambers of commerce, as well as assistance to create a Japanese language version
- Activities to dispatch local personnel to Japanese companies for training programs

Source: Nomura Research Institute.

- A group of eODA projects under the Aid for IT category for the purpose of developing an IT-access environment for small and medium-sized companies.
- A group of eODA projects under the Aid by IT category that supports the management operations of small and medium-sized companies by means of IT.
- A group of projects attempting to establish exclusive relationships with capable suppliers that have been fostered through the three approaches above.

Although such projects include some that are not suitable to ODA—particularly those for the purpose of establishing exclusive relationships as indicated in the last item above, it nevertheless would seem possible to foster small and medium-sized companies in developing countries and to benefit from such results only after implementing a package of various efforts that include eODA, non-eODA and non-ODA.

2 Combining eODA with Support for the Establishment of Standards

Providing eODA on the basis of the standards generally accepted in Japan will give Japanese companies an advantage in participating in relevant eODA projects. Because the term eODA is directly related to the Internet, people are apt to consider that this constitutes the only world standard by which IT applications can be measured. However, there are other technologies in which only a few international standards have already been established. In the area of ITS (Intelligent Transportation Systems), for example, Japan, the United States and Europe are keenly competing with each other to establish international standards.

Assume, for example, the case of a project under eODA to prepare digital maps for major cities in developing countries as part of the infrastructure to eliminate traffic congestion and/or improve traffic safety. If the standards generally used in Japan are adopted for such a project, Japanese companies will obviously have an overwhelming advantage in the event such standards are adopted by the recipient country and applications using digital maps (e.g., car navigation systems) become popular in the near future. There are, of course, many more examples in addition to the above two.

The e-Japan strategy envisions that about 30,000 competent foreign human resources will be accepted in Japan by 2005 to secure IT engineers and researchers with highly advanced skills that are beyond the level of US standards. And it would seem quite evident that strongly promoting the nurturing of IT engineers in the Japanese language as part of eODA will also lead to substantial contributions to Japan as well.

To the extent that eODA is part of ODA, it is a matter of course for such assistance to be designed for the benefit of recipient countries. In view of the extremely severe financial situation now facing Japan, however, such assistance must as far as possible be able to promise direct advantages to Japan in order to obtain public understanding and support for eODA.

V IT Characteristics and Japan's Tasks in Promoting eODA

Lastly, on the basis of the consulting work we have carried out so far, we see the following tasks facing Japan in implementing eODA.

(1) Eliminating vertical divisions and providing across-the-board support covering various fields

A group of projects that can provide returns to Japan in a visible format can be expected only after packaging many projects including non-ODA projects. As explained previously, such packages would be designed to foster and support small and medium-sized companies. In planning and implementing this type of package, related organizations and agencies must form a group of projects on an across-the-board basis in terms of fields and business schemes by transcending the barriers of vertically divided areas of focus. And as private-sector consultants, we must at the same time be equipped with the abilities to plan and coordinate projects that are organized in such groups.

(2) Working towards a greater diffusion of systems and standards

It is not necessary to carefully examine the example of the US, which announced its own accounting system as the global standard and created an environment that makes it easy for US companies to carry out activities in the world by disseminating this standard in various countries, to see that disseminating one's own systems ahead of those of other countries makes it extremely easy for one's own companies to carry out subsequent activities in a target country. It can also be considered that aid organizations in various countries have been concentrating on IT policy assistance for developing countries because they intend to disseminate systems of their own through such means. When we take heed of disseminating standards and systems that range from specific examples such as the digital maps previously described to major systems (such as the capitalistic economy, for example), we can make a direct return to Japan easy to see.

(3) Ensuring continuous support

One of the problems that plague not only eODA but also Japan's ODA on the whole is the transitory nature of such assistance due to structural restrictions. For example, high-precision maps that are created through ODA grants become totally useless because the subsequent updates are not continually carried out on a systematic basis. Quite often we have seen structural restrictions imposed by Japan play havoc with ODA. In the IT field, not only hard-

ware replacement but also real-time updates of software such as company databases are essential. In order to cope with this issue, continuous assistance should be provided by giving consideration to follow-up non-ODA programs in addition to targeted ODA grants.

(4) Meeting the speed of technological innovation

IT innovation spreads very fast, and new technology and equipment soon become obsolete and will no longer be used. Accordingly, it is not rare to find cases in which it becomes difficult to provide proper responses under current ODA programs when a project doesn't actually start until several years after a plan is initiated. An assistance scheme that can meet the rapid progress of IT needs to be established in order to implement ODA in an effective manner.

(5) Giving consideration to narrowing the digital divide in developing countries

At the beginning of this paper, we pointed out that IT will change social mechanisms, and that failing to catch up with this trend will mean being left behind the rest of the world. However, we must recognize that the first stages of narrowing the digital divide among countries may inevitably lead to widening the gaps between urban and rural areas, as well as accentuate the cleavages between the haves and the have-nots.

This paper has proposed several ideas by mainly considering projects for urban areas in relatively developed countries from the standpoint of focusing on visible returns to Japan. In addition to such eODA, however, long-term projects that use the latest in IT such as satellite communications to improve communications environments in underdeveloped countries, rural areas and isolated islands should not be neglected, and must be implemented in order to avoid exacerbating the digital divide within developing countries.

1 "E-Japan Strategy," Strategic Headquarters for the Promotion of an Advanced Information and Telecommunications Network Society, January 2001.
2 *Communications White Paper 2000,* Ministry of Posts and Telecommunications.
3 "Application of Advanced Information Technology to ODA Projects: Phase 2," Institute for International Cooperation (Japan International Cooperation Agency (JICA)), April 2001.
4 Takeshi Shinohara, "IT Revolution and eODA," *JBIC Review*, Japan Bank for International Cooperation, Special Issue, November 2000.
5 IFC Website (http://www.worldbank.org/)
6 UNDP Website (http://www.undp.org/)
7 USAID Website (http://www.usaid.gov/)
8 Ministry of Foreign Affairs Website (http://www.mofa.go.jp/mofaj/index.html)
9 "Japan's Official Development Assistance," Economic Cooperation Bureau of the Ministry of Foreign Affairs, March 2001.
10 "Information Technology Innovation and Technical Cooperation (Application of Advanced Information Technology to ODA Projects: Phase 1)," Institute for International Cooperation (JICA), March 2000.
11 JICA Website (http://www.jica.go.jp/index-j.html)

Takeshi SHINOHARA is a chief consultant for NRI's Center for Knowledge Exchange and Creation. His area of expertise is information and communications technology policies.
Ryoichi YAMAGISHI is a senior consultant at NRI's International Consulting Department. His area of expertise is infrastructure development in developing countries.

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Inquiries to: Corporate Communications Department
Nomura Research Institute, Ltd.
E-mail: nri-papers@nri.co.jp
FAX: +81-3-5255-9312