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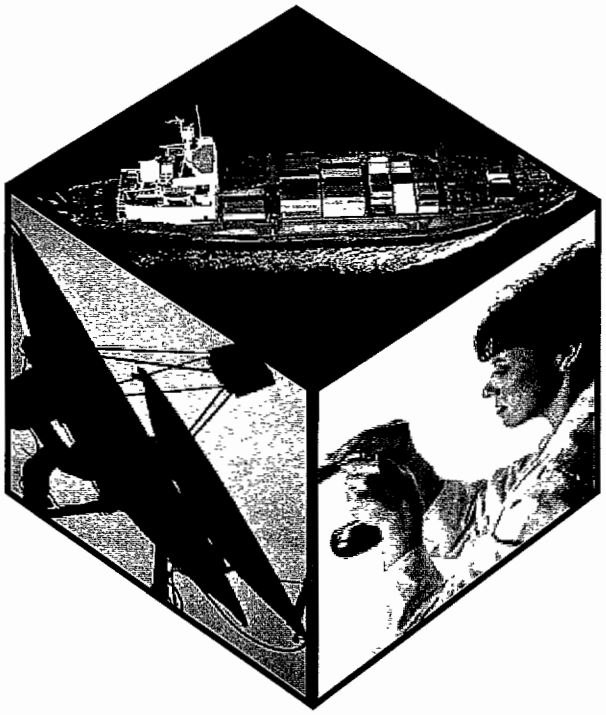

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Washington D. C., July 29, 1996

INFORMATION TECHNOLOGY, TRADE AND DEVELOPMENT SEMINARS

About the Series

The information revolution has transformed the tools available for global trade and development. Business people around the world are beginning to use public and private networks not only to exchange information but also to consummate trade transactions. In recognition of these trends, USAID sponsored the "Information Technology, Trade and Development Seminars Series."

Since May 1995, over twenty inter-agency seminars, featuring presentations from the public, private and non-profit sectors, have been convened (Annex A contains a list of seminars). The seminars have involved a variety of organizations, such as the State Department, the Commerce Department, and the Telecommunications Industry Association, and have been led by moderators from Dun and Bradstreet Information Services, the Internet Society, and the National Science Foundation, among others. Speakers have been drawn from, for example, the World Bank, the Information Association of America, and the National Institute of Standards and Technology.

Representatives from these diverse groups discussed new information technology (IT) projects to support trade and development in key emerging markets. They noted constraints and "lessons learned" in implementing electronic commerce. And, in keeping with the spirit of the seminar series, they identified areas of public and private sector initiative and cooperation in this rapidly changing field.

The E-Trade List

In conjunction with the launch of the seminar series, USAID also initiated an "e-trade" Internet discussion list for interested public and private sector professionals working in electronic commerce, international trade, and economic development. The purpose of this electronic mail list is threefold: to share information on international trade promotion and communications; to access public and private sector feedback; and to participate in the "communications revolution" of which Internet is a key instrument.

In addition to being an information clearinghouse for issues related to the use of PC-based trade facilitation in both developed and developing countries, information on USAID-sponsored and other related seminars in information technology, trade and development are posted on the list (Annex B contains instructions for list subscription).

Purpose of this Report

The purpose of this report is to summarize and synthesize the main ideas and views presented by the speakers during the Information Technology, Trade and Development Seminar Series. These ideas are organized below into four themes, including: the impact of information technology on trade; the benefits of information technology with regard to development; the issues that must be addressed in order to realize the enormous promise of the information superhighway; and public and private sector roles in achieving the goals of the Global Information Infrastructure (GII).

THEME I: INFORMATION TECHNOLOGY AND TRADE

According to Thomas Kalil of the White House National Economic Council, "[t]he recent explosion in communications technology will have a huge impact on commerce and trade." Both the public and private sectors are using information technologies, such as e-mail, the Internet, and electronic data interchange (EDI), to disseminate and obtain information; to reduce costs and save time; and to locate new partners and create business opportunities. As a result, the actors involved in commerce and trade are developing new ways to do business.

Obtaining Information

The U.S. Council on Competitiveness reports that "advances in technology and the rise of international competition have made knowledge the new currency of the global economy." Obtaining information is critical to businesses, and new technologies are making information more accessible. For example, on the Internet, banks are providing information on finance, marketing, e-cash transfers, and foreign exchange rates; the Chicago Mercantile Exchange can also be found on the World Wide Web (WWW).

Among the "information sharing" initiatives and projects profiled during the seminar series, were several examples from the public sector. Paper reduction and information dissemination are the current Administration's goals. U.S. Government initiatives include: the Technology Initiative of 1993; the National Performance Review (NPR) Initiative on Reinventing Government; the National Information Initiative Agenda for Action; and the Paperwork Reduction Act.

For example, it is now possible to access U.S. patents on the WWW. The Commerce Trade Information Center (CTIC) makes U.S. export promotion information available via "1-800-USA-TRADE" and through "fax on demand." The International Trade Administration (ITA) WWW site (http://www.ita.doc.gov) provides information on the Export Advocacy Program, state and country information, the National Trade Database (NTDB), and the Big Emerging Markets (BEMs). An e-mail capacity allows visitors to the BEMs home page (http://www.stat-usa.gov/itabems.html) to ask the BEMs manager, industry experts and the trade information center, questions about trading with BEMs.[1] Annex C contains a list of related WWW sites.

THE SMALL BUSINESS ADMINISTRATION (SBA): PROVIDING PUBLIC INFORMATION

"... the small business community needs quick access to information, and they expect the government to provide it."

According to Diane Gannon, Chief of the Productivity Enhancement Staff of the Office of Information Resources Management, the SBA has two electronic bulletin boards to provide the information the public demands. The SBA also has a home page on the WWW (http://www.sbaonline.sba.gov). The home page provides information from local SBA offices in different cities and links to U.S. federal and state home pages.

Visitors to the SBA site can find three types of information: how to start a business; how to finance a business; and how to expand a business. The SBA home page links the visitor to other sites which can help answer those questions. For example, a link to the Department of Commerce will provide access to training modules and workshops, such as the franchise workshop. Shareware files on how to open and run a small business are also available via ftp. The current day's listing of the Commerce Business Daily is accessible, as are business statistics and finance information. Future sites will include an international trade link and women in trade link.

At the international level, public and private partners in G-7 countries are developing the Global Legal Information Network (GLIN). GLIN will make relevant local laws and regulations mutually accessible to member countries. GLIN is important because the statutes and regulations of different countries are changing rapidly. In order to conduct spontaneous commerce, access to existing treaties and regulations and currency of information are essential.

Many information sharing projects also exist in the private and education sectors. For example, the goal of Americans Communicating Electronically (ACE), a seminar co-sponsor, is to improve communications between citizens and their government by

[1] The BEMs are: India, ASEAN countries, South Korea, Mexico, Brazil, Argentina, South Africa, China economic area, Poland, and Turkey.

facilitating access to public information through electronic media, e-mail, gopher and the WWW. AEANET (http://www.aeanet.org), the home page of the American Electronics Association, provides on-line access to up-to-date industry information. The United Nations ReliefNet (http://www.reliefnet.org) provides access to information on early planning for disasters. Brown University provides information to promote sustainable development on the HungerWeb (http://www.netspace.org/hungerweb/).

Reducing Time and Costs

It is estimated that as much as 7% of the value of world trade, approximately $210 billion, can be attributed to the cost of transaction administration. Administration can include filling out numerous, often duplicative paper-based trade documents and forms, adherence to hundreds of years-old trade procedures, and dealing with the layers of public agencies that govern the trading process. Significant savings in cost and time can be realized by automating some of these steps using the many different tools of electronic commerce.

For example, it costs $2.50 to send a ten-page document by mail, $5.00 by fax, and the cost of a local telephone call via the Internet. In Singapore, with the introduction of Tradenet, an electronic trade system, and EDI, approval of import and export transactions now only takes 15 minutes. Officials in Singapore claim that properly applied trade facilitation techniques are already saving the country in excess of one percent of GDP per year. Other examples of national electronic trade systems include: Tradevan in Taiwan; Tradelink in Hong Kong; and Tradegate in Australia (see box below).[2]

Electronic techniques will also help the United States Government save time and money in the area of procurement. There are approximately 2,400 government procurement offices with 200,000 to 400,000 potential vendors. Around 19.6 million government procurement actions take place per year. Ninety percent of these are less than $25,000. By 1997, all U.S. agencies will be required to use electronic commerce to obtain these goods and services.

[2] Schware, Robert and Paul Kimberley, "Information Technology and National Trade Facilitation: Making the Most of Global Trade," World Bank Technical Paper Number 316, World Bank: Washington, DC, 1995 and Schware, Robert and Paul Kimberley, "Information Technology and National Trade Facilitation: Guide to Best Practice," World Bank Technical Paper Number 317, World Bank: Washington, DC, 1995.

NATIONAL ELECTRONIC TRADE FACILITATION SYSTEMS: LESSONS LEARNED

In response to growing demand from countries ready to receive technical and institutional guidance in the field of electronic trade facilitation activities, the World Bank's Finance and Private Sector Vice Presidency sponsored a study in 1994 entitled "Information Technology and National Trade Facilitation." Through extensive research of the experiences, both success and failures, in Hong Kong, Malaysia, Singapore, Taiwan, Australia, New Zealand, Hungary, Argentina, Brazil, Chile, and Mexico, the study summarizes and identifies the factors that contribute to success in information technology (IT) facilitated trade processing. The project was also designed to create a best practice model for trade facilitation.

"Best practices" identified include:

- *A "Shared National Vision":* Facilitating trade is a "joint venture." The right mix of public and private sector support and commitment is critical to the success of a trade facilitation program. The use of "inducements," such as preferential pricing, to get some private sector actors to participate, and a program of "continuing improved awareness" of the benefits of trade facilitation, may also be needed.

- *Use of International Standards:* This implies alignment with trading partners' systems and adoption of world technical standards and guidelines.

- *Streamlining Processes:* Best practice involves simplifying and re-engineering processes to increase the use of electronic techniques, removing excessive and obsolete controls, using pre-processing where possible, and shortening and easing lines of communication. Here techniques that replace the use of paper and/or increase the use of codes are especially useful.

- *Development of a "Government Gateway":* This includes the creation of a single user connection for businesses to access all government agencies involved in trade.

- *"Low-Tech" and "No-Tech" Initiatives:* Electronic trade facilitation programs must also ensure that developing countries and businesses without access to information technology participate. Many options exist including, for example, the use of post offices as input bureaus.

Locating New Partners and Business Opportunities

The justification for using electronic commerce tools is not solely based on savings and efficiency. Application of electronic trade facilitation to all phases of the trade

transaction (which also includes research/preparation, analysis, and audit) can help users create trading partner relations and business opportunities.

By electronic means, it is possible for a company to reach millions of other companies around the world. Value-added networks (VANs) are well-established channels for electronic commerce. VANs are a series of interconnected networks for conducting business in a closed environment or across networks. VANs offer marketing, mapping into standard formats, and "end-to-end" responsibility for problems.

For example, the IBM Global Network Resources is a VAN in over 100 countries, with 28,000 customer sets world wide. This VAN provides: messaging services; electronic data interchange (EDI); network services; information providers; capacity service and network outsourcing. Use of a combination of VANs appears to be a definite solution for large established companies and trading partners.

VANs, however, are too expensive for use by most smaller companies. For conducting small business operations, information outreach, low value transactions, or pre- or post-transaction comments, the Internet may provide a suitable channel. Organizations, such as the National Association of State Development Agencies, are working with smaller companies to bring them onto the Internet. In Ohio, for example, many companies have access to the Internet. Electronic commerce on the Internet, however, is still in the development stage, and only a few firms provide EDI software on the Internet.

A growing number of organizations, such as those profiled in the box below, provide electronic trade facilitation services to help small businesses. These services range from providing general information, to providing specific trade leads, to facilitating the trade transaction. The G-7 countries are also working to stimulate the use of information technology by small and medium sized firms. The pilot project, "A Global Marketplace for SMEs," will: (i) help SMEs access information needed to integrate themselves into the fabric of global trade; (ii) address SME legal, institutional, and technical requirements; and (iii) encourage the development of cooperative ventures that address practical problems and provide demonstrations of global electronic commerce involving SMEs.

Last, new players not only will be able to participate at long distances without long established relationships, but electronic commerce tools will also allow for this previously unmanageable number of transactions to take place with greater customer satisfaction. For example, the use of EDI to preclear exports leads to more efficient handling of goods, better anticipation of problems, proper scheduling, and maximum use of existing infrastructure. Electronic tools, such as "quick response" (QR) and "just in time" (JIT) supported by EDI, allow suppliers to meet variable customer demand. In supermarkets, for example, inventory has been reduced from four months to one week.

ELECTRONIC TRADE FACILITATION FOR SMALL BUSINESS

ARPA (Advanced Research Projects Agency): An electronic commerce resource center implemented by a Congressional initiative. ARPA works with small and medium sized manufacturers to implement electronic commerce in their business transactions.

Assist International: (http://www.imex.com/assist.html) Allows visitors to download free "how to" information. The "Export Tools Handbook" is also available.

Datamatix: Datamatix provides trade leads to small businesses. Datamatix profiles thousands of public and private sector opportunities to buy and sell and distributes them to customers via the IBM Global Network and TPICC network.

Dun & Bradstreet Information Services: (http://www.dbisna.com) Provides advisory services, as well as data, which can be accessed directly through a "1-800" number. These services help companies grow by identifying trading partners and facilitating trade between those partners.

Full Service Trade System (FSTS): The World Trade Center Association's electronic one-stop-shop trading company. FSTS, targeting small to medium businesses, is a system which combines a short term revolving lending facility with electronic documentation capabilities to simplify aspects of finance, shipment, and insurance of goods and services connected with an international trade transaction.

IBEX: The U.S. Chamber of Commerce's interactive desktop system that helps companies locate and facilitate deals around the world using a private network, enabled by e-mail. IBEX is a "virtual agent" that searches for qualified partners, records negotiations, and finds intermediaries to facilitate transactions.

IMEX Exchange: (http://www.imex.com) Provides access to government sites, trading desks and tools for exporting. IMEX also provides a link to export shipment information.

Trade Compass (http://www.tradecompass.com): Trade Compass is an Internet information system for international commerce. Trade Compass provides an arena for: obtaining top trade stories and trade related information; promoting products; and interaction between buyers and sellers.It is available on the Microsoft Network and the WWW.

Tradescope: (http://www.tradescope.com) Provides global leads, insurance information, an export/import directory, and credit reports. An e-mail capability enables visitors to request specific information.

U.N. Global Trade Point Network: The trade point initiative aims at leveling the playing field for small businesses by using electronic tools to facilitate transactions, reduce costs, and help bring buyers and sellers together. TradePoint USA is locate at http://www.tpusa.com.

UNINET (http://www.nando.net/public/bo.html): An international partnering system for small high-tech companies. The partner companies bring vetted companies into the system and make preliminary matches with applicants, and facilitate transactions.

THEME II: INFORMATION TECHNOLOGY AND DEVELOPMENT

A second major theme explored by series' participants was the impact and uses of information technologies in developing countries. While the lack of communications capacity in the developing world has been under-addressed in the past, it is now recognized that communications is a critical element in achieving economic, social and political development and in expanding the reach of resources available in development programs. According to Joan Dudik-Gayoso, Science and Technology Coordinator in USAID's Global Bureau, access to information technology is essential. Those countries without access to information technology will be left behind as the world becomes more integrated.

Economic Growth

Application of information technologies are helping to narrow the competitive gap between more developed and less developed countries. According to Anthony Rutkowski of the Internet Society, the Internet provides low-cost, instant access to resources; promotes the development of critical skills; supports a business and market oriented economy; helps access multiple sources of funds and assistance; and allows for very low-cost, instant entry into the global market. The result is growth in markets abroad, change in market fundamentals, intensification of international competition and improved economic opportunity (see box below).

Recognizing the advantages to economic growth, USAID supports many information technology projects in developing countries. For example, USAID has worked with an UNCTAD program to develop 70 trade points around the world to electronically connect key public and private participants in international trade and facilitate the exchange of trade information. In Ecuador, USAID has created a self-financing computerized trade and investment intermediation service to link exporters and clients. Under the Capital Markets Development project in the Philippines, USAID is working to enhance the efficiency of the securities market, automating trading operations, integrating two stock markets in operation, and upgrading regulatory functions. In Tanzania, USAID is working in the area of rural telecommunications development to stimulate inventory management, market development, and receivables collection.

INCREASING COMPETITIVENESS AND CREATING JOBS IN AGRIBUSINESS

Hungary: After the collapse of the Soviet Union and the removal of Hungary's tariff and non-tariff barriers to trade, the domestic manufacturing sector became increasingly marginalized by the entry of foreign businesses. The government of Hungary recognized that domestic firms needed help in improving competitiveness. Working at the grass roots level and with chambers of commerce and trade associations in the agricultural sector, an electronic system was implemented to gather sales information from the five big wholesale agriculture markets in Hungary. Farmers can call a central Budapest location and access this information to find out how many of a product had been sold and at what price. This system is helping the farmers decide what and when to harvest, thus making them more competitive in the market.

Agro-Info Americas: The goal of Agro-Info Americas (formerly known as "Agrinet") is to stimulate job creation in the Latin American agribusiness sector. Users of Agro-Info connect to Sprint's Data Global Network using a computer, a modem and a telephone line. Messages and advertisements can be posted and viewed on electronic bulletin boards. An electronic commerce database is accessed using e-mail. The database allows companies to place orders, acknowledge orders, and eventually transfer funds. U.S. databases, such as USDA's Agri-Marketing service, and the OAS's Foreign Trade and Information Service (SICE) are also available.

Access to Social Infrastructure

Advances in information technology are also expanding access to those things that are needed for a better quality of life including, for example, education and health care. Remote access to information and services are now available through projects profiled during the seminar series. A pilot program workshop for the introduction of scientific and technical information though the Internet (INFOCyT) is one example of how the WWW can be used to facilitate the transfer of knowledge and learning. INFOCyT established a home page on the Web where scientists in Latin America can access information from a centralized point (http://www.rep.net.pe/../INFOCYT/infocyt.html). In Zambia, a USAID project has made the medical school library available electronically to 100 other cities and towns in the country. USAID also has established an Internet site at a Bulgarian University to facilitate distance education.

In Costa Rica, President Figueres has endorsed a telemedicine pilot project. This project will allow medical providers in remote areas to contact a regional hospital with questions and to transmit pictures of an injury or other health related inquiry. The regional office in turn will contact a national hospital in San Jose and instantly obtain information for the health care provider in the remote area. Thus, systems, such as AT&T's Picasso System, will provide remote access to advanced medical diagnoses. Other benefits include reduced costs and better channeled resources.

In addition, improved remote access to education, health care and public services will reduce the pressure on urban areas. Fewer people will be forced to migrate to congested urban areas in search of these services and opportunities. Such migration is becoming more and more economically and environmentally unsound.

Participation

Participation is the third area where information technology can have a big impact in developing countries. In the United States, public servants, including congresspeople and the president, have recognized the value of information technologies and have set up home pages on the Internet. David Lytel, of the White House Office of Science and Technology Policy, explains: "the Internet is a leading factor in promoting an understanding of American culture, allows real voices to penetrate the media, and allows for interaction between people who would otherwise not communicate. It enables Americans to act on world events and to learn about them through virtual conversations with people around the world." Access to information encourages the empowerment of individuals and fosters political and social diversity.

Because of the availability of a variety of sources and media which have equal, and in some cases, more timely access to information, government's traditional information role is changing. Government no longer has control over sources and content of information. Access to such information was crucial to the democratic revolutions experienced in the Former Soviet Union and Central and Eastern Europe.

USAID Role in Supporting Development

Through the use of concessional aid, USAID supports the use of information technology in developing countries by: (i) working with host country governments to create a enabling policy environment that is conducive to the adaption of technology and (ii) funding projects that demonstrate the need for and uses of information technology. USAID Policy Determination #22 (PD #22), "Chapter 215: Telecommunications, Information, and the Global Infrastructure Initiative," provides the "principles and conditions for USAID funding of telecommunications and information applications and technologies to promote sustainable development." PD #22 emphasizes that the building and installation of hardware is the realm of the private sector, and thus is not concessionally financed by USAID. (Annex D contains a copy of USAID PD #22.)

USAID sees information technology as an integrating force, not as a separate sector, in the effort to achieve the goals of development. Because technology is cross cutting, the Agency seeks to avoid setting up separate information technology infrastructures in

the various sectors in which it works, such as health, agriculture, and environment. This approach is less expensive and will enable a more integrated response to development concerns.

Since the mid-1980s, USAID has supported 42 information technology projects in 25 countries. In the area of policy reform, as part of the Summit of the Americas Initiative, USAID authorized, within a larger effort to expedite the process of trade liberalization in Latin America, a $500,000 component to expand the use of information technology in the region. In Africa, the Leland Initiative is a 5 year/US$15 million program to bring Internet connectivity to Africa's 20 USAID-assisted countries. The foci of the initiative are to develop policy, to garner government commitment to the need for the Internet, and to assess hardware needs.

USAID's other challenge is to get projects working and demonstrating results. In Poland, Madagascar and Tanzania, USAID has set up trust funds to run telephone co-operatives. USAID also has a grant application from Caribbean Basin and Latin American Action (C/LAA), a private group, to use e-mail and Internet connections on a self-sustaining basis in the agribusiness sector. In time, as personal computer costs come down, as the ease of use increases, and as the mass media catches up with the new technologies, results will be easier to achieve.

THEME III: THE FUTURE OF IT-BASED SOLUTIONS FOR TRADE AND DEVELOPMENT

The Changing Technology

Just as we are beginning to see the impact of new information technology on today's trade and development, the prospects for the future are also being revealed. Advances in information technology are occurring at a rapid pace. The technology is getting faster, cheaper, and very well connected. For example, the compute power of microprocessors is expected to double each year at the same price. Memory capacity is evolving at exponential rates and the cost is going down; communications capacity is also doubling every year and will speed up in the future. New optical technologies are expected to evolve from 2.4 gigabits per second to 100 gigabits per second on the same fiber.

Another important characteristic of the evolving information technology is connectivity. Future technologies will enable connectivities between heretofore separated areas, regions, and disciplines. Cellular and wireless communications (see box below) will enable unprecedented personal communications capability, making connections to the rest of the globe easier. Emerging digital media standards in the way information is represented will allow for merging technologies and distributed computing. In the future, users will have the capability to "pull" information according to demand and personal needs.

THE FUTURE: EXPANDED WIRELESS COMMUNICATION

Iridium Corp.: In the near future, people will be reachable anywhere in the world with one telephone number. Iridium Corp. is developing a satellite system to serve hand-held telephones and solar powered telephone booths. The cellular telephone will transmit to satellite, which will then relay the call to any location in the world. The satellite will record the identity and location of the caller, as well as track the duration of the call. This service, available for $3.00 per minute, will also give access to advanced data services and can be plugged into laptops to download information.

The advantages of this service are speed and increased coverage, especially in remote areas. In the year 2000, there will be at least 140 million people subscribed to cellular services. The professional traveller will be the biggest customer, as well as those requiring rural services, such as government workers or employees in remote facilities.

The service will be most valuable in areas where long telephone lines are not practical. Some governments are considering this service as a quick solution to the lack of connection in outlying areas. The benefits will be nationwide coverage, technical transfer capabilities, the creation of local wealth, and quick access to communications during disaster relief efforts.

Teledesic Corp.: Formed in 1990, Teledesic seeks to bring affordable access to advanced information services to parts of the world that cannot be economically served by wireline means. Teledesic works in partnership with local service providers in host countries to provide global broadband wireless services by deploying a network of low earth orbiting satellites working in the KA band. Each interconnected satellite will cover a small portion of the earth's surface to provide seamless coverage over the entire globe.

Lawrence Williams of Teledesic stresses the social, economic and environmental benefits of such a network and the vision of universal access for all the world's citizens.

In addition, electronic communications and connections are going to be increasingly two-way, broadband, and virtually distance-insensitive. Russell Neuman of Tufts University also anticipates that communications will become modality-independent, that is, the format (e.g., voice or text) something is created in might not be the format in which it is displayed. In the future, the distinction between telecommunications and

mass broadcast communication will disappear. While on the one hand communications are becoming more global, on the other hand, the increasing use of electronic technology will enable communicators to monitor impact and viewership.

Changes on the Internet are also happening at hyperspeed. The Internet is improving, but not stabilizing. Today, the Internet has over 20 million users/day. By 1999, it will have over 400 million. As such, even a small change on the Internet can have huge implications.

Transitional Issues

Alan Lang of the Secretary's Open Forum noted, "[f]ew issues touch more lives in a greater way than the growth of the global information infrastructure... we are beginning to see the perils and promises of new information technology." Realizing the promises and avoiding the perils of the new information technology was a third major theme explored by seminar speakers. In order to move successfully to this next plateau in the Information Age, it is important to address issues such as: security; standards, laws and regulations; culture; and access.

Security

According to Richard Wilhelm, Senior Policy Advisor to Vice President Gore, solving the security problem is essential if we are to realize the full potential of the information superhighway. In the era of signed paper documents, there existed inherent security in ink. There is no inherent security in "volts on a line." Presently, there are few rules in cyberspace. In addition, there is no one with the authority, tools and will to enforce the rules that do exist. Fraud and security breaches pose real dangers that can cost millions of dollars.

As the types of security threats rise, as the business community's appreciation of the risks involved increases, and as information security technology becomes more ubiquitous, information security which was once largely a discretionary, expensive afterthought now has become a focal point of transactions. Finding technical and legal solutions to securing electronic commerce is a huge and growing field. Government and private organizations are working to find the technologies that will reduce the cost of building and maintaining business relations and the best way to put those technologies in place. Progress toward solutions are slow due to several factors, including those outlined in the box below.

SECURITY ON THE INFORMATION HIGHWAY: THE ISSUES

Several factors complicate progress toward a solution to the security issue. Some of these include:

- Information security involves more than just privacy. It also includes:

  authenticity (i.e., that the document is actually from the sender);
  data integrity (i.e., that the document is original);
  nonrepudiation (i.e., that the parties actually participated in the transaction);

- Lack of common understanding of the threat. Much information is classified or intentionally not disclosed to protect competitive positions in the private sector. Computer attacks may not be recognized, and there exists little knowledge of what to do if attacked.

- Who pays for protecting the information infrastructure is another outstanding issue.

- There are also competing perspectives that must be incorporated into any final solution, including those of the national security community which seeks controls on technology exports to adversaries; law enforcement officials who want to be assured that the technology will be accessible under court order; private business seeking secure transactions and access to a range of technologies; and the public.

Standards, Laws and Regulations

Seminar speakers also expressed the need for standards and international agreement in areas such as equipment, transmission, network management, customer access, service communications, international settlements rates and cost basing. Business applications on the Internet, for example, will require a higher level of structure. The current situation with international trade yields procedures which lead to a lack of competitiveness. Any standards must, however, have broad based acceptance and endorsement, and be interoperable. Without such standards, trade will be stunted.

Telecommunications have been standardized for many years by the International Telecommunications Union (ITU). However, sometimes the ITU has adopted both a "North American" and "European" standard. The OAS's Inter-American Telecommunications Commission, CITEL, is currently working to bridge these differences. CITEL is responsible for regional standards and spectrum issues, standard equipment certification, and guidelines for value added networks (VANs). In the future, CITEL could serve as a regional representative for the hemisphere.

Hal Burman of the Department of State further noted that there also needs to be coordination of national laws and national legal systems due to the breakdown in the sanctity of borders through the increasing internationalization of trade, especially electronic trade. Countries must internationally agree on guidelines for property rights (e.g., the treatment of data as property), regulations on the access to frequency, access to market, and obtaining licensing, for example. The old laws and rules governing paper commerce and property cannot apply.

THE IMPORTANCE OF EDUCATION: A SOFTWARE INDUSTRY PERSPECTIVE

The Software Publishers Association, represented at this seminar series by Douglas Miller, consists of a diverse membership who agree that the Internet and electronic commerce is the next big area for the software industry. The Association's focus is the establishment of intellectual property rights -- one of the biggest concerns for the software industry. Piracy has been an $8 billion a year problem. The Association believes copyright law must be retained regardless of the medium a work is presented in and it must be enforced at home as well as overseas. This worldwide aspect is critical.

Unquestionably, according to Miller, the key issue is education. Before any other steps, such as business development, are taken, people overseas must be educated as to what intellectual property is and how to protect it. For example, Poland was once referred to as the "one-copy country," meaning that one copy was distributed throughout the country. Now Poland has passed and enforced laws on intellectual property. This has led to the growth of an indigenous software industry. Further, people must be educated about the possibilities of doing business on the Internet, and also about the responsibilities of actually conducting commercial transactions. In China, the Association has opened the U.S. Information Technology Office in order to lay the groundwork for information technology. The Association also has set up many educational programs in Latin America.

Culture

Culture is another issue that must be addressed when implementing information technology in trade and development. More liberal information environments will facilitate the adoption of technology; in restrictive countries, such as China, facilitating the use of information technology will be more difficult.

Second, many people simply are not comfortable working in an electronic world. In international trade finance, for example, any new electronic model should mirror the paper model. People understand paper but not technology; they must learn how to manage risks in the electronic world. This requires a cultural change to understand that there is value to these "faceless" electronic systems. There must be vision and leadership for these new electronic systems to be accepted.

Presently, the public sector lags the private sector in application of information technologies, and until managers and project designers start using this technology in their own daily work, they will not apply it to their development activities. In a time of declining budgets it is imperative that people understand the value and cost effectiveness of these tools. Installing hardware is the easy part, getting organizations to adopt the technology is more difficult and involves hard-to-institute human development issues.

Appropriate Technology

As advances in technology continue to emerge, several seminar speakers cautioned that technology must be "appropriate." Paul Foldes of In The Know argued that technology must remain simple so that people can use it. There is no commercial benefit if people cannot use a technology. He advocated the use of e-mail. Ninety percent of traffic on Internet is e-mail. Most people have access to e-mail, whereas most people do not have access to the WWW. Furthermore, passive tools such as e-mail "infobots" and "fax on demand" will not spread viruses. In combination with phone and fax, these tools are cost effective way to consummate a business transaction.

Access

The issue of access to technology is of particular importance in developing countries. Over half of the world's population lives more than two hours away from a telephone. In terrestrial systems, access cost is a function of the distance from local exchange and subscriber density. Cost of access goes up dramatically as user population decreases. Therefore, many areas of the developing world are not wired and may never be. Many parts of the world will not get access to advanced digital broadband infrastructure through traditional wired means. For example, most countries have Internet or e-mail access in at least two cities. The biggest areas of non-connectivity are Central Africa and Asia.

Currently, there is a large imbalance between the "haves" and the "have nots" both between countries and within countries. In Latin America, there are 7 telephone lines per 100 users; in the industrialized world, there are 50 to 60 lines per 100 users. The ability of government-owned monopolies in the telecommunications sector to provide improved service is one issue. Because monopolies are inefficient, they cripple the overall development of access in those countries. Privatization of monopolies, however, usually means lay-offs of personnel. The introduction of other competition, such as satellite systems, raises the issues of national sovereignty and the loss of revenues.

According to Brett Haan of the Federal Communications Commission, the main problem faced in connecting Latin American countries has not been lack of funding or equipment, but rather getting the cooperation of various interested parties, such as the telephone company.

Improvement, however, has become pervasive as countries realize that their present information infrastructures are inadequate to meet the economic and societal demands of the next century. Developing countries that cannot fit into an integrated global economy are going to be left behind. Fortunately, countries can "leapfrog" technology, bypassing decades of telecommunications development by implementing the technology available now. Individuals, firms and farmers that do not have access to the technology will not benefit from participation in the international or national economies. As is the case in developed countries, the solutions considered must not be limited. They must include a broad spectrum of communications and information systems and training in their use.

THEME IV: ACHIEVING THE GOALS OF THE GLOBAL INFORMATION INFRASTRUCTURE

The Roles of the Public and Private Sectors

Addressing the issues and ensuring the benefits of information technologies are embodied in the goals of the Global Information Infrastructure (GII). The five principles of the GII are to: encourage private investment; promote competition; create a flexible regulatory framework; provide open access to all producers and consumers; and ensure universal service. Both the public and private sectors have a role to play in advancing these principles.

According to Kalil, "the Clinton Administration believes electronic commerce should be and will be led by the private sector." The GII must be built by the private sector for only the private sector has the money and resources to do so. Government, on the other hand, must work nationally and internationally to create and foster a conducive international business environment. Promoting such an international business climate involves the encouragement of competition and attention to the "transitional issues" discussed above. Several seminar speakers believed that promoting a conducive international business climate is today's most important foreign policy issue.

Other speakers believed that government also should be involved in fostering participation, funding innovation and pilot activities, and threatening intervention when a "level playing field" does not exist. Several fora exist for pursuing these goals including: the Negotiating Group on Basic Telecom (NGBT) within the General Agreement on Trade and Services; G-7 conferences; the World Radio Conference; APEC; and the Summit of the Americas. Because of U.S. dominance in information technology, within these fora, the United States will not only have a better negotiating position, according to Peter Cowhey of the Federal Communications Commission, the United States also will have "a new leadership role in this community... its policies, both domestic and international, will be key."

In addition to promoting the GII's five principles, the best way the government can demonstrate a "leadership role" is to use the technology itself. According to Dr. Mike Nelson of the White House office of Science and Technology Policy, the fact that U.S. federal agencies have developed approximately 120,000 worldwide web pages to provide information to the public is positive, but utilization of information technology in the public sector has been uneven. To begin to address this challenge, the Secretary of State's Open Forum and Highway 1, a non-profit organization designed to educate government officials about new technologies and their applications, co-hosted a seminar to demonstrate the practical applications of information technology in the public sector.

Many government agencies have incorporated available technologies, such as video-conferencing, groupware software, voice enabling systems, and digital imagery, into their operations. As a result, these agencies are enjoying the benefits -- e.g., reduced costs, improved planning and efficiency, ease of use and speed of results -- of the Information Age. For example, the U.S. Embassy in Geneva has used video-conferencing to "meet" with executive branch visitors (thus using technology to decrease the direct costs associated with travel, e.g., per diem and airfare); to testify at Congressional hearings; and to conduct press briefings before conferences taking place in other parts of the world. Other government agencies, such as the Pentagon's Joint Combat Camera Center, utilize digital imagery in their operations to improve planning and decision-making capabilities. The Federal Emergency Management Administration also uses Kodak's DC40 camera (a brand of digital technology) to rapidly provide images of disaster situations; likewise, NASA's Johnson Space Center in Houston uses a number of digital cameras for training and in space shuttle flights and operations.

While information technology can enable them and their colleagues to do their jobs better, Ambassador Teresita C. Schaffer, Director of the State Department's Foreign Service Institute, and USAID's Joan Dudik-Gayoso noted these benefits are not automatic. In order to avail themselves of the benefits of technology, government officials must be prepared to:

- Apply greater analysis and judgment regarding how much information is circulated and to whom, so that officials do not experience information "overload." So that the enormous volume of information that is now available does not become an inefficiency rather than an efficiency, government officials must develop means to separate the "trash" from the "nuggets." In addition, decisions must not be forced up-ward unnecessarily through the indiscriminate use of e-mails.

- Commit major resources to technology support, and education and training in technology. In addition, since the pace of change will not quit, officials must continually invest in technology.

- Work and communicate with technology providers to ensure that systems meets the needs of individuals, offices and agencies within government.

CONCLUSION: REALIZING THE POTENTIAL OF INFORMATION TECHNOLOGY

Realizing the potential of information technology will require cooperation and coordination and "ownership" among the key stakeholders and players, both public and private, and both technical and legal. Evidence suggests that private groups, such as Highway 1 and others profiled in the box below, can provide valuable input to public policy issues. We must combine the interests of business with key public policy groups, in order to link those with needs to those with an understanding of telecommunications.

Unfortunately, the political process is not keeping up with developments in the private sector. The current process, consisting of a multitude of federal government organizations, boards, and fora, each with limited responsibility and resources, has produced ideas but no final solution and might not be the right way to balance the divergent interests. Speakers contended that without new, effective institutions for problem solving in the information age, we risk producing a "greater mess" by allowing the government and the private sector to follow divergent paths.

In addition, while government and business must pay attention to the implications and challenges of information technology, it is also important that individuals also do so on a personal level. Clint Brooks of the National Security Agency suggests each of us

must develop our own personal information strategy. While the power of information technology will enhance our capabilities, the outcomes are dependent on our ability to take the time to reflect and think.

Critical toward this outcome is education. John Rothrock of SRI International emphasized that education is greatly needed to teach people how to develop their own paradigms, as opposed to training, a process which teaches people to work within given paradigms. Such new thinking will be crucial for confronting the many challenges that face us in the Information Age. In the words of G. Martin Wagner of the Federal Electronic Commerce Acquisition Program, "technology for its own sake is not a good thing, we must use it wisely, learning as we go along."

PRIVATE SECTOR PARTNERS

CIX is a worldwide trade association of Internet service providers. CIX's membership consists of 160 companies. CIX's goals are to ensure: global connectivity; continued evolution of the Internet; and a level playing field, in which standard setters do not control the game.

C/LAA was founded in 1978 by the chairman of a major oil company. The organization was non-partisan and structured with leading corporate members and public policy leaders. In 1994, a group formed by the C/LAA met and wrote a white paper on the importance of telecommunications in the region. A ten point agenda was formed and adopted at the Summit of the Americas.

Information Technology Association of America (ITAA) is the oldest and one of the largest trade associations for the information technology industry. ITAA's mission is to seek "to foster an environment which is conducive to the health, prosperity and competitive nature of the information technology industry and to help its members succeed in delivering benefits of IT to their customers." It consists of 9,000 member companies throughout the U.S., which includes the smallest of companies to the largest of companies in the information technology field. ITAA provides software, telecommunications, training, services and so forth to its members. The basic function, however, is the public policy function.

Highway 1 is a non-profit organization that seeks to educate government officials about new technologies and their applications. Sponsored by member companies – Apple, AT&T, IBM, Novell, and Quantum, the Highway 1 center provides" a non-partisan place where legislators and others can get their hands on the latest in computer technology without a sales pitch or lobbying pressure." Highway 1's mission is to establish a road to better communication between the government and the people through demonstrations of applications, such as video and audio presentations, desktop videoconferencing, Internet access for research and electronic mail, and establishing a home page on the World Wide Web.

Telecommunications Industry Association (TIA) is a nationwide trade association, whose membership includes 600 telecommunications equipment companies. TIA is active in setting standards for telecommunications and organizing trade shows. TIA is also active in domestic government affairs and has been working on the telecommunications bill. Another way TIA is active is through the organization of reverse trade missions, where visiting professionals are exposed to developing us technologies. TIA also held the Latin American telecommunications summit which included government and telecommunications officials from all over the region.

ANNEX A

SEMINARS, CO-HOSTING AGENCIES, SPEAKERS, PANELISTS AND MODERATORS

SEMINARS, CO-HOSTING AGENCIES, SPEAKERS, PANELISTS AND MODERATORS

WEDNESDAY, MAY 3, 1995

Topic: Internet Access and Developing Countries

Host: Gary Vaughan, USAID

Moderator: Peter Cowhey, Federal Communications Commission

Panelists: Steve Goldstein, National Science Foundation
Saul Hahn, Organization of American States
Robert Schware, World Bank

THURSDAY, MAY 25, 1995

Topic: Electronic Information Sharing for Business and Government

Host: Gary Vaughan, USAID/LAC

Introduction: Joe Gueron, USAID/IRM

Panelists: Jim Lindahl, USAID/IRM
Jim Russo, USAID/IRM
Ken Smart, Egghead Software
Browning Rockwell, Horizon Trading

WEDNESDAY, JUNE 7, 1995

Topic: Application of Telecommunication and Information Technology in Latin America

Co-sponsors: Caribbean/Latin American Action (C/LAA)
Inter-American Institute for Cooperation (IICA)

Hosts: Julie Wolinsky, C/LAA
Gary Vaughan, USAID

Introduction: Peter Johnson, C/LAA

Panelists: Ken Bleakley, Communicaciones Magazine and First Personal Communications
Rodolfo Garcia, Sprint International

THURSDAY, JULY 27, 1995

Topic: Telecommunications Infrastructure in Latin America: A Private Sector Perspective

Host: Gary Vaughan, USAID

Moderator: Eric Nelson, Telecommunications Industry Association

Panelists: Frank Urbany, Bell South Corp.
Steve Cheston, Iridium Corp.
David Porter, AT&T
Ivor Knight, Knight Communications Consultants

THURSDAY, AUGUST 3, 1995

Topic: Small Business Use of the Internet for International Trade

Hosts: Gerry Chiaruttini, Small Business Administration (SBA)
Gary Vaughan, USAID

Panelists: Peter Robinson, National Association of Export Companies
Allen Paul, UNISPHERE
Diane Gannon, SBA

WEDNESDAY, AUGUST 9, 1995

Topic: Global Information Infrastructure: Implications for American Foreign Policy

Co-sponsor: Secretary's Open Forum

Hosts: Alan Lang, Chair, Secretary's Open Forum
Gary Vaughan, USAID/LAC/RSD

Presenter: Anthony Rutkowski, Executive Director, The Internet Society

Panelists: David Lytel, White House Office of Science and Technology Policy
Richard Beaird, U.S. Department of State (EB/CIP)
Carol Cameron Darr, Commerce Department (NTIA)
Peter Cowhey, FCC
Jonathan Olsson, USAID/G/EG

THURSDAY, SEPTEMBER 7, 1995

Topic: Electronic Commerce for Big Emerging Markets

Co-sponsor: Dept. of Commerce Trade Information Center (ITA/TIC)

Hosts: Thomas Cox, Director, TIC, Department of Commerce
Gary Vaughan, USAID/LAC

Opening: Thomas Kalil, National Economic Council

Panelists: Browning Rockwell, Trade Compass
Randy Smith, Trade Point USA
Kimy Tsukamoto, Dun and Bradstreet Information Services
Frank Eggert, Department of Commerce

WEDNESDAY, SEPTEMBER 13, 1995

Topic: Electronic Commerce: Changing the Business Model

Co-sponsor: GSA

Moderator: G. Martin Wagner, Federal Electronic Commerce Acquisition Program, GSA

Panelists: James Griffin, Athena Associates, Inc.
Judy Payne, Datamatix
Michael McGrath, Advanced Research Projects Agency (ARPA)

FRIDAY, SEPTEMBER 22, 1995

Topic: The Global Information Locator Initiative

Hosts: Eliot Christian, U.S. Geological Survey
Jerome Kreuser, The World Bank
Gary Vaughan, USAID

Panelists: Brewster Kahle, WAIS
Paul Evan Peters, Coalition for Networked Information

MONDAY, OCTOBER 16, 1995

Topic: The Future of Global Electronic Commerce in Public v. Private Sector Roles

Host: Gary Vaughan, USAID

Moderator: Hal Burman, U.S. Department of State, Office of General Council

Panelists: Michael Baum, Independent Monitoring
Jeff Ritter, Ohio Supercomputer
William Foster, Commercial Internet Exchange

THURSDAY, NOVEMBER 9, 1995

Topic: World Trade on the Internet

Co-sponsor: Washington International Trade Association

Moderator: William Krist, American Electronics Association

Panelists: Gary Vaughan, USAID
Paul Foldes, "In the Know"
Wayne McFadden, Trade Compass Services
Mark van Fleet, U.S. Chamber of Commerce

THURSDAY, NOVEMBER 30, 1995
FRIDAY, DECEMBER 1, 1995

Topics: Enhancing Global Trade Through Information Technology: Status of Opportunities for Developing Countries
Enhancing Global Trade Through Information Technology: Implications for U.S. Foreign Aid

Co-sponsor: World Bank

Host: Robert Schware, World Bank

Panelists: Paul Kimberley, Paul Kimberley Associates
Hans Hansell, U.N. Economic Conference for Europe
Carlos Recabarren, EDI*Chile
Hans Peters, World Bank
Ake Nilson, International Chamber of Commerce and Bolero Users Association
Jim Graham, USAID/AFR
Gary Vaughan, USAID/LAC

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THURSDAY, DECEMBER 14, 1995

Topic:	Information Technology, National Security and Foreign Policy: A Business-Government Roundtable
Co-sponsors:	Industrial College of the Armed Forces (ICAF) Department of State
Introduction:	Major General Cowings, ICAF
Keynote:	William Crowell, National Security Agency
Panel One:	National Security and Defense Issues in Applying Information Technology
Leader:	Dr. Clint Brooks, National Security Agency
Panelists:	Col. (ret.) John Rothrock, SRI International Roger Molander, RAND John Davis, Pentagon (JCS) Richard Wilhelm, Advisor to the Vice President
Panel Two:	Information Technology and Foreign Economic Policy
Leader:	Brett Haan, FCC
Panelists:	Judy Payne, Datamatix Alan Miller, EDS Anthony Mocenigo, Department of Commerce
Introduction:	Admiral Jerome Smith, Fort McNair
Speaker:	Lawrence H. Williams, Teledesic Corp.
Panel Three:	How the Information Revolution will Impact and Enable Diplomacy for the 21st Century
Leader:	Richard Beaird, State Department
Panelists:	Prof. W. Russell Neuman, Fletcher School of Law and Diplomacy, Tufts University Wilson Dizard, Center for Strategic and International Studies Barry Fulton, U.S. Information Agency (USIA) Joan Dudik-Gayoso, USAID

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Panel Four: Final Summation Panel and Q&A Discussion

Leaders: Amb. Jon Glassman, ICAF
Dr. James Criner, Information Resource Management College

Opening: William J. Drake, University of California/San Diego

Panelists: Dr. Clint Brooks, National Security Agency
Richard Beaird, State Department

THURSDAY, JANUARY 18, 1996

Topic: Internet Applications and International Development

Co-sponsor: Americans Communicating Electronically (ACE)

Host: Tom Tate, ACE

Panelists: James Russo, USAID/IRM
Joan Dudik-Gayoso, USAID/G/SCT
Gary Vaughan, USAID/LAC

TUESDAY, JANUARY 23, 1996

Topic: Electronic Banking, Trade Finance and the Internet

Moderator: Gary Enright, International Trade Administration

Panelists: Kawika Daguio, American Bankers Association
Herb Ouida, World Trade Center Association
Daniel Bloom, Hill and Knowlton
Douglas Miller, Software Publishers Association
Karen Britto, National Association of State Development Agencies

THURSDAY, MARCH 7, 1996

Topic: G-7 Global Marketplace for SMEs

Co-sponsor: National Institute for Standards and Technology (NIST)

Moderator: Shirley Hurwitz, NIST

Panelists: Joan Dudik-Gayoso, USAID
David Jefferson, formerly with NIST
Yelena Yesha, Center of Excellence in Space Data and Information (CESDIS)
Bradley Fordham, NIST
James Johnson, Eikon Strategies

THURSDAY, APRIL 18, 1996

Topic: Value-Added Networks and International Electronic Commerce

Moderator: Harris Miller, International Technology Association of America

Panelists: Jim Crouse, IBM Global Networks
Howard Stern, Sterling Commerce
Ron Myer, GE Information Services
James McGlinchey, U.S. Trade Representative Office
Susan Chu, USAID

TUESDAY, JULY 9, 1996

Topic: Computer Applications for Foreign Affairs

Co-sponsors: Secretary of State's Open Forum and Highway 1

Opening: Alan Lang, Chair, Secretary's Open Forum
Kimberly Jenkins, Executive Director, Highway 1

Keynote: Mike Nelson, Special Assistant to the President, White House Office of Science and Technology Policy

Speakers/ Presenters: Bai Ackridge, IBM

Marc Cannady, Highway 1
Dan Campbell, USIA
Anthony Hardenberg, Department of Commerce
Barry Levine, Delfin Systems
Dave Budd, IBM
Eric Beller, Big Sky Technologies
Patrick Nugent, Eastman Kodak
Alan Grogan, Apple Computer

Hiram Larew, Secretary of State's Open Forum
Joseph Bruns, USIA
Amb. Teresita C. Schaffer, Foreign Service Institute
Joan Dudik-Gayoso, USAID
Mark Stiffler, DISA

ANNEX B

E-TRADE LIST SUBSCRIPTION

E-TRADE LIST SUBSCRIPTION

"List subscription: List membership is open to public sector employees and private citizens in the United States and overseas who have access to the Internet. To subscribe to the list, send an internet message to: listproc@info.usaid.gov. Leave the subject line blank, and type the following message: subscribe e-trade *Your Name*. After you have subscribed, you will receive a welcome message containing information about list topics as well as the rules that govern list discussions."

WELCOME MESSAGE

You have been added to list e-trade@info.usaid.gov. The system has recorded your address as:

(YOUR_ADDRESS@YOUR_DOMAIN)

and in order for your messages to get posted (if the list accepts postings), you will have to send them from this address, unless the list does not require subscription for posting. If a message is ever rejected, please contact the list's owner: gavaughan@usaid.gov

For information on this service and how to use it, send the following request in the body of a mail message to listproc@info.usaid.gov:

HELP

All requests should be addressed to listproc@info.usaid.gov.

Welcome to E-TRADE@info.usaid.gov.

E-TRADE is an electronic mail list for discussion of existing and planned public and private sector initiatives in electronic commerce, international trade, and economic development. It is a forum for addressing both policy and technological issues in promoting the use of PC-based trade facilitation networks in both developed and underdeveloped countries.

This list is designed for public and private sector professionals in telecom/electronic commerce; prospective users of international electronic commerce networks such as small and medium business, trade associations, foreign officials and entrepreneurs; and public policy-makers in the field such as U.S. government program managers, Congressional staff with an interest in telecom and trade issues, and multilateral development agency professionals.

The list encourages all interested subscribers to contribute any perspective, view or query they think appropriate. While the list will serve as a communications channel and feedback loop for topics raised in a series of Washington-based public/private sector briefings during May- August 1995, issues and information shared on this LIST need not be confined to those issues raised in the briefings.

The following rules apply for subscribers' use of this list:

1. Message length/format: Messages should be as concise as possible (appropriate paragraphing and "bullets" might help with longer messages), with a descriptive subject heading, and preferably no attachments. Please avoid short, unnecessary messages such as "that's right" in response to someone else's message.

2. Sender Identification: Each message sender should identify him or herself by job title and name of organization.

3. Language, Jargon and Etiquette: All messages should be submitted to the list in English. Users should avoid either bureaucratic or technical jargon. For example, public sector users should spell out (at least initially) agency acronyms, and the private sector participants should explain complex technical concepts. INTERNET etiquette also requires users to keep discussions substantive and avoid inflamatory opinions ("flaming")

4. Advertisements: While "e-trade" is open to receipt of companies' or consultants' explanation of technology which may have a broad impact on the evolution of the international electronic commerce sector, the list is not appropriate for the distribution of unsolicited advertisements (or resumes) for individuals' or firms' products or services (unless requested in private e-mail by individual list users).

ANNEX C

WORLD WIDE WEB SITES

INTERNET TRADE LEAD INFORMATION SOURCES

Prepared by Naydu Yaniz, Research and Reference Services, CDIE, LAC/SPM.

WORLD TRADE CENTERS

The World Trade Center Association
http://www.wtca.org/
World Trade Centers and affiliated associations are located in virtually every major trading city in the world. There are 180 operating WTCs and over 120 planned WTCs around the world, with more petitioning for membership each month. Apolitical and unaligned, the WTCA enables members to interact with people of every ideology in pursuit of common economic interests. Through the WTCA, political and geographic borders become reasons for cooperation rather than dividing lines. Through this site you can link to any World Trade Center in the World, as well as find trade leads and information on trade resources.

The World Trade Organization (WTO)
http://www.unicc.org/wto/Welcome.html
This site contains trade policy reviews, information on the Uruguay round, international trends and statistics, and the environment as it relates to international trade issues.

TRADE ASSOCIATIONS

The Federation of International Trade Associations (FITA)
http://www.fita.org/
FITA fosters international trade by strengthening the role of local, regional, and national associations throughout the United States that have an international mission. This site contains information on World Trade Clubs; International Trade Associations, and Chambers of Commerce. One special feature allows the visitor to search for international training seminars.

International Trade Association
http://iami.org/ita.html
This international association share information on World Trade Seminars, International Trade News, updates on regulations and guidelines, and world trade publications. It also provides more specific information on environmental inspections, international real estate appraisals, construction and home inspections.

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TRADE LEAD SITES

A.R. Vogue Corporation*
http://www.bekkoame.or.jp/~tomatell/business/vogue.htm
Home page of a company which sends out trade leads and trade catalogs.

Agricultural Trade Leads*
gopher://una.hh.lib.umich.edu/11/ebb/usda
Opportunities for agricultural trade.

Bezick Trading Company*
http://netcneter.com/yellows/bezick.html
Trading company home page which offers free advertising.

Global Trade Point Network*
http://www.unicc.org/untpdc/gtpnet/gtpnet.html
Trade leads from UNCTAD (United Nations). Can also enter leads.

IBEX Exchange Home Page*
http://www.ibex.com/
Home page of IBEX Exchange. Listings of companies wishing to export; it contains government information , marketing databases, etc.

Internet Tradeline*
http://www.intrade.com
One of the most thorough sites for international trade. Allows users to receive a full proforma invoice for goods which are listed by participating manufacturers and provides extensive trade information.

ProTRADE Forum Home Page*
http://www.cityscape.co.uk/users/bm22.pt.html
Information about Compuserve's "ProTrade" Forum, an exclusive forum for international traders.

The International Trade Desk:
http://members.aol.com/tradedesk

TRADE INTERNATIONAL*
http://www.cityscape.co.uk/cgi-bin/dat2html?file
Home page of a UK publication which offers advertising for international trade.

Trade Leads Compiled by Synergy Enterprises*
http://harbour.awod.com/gallery/business/synergy/InternationalTradeOpp.html
Trade leads, can enter leads for free.

World Wide Trade Service
http://www.nas.com/~westg/BizOp/Bizop.html
These WWWeb pages features advertisements, business opportunities, money making and money saving products and a number of other consumer products.

TRADE NETWORKS

CommerceNet*
http://www.commerce.net
CommerceNet is a consortium of technology-oriented organizations whose charter is to facilitate the use of an open Internet-based electronic marketplace for business-to-business transactions.

International Trade Forum Home Page
http://www.cityscape.co.uk/users/bm22/pt.html
The International Trade Forum is where thousands of exporters and importers from all over the world meet on-line to discuss international business. The Forum is divided into several distinct areas: the Library provides a huge resource for researching trade, the Messages covers discussion about international trade, and the Conference Room is the place for live on-line business discussions. Members of CompuServe can access the forum under GO TRADE.

International Trade Network*
http://www.ios.com/~intlnet/welcome.html
Access to information and contacts throughout the world.

Intertrade Mercantile Exchange*
http://www.intergroup.com/mercantile
A global, computerized, electronically operated exchange for goods and services. It provides a controlled-value trading structure, which owes its origins to the concept of barter, but which in its modern concept enables its members to buy or sell in much the same way as if they were conducting a single transaction for cash or credit, without any necessity for an opposing trade. The ability to trade in this way generates the possibility of immediate and on-going transactions.

International TradeNET Web-Site
http://intl-tradenet.com
TradeNET is a private sector, business to business trade network created to stimulate import/export trade activity and promote economic growth and development for our local communities, the Americas and the rest of the world. It is a repository of international trade data providing trade leads, business opportunities, and member services.

The Network Exchange Trading System (NETS)
mailserv@ukefl.demon.co.uk
NETS members are able to open up trading links with customers who would otherwise find it too expensive to buy or sell overseas. Using a simple barter system, NETS allows overseas trade to be conducted without requiring trading partners to arrange traditional money payments in foreign currency.

LISTSERVS ON TRADE RELATED ISSUES

Export Leads*
LP.Export@mailback.com
A list of 125 foreign companies who have specifically asked their local US consulate to find them a U.S. supplier for all kinds of U.S. goods and services; for example: clothing products, wood and paper products, chemicals, furniture and fixtures, plastic products, leather goods, metal and metal products, machinery, electrical, oil & gas, computers and software, computer services of all kinds, all kinds of food products, communication products, communication consultants, fertilizers, etc.

Global Connect, Inc*
http://www.gc.net/
Information about CONNEX, a monthly electronic newsletter for connecting businesses throughout the world.

Global Entrepreneurs Network*
info@entrepreneurs.net
International entrepreneurs organization. E-mail for information.

International Trade*
listserv@csf.colorado.edu
Discussions about international trade.

INTERNET, International Commerce List*
IC-L-REQUEST@ins.infonet.net
Notices sent by e-mail about shipping, raw materials, commodities and other subjects regarding international trade.

TradeNet
http://www.tradenet.org/
TradeNet World Service is a membership organization of professional importers and exporters located in virtually every country around the world. One can join TradeNet by filling in a subscription form on this site, or send an e-mail message with the word SUBSCRIBE in the body to list@TradeNet.or. You will be automatically subscribe to the TradeNet international mail list and begin receiving a daily digest message from TradeNet

USAID POLICY DETERMINATION: 22

CHAPTER 215: TELECOMMUNICATIONS, INFORMATION, AND THE GLOBAL INFORMATION INFRASTRUCTURE

215.1 OBJECTIVES

This Policy Determination provides the principles and the conditions for USAID funding of telecommunication and information applications and technologies to promote sustainable development. These guidelines are to ensure that the uses of the bilateral assistance funds satisfy sound programmatic, budgetary, and financial practices and that the initiatives are consistent with USAID's sustainable development objectives and U.S. government policies supporting economic growth, promoting trade, and accessing the "Global Information Infrastructure (GII)". The GII, in general, includes the components to gather, transmit, access, and disseminate information over a global system of networks.

The Policy Determination has four sections. The first provides a general overview of the roles and opportunities for telecommunications and computer information activities in sustainable development and humanitarian assistance. The second contains the "Policies" that influence the design and funding decisions (e.g., grants, credits, procurement, tied aid, and capital projects) for telecommunications and computer-mediated project activities. The third provides the "Essential Procedures" that determine how each of the policies will be implemented. The fourth, "Supplemental Materials," has additional information on the policy environment for telecommunications, the rationale for some of the policy principles, and more detailed information on the "Essential Procedures."

215.2 POLICY OVERVIEW

Developing countries and transition economies will need access to the GII if they are to become active members of the global economy of the 21st century and benefit from more efficient channels for international trade and worldwide communications. There is a general consensus that GII activities should be based on five principles: (1) encourage private investment, (2) promote competition, (3) create a flexible regulatory framework, (4) provide open access, and (5) ensure universal access. Countries will, therefore, require the appropriate institutional and regulatory infrastructure, the human capacity, as well as the technological tools (the physical infrastructure).

The Administration and the Congress see two potential benefits of using GII activities to achieve sustainable development objectives. These activities can help promote economic growth in developing countries and, in turn, lead to export opportunities for U.S. private enterprise to enter new and expanding markets. USAID bilateral assistance programs are vital to the overall strategy and complement U.S. economic and trade policies.

USAID can advance the goals of sustainable development by working with host countries to become active partners in the GII as it is evolving. The challenge to USAID is to identify ways in which telecommunication and information activities can promote sustainable development objectives and accelerate the integration of developing and transition countries into the world economy. The result of USAID's programs will not only bring measurable economic and social benefits to the recipient country, but also provide indirectly trade and investment opportunities to U.S. businesses through the opening of new markets and technology transfer.

There are two interrelated aspects of telecommunications and computer networking which are legitimate interests of USAID. One supports the use of new telecommunications and networking tools to achieve specific sustainable development goals -- encouraging broad-based economic growth, stabilizing world population growth and protecting human health, protecting the environment, and building democracy, and achieving humanitarian assistance goals. The other helps create the enabling environment (institutional, intellectual, and physical infrastructure) for sustainable development. This includes training and financial assistance (grants and loans (e.g., the Enhanced Credit Facility)) to enable local providers and system users to design, select, operate, manage, purchase, and regulate telecommunications and information systems. Both aspects may include investments in new technologies and additions and upgrades to existing networks and systems.

215.3 POLICY

The following policy principles will guide USAID's activities in using telecommunications as a tool to achieve the strategies for sustainable development .

1. USAID's focus, in this context, is to use the GII to: build and strengthen the enabling environment (laws, regulations, and other rules), broaden access and participation, and encourage institutions to adapt to economic and social changes (E215.1.1 and E215.1.8).

   a. USAID will support the efforts of developing countries and transition economies to create and share new information resources and to take advantage of existing and planned international information networks (E215.1.1).

   b. USAID will ensure that GII activities are demand-driven. This means that users and stakeholders should be involved in the planning, regulation, operation, and financing of the activity.

   c. The GII is a cross-cutting theme in the "Strategies for Sustainable Development." USAID will not invest in the development of the GII as an end in itself. GII activities should be tailored to specific country needs, which may vary widely (E215.1.1 (a-e) and (SM215.1.3).

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World Service delivered to your e-mail mailbox. Each day TradeNet distributes import-export notices from members who offer or seek a wide variety of goods located in virtually every country in the world. There is no charge to become a member of TradeNet nor to receive or post offers. Instructions for posting your own offers will be sent to you when you join.

Tradewinds*
Majordomo@listserv.telalink.net
Mailing list of trade leads submitted by other companies on the list. Send e-mail with the word "Subscribe" in the message.

World Wide Business Opportunities (WWBO)
wwbostaff2@aol.com
World Wide Business Opportunities (WWBO) is a monthly trade electronic listing. Each issue contains hundreds of business opportunities that are collected from all over the world.

TRADE INFORMATION BULLETIN BOARDS

Economic Bulletin Board International Marketing Insights*
gopher://una.hh.lib.umich.edu/11/ebb/imi
Reports on global trading opportunities.

EXECPC*
http://www.execpc.com/bbsinfo.html
BBS and subscription information about what is billed as "the largest trade database in the world."

International Business Newsgroup*
biz.marketplace.international
Bulletin board of international business efforts.

IntlTrade Network*
http://world.std.com/~usa
A bulletin board listing trade leads, marketing information and other useful information for international trade.

FTP.STD.COM
Trade leads documented
majordomo@world.std.com
Subscription information for IntlTrade Network: type "info' on subject line

PangaeaNet (tm) Home Page*
http://www.pangaea/net/homepage.htm
A bulletin board listing trade leads, marketing information and other useful information for international trade.

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The Import/Export Connection*
http://www.com.org/~sailor/imexcon.htm/
A bulletin board listing trade leads.

TradeFair*
http://www.tradefair.com/TradeFair.html
Bulletin board of trade leads and market information.

Tradescope Home Page*
http://www.tradescope.com
A bulletin board listing trade leads, marketing information and other useful information for international trade.

TRADE NEWSGROUPS

alt.business.import-export*
http://web.cs.ubc.ca/grn/virtual/alt.business.import-export/index.html
Encoded list of posts from the alt.business.import-export Usenet Newsgroup.

Americast Newsgroup*
biz.americast
General posts about business. Many offerings to buy and sell diverse goods.

Business Newsgroup*
alt.business.misc
Newsgroup with general discussions about business including international trade leads.

Import /Export Newsgroup
alt.bus.import-export
An open bulletin board of trade leads and information.

REGION SPECIFIC TRADE INFORMATION SOURCES

AmericasNet
Florida International University
http://americas.fiu.edu/index.html
This site links visitors to information on the Hemispheric Summit Implementation Events, as well as to various trade forums. It also links to international resources in Florida and trade resources in the Americas.

CBCC: Trade Leads*
http://turnpike.net/emporium/l/icml/cbcc/czleads.html
Trade leads from the Czech Republic.

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EEUROPE*
listmanager@hookup.net
Mail list dedicated to doing business in Eastern Europe. Subscribers can post their offers and requests, commercial or non-commercial (as long as they are related to Eastern Europe), business leads (from and for Eastern Europe) and advertisements (for goods which are saleable to Eastern Europe).

JETRO (Japan External Trade Organization)
http://www.jetro.go.jp/
Jetro is a nonprofit, Japanese government related organization dedicated to promoting mutually beneficial trade and economic relations between Japan and other nations. This site links to information on Japanese Government Procurement, facts and figures on Japan's trade and economy, economic information resources and publications, APEC information, and other useful information.

LA/C Business Bulletin
http://www.ita.doc.gov.region.latinam/
This site is a publication of Latin American/Caribbean Business Development, sponsored by the Department of Commerce and in cooperation with the U.S. Agency for International Development. This bulletin announces upcoming trade events; investment opportunities; sourcing opportunities for Latin American/Caribbean companies; and consulting, financial, and other services.

Latin American Trade & Information Network
http://www.latinet.com/
This Web site includes Latin American connections and information from neighbors in Central and South America and the Caribbean. Latinet was created to enable progressive Latin American companies and indeed all companies with significant Latin American interests to accede to the worldwide market with a minimum of difficulty and a maximum of efficiency. We are in a position to assist our customers in planning a coordinated internet campaign, through the creation of effective world wide web pages that receive economical exposure to huge numbers of potential purchasers and partners. Links include: America's International Business Journal: The newspaper of international commerce and trade from the world's gateway to the Americas; Cartagena de Indias: The Caribbean's Gem Waiting to be Polished; Colombian American Chamber of Commerce of Greater Miami; Colombian American Bar Association; Colnet: Colombia Network: Index of Colombian corporations interested in marketing their products and services abroad; Turbana Corporation: A multinational banana company based in Coral Gables, Florida. Instructions are also provided on how to set up your own Web site.

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LatinoWeb Business*
http://latinoweb.com/favision/business.htm
Latin owned companies in the U.S. , many trade leads.

Russian Trade Connections*
http://www.lh.com/rtc/
Web publication for business people an anyone else interested in trading with Russia.

GOVERNMENT SPONSORED TRADE INFORMATION SITES

CENTER FOR TRADE & INVESTMENT SERVICES (CTIS)
http://www.info.usaid.gov/welcome/ctis/ctis.html

The Center for Trade & Investment Services acts as a central point of contact at the United States Agency for International Development (USAID) for the U.S. business community and as a vital link with the developing countries USAID serves. USAID plays an important role in developing markets and creating economic opportunities for U.S. companies in the developing world, and is a valuable source of commercially-relevant information about developing country economies. Through CTIS, the opportunities and information generated by USAID activities are made available to the U.S. business community.

National Trade Data Bank
http://www.stat-usa.gov/BEN/Services/ntdbhome.html
The National Trade Data Bank (NTDB) is the U.S. Government's most comprehensive source of world trade data, consisting of over 130 separate trade and business related programs (data bases). Topics on the NTDB include: export opportunities by industry, country, and product; foreign companies or importers looking for specific products; ho-to market guides; demographic, political, and socio-economic conditions in hundreds of countries; and much more. Subscription information can be obtained at this site.

Trade Opportunity Program
gopher://una.hh.lib.umich.edu/11/ebb/top
Daily global government and private trade opportunities, compiled by U.S. embassies.

STAT-USA
http://www.stat-usa.gov/
This site offers daily economic news, statistical releases, statistical databases and selected publications of interest. This site is a service of the U.S. Department of Commerce.

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TRADE INFORMATION CENTERS

Center for International Trade Development
http://www.viasub.net/~citd/
The CITD has been established to provide international trade assistance and resources to potential and existing businesses and individuals to help them succeed in the international market. The Center's services include: training/seminars, one-on-one business counseling, updated international trade library, foreign market data, trade leads, and technical assistance.

Global Access to Trade and Technology Server (GATTS)
http://www.gatts. com/gatts.html
This is an index to world trade information and resources. This site provides links to sites such as: banking and currencies; chambers of commerce; conventions and international trade shows; customs and tariff rates; electronic news/trade publications; embassies and consulates; government resource links; international trade law; international trade listservs and newsgroups; trade statistics; and trade centers.

Ibex Yellow Pages*
http://www.cba.uh.edu/ylowpges/yi.html

Market Link*
http://www.globalnet.org
List of directories, World Trade Centers, Chambers of Commerce, newspapers, distributors, etc.

North Carolina International Trade Notes*
http://www.ces.ncsu.edu/itd/catalog.html
International trade information, leads and listings compiled at North Carolina State University.

The Trade Zone
http://www.tradezone.com/tz/trdzone.htm
Global Trade is the focus of the links on this page. These links are posted here to assist individuals and businesses in their activities involving International Trade. They include sites on everything from banks to embassies to transportation to weather.

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Trade Compass
http://www.tradecompass.com/
Some Trade Compass features include: Trade News provides a daily summary of the days events, access to newsletters, trade journals, and links to news sources around the world.

- Marketplace allows you to locate companies by location or service, search an index of 14,000 US export companies, or get detailed information about "featured companies."
- Trade library provides a wealth of information vital to conducting international business. Government, legal, travel, insurance, and other information is easily located in the Trade Library.
- Trade Forum is a center for the discussion of international commerce, as well as a place to search and post.

TradePoint USA
http://www.natp.iftea.com/
Trade Point USA is a not-profit trade information and services company established in cooperation with the United National Conference on Trade and Development. This homepage describes the capabilities and recent activities of the TradePoint. Trade Point provides trade leads and trade backup for developing nations trough trade leads, market information, and UN documents.

This site provides access to information on Trade Point I-Trade system: I-TRADE (SM). Trade Point USA has developed an on-line, Internet-based, trade information and marketing service called I-TRADE (SM) (International Trade Resource and Data Exchange); private-sector trade resources into a comprehensive, user friendly clearinghouse of trade-related information, products, and services. Drawing from and working with some of the most respected suppliers of trade information in the world, I-TRADE (SM) provides SME's with access to very high-quality and up-to-date trade information and trade services at a reasonable cost.

University of California at Fresno Automated Trade Library Service*
http://caticsuf.csufresno.edu:70/1/atls
Trade Leads and information for California companies. Includes exchange rates and world time.

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CHAMBERS OF COMMERCE

International Chamber of Commerce
http://www1.usa1.com/~ibnet/icchp.html
This home page introduces you to the universe of the International Chamber of Commerce and its thousands of member companies and associations in more than 140 countries. If you are engaged in international trade, this is the web site for you. Consult it regularly to keep up with developments on the global marketplace that affect your business. The ICC pages are organized so that you can quickly zero in on the topic or the country that interests you. You will quickly discover how to gain access to ICC expertise and rules for the conduct of trade that are applied worldwide.

The Global Network of Chambers of Commerce & Industry
http://www1.usa1.com/~ibnet/chamshp.html
This page is sponsored by the Consortium for Global Commerce. At this site you can register your local Chamber of commerce. You can also access Chambers of Commerce from Oceana, the Americas, Africa, Asia, Europe, and the Middle East.

Cyber Chamber of Commerce
http://www.ccc.net/home.html
The mission of the CyberNet Chamber of Commerce is to encourage, promote and facilitate the worldwide interchange of global commerce and entrepreneurial business information. Links on this site include U.S. and Foreign Chambers of Commerce, U.S. Government links, demographics/statistics, information on trade shows, business seminars, translation services, and much more.

**Sites listed in "Internet Resources", Assist International Trade Lead Information/Sources, August 3, 1995.*

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OTHER INFORMATION TECHNOLOGY, TRADE AND DEVELOPMENT WORLD WIDE WEB SITES

* Below are sites mentioned by speakers during the Seminar Series.

AEANET
http://www.aeanet.org
Provide information on the American Electronics Association, legislation, activities, member companies, services.

Americans Communicating Electronically
http://www.reedusda.gov/homeace/ace.html
http://www.sbaonline.sba.gov/ace
Provide information on ACE.

Assist International
http://www.imex.com/assist.html
Allows visitors to download free "how to" information. The "Export Tools Handbook" is also available.

CIDA (Canadian)
http://www.bvxca/ict
Survey/discussion of develoment issues in the digital age. Provide other CIDA development information.

Coalition for Networked Information
http://www.cni.org/CNI.homepage.html
Creation of and access to information resources in networked environments.

Commerce Department Big Emerging Markets Home Page
http://www.stat-usa.gov/../itabems.html
Provide economic and statistical information on exporting to BEMs.

Commercial Internet Exchange
http://www.cix.org
Exchange ideas and information, and experimental projects among suppliers of internetworking services.

Dun & Bradstreet Information Services
http://www.dbisna.com
Helps companies grow by identifying trading partners and facilitating trade between those partners.

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Electronic Commerce
http://www.financenet.gov/
Provide listing of government asset sales for general public, document libraries, mailing lists, discussion forums, major related resources, and links to finance managment professionals.

FedWorld
http://www.fedworld.gov
Access to U.S. Government information on-line. One-stop to locate and order USG information.

Hemispheric Wide Inter-University Scientific and Technical Information Network
http://ichu.rep.net.pe:80/RedHUCyT/
Share scientific and technical information in an efficient manner.

Thomas Ho's Favorite Electronic Commerce WWW Resources
http://www.engr.iupui.edu/~ho/interests/
Provide links to electonic commerce related sites.

HungerWeb
http://www.netspace.org/hungerweb/
Promote sustainable development. Provide information and statistics about hunger around the world.

INFOCyT
http://www.rep.net.pe/.../INFOCYT/infocyt.html
Provide scientists in Latin America with access to informatin from a centralized point.

IMEX Exchange
http://www.imex.com
Provide free information, government assistance, how-to help for international trade. One-stop global marketing.

Information Infrastructure Task Force
http://www.iitf.doc.gov/
Provide information on IITF and the Administration's National Information Infrastructure.

Information Society Project Office
http://www.ISPO.cec.be/
Provide information relating to the Information Society.

International Trade Administration
http://www.ita.doc.gov
Provide trade information and links to other trade related sites.

Internet 1996 World Exposition
http://town.hall.org/fair/
Introduce new technologies.

National Information Infrastructure
http://nii.nist.gov
Provide information about the NII, the "information superhighway."

National Institute for Standards and Technology
http://speckle.ncsl.nist.gov/
Provide information on NIST.

RAND
http://www.rand.org/
Provides abstracts of all RAND documents.

ReliefNet
http://www.reliefnet.org/
Help humanitarian organizations raise global awareness and encourage support for relief efforts via the Internet.

Small Business Administration
http://www.sbaonline.sba.gov/
Provide information from local SBA offices, how to start, finance and expand a business; access to U.S. federal agencies and state home pages.

White House
http://www.whitehouse.gov
Provides a guide to information and services of the federal government and a virtual library of documents, speeches, and hot topics. Government statistics and a help desk are also available.

UNINET
http://www.nando.net/public/bo.html
An international partnering system for small high-tech companies. The partner companies bring vetted companies into the system and make preliminary matches with applicants, and facilitate transactions.

United Nations (e.g., UN/ECE, FAO, ECLAC, IFAD, ITU, UNDP, UNFPA, etc.)
http://www.unicc.org/
United Nations International Computing Center. Access to U.N. Internet servers.

USAID
http://www.info.usaid.gov
Provide information on USAID development activities.

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ANNEX D

USAID POLICY DETERMINATION #22

2. USAID should ensure that GII activities complement and reinforce U.S. trade promotion and intellectual property rights policies (E215.1.4 and E215.1.5).

a. USAID will not provide grants or credit for activities which circumvent competitive markets, create trade distortions, or crowd out (replace) private sector financing (E215.1.4 and E215.1.5).

b. USAID will design the financial terms of capital projects with a telecommunications component in accordance with the OECD "Arrangement on Guidelines for Officially Supported Export Credits" (E215.1.4).

c. USAID will require that all telecommunications equipment and services be of U.S. source, origin, and nationality, unless a waiver is executed (E215.1.5).

3. USAID will, as necessary, assume the appropriate leadership and/or coordination roles in assessing the GII needs of developing countries and determining the most efficient way of delivering bilateral assistance by the respective USG agencies (E215.1.7).

4. USAID may provide funding for developmentally sound telecommunications market assessments and physical infrastructure projects on occasion; however, the primary program emphasis will be the other dimensions of the GII (E215.1.3).

5. USAID, in accordance with current statutory provisions, will not use Development Assistance Funds or the Development Fund for Africa as part of a mixed credit financing package; however, these restrictions do not apply to Economic Support Funds (E215.1.9).

6. USAID will participate with other USG agencies in building and applying the tools of the GII to promote sustainable development and open up opportunities for U.S. businesses (E215.1.7).

7. USAID will cooperate with multilateral institutions to ensure that GII activities promoting sustainable development are mutually supportive and effective (E215.1.7).

8. PD# 22 replaces PD# 10 as the agency policy statement on the role of telecommunications in sustainable development and humanitarian assistance (SM215.1.2).

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ANNEX E

BIBLIOGRAPHY

"INFORMATION TECHNOLOGY, TRADE, AND DEVELOPMENT"

An Inter-Agency Seminar Series

BIBLIOGRAPHY

Prepared by Naydu Yaniz, Research and Reference Services/CDIE, LAC/SPM

INTERNET ACCESS IN DEVELOPING COUNTRIES

Cabezas, Alberto. "Internet: Potential for Services in Latin America" ***IFLA Journal*** **1995 Vol. 21 No. 1 pp. 11-14**
This article addresses Latin America's unified effort to proliferate Internet availability in the region. The current state of connectivity, the challenges of developing substantial information sources, and the maintenance of a "traffic free" infrastructure are discussed. CONICYT of Chile (http://www.conicyt.c1/inicio1.html) and the Gopher of the Red Cientifica Peruana (http://www.rcp.net.pe/rcp_ingles.html) are cited as two examples of networks that provide a wealth of information about the region.

Palowitch, Casey. "Russian and East European Information Via the WWW: The Rees Home Pages" ***Database*** **February/March 1995. pp. 47-53**
The history and substance of the Russian and East European Studies (REES) home page (http://www.pitt.edu/~cjp/rees.html) are discussed in this article. Anyone searching for information on this site will find a comprehensive guide to Internet resources in Russian and Eastern European area studies. While the materials available through REES, maintained by the University of Pittsburgh, are primarily of an educational and research nature, business and public issues are increasing.

ELECTRONIC INFORMATION SHARING FOR BUSINESS AND GOVERNMENT

Baum, David. "Groupware: Is it Notes or Nothing?" ***Datamation*** **May 1, 1995. pp.45-48**
This article compares Lotus Notes, a groupware software, to Microsoft and Novell software. The author examines the advantages and disadvantages of each and concludes that if collaboration between workers, simultaneous updates, and distribution of documents is your goal, then Lotus Notes is the best choice in groupware.

Shoop, Tim. "The Lure of: Or, How I Learned to Stop Worrying and Love the Internet" ***Government Executive*** **April 1995. pp. 42-46**
This article is directed at those wanting to access federal government sites on the Internet. Along with introductory information about the Internet, Gopher, and World Wide Web (WWW), this article gives examples of government sites on the WWW. Examples include THOMAS, a

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site providing access to full text legislation (http://thomas.loc.gov/), and FedWorld, an information network operated by the Commerce Department's National Technical Information Service (http://www.fedworld.gov).

"Ubois, Jeff. "Wheels of Commerce" *Internet World* April 1995 pp. 62-67
Cathy J. Medich and Jay M. Tenenbaum, both of CommerceNet (http://www.commerce.net), are interviewed in this article. CommerceNet began its service in April, 1994. The goal is to create an infrastructure for business-to-business transactions in which companies are enabled to streamline their procurement and development cycles by performing transactions online. CommerceNet currently has 70 members who are organized according to issue specific working groups such as payment services, catalogs and directories, electronic data interchange, and design-to-manufacturing integration. The issues of securing online transaction payments and intellectual property rights are discussed.

APPLICATION OF TELECOMMUNICATION AND INFORMATION TECHNOLOGY

Perednia, Douglas A. "Telemedicine Technology and Clinical Applications" *The Journal of the American Medical Association* February 8, 1995
Telemedicine is the use of telecommunications to provide medical information and services. This article describes the political, economical and historical perspectives of telemedicine and discusses the technical aspects of its use. Five considerations for the use of telemedicine are discussed: can the services lacking be provided by moving images and data; have investments made or approaches taken been worth the effort to date; do common standards and protocols exist; do licensing and reimbursement policies foster technology neutral use of resources; and are goals and accomplishments reevaluated periodically.

TELECOMMUNICATIONS INFRASTRUCTURE IN LATIN AMERICA

Castellon, Arely. "Latin Telecom Evolves: Privatizing and Liberalizing Latin America's Telecommunications Sectors" *LatinFinance* June 1995 n68 pF26
Latin American countries have recently witnessed privatization, liberalization, and economic reform programs in the telecommunications industry. Chile has been the first country to privatize its telephone industry, and since then both Venezuela and Mexico have started similar programs. These reform programs, coupled with regional trade agreements, show a potential for future cross-border telecommunications growth for Latin America.

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"Information Infrastructure Workshop Recommendations on Building the Foundation of a Hemispheric Information Infrastructure"
A formal set of recommendations were made at the Hemispheric Trade and Commerce Forum in Denver, July 1995. These recommendations were made to complement and reinforce the Declaration and Action Plan of the Summit of the Americas. Recommendations were made to participating Trade Ministers, CITEL (OAS Inter-American Telecommunications Commission), individual governments, and the private sector.

International Technology Consultants. "Latin American Telecommunications Sector Overview" July 1-2, 1995
International Technology Consultants (ITC) presented this overview at the Hemispheric Trade and Commerce Forum in Denver, Colorado on July 1-2, 1995. This report discusses current trends in telecommunications equipment and services. ITC projects strong growth in Latin American telecommunications, particularly in wireless communications. The overview discusses the regulatory environment, equipment and service sectors, recent activity by country, and opportunities for American companies in the region.

SMALL BUSINESS USE OF THE INTERNET FOR INTERNATIONAL TRADE

Rubin, Ronald S. "Utilizing Electronic Information Retrieval Techniques for Assessing Global Market Opportunities: an Evaluation of the National Trade Data Bank on CD-ROM and Online through Internet" ***University of Central Florida***
One source of valuable trade information available to small and medium sized businesses is the National Trade Data Bank (NTDB). Because these businesses do not always have the time, resources, or expertise to gather foreign market information, the NTDB, accessed through either CD-ROM or online through the Internet, provides interpretative and timely data on foreign markets and international trade.

Small Business Administration. "Bankable Deals: a question & answer guide to trade finance for U.S. Small Businesses" ***Cosponsored by the U.S. Small Business Administration and AT&T*** This guide provides answers to questions small businesses ask most. This includes information on export financing, export sales, and foreign credit insurance, among others. It also provides information on government export finance assistance, and lists U.S. Small Business Administration's (SBA) District Offices and Export Assistance Centers.

Small Business Administration. "Breaking Into the Trade Game: a small business guide to exporting" ***Co-sponsored by the U.S. Small Business Administration and AT&T***
The SBA's Office of International Trade (OIT) developed this guide to help small businesses in developing international markets. In this second edition information is provided on how to maximize international opportunities through the use of high-technology equipment to facilitate global information transfers and communications. Foreign market entry, export financing, and investment opportunities are discussed. An extensive exporters directory includes information on government trade centers, foreign embassies and multilateral development organizations.

Global Information Infrastructure: Implications for American Foreign Policy

Rutkowski, Anthony. "Global Growth of the Internet: Virtuosity Comes to American Foreign Policy" slide presentation, August 9, 1995
The presentation made by Anthony Rutkowski on August 9th for the seminar series "Information Technology, Trade and Development" is outlined in this document. Internet host counts and global infrastructure diffusion are charted. How the Internet is used, and by whom, is also covered. Finally, specific points are made about the Internet's role as a commercial enabler, as well as the Internet's importance to developing countries.

TOWARDS A GLOBAL INFORMATION LOCATOR

Christian, Eliot. "The Government Information Locator Service (GILS)" ***Report to the Information Infrastructure Task Force*** **May 2, 1994**
In coordination with the Information Infrastructure Task Force (IITF), the Office of Management and Budget (OMB) is promoting the establishment of an agency-based GILS to help the public locate and access information throughout the Federal Government. This report discusses how GILS will be implemented. GILS will identify and describe information resources throughout the Federal government, provide assistance in obtaining the information, and will supplement other agency and commercial information dissemination mechanisms.

Information Infrastructure Task Force. "The Global Information Infrastructure: Agenda for Cooperation" Washington D.C. February 1995
http://www.iitf.doc/gov
This document outlines in detail the five principles agreed upon at the first World Telecommunication Development Conference in March 1994. These principles are the foundation of the GII.

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ELECTRONIC COMMERCE

Foster, William A. "Making the Internet Safe for Commerce" ***Foster & Brahm*****, Washington D.C. May 29, 1995**
This paper discusses competing models of security on the World Wide Web. Secure Socket Layer, Secure HTTP, and other security schemes are covered. It also examines recent efforts to add authentication and secure transaction capabilities to the Web and explores how these efforts have been supported by the agendas of various government agencies.

Madey, Gregory, and Raghunathan, Madhav. "Electronic Commerce: the Emerging Order for International Business", ***presented to Southern African Business Opportunities Summit by Kent State University Graduate School of Management*****, November 6, 1995**
The shift from a manufacturing to an information economy in the world is highlighted in this paper. The authors point out that information is an increasingly vital resource for international trade, a resource that will be managed by the Global Information Infrastructure (GII). They also point out that UNCTAD is leading efforts to bring the latest technologies within the reach of developing nationals to provide them with opportunities for participation in international trade. Various Internet applications and tools are covered.

THE IMPACT OF THE INFORMATION REVOLUTION ON AMERICAN FOREIGN POLICY

Blake, Jonathan D.; Teidrich, Lee J. "The National Information Infrastructure Initiative and the Emergence of the Electronic Superhighway"
This paper examines the blueprints of the emerging information superhighway. The private sector has been aligning itself to construct the superhighway; industries, technologies, and services are converging. Congress and the current Administration will develop and regulate the superhighway. Legislative proposals have emerged over the past year on telecommunications reform, and the National Information Infrastructure initiative will provide a wide range of services on a universal basis. Future challenges in constructing the infrastructure are also covered.

Christie, Alix; Illingworth, Montieth M.; Lange, Larry. "One World: International Internet Usage" ***Information Week,*** **October 2, 1995 n547, p52-59**
Although the Internet is the fastest growing means of communication, many factors are currently limiting international Internet usage. Such factors include telecom monopolies, reluctance to utilize the Internet, and inadequate telephone services. This article gives several examples of how opportunities to connect with foreign businesses via the Internet exist, but in many cases cannot be met.

Garcia, Linda D. "Networking and the Rise of Electronic Commerce: the challenge for public policy" ***Business Economics*** **7-14 October 1995 v30 n4 pgs**
The role of government in expanding markets on a global basis is still unclear, according to this author. The efficiency of the global economy will be influenced by how electronic networks are formed in the future. Information and communication technologies are being mixed and matched, and used interchangeably for networks serving different purposes. But national regulators continue to set ground rules as if the technologies were quite distinct and unrelated. As communication and information technologies converge regulators and lawmakers will need to determine which set of principles should apply, as well as address broader economic issues.

DONOR and ORGANIZATIONAL LITERATURE:

ORGANIZATION OF AMERICAN STATES:

"RedHUCyt" Hemisphere Wide Inter-University Scientific and Technological Information Network 1992-1994
The RedHUCyt information network was created to "connect the member countries to Internet by integrating an electronic network for the exchange of scientific and technological information among professors, researchers, and specialists at different universities in the member states." This document describes the initiative's objectives, activities, and achievements, all of which can be accessed through RedHUCyt's WWW homepage (http://www.rcp.net.pe/../RedHUCyT/RedHUCyT.html).

USAID:

Russo, Jim. "The Internet: U.S. Agency for International Development" ***USAID.*** **December 1994. pp. 1-16**
The Internet services available to Agency employees as well as instructions on how to use them are described in this paper. Gopher, Listservs, WAIS, and the World Wide Web are covered. There is also a section on what USAID's involvement in developing world connectivity. Additional reading for those wanting to learn more about the Internet is also listed.

Coakley, John; Horkan, Kathleen; and Bland, Jeff. "Telecommunications in Sustainable Development: A USAID Backgrounder" ***Research &Reference Services Project*** **April 1995 (PN-ABU-376)**
This document provides background information on the role of telecommunications in sustainable development and an inventory of USAID telecommunications activities. The paper is divided into five sections: the first discusses general issues regarding telecommunications in developing countries, the second examines the telecommunications activities of other donors, the third examines the activities of the U.S. Government in the sector, the

fourth looks specifically at USAID activities in telecommunications, and the fifth draws some conclusion regarding USAID's activities and approaches to telecommunications.

Owen, Darrell; and Russo, James. "Intranet: Architecting and Building a Corporate Web" ***USAID,*** **Washington D.C. January 1996**
(author's abstract) This article is based upon actual experience in developing an Intranet at the USAID to provide information to the Washington headquarters and 44 overseas missions in 24 time zones. The discussion puts forth an over arching vision, underlying concepts, and a basic architecture for such an initiative - including use of technologies for integrating the management of non-structured narrative information with existing transaction-oriented systems. The paper concludes with a basic project outline for executing such a project.

WORLD BANK:

Schware, Robert, and Kimberly, Paul. "Information Technology and National Trade Facilitation: making the most of global trade" WTP 316, ***World Bank Technical Paper*****, 1995**
This report identifies successful factors in the application of information technology to trade. It refers to case studies from Brazil, Hong Kong, Hungary, Singapore, Taiwan and Mauritius. Economic advantages and barriers are discussed.

Schware, Robert, and Kimberly, Paul. "Information Technology and National Trade Facilitation: guide to best practice" WTP 317, ***World Bank Technical Paper*****, 1995**
This document is the second volume of the World Bank's study on information technology and trade facilitation, the first is mentioned above. This volume is designed for use by managers and technical staff involved in the implementation of an electronic commerce project. It also refers to the case studies mentioned above. Issues addressed include legal and regulatory requirements, skills and technology infrastructure, and investment costs and benefits, among other topics.

Baranshmaje, Etienne et al. "Increasing Internet Connectivity in Sub-Saharan Africa: Issues, Options, and World Bank Group Role" ***World Bank, Draft*** **March 29, 1995. pp 1-19**
According to tables prepared by the Internet Society, Sub-Saharan Africa is the region least-connected to the Internet. The World Bank identifies the advantages and power of information, thus making the point that Africa must connect if they are to escape yet another major marginalization in development. The Bank states that "the real challenge is not technical or financial, but organizational and political". This document provides a statement of the World Bank's policy considerations, technical and financial options, and a suggested strategy for dealing with Africa's information revolution.

Nagy, Hanna; Guy, Ken, and Arnold, Erik. "The Diffusion of Information Technology: experience of industrial countries and lessons for developing countries" WDP 281 *World Bank Discussion Paper*, 1995
This report examines experience of Canada, Germany, Ireland, the Netherlands, Sweden, the United Kingdom, the United States, and Japan in adapting information technology diffusion programs in the last ten years. It analyzes the national policy portfolios of these countries to draw lessons and reviews the experiences to draw guidelines for developing countries.

GENERAL INFORMATION ON THE INTERNET AND WORLD WIDE WEB

"Guide to Network Resource Tools-World -Wide Web"
"Guide to Network Resource Tools-LISTSERV"
http//www.earn.net/gnrt/notice.html
These documents contain basic descriptions and instructions on the uses of the World Wide Web and Listservs.

Richard, Eric. "Anatomy of the World-Wide Web" *Internet World* April 1995 pp.28-30
Richard's article covers the technological aspects of the World Wide Web. The computer systems used to generate the WWW: Uniform Resource Locators (URLs), Hypertext Transfer Protocol (HTTP), and Hypertext Markup Language (HTML); are discussed in depth.

ADDITIONAL REFERENCES:

*For general information on USAID and its projects information is available on USAID's WWW and gopher sites: gopher.info.usaid.gov or http://www.info.usaid.gov/

*"Telecommunications in Sustainable Development" can be ordered from the Development Information System Clearinghouse at (703)-351-4006. All other journal articles are available at either the State Department library, Development Information Center, or most local libraries.

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