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FTAA
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FTAA-Joint Government-Private Sector Committee of Experts on Electronic Commerce

Second Report with Recommendations to Ministers

Submitted by

Chair: **Ramiro Soto Platero, Uruguay**
Vice-Chair: **Richard Simpson, Canada**

<u>**FTAA - JOINT GOVERNMENT-PRIVATE SECTOR COMITTEE OF EXPERTS ON ELECTRONIC COMMERCE**</u>

<u>**SECOND REPORT WITH RECOMMENDATIONS TO MINISTERS**</u>

November 22, 2000

Chair:	**Mr. Ramiro Soto Platero, Uruguay**
Vice-Chair:	**Mr. Richard Simpson, Canada**

1. Introduction

The FTAA Joint Government Private Sector Committee of Experts on Electronic Commerce ("the Joint Committee") was established by the Western Hemisphere Trade Ministers in the San Jose Ministerial Declaration of March 1998, which was endorsed by Heads of State within the Santiago Summit Declaration of April 1998. The Trade Negotiations Committee directed the Joint Committee to "make recommendations to ministers on how to increase and broaden the benefits of electronic commerce and, in particular, how electronic commerce should be dealt with in the context of the FTAA negotiations."

Participation in the Joint Committee is open to all FTAA governments. Private sector representatives with expertise in the issues under discussion have also been invited by government representatives to attend the Joint Committee's meetings.

During its first mandate, the Joint Committee held five meetings with broad participation averaging 20 countries and produced a "Report with Recommendations" to the Ministers in the autumn of 1999. In the Toronto Ministerial Declaration, the FTAA Trade Ministers thanked the Joint Committee for its report and asked that the Joint Committee continue to meet as a non-negotiating group over the following eighteen months with the focus of work being the development of recommendations in compliance with the Joint Committee's mandate in time for the next meeting of the FTAA Trade Ministers.

During the year, the Joint Committee, under the leadership of the Chair, Ramiro Soto Platero, representative of the Uruguayan private sector, and the Vice-Chair, Mr. Richard Simpson from Canada, has held four meetings, under the work program established at the beginning of the year 2000, which contemplated presentations and discussions on access and infrastructure, small and medium sized enterprises, on-line payment systems, authentication and certification, and other information issues (intellectual property, taxation, consumer protection, online content distribution).

These issues were addressed through the presentation of national experiences and best practices as well as discussions of relevant cross-border aspects. The valuable contributions made by the Tripartite Committee were appreciated by the experts as the work of the Committee progressed.

The meetings of the Joint Committee on electronic commerce have been both effective and welcome in ensuring discussion amongst all of the countries of the FTAA area. The Joint Committee is able to play the useful role of (a) facilitating the sharing of information among countries on their domestic approaches to electronic commerce and (b) providing advice on the international aspects of these issues, including their implications for trade policies. In this respect, the Joint Committee's work has revealed a number of areas where governments need to ensure compatibility of domestic laws, policies, rules and standards across jurisdictions, some of which may relate to the conduct of the FTAA negotiations.

1.1. Overview of Electronic Commerce in the Hemisphere

Electronic commerce maintained its growth trend in 2000, both globally and throughout the Hemisphere. Constant technological innovation with respect to Internet access has aided in the expansion of on-line trade, thus enabling larger segments of the population to have the possibility to share in the benefits of on-line commercial transactions and enabling companies – including small and medium sized enterprises – to become part of the process, with an attendant increase in competitiveness and scale.

The available indicators show that the greatest impetus to the growth and development of electronic commerce is taking place in the business-to-business sector (B2B). As part of this process, and in relation to the international marketing of goods and services, advances are being made in at least two respects:

a) Through the adoption of electronic commerce as a tool for enterprises to market goods and services on the international market, by putting into service web sites/ electronic sites designed for that purpose such as "vertical markets" or "business community" type structures.

b) Through the development of technology platforms such as the Internet, which make it possible to address operational aspects of the international marketing of goods and services by digitizing the procedures and documentation involved.

During its work over the past year, the Joint Committee has noticed a number of positive trends in e-commerce in Latin America, the Caribbean and North America: a large increase in access to information technologies by people of many countries; substantial growth in local language Internet content; development of entirely new industries, with substantial positive employment impacts; increased availability of risk capital to support the realization of the dreams of new entrepreneurs; and technological developments which may accelerate broader access to the benefits of business-to-consumer (B2C) and business-to-business (B2B) e-commerce. Despite these positive trends, which reflect in part the effects of successful government policies and private actions, much more work needs to be done.

Latin America and the Caribbean have high rates of growth in the number of Internet users, and are increasing their share in the global electronic market. A great disparity still exists in the Hemisphere in terms of access to the global network, as well as a significant asymmetry in the volume and value of electronic commerce in the Americas. Thus, different levels of technological development, if not an obstacle, remain a major challenge to the achievement of an equal sharing of the benefits throughout the Hemisphere through the balanced expansion of electronic commerce. Overcoming the different levels of technological development should be among the priorities of the countries of the Hemisphere, particularly when electronic commerce is being discussed. In this exercise, collaboration among all the sectors involved, both public and private, will be of great relevance in terms of investments and support for dynamic technological innovation.

Despite continued and sustained growth in electronic commerce, the Hemisphere will have to face the challenges that lie ahead in this field, mainly by creating the social and economic conditions necessary for information technology to contribute towards overcoming income disparities, employment, education and development within and among the countries of the Hemisphere.

The countries of the region have made efforts to boost and facilitate access to information technologies and have sought to create a regulatory framework commensurate with their domestic needs and conducive to the development of electronic commerce on a non-discriminatory basis. The countries of the region must persevere in stimulating information technology development, and encouraging the participation of a greater number of people in the benefits flowing from such technologies, including through electronic commerce.

The Internet and electronic commerce represent significant social and economic potential for all countries of the Western Hemisphere. Dynamic national strategies to develop infrastructure, to enhance access, to increase participation in the Internet economy especially for SMEs, and to create the legal foundations for online payments, electronic signatures and certification are critical for the development of e-commerce across the Americas. At the same time, since e-commerce is inherently borderless and global in scope, measures to enable and promote domestic growth must also be contemplated to allow the effective conduct of e-commerce between countries

Governments also have important roles to play with respect to these issues, whether within their own countries and/or globally, which entails cooperation, information dissemination and promotion activities.

2. The Development of Electronic Commerce

1) *Access and Infrastructure*

Challenges and Opportunities

At its most fundamental level the growth of electronic commerce is grounded in creating the right conditions for telecommunications and Internet growth. The Joint Committee's meetings this year began with the issues surrounding the development of and access to advanced telecommunications technologies since the precondition to the realization of the social and economic potential of e-commerce and the Internet must clearly be the possession of an adequate and affordable telecommunications infrastructure. In fact, the Joint Committee's discussion of access and infrastructure reflected the concern that all of the countries of the Western Hemisphere, and all citizens and regions within each country, should have the opportunity to participate. While the number of Internet users in the hemisphere is growing rapidly there are still segments of the population that do not have ready access to the telecommunications infrastructure and, therefore, to the Internet. The challenge for each individual government is how to encourage the development of a vibrant, high-quality, low-cost telecommunications infrastructure which all citizens have the opportunity to access.

FTAA countries have recognized the importance of expanding access to the Internet for purposes of economic growth and development. Several delegations cited:

- their positive experiences in introducing competition and in progressively liberalizing their telecommunications markets;
- competition in telecommunications markets, including local telephone service, has had a positive effect on investment in the sector, on development of infrastructure, increased innovation, higher penetration rates and lower prices for consumers of telecommunications services;
- these trends demonstrate that policies which encourage competition in telecommunications have stimulated Internet usage, local content development, and e-commerce - which in turn stimulate further investment in the e-commerce infrastructure;
- lower per-minute cost or (especially) flat-rate prices for local service significantly increase both the number of individuals on-line and the time each user spends on-line;
- robust competition in information technology markets is driving down the cost of equipment used to access and operate the Internet;
- several countries have sought to make it cheaper to get and stay on-line; and
- several governments are taking steps to reduce the cost of leased lines used to connect to the Internet backbone by allowing competition, and/or by regulating prices set by dominant operators.

In addition to physical networks, an electronic commerce transaction depends on a wide array of enabling factors sometimes called the "electronic commerce value-chain." Consequently, the widespread growth of electronic commerce as a means of doing business depends on the existence and accessibility of a range of goods, services and procedures, such as telecommunications services, electronic payment systems, transportation and distribution systems, as well as legal or regulatory factors such as the enforceability of electronic contracts and efficient customs clearance procedures.

Access also relies on the existence of adequate levels of digital literacy since the knowledge, skills and familiarity of citizens with computer technologies will determine their ability to take advantage of electronic commerce. Measures to expand digital literacy throughout the population will not only increase the overall growth of e-commerce but also tend to assure a more even distribution of its benefits within society. A number of FTAA countries have therefore placed high priority on computer awareness, education and training as a means of promoting access to the networks and technologies related to e-commerce.

Recommendations:

Building on recommendations from the Joint Committee's First Report to Ministers, FTAA Governments should:

- Promote vibrant and fair competition:

  - At the different levels of telecommunications services (that could be suppliers of telecommunications and computing hardware, telecommunications carriers, telecommunications resellers, and associated services suppliers such as e-commerce services suppliers).
  - Among telecommunications services provided through all types of technological means (including wireline, wireless, cable, and satellite technologies).
  - In the allocation of fundamental resources such as spectrum and rights-of-way.
  - Through the oversight of domestic competition authorities or communications regulators to ensure that no anti-competitive conditions arise.

- Maintain an independent, effective, fair and transparent oversight body.

  The national regulator is critical in setting the tone for the telecommunications market and will be key in providing regulatory certainty, ensuring non-discriminatory treatment of market participants (both domestic and foreign), and in preventing anti-competitive behavior. In turn, this healthy environment will provide the certainty required to attract the large investments required for infrastructure development.

- Allow the marketplace to decide how to expand the availability of data-capable infrastructure (wireline, wireless, cable, satellite, etc.) able to support electronic commerce applications. As technological platforms that have been different historically converge to a similar set of capabilities, FTAA governments should promote competition across communications platforms through technology-neutral regulations.

- While recognizing the possibility that governments might need to regulate for legitimate public policy objectives, there is great value in allowing the free development of Internet services to continue by avoiding the imposition of regulations that might impede its development.

- Establish regulatory regimes that permit a broad range of pricing strategies, including unmetered rates, for services used to access the Internet and adopt cost-based approaches to interconnection pricing.

- Ensure that all information service providers have access to facilities, networks, and network services, including access to the local loop, on a nondiscriminatory and cost-based basis.

- Take steps to facilitate efficient testing and certification procedures for IT products.

- Seek to provide access and affordable service to all members of society:

  - Administer Universal Service programs for basic telephone service in a transparent, nondiscriminatory, and competitively neutral manner, so as to be no more burdensome than necessary.
  - Place governmental information and services online, in order to provide them more efficiently and effectively, and to increase the uptake of information technologies by business and citizens.
  - Maximize efforts to bring voice and data services to under-served populations, by coordinating efforts from all social sectors involved.

- Take steps to improve e-commerce fulfillment, including implementation of the business facilitation measures for express shipments agreed to at the Toronto Ministerial.

- Pursue efforts to develop a clear, predictable, nondiscriminatory, stable yet flexible legal and regulatory framework, which is conducive to the expansion of access to information and telecommunication technologies.

- With the support and collaboration of the public and private sector, place a high priority on computer awareness, education, and training as a means of promoting access to the networks and technologies related to e-commerce

2) *Small and Medium-Sized Enterprises*

Challenges and Opportunities

Small and medium sized enterprises are an important part of a national economy and countries in the hemisphere greatly benefit from the creativity and entrepreneurship that come from small business. Exciting opportunities exist for SMEs in the uptake of electronic commerce. Both research studies and business experience indicate that the adoption of electronic commerce will enable SMEs to continue to lead in the development of jobs and growth across the FTAA, to create new forms of commerce and to improve the standard of living in individual jurisdictions. In many ways, SMEs are in a strong position to take advantage of the opportunities offered by the Internet and e-commerce. They tend to be more flexible, adaptable and quick to respond to new technologies and market opportunities as they lack the management layers and bureaucracies that encumber decision-making. Many SMEs recognize the Internet as a valuable means to promote their product, establish a corporate presence on the Web and provide customer service.

Although the Internet vastly expands the potential market available to SMEs, the challenges of electronic commerce are more acute for SMEs than for larger business enterprises. SMEs' limited resources make them more vulnerable to fraud and failure and often more reluctant to take on the risks associated with new ventures such as e-commerce. Another challenge facing SMEs' participation in e-commerce is the shortage of trained technical workers who can effectively manage the changing technology and fully tap opportunities to increase efficiency, lower supply costs, and reach new markets. SMEs may be less able to devote resources to attracting and retaining technically qualified workers.

Both the private sector and the government, jointly and separately, can assist with policies and programs to help solve the problems of SMEs.

Several FTAA governments have developed programs that reach out to SMEs to provide tools and training to enable them to take advantage of e-commerce to increase their sales through exporting and to manage their business more efficiently. Governments in the region are striving to make their programs, products and services available through the Internet. Specific efforts in some countries have included the use of virtual trade shows, software toolkits, training programs, and web-based counseling and information services.

The private sector - often SMEs themselves - are offering services to companies who wish to trade on the Internet but lack the technological know-how or the manpower to do so. Services assist firms to go online and develop and integrate e-commerce solutions for all of their business operations. Support to SMEs is also available to develop guidelines for advertising, marketing, contracting and resolving complaints, which is particularly important in assisting SMEs to attract and retain satisfied customers in the electronic marketplace. Efforts are also underway to create portals, business-to-business exchanges, procurement networks, and other tools to promote exporting over the Internet, in relation to which, private-public sector partnerships are also developing in some countries. Finally, self-assessment tools are

becoming available to assist SMEs to evaluate their e-commerce readiness and to identify their needs and prospects.

Recommendations:

Throughout the Western Hemisphere, SMEs represent the vast bulk of enterprises. As such, steps to promote and support their efforts to engage in e-commerce will reap substantial benefit for the region. Building on recommendations from the Joint Committee's First Report to Ministers, FTAA Governments should:

- Encourage SMEs to familiarize themselves with available electronic commerce tools, by undertaking activities to disseminate information on options, opportunities and challenges and to promote the use of electronic commerce and telecommunication technologies, in order to improve participation in international markets.

- Continue to cooperate with and encourage the private sector to offer educational opportunities via the Internet and to disseminate information on the advantages and benefits of using new technologies to conduct commercial transactions and to improve overall efficiency and productivity by integrating electronic commerce into business operations.

- Support cooperation and promote efforts by local business organizations and small and medium sized enterprises to develop sites where SMEs can network, post information, and exchange ideas about best practices and lessons learned, in order to facilitate investment, job creation, increased competitiveness, and the use of more advanced technologies.

- Support the search for solutions to the obstacles faced by SMEs in fully utilizing electronic commerce, encouraging companies that provide electronic commerce business services to develop products tailored to the needs of SMEs and to cooperate with these companies to develop and promote SME export portals, affordable and secure payment systems, SME training programs, and regional technical centers.

- Continue national efforts to make government products and services available via the Internet, helping SMEs to build their Internet skills.

3) *Online Payment Systems*

Challenges and Opportunities

The availability of effective electronic payment systems is a significant element of electronic commerce, enabling wholesale and retail businesses to move their business-to-business (B2B) and business-to-consumer (B2C) marketing and sales onto the web with minimal concerns about completing the financial portion of the transaction. However, the on-line environment presents challenges related to fraud, security risks, consumer protection and privacy protection that should be adequately addressed. In addition, the cross-border supply of payment services raises issues about the standards and roles applicable to domestic payment systems and their interoperability with foreign systems, and about the level of consumer protection available for consumers who make use of foreign payment systems.

The Americas could benefit from participation in the burgeoning electronic payments markets associated with e-commerce. Yet, today, payment systems based on credit cards are widely perceived to be inadequate as credit cards are unavailable for many potential e-commerce consumers in the region and relatively expensive for small and medium-sized enterprises (SMEs), including retailers. Many have

identified these issues as contributing to the relatively slow entrance by existing bricks-and-mortar retailers into e-commerce in the Americas and to the relatively low levels of consumer purchases on the Internet.

New technologies for payment are underway in the region that should help address these problems for both business and consumers. For B2C e-commerce, and some SME applications, banks and other companies are creating novel approaches to supplement traditional methods. These include e-commerce charges and payments incorporated into existing utility bills; taking advantage of existing credit relationships, use of debit cards, new payment technologies such as bar code scanning, smart cards, electronic wallets and cellular telephones; deployment of new security technologies and prepaid cards with small amounts of purchasing power for citizens who lack access to traditional credit. But there is more work to be done by FTAA Governments and the private sector.

The continued growth in electronic commerce depends significantly upon the development of an efficient and secure cross-border financial services infrastructure. FTAA Governments, the financial sector and retailers need to look at payment systems used to support e-commerce in the Americas if they are to accelerate the growth of e-commerce and broaden its benefits for the region's citizens.

As the relationships between financial institutions and their online business customers become increasingly complex and interdependent the ability of financial institutions to meet their customers' investment, cash management and foreign exchange needs as part of online payment support services will be critical to the customer's ability to compete in global e-commerce.

Recommendations:

The private sector is responding quickly to develop electronic payment solutions to enable e-commerce. To encourage innovation and confidence in the development of effective and secure payment systems, FTAA Governments should:

- Work cooperatively among themselves, and with the private sector, as electronic payment systems develop, in order to keep apprised of policy implications and to ensure that governmental activities flexibly accommodate the needs of the emerging marketplace.

- Build on the existing work of governments, the private sector, and international organizations to improve information sharing and cooperation in combating security threats to payments systems, cross-border fraud, illicit financial transactions, and threats to the integrity of the Internet.

- Examine, with the private sector, online payment systems, with a view to removing possible obstacles to the deployment of alternative online payment methods, thereby accelerating participation in B2B e-commerce, especially by SMEs, and fostering efforts to provide greater access to innovative technologies for Internet purchases by consumers and SMEs without traditional access to credit.

- Develop policies in conjunction with the private sector that foster flexible, innovative approaches in the development of alternative payment mechanisms. Efforts should be directed at improving the efficiency and lowering the costs while ensuring the security of cross-border payments systems.

- Cooperate with the private sector, including chambers of commerce, banking and retail associations, and universities to educate SMEs and retailers about effective e-commerce models in the region and payment technology systems.

- Stimulate efforts by the financial and retail sectors to develop and identify for the public websites utilizing secure payment technologies and practices and respecting consumer privacy, and

cooperate with the private sector to educate consumers and business and provide them with the information they need to decide whether and how to participate confidently in e-commerce.

- Encourage banks, payment card companies and retailers to work to achieve an appropriate sharing of risk and costs among themselves to promote broader participation in e-commerce by the region's retailers, SMEs, and financial institutions, while protecting consumers from unreasonable liability for fraudulent and unauthorized electronic payment transactions.

- Support policies and procedures designed to promote transparency in the regulation of payments systems, including standard-setting, the application process, and judicial, arbitral, and/or administrative review.

4)   Certification and Authentication

Challenges and Opportunities

In the electronic world, where parties do not have face-to-face contact and may not know each other even by reputation, authentication technologies help identify the parties and provide means by which they can reliably sign documents, assent to transactions, and verify documents' integrity. As such, they play an important role in building user confidence in e-commerce.

But technology is not sufficient in and of itself. The development of electronic commerce requires legal recognition, functional equivalence and non-discrimination as regards electronic signatures, as well as technological neutrality in order to avoid locking consumers and businesses into one technology that may not suit their needs and erecting artificial barriers to the development of new technologies.

For their part, companies are increasingly employing authentication methods in electronic markets through closed systems. A closed system is established by a voluntary agreement under private law in which participants specify in advance how they will conduct business, including what method of logging on to the system and signing they will use. Through closed systems, participants may access information, utilize services, and engage in transactions. Many closed systems employ electronic agents, computer programs that initiate or respond to messages on behalf of an entity or individual without contemporaneous human participation.

In closed systems, mutual trust has already been established between the parties through their agreement. Thus, these agreements can be relied upon to govern the system, provided that the legal rules for e-commerce recognize and enforce private law agreements with respect to authentication methods and other operational aspects of closed systems, including the use of electronic agents. Closed systems constitute the backbone of B2B e-commerce.

FTAA countries have a range of views as to the appropriate role of government in regulating the activities of certification authorities (CAs). However, there is agreement that competition and non-discrimination are important principles in the provision of certification services.

Various national approaches to the establishment and governance of certification authorities and their activities can co-exist. These approaches may include varying elements of industry self-regulation and/or governmental regulation. In order to facilitate electronic commerce, however, it is important that these varying approaches be made compatible with each other.

Recommendations:

Building on recommendations from the Joint Committee's First Report to Ministers, FTAA Governments should:

- Take steps to identify and remove legal barriers that hinder the recognition of electronic transactions, including recognizing the legal validity of electronic signatures and documents, taking into consideration the enabling provisions of the 1996 UNCITRAL Model Law on Electronic Commerce.

- Make efforts to ensure that their electronic signature legislation is technology-neutral .

- Ensure the legal validity of electronic records and evidence for use in court and other official proceedings, independently of the authentication and certification technology used.

- Afford parties to a B2B transaction the freedom to determine by private law agreement the appropriate technological and business methods of authentication and give the parties' agreement legal effect, including possible means for resolving disputes, without prejudice to applicable public policies.

- Recognize the importance that the private sector must play in the development and deployment of authentication and certification technologies, and promote the participation of all relevant social sectors in the process of formulation of policies and laws in this area.

- Make efforts to ensure that laws and regulations do not discriminate against electronic authentication methods, or against national or foreign providers of authentication services, and do not erect barriers to the provision of authentication services by any of them.

- Work with the private sector to encourage the development and deployment of authentication systems that provide adequate protection against fraud and identity theft, are consistent with respecting individuals' personal privacy, and do not impede use by creating barriers.

Other Issues

In addition to the above subjects, the Joint Committee also noted the importance of other issues in relation to the development of electronic commerce, such as consumer protection and the protection of intellectual property online. Although not examined in detail, the Committee believes that such issues warrant further attention from governments within the context of the FTAA.

5) Consumer Protection

Challenges and Opportunities

Increasing competition in the global electronic marketplace offers consumers new and substantial benefits, including convenience, access to a wider range of goods and services and the ability to gather and compare information online, resulting in the possibility of obtaining reduced transaction costs, and better prices, quality and service. These benefits cannot be fully realized, however, without consumer confidence in domestic and international e-commerce. The key elements for building consumer confidence in electronic commerce include: protection from fraud and from misleading and unfair conduct and commercial practices; respect for consumer privacy; private sector initiatives; global cooperation; consumer and business education, and effective means of dispute resolution.

Consumer protection agencies around the world have begun to address the increased need to cooperate in efforts to combat fraudulent, deceptive, and unfair practices on-line. This cooperation has included the sharing of information and experiences, joint action, and coordination. Furthermore, efforts are underway in international fora, such as OECD, APEC, the International Chamber of Commerce, the

Hague Conference on Private International Law and the Global Business Dialogue on Electronic Commerce (GBDe) to develop cooperative arrangements and means to protect consumers in the context of cross-border e-commerce. These efforts include private sector recommendations, international guidelines, and public workshops.

6) *Intellectual Property Protection*

Challenges and Opportunities

The ability to perfectly copy electronic data, to distribute it instantly on a global basis, and the growth of e-commerce raise a number of key issues for holders of intellectual property and governments related to the adequate and effective protection of copyrighted works online. Authors, producers of copyrighted works, and performing artists must be able to have confidence that their copyrighted works will be protected online. Legal protection of intellectual property in the online environment preserves incentives for the creation of local content and encourages its world-wide dissemination. Consumers also must have confidence that they can rely on trademarks as trusted indicators of the origin and quality of their on-line purchases.

7) *Online Distribution of Content*

Challenges and Opportunities

The countries of the Hemisphere are among the most active in the world in terms of generating "content" suitable for online distribution. Every day sees a growth in the global reserve of music, film and audiovisual fixations, computer software, training programs, literature, journalism, etc., through contributions resulting from the creative ingenuity and entrepreneurial capacity of the Americas. Ensuring the online distribution of content is an important factor in increasing economic output from electronic commerce should be a priority for the governments of the FTAA countries.

Currently, the distribution of content through placement on web sites and subsequent downloading, or through forms of distribution from a single source to multiple users, such as simulcasting, is one of the most active forms of electronic commerce. However, producers of content who work in the countries of the Hemisphere are suffering important economic losses due to the unauthorized distribution and/or use of content by third parties.

3. Future Work of the Committee

During the second phase of work in the FTAA, the Joint Experts Committee, under its ongoing work plan, deepened its examination of selected issues pivotal to the development and integration of electronic commerce in the region. The Joint Experts Committee's discussions centered on 'real world' challenges and opportunities, and practical aspects of electronic commerce, with a focus on being able to:

· go online – Access and Infrastructure
· get small business online – Small and Medium-sized Enterprises (SMEs)
· enter into contracts online – Authentication and Certification
· make a purchase online – Online Payment Systems

Through discussions of national experiences and lessons learned, the Joint Experts Committee has improved regional awareness and understanding of the policies and practices that will expand and broaden the benefits of electronic commerce for the Western Hemisphere. As e-commerce technologies, market conditions and practices continue to evolve rapidly, new issues and solutions emerge. Sharing experiences

and information on e-commerce problems and solutions will enhance e-commerce growth, trade flows and economic integration in the region.

The Joint Committee also should continue to keep abreast of ongoing work in other international fora, and stimulate discussion of timely e-commerce issues. The Joint Committee considers that the following topics could be the subject of future work, and agrees that the priorities will be determined during the next period: i) effective consumer protection, with a particular focus on: protection from fraudulent, misleading or unfair commercial practices/conduct, respect for the privacy of the consumer, private sector initiatives, effective means of dispute resolution, and international cooperation in these areas; ii) "e-government"; iii) the digital divide between and within countries of the Western Hemisphere; iv) the impact of electronic commerce on social development, training and formation/ education of human resources through the use of information technologies; v) the production of digital content and its on-line distribution; vi) implications for customs and taxes of cross-border electronic transactions.; and vii) the security of electronic transactions.

At the same time, we recommend that the Joint Committee begin to address e-commerce issues as they relate to the FTAA negotiations. The Joint Experts Committee is not a negotiating group, and FTAA negotiations on e-commerce related obligations should occur in the respective FTAA negotiating groups, not in this Committee.   Nonetheless, the Internet and e-commerce are revolutionizing the way that international business is conducted, from how information is communicated, to how contacts are made, records kept, supply chains operated, products delivered, and disputes resolved. The FTAA is the first comprehensive trade agreement to be negotiated since this electronic business revolution, and will need to reflect this new reality. In order to ensure that the final FTAA agreement is relevant and current, the Joint Committee should explore through national experiences and the hands-on knowledge of its private sector participants how e-commerce is changing the conduct of international business and inform negotiating groups regarding the nature of these changes. Among the negotiating groups that might benefit from the Joint Committee's technical input are the Negotiating Groups on Market Access, Services, and Government Procurement.

There is continued interest within the Joint Committee to share national experiences and analyze broadly the factors that lead to their success or failure in areas to be determined.

The Joint Committee thanks the Tripartite Committee and the FTAA Secretariat for their support.

ANNEX – National Experiences

ARGENTINA

1.- Access and Infrastructure

a)   Telecommunications

In 1997, the Department of Communications approved the web communications access model 0610. This new numeration will enable the ISP servers to have a special number to differentiate between a normal telephone call and one for accessing the Internet. Therefore, after being connected for twelve (12) minutes, the subscriber will have a rebate in the pulse rate that, depending on the time of day, could lead to a 40% discount.

Argentina also initiated in 1998 a telecommunications deregulation plan which paved the way for a gradual, progressive and orderly sectorial access. This deregulation involved local calls, long distance calls and international communications.

The purpose of this plan, completed in November 2000, with the opening up of the local market, was to increase competition in this sector, to lower the actual telecommunications costs and to increase access opportunities for the users.

In addition, mobile telephones have had rapid growth over the last few years. This has opened the way for the creation of mobile lines with Internet access.

b)   EDUC.AR

Educ.ar is the first state-run Internet company in Argentina. Its purpose is to wire the whole Argentine Republic's education system to the Internet and open up access to the most recent technological advances. Its main objective is to be a tool to make education more democratic.

The development of Educ.ar was based on three basic pillars: an educational content portal, a teacher training plan and a connectivity plan. The first stage will involve connecting middle schools with a student population of 2,845,066. This will almost quadruple the total number of people presently connected to the Internet in Argentina.

The second stage will involve connecting primary schools with a student population of 7,778,534. This will be almost a tenfold increase in the number of people who presently have access to the Internet

c)   Electronic Government

Within the framework of the National Modernization of the State Plan, initiated by the Argentine Government, the Electronic Government Initiative plays a vital role as an important tool to realize a major portion of the horizontal and vertical reforms that are an integral part of it.

The "Electronic Government" concept includes all those activities based on modern computer technologies, in particular the internet which the State is developing to increase public administration efficiency, improve services offered to the people and provide a far more transparent framework for government activities than is presently the case.

Those activities cover internal aspects dealing with the administration of public bodies, widespread distribution of information on government actions, as well as the provision of more and better services to the constituents.

A few examples of the activities covered in the Electronic Government Concept are: a "paperless" public administration; remote access to the services offered by the State twenty-four (24) hours a day, three-hundred and sixty-five days (365) a year or development of portals offering better and faster access to government information.

This project also covers the creation and maintenance of a "single wicket" access point to all national government activities.

The portal address (URL) is www.gobiernoelectronico.ar, but can also be reached through www.info.gov.ar.

d)   Cybercities

This program encourages the use of interactive and multimedia technologies to stimulate community integration processes, promote efficiency and productivity, develop electronic government practices and provide quality information and services to the people and institutions. There is a pilot project in the Cordoba Municipality of La Carlota.

e)   Virtual Museums

The purpose of this program is to bring our present cultural heritage on line under the mandate of the National Department of Culture.

2.- On-Line Payment System

The National Payments System is the realization of the electronic compensation project for methods of payment proposed in 1996. This System provides the infrastructure to administer in a far more efficient, simple, fast and reliable way, all payments between commercial parties in any type of business community. That infrastructure may be utilized in a Business to Business environment (for example, a business with all its suppliers and/or clients) or in a Business to Consumer environment (for example, a business providing public services with its clients). Businesses can only have access to that infrastructure through the banks that are the gateway to this multi-bank payment system.

This System has two basic initiatives called "high value" and "low value". The purpose of this differentiation is essentially not to distinguish transactions by their total amounts, but rather to highlight the different characteristics and possible users of each service. "High value" covers inter-bank payments or money transfers between the various banking institutions. "Low value" targets inter-business payments or payments by the end-customers to the businesses. In the latter case, it is based on the fact that all payments processed through the banking system in Argentina will be paid electronically.

There has been in the private banking sector a significant increase of portals, over the last year, to facilitate client access to banking information, including on-line payments for services.

3.- Certification and Authentication

The protection of property and security of transactions appears to be the focal point for the debate dealing with regulations and laws for electronic commerce. In this respect, Argentina is working to enact legislation.

There are a number of projects before Parliament dealing with the recognition of digital signatures for legal proceedings.

Moreover, within the country, Law 24.624 recognizes as originals documents drafted with first generation electronic or optical platforms, reproduced from originals of any kind, contained in this type of software, that cannot be erased.

4.- Consumer Protection

The Consumer Protection Law 24240 does not explicitly mention transactions carried out through electronic commerce. It is, however, understood that the same protection would apply by extension.

5.- Privacy

In 1999, the Sixth Court of the Criminal Tribunal of the Federal Capital handed down a ruling stating that electronic mail has the same legal protection as that granted to traditional private correspondence.

BRAZIL

Introduction: Internet and Electronic Commerce in Brazil

The development of Internet in Brazil began in 1989 with the pioneering work of a handful of academic institutions and non-governmental organizations. This was actively encouraged by the federal government through the Ministry of Science and Technology, as well as by several state governments. Between 1991 and 1993 an early version of Internet services with points in 21 provinces was implemented by the National Research Network (RNP). In 1995, a federal government decision defined the general rules governing the provision of Internet services in Brazil, and today there are approximately 450,000 "hosts".

The number of Internet users in Brazil was estimated at 300,000 in 1996, a figure thought likely to have grown to five million by 2000. The latest projections see the number of users doubling between now and 2002, mainly as a result of cheaper computer equipment and greater supply of telephone lines.

About US$450 million worth of transactions were carried out electronically in Brazil during 1999, mostly of the business-to-business (B2B) variety; this accounted for 88% of all electronic business in Latin America. E-commerce in Brazil is expected to grow to US$3.2 billion by 2003. In 1999, almost 90% of all e-commerce transactions in Brazil were carried out by "old economy" firms, 42% of them belonging to the financial sector. Books, CDs, computers and accessories, and tourism services are the most widely sold products in virtual stores.

Given the importance of e-commerce, there has been a rise in government initiatives to develop and support this activity. Such initiatives have included the creation of the Electronic Commerce Executive Committee, which is expected to have both private-sector and academic participation.

E-Government

In the Internet age, the government needs to promote universal access and greater use of electronic media, in order to make its administration more efficient and transparent at all levels. The creation and maintenance of equitable universal services for citizens is a public policy priority.

In 1993, a number of ministries began to use the Internet to disseminate information in their respective areas, and two years later the number of Federal Government sites on the web had grown

considerably. An independent analysis in early 1996 identified Brazil as a pioneer in the Americas in posting government information on the Internet. The variety of information provided at both federal and state levels has increased recently, and the Ministry of Planning has created a system for accessing this information through the federal government site at http://www.redegoverno.gov.br.

There are several applications at the federal government level that make use of information and communications technology, and these have the potential to revolutionize the management of public services in their respective areas of action:

a) *Income Tax Declaration:* It has been possible to submit income tax returns by electronic data transmission since 1995, and over the Internet since 1997. As many as 70% of all income tax returns filed by natural persons, along with 80% of those filed by corporations, were submitted electronically in 1998;

b) *Tax collection:* The Integrated Inter-State Trade Operations Information System (SINTEGRA) is currently being implemented throughout the country. Its aim is to facilitate information exchange between taxpayers and tax authorities in the individual states, as well as information exchange between states;

c) *Health:* The "National Health Card" (Portuguese acronym: CNS) is a Health Ministry initiative to computerize all public health services in the Single Health Care System (SUS), by providing an identification card to all users. The system is currently being piloted with a population of about 12 million people.

d) *Legislative Process:* The "Interlegis Project", which was initiated in 1997 by the federal Senate, has the aim of establishing a network for legislative communication and participation throughout the country, linking information systems between the federal, state and municipal legislatures;

e) *Government Procurement:* "ComprasNet" is an on-line system created by the Ministry of Planning giving access to all federal government tenders, as well as other services and facilities to enhance the transparency of procurement and business opportunities for companies.

"Information Society Program"

In August 1999, the Information Society Program Implementation Group (SOCINFO) was set up under the aegis of the Ministry of Science and Technology, in response to a proposal made by the National Science and Technology Council. The program, which cost about R$3.4 billion (US$2 billion) to implement, was officially launched by the President of the Republic in December 1999.

The Information Society Program envisages action by federal, state and municipal governments in conjunction with relevant social sectors, and seeks to ensure the viability of a new stage of Internet development and applications in Brazil. The program includes training for research and development, as well as guaranteeing advanced communication and information services. Its goal for the next four years is to lay the foundations for a substantial increase in the information economy's share in the total Gross Domestic Product (today estimated at 10%) and thereby help to reduce the country's social and regional inequalities.

Within these general objectives, SOCINFO has established specific goals in the following areas: science and technology; education; culture; health; social applications; environment and agriculture; industry; commerce; public finance; information and media; entrepreneurship; investment; technology creation and transfer; government activities; education for the information society; and follow-up and evaluation. Further details on the Information Society Program can be found at www.socinfo.org.br .

Legislation

Brazil does not yet have specific laws on e-commerce, but there is intense legislative activity in this area, with a number of bills of varied scope and approach currently before the National Congress. The Model Law on Electronic Commerce drawn up by UNCITRAL serves as a benchmark in the corresponding legislative debates.

Private Sector

Brazil's financial institutions are currently the leaders in private-sector e-commerce activity, after investing in computerization for several years. There is even one entirely "virtual" bank in the country, and another with its own satellites for data transmission. Brazil's financial sector is also very active in the area of electronic payment systems.

In other sectors of the economy, most firms have not yet reached the point where they can accomplish the full cycle of e-commerce transactions. Among retailers, the best examples are supermarkets (where between 1% and 2% of sales by the large chains take place over the Internet), along with bookshops, CD stores, and computer and accessory retailers. The tourism sector has also seen significant growth. The current trend in the private-sector B2B transactions is for existing business between companies to migrate to the electronic domain (Internet and Intranet); thus far, however, no new business has been created.

The "PROER Especial" project, undertaken by the Brazilian Small Business and Microenterprise Support Service (SEBRAE, www.sebrae.com.br), is an example of the encouragement being given to the formation of SME networks in Brazil. The aim is to promote economic diversity and enterprise complementarity, along with sustainable and competitive productive linkages.

CANADA

1.   Access and Infrastructure

Over the past 20 years, Canada has gradually introduced competition to virtually all areas of communications in the pursuit of improved infrastructure and increased access to efficient and affordable communications services for both residential and business consumers. Canada has privatized state-owned operators and eliminated monopolies in satellite and international telecommunications services. These developments have stimulated a dynamic telecommunications market which has brought about innovation, improved quality of service and a dramatic reduction in prices for business and residential telephony services and Internet access which makes the Canadian market the least expensive in the world (OECD Communications Outlook, 1999).

More recently, the "Connecting Canadians" initiative, launched in 1997, has resulted in a substantial increase in Internet access levels, both for businesses and citizens. It became the catalyst for the development of a comprehensive strategy on e-commerce (involving awareness raising, fostering adoption and use, policy development, international presence and leadership, and public-private sector partnership). Another key element of the Connecting Canadians initiative is the current federal government focus on government-on-line.

Current Canadian objectives revolve around universal access and connectivity, effective use of networks in support of e-commerce and public services and aggressive broadband deployment.

2.   Small and Medium-Sized Enterprises ("SMEs")

The Canadian strategy with regard to SMEs has focused on awareness raising, adoption and use of e-commerce, and on better measuring and analyzing new business models emerging with the "new economy". The Canadian strategy is built on a strong partnership with key federal agencies, such as the Business Service Centers, and with the private sector. Special projects, such as an electronic Business Service Centre, are being implemented to provide assistance to SMEs through information, guidance and contacts relevant to e-commerce.

The Canadian private sector has also taken an active role in the area. The Canadian E-Business Opportunities Roundtable is a voluntary group of Canadian business leaders and educators who are

committed to fostering the development of e-business in Canada. One of the key objectives of the Roundtable was to create a comprehensive fact-based understanding of the state of e-business in Canada, including the challenges and opportunities for SMEs. The Roundtable has held a number of regional conferences to communicate the nature of the e-business challenge to the SME community. SMEs have indicated strong support for this type of activity and have recommended continued information seminars and practical workshops, development of means to assess the advantages of using e-commerce, development of an internship program for recent graduates (e-corps) to go to SMEs and help them integrate e-commerce in their business activities, creation of accessible one-stop information resources for SMEs, time -limited economic incentives to stimulate e-commerce adoption, and information sessions from industry associations on currently available on-line security solutions.

3.   Online Payment Systems

Electronic payment systems in Canada are growing in importance. Debit and credit card payments have surpassed traditional paper-based payment instruments in terms of volume of transactions. In 1998, 53 per cent of cashless transactions were made using debit and credit cards, 31 per cent using cheque, 9 per cent by credit transfer, and 7 per cent by direct debit. A recent survey undertaken for the Canadian Bankers Association found that 63 per cent of Canadians now use ABM, telephone banking or the Internet as their primary means of conducting financial transactions.

The Canadian Payment Association's Automated Clearing and Settlement System provides a mechanism for the processing and settlement of a number of electronic payment instruments, such as credit transfers and pre-authorized debits. The CPA also operates the Large Value Transfer System, an electronic payment system established in 1999, that provides irrevocable same-day finality of payment. The CPA is analyzing issues associated with the possible use of an Automated ClearingHouse in Canada, and is exploring linkages with the proposed Worldwide Automated Transactions ClearingHouse.

The CPA will be implementing a public key infrastructure to facilitate the growth of on-line Internet payments. The CPA intends to become a root certification authority for CPA members and other qualified institutions electing to act as certification authorities. As a root certification authority, the CPA will ensure consistency in the standards applicable to the issuance of digital certificates, which authenticate the identity of users conducting electronic transactions.

The Interac Association operates Canada's only national ABM and electronic funds transfer/point-of-sale (EFTPOS) network. Canada has the most EFTPOS terminals per inhabitant in the world and is behind only Japan in having the most ABMs per inhabitant.

Canada's major financial institutions are developing electronic bill presentment and payment (EBPP) schemes that allow consumers to receive and pay bills on-line from a single website. EBPP will likely reduce the number of cheques used for bill payments. Financial institutions are also continuing to test forms of electronic cash, such as Mondex and VisaCash.

Among the policy issues of interest to Canada in relation to electronic payment systems are network access and competition, consumer protection, security, privacy, and the regulatory framework appropriate for institutions issuing electronic cash.

4.   Certification and Authentication

The Canadian experience in building trust in the electronic environment includes legal and policy measures regarding electronic signatures, privacy and cryptography. Canadian legislation, the "Personal Information Protection and Electronic Documents Act" was recently passed and came into effect on January 1, 2001. It establishes the legal framework governing the collection, use and disclosure of personal information in the federal domain. The Act also provides an electronic alternative for doing business with the government. It contains provisions covering the use of secure electronic signatures, electronic evidence

in the courts, and government-on-line measures. Equivalent legislation is also being introduced by provinces.

A public consultation document on Authentication and Certification has recently been released by the Canadian government. It seeks views from all stakeholders on how to proceed with the establishment of Certification Authorities ("CAs"). The Canadian approach recognizes the leadership role of the private sector in designing a proper accreditation mechanism.

Cryptography technologies form a relatively new but vibrant market in Canada and elsewhere. The Canadian government issued a policy statement in October, 1998, which permitted the import and use of cryptography products with no mandatory key recovery requirement or licensing regime.

COLOMBIA

A number of initiatives have been undertaken in Colombia since the mid-1990s to foster the use of information technologies (IT).

Based on these initiatives and with a firm determination to take full advantage of the benefits offered by such technologies, in early 2000 Colombia adopted as its long-term strategy in this area a high-level policy called " Connectivity Agenda : The Leap to Internet." Its purpose is to promote a broad-based and overall increase in the use of information technologies with a view to improving the competitiveness of the production sector, modernizing public and government institutions, and socializing access to information.

This is based on an understanding that information technologies are tools that will make it possible to develop a new economy, build a more modern and efficient State, ensure universal access to information, and effectively acquire and use knowledge, all of which are fundamental elements for the development of modern societies.

The Connectivity Agenda is a series of strategies implemented through specific interconnected programs and projects aimed at fostering social and economic development in Colombia through an extensive increase in the use of information technologies.

The Agenda seeks to create a favorable environment and conditions for the different sectors, so that each can assimilate and exploit information technologies and, accordingly, produce a positive impact that will contribute to the achievement of certain objectives.

To achieve the proposed objectives, six strategies and their corresponding lines of action were identified:

1. Access to information infrastructure
   - Strengthen the national telecommunications infrastructure
   - Provide access to information technologies for the majority of Colombians, at more affordable prices

2. Use of IT in educational and training processes on the use of IT
   - Foster the use of information technologies as an educational tool
   - Train Colombians in the use of information technologies
   - Upgrade the skills of human resources specializing in the development and maintenance of information technologies
   - Increase people's awareness of the importance of using information technologies

3. Use IT in businesses - on-line businesses
   - Foster the adoption of information technologies by the production sector

4.   Foster the development of the domestic information technology industry
- Create a favorable environment for developing the information technology industry

5.   Generate content
- Promote the national content industry
- Support the generation of content and on-line services

6.   On-line government
- Improve State operations and efficiency
- Improve State transparency and strengthen social control over public administration
- Strengthen the State's function of service to citizens through the use of information technologies

In line with these general strategies, a group of programs and projects considered necessary at the outset were launched. The most important were: creation of a government Intranet and application of information technologies in government; strengthening the national telecommunications infrastructure; establishing community Internet access centers; fostering and regulating electronic commerce; defining tariff schedules for accessing Internet; using information technologies as an educational tool, etc.

In regard to the first two, which in the language traditionally used by the Joint Government-Private Sector Committee of Experts on Electronic Commerce correspond to the issue of "government as model user," several important advances were made. In the first phase, all entities of the central government were to provide on-line information to the public by December 31, 2000. Two other phases are planned: one to offer the public the possibility of processing various transactions on-line (by December 31, 2001), and the other, to process administrative procurement on-line (by June 30, 2002). In addition, the government portal www.gobiernoenlinea.gov.co was designed and implemented.

Work is also under way to design a training project for government employees on the use of information technologies.

Significant progress has also been made on other fronts: foreign trade formalities can be processed over the Internet; and the submission of tax declarations, the payment of taxes administered by the Directorate of National Taxes and Customs, and tax withholding at the source have been authorized since 1999 through the Electronic Declaration and Payment System.

Regarding access to information infrastructure, regulations were defined for reducing the cost of access to Internet, which now requires payment of a basic telephone rate of about US$8.00 per month. Bidding procedures for the installation and operation of Internet access centers in numerous municipalities of the country are moving forward, as are those for the acquisition, installation and maintenance of 650 computer science classrooms in public schools throughout the country.

All of this is being done under a telecommunications policy that for years has sought to expand coverage, modernize infrastructure and diversify the services provided, as needed for the process of social development, and for the liberalization, growth and internationalization of the economy. These objectives have been pursued through the following mechanisms: fostering competition, encouraging private sector participation, and strengthening public enterprises. In this regard, Colombia's telecommunications sector was one of the first in Latin America to begin the liberalization process.

With regard to the regulation of electronic commerce, Colombia has had a law on this subject in effect since 1999, which is based in large part on the Model Law on Electronic Commerce adopted by the United Nations Commission on International Trade Law (UNCITRAL).

The law on electronic commerce aims to ensure the integrity, reliability and security so critical for both data messages and electronic commerce, since they have to do with operations and transactions conducted electronically between parties, through telematic networks (open or closed), involving no direct or physical contact between the parties.

Digital signatures, digital certificates and the certification services provided by certification agencies are tools that will provide security to the data messages used in completing a given action or business transaction.

Decree 1747 of September 11, 2000 is a regulation of the law that governs certification agencies and the certificates they issue.

Certification Entities are legal persons, notaries or consuls, who are authorized primarily to issue certificates relative to digital signatures, authenticate signatures in connection with communications based on digital signatures, and carry out some other related tasks.

The decree identifies two types of certification agencies; both of which must be authorized by the Office of the Superintendent for Industry and Commerce:

- Closed: those that provide services to a closed circle of persons (i.e., a bank and its clients)
- Open: those that provide services to the general public

In the case of closed agencies, the requirements of the Superintendent are minimal, primarily because the responsibility they assume for the certificates they issue is minimal.

The principal requirements for accrediting an open certification agency are: a minimum equity capital, a guarantee from an insurance agency or establishment of a trust contract having autonomous equity, in order to cover possible damages caused in the performance of their activities.

There are also some infrastructure and resource requirements, as well as certain security procedures and systems required for qualifying that the system is reliable in the exercise of its activity.

Foreign certification agencies must accredit a domicile in Colombia even if their infrastructure is abroad.

The decree also establishes a series of duties of the certification agencies in order to ensure that they carry out their activities in the best possible manner.

On another level, in mid-2000, a plan of action was launched to foster electronic commerce, the aim of which is, among other things, to generate trust and raise the awareness of consumers, businesses and various government sectors regarding the advantages offered by electronic commerce, in order to foster an increased use thereof.

In this connection, it is worth noting that steps are being taken to provide small and medium-size enterprises (SMEs) with training in electronic commerce and with soft credits so as to encourage them to acquire information technology.

Similarly, intellectual property and copyright legislation are being revised to ensure suitable protection of transactions in electronic commerce; consumer protection regulations are also being adjusted, in order to ensure that on-line consumers receive appropriate protection.

COSTA RICA

For about two years now, Costa Rica has been implementing a variety of technology-based development initiatives focused on three key areas: (i) New Society; (ii) New Government; and (iii) New Economy. These, in turn, are founded on the three basic pillars of electronic commerce development in Costa Rica, namely education, telecommunications and infrastructure, and regulatory framework. E-commerce thus forms part of Costa Rica's global development strategy.

The leading projects currently being undertaken include: the Teacher Training Center (CEFOF); the recent Digital Signature Bill, which is intended to give legal force to the electronic signature and electronic document, and to regulate accreditation and certification activities; projects to open up the Internet market and the new high-speed network being developed by the Costa Rican Electricity Institute, the national telecoms services provider (National Interconnection Program "Border to Border").

A variety of intellectual property laws have been passed recently within Costa Rica's basic regulatory framework, which protect IP rights in the e-commerce domain. These include ratification of the WIPO Copyright Treaty (WTC), and the Law on Procedures for Enforcing Intellectual Property Rights.

The government and the private sector are also undertaking several other major technology-based development initiatives. These include: the Digital Government Office, whose overriding goal is to provide guidance for national strategy in the "new government" area; the "free e-mail for all Costa Ricans" project (costarricense.com and correos.cr); the private-sector initiative to set up specialized human resource training centers and training staff in the software area (CENFOTEC); the e-SMEs and CostaRicaMarketplace.com project being developed by the foreign trade promotion agency, which seeks to establish a forum for SMEs to take advantage of the benefits of electronic commerce.

All of these initiatives aim to insert Costa Rica fully into the new digital era and enhance the country's development by taking advantage of the opportunities afforded by technology. This national strategy also aims to expand Internet access to all Costa Ricans, and for firms, schools, institutions and individual citizens to all become familiar with the use of e-commerce and be able to share in its benefits.

EL SALVADOR

The Government of El Salvador is carrying out an economic and social reform program to achieve a fair and faster economic growth that will achieve the development and creation of the necessary wealth to improvement the quality of life of all the people in El Salvador and has, therefore, signed an agreement with the World Bank for Loan IBRD number 3946 – ES, to finance the Technical Assistance Project for Improved Competitiveness. Within one of the components of the Project, "Technological Capacity", the decision was made to support the integration of one of the fastest growing ways of doing business in the last few years: Electronic Commerce. Since very few enterprises within the country have access to the internet, they have not been able to penetrate this market and are, therefore, losing opportunities to do business. This assistance involves encouraging businessmen to embrace these new technologies, training on their uses, risks and benefits and the integration of businesses into virtual sales.

A legal framework, as well as an information mechanism on the security of communications, must be established in El Salvador to stimulate electronic commerce and assure the private sector that its business transactions on the Internet remain totally secure.

Here are the objectives and actions in the "Technological Capacity" component part of the project presently being developed in El Salvador.

OBJECTIVES.

A. General.

1.1.   Stimulate the development of electronic commerce in the country through the national private sector by providing consultation, technical assistance, training and/or seminars.
1.2.   Promote the dissemination of the use of an Information Technology culture.

B. Specific.

2.1.   Support the establishment of the National Electronic Commerce Working Groups who will define the guidelines, policies and even the laws that will be the backbone and stimulus for the integration of the national private sector into electronic commerce.

2.2.   Support the establishment of virtual business sites (electronic commerce) in at least three sectors of the clusters.

2.3.   Support the creation of a local critical mass to promote the dissemination and establishment of electronic commerce in El Salvador.

ACTIONS

There are four stages to the project:

1.   General Incentive for the Use and Exploitation of Information Technology.

The purpose of this stage is to support the dissemination of the use and exploitation of Information Technology focusing on the utilization of the INTERNET and targeting three different groups in society:

1.   Small and Medium Enterprise (SME) businessmen focusing particularly on the businesses in the Clusters.
2.   University professors and students.
3.   Professionals.

2.   Support the Establishment of a General Environment for the Implementation of Electronic Commerce.

The purpose of this stage is to support the establishment of a global general environment for the implementation of electronic commerce in El Salvador through point support in the form of technical assistance and/or training by the Working Groups mandated with its national development:

1.   Working Group on Security.
2.   Working Group on the Legal Framework.
3.   Working Group on Electronic Culture

3.   Establishment of Electronic Commerce in the Clusters' Enterprises.

The purpose of this stage is to support the establishment of electronic commerce in at least three enterprises/sectors of the Clusters, whether it be associative or through pilot or key enterprises particularly for those sectors.

4.   Follow-up and Dissemination of Experiences.

The purpose of this stage is to continue to further the establishment of electronic commerce that would require the following actions:

1.   The results achieved in electronic commerce by the Program supported enterprises.
2.   Testimonials of experiences learnt in the process.

El Salvador, particularly in other areas, has very progressive legislation for intellectual property that provides electronic commerce rights protection. Moreover, El Salvador has signed a number of international agreements to strengthen intellectual property protection and guarantees.

MEXICO

Access and infrastructure

Liberalization and deregulation are the basis for Internet development and, as part of a telecommunications sector development strategy, Mexico has undertaken the following initiatives:

- Privatization of the state monopoly, TELMEX, in 1990.
- Enactment of the Federal Telecommunications Act in 1995.
- Creation of the Federal Telecommunications Commission as an independent regulatory body in 1996.
- Five (5) different communications regulations are issued between 1996 and 1997.
  1. Long distance services;
  2. International long distance services;
  3. Local services;
  4. Public telephony; and,
  5. Satellite communications.

These initiatives resulted in making the domestic telecommunications market more attractive to foreign investors and, consequently, Mexican consumers can benefit from the investments and new technologies that they brought in.

Mexico drew up and implemented a sustainable long-term process for regulatory reform in the telecommunications sector. The transition from a state monopoly to a market economy was rapid in most of the telecommunications sector, which consequently led to an improved quality in services. The TELMEX licensing concession included very innovative asymmetric regulations for its time.

The problem confronting Mexico is not a regulatory or liberalization problem for access to the local network, but rather one of infrastructure investment to increase telephone ownership.

Small and Medium Enterprises (SME's)

The government of Mexico lends support to the development and integration of the SME's into the productive process through the Sistema de Información Empresarial Mexicano (SIEM) (Enterprise Information System of Mexico). SIEM is an informational, promotional and consultative tool available through the Internet (www.siem.gob.mx) for the industries, businesses and services operating in Mexico. It identifies the supply and demand of products and services of the registered enterprises and therefore becomes a virtual business center. Similarly, it provides an equal promotional opportunity to smaller enterprises in relation to major industries.

Certification and Authentication

The private sector and the Congress of the Union worked closely with one another to make the appropriate amendments to the legal framework in order to provide a totally secure environment for economic agents wishing to do business electronically.

Those amendments incorporate the principles of the UNCITRAL Model Law on Electronic Commerce, the consumer protection guidelines of the OECD and the legal structure of Mexico.

The electronic commerce reforms were published in the "Diario Oficial de la Federación"(Official Gazette of Mexico) on 29 May 2000 and included:

iv.   *Civil Matters.* The Parties signing an agreement may express their will or offer a good or service through electronic means.

v.   *Procedural Matters.* Information generated or communicated through electronic means is recognized fully as evidence.

vi.   *Commercial Matters.* The use of electronic means is recognized for the provision of goods or services through electronic means, and establishes the obligation to retain the information whereby contracts, agreements or commitments have been signed giving rise to rights and obligations, and that is generated or transmitted through electronic means.

vii. *Social Matters.* The OECD guidelines for the promotion and protection of consumer rights covering transactions made through electronic means are included.

viii. *Administrative Matters:* Notifications, summons, injunctions, requests for reports or documents, resolutions or promotions made by individual persons may be made through electronic means. Certification of the means of identification is the responsibility of each government agency or decentralized body in accordance with the Secretaría de Contraloría y Desarrollo Administrativo (Department of Finance and Administrative Development) stipulations.

These reforms are contained in a general legal framework that legally recognizes transactions made through electronic means and provides security and confidence to the consumers.

Consumer Protection

A reform containing five (5) regulations covering electronic commerce was published in the Diario Oficial de la Federación (Official Gazette of Mexico) on 29 May, 2000 that adds a chapter on electronic transactions to the Federal Law for Consumer Protection and deals with: i) confidentiality in the handling of the information provided by the consumer to the supplier; ii) the supplier's obligation to offer secure methods to protect the information provided by the consumer; iii) the supplier's obligation to provide to the consumer, prior to the transaction, his official business address, telephone numbers and other means that the consumer may need to submit complaints or request explanations; iv) the supplier's obligation to monitor the marketing practices aimed at the vulnerable sectors of society such as children, the sick and the elderly; and, v) the inclusion of the violation of specific consumer protection provisions in transactions made through electronic means as an offense with its corresponding sanctions.

This reform contains the guidelines approved by the OECD Committee on Consumer Policy in the field of electronic commerce to promote and protect consumer rights in such transactions.

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<u>PERU</u>

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Access And Infrastructure

Peru modernized the telecommunications sector in the early 1990s with the promulgation of its *Ley de Telecomunicaciones*, which created an oversight body -- the *Organismo Supervisor de Inversión Privada en Telecomunicaciones* or OSIPTEL – that began supervising private investment in telecommunications in July of 1993, replacing the the sector's regulatory agency, the *Comisión Reguladora de Tarifas de Telecomunicaciones*. This change represented a shift in thinking about the role of the State, which moved from its position as monopoly operator, to the role of promoter and regulator of the development of its telecommunications market within a framework of free competition and retained the power to establish mechanisms for the prevention of unfair business practices of any kind.

An essential requirement for the development of electronic commerce is the existence of fully operational communications networks accessible to all. Users must have access to these networks through their own or a shared (community Internet access point) system which enables them to participate in

electronic commerce. While fixed systems predominate for the Internet, the use of wireless technology through traditional cellular telephones, radio bands and satellite networks is recording rapid growth.

The following measurements of access to telecommunications infrastructure for purposes of electronic commerce are based on a study carried out this year for APEC by the Ministry of Industry, Tourism, Integration and International Negotiations (MITINCI), working in conjunction with the *Instituto Peruano de Comercio Electrónico* (IPCE).

In Peru there are 6-10 telephone lines per 100 inhabitants. Between 1% and 25% of the population has access to wireless digital communications systems. Only 1-5% of Peruvians are able to access the Internet over wireless digital systems. On the other hand, 1-5% of the population currently has access to the Internet through the cable network.

It is well established that electronic commerce has a greater need for bandwidth than traditional telephony. In this respect, in Peru the average speed of connection available to non-commercial users is less than 56 Kbps, whereas the average for commercial users is between 56 and 384 Kbps, with maximum speeds of 1.6-4.5 Mbps. Meanwhile, the maximum speed of connection for those with wireless access to the Internet is under 56 Kbps.

Households with Internet service, as well as some business users who access the Internet through dial-up connections, pay two types of fees: those charged by their ISP and those generated by telephone charges for Internet traffic. The ISP fees are intended to cover the cost of Internet access. These fees are not subject to regulation since there is unrestricted competition in the Internet access market.

The Internet traffic fees are designed to cover the cost of the means used for connection with the ISP. Non-dedicated traffic must pay a per-minute fee, whereas dedicated traffic is charged a fixed amount. These fees are likewise determined by the market since the local telephone companies and local carriers have also been deregulated.

Analysis of the reliability of Peru's infrastructure shows a break-down rate of less than 2% with respect to failure of dial-up connections, whether due to busy signal or interruption. At the same time, the ratio for loss of data packets is lower than 5%.

Market conditions for infrastructure services and terminal equipment require a breakdown according to the socio-economic level of the population. Some 97% of individuals in socio-economic levels "A" and "B" own a telephone, 48% own a computer, and only 18% have access to the Internet from their home. Of those in socio-economic level "C", 65% own a telephone, 5% have a computer, and virtually none has Internet access. Finally, in levels "D" and "E", 22% have a telephone, only 1% own computers, and none has access to the Internet.

Less than 5% of the population at large have a cellular telephone. By contrast, approximately 89% of Peruvians own television sets – hence the development of new technologies for Internet access by this means. In fact, the cable television network has turned itself into an important medium for access to the Internet through a series of measures to upgrade its network and terminal equipment. Similarly, a series of upgrades and the addition of special equipment to the telephone network have enabled that medium to offer ADSL service.

It is important to note that in 1999, the percentage increase in Internet traffic outstripped the rate of growth in traffic on the public switched telephone network (55% vs. 30%). The implication is that individuals are intensifying their use of the Internet. Further proof of this may be seen in the increase in subscribers' time of connection, which is currently bordering on 13 hours per month.

It is worth noting that the Internet user base consists primarily of individuals with dedicated connections, rather than household users who access the Internet by means of dial-up connections. This user base is made up of persons employed by public and private agencies, educational institutions and

universities, as well as individuals operating through community Internet access points, all of which have dedicated lines linked directly to the Internet.

The community Internet access points are an example of consumer linkage to the information highway. The number of Internet access points of this type in Peru is growing and currently stands at approximately 600. The cost for one hour's connection in a community Internet access point varies between S/.2.5 and S/. 4. (US$ 0.70 and US$ 1.15).

The estimated number of Internet portals is around 1,600. It is worth noting that this market is in a highly competitive phase at the moment, and consumers are therefore benefiting from reduced prices and a variety of promotional offers.

The placement in operation of the Peruvian Network Access Point (NAP) means that local Internet traffic between the different supplier firms will no longer pass through the international link, but rather will be managed locally. This will speed up internal communications and access to the resources on local servers (Web pages, databases, etc.). The NAP is administered by a totally neutral and non-profit entity whose sole objective is to promote development of the telecommunications sector. The creation of Peru's NAP will greatly improve the system and result in much faster service. With the signing of this important agreement, Peru becomes the fifth country in Latin America to obtain this system (the others are Colombia, Argentina, Chile and Brazil).

Peru still lacks the resources needed for investment in this sector to ensure adequate infrastructure for information technology and electronic commerce. It is equally important to point out that the level of knowledge, awareness and dissemination of electronic commerce and information technology is unacceptably low. It is widely felt as well that one of the obstacles to the development of electronic commerce in Peru is the lack of high-speed digital systems at accessible prices.

Strategies are needed to encourage more widespread use of and access to the Internet by facilitating and overseeing free competition; developing other means of access (expanded use of the spectrum); promoting access pricing based on costs and the nature of the demand; providing training and raising awareness of the service; developing strategies for ensuring more widespread knowledge of information technologies, telecommunications and electronic commerce; connecting to universities and public schools, and thereby promoting distance learning.

Small and Medium-Sized Enterprises

The New Economy has the wonderful capacity to reinforce the competitive potential of all enterprises, but most especially those in the SME category, and to narrow the gap between these and the larger firms. Peru's SMEs, with their highly flexible and non-authoritarian organizational setups, have the ability to assimilate and exploit the new technologies and incorporate innovative processes to make them more efficient. Their major disadvantage is that the limited financial resources available to SMEs do not permit them to gain access to information technology.

Peruvian SMEs suffer from a further disadvantage in that they are traditionalists: the business community in general is reluctant to adopt new technologies for the simple reason that Peru lacks a tradition of welcoming innovation.

Were the SMEs to embrace the adoption of new technologies, which are the cornerstone of electronic commerce, they could easily streamline their processes, take better advantage of their market niches, and find many new commercial opportunities around the world, aided by their inherent structure and flexibility.

However, the SMEs face two serious limitations in this area: (a) the traditionalist mindset of its business sector, and (b) the costs involved in implementing technological solutions.

In Peru, the institution charged with promoting development of the SMEs is the PromPyme, a government agency that provides business advice for microenterprises and small firms, registers these enterprises and is responsible for promoting demand for their products and services, which may include putting them in contact with potential clients and helping them participate in government tender calls. In terms of the Internet, this agency is about to launch its Web page, which will facilitate consultation and access to its database, and promote the use of computerized methods in the management of the country's SMEs.

Another entity with a mandate to foster acceptance of electronic commerce and its related procedures is the Instituto Peruano de Comercio Electrónico (IPCE), which provides advisory services in this area and promotes the use of on-line payment methods and the conduct of business over electronic media. IPCE is responsible for generating information on the development of electronic commerce in the Peruvian context. As an institution created especially to deal with e-commerce, it is available to answer questions from SMEs on diverse matters related to trade over the Internet. By visiting its Web page (www.ipce.org.pe), it is possible to obtain a variety of data that will be of great use to this type of companies.

An important part of IPCE's mandate relates specifically to allaying the natural fear felt by individuals and corporate persons in particular, when applying electronic solutions for the first time. In this way, IPCE strives to change the thinking of the operators of SMEs to ensure that they do not miss the opportunity of tapping new markets, or get left behind in the global economic development which is today designed to take advantage of this method of doing business.

Another limitation on the ability of Peruvian SMEs to take part in electronic commerce is the cost of implementing technological solutions. SMEs have only limited resources to spend under this heading, which seriously restricts their access to the necessary hardware and software, and their ability to meet the need for personnel trained in this area.

Accordingly, private enterprise has taken a leading role in the development of electronic commerce among Peru's SMEs. There are now a number of large companies in this market offering global solutions designed specifically for SMEs. These solutions range from consulting, sales and provision of integrated technology services, to the hosting of a firm's Web page to help it develop electronic commerce. In a further step, many SMEs have opted to engage an external provider to take over the entire electronic process at a cost that is significantly lower than that of developing a complete solution within the firm.

Other SMEs have chosen to join the recently created e-Marketplaces that have sprung up under large-scale private sector initiatives in Peru, which not only advertise them as suppliers to potential clients but also permit SMEs to post more details and information about their firms, and in some cases even catalogs showing the products that the firm sells. There is a growing belief that these e-Marketplaces will in future become the preferred platform for conducting business among large companies and SMEs alike, as well as between the two. Under the heading of inter-firm electronic transactions, novel forms of payment designed specifically for the business sector have been developed in Peru -- including electronic transfer of funds -- which the SMEs can put to great advantage.

Most of Peru's SMEs have yet to see the Internet as a market in which to develop sales, or as a plataform from which to search for new business opportunities. Many SMEs think that simply having a presence on the Internet will suffice, and while this is a good first step it means that they are missing an excellent opportunity to expand their business. It is here that the above-mentioned institutions can be of assistance. However, the future of Peru's SMEs remains promising in any case, owing to the high level of vitality and flexibility in this sector. Electronic commerce will provide great benefits for Peruvian SMEs at reasonable cost established by the market itself, enabling them to reap the benefits of operating on a modern, efficient, global and profitable medium which, moreover, represents the future marketplace for businesses aimed at the consumer, as well as for transactions between the firms themselves.

On-line Payment Systems

A crucial factor for the development of electronic commerce in Peru is the creation of forms of payment that make it possible to carry out transactions on line. Considering the B2C experience, statistics show that the method of payment preferred by Internet users is by credit card. Unfortunately, Peru does not have the critical mass of cardholders needed for extending electronic commerce to the majority of its inhabitants. Only 2% of Peruvians own a credit card, which means roughly 500,000 individuals. This is due to the stringent requirements for obtaining credit cards through any of the commercial banks, making them inaccessible to the great majority of Peruvians.

This has led Peru's private sector financial institutions to develop creative methods for promoting the use of on-line transactions through ingenious alternatives which are very popular with the public, and which demonstrate the desire of Peruvians to make purchases on line. The solutions adopted by these private sector institutions to strengthen electronic commerce in Peru include debit, commercial credit and special prepaid Internet cards, cash payment and electronic transfers.

The Instituto Peruano de Comercio Electrónico (IPCE), as the agency responsible for promoting the use of electronic commerce in Peru, has determined that 12% of Peru's Internet users have made at least one on-line purchase. With respect to payment, IPCE found that the methods of payment preferred by Internet users in Peru are: credit cards (37%), prepaid cards (24%), cash (17%), debit cards (12%), electronic transfer of funds (5%), and none (5%).

Debit cards are held in much greater numbers than in the case of credit cards, with some 8% of the population owning one – which means that 2,000,000 of these cards have been issued. Many of Peru's virtual stores have begun to accept this method of payment given its great popularity with the Peruvian public, no doubt due to the minimal and simple requirements for obtaining one.

Commercial credit cards for use in specific establishments are in great demand in Peru, far exceeding the quantity of ordinary credit cards held by Peruvians and nearly equaling the number of debit cards in circulation. This has led these establishments to seriously consider the possibilities of the Internet as an additional distribution channel with a built-in market consisting of a large number of potential clients. In the next few years, more establishments that issue their own credit cards are expected to begin using the Internet as an additional market, and to implement their own models of electronic commerce.

Prepaid cards provide an excellent example of the creativity shown in designing solutions that promote public access to electronic commerce. A private sector initiative is now underway in Peru to promote electronic commerce by means of prepaid cards, which are used like credit cards and may be accepted in other countries as well. Other projects involving the use of prepaid cards are scheduled to begin as well, so that the volume of e-commerce transactions is expected to rise in Peru. A survey conducted by the IPCE found that 85% of the country's Internet users are willing to purchase a prepaid card for use in on-line shopping.

COD payment in connection with electronic commerce is a solution adopted in very few countries (among these, Peru) since this method runs contrary to the very nature of e-commerce transactions in that it does not involve immediate on-line monetary compensation. Nevertheless, cash payment on delivery is used by many virtual businesses because it provides a larger base of potential clients. Transactions involving this method of payment are expected to decline in future.

Electronic transfers, the method of payment long used in the banking sector, is currently being adapted for B2B transactions in Peru, and is specifically aimed at the business sector. There is already a private-sector initiative underway in the Peruvian market which will provide a platform for payment under an exclusive means of joining the Web pages of the businesses involved in the electronic transfer process, offering SMEs the opportunity to become more competitive in the New Economy through increased efficiency, both in their payments and in collection of amounts due.

An electronic clearinghouse, the Cámara de Compensación Electrónica, is also being created in Peru to link the financial system by means of an interbank network capable of effecting electronic transfers between the country's various financial institutions. This platform will accommodate both the B2B and B2C electronic commerce models since it will permit automation of payments and collections in the business sector, including payment of suppliers and employee wages, as well as facilitating automatic debiting and payments by individuals in virtual stores, with the option of charging such payments to a specific bank account.

Like people everywhere, Peruvians are reticent to make on-line purchases. In the end, this comes down to a question of confidence and the security of the payment method. To offset the problem of lack of confidence, it is necessary to resort to guarantee agencies; ensuring that the payment method is secure requires reliance on security protocols.

The SSL (Secure Socket Layer) protocol has been the predominant security system used in Peru since the arrival of browsers incorporating this encryption protocol, which permits the transfer of data encrypted by an algorithm such that the contents of the payment message (e.g. a credit card number) is unintelligible until it reaches the original receiver.

In February 2000 the SET (Secure Electronic Transaction) security protocol was launched in Peru. Devised under a joint private sector initiative, this protocol has greater encryption power and is also capable of authenticating the entities and individuals taking part in a transaction.

The status of electronic commerce in Peru is rising rapidly, and to reinforce this trend the private sector and various institutions are promoting the advantages of its payment methods, security and mode of application. Peruvians in ever increasing numbers are able to make purchases over the Internet, and those on-line businesses that offer more payment options will see a significant increase in the number of their potential clients.

Certification and Authentication

Peruvian legislation has been updated this year with the addition of new provisions and amendment of existing laws, creating a legal framework within which to promote the country's electronic businesses.

Under the heading of certification and authentication in the transmission of data messages, Peru already has an act governing electronic signatures and certification (Law 27269: Ley de Firmas y Certificados Digitales). The regulations to implement this act are currently being drafted.

Readers will find the text of Law 27269 on the IPCE Web page (www.ipce.org.pe).

This law permits the use and validation of digital signatures in Peru, according them the same validity and legal effect as a handwritten or holographic signature, provided that the digital signature meets integrity and authentication requirements and is not repudiated.

The Peruvian system is based on Certification Bodies (CBs), Registration and Verification Bodies (RVBs), and the Competent Administrative Authority.

A Certification Body is responsible for issuing and administering digital certificates, and may also carry out the functions of registration and verification.

CBs may delegate the authority for registration and verification to other entities by agreement. This distinction was introduced so that foreign CBs would not necessarily have to establish a physical

presence in the country, but rather could delegate the verification function to local entities under outsourcing contracts.

Registration and Verification Bodies (RVBs), whether they work for foreign or local CBs, are charged with verifying the information in applications for digital certificates supplied by natural or juridical persons. Based on its verification and subject to the information provided, the RVB advises the CB whether or not to issue the respective digital certificate.

The third element in this system is the State which, acting through the Competent Administrative Authority (CAA), oversees development of the digital certification market by controlling registration of CBs and RVBs. The CAA is responsible for ensuring that the CBs and RVBs meet international standards and the commitments made in their Declarations of Certification Policies. The Authority also recommends adoption by the market of new technology standards applicable to digital signatures and any other form of electronic signature, provided that it meets integrity and authentication requirements and is not repudiated.

This law permits free competition in the digital certification market by not discriminating between digital certificates issued by Peruvian Certification Bodies and those issued by foreign firms.

The regulations currently in preparation will establish a regulatory structure that recognizes the electronic signature regime in general (Principle of Neutrality), as well as devising a specific regime for digital signatures.

In the case of digital signatures, that structure is made up of the CBs, RVBs and CAA, as well as the hardware, software and procedures that incorporate the provision of digital certification service.

The law recognizes that a document bearing a digital signature has probative value between the parties, but does not ensure the legal validity of the contents of the message which, depending on the type of instrument, must be prepared by a notary public or other legal authority, and in accordance with specific legislation governing each case.

Finally, the law seeks to deal with the framework for representation in the case of juridical persons. Specifically, it seeks to provide a mechanism by which juridical persons may cancel certificates issued for the use of their employees in representing them, such that they may revoke such powers in the same way that this is done in the real world.

To accomplish this, a distinction is made between the holder of a digital certificate and the user of the digital signature. In the first case, it is the organization which acquires the certificate, and which, as the owner of same, may request its cancellation when it sees fit. And in the second case, the user is a natural person to whom the organization gives the digital certificate so that he/she may create the corresponding user code and apply a digital signature to data messages as part of his/her representation, and within the framework of the powers assigned to that individual.

Source: Instituto Peruano de Comercio Electrónico (IPCE)

UNITED STATES

Access and Infrastructure

U.S. national experience demonstrates that competition is the means to achieve widespread availability of telecommunications and information services. The Telecommunications Act of 1996 provides for accelerating deployment of telecommunications networks by opening all telecommunications markets to competition. The framework has spurred investment in broadband networks and services by all

industry segments using a variety of technologies including telephony, cable TV, terrestrial, fixed, mobile, wireless and satellite. It also requires the Federal Communications Commission to ensure that all regions of the nation have access to advanced telecommunications and information services.

As a result of the Telecommunications Act and other policies that encourage competition, the availability of telecommunication services throughout the U.S. has improved and costs are lower. This has stimulated Internet usage, local content development, and e-commerce – which in turn stimulates further investment in the e-commerce infrastructure and feeds into the growth cycle. In the U.S., flat-rate prices for local telephone service and fixed rate pricing for Internet access have also significantly increased both the number of individuals online and the time each user spends online.

Another key component of Internet availability in the U.S. is competitively priced leased lines for businesses and Internet Service Providers (ISPs). These lines are vital to Internet Service Providers in connecting to the Internet backbone. They also help firms integrate their supply chains to efficiently reach their customers.

The U.S. has adopted numerous programs to make telecommunications and information services available to all sectors of the population, bridging the "digital divide"in under served areas.   Programs include the e-rate program which has led to the connection of classrooms and libraries to the Internet, Community Technology Centers, and the Department of Agriculture's Rural Utilities Service (RUS) which has facilitated the flow of telecommunications investment to rural America.

Small and Medium Sized Enterprises

The U.S. Government has made access to e-commerce for small and medium sized enterprises a high priority and is taking steps to address key obstacles to SME participation in e-commerce by developing export transaction tools to help companies sell internationally and making all related federal government programs and products available through the Internet. U.S. government efforts to help SMEs get online include the use of virtual trade shows, software toolkits, training programs, and e-commerce counseling. Examples include:

- *ww.USATrade.gov* - U.S. Commercial Service web site offering access to a variety of resources for SMEs seeking to export and to participate in e-commerce;
- *E-ExpoUSA.doc.gov* - on-line virtual trade show featuring electronic trade leads, international exposure, and multimedia;
- *Infotechlink.com* - targeted to global buyers of information technology products and services;
- *Manufacturing Extension Partnership (MEP)* - helps smaller manufacturers become export ready and will focus on applying e-commerce solutions to export counseling for manufacturers;
- *IT Management Planning Tool* - software tool that helps SMEs assess and manage their IT infrastructure and analyze their e-business readiness;
- *Global Technology Network (GTN)* www.usgtn.org - a network of domestic and international partners that assists U.S. small and medium size firms seeking access to emerging overseas markets.

Payment Systems

The existence of efficient and secure domestic payments, clearing, credit and insurance systems has been critical to the rapid development of electronic commerce within the United States. Policies which foster flexible, innovative approaches spurred the development of this financial services infrastructure, enabling wholesale and retail businesses to move their B2B and B2C marketing and sales onto the web with minimal concerns about completing or insuring the financial portion of the transaction.

In the U.S., credit cards are the primary method of payment for online purchases and their wide acceptance is propelling the U.S. toward a more cashless society. It is estimated that of the 14 million

merchants worldwide that accept payment cards, over 3.3 million are in the U.S. Consumer payment cards are held by over 75% of U.S. consumers, with more than 80% of them having used their cards in the past month.

While in the United States credit cards are the primary tool for electronic payment, throughout much of the rest of the Hemisphere, systems based on credit cards are widely perceived to be inadequate as they are unavailable for many potential e-commerce consumers in the Americas and relatively expensive for small and medium-sized business, including retailers. Although these impediments are seen to be less daunting in the U.S., for B2C e-commerce and some SME applications, U.S. banks and other companies are creating novel approaches to supplement traditional payment methods. These include e-commerce charges and payments incorporated into existing utility bills, taking advantage of existing credit relationships; use of debit cards; new payment technologies such as bar code scanning, smart cards, electronic wallets and cellular telephones; deployment of new security technologies; and prepaid cards with small amounts of purchasing power for citizens who lack access to traditional credit.

Historically in the U.S., banks have been the main actors in the payment systems field because of the preponderance of cash transactions and the membership requirements of credit card associations. New entrants utilizing electronic payment approaches described above are increasingly able to add unique solutions and value to the payments system and new opportunities for adding value are being created such as person-to-person micropayments (P2P).

These new services are being offered in regulated as well as unregulated industries in the U.S., creating useful competition as well as new challenges, raising issues which today are being addressed by government, industry and consumers.

Authentication

The evolution of U.S. laws demonstrates the importance of technology-neutral legislation that respects private parties' freedom of contract and does not mandate licensing of CAs. In 1995 the state of Utah enacted a technology-specific law that gave legal effect only to digital signatures and required certification entities to be licensed. Its burdensome requirements on both authentication and licensing caused it not to be used as a model. Other U.S. states, seeing the inadequacies of the Utah model, developed their own, often quite different legal rules.

The divergence of approaches, and the threat of inconsistency among the laws of the 50 U.S. states, led the National Conference of Commissioners on Uniform State Laws in 1999 to develop the Uniform Electronic Transactions Act (UETA). UETA gives legal effect to electronic signatures and documents, but it does not favor any particular technology, nor does it provide for the licensing of certification entities. The same concern about divergent approaches caused the U.S. Congress, in June 2000, to enact the Electronic Signatures in Global and National Commerce Act (E-SIGN). Like UETA, E-SIGN provides for legal recognition of electronic signatures and documents, and does not extend presumptions or other legal benefits to one specific authentication technology. Moreover, E-SIGN preempts state laws on electronic transactions, other than UETA, unless they are consistent with the legal rules prescribed in E-SIGN. Thus, state laws are now superseded to the extent that they give benefits to a particular technology. Both statutes also importantly respect party autonomy and give recognition to the acts of electronic agents. In addition, neither E-SIGN nor UETA provide for the licensing or accreditation of certification service providers.

The U.S. is actively participating in work conducted at the international level. The National Law Center for Inter-American Free Trade (NLCITF) is in the process of developing model rules for electronic signatures and documents (titled the Uniform Inter-American Rules for Electronic Documents and Signatures (UIAREDS)) that embody these policy recommendations.

Consumer Protection

The U.S. favors an approach to consumer protection in the online environment that is based upon industry self-regulation, enforcement of existing legal protections and refining existing consumer protection laws where necessary to accommodate the unique characteristics of the online environment. The Department of Commerce is working with the private sector to develop consumer awareness campaigns and to encourage industry efforts to help consumers resolve complaints about online purchases and to achieve effective consumer protection online.

The Federal Trade Commission (FTC) has taken the offensive against misleading and deceptive practices online through systematic analysis of the marketplace; rigorous enforcement of existing law; encouragement of industry self-regulation; education of the consumer and business; and an inclusive approach to policy making. The FTC Act generally prohibits unfair or deceptive commercial practices, including practices online. By the end of 2000, the agency had already brought 165 cases against 562 defendants for violations of the FTC Act online.

The FTC systematically analyzes consumer complaint data to identify and target the most serious cases of fraud, deception, and identity theft, coordinate law enforcement efforts, and respond quickly to emerging problems. Fraud complaints become part of the FTC's **Consumer Sentinel,** an international, multi-state database that uses the Internet to provide secure access to over 250 law enforcement agencies in the U.S., Canada, and Australia.

Law enforcement officials around the world have recognized the need to cooperate and share information and experiences. The U.S. signed cooperation agreements in 2000 with consumer protection agencies in Australia and the UK, and is pursuing cooperative arrangements with other countries as well. The year 2000 culminated with an announcement of a global law enforcement project, involving 251 actions against online fraud taken by agencies from 9 countries and 23 states. The U.S. has also been active on the OECD Committee on Consumer Policy which issued guidelines that set forth general principles intended to help eliminate some of the uncertainties consumers and businesses encounter when buying and selling online. These guidelines encourage private sector initiatives that include participation by stakeholders including business, government and consumer representatives, and emphasize the need for cooperation among governments, business and consumers.

<u>URUGUAY</u>

I.   ACCESS AND INFRASTRUCTURE

PROJECT MERCURIO

The basic objective of this project undertaken by the National Telecommunications Administration (ANTEL) is to ensure universal access to Internet in Uruguay.

To this end, the project will provide each ANTEL client (i.e., the users of fixed telephony services, currently numbering around 1,100,000) with a terminal or similar device yet to be defined, under very affordable terms. This will enable ANTEL's clients to simultaneously have access to Internet (through the IP National Network) and make use of telephone services.

An ANTEL portal will be situated on the IP National Network, which will host public and private sites and the Adinet mail services. Under this project, Adinet mail will be provided to all clients. Uruguay would be the first country in the world to undertake a project of this nature, having as it does certain basic characteristics favorable for such a project, including:

-        a scale or size suitable for implementing such a project, enabling investments to be highly effective, a goal not feasible at other scales

- suitable infrastructure: Uruguay is the first country in the Americas to have a 100% digital network. Its data network provides the greatest coverage with a variety of state-of-the-art technologies and the best prices in the region.

WHAT ARE ITS PRINCIPAL OBJECTIVES?

- To provide universal access to Internet (enabling all ANTEL clients to access the "Uruguayan network" and the "world network"), within a period of approximately 3 years.
- The "second telephone line" project. (The Mercurio project will make it possible to simultaneously connect an Internet access terminal and a fixed telephone by means of various technological access mechanisms, including LMDS, ADSL, E1, nx64, etc.)
- To stimulate the development of local content (both public and private), enabling content providers to supply information to all ANTEL clients. These will be accessible to both residents in Uruguay and to users in any part of the world.
- To significantly increase the bandwidth throughout the network (in line with the growing needs resulting from increased traffic).
- To bring about an overall reduction of costs
- To foster the development of local and global content
- To host web pages
- To provide access to investors as potential "partners"
- To increase business opportunities for software supplier companies
- To increase business opportunities for hardware supplier companies
- To stimulate local and world information technology
- To increase the volume of telephone traffic
- To increase the volume of data traffic

WHAT WILL MERCURIO OFFER?

In essence, the Mercurio project will offer packages to fixed telephony users, including a device for accessing Internet and the access technology at a reduced cost. The packages will be tailored to the different profiles of the clients, and the access device will vary according to the profile. To begin with, three likely Internet access devices are being considered: PC, Internet navigator, and a simple, custom-designed terminal. These devices will make it possible to provide services to different segments of clients: those interested in having all computer-related facilities and those who are not as familiar with the use of a PC but whom the project aims to keep involved.

In addition to the devices and the access technology, Mercurio will offer web pages through its portal, which will be designed in due time. Briefly, the portal will have a virtual campus linked to education, electronic mail and all the web pages that spark a deep interest in users.

Uruguay's National Committee on the Information Society was created by decree on August 8, 2000 (Decree N° 225/00) for the purpose of establishing a national strategy, a national response to the profound and radical changes that new technologies are producing in the economy, trade, culture, work, health, education and even in how leisure time is used throughout the world.

This strategy is described in an Agenda entitled "Uruguay on the Net" which must be translated into concrete, rapid and effective action at different levels of implementation, involving the lowest investment possible in bureaucratic expenses and addressing the time factor, which is key to all that has been called the New Economy.

II.   NATIONAL COMMITTEE ON THE INFORMATION SOCIETY

The priority objective of the National Committee on the Information Society is to work on the basis of an Agenda for the development of the Information Society (Uruguay in Network), taking action in five Working Areas:

1) TELEMATIC LITERACY:

Knowledge regarding information and communications technologies (ICT) must be the heritage of the entire society. The work to be undertaken through this Working Area will address the new role of educators, the structural changes needed, and the organization of education as a key component for building the Information Society (IS).

Initiatives:

- Develop mechanisms for adapting curricula on an ongoing basis in order to incorporate ICT (primary, secondary, technical, university education)
- Provide training to the corps of educators in how to use ICT in their teaching activities
- Study the development of curricula for the new professional profiles required by the IS.
- Foster the use of new study technologies, through the creation of multimedia web pages
- Ensure accessibility for all citizens

2) DEVELOPMENT OF TELEMATICS SERVICES FOR CITIZENS AND BUSINESSES

The development of telematic services for citizens and businesses must not contribute to increasing the gap between those who have access and those who do not. It will be necessary to stimulate universal access to the Information Society, primarily through training, computer infrastructure, access lines, affordable costs, and web pages reflecting citizens' needs.

Initiatives:

- Create public access centers by late 2001
- Install Internet access terminals at Post Offices
- Install Internet access terminals in all public buildings with considerable public traffic
- Promote events and opportunities, including fairs, contests, meetings, demonstrations, etc., for introducing more and more citizens to the use of Internet
- Create the Uruguayan Museum of the Information Society
- Design specific public awareness campaigns for the communications media regarding the purposes and scope of the national strategy on the Information Society.
- Foster the implementation of virtual assemblies on topics being addressed in Parliament

3) MODERNIZATION OF THE PUBLIC ADMINISTRATION

- During this term of government, all State Directorates must adopt new information and communications technologies in support of their administrative and service-providing systems.
- Develop a regulatory framework and regulations to support the development of the Information Society.
- Promote the creation of a Parliamentary Committee on the Information Society
- Conduct a study on legal barriers to the development of the Information Society
- Identify measures to ensure privacy, security and the protection of electronic data
- Promote measures to support electronic commerce
- Adjust tax legislation to electronic commerce
- Design an Internet-based government procurement system
- Re-draft the current law on intellectual property to include protection of software and data bases
- Promote the use of electronic means for conducting public bidding processes

- Promote an efficient telecommunications and Internet market
- Develop a telecommunications infrastructure that guarantees the band width throughout the territory

4)   PROMOTION OF AN EFFICIENT TELECOMMUNICATIONS AND INTERNET MARKET

- Develop a telecommunications infrastructure that guarantees the band width throughout the country
- Introduce new services, tapping the most advanced technologies (Uruguay Net, dedicated Internet, frame relay, videoconference services in virtual classrooms, voice on IP through IPTEL service, and MegaExpress service)
- Develop technical and commercial solutions for incorporating Internet service access providers into the data network
- Improve benefits on Internet
- Transform UruguayNet into a regional network, so as to reduce the cost of dial-up connection
- Foster electronic commerce activities.
- Incorporate ANTEL into the Telecenters, making it possible to navigate and access electronic mail with the use of the chip cards used for public telephones

5)   PROGRAM TO SUPPORT THE COMPETITIVENESS OF THE SOFTWARE SECTOR IN URUGUAY

The country's strategy with regard to the growing internationalization of the software sector will be based on the development of a Uruguayan technological software pole called "Polo Uruguay Soft."

Polo Uruguay Soft will not be associated with a specific physical location; rather, it refers to a strategy to create a true institutional and functional network that will help improve the conditions of competitiveness for the software sector. This institutional network will cover initiatives along the lines of technological parks.

Physically, Polo Uruguay Soft will occupy a small building where a variety of functions are coordinated and where various services will be provided to all the companies of Uruguay's software sector.

The following will be involved in the infrastructure:
- Universities
- Uruguayan Software Chamber
- Technological Laboratory of Uruguay
- Silicon Plaza
- Uruguay XXI
- Centro Uruguay Soft
- Others

III)   RECENT LEGISLATION

On December 28, 2000, the Government passed two decrees granting tax exemptions for the production of software having significant impact. The first exempted companies dedicated to "producing logical support" (software) from paying the Income Tax on Industry and Trade (IRIC), during the January 1, 2001 - December 31, 2004 period.

The second included software development, software advisory services and call centers in activities considered "export of services" with regard to the payment of the VAT (value-added tax). Accordingly, these companies receive the same tax treatment as other exporters, who are reimbursed for the VAT paid in making their purchases. These measures will have a strong impact on the development of this domestic industry.

While to date most software exporters do not pay this tax, the decree covers a very diverse scenario ranging from single-person businesses who bill as personal service providers, to companies that locate services in foreign trade zones and, therefore, do not pay domestic taxes. This decree complements the approval of a software copyright law.

The second decree is based on the fact that "advisory services to foreign entities and software-related services are activities that are essentially based on knowledge, the development of which is a priority objective of the present administration."

IV)   OTHER INITIATIVES

Every day, the Internet is becoming more and more commercial in nature. Companies aim to obtain the best advantages offered by the network, but to successfully establish businesses and commercial transactions in the virtual world, the system must be safe.

In order to overcome the insecurity of electronic commerce, Uruguay's National Chamber of Trade and Services has added Digital Certification, a service it currently offers to companies throughout the country. On May 25, 2000, the Digital Certificate was officially launched, as a result of an agreement signed with Spain's Superior Council of Chambers of Commerce and Industry. Digital Certificates provide international legal guarantees for communications and business transactions.