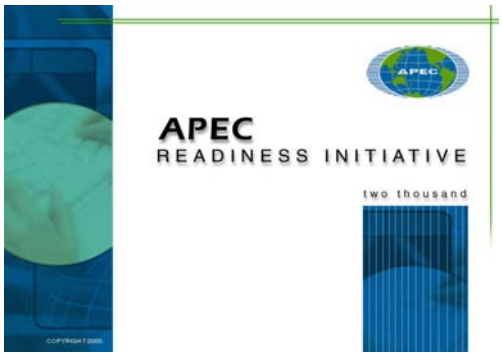
# Asia-Pacific
# Economic Cooperation

# APEC E-Commerce Readiness
# Assessment Guide

**APEC Telecommunications and Information**
**Working Group**

**2000**




**The APEC E-Commerce Readiness Assessment Initiative**
**An Overview of the Assessment Process**

A business partnership with APEC has developed an initiative to improve the e-commerce readiness of member economies. Each economy that conducts an assessment, and hosts a follow-on discussion involving officials, business practitioners and other stakeholders, can benefit by considering its policy, technology and regulatory environment. The initiative applies the APEC E-Commerce Readiness Guide as a first step to analyze results and structure discussions between public and private sector leadership. Ultimately, each government will decide what actions can be initiated from the experience gained, and from the recommendations made by the business community.

Steps for officials in managing the readiness self-assessment process:

1) Commit to conduct readiness assessment. Secure official participation from ministries with responsibilities for e-commerce policies.
2) Establish a point of contact to coordinate the participation of government agencies.
3) Recommend a business community leader to coordinate private sector participation, and as liaison with the Readiness Initiative Coalition. (The leader can identify participants from local businesses and associations, academia, affiliates of APEC e-commerce coalition companies, and members of ABAC, PECC, and PBEC, or their affiliates.)
4) Establish a mechanism to identify and collect data from public and private sources.
5) Host a roundtable with public and private participants to stage business led briefing on using the Guide.
6) Complete data collection and share results among participants.
7) Hold discussion to validate data and to develop options for implementation strategies.
8) Develop action plans for recommendations from business participants.
9) Showcase at an APEC venue experience gained from the assessment and dialogue, and highlight strategic plan for implementing actions.
10) Consider potential areas for cooperative or collective APEC action, for discussion with other economies.

David N. Barnes, Vice President Government Programs of IBM Asia Pacific leads business involvement in the initiative, and can be contacted at **barnes@jp.ibm.com**.

**APEC E-Commerce Readiness Initiative**

**Dated: 29 May 2000**

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## Background to the Initiative:

The APEC E-Commerce Readiness Initiative is a partnership of the business community and APEC to enable member economies to participate competitively in e-commerce and to increase community prosperity from electronic trade.

Every economy, regardless of its level of development, presents a *readiness profile* on the global stage, composed of its national policies, level of technology integration, and regulatory practices. The Initiative provides a process whereby each economy can assess its own state of readiness for e-commerce and engage with the business community to set strategies to improve positioning for the digital economy. The Guide points to prescriptions for the changes that are necessary to improve the business environment.

The Readiness Initiative moved from proposal to execution in only a little over six months. In September 1999 in Auckland, APEC Ministers encouraged use of the Guide following support from PECC, PBEC, ABAC and the CEO Summit in Auckland. An early draft of the APEC Guide was used for a readiness assessment of the six major ASEAN economies on behalf of the ASEAN Heads of State. The results were the catalyst for the "e-ASEAN" initiative. E-ASEAN is also aimed at improving e-commerce readiness.

## The APEC E-Commerce Readiness Assessment Guide

The Guide builds on six indicators: Infrastructure and Technology; Access to Services; Current Level and Type of Use of the Internet; Promotion and Facilitation Activities; Skills and Human Resources; and Positioning for the Digital Economy.

APEC economies are applying the Guide as a voluntary, self-assessment exercise. It involves data collection, an evaluation and validation process, and then a strategic planning and decision-making exercise specific to the local context. The exercise is conducted as a public-private partnership, involving government, business and other stakeholders.

At the conclusion of the process government, business and other community stakeholders have a recommended set of actions for implementation to create the necessary changes that are relevant for the local business environment.

Publication of the results of the assessment, and action on policy initiatives, are decisions entirely in the hands of each government; they will make choices to encourage electronic commerce and wisely too consider the consequences of missing opportunities to overcome obstacles that enable full participation. Collectively, APEC can identify what conditions and action agendas will create the optimal conditions for electronic trade to flourish within a global context.

David N. Barnes, Vice President of Government Programs leads business participation, and can be contacted at barnes@jp.ibm.com

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APEC

# READINESS INITIATIVE

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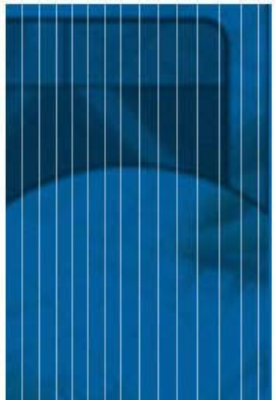

**A Partnership of the Business Community**
**With APEC Economies**

# E-COMMERCE READINESS ASSESSMENT GUIDE

www.abaconline.org

Version 5.0

www.ecommerce.gov/apec/

# APEC e-Commerce
# Readiness Assessment Guide

In their "Blueprint for Action" for electronic commerce, APEC ministers recognized the "enormous potential of electronic commerce to expand business opportunities, reduce costs, increase efficiency, improve the quality of life, and facilitate the greater participation of small business in commerce."

At the same time, the Blueprint points to the different stages of development of member economies and their diverse regulatory, social, economic and cultural frameworks. These differences mean that all economies will encounter different challenges in the development of e-commerce. Each government will need to tailor its policies to most effectively address the specific needs of its economy, while remaining focussed on the common objective.

The APEC e-Commerce Readiness Assessment Guide has been specifically developed to assist APEC economies achieve this aim, i.e. to help governments develop their own focussed policies, adapted to their specific environment, for the healthy development of e-commerce. The Guide is the result of an iterative consultation process that was initiated by a business coalition, and reflects the contributions of members of the private sector, government and other parties with a stake in the development of electronic commerce.

Readiness is the degree to which an economy or community is prepared to participate in the digital economy. Every economy, regardless of its level of development, presents a *readiness profile* on the global stage, composed of its national policies, level of technology integration, and regulatory practices. Readiness is assessed by determining the relative standing of the economy in the areas that are most critical for e-commerce participation. Six broad indicators of readiness for e-commerce are developed into a series of questions that provide direction as to desirable policies that will promote e-commerce and remove barriers to electronic trade.

The Guide permits APEC economies to identify impediments within their borders to the deployment of e-commerce. The assessment results can be used to develop the most suitable strategies to overcome these impediments. The results are not intended to be scored, rather to provide a starting point in a strategic planning process.

Only when considered together, in the context of a strategic planning dialogue, do the six indicators provide a good picture of an economy's readiness. The application of the Guide, and the setting of strategies, should be based on a partnership involving government and other stakeholders in each economy, including the business community and academia. The dialogue conducted in these sessions will provide the most substantial benefits to the development of the economy.

The Guide provides a general framework that any economy or community can apply. Its purpose is not comparison between economies, but for analysis within them. Publication of the results of the assessment, and any action on consequential policy initiatives, are seen as decisions entirely in the hands of each government, in consultation with relevant interests in their communities.

APEC economies should take the opportunity to voluntarily use this guide to make a self-assessment as soon as practicable. The e-commerce world is moving at "Internet speed", and the longer the delay in full participation in electronic trade, the greater the loss to the community.

## 1. Basic Infrastructure and Technology

*Access to Basic Infrastructure*

Electronic commerce has grown from people being connected. Proper functioning and affordable communications networks are therefore an essential condition for the development of e-commerce. Only users who are able to access these networks, through proprietary or shared access devices or terminals/kiosks, are able to participate in electronic commerce, and the larger the number of users with network access, the greater the potential benefits of electronic commerce. Communications networks can comprise fixed line telecommunication networks, wireless networks and cable. While wired networks have been the mainstay of the Internet, a small but fast growing percentage of access is also provided by wireless technology, through traditional cellular, radio band and satellite networks.

The measures below are intended to give an indication of the availability of basic infrastructure in your area.

1.1 What is the teledensity (number of telephone lines per 100 people) in your economy?

| | | | | |
|---|---|---|---|---|
| 0-5 | 6-10 | 11-20 | 21-40 | >40 |

1.2 What percent of the area of your economy has access to digital wireless or other system such as Direct PC?

| | | | | |
|---|---|---|---|---|
| 0 | 1-25% | 26-50% | 51-75% | 76-100% |

1.3 What percentage of the population in your economy has digital wireless or Direct PC Internet access?

| | | | | |
|---|---|---|---|---|
| 0 | 1-5% | 6-20% | 21-50% | 51-100% |

1.4 What percent of your economy has access to cable?

| | | | | |
|---|---|---|---|---|
| 0 | 1-24% | 26-50% | 51-75% | 76-100% |

1.5 What percentage of the population currently has access to the Internet via the cable network?

| | | | | |
|---|---|---|---|---|
| 0 | 1-5% | 6-20% | 21-50% | 51-100% |

1.6 Has your economy already started to license radio spectrum for voice, data and video network access as an alternative to the wireline "local loop" or "last mile"?

| | |
|---|---|
| No | Yes |

*Speed and functionality of the infrastructure*

Electronic commerce has greater bandwidth requirements than traditional telephony, and limitations on bandwidth availability will restrict the maximum number of users able to benefit from electronic commerce. With time, the growth of the number of Internet users and the development of more mature forms of electronic commerce will further increase the demand for greater bandwidth.

The following questions will give an indication of the extent to which your economy is facing or risks facing a capacity bottleneck.

1.7 What is the highest connection speed supported by your infrastructure available to your consumer users?

| | | | | |
|---|---|---|---|---|
| *56Kbps | 57-384 kbps | 385kbps-1.5Mbps | 1.6-45Mbps | >45Mbps |

1.8 What is the average connection speed available to your consumer users?

| | | | | |
|---|---|---|---|---|
| *56Kbps | 57-384 kbps | 385kbps-1.5Mbps | 1.6-45Mbps | >45Mbps |

1.9 What is the highest connection speed supported by your infrastructure available to business users?

| | | | | |
|---|---|---|---|---|
| *56Kbps | 56-384 kbps | 385kbps-1.5Mbps | 1.6-45Mbps | >45Mbps |

1.10 What is the average connection speed available to your business users?

| | | | | |
|---|---|---|---|---|
| *56Kbps | 57-384 kbps | 385kbps-1.5Mbps | 1.6-45Mbps | >45Mbps |

1.11 What is the highest connection speed available for wireless Internet access?

| | | | | |
|---|---|---|---|---|
| *56Kbps | 57-384 kbps | 385kbps-1.5Mbps | 1.6-45Mbps | >45Mbps |

1.12 Which users have dedicated or other high-speed (>1.5Mbps) digital access to the Internet?

| | | |
|---|---|---|
| Limited to certain categories of users (eg military, research institutions or major international businesses) | Available to a broad array of large users. | Widely available |

1.13 How many ISDN or DSL subscribers are there per 1000 mainlines?

| | | | | |
|---|---|---|---|---|
| 0 | 1-10 | 11-50 | 51-100 | >100 |

1.14 Of the total number of residential lines, what percent represents additional (non-primary) lines?

| | | | | |
|---|---|---|---|---|
| 0-5% | 6-10% | 11-15% | 16-20% | >20% |

1.15 Are cable network upgrades underway to permit the interactive applications necessary for electronic commerce?

| | | |
|---|---|---|
| No | Some | Yes |

*Price*

For electronic commerce to truly take off, infrastructure charges will need to be affordable for both individual and business users. Traditional voice telephony charging practices may inhibit the growth of electronic commerce, since Internet users are typically connected for much longer periods of time compared to voice communications services. Competitive pricing of telecommunications services has spurred the development and deployment of Internet and e-commerce technology. The following questions will give an indication of whether your economy enjoys competitive infrastructure prices.

1.16 What is the pricing structure charged to connect to the Internet on a dial-up basis:

a. For dial-up telecommunications services purchased by consumer/residential customers?

| | |
|---|---|
| Minutes of Use | Flat-rate |

b. For dial-up telecommunications services purchased by business customers?

| | |
|---|---|
| Minutes of Use | Flat-rate |

c. For charges levied by Internet Service Providers?

| | | |
|---|---|---|
| Minutes of use | Quantity of data downloaded | Flat-rate |

1.17 What is the price level and structure charged to connecting to the Internet via leased line?

a. What is the standard list or retail price for a 2 km 2Mbps leased line?

| | | |
|---|---|---|
| >US$1000 | US$500-1000 | <US$500 |

b. What is the predominant pricing structure charged by Internet Service Providers to connect via leased line connections?

| | |
|---|---|
| Quantity of data transmitted | Flat-rate |

*Reliability*

Electronic commerce requires infrastructure services and connections to be reliable. The following questions will give an indication of the current reliability of the infrastructure network in your economy.

1.18 How many dial-up attempts/connections fail because they are busy or interrupted?

| | | | | |
|---|---|---|---|---|
| >6% | 5-6% | 3-4% | 1-2% | <1% |

1.19 How often are local websites and/or addresses inaccessible?

| | | |
|---|---|---|
| Regularly | Sometimes | Rarely |

1.20 How high is the rate of packet loss?

| | | | | |
|---|---|---|---|---|
| >20% | 16-20% | 11-15% | 5-10% | <5% |

*Availability of terminal equipment*

The rate of growth of the demand for electronic commerce will depend on the availability and diffusion of the appropriate terminals to access the Internet and electronic commerce applications. Personal computers (PCs) are currently still the main terminal used to access the Internet, but non-PC Internet devices, including mobile/cell phones, are expected to rapidly grow in importance.

The following questions will give a perspective of whether the lack of availability of terminal equipment is an impediment to the growth of e-commerce in your economy.

1.21 What proportion of the population has access to PCs - through the home or from school or work?

| | | | | |
|---|---|---|---|---|
| <5% | 5-10% | 11-20% | 21-30% | >30% |

1.22 What percent of the population has a PC at home?

| | | | | |
|---|---|---|---|---|
| <5% | 5-10% | 11-20% | 21-30% | >30% |

1.23 TVs as percent of the population?

| | | | | |
|---|---|---|---|---|
| <30% | 30-40% | 41-50% | 51-60% | >60% |

1.24 Mobile/cell phones as percent of the population?

| | | | | |
|---|---|---|---|---|
| <5% | 5-10% | 11-20% | 21-30% | >30% |

*Infrastructure Market Conditions*

Higher levels of competition in the markets for communications infrastructure provision and for terminal equipment has a positive impact on both the price and quality of these products and services. Affordable access to high quality infrastructure and terminal equipment in turn has a catalytic effect on the uptake of electronic commerce.

The questions below are intended to give an indication of whether the market conditions for infrastructure services and terminal equipment are likely to have a favorable effect on the uptake of electronic commerce

1.25 How would the market for basic telecommunications infrastructure be best characterized?

| | | | | |
|---|---|---|---|---|
| Monopoly | Duopoly | Oligopoly | Multiple licensed companies | Open and effective competition |

1.26 How is the market for basic telecommunications infrastructure regulated?

| | | |
|---|---|---|
| There is no regulator for basic telecommunications services; or<br>Strong links exist between the regulator and the operator.<br>There is no truly independent regulatory body for basic telecommunications services. | There is a clear separation between the telecommunications operator and regulator. However, the regulator has limited real authority to prevent the abuse of market power. | There is a truly independent regulator for basic telecommunications services. There is a clear separation between the telecommunications operator and regulator. The regulator has the authority to enforce pro-competitive principles regarding interconnection, and unbundling of network infrastructure, and other regulatory safeguards to prevent abuse of market power. |

1.27 To which extent does the government adopt international principles that facilitate the development of global services, and ensure a level playing field for all providers?

| | | | |
|---|---|---|---|
| Market restricted to domestic operators. | The economy made market-opening commitments under the WTO Basic Telecom Agreement (or equivalent), but maintained substantial exceptions regarding the scope of services or the timeframe.<br>Only limited adoption of the regulatory principles. | Made market-opening commitment under WTO Basic Telecom Agreement, but with certain limited exceptions in scope of services or timing.<br>Regulatory principles fully adopted. | Made full and immediate market-opening commitment under WTO Basic Telecom Agreement.<br>Complete adoption of regulatory principles. |

1.28 Has your economy acceded to the WTO Information Technology Agreement to enable optimal market conditions and prices for terminal equipment?

| | | | | |
|---|---|---|---|---|
| Not a WTO member, and no ITA-equivalent commitments | Member of WTO but not an ITA signatory | Implementing ITA with delays | Implementing ITA without delays | Fully implemented ITA |

1.29 Does your economy allow foreign providers to participate in the market of wireless communication services?

| | | | |
|---|---|---|---|
| Foreign vendors excluded | Individual licensing requirements with discrimination against foreign vendors. | Class licensing requirements with discrimination against foreign vendors | No discrimination between local and foreign providers. |

1.30 Is licensed spectrum used for Internet access in your economy?

| | |
|---|---|
| No | Yes |

1.31 How many spectrum bands are being used for Internet access?

| | | | |
|---|---|---|---|
| None | One | Few | Many |

1.32 Is your economy open to foreign investment in wireless telecommunications?

| | | |
|---|---|---|
| No foreign investment allowed in wireless services | Foreign investment allowed, but discriminatory treatment of foreign investors | No discrimination against foreign investment in wireless services. |

1.33 How many licensees are there in your economy in the

a. Cellular network?

| | | | |
|---|---|---|---|
| None | One | Few | Many |

b. PCS network*?*

| | | | |
|---|---|---|---|
| None | One | Few | Many |

c. Packet data network?

| | | | |
|---|---|---|---|
| None | One | Few | Many |

*Interconnection and interoperability*

Many of the benefits of electronic commerce stem from its global nature. To maximize its potential, networks need to be fully interoperable, and interconnection needs to be guaranteed.

1.34 Standards:

| | | | |
|---|---|---|---|
| Strict regulation of types of services allowed, quality levels, and security level. Application of regulation not transparent, and rules do not necessarily guarantee international interoperability. | Great number of government-imposed mandatory closed standards. | Government imposed, mainly open standards with little industry participation in their development. | Open standards limited to those necessary to assure network integrity, protect health and safety, and protect the environment. Standards voluntary and industry-led. |

1.35 To which extent is the interoperability of networks enabling user choice?

| | | | | |
|---|---|---|---|---|
| User forced to access ISP through monopoly carrier. | Number of infrastructure operators with functional or geographically determined roles. | User able to access ISP through a choice of different fixed line carriers | Users able to choose between variety of fixed line and mobile infrastructure providers. | Users able to choose between fixed line, cable TV and mobile infrastructure to access the ISP. |

## 2. Access to Necessary Services

Beyond the availability of affordable, high-quality basic communications services, the adoption of electronic commerce will also depend on the capacity, availability and pricing of value-added services which provide applications such as access to the basic infrastructure, and content hosting. The more affordable the access to these services, the greater the penetration and more widespread the benefit. These services are typically provided by Internet Service Providers (ISPs).

2.1 What is the capacity of access services available to most users in your economy?

| | | | | |
|---|---|---|---|---|
| </=56Kbps, not widely available | </= 56Kbps, widely available | 57-128Kbps | 129Kbps-1Mbps | >1 Mbps |

2.2 What is the average capacity of access for most ISPs?

| | | | |
|---|---|---|---|
| Dedicated 56Kbps leased lines | ISDN (64kbps/128kbps) | Dedicated/ Burstable T1 (1.5Mbps) | T3 Octet Stream (46Mbps) |

2.3 What types of services are available to large business users to access the Internet?

| | | | | |
|---|---|---|---|---|
| Need to build own network to connect to backbone outside region | Need to build own network to connect to backbone within region | Leased lines or dedicated access channels <1.5 Mbps available for some users | Leased lines or dedicated access channels <1.5 Mbps available for most users | Most users can obtain symmetric bandwidth services >1.5 Mbps |

2.4 Is non-telephone or non-wireline access available to business users to enable Internet connection?

| | |
|---|---|
| NO | YES |

2.5 How would you describe the market for Internet Service Providers (ISPs) in your economy?

| | | | |
|---|---|---|---|
| Few providers providing basic access service | Several providers offering individual and business access services | Large number of providers offering access, content and other services. Range of prices and speeds available. | Multitude of providers of which many cater to specialized requirements |

2.6 How restricted is the market for ISPs in your economy?

a. From the ISP perspective:

| | | | | |
|---|---|---|---|---|
| ISPs subject to individual license requirements | ISPs subject to class license requirements | ISP market competitive, but limitations in terms of types of services allowed | Competitive ISP market, interim rules regarding inter-connectivity | ISPs subject to normal competition rules |

b. From the customer perspective

| | | | |
|---|---|---|---|
| Customer not free to choose ISP. | Customer free to choose ISP, but regulated service/pricing package. | Customer free to choose ISP and pricing policy, but no choice between alternative access networks. | Customers enjoy full freedom to choose ISP, access network and types of service. |

2.7 To what extent do ISPs enjoy equal access to network facilities, at the same rates, terms and conditions as those utilized by telecommunication companies themselves, for the provision of their own competing ISP services?

| | | | |
|---|---|---|---|
| Much higher rates and very strict terms and conditions | Higher rates and stricter terms and conditions | Similar terms and conditions | Same rates and terms and conditions |

2.8 Is access provided to elements of the system in an unbundled fashion (i.e. without being tied to purchase of other services from the network provider)?

| | |
|---|---|
| NO | YES |

2.9 Is local content widely available?

| | | | |
|---|---|---|---|
| No local content | Government provides virtually the only local content/local language content available. | Market for local and local language content developing rapidly. | Local content industry booming. Both private and public sectors have an important presence on the Net. |

Traditional IT support and operations services are necessary to build, maintain and enhance the infrastructure, networks and systems on which the e-commerce transactions of individual businesses and other organizations depend.

2.10 What is the availability for end user organizations of skilled IT support in the form of service provider businesses and contractors?

| | | | |
|---|---|---|---|
| Little commercial availability of IT support services. Firms are dependent on own resources. | Only a limited range of services are available in the market, and they may be expensive. | Services becoming more widespread and affordable but lack sophistication in application of latest technologies. | A wide and sophisticated range of services is available at world competitive prices. |

*Non-IT Services and Distribution Channels*

The development of the IT infrastructure does not compensate a lack of development of the "traditional" business services and distribution systems. On the contrary, with electronic commerce, the buying and selling of physical goods over long distances will be increasingly commonplace. This will however only be possible if business services are adequate and if the physical distribution system is reliable, fast and affordable.

The Internet has raised customer expectations by allowing goods and services to be offered real-time on a global basis. These expectations include a problem-free experience, that will provide a complete solution from selection, order entry, confirmation, payment and delivery. As in the physical world, success in electronic commerce is dependent on meeting and exceeding customer expectations.

The following question is designed to determine how ready the physical infrastructure in your economy is for the development of electronic commerce.

2.11 Which description most adequately reflects your distribution environment?

| | | | |
|---|---|---|---|
| Basic postal services available but not reliable<br><br>Road infrastructure does not reach remote areas.<br><br>Door-to-door air express and airfreight services very expensive and infrequent. | Postal services well developed.<br><br>Main cities linked by reliable road infrastructure<br><br>Door-to-door air express and airfreight services regular though still infrequent | Private delivery services available as alternative to traditional postal service.<br><br>Roads to most locations in good condition.<br><br>Regular and continuous door-to-door air express and airfreight services. | Delivery services widely available.<br><br>Airfreight well developed.<br><br>Cities and towns well connected by highways and/or secondary roads.<br><br>Sophisticated, specialized, distribution services. |

When electronic commerce is applied to transactions involving physical goods, an important business objective is to deliver the product as quickly and dependably as possible. Rapid customs clearance is critical in the electronic commerce value chain. Immediate release based on pre-clearance through paperless document exchange (e.g. EDI) is the ideal environment. Without rapid and efficient clearance, some of the benefits of electronic commerce are lost to the purchaser.

2.12 Have the International Express Carriers Conference Guidelines on handling procedures been adopted and implemented? (The IECC classify shipments into four categories with procedures for each: (1) documents; (2) low value non-dutiable consignments; (3) low value dutiable consignments; (4) high value consignments.

| | |
|---|---|
| NO | YES |

2.13 Is there a paperless customs environment, in which all documents are transmitted in the form of e-certified images?

| | |
|---|---|
| NO | YES |

2.14 To what extent are shipments pre-cleared through EDI, so that shipments are either released or their status is notified at least two hours before arrival?

| | | | |
|---|---|---|---|
| 0 | 25% | 50% | 100% |

2.15 Has a deminimis level been established?

| | | |
|---|---|---|
| <US$100 | US$100-500 | >US$1000 |

2.16 Does customs operate 24 hours a day, seven days a week?

| | |
|---|---|
| NO | YES |

2.17 Does e-commerce result in a reduction of physical inspection by Customs?

| | |
|---|---|
| NO | YES |

2.18 Does export require physical inspection or declaration?

| | |
|---|---|
| NO | YES |

2.19 If export requires a declaration, will EDI suffice?

| | |
|---|---|
| NO | YES |

E-commerce requires specialized support in financial services and an advanced payments system. Both consumer and business e-commerce transactions are dependent on this support. Consumer transactions are at present dominated by the use of credit cards as the most convenient payment method. Many new electronic payments systems and technologies are under development and in trial. Governments should look to establish a regulatory environment that facilitates access by business and consumers to a competitive market in these services.

2.20 Are financial institutions allowed to issue credit cards to consumers?

| NO | YES |
|---|---|

2.21 Are there financial limits imposed by government on credit card usage?

| YES | NO |
|---|---|

2.22 Do foreign exchange restrictions prevent or restrict consumer purchases from international web sites?

| YES | NO |
|---|---|

2.23 Is the technology infrastructure of commercial financial institutions capable of supporting online authorization and settlement of e-commerce transactions?

| NO | YES |
|---|---|

2.24 Do government regulations restrict electronic settlement of e-commerce transactions or the use of electronic payment technologies?

| YES | NO |
|---|---|

## 3. Current level and type of use of the Internet

3.1 Number of Internet hosts under the domain of your country as a percentage of the population?

| | | | | |
|---|---|---|---|---|
| 0 | 0-0.5% | 0.6-1.5% | 1.6-3% | >3% |

3.2 Number of Internet hosts as percentage of the population (including TLDs weighted by domain registrations)?

| | | | | |
|---|---|---|---|---|
| 0 | 0-1.5% | 1.6-3% | 4-6% | >6% |

3.3 What is the estimated number of people who access the Internet per account?

| | | | | |
|---|---|---|---|---|
| >7 | 6-7 | 4-5 | 2-3 | 1 |

3.4 What percent of business accesses directly?

| | | | | |
|---|---|---|---|---|
| <10% | 10-25% | 26-50% | 51-75% | >75% |

3.5 What percentage of users accesses the net from home (vs. work)?

| | | | | |
|---|---|---|---|---|
| <10% | 10-25% | 26-50% | 51-75% | >75% |

3.6 How many Internet sites have secure socket layer (SSL) with third party certification (indicator of electronic commerce)? Secure web servers per 100000 inhabitants:

| | | | | |
|---|---|---|---|---|
| 0 | 1-2 | 3-4 | 5-6 | >6 |

3.7 Are there any Secure Electronic Transaction (SET) and/or Secure electronic Commerce Environment (SECE) services offered or undergoing tests?

| | |
|---|---|
| NO | YES |

3.8 The type of use of the Internet becomes more sophisticated as consumers grow more confident in electronic commerce. For which purpose is the Internet used by individual users in your economy?

| e-mail | random surfing | Catalogue/ look up info on products | low value transactions (e.g. book) | High value transactions |
|---|---|---|---|---|

3.9 At the first stage of Internet use, the demography of the group of users tends to be quite homogeneous, consisting mainly of males between 10 and 35 years old. As Internet use becomes more widespread, the proportion of this group of users tends to decline. What proportion of the people who access the web in your economy are NOT men between 10 and 35?

| <10% | 10-25% | 26-50% | 51-75% | >75% |
|---|---|---|---|---|

By investing in Internet technologies and e-commerce for its own requirements, Government can show the way and encourage adoption by the business sector and the rest of the community. In this way it can improve the competitive position of the economy, improve efficiency of its own operations, become more accessible and transparent, and improve the effectiveness of its procurements.

3.10 How does the government use Internet technologies?

| Basic internal use for communication and information research. | +On-line Publishing and information provision. | +Provision of services to the public and e-procurement. | +Transforming government or e-Government |
|---|---|---|---|

3.11 What percent of businesses uses the Internet in your economy?

| <10% | 10-25% | 26-50% | 51-75% | >75% |
|---|---|---|---|---|

3.12 For which purposes does the business community in your economy use the Internet?

| E-mail/basic communication | +Marketing communication customer support | + basic tool for sales function, work organization and form processing | + Electronic commerce | + Total Business transformation |
|---|---|---|---|---|

## 4. Promotion and Facilitation Activities

As the implications of electronic commerce are not always intuitive, and the subject creates perceptions of technical complexity, there is an important role for promotion and facilitation activities in achieving successful adoption across a community. A key means of facilitation is through the promotion and use of technical standards. The means and processes by which these standards are implemented and adopted have a significant effect on facilitating electronic commerce.

4.1 Assessment of the level of e-commerce awareness/network literacy: What is the proportion of people who access the web who are not students, academics or active in the Information Technology (IT)/Communications area:

| | | | | |
|---|---|---|---|---|
| <10% | 10-25% | 26-50% | 51-75% | >75% |

4.2 Is your economy taking initiatives to raise awareness and disseminate best e-commerce practice among Small and Medium Enterprises (SMEs)?

| | | | |
|---|---|---|---|
| No initiatives currently in place | Small, isolated initiatives | Several larger projects | The government has adopted and is implementing an ambitious integrated program |

4.3 Are any studies or agencies gauging the effects of e-commerce on employment - both job creation and dislocation?

| | |
|---|---|
| NO | YES |

4.4 Any initiatives underway or planned to address retraining or social implications of the Internet on the workplace (this includes the positive effects of telecommuting, more flexibility and new entrepreneurship as well as issues of job dislocation)?

| | | | |
|---|---|---|---|
| No initiatives currently in place | Small, isolated initiatives | Several larger projects | The government has adopted and is implementing an ambitious integrated program |

4.5 What is your economy's policy with regard to standards?

| | | | |
|---|---|---|---|
| Government develops and mandates standards. | Support the development of mandatory standards in concert with the business community. | Encourage industry led standards development.<br><br>Accept de facto standards.<br><br>No safeguard against abuse of proprietary de facto standards. | Encourage industry to cooperate internationally for the development and adoption of global, open standards<br><br>Competition policy safeguards the abuse of proprietary standards. |

4.6 Is there a targeted public budget (Universal Service plan) that helps the needy pay for local phone calls, without creating market distortions?

| | | |
|---|---|---|
| Universal access issue addressed through monopoly | Universal access addressed by intervening in the market | Public budget administered in a competitively neutral manner |

4.7 Does your economy support the development of adaptive technologies (e.g.. touch screens, special keyboards, speech technologies, etc.) for electronic commerce, to alleviate the isolation and increase the independence of people with physical or cognitive disabilities?

| | | | |
|---|---|---|---|
| No projects in place | Small, isolated initiatives | Several larger projects | Yes, an ambitious integrated program |

4.8 What is the extent of independent sources of advice to users and consumers?

| | | | |
|---|---|---|---|
| No independent sources of advice for users and consumers. | Information is sporadic, incomplete and subject to bias. | Government is working with business to encourage the setup of independent sources of advice.<br><br>Some independent organizations are emerging. | Independent sources of advice exist on-line and off-line which enable evaluation and comparison.<br><br>Independent user organizations are active. |

4.9 What is the current year to year growth rate in number of Internet users in your economy?

| | | | | |
|---|---|---|---|---|
| <5% | 5-20% | 21-35% | 36-50 | >50% |

## 5. Skills and Human Resources

A range of skills is required to develop and to implement electronic commerce technologies. Users also require basic information technology skills and can benefit from understanding IT concepts in taking advantage of electronic commerce. Developing the necessary skills in society through schools, higher education, on-the-job training and adult education will be essential for the citizens of an economy to be able to participate in, and benefit from, electronic commerce.

5.1 What proportion of schools have access to the Internet?

| | | | | |
|---|---|---|---|---|
| <30% | 30-50% | 51-70% | 71-90% | >90% |

5.2 Schools and other educational institutions have a special role to play in providing students (and parents) who do not necessarily have access to a computer and/or the communications network at home with access to the networked world. Is your economy taking initiatives to increase access of schools to the Internet?

| | | | |
|---|---|---|---|
| No project foreseen | Small, isolated initiatives | Several larger projects | Yes, an ambitious integrated program |

5.3 Is your economy taking initiatives to integrate the Internet and e-commerce in its education and training policy?

| | | | |
|---|---|---|---|
| No specific project in this field | Small, isolated initiatives | Several larger projects | Yes, an ambitious integrated program |

5.4 Do schools and educational institutions have access to the most recent technology and technological applications?

| | | | | |
|---|---|---|---|---|
| No | Only universities with IT-related curricula | Most universities | Most universities and higher education institutions | Yes, most schools and educational institutions |

5.5 Is the education system being reviewed to take advantage of the most recent technology and technological applications?

| | | | |
|---|---|---|---|
| No | Only for specific distance learning needs | To facilitate learning by students and give them greater access to the world's knowledge base | Yes, both to improve student engagement and enhance teachers' skills |

5.6 Is there close cooperation in your country between educational institutions and businesses to develop up-to-date curricula?

| | | | |
|---|---|---|---|
| No current projects for cooperation in this area. | Only cooperation on an ad-hoc basis for specific programs | For higher education only | Yes, as an integral part of the education policy |

5.7 What percent of schools have some computer/IT education as part of the curricula?

| | | | | |
|---|---|---|---|---|
| 0 | 1-25% | 26-50% | 51-75% | >75% |

5.8 Electronic commerce has a major impact on human resources by facilitating the internationalization of businesses and increasing the mobility of workers. Does your country have regulatory barriers that restrict the free movement of workers, by setting country-specific requirements and avoiding mutual recognition?

| | | | |
|---|---|---|---|
| Yes, important general restrictions exist for the recognition of foreign qualifications and certificates. | General restrictions minor, but specific regulations restricting access in most sectors | Only restrictions remaining in very specific sectors | No restrictions; or mutual recognition agreements for the recognition of foreign qualifications. |

5.9 Electronic commerce also facilitates the distance provision of services. This can help stem rural exodus and increase the integration of distant areas, and allows a more efficient use of global resources and expertise. Does your country have regulatory barriers to the free provision of services across borders?

| | | | |
|---|---|---|---|
| Yes, establishment is required to provide services | General restrictions minor, but specific regulations for most sectors | Only restrictions in very specific sectors | No restrictions or mutual recognition agreements for the provision of services by providers located abroad. |

## 6. Positioning for the Digital Economy

Government policy plays a pivotal role in determining the vitality of the electronic commerce environment. It plays an essential facilitating role, which in the near term must be geared to eliminating obstacles and increasing the predictability/certainty of outcomes. The implications apply not only to specific policy issues, but also to the models adopted for the implementation of policy. Government decisions can act as a stimulant, or as a significant inhibitor. Traditional heavy-handed regulation is too rigid to support the speed of technology and market developments that characterize electronic commerce. Industry self-regulation can provide a flexible and effective alternative to government regulation.

6.1 Is your economy promoting industry self-regulation to address e-commerce policy issues?

| | | | | |
|---|---|---|---|---|
| Self-regulation is not supported; the government leads. | Industry not encouraged to participate in policy-making. | Industry is consulted before the government acts. | Self-regulation only seen as secondary part of Internet policy. | Industry self-regulatory solutions considered as primary part of Internet policy. |

*Taxation:*

The issues of taxation in the on-line world are many and complex. Technological solutions will help governments address some of these. However, governments must also ensure that electronic commerce is not put at a disadvantage compared to traditional commerce by additional taxation. Moreover, electronic commerce reinforces the need to address taxation issues on an international level, to avoid double taxation and inhibiting variations in tax regulations. The global nature of electronic commerce needs to be respected by not introducing any tariffs on cross-border electronic commerce. By supporting the WTO Standstill Agreement on Tariffs on international transactions, governments are able to give a clear signal to business that their economies are encouraging the development of electronic commerce.

6.2 General Taxation Principles

| | | | |
|---|---|---|---|
| Government considering the implementation of a tax on electronic commerce.<br><br>Taxation principles inconsistent with internationally agreed principles. | Government has not yet developed a clear policy regarding the fiscal treatment of e-commerce.<br><br>Taxation principles not fully consistent with internationally agreed principles.<br><br>Taxation policy not transparent, difficult to apply and unpredictable. | Government has not yet developed a clear policy regarding the fiscal treatment of e-commerce.<br><br>Taxation principles are consistent with internationally agreed principles.<br><br>Taxation policy transparent, easy to apply and predictable. | Taxation system promotes tax neutrality between on and off-line transactions and taxation policy is consistent with internationally agreed principles |

6.3 Tariffs on electronic commerce

| | | | |
|---|---|---|---|
| The government is openly opposing the extension of the WTO Standstill on electronic commerce tariffs. | The government has not yet taken a position re. the extension of the WTO Standstill on electronic commerce tariffs | The government openly supports the short-term extension of the WTO Standstill on electronic commerce tariffs | The government openly supports the making permanent of the WTO Standstill agreement on electronic commerce tariffs |

6.4 Legal Framework:

Legal insecurity can be an important inhibitor to the development of electronic commerce. The great patchwork of different legal environments across the globe is in itself a major source of insecurity, which will need to be overcome by the development of internationally-agreed principles.

| | | | |
|---|---|---|---|
| The government is taking quick regulatory action in isolation, with the aim to control to the maximum extent all the Internet activities that can be accessed from within its geography. It does not aim to coordinate issues of jurisdiction and applicable law with other countries. | The government is adopting regulatory measures in isolation, which risk causing international problems regarding conflict of laws and jurisdiction. | The government is participating in work in international fora such as WIPO, UNCITRAL and OECD to develop internationally coherent and legal principles for electronic commerce, and takes these into account when developing its regulations. Where an international solution has not yet been found, it adopts measures that can still lead to conflict of laws and jurisdiction. | The government does not rush into the adoption of new regulation. It is participating in and supporting work in international fora such as WIPO, UNCITRAL and OECD to develop internationally coherent and legal principles for electronic commerce. It has adopted the principle of non-discrimination between on-and off-line transactions, and takes international principles into account when developing its e-commerce policy |

6.5 Electronic authentication:

An appropriate legal framework for electronic commerce also requires the legal recognition of electronic documents and signatures. However, this legal recognition should not be tied to inflexible government regulation or specific technological requirements.

| | | | |
|---|---|---|---|
| The government has adopted rules regarding the legal recognition of electronic signatures that are not technology neutral, linking legal recognition to the use of a specific technology (e.g. PKI). Certification Authorities are subject to a licensing regime if their certificates are to be legally recognized. Recognition of signatures from abroad is not implied. | The government has adopted regulation to recognize electronic signatures and ensure non-discrimination, but gives special treatment to those that follow a specific technology (e.g. PKI). | The government implicitly accepts electronic documents and signatures. No rules or preferences related to any particular technology. Still requirements in legislation requiring hand-written signatures or other form requirements for specific transactions. | The government has adapted its legislation to explicitly ensure non-discrimination between electronic and handwritten documents and signatures. The legislation is technology neutral. Only specific requirements for specific types of transactions. |

6.6 Security and Encryption:

Users will not engage in electronic commerce if they have doubts about the security of the information they transfer on line. For different types of transactions and activities, users will want to be able to choose between different types of products/services offering different levels of security.

| | | | |
|---|---|---|---|
| Government controls the use and trade of encryption products. Key escrow may be required or plans to implement key escrow. | Government testing and certification requirements for encryption which represent an important de-facto restriction on use, production and/or import of encryption | Government allows users to choose the most appropriate solution for encryption (incl. strong encryption). Only limited trade restrictions. | Government allows users to choose the most appropriate solution for encryption (incl. strong encryption), no export or import restrictions |

6.7 Copyright

Effective copyright protection is important to ensure that there is adequate incentive for the creation of electronic commerce content. Therefore, it is essential that countries adopt and implement the World Intellectual Property Organization Treaties (WIPO) on copyright and related rights.

What is the status of your economy's intellectual property rights legislation and record of IP protection?

| | | | |
|---|---|---|---|
| Country has not signed WIPO Treaties on Copyright and Related Rights | Country signed but didn't ratify WIPO Treaties on Copyright and Related Rights | Country signed but not implemented WIPO Treaties on Copyright and Related Rights | Signed and implemented WIPO Treaties on Copyright and Related Rights |

6.8 Liability

ISPs can't be expected to carry the burden of being held liable for all the content carried on their services. By the same token, they should not be forced to control all the content they carry. However, ISPs should be expected to take action if they have been given valid notification of a Web site with harmful or illegal content.

What is your economy's approach to liability? Is liability relief contemplated for ISP/access providers - notice takedown solutions?

| | | |
|---|---|---|
| ISPs responsible for all Internet content carried. Extensive control requirements. | Balanced liability solutions limiting ISP responsibility but systematic control requirement. | Balanced liability solutions limiting ISP responsibility combined with an effective system of notice takedown solutions for ISPs |

6.9 Content:

Very strict content control regulations will have an adverse effect on electronic commerce. ISP self-regulation combined with user-empowering technologies will provide a balanced and flexible solution to content control.

Which situation best describes your economy's approach to content?

| | | | |
|---|---|---|---|
| Restrictive rules regarding Internet content, government screening. | ISPs responsible for Internet content carried. | Balanced liability solutions limiting ISP responsibility or systematic control requirement. | Effective system of self-regulation complemented by user-empowering technologies. |

6.10 Privacy*:*

Consumers will only embrace electronic commerce if they can expect reasonable levels of data privacy. Governments have a role in promote industry self-regulatory initiatives for privacy protection. Strict regulatory solutions that do not recognize different systems (self-regulation, contractual solutions, etc.) of privacy protection will cause barriers to electronic commerce.

Which situation best describes your country's approach to privacy?

| | | | |
|---|---|---|---|
| Businesses and consumers unaware of privacy issues; or heavy-handed approach government endangering cross-border data flows. | Strict government rules or standards for privacy protection with little involvement industry for their development and/or enforcement. | Companies well aware of privacy issue, most companies publish their privacy policy on their website - Light-handed or no involvement government | Established self-regulatory system for privacy protection, based on self-regulatory codes and/or seal programs |

6.11 Consumer Confidence*:*

Consumers across the globe are already enjoying the benefits electronic commerce brings in terms of convenience, wider choice, lower prices, and ready access to more comprehensive pre-purchasing information. Nevertheless, consumers only take the decision to buy online if they can feel confident that the desired transaction will be completed as expected. The lack of face-to-face contact between businesses and consumers in electronic commerce means that consumer trust cannot be generated in the same manner as with traditional commerce. As technical solutions to enhance trust, such as strong encryption and electronic authentication become more important, so do others which influence the less tangible -equally important- aspects of trust, such as user empowerment, quality labels, comparative reports, industry accreditation systems, etc. For example, a company's track record regarding its dealing with consumers undergoes daily scrutiny on the web - with any anomalies receiving instant and global attention. At the same time, the global and decentralized nature of electronic commerce also makes it much more difficult for governments to enforce traditional national regulatory frameworks. The importance of international principles and industry self-regulation is important in electronic commerce to ensure effective consumer confidence, while maintaining the advantages of the global nature of electronic commerce.

Which situation best describes your economy's approach to consumer protection?

| | | | |
|---|---|---|---|
| Traditional geographically determined government regulations are the only measures to protect consumers in electronic commerce transactions. | An independent agency dedicated to the oversight and redress of consumer protection complaints is established. | Industry has adopted a general code of conduct for electronic commerce transactions.<br><br>An independent agency dedicated to the oversight and redress of consumer protection complaints is established.<br><br>Industry has started to develop self-regulatory mechanisms such as accreditation systems etc. | A variety of industry initiatives (e.g. codes of conduct, accreditation systems, etc. are in place to enhance consumer confidence.<br><br>Transparency in the market is enhanced by independent agencies/companies dedicated to making and publicizing market evaluations.<br><br>Alternative dispute resolution and/or mediation mechanisms are available for resolving consumer complaints. |

## ANNEX - Acronyms and Definitions[1]

**Backbone** The top level of a hierarchical network. The main pipes along which data is transferred.

**Bandwidth** The amount of information or data that can be sent over a network connection in a given period of time. Bandwidth is usually stated in bits per second (bps), kilobits per second (kbps), or megabits per second (mps).

Voicegrade bandwidth:

**Broadband.** A frequency band divisible into several narrower bands so that different kinds of transmissions such as voice, video, and data transmission can occur at the same time.

**Certification Authority** Person who or entity which issues certificates or provides other services related to electronic signatures to the public;

**Dedicated line** A telecommunications line that is reserved for the singular purpose, for example providing a data connection between two computers.

**Dial-up** 1. A temporary connection between computers established over a telephone line.
2. To establish a temporary connection to another computer.

**Digital** A device or method that uses discrete variations in voltage, frequency, amplitude, location, etc. to encode, process, or carry binary (zero or one) signals for sound, video, computer data or other information. Digital communications technology generally permits higher speeds of transmission with a lower error rate than can be achieved with analog technology. When analog signals are received and amplified at each repeater station, any noise is also amplified. A digital signal, however, is detected and regenerated (not amplified). Unlike amplification, any noise (less than a valid signal) is eliminated by digital regeneration.

**Domain Name** The domain name identifies a Web site.

**Domain Name System (DNS)** The DNS maps Internet addresses. To function as part of the Internet, a host needs a domain name that has an associated Internet Protocol (IP) address record. The DNS is a database system that looks up host IP

[1] Adapted from Netdictionary - http://www.netdictionary.com/html; ILC Glossary of Internet Terms - http://www.matisse.net/files/glossary.htm; ITU - http://www.itu.org, WTO - http://www.wto.org and OECD - www.oecd.org.

addresses based upon domain names. For example if you ask for "www.thisismyhost.com" it will return "123.45.67.89".

**Top Level Domains (TLD)** Domain names are derived from a hierarchical system, with a host name followed by a top-level domain category. A top-level domain name can either be an ISO country code (eg .th for Thailand) or one of the generic top level domains (gTLDs).

**Generic Top Level Domains (gTLD)** Generic top-level domain categories are .com (for commercial enterprises), .org (for non-profit organizations), .net (for network services providers), .edu (for educational institutions), .mil (for the military), and .gov (for government).

**gTLDs weighted by Domain registrations:** Distribution of Internet hosts under gTLD (.com, .org, etc.) registrations according to the number of gTLD registrations from the respective countries (rather than allocating all hosts under gTLD registrations to the United States)..

**Electronic signature** Signature in digital form

**e-mail** Electronic mail, the computer-based exchange of mail.

**Host** A computer that provides data, applications and other services, and that allows users to communicate with other host computers on a network.

**Integrated Services Digital Network (ISDN)** A technology that allows for the rapid transfer of voice and data.

**Interconnection/Interconnection charge** A charge levied by network operators on service providers for interconnection with their network.

**Internet** A worldwide network of networks that all use the TCP/IP communications protocol and share a common address space. First incarnated as the ARPANET in 1969, the Internet has metamorphosed from a military internetwork to an academic research internetwork to the current commercial internetwork. It commonly supports services such as email, the World Wide Web, file transfer, and Internet Relay Chat. The Internet is experiencing tremendous growth in the number of users, hosts, and domain names.

**Internet Service Provider (ISP)** 1. A business that delivers access to the Internet, usually for a monthly fee. PSI, UUNET, and Netcom are examples of established ISPs but there are thousands of smaller ones all around the world.
2. A business that provides Internet services, such as web site hosting, or web site development.

**Interoperability** The ability of software and hardware on multiple machines from multiple vendors to communicate meaningfully

**Kilobites per second (Kbps)** See "Bandwidth"

**Leased line** A two-way link for the exclusive use of a subscriber regardless of the way it is used by the subscriber (eg. switched subscriber or non-switched, or voice or data). They can be either national or international in scope.

**Local Area Network (LAN)** A group of connected computers at a single location (usually an office or home).

**Megabites per second (Mbps)** See "Bandwidth"

**Modem** A modulator/demodulator. A device that converts analogue signals to digital and vice versa. Can be used to connect computers via the phone lines. It can also be used to connect them through cable networks etc.

**Network** A configuration of data processing devices and software connected for information interchange.

**Packet** A block of data sent across a network. When a large quantity of data is to be sent over a network, it is broken up into several packets, sent, and the reassembled at the other end. Packets often include checksum codes to detect transmission errors. The exact layout of an individual packet is determined by the protocol being used.

**Personal Computer (PC)** - A desk-top, free-standing, or portable microcomputer that usually consists of a system unit, a display, a keyboard, one or more diskette drives, internal fixed-disk storage, and an optional printer. PCs are designed primarily to give independent computing power to a single user and are inexpensively priced for purchase by individuals or small businesses.

**Public Switched Telephone Networks (PSTN)** - Most widespread type of telecommunications network. It was originally set up for voice telephony, which is reflected in its bandwidth, coding techniques and switching capacity. Digitalization of the PSTN significantly increases its capacity.

**Secure Sockets Layer protocol (SSL)** Security protocol for encrypted transmission over the Internet. The protocol allows client/server applications to communicate in a way that cannot be easily eavesdropped. Servers are always authenticated and clients are optionally authenticated. It sets up a secure end-to-end link over which http or any other application protocol can operate.

**SSL with third party certification:** Third party certification provides the additional security (authentication) to the SSL required for electronic

commerce. Self generated certificates are not considered to provide the necessary level of security. By making a survey of SSL-based sites, excluding those without third party certification makes it possible to get an indication of the number of electronic commerce sites (e.g. Netcraft Web Surveys, http://www.netcraft.com/Survey/)

**Server** A computer that provides information to client machines. For example, there are web servers that send out web pages, mail servers that deliver email, list servers that administer mailing lists, FTP servers that hold FTP sites and deliver files to users who request them, and name servers that provide information about Internet host names.

**Symmetric bandwidth services** Services where the available bandwidth for upload and download are equal.

**Telecommunications** The sending of signals representing voice, video, or data through telephone lines.

**United Nations Commission on International Trade Law (UNCITRAL)** Established by the United Nations General Assembly in 1966 to reduce or remove obstacles to international trade created by disparities in national laws. Its mandate is to work towards a progressive harmonization and unification of the law of international trade.

**Universal Access** Derivative from the Universal Service concept, which states that every individual within a country should have basic telecommunication service available at an affordable price. The precise definition of this concept varies among countries.

**World Intellectual Property Rights Organization (WIPO)** Specialized intergovernmental organization of the United Nations system of organizations. Responsible for the promotion of the protection of intellectual property throughout the world through cooperation among States, and for the administration of various multilateral treaties dealing with the legal and administrative aspects of intellectual property.
The main texts adopted by WIPO are the Trademark Law Treaty, the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty and the Agreement between the World Intellectual Property Organization and the World Trade Organization.

**World Trade Organization (WTO)** International organization dealing with the global rules of trade between nations. Its main function is to ensure that trade flows as smoothly, predictably and freely as possible.

**WTO Information Technology Agreement (ITA)** WTO Ministerial Declaration on Trade in Information Technology Products, Singapore, 13

December 1996. The Declaration provides for the elimination of customs duties and other duties and charges on information technology products

**WTO Basic Telecom Agreement** - Results of the 3-year WTO negotiations on market access for basic telecommunications services. Annexed to the Fourth Protocol of the General Agreement on Trade in Services. Includes market opening commitments and commitments on regulatory principles of 72 countries across the globe. WTO Members were able to decide individually whether or not to file a Most Favored Nation (M.F.N) exemption on measures affecting trade in basic telecommunications services.

**WTO Standstill Agreement for Tariffs** During the Geneva Ministerial Declaration on Global Electronic commerce held in May 1998, the Ministers declared that members would continue their current practice of not imposing customs duties on electronic transmissions, at least until the Third Session of the General Council in December 1999.