APEC TEL Project

EC Best Practice for SME's in the APEC Region

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Contents

Executive Summary

This report is broken into two parts. The first describes the aim of the project and then moves on to an examination of the research and reports that have been done over the last several years on the topic of electronic commerce and the barriers to its adoption. The second part looks at the experience of some small SME's in our region.

The constancy across the reports of the types of issues that are considered to be barriers to implementation is instructive. Clearly, we know and understand why more companies are not on line. Equally obvious are the reasons for going on line, such as

- Adding an additional channel to extend customer reach
- Becoming more efficient and reducing operational costs
- Improving customer service

The issues that have been highlighted in almost every report can be summarized as follows:

- **Access**: the most fundamental obstacle to electronic commerce is inability to access and use the network infrastructure (for some SMEs, cost of access is prohibitive or not justifiable; for others the issue is a lack of infrastructure quality and reliability).
- **Knowledge and skills**: most SMEs don't know enough about the online environment to understand how they can benefit and for those who do, typically they lack the necessary skills or required finances to take the first step. SMEs are also looking for viable business models.
- **Trust and confidence**: most SMEs find it hard to trust the online environment. When they don't see their government making electronic commerce a national priority and if most of their business partners are not yet online, then it makes them wonder why they should get involved.
- **Language**: for many SMEs, the dominance of English-only websites creates a barrier.
- **Security**: SMEs express considerable concern over the security of electronic transactions.
- **Legislation**: SMEs are not alone in their desire for globally consistent legislation that is conducive to electronic commerce (to address legal, liability, taxation, intellectual property, consumer protection, privacy and customs issues).
- **Financial**: SMEs need access to safe and reliable payment systems if they are to successfully conduct business online.

Many SME's consider that it is government's role to solve the problems that hold them back from implementing electronic commerce. There are, however, some small companies that have decided to find ways around the obstacles and to develop an electronic strategy. There are many ways for companies to cost-effectively begin using electronic commerce and this document identifies a number of different business models for consideration.

The examples shown in chapter 7 represent a small but representative sample of what small companies in the APEC region are doing. While market forces will ultimately drive the adoption of electronic commerce, governments should take the lead in two ways: one, become a model user in their own right; and two, make electronic commerce a national priority by working to remove all barriers.

Part 1 - Research

1 Introduction

1.1 Project definition

For the past ten years APEC and other bodies such as the OECD, ITU and WTO have been conducting survey research on the many aspects of electronic commerce. The focus of much of this research has been on the impediments to the uptake of electronic commerce by SMEs. In recent years, governments from all corners of the world have been seeking ways to encourage and facilitate the greater participation of SMEs in the online economy and global commerce.

To address the issues, but at the same time not duplicate the impressive body of existing research, AOEMA proposed a project to the TEL that one, amalgamates research findings into a single and concise list of impediments and two, identifies best practices for SMEs planning to implement electronic commerce.

Simply put, after all these years of study and surveys that ask the same questions in different ways, it seems pointless to engage in yet another survey or research project to learn what we already know. The fact is the impediments being faced by SMEs have been pretty nearly the same for the past ten years. Arguably, some of the issues cited are more perception than reality, but perception becomes reality when you are struggling with issues and have no way of resolving them.

best practices guide for SMEs implementing EC

In spite of the fact that little has changed over time and most SMEs are still hesitant to go online, there are those who have taken the important step forward. They have either found a way around the problems or have come to the conclusion that these issues no longer stand as roadblocks in the way of success. These SMEs and their stories can help inspire and even train other SMEs in how to successfully launch an online business, thus forming the basis of a “best practices guide”.

This project, then, can serve the TEL in two ways. Firstly, it provides a concise volume of research findings to give perspective and guidance to TEL members addressing the critical issues, and secondly, gives SMEs a guidebook to learn from their peers how to resolve some of the problems plaguing them.

1.2 Terminology

To ensure understanding of commonly used, but not always clearly defined, acronyms, please refer to the following list and associated website references.

1.2.1 APEC – Asia Pacific Economic Cooperation

21 APEC economies GDP over US$18 trillion and 43% of global trade

Asia-Pacific Economic Cooperation (APEC) was established in 1989 in response to the growing interdependence among Asia-Pacific economies. Begun as an informal dialogue group, APEC has since become the primary regional vehicle for promoting open trade and practical economic cooperation. Its goal is to advance Asia-Pacific economic dynamism and sense of community. Today, APEC's 21 member economies had a

combined Gross Domestic Product of over US$18 trillion in 1999 and 43.85 percent of global trade.

www.apecsec.org.sg

1.2.2 TEL – Telecommunications and Information Working Group of APEC

The APEC Telecommunications Working Group (TEL) was formed in 1990. Under its first Chair, the United States, TEL was charged to address human resource development; technology transfer and regional cooperation; opportunities for on-site visits, observerships and fellowships; and telecommunications standardization.

TEL's activities are consistent with specific goals set out by APEC economic leaders in the 1994 Bogor Declaration. Four steering groups, which propose, implement and monitor projects and activities to advance the overall goals of APEC accomplish the work of the TEL. Each steering group addresses a specific priority area: liberalization; business facilitation; development cooperation; and human resource development.

The business and private sector from many APEC member economies are actively involved in TEL activities, including all four TEL Steering Groups. Many projects are both initiated and driven solely by the private sector or in cooperation with the public sector.

APEC TEL has been a leader in addressing EC issues for SMEs

Leaders and Ministers stated at the Vancouver APEC meeting that electronic commerce was one of the most important technological breakthroughs of this decade. A joint TEL-PECC seminar on this issue was held in conjunction with the 17th TEL meeting in Brunei in March 1998. The Reference Framework for Action on Electronic Commerce adopted by Ministers in June 1998, committed the TEL to collaborating with the APEC Electronic Commerce Task Force, and to a focused program of work.

www.apectelwg.com

1.2.3 PLGSME – (ad hoc) Policy Level Group on Small and Medium Enterprises

The Small and Medium Enterprises Working Group was established as an *Ad Hoc* Policy Level Group on SMEs (PLGSME) in February 1995. Its original mandate was for two years. However, it has been extended twice: the first time in 1996, and the second in August 1998. In 2000, as part of the Management Reform process, the PLGSME was changed into the SMEWG and granted permanent status.

www.apecsec.org.sg

1.2.4 EC – Electronic Commerce

The following definition was taken from the Electronic Commerce Stock-take undertaken by the Electronic Commerce Steering Group at its inception.

Electronic commerce relates to commercial transaction of goods and services conducted between parties electronically mainly through open internet based systems i.e. the parties interact electronically rather than by

physical exchange or contact. A wide range of communication technologies and applications including e-mail, EDI, Internet, Intranet and Extranet can be used to support electronic commerce.

Electronic commerce includes commercial transactions such as electronic trading of goods and services, on line delivery of digital content, electronic fund transfers, electronic share trading, electronic bills of lading, collaborative design and engineering, on line sourcing, public procurement, direct and consumer market. The potential for the application of electronic commerce will continue to expand.

CATEGORIES OF ELECTRONIC COMMERCE

Business to Business

A company that uses a network for ordering from its suppliers, receiving invoices and making payment. In APEC several large supermarket retail chains have embarked on an EDI based retail community system which links them individually to a chain of suppliers. Payments are made via Electronic Fund Transfer (EFT).

Business to Consumer

Mostly related to electronic retailing. There are now shopping malls Internet offering all types of consumer goods from cakes and shirts to computer and motorcars. Virtual malls have already existed for some time.

Business to Government

It covers all transactions between companies and government organizations.

Consumer to Government

Existing services that governments provide online such as payments or grants to welfare homes and income tax returns to individuals.

1.2.5 AOEMA – Asia Oceania Electronic Marketplace Association

AOEMA

AOEMA is a not-for-profit international association dedicated to the promotion and development of electronic commerce in the Asian region. Since 1996, it has been focused on the issues that SME's have with the implementation of electronic commerce. During that time it has worked closely with APEC in order to access the broadest range of SME's through government contact. Over 4000 people have attended the E-Commerce awareness seminars that have been run in 10 economies in the region.

In addition, AOEMA conducts research into areas that will help SME's become more aware of the opportunities of Electronic Commerce and learn how to overcome the barriers.

www.aoema.org

1.2.6 OECD – Organization for Economic Cooperation and Development

The OECD groups member countries in an organization that, most importantly, provides governments a setting in which to discuss, develop

and perfect economic and social policy. They compare experiences, seek answers to common problems and work to co-ordinate domestic and international policies that increasingly in today's globalize world must form a web of even practice across nations. Their exchanges may lead to agreements to act in a formal way - for example, by establishing legally-binding codes for free flow of capital and services, agreements to crack down on bribery or to end subsidies for shipbuilding. But more often, their discussion makes for better-informed work within their own governments on the spectrum of public policy and clarifies the impact of national policies on the international community. And it offers a chance to reflect and exchange perspectives with other countries similar to their own.

Exchanges between OECD governments flow from information and analysis provided by a Secretariat in Paris. Parts of the OECD Secretariat collect data, monitor trends, analyze and forecast economic developments, while others research social changes or evolving patterns in trade, environment, agriculture, technology, taxation and more. This work, in areas that mirror the policy-making structures in ministries of governments, is done in close consultation with policy-makers who will use the analysis, and it underpins discussion by member countries when they meet in specialized committees of the OECD. Much of the research and analysis is published.

www.oecd.org

1.2.7 ITU – International Telecommunication Union

The International Telecommunication Union is unique among international organizations in that it was founded on the principle of cooperation between governments and the private sector. With a membership encompassing telecommunication policy-makers and regulators, network operators, equipment manufacturers, hardware and software developers, regional standards-making organizations and financing institutions, ITU's activities, policies and strategic direction are determined and shaped by the industry it serves.

The climate in which ITU operates today is very different from the one in which it was founded some 135 years ago. Over the past 20 years, telecommunications have grown from a tool that facilitated person-to-person communications to the foundation that underpins a huge number of human activities, from international trade and commerce to health and, increasingly, education. Fast, reliable telecommunication networks are now a vital ingredient in the trans-border delivery of services such as banking, transportation, tourism, online information and electronic home shopping.

At the same time, the Union's client base is also evolving, due to changes in the way telecommunication services are delivered and the convergence of the communication, computing and audio-visual entertainment industries.

Liberalization and deregulation of the telecommunication sector in many countries has prompted traditional ITU members to look to ITU to provide new services that place greater emphasis on policy development and regulatory guidance.

www.itu.org

1.2.8 SMEs – Small and Medium Enterprises

The following table is from "Profile of SMEs in APEC Economies 1998" (available from the APEC website) and provides definitions for the term "small business" as reported by each of the 21 APEC economies. Most definitions are expressed in terms of number of employees, but a few refer instead to dollar figures (either annual sales or value of fixed assets).

Australia	Services Manufacturing	< 20 <100
Brunei Darussalam	Manufacturing or services	<100
Canada	Services Manufacturing	<50 <100
Chile	Small	Annual sales of USD75,000 – 780,000
China	Small	50-100
Hong Kong	Non-manufacturing Manufacturing	<50 <100
Indonesia	Small	Annual sales of <USD100,000
Japan	Services Manufacturing	<5 <20
Korea	Small and medium Services Manufacturing	 <20 <300
Malaysia	Full time	<150
Mexico	Micro Small	1-15 16-100
New Zealand	Small and medium	<50
Peru	Small	Annual sales <USD17 million
Philippines	Small	10-99
PNG	Manufacturing and services Very small Small	 5-10 11-20
Russia	Small	1-249
Singapore	Services Manufacturing	<200 employees Fixed assets of <USD15million
Chinese Taipei	Services Manufacturing	<50 <200
Thailand	Small	<50
United States	Non-manufacturing Manufacturing	Sales <USD5million <500
Vietnam	Small	<30

for purposes of this project a small business is fewer than 20 employees

With different ways of defining size and a range of definitions, it is hard to come up with one definition acceptable to all 21 APEC economies. However, for purposes of this project it seems that most economies can agree that a business entity is "small" if it involves fewer than 20 employees. Our focus will be at this end of the "SME" scale.

1.3 Project context

The purpose and intent of the "EC Best Practice for SMEs" Project, managed by AOEMA and on behalf of the APEC TEL, is to address a number of concerns expressed over the past several years by APEC

leaders and ministers on the subject of Electronic Commerce and the opportunities for SMEs.

Print and broadcast media constantly remind us that we have a “new economy” and a key component of this new paradigm is “electronic commerce”. The problem today is that relatively few SMEs are taking advantage of electronic commerce, citing many areas of concern and numerous perceived roadblocks. The lack of EC uptake by SMEs in the APEC region has been of concern to all 21 APEC governments and becomes somewhat alarming when you consider these statistics:

Over 40 million SMEs in APEC region and 84% of workforce and 95% of all enterprises

There are over 40 million SMEs in the APEC region, representing 84% of the workforce and 95% of all enterprises. They contribute to between 30-60% of the GDP and account for 35% of all exports. (PWC citation)

If we accept these figures, then we have to believe our economies will gain the most benefit from the “new economy” if we proactively encourage SMEs to become aware of electronic commerce and implement sooner than later. The EC Best Practice project demonstrates how some SMEs have successfully implemented EC in spite of the many impediments cited by others who have not taken the step forward.

This is about very small businesses successfully finding a niche for themselves in the wide world of the Internet and how they overcame the obstacles. Obstacles that have caused many others to turn away from the “new economy” and decide to wait until all the problems are resolved. As with any endeavor, the Internet is not without some risk and it can only be what you make out of it. Rather than dwelling on the negative aspects of the Internet and electronic commerce, the “EC Best Practice for SMEs” project promotes a positive attitude based on success stories of real people conducting real business in the online environment.

1.4 Project background and scope

Original project proposal as submitted to TEL 22;

Electronic Commerce (EC) is the reference used to describe many different forms of on-line business procedures, including business-to-business, business to consumer and government to consumer transactions. While studies indicate that business-to-business EC will be the most significant development in the future, it is the business to consumer experience that is the focus today.

the same issues and concerns have been identified by all surveys to date

In fact, governments around the world are looking for ways to actively promote and support EC for the benefit of SMEs and for sustainable economic growth. However, most SMEs are still unsure of how effective EC will be for their business and if it is safe to implement. In an attempt to overcome these concerns, numerous studies have been undertaken by APEC and other internationally recognized forums to determine exactly what the impediments are that have delayed the uptake of EC.

We now have an impressive body of research and a clear picture of what stands in the way of SMEs implementing EC. The same issues and concerns have been identified by all surveys to date. Consequently, we don't need another survey, but rather an active work program to resolve the issues and concerns that are currently standing between SMEs and EC implementation.

This document reports on a project to consolidate survey research results and to further analyze impediments in the context of a work program to resolve issues and identify good practices in the APEC region. Some companies have already overcome the impediments, having developed viable solutions that other businesses in the region could learn from. A combination of case studies that demonstrate viable solutions and an action plan for resolving the more challenging issues will be the focus of this new project.

Over the last 10 years APEC working groups have sponsored projects that have sought to promote, implement or analyze electronic commerce in the region. Over the years, these projects have produced a significant amount of very important and insightful information. The findings should be consolidated into a handbook that would be useful to policy makers and business executives.

Project Steps

1. Review of all available EC projects, surveys and white papers from APEC working groups, OECD and other relevant fora, with the purpose of identifying common themes and issues. The following list of APEC projects was identified in the original proposal and put forward at TEL 22. Additionally, documents available through the OECD have been added to this list and we are in the process of determining whether the work programs of other fora are relevant as well (e.g., United Nations and other similar bodies)
2. Distil from this body of literature a list of common issues and concerns facing SMEs in the APEC region as they consider whether or not to implement Electronic Commerce.
3. Identify and document good practice examples of how SMEs in the APEC region have been successful in overcoming these issues and the perceived barriers to Electronic Commerce.

2 APEC EC Objectives and Directives

Asia-Pacific Economic Cooperation (APEC) was established in 1989 in response to the growing interdependence among Asia-Pacific economies. Begun as an informal dialogue group, APEC has since become the primary regional vehicle for promoting open trade and practical economic cooperation. Its goal is to advance Asia-Pacific economic dynamism and sense of community.

The member economies represent the rich diversity of the region as well as differing levels of economic development. Despite such differences there is a growing sense of common purpose and cooperation aimed at sustained regional and world growth.

2.1 Primary Objectives

APEC has come a long way since 1989. It has built steadily on the efforts of the past and looks forward to further progress. The initial years of APEC were focused largely on exchanges of views and project-based initiatives. The concerns were simply to advance the process of Asia-Pacific economic cooperation and to promote a positive conclusion to the Uruguay Round of GATT negotiations.

The core mission of APEC is to facilitate trade by removing barriers.

Since 1993 APEC leaders have met annually to discuss issues and formulate working agendas. They have articulated their objectives through official statements and declarations:

2.2 Directives from Annual Leaders' Meetings

2.2.1 Blake Island, 1993

APEC Economic Leaders met for the first time in November, 1993, when they held informal discussions at Blake Island near Seattle. They envisioned a community of Asia-Pacific economies, based on the spirit of openness and partnership; which would make cooperative efforts to address the challenges of: change; promote the free exchange of goods, services and investment; and work towards broadly-based economic growth, higher living and educational standards and sustainable growth that respects the natural environment.

2.2.2 Bogor, 1994

In 1994 in Bogor, the vision of an open trading system became the very ambitious goal of *"free and open trade and investment in the Asia-Pacific by 2010 for developed member economies and 2020 for developing ones"*.

2.2.3 Osaka, 1995

In Osaka, APEC Leaders adopted the Osaka Action Agenda (OAA), which firmly established the three pillars of APEC activities: trade and investment liberalization, business facilitation, and economic and technical cooperation.

2.2.4 Manila, 1996

harnessing technologies of the future

The Manila Action Plan for APEC (MAPA), adopted by the APEC Leaders in November 1996, compiled members' initial individual action plans to achieve the objectives outlined in Bogor. APEC Leaders also instructed that high priority be given to the following six areas of economic and technical cooperation: developing human capital; fostering safe and efficient capital markets; strengthening economic infrastructure; harnessing technologies of the future; promoting environmentally sustainable growth; and encouraging the growth of small and medium-sized enterprises.

2.2.5 Vancouver, 1997

encouraging the growth of small and medium-sized enterprises

In Vancouver APEC Leaders recognized members' efforts to improve the commitments in their Individual Action Plans (IAPs) and reaffirmed their intention to update these annually. APEC Leaders endorsed their Ministers' agreement that action should be taken with respect to early voluntary sectoral liberalization (EVSL) in 15 sectors, with nine to be advanced throughout 1998 and implementation to begin in 1999. APEC Leaders welcomed the progress of APEC fora in involving business, academics and other experts, women and youth and encouraged them to continue these efforts. APEC Leaders endorsed the Vancouver Framework for Enhanced Public-Private Partnership for Infrastructure Development.

2.2.6 Kuala Lumpur, 1998

In Kuala Lumpur APEC Leaders reaffirmed their confidence in the strong economic fundamentals and prospects for recovery of the economies of the Asia-Pacific. They agreed to pursue a cooperative growth strategy to end the financial crisis. They pledged efforts to strengthen: social safety nets; financial systems; trade and investment flows; the scientific and technological base; human resources development; economic infrastructure; and business and commercial links, so as to provide the base and set the pace for sustained growth into the 21st century. APEC Leaders also welcomed the Ministers' decision to seek an EVSL agreement with non-APEC members at the World Trade Organization.

The APEC Leaders adopted the Kuala Lumpur Action Program on Skills Development with the objective of contributing towards sustainable growth and equitable development while reducing economic disparities and improving the social well-being of the people, through skills upgrading/improvement.

2.2.7 Auckland, 1999

At their meeting in September 1999 in Auckland, APEC Leaders agreed that the performance and prospects of the APEC economies had improved, but they were not complacent about the risks to recovery. Accordingly, they pledged to strengthen markets and improve the international framework governing trade and investment flows. APEC Leaders also put people and their prosperity at the forefront of their discussions, welcoming the more active participation of women and the business sector in APEC's work.

2.2.8 Bandar Seri Begawan, 2000

address the challenges of the New Economy

With the emerging signs of economic recovery in the region, APEC Economic Leaders, in their meeting in Bandar Seri Begawan in November 2000, mapped out ways of preserving, strengthening and further opening markets as well as sustaining economic recovery in APEC. Aiming to deliver on the various agreements, to the people and the diverse communities that APEC serves, they decided to address the challenges of the New Economy in the following areas:

***Managing Globalization*.** APEC Leaders directed their Ministers to reinvigorate APEC's programs in economic and technical cooperation and to continue to work in international forums to help shape the global economy and provide a more secure and stable financial environment.

***The Action Agenda for the New Economy*.** This agenda brings together all of the elements related to the New Economy that APEC has been working on for some time: the e-Commerce Readiness Assessment, paperless trading, and building capacity in both people and institutions. APEC Leaders instructed their Ministers to expand and develop the agenda to create an environment for strengthening: market structures, institutions and infrastructure investment, technology development ; and building both human capacity and entrepreneurship development.

APEC committed to ensure all people have access to Internet by 2010

***Creating New Opportunities*.** APEC Leaders committed themselves to working to ensure all people of urban, provincial, and rural communities in every APEC member economy have individual or community-based access to the information and services offered by the Internet by 2010. As a first step, APEC Leaders pledged to triple the number of people within the APEC region with such access by 2005.

***Strengthening the Multilateral Trading System*.** APEC Leaders reiterated the need to expeditiously launch a new WTO round. They agreed that a balanced and broad-based agenda responding to the interests and concerns of all WTO members should be formalized and finalized as soon as possible in 2001 and that a round be launched in 2001.

***Making APEC Matter More*.** In addition to urging APEC to expand its work in outreach, APEC Leaders instructed their Ministers to ensure that the new "electronic-Individual Action Plans" be fully operational in 2001 and updated and improved as an electronic tool in future years. (These IAPs are the basic road maps by which each APEC member charts its progress toward the Bogor goals of trade and investment liberalization. The new electronic version has greatly enhanced their accessibility and usefulness for business.)

Focusing on the primary goal of trade facilitation and the emergence of the global economy, the following major themes emerge from the above statements:

encourage and support the growth of SMEs

- Encourage and support the growth of small and medium size enterprises (SMEs);
- Promote entrepreneurship;
- Improve the international framework governing trade;
- Help shape and manage the global economy;
- Work to prevent a digital divide by ensuring all people of urban, provincial and rural communities in every APEC economy have individual or community-based access to Internet information and services.

2.3 APEC Small and Medium Enterprise (SME) Seventh Ministerial Meeting

(Bandar Seri Begawan, Brunei Darussalam, 22-23 June 2000)

JOINT MINISTERIAL STATEMENT

(Selected excerpts)

APEC Ministers responsible for Small and Medium Enterprises (SMEs) met in Bandar Seri Begawan on 22-23 June for their seventh meeting. Representatives of SMEs throughout the APEC region joined them in interactive sessions.

enabling APEC SMEs to capitalize on electronic commerce

The meetings discussed matters that are concerned with responding to the needs of APEC SMEs, focusing on four main issues:

- Capacity Building of APEC SMEs
- Enabling APEC SMEs to Capitalize on Electronic Commerce
- Making Financial and Capital Markets More Accessible to SMEs
- Towards Harnessing Diversity for Shared Economic Prosperity

Ministers agreed that there is a need to exchange information regarding best practices and legal issues on E-commerce including government purchasing and intellectual property. In this respect, Ministers sought greater cooperation among member economies to facilitate the development of E-commerce in the region. Ministers noted the recommendations from the *APEC 2000 SME Electronic Commerce Workshop* in Bandar Seri Begawan as Annex B, which makes reference to promote E-commerce and to capitalize on ICT. Ministers instructed the PLGSME to implement the relevant recommendations in collaboration with relevant APEC fora including the APEC Electronic Commerce Steering Group and the Telecommunication Working Group. Ministers also agreed to endorse a new initiative by Chinese Taipei, the E-COMMERCE Symposium on SMEs, to enhance the promotion of E-commerce to SMEs.

2.4 APEC Telecommunications and Information Ministers

APEC Ministers responsible for the Telecommunications and Information Industry have to date met four times to review the work of the TEL, and to provide direction for the development of the Asia-Pacific Information Infrastructure (APII).

At the **3rd Ministerial Meeting** in June 1998, the Singapore Declaration was issued. Ministers approved a Reference Framework for Action on Electronic Commerce and a set of principles for use by economies wishing to provide universal access to telecommunications services.

importance of electronic commerce as a tool for businesses, governments and consumers

"Ministers reaffirmed the importance of electronic commerce as a tool for businesses, governments and consumers and approved a joint action plan for TEL in electronic commerce, which would support the goals of Leaders. Ministers asked that this expanded list of activities be raised and coordinated with the work program being prepared for the Ministers responsible for Trade.

Ministers recognized the need to ensure that the whole region shares in the benefits of electronic commerce, that the various infrastructure and service layers develop in a balanced and

sustainable manner, and that the needs and interests of Asia-Pacific users are adequately considered."

The **4th Ministerial Meeting** held in Cancun, Mexico in May 2000 focused on the theme of "Convergence". The Ministers issued the Cancun Declaration which sets out a number of goals for the TEL, including: placing emphasis on bridging the digital divide at the domestic, regional and international level, and the need to engage the private sector in this effort through cooperation and collaboration.

"We the APEC Ministers responsible for the telecommunications and information industry, gathered at Cancun, Mexico, 24-26 May, 2000, acknowledging the importance of the information and telecommunications sector to the growth of electronic commerce; the convergence across industry sectors brought on by growth in electronic commerce; and, desirous of ensuring that the information and telecommunications infrastructure is ready, and that industry is prepared to play its part in supporting the growth of electronic commerce, thus, reaffirming our commitment to implementation of the Reference Framework for Action on Electronic Commerce agreed at TELMIN3 and the APEC E-Commerce Blueprint for Action"

2.5 PECC

As the only non-governmental official observer of APEC, PECC provides support to APEC ministerial and working level meetings. It also channels and facilitates private sector participation in the APEC process.

www.pecc.net

PECC Statement to the APEC Trade Ministers

Shanghai, People's Republic of China
7 June, 2001

IT Opportunities: regional good fortune or digital divide?

The issues relevant to capturing the benefits of the new economy are central to the APEC agenda for liberalization of trade and investment and market strengthening reform under the Bogor goals. For instance, liberalization in telecommunications services would be a key prerequisite to interconnectivity.

Meeting IT's challenges in APEC's work program can broaden the appeal of the Bogor goals, as well as communicating APEC's achievements in meeting the goals. Outreach, I know, continues to challenge us all. Further, meeting the IT challenges also makes it easier to reach your end point of free and open trade and investment amongst APEC members.

PECC has contributed to crosscutting policy work in the communication and information technology fields. In 2000, the PECC Telecommunication and Information Industry Forum (TIIF) developed a number of programs and organized regular industry-government dialogues both at the APEC Telecommunications Working Group (Tel), the Electronic Commerce Steering Group (ECSG), and the Tel Ministerial.

The TIIF focuses on a number of fundamental objectives such as advancing all member economies access, at affordable rates; empowerment by increasing IT literacy and skills development; and creating partnerships between government, industry, and academic organizations to facilitate new business opportunities for small and medium sized enterprises. We believe that the PECC work program in these areas offers a significant contribution to the 2001 APEC theme of creating benefits to all from digital opportunities.

PECC's list of Barriers

From a presentation give at the Brunei Symposium in 2000 the following is a list of what PECC sees at the perceived barriers to the implementation of EC.

- •Lack Of Access To Capital
- •Lack of Infrastructure
- •Lack Of Training In Information Management
- •Lack Of Access To Information
- •Lack of R& D resource
- •Lack Of Access To Support Networks
- •Disincentives in Government Regulation

3 EC Programs Across Work Groups

3.1 APEC 2000 SME E-Commerce Workshop

The APEC 2000 SME E-Commerce Workshop has made the following recommendations to APEC SME Ministers, to help APEC SMEs embrace and utilize e-commerce:

lowering Internet access costs along with improvement of quality of service

1. Access to information Infrastructure

- Provide an environment that fosters/encourages investment in *e*-Business by government and private enterprise.
- Assist in lowering Internet access costs along with the improvement of quality of service for SMEs.
- Support an information infrastructure as a resource for SMEs through the establishment of centers for expertise.

2. Human Resources Development

- Respond to the existing "Human Resource Deficit" impeding development of the knowledge-based Economy and recognize the need for new tools and skills.
- APEC Government give priority to the development of a national and regional e-commerce human resource Master Plan with specific action items and time frames.
- Emphasize public/private sector cooperation, which is of critical importance to HR development in the Knowledge-based Economy.

3. Trust and Regulatory Environment

modify and enhance policies and laws that foster supportive environment for e-business

- Encourage self-regulation whenever possible, but include minimum standards for trust in the marketplace.
- Modify and enhance policies and laws that will foster a supportive environment for *e*-Business and seek compatibility across jurisdictions.
- Encourage SME participation in an active dialogue with governments and suppliers on issues including: security, consumer protection, liability, interoperability, payment mechanisms.

4. Government and Business Relationship

- Develop *e*-Government to optimize services to SMEs; share information between governments on best practices adoption; and share information with SMEs on *e*-Government initiatives
- Develop one-stop *e*-Commerce Information Centers that provide the information needed by SMEs
- Undertake a regular and open assessment of *e*-Commerce readiness as part of this process

5. Summary points from presentation by Estaeban Restrepo Uribe, Bogota, Columbia on the "Barriers for the Appropriation of Information Technology by SMEs":

- Low level of knowledge about the services and support networks for innovation technology.
- Mistrust about information technology processes.
- No importance/relevance of international quality rules and standards.
- Legal framework.
- Coordination of financial sources.
- Development of capital markets.

- Investment capital.

3.2 Working Themes for APEC 2001

sharing the benefits of globalization and the New Economy

As APEC enters its second decade, it faces some major new challenges, which have generated a sense of urgency and called for greater cohesion and increased strength of commitment. To meet the challenges, the following theme for APEC 2001 has been set: "Meeting New Challenges in the New Century: Achieving Common Prosperity through Participation and Cooperation". The theme embodies the following sub-themes:

- Sharing the Benefits of Globalization and the New Economy;
- Advancing Trade and Investment; and
- Promoting Sustainable Economic Growth.

The theme is designed to transcend the traditional boundary between trade and investment liberalization and facilitation (TILF) and economic and technical cooperation (ECOTECH), to build on the existing ECOTECH Agenda, to revive the momentum of progress in APEC's core mission of trade and investment liberalization and facilitation, and to foster a favorable macro-economic environment for the sustainable growth of the regional economy.

3.3 Electronic Commerce in the APEC TEL

Recognizing the valuable work the TEL has done to address e-commerce, including identification of current barriers to further uptake of e-commerce by SMEs, Ministers urge the TEL to continue work to ensure that policy and regulatory environments better foster the uptake of e-commerce, facilitate the electronic delivery of services and enhance the development of e-commerce infrastructure.

A "Program of Action" specifies key areas for the TEL in general:

- Further encourage the participation of the business/private sector in its work.

improve network access, especially in underserved urban, rural and remote areas

- Place emphasis on bridging the digital divide at the domestic, regional and international levels.
- Improve network access, especially in underserved urban, rural and remote areas.
- Assist developing economies to reform their policy and regulatory structure to meet new environments.
- Reinforce and enhance human resource development activities through various measures such as utilizing distance learning technologies.
- Promulgating knowledge and recognition of the digital divide by holding appropriate fora.
- Monitoring the fair and sustainable development of the Internet in the APEC region as an integral part of the Asia-Pacific Information Infrastructure (APII).

support additional initiatives to ensure SMEs can benefit from electronic commerce

- Assess economic and cultural reasons for divides with a view to develop technology neutral, pragmatic approaches to encourage greater access.
- Ministers support additional initiatives to ensure small and medium enterprises can benefit.
- Consider the opportunities and benefits arising from wireless technology in the expansion of both basic telephony and convergent services.

3.4 APEC Finance Ministers Statement Sept 2000

Electronic Financial Transactions Systems: IT lowers the costs and speeds up delivery of financial services products, thereby contributing to overall greater efficiency and convenience of the financial sector. In the light of the growing importance attached to achieving "Paperless Trading" and as part of APEC's concerted initiatives towards that goal, Ministers agreed at Bandar Seri Begawan to launch a working group on electronic financial transactions systems. Building on the work of other competent bodies, the working group will formulate programs to foster the use of electronic means for conducting financial transactions.

The working group, consisting of financial experts from interested economies, will be co-chaired by Japan and Hong Kong, China.

3.5 APEC Economic Committee

2001 FIRST PLENARY MEETING
15-16 February 2001

Canada made a presentation on **"Perspectives on the New Economy: United States and Canada."** The New Economy is defined in a United States context as a phenomenon where the following four key features are present:

- strong trend productivity growth;
- co-existence of low inflation and low unemployment;
- disappearance of Federal budget deficits; and,
- superior United States economic growth and productivity performance relative to other industrial economies.

Chinese Taipei introduced its proposal on **"Transforming Digital Divides into Digital Opportunities"** which is an analytical approach to this issue, complementing its proposal in other APEC fora emphasizing capacity building. It outlined the following issues to be addressed.

- How serious is the digital divide in the APEC region?
- What are the impacts of digital divides on the division of labor, the organization of production, and the rise and fall of industries across the APEC region?
- What are the effects of IT applications on economic performances at the firm and the industry levels?
- What contributes to digital divides and what are the solutions?
- What are the opportunities for APEC members to cooperate in narrowing the digital divides and create new opportunities in the information age?

The United States introduced its proposal on **"The New Economy: Issues and Policy Challenges in APEC Economies."** It said the question is whether there is the potential for similar changes as in the United States in other economies. The proposed study will encompass the following components:

- an empirical assessment of how the various economies rank along several dimensions of the New Economy; and,
- an assessment of the policy environment necessary to foster technological and organizational innovation.

Australia introduced its proposal on **"Impact of E-Commerce on Service Industries,"** noting that it achieved strong productivity growth despite not being a major producer of ICT goods. Service industries stand out as

offering to create new trade opportunities through e-commerce. The study has a two-year timeframe and the Group on Services will be consulted.

Japan introduced its proposal on the **"Renewed Importance of Entrepreneurship in the New Economy,"** the aim being to identify the right public policies, including on capital markets to foster entrepreneurship.

The points raised during the discussion include:

- Does the definition of the New Economy in the United States apply to others? (Response) An APEC definition of the New Economy can be discussed in Shanghai.
- The recommendations arising from the research projects must be something all economies can subscribe to.
- There should be an integrated project plan for all the projects on the New Economy so as to avoid duplication. (Response) The Chair will try his best to get integration of the projects. The United States project is on a one-year time frame while the others are on a two-year time frame.

Income inequalities should be a factor in Chinese Taipei's measurement of the digital divide. The number of case studies should be carefully selected to maximize their usefulness and kept to a manageable number. (Response) The internal digital divide is difficult to measure.

3.6 Electronic Commerce in the APEC PLGSME

APEC Ministers responsible for Small and Medium Enterprises (SMEs) met in Bandar Seri Begawan on 22-23 June for their seventh meeting. Representatives of SMEs throughout the APEC region joined them in interactive sessions.

The meetings discussed matters that are concerned with responding to the needs of APEC SMEs, focusing on four main issues:

- Capacity Building of APEC SMEs
- Enabling APEC SMEs to Capitalize on Electronic Commerce
- Making Financial and Capital Markets More Accessible to SMEs
- Towards Harnessing Diversity for Shared Economic Prosperity

The discussions between Ministers and the business sector were supported by a Business Forum and participation from the associated Women Leaders Network Meeting, an E-Commerce Workshop and an E-Trade Fair. Ministers and business representatives welcomed the opportunity for their dialogue and highlighted its usefulness and effectiveness in understanding the key policy issues facing SMEs.

Enabling APEC SMEs to Capitalize on Electronic Commerce

from *Digital Divide* to *Digital Opportunity*

It is recognized that the progress of information and communication technology (ICT) has tremendous effect on the existing economic system and that the dynamic changes pressured many SMEs to make structural adjustment. There is broad consensus that governments could assist SMEs to overcome the problem of high initial costs of investment in ICT by creating an environment favorable to E-commerce.

Ministers acknowledged that there are many problems arising from E-commerce and recommended that APEC put in place a framework for the coordination of standards, encouragement of private sector innovation, and

to improve consumer confidence and acceptance. This should include self-regulation by the private sectors. Ministers acknowledged that the involvement of governments, private sectors, E-commerce and Internet could turn the world of Digital Divide to Digital Opportunity.

Ministers are pleased to note that the Electronic Commerce Steering Group will address consumer confidence and acceptance issues. They urged APEC to give priority to hasten the work on strengthening the regulatory and security measures for E-commerce, removing uncertainties that restrict E-commerce, and encouraging the development of self-regulatory frameworks. In this regard, Ministers instructed the PLGSME to coordinate with relevant APEC fora including the APEC Telecommunication Working Group and the Electronic Commerce Steering Group in expediting the on-going work on reducing the costs of access to the Internet.

In summation:

strengthen regulatory and security measures for e-commerce

- Note that Ministers have called on member economies to place greater emphasis on the development of infrastructure concerning ICT.
- Note that Ministers have instructed the PLGSME to take into account that future work program on the use of ICT and E-commerce be focused on definite sector of SMEs and to work with the relevant APEC fora in addressing this issue.
- Note that Ministers have called on APEC to give priority to hasten the work on strengthening the regulatory and security measures for E-commerce.
- Note that Ministers have instructed the PLGSME to consider contributing to the further development of the *BizApec.com* website.

reduce costs of access to the internet

- Note that Ministers have instructed the PLGSME to coordinate with relevant APEC Fora including the APEC Telecommunication Working Group and the Electronic Commerce Steering Group in expediting the on-going work on reducing the costs of access to the Internet.
- Note that Ministers have instructed the PLGSME to implement the relevant recommendations arising from the APEC 2000 SME ELECTRONIC COMMERCE WORKSHOP.
- Note that Ministers have endorsed the E-COMMERCE SYMPOSIUM ON SMEs initiative.

3.7 APEC Electronic Commerce Steering Group (ECSG)

APEC Leaders and Ministers at the November 1997 meetings in Vancouver instructed that a work program on electronic commerce in the region be undertaken, so as to promote a predictable and consistent legal and regulatory environment that enables all APEC economies to reap the benefits of electronic commerce. The Senior Officials at their first meeting in Penang 1998, formed a Task Force to undertake this work.

Australia and Singapore co-chaired the Task Force during 1998. The Task Force met four times, two of which included business participation. The Task Force has now fulfilled its mandate, with the delivery of the ***APEC Blueprint for Action on Electronic Commerce.***

promote predictable and consistent legal and regulatory environment

The APEC Electronic Commerce Steering Group (ECSG) was established by the SOM in February 1999. The role of the Steering Group is to ensure continued coordination of APEC e-commerce activities and to pursue the

work programme set out in the *APEC Blueprint for Action on Electronic Commerce*. The ECSG meets once a year but continues to conduct its business throughout the year as a 'virtual' group using electronic means of communications. The 1st ECSG meeting was held on 27-28 June 1999 in Auckland, New Zealand and the second meeting held in Bangkok, Thailand in July 2000. The ECSG's two-year term will expire in 2001 and it will be reviewing its mandate and reporting its recommendations to SOM I in Beijing in February 2001.

3.7.1 Blueprint for Electronic Commerce

The Blueprint for Electronic Commerce called for the establishment of a Steering Group on Electronic Commerce, "To ensure continued co-ordination and pursuit of the Blueprint for Action, a Steering Group comprising representatives from member economies would be established involving relevant working groups and sub-fora as well as business sector experts in accordance with APEC guidelines on business sector participation."

The APEC Senior Officials meeting in Wellington, New Zealand, in February 1999, approved a proposal establishing the APEC Electronic Commerce Steering Group. The Steering Group will do most of its business electronically, but will hold physical meetings as necessary.

Recognizing 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 global commerce;

Taking into account the different stages of development of member economies, the diverse regulatory, social, economic and cultural frameworks in the region; and

Taking into account that enhancing capability in electronic commerce among APEC economies, including through economic and technical cooperation (ecotech activities), is needed to enable all APEC economies to reap the benefits of electronic commerce;

Agreed to the following:

1. The business sector plays a leading role in developing electronic commerce technology, applications, practices and services.

role of governments is to promote and facilitate the development and uptake of electronic commerce

2. The role of governments is to promote and facilitate the development and uptake of electronic commerce by:

- Providing a favorable environment, including the legal and regulatory aspects, which is predictable, transparent and consistent
- Providing an environment which promotes trust and confidence among electronic commerce participants
- Promoting the efficient functioning of electronic commerce internationally by aiming, wherever possible, to develop domestic frameworks which are compatible with evolving international norms and practices, and

- Becoming a leading-edge user in order to catalyze and encourage greater use of electronic means.

3. For electronic commerce to flourish, business and governments should cooperate wherever possible to ensure the development of affordable, accessible and inter-operable communication and information infrastructure.

technology-neutral, competitive market-based solutions which can be safeguarded by competition policy, and effective industry self-regulation, should be favored

4. While recognizing that some degree of government regulation may be necessary, technology-neutral, competitive market-based solutions which can be safeguarded by competition policy, and effective industry self-regulation, should be favored.

5. Government and business should co-operate to develop and implement technologies and policies, which build trust and confidence in safe, secure and reliable communication, information and delivery systems, and which address issues including privacy, authentication and consumer protection.

WORK PROGRAM

6. In order to benefit fully from electronic commerce, APEC economies should endeavor to work together to build trust and confidence; enhance government use; intensify community outreach; promote technical cooperation and experience exchange; where appropriate, work towards eliminating impediments to its uptake; and develop seamless legal, technical, operating and trading environments to facilitate the growth and development of electronic commerce.

To this end APEC Ministers agreed to a Work Program which builds on APEC's existing electronic commerce work, including:

- Expanding and drawing lessons from the Task Force collection of case studies in order to facilitate and support electronic commerce activities by small and medium enterprises (SMEs), government, and business/public sector partnerships

identify economic costs that inhibit increased uptake of EC, including those imposed by regulatory and market environment

- Undertaking work to develop measures and indicators on the uptake, use and flows of electronic commerce

- Identifying the economic costs that inhibit increased uptake of electronic commerce, including those imposed by regulatory and market environment

- Welcoming Finance Ministers' continuing work on financial aspects of electronic commerce, a priority agreed jointly with ABAC, including by involving the business sector, given the important role financial institutions play in the processes necessary for uptake and operation of electronic commerce

- Exploring further economic and technical cooperation (ecotech activities) to facilitate the uptake, use and maximization of benefits of electronic commerce in APEC member economies

- Tasking authentication experts, which includes business sector experts, to study the range of business models for electronic authentication, including the role of possible mechanisms such as cross-certification and the use of a root certification authority, to

promote inter-operability and trust and to facilitate cross-border electronic commerce

- Welcoming OECD's continuing work on taxation, consumer protection, privacy and authentication issues, and agreed to monitor progress in discussions in these areas, and for experts to participate at a joint meeting of APEC/OECD officials in 1999 to discuss emerging technologies and business models for authentication

welcoming OECD's continuing work on taxation, consumer protection, privacy and authentication issues

- Working with UNCITRAL and other international fora in moving forward work on legal foundations, where appropriate, for a seamless system of cross-border electronic commerce.

7. Given the fast developing and changing nature of electronic commerce, APEC Ministers endorsed the development of a "Virtual" Electronic Commerce/Multimedia Resource Network to provide a reference base to continue raising awareness and exchanging information, including on economies' electronic commerce development strategies, government use of electronic commerce as a means to conduct business, and human resource development, education and training, and tasked officials to implement it taking into account the proposals of member economies, the proposed PECC Edupact stocktake of electronic commerce resources in member economies, and elsewhere.

8. Taking into account diverse legal and regulatory frameworks in the region, APEC Ministers agreed that member economies should endeavor to reduce or eliminate the requirement for paper documents needed for customs and other cross-border trade administration and other documents and messages relevant to international sea, air and land transport i.e. "Paperless Trading" (for trade in goods), where possible, by 2005 for developed and 2010 for developing economies, or as soon as possible thereafter. To this end, relevant APEC sub-fora should examine specific initiatives.

9. APEC Ministers acknowledged the crucial importance to economic development, cross-border trade, international communications, transport and financial systems and electronic commerce, of urgently addressing the issue of the Year 2000 (Y2K) computer problem. To this end they agreed that APEC economies would continue to cooperate on Year 2000 preparation and would mount a regional contingency planning experts' conference in early 1999.

10. APEC Ministers recognized that the task force approach had been an efficient and effective mechanism for providing coordination, greater focus and broad direction for the crosscutting issue of electronic commerce. In line with the move to rationalize work management structures in APEC, the Electronic Commerce Task Force would conclude with delivery of its report through Senior Officials and Ministers to Leaders. To ensure continued co-ordination and pursuit of the Blueprint for Action, a Steering Group comprising representatives from member economies would be established involving relevant working groups and sub-fora as well as business sector experts in accordance with APEC guidelines on business sector participation. The Steering Group would conduct discussions virtually, but would also meet physically as necessary, and would prepare a report to the SOM once a year on progress in electronic commerce work in APEC. Ministers noted the potential for the model of a short-term task force drawing in business sector

participation, to be used for dealing with other crosscutting issues from time to time in APEC.

3.7.2 EC Task Force

importance of the telecommunications infrastructure as the key backbone that supports all EC activities cannot be over-emphasized

Access To The Information Infrastructure

1. The importance of the telecommunications infrastructure as the key backbone that supports all electronic commerce activities cannot be over-emphasized. Without a telecommunications infrastructure that provides sufficient capacity for information flows, e-commerce would not be possible. There are, however, a number of constraints. These constraints will need to be addressed by both technological developments and deliberate government policies.

2. The challenge for APEC member economies and other economies in general would be to work towards a secure, widely accessible, fully interconnected international network that will guarantee the availability of sufficient bandwidth for e-commerce.

Trust In Information Systems And Electronic Transactions

Beyond international consensus on the policy framework, it is also necessary for member economies to develop complementing domestic legislative framework, so that e-commerce transactions and digital signatures are afforded a clear legal status as with traditional paper-based commercial transactions. Without the legislative framework, businesses will face lingering uncertainties (e.g. how is a contract formed electronically, are digitally signed documents equally binding as paper-based signed documents) in embracing e-commerce.

Promotion And Facilitation

Many of the emerging issues are those already associated with existing non-electronic systems. The continued uptake and success of paperless systems may depend most heavily on attitudinal changes, rather than the invention and codification of elaborate new rules or processes.

International Regulatory Environment

Within the next three years, a range of international organizations aims to clarify principles and modalities surrounding electronic commerce. A pattern emerging is that trading relations, the identification of rights and responsibilities, and the resolution of conflict, either between states or between individuals, are likely to be defined according to an emerging set of "soft norms" and conventions based on practice, rather than through the rigid imposition of tightly defined rules. To ensure such conventions evolve in a way that benefits all economies, it will be important for governments to cooperate in harmonizing or aligning domestic law and regulation with emerging international norms.

Government And Business Sector Relationships

The symbiosis between government and business roles is perhaps most apparent in attempts to create trust and confidence in electronic commerce. As governments establish online processes, they can create a climate of consumer confidence in online transactions. The fact that governments are seen to be confident in relying on electronic systems provides an

important demonstration effect to citizens/consumers -- although, of course, electronic means will never entirely replace paper and face-to-face relationships between a government and its citizens. Governments' ability to establish online services has largely depended on industry-led development of technology and systems. And governments' use of electronic means assists in integrating citizens/consumers into the broader commercial arena of electronic commerce.

3.7.3 ECSG Tasks and Achievements

Business and Private Sector Participation

the role of government to provide an environment, particularly the legal/regulatory framework that is conducive to development of EC

It is generally recognized that the private sector is taking the lead in the development and application of electronic commerce. The role of government is to provide an environment, particularly the legal/regulatory framework that is conducive to the development of e-commerce. Therefore it is essential for government and the private sector to work closely together. The private sector has been active participants in all ECSG meetings. APEC e-commerce activities such as the APEC E-commerce Convention in Tokyo in May 2000, the APEC 2000 SME E-commerce Workshop in Brunei Darussalam in June 2000 and the Consumer Protection Workshop in Bangkok in July 2000 all had extensive private sector participation.

Achievements

The E-Commerce Steering Group met 20-22 July 2000 in Bangkok. A one-day workshop on electronic commerce and consumer protection was held followed by a day and one-half meeting of the Steering Group. The Workshop and ECSG meeting addressed three objectives: (1) carry out the mandates of the 1999 Ministerial Meeting, specifically on Consumer Protection; (2) follow-up on the guidance on paperless trading from Ministers Responsible for Trade (MRT) and results of the Tokyo E-Commerce Convention; and (3) review progress in carrying out APEC e-commerce Blueprint. Some of the ECSG's activities in 2000 are as follows:

need for compatible consumer protection frameworks in APEC economies to promote consumer trust and ensure effective enforcement of consumer protection laws

Consumer protection: The workshop identified a clear need for information sharing and a need for compatible consumer protection frameworks in APEC economies in order to promote consumer trust and ensure effective enforcement of consumer protection laws.

Legal Framework: The ECSG has undertaken a survey to be completed prior to the November Ministerial on progress towards the adoption and/or modification of laws in a manner consistent with the UNCITRAL Model law.

Authentication: The ECSG reviewed the ongoing work by the TEL experts group which includes a regular series of workshops and a series of information papers and concluded that both public and private sector leaders need to be familiar with emerging authentication technologies and business practices.

Paperless Trading: The ECSG followed up on the MRT and SOM by reviewing a proposed questionnaire for the paperless trading matrix. Some potential overlap was identified between the work of the Sub-Committee on Customs Cooperation (SCCP) and the Transportation Working Group (TPT WG). The ECSG co-chairs agreed to help coordinate among the

various APEC fora involved, especially the SCCP and the TPT. A final questionnaire will be completed in time to provide a report to SOM I in 2001.

Tokyo E-Commerce Convention: As directed by the MRT the ECSG examined key outcomes of the Convention with respect to the APEC action, namely, the need for a seamless and compatible legal and regulatory framework; E-government; and training and education.

Training and Human Resources: The ECSG identified a large number of proposals and initiatives, both within APEC, the private sector and other international fora such as the ITU. The ECSG concluded that the scope and content of this issue requires a coordinated approach involving all key players. The PECC has agreed to bring together all interested parties including APEC fora, other international organization active in the region and private sector groups.

E-Government: Both the Tokyo Convention and the Brunei workshop identified e-government as an important element in promoting the development of e-commerce and especially SME use of e-commerce. The ECSG supports the idea of a conference to promote exchange of information and best practices.

Readiness: The ECSG noted the number of assessments completed and relevance of this work to other e-commerce activities such as paperless trading, establishing compatible legal frameworks, developing infrastructure.

achieving seamless legal/regulatory environment, promotion of e-government and need to address education and training requirements

APEC E-Commerce Work Programme: The ECSG took note of the emerging focus in electronic commerce of so-called end-to-end solutions that encompass areas outside the purview of the Blueprint such as logistics. It also noted that the Blueprint Work Programme references to achieving a seamless legal/regulatory environment, the promotion of e-government and the need to address education and training requirements do not fully reflect the increasing attention and priority being given to them in APEC.

Next Steps

widen scope of APEC's EC work to include continuing work on consumer protection, electronic signatures, authentication, legal and regulatory frameworks, training and education, e-government and e-commerce readiness assessment

For 2001, the ECSG has taken inputs from APEC e-commerce events in 2000, including the APEC E-Commerce Convention in Tokyo in May 2000, the SME E-Commerce Symposium in Brunei in June, the Consumer Protection Workshop and ECSG meeting in Bangkok in July, and produced a set of recommendations which were endorsed by SOM and Ministers in the context of widening the scope of APEC's e-commerce work programme. These recommendations include continuing work on consumer protection, electronic signatures, authentication, legal and regulatory frameworks, training and education, e-government and e-commerce readiness assessment.

Indeed, the Ministerial statement recognized "the need to improve consumers' trust and confidence in e-commerce," and "endorsed a work programme leading to a favorable as well as compatible legal and regulatory frameworks on consumer protection, electronic transactions documents and signatures across APEC." The ECSG could also participate in carrying out the Leaders' instructions to Ministers to develop and expand the APEC Action Agenda on the New Economy.

4 Electronic Commerce Research

4.1 APEC Wide

4.1.1 Program to Assist Implementation of Electronic Commerce for Commercial Messages

The APEC Transport Working Group. A series of courses were conducted in Manila; Singapore; Beijing; Bangkok; Hong Kong, China; Mexico City; Jakarta and Brunei. These courses were delivered over an extended period, between September 1999 and June 2000.

Areas of Particular Concern:

1. Government/Legal Framework

relatively slow pace and lack of urgency to make necessary adjustments for EC is of major concern

Whilst most economies appear aware of the need to adjust their government procedures and legal framework, the relatively slow pace and lack of urgency of such adjustment in most economies is a major area of concern. The slow pace may be caused by adversely-affected parties blocking eCommerce initiatives, or by a lack of a clearly-enunciated and wholly-supported strategy. The gradual redirection of international trade, to bypass slowly-adjusting economies, is likely to be insidious, and difficult to identify and measure.

2. Education

Although many participants in the Transportation Chain are fully aware of global eCommerce initiatives, many are not. This is especially true amongst the smaller participants, who cannot afford dedicated IT personnel and have limited time available for education. Even for participants with IT personnel, there is a need to educate senior management about eCommerce, paying particular attention to the benefits it can bring to an organization or community. Additionally, awareness of eCommerce activity associated with the local environment is not always promulgated to all members of the community.

3. Cross-Community Awareness

In most economies, there is insufficient awareness by community members of the *complete* Transportation Chain, or the fact that their ultimate ‘end customer’ is the shipper/consignee. Consequently, many eCommerce decisions are made with parochial views of ‘their part of the Transportation Chain’ without understanding the (perhaps much bigger) potential impact and benefit arising from other parts of the industry, or the view of their ultimate ‘end user’. It is ‘end customer’ money that drives the whole Transportation Chain, and it should be their views that shape the chain, and provide the driving force for change. Much of the EDI/eCommerce activity associated with the shipping lines and port operators is focused on operational efficiency. Whilst in no way deriding such focus, some opportunities for ‘Customer Service’ benefits (particularly for the ‘end customer’) through access to information that the shipping lines and port operators hold, appear to have lesser priority.

4. Infrastructure

In several economies, the local infrastructure limits the ability of eCommerce to deliver its full benefit. Infrastructure includes port facilities, road access, vehicle reliability, utility (electricity, telecommunications) reliability, etc.

5. Financial Constraints

In several economies, the purchase of an Internet-enabled PC is an expensive investment. It is difficult to justify such an investment unless it can be used for many 'value-added' activities. During the initial phases of eCommerce, often only one activity (say to Customs) is available, which may be perceived as insufficient for a positive investment decision. To undertake such an investment just to learn about eCommerce is unlikely to be seen as a commercially attractive proposition.

4.1.2 APEC Commercial Message Project

The Transport Working Group initiated a pilot Electronic Data Interchange (EDI) trial program to determine future direction in the adoption of electronic commerce (as widely as possible) through out the transport sector in the region. This is part of facilitating the electronic commerce and eliminating the requirement for paper documents (both regulatory and institutional) for key messages relevant to international transport and trade as soon as practicable within the next ten years.

4.1.3 Pilot Electronic Commerce Training in Maritime Transport

This project will deliver an Internet-based training program of approximately three month duration. The pilot course will involve the construction of a web site that will serve as a virtual classroom. The course will encourage teamwork between the participants and involve the solution of real-life electronic commerce problems.

In addition to addressing the most urgent electronic commerce training needs of interested economies the course would also trial the effectiveness of remote training using innovative techniques. If the course is successful the principle could be applied to training in other aspects of the transport sector.

4.1.4 SCCP Program to implement EDIFACT electronic message standards

In order to enhance regional trade, it is helpful for regional customs to utilize electronic communication effectively. Thus, APEC economies recognized the need to have an international standard, which is essential to this goal. This can be done at an agreed standard referred to as UN/EDIFACT (United Nations/Electronics Data Interchange for Administration, Commerce and Transportation). Under the SCCP CAP, the target date for implementation of this program for all members is 1999.The introduction of a common level of UN/EDIFACT throughout the region will facilitate streamlining and harmonization of customs procedures. This will eventually lead to a greater level of transparency of customs documentation and assist in the standardizing of customs information requirements as well as promoting compliance with standardized customs process.

4.1.5 Program to develop a core set of harmonized trade data elements and customs clearance procedures

Under this work program, the SCCP agreed to develop a compendium or directory which would include a simplified "core set" of data elements that would satisfy the standard data requirements of SCCP members. This would then facilitate exchange of information and subsequently provide a foundation for common forms and electronic commerce. This work program thus complements the SCCP's program on UN/EDIFACT.

4.1.6 APEC Government Procurement Experts Group

Electronic Commerce in Government Procurement: Enabling Distributed Procurement

Government procurement has always been a subject of great debate from a governance perspective. There have been arguments on both the centralized and de-centralized side of the fence, with either camp claiming superior value for money, transparency, open access and lower administrative costs. The centralization camp is often accused of introducing process inefficiencies, while the decentralization advocates are blamed for not obtaining value for money by using the “collective bargaining power of the government”.

the use of EC in government procurement encourages participation of SMEs

The use of electronic commerce in procurement has brought dramatic improvements in selected government procurement sectors in many APEC countries. There are many successful, standalone electronic commerce based government procurement systems in use in the USA, Canada, Singapore, Korea, Australia and New Zealand to name a few.

It is further well accepted within APEC that the appropriate use of electronic commerce in procurement by the government as a model user that encourages and accelerates the participation of the SME sector is a cornerstone of rapid development of the information economy.

However there are two major barriers to the above goal.

critical that government departments within each economy coordinate their implementation of EC, otherwise SMEs will find it extremely costly

1. Individual efforts by individual government departments introduce multiple systems and catalogs. SME’s then have to be able to participate in each system/catalog in order to participate in the electronic marketplace. This is an entry barrier and thus keeps the large majority of SME’s away. Further, even if every APEC economy had one centralized system, a single mechanism of automated, transparent, open and accessible procurement must exist to enable the “Global Information Economy”. This mechanism will by definition need to be “distributed” in form. APEC governments need to address this barrier for a rapid take up of electronic commerce in their countries and the APEC, particularly by the SME sector.

2. According to a study by the National Association of Purchasing Management as early as 1995, in most organizations, the purchasing department only spends about 41% of the total purchase bill. Further the cost of processing low $ value purchases i.e. $100 cost more than the purchase value itself. The application of electronic commerce to the activities of the purchasing department is thus not sufficient to deliver the much hyped benefits of electronic procurement, both from the vertical and horizontal spread of purchases. This situation further creates another barrier to the SME’s from a “market coverage perspective”.

Deriving the fullest benefit of electronic commerce in government procurement and enabling ubiquitous participation of SME's, will require innovative use of electronic commerce.

This short presentation argues that modern electronic commerce offers unprecedented process innovation in government procurement practices It presents a case for the governments to practice distributed collaboration i.e. centralized and automated procurement for the entire enterprise (government) based on autonomous, distributed requisitions, approval and fulfillment.

4.1.7 Towards An Information Society: Developments In APEC (APEC Economic Committee, Oct 1998)

While efforts have been made to encompass all communities within the APII, more could conceivably be done to reassure low-income economies that they will significantly participate in the direct benefits from development of a regional information infrastructure. Most of the pilot projects within APEC to promote development of information technologies and applications are currently led by a few advanced economies.

Greater efforts could be devoted to designing projects that are of interest to, and attract the participation of, lower-income APEC members. Similarly, education and training within APEC could be further directed towards meeting the needs of lower-income economies that lack an adequate supply of well-trained information managers and workers. This would require that APEC training programs reach beyond the public sector to address certain important private sector training needs within APEC member economies. Developing member economies for their part must put a special emphasis on putting in place the policy frameworks to promote the evolution of the information society.

There is a need for ongoing efforts to ensure that APEC initiatives to promote the APII appropriately balance the need for liberalization and other market-based reforms with the need for cooperation and support for those economies with less developed information infrastructure. Current Ecotech initiatives need to be reviewed to determine whether existing programs of technical cooperation and human resource development need to be adjusted to focus more sharply on the requirements of developing economies.

4.1.8 Observations for APEC Work Agenda on Narrowing the Digital Divide

APEC Symposium "Transforming the Digital Divide into a Digital Opportunity"

Chinese Taipei, 24-27 July 2001

The APEC Symposium "Transforming the Digital Divide into a Digital Opportunity" was convened to discuss how every member economy can be appropriately equipped to benefit from the opportunities presented by a networked environment and how to assist developing member economies to improve their skills base in e-commerce at the application level. Symposium participants discussed a broad range of topics and developed the following observations to report to the August 2001 meeting of APEC Senior Officials at Dalian, China.

1. With regard to the **e-commerce climate**, participants:

- viewed with concern the recent slowdown of the global economy and recognized that APEC economies need to remain focused on efforts to generate digital opportunities.
- urged member economies to share experiences of best practices in the development of e-commerce infrastructure, including the drafting and enacting of laws enabling e-commerce, as well as the kind of difficulties encountered while addressing the digital divide. Participants agreed that effective ways for practical experience sharing include establishing databases on laws and regulations pertaining to paperless trading, consumer protection, e-commerce, etc.
- noted that the import high tariff rates on information and communication technology (ICT) products and their peripherals as well as the high costs of getting access to Internet services will impede the spread of Internet usage, hence deepening existing digital divide within individual economies or among APEC member economies.
- therefore encouraged member economies to take these concerns into consideration.

2. Recognizing that **small and medium enterprises** (SMEs) form the backbone to the development of APEC member economies, participants:

- encouraged the active participation of SMEs in the e-marketplace and global market and supported e-commerce development programs for SMEs.
- endorsed the APEC SME E-Commerce Plan as endorsed by Ministers in Brunei and recommended that SOM request relevant fora to follow up on this question.

3. With regard to **human resource development**, participants:

- commended the HRD initiatives underway in APEC fora and inside APEC economies.
- recognized that it is important for member economies to accelerate plans for education and training in the use of ICT and Internet-related products in order to build an environment conducive to e-commerce within a digital society, and that member economies are encouraged to establish budget targets to accomplish this.
- suggested that APEC investigate the feasibility of a public-private cooperation in order to establish a mechanism to accelerate the supply and distribution of refurbished or unmarketable computers equipment and software to groups or organizations in need and thereby encourage the spread of computer usage.
- recognized that e-learning plays an important role in addressing the digital divide issue and recommended that the establishment of voluntary standards and accreditation guidelines will help ensure the quality of the education provided through the Internet.
- noted with concern the existence of cultural and linguistic barriers and encouraged the establishment of an e-learning network, rich in local and regional content, that would allow our youth to share knowledge and also provide programs for lifelong learning.
- recommended that teaching resources be shared among e-learning institutions, organizations and websites in the APEC region through APEC's knowledge network.

4. With respect to **sustainable growth**, participants:

- recognized the importance of cooperation among APEC member economies on infrastructure/technological development and the creation of specific initiatives for technology and skills development to developing economies to narrow the digital divide.
- encouraged the development of independent rural community networks linking citizens, producers, and markets.
- recognized the vast potential of cyber-communities as well as e-government to bring convenience and cost savings to all people and businesses in the APEC region.

5. With respect to **connectivities** and **trade facilitation**, participants:

- agreed that there is an opportunity for APEC to take steps to facilitate the development of wireless communication and mobile commerce, among other communications media, and recommended that Senior Officials instruct relevant fora to report on appropriate actions in this regard in 2002.
- stressed the importance of cooperation on automated customs clearance and quarantine inspection practices to facilitate e-commerce in the APEC region, and encouraged continued cooperation on the compatibility of different customs procedures, the standardization of trade-related documents, and so on.

6. With regard to **APEC leadership**, participants:

- agreed that possible approaches to move the APEC agenda forward could include strengthening work in all APEC fora including ECSG, TEL WG and the E-APEC Task Force and increasing the participation of Senior Officials in e-commerce-related symposia and discussions to contribute toward improving the quality of their policy-making related to e-commerce.
- recognized that continuing to facilitate public-private sector exchanges on e-commerce development and cooperation within existing APEC fora would be valuable to better inform SOM of appropriate future actions.

4.2 TEL

4.2.1 Australia New Zealand, end-to-end Paperless Trading Trial (1992)

successful end-to-end paperless trading trial between APEC economies 1992

This project defined and implemented a full paperless scenario for the export of steel from Australia and the import of steel to New Zealand. All participants in the process were included in the project and it was able to demonstrate a paperless import/export process, including both commercial and regulatory documentation

4.2.2 APEC SME Electronic Commerce Survey, 1994

TEL conducted SME EC survey in 1994 to identify barriers

This report explores the opportunities and benefits for SMEs in the APEC region to use electronic commerce. It identifies the obstacles and barriers to greater APEC SME participation in the global electronic marketplace. It also examines areas where measures or initiatives – by governments or by others – might effectively address the inhibitors to SME adoption of electronic commerce. These include measures to improve market conditions, build trust and confidence in the electronic marketplace, address gaps in the information infrastructure, and build firm-level SME capability to participate fully in electronic commerce.

4.2.3 Electronic Commerce Awareness Seminars

At the 12th APEC TEL in Shanghai, China, AOEMA proposed holding a series of Electronic Commerce Awareness seminars for the region. The purpose of the seminars was to ensure that small businesses in the region understood the impact that electronic commerce will have on their businesses in the near future. The APEC TEL accepted the project proposal and since that time 25 sessions have been held around the region.

06/96 Philippines	09/98 Indonesia	08/00 India
11/96 New Zealand	02/99 China	09/00 Thailand
12/96 Malaysia	02/99 Korea	12/00 Malaysia
06/97 Philippines	06/99 Vietnam	4/01 Sri Lanka
06/97 Korea	06/99 Thailand	5/01 Thailand
07/97 Thailand	08/99 Brunei	5/01 Korea
11/97 Taiwan	11/99 Australia	9/01 Vietnam
02/98 Korea	05/00 Hong Kong	
05/98 Malaysia	06/00 Korea	

Progress of the concept

AOEMA EC seminars help SMEs understand the benefits

Since the initial seminars the concept of the project has progressed from a standard training course that was expected to suit all economies to a custom-designed program to best suit local needs and requirements of each economy.

The involvement of key people in the economies has been vital to the success of the seminars.

Lessons learned

The direct value to seminar participants has been in the question time and during breaks. The presentations have started people's minds working and they are thinking seriously about how this will affect them. Clearly most businesses are interested in the topic of electronic commerce but are struggling with two areas in particular;

- Understanding the benefits that they could gain from being involved in electronic commerce
- Finding the resources and expertise required to initiate an on-line presence

In addition to these two key concerns are the additional concerns of security, legality, payments and order fulfillment.

Experience has shown that many of these small companies are not yet comfortable with the on-line world to trust their business to an electronic environment. These people need to be socialized to the Internet in a non-threatening way. Community and government services are an ideal way to achieve these ends, therefore it is vital that governments become involved in offering information online, promoting the concept through advertising and example

Awareness is vital to the growth of an on line community, but there needs to be considerable support work to actually engage SME's in the process.

4.2.4 Internet and Electronic Commerce: Training on Java Base Technology for APEC Economies

The project aims to develop training modules and courses in Java based technology. Java is a language and computer software specifically designed for the Internet. It will attempt to identify gaps in government policies and strategies to encourage the practice of electronic commerce in business and government in the Asia Pacific region.

4.2.5 Integrated Next Generation Electronic Commerce Environment Project (INGECEP/Cyber Net)

INGECEP project demonstrates 'agent-based' business model and many lessons learned from the involvement of

Led by Japan, this project aims to help the extension of the global market through the development of new multimedia applications and security systems for electronic commerce. The project will concentrate on providing coherent services to clients both on broadband (IP over ATM) and narrowband (Internet) networks, with a view to filling the gap between large-size enterprises and small//medium size enterprises, and between developed and developing economies. This business project has now included a component concentrating on building consumer confidence. Japan is currently looking for a counterpart to participate in a joint project involving the marketing of products to consumers in Japan. They reported that the interconnection experiments between cyber malls reveal issues including methods of payment, transportation and tracking of products. The international interconnection trial began in 1998 and the interim report was presented to TEL 19 in March 1999.

4.2.6 Database of Existing Certification Authorities

AOEMA proposed that a database of Certification Authorities be prepared. The Electronic Authentication task group(EATG) of the APEC TEL Business Facilitation Steering Group(BFSG) has been working on the issues related to ensuring confidence in conducting business on-line.

Certification Authorities (CA's) are seen as an integral part of the electronic authentication process and this project was designed to gain an understanding of the workings of the CA's in the region. Since the start of the project the process of electronic authentication has become better understood and many of the strategies surrounding the operation of certification authorities have become more settled.

This report by AOEMA is an update on the information that has been gathered so far. This project will be ongoing and the information contained herein will be developed as time progresses.

www.aoema.org

4.2.7 Electronic Document Retention Recommendations

'code of good practice' established for document retention procedures

AOEMA Australia introduced document TELWG/19/BFSG/33 proposing that work be done to develop a voluntary guideline on retention of documents to support electronic working. This would bring some previous work by AOEMA within the APEC TEL environment, and could lead to a future training course.

The production and storage of documents on computer systems has become common practice. With the advent of electronic commerce this practice will grow significantly. It is therefore inevitable that these stored

documents will increasingly be used in their electronic form as a basis for business transactions, and will be produced, transmitted, and stored in significant numbers.

There has been much discussion about the value of documents stored on document management systems when required as evidence for a considerable time. It is crucial that a discipline is commonly agreed so that the value of these documents as evidence can be maximized. It has not been possible up to this time to produce a rule set. Instead, a Code of Practice needs to be developed which will evolve as the technology and electronic commercial practices mature.

This Code of Good Practice does not guarantee legal admissibility. It seeks to define the current interpretation of best practice.

This Code of Good Practice covers issues such as system planning, implementation, initial loading, and the procedures for the use of the system. It will pay particular attention to setting up authorized procedures and subsequently the ability to demonstrate, in a Court of Law, that these procedures have been followed. These Codes are available from AOEMA

4.2.8 Electronic Commerce Legal Issues survey

legal framework guide designed to assist SMEs

In 1996 AOEMA proposed to the APEC TEL that a study of the legal issues surrounding Electronic Commerce in APEC Economies be undertaken. This Guide is intended for use by both government and industry to understand their rights, responsibilities and exposure when using the Internet and other electronic communications technologies to conduct business in the APEC economies. It is especially designed to assist small and medium enterprises (SMEs). It is a first-level guide, not a legal text. It assumes you are already aware of the general legal and regulatory constraints governing your business in your own economy.

www.bakerinfo.com/apec

4.2.9 Study of International Charging Arrangements for Internet Services

In June 1998, APEC Ministers for Telecommunications and Information Industry called upon TEL to undertake "the study and, if and when appropriate, development, by their next Ministerial Meeting, of compatible and sustainable international charging arrangements for Internet services as electronic transactions become increasingly conducted over the Internet."(paragraph 11(c), the Singapore Declaration). Ministers also Ministers agreed to "encourage member economies to enhance access to the APII, particularly in Internet infrastructure, by expanding high bandwidth connectivity among economies. In this regard, Ministers request TEL to study how to create sustainable and equitable financing arrangements for the establishment of these links"

In December 2000 the Internet issues Task Group was formed to continue with the work started by the ICAIS task force.

Terms of Reference for the APEC TEL Internet Issues Task Group. The Task Group shall:

2.1 Continue to discuss and develop ICAIS, noting the initial suggestions made by the ICAIS Task Force that:

- Where measurement tools are available and acceptable, charging arrangements should be based on traffic flow patterns for each type of service, taking into account which side has generated the traffic.
- In the absence of efficient measurement tools, charging arrangements for international links should be based on the ratio of inbound to outbound traffic flow

2.2 If necessary, in order to gain independent information or research, commission consultancies or studies in accordance with the APEC Project Guidelines.

2.3 In conjunction with PECC or other relevant trade and industry associations, foster discussion between business/private sector and government parties on the appropriate means to assess and reward the value of products and services exchanged in the provision of converged Internet services among APEC economies.

2.4 Establish an online discussion group or "Virtual Forum" to solicit contributions and comments from qualified experts, as well as economy representatives. Industry support for this forum should be sought.

2.5 Synthesize the work of the four Steering Groups in relation to the larger Internet developmental issues.

2.6 Organize seminars on the margins of TEL meetings at which issues can be discussed amongst the public and private sectors.

2.7 Coordinate APEC TEL's work with that of other relevant international regional fora on ICAIS and Internet-related issues and act as the liaison point with these other fora.

2.8 Monitor progress on the application and implementation of the APEC Principles on International Charging Arrangements for Internet Services, including economy reports, as appropriate.

2.9 In close relationship with the Liberalization Steering Group of the TEL, and in accordance with the Ministerial directive, monitor progress of the application of the APEC principles of Interconnection, especially as they apply to Internet Services.

2.10 Record progress on these issues and report on them to the Plenary of the TEL.

2.11 Draft the appropriate report and recommendations to TELMIN 5 for the approval of the TEL

4.2.10 Survey on EDI implementation in Japan

SMEs implementing EDI find cost is excessive and paperless formats not acceptable for legal reasons

In today's Japan, it is universally recognized that the ability to conduct Electronic Data Interchange (EDI) among companies is an essential part of doing business. Yet hard, quantifiable, continuous survey data are almost nonexistent regarding the number of companies that have introduced EDI, the types of businesses in which it is applied, and the standards adopted.

Against this background, the Center for the Informatization of Industry (CII) and the Japan Electronic Data Interchange Council (JEDIC) conducted their second survey of the status of EDI in Japanese companies in 1998 (the first such survey was conducted a year earlier). This report is a summary of the findings of that second survey.

In this survey, we preferred a broad interpretation of EDI implementation. We included companies that are conducting EDI through industry and other independent agreements, as well as those using the CII and UN/EDIFACT standards. Also, it should be borne in mind that this survey of some 3,000 companies includes many firms whose introduction of EDI is quite progressive, such as JEDIC member companies, and can be taken to be much further ahead than the average Japanese company in this respect.

From the report the following issues were noted;

4) Issues in Promotion and Implementation of EDI

When asked about problems encountered in implementing EDI, by far the largest number of companies-over half in each case-stated that "cost is excessive" (52.9%) or they have "insufficient hardware and software resources" (51.0%). Next came the statement that "customers do not understand the issue" (33.5%). One item which was often cited as a big problem in the first and second surveys, that "paperless formats cannot be used for legal reasons," was removed from the list this year, because a change in the tax system in July 1998 resulted in the establishment of the Law Concerning Preservation of National Tax Records in Electronic Form, which permits the magnetic preservation of records. Problems with EDI cited by companies which had not implemented it were "insufficient hardware and software resources" (57.9%), "not enough progress in informatization in the company" (47.6%) and that it was "not necessary" (35.4%).4) Issues in Promotion and Implementation of EDI

4.2.11 E-commerce Readiness Indicators

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 focused 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 focused 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 assessed by determining relative standing of an economy in the areas most critical for e-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.

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.

http://www.ita.doc.gov/td/industry/otea/ecommerce/apec/docs/documents.html

4.2.12 Electronic Commerce Capability Building

Jointly proposed by Electronic Commerce Resource Center under National Electronics and Computer Technology Center, Thailand and University of Hawaii, U.S.A. It is endorsed by Business Facilitation Steering Group, APEC Telecommunications Working Group in March 2000. It will be carried out in 2 phases

Phase I : A survey report of Training and Human Resource Development Requirements and Needs and a workshop and report on Electronic Commerce Policy and Regional Cooperation

Phase II: A video on Electronic Commerce Development in APEC

Current status of project: (March 2001)

Phase I – Survey and Workshop

Preparation of stocktaking and monitoring other APEC projects as well as designing survey forms and content is now being undertaken by University of Hawaii.

The survey will include a critical review of all existing studies prior to this and field study of the current state of electronic commerce implementation. It will also involve extensive field research to deal with a difficult problem.

The survey forms will probably be circulated for comments at the first place and then distributed for completion to the regular points of contact of each economies, if agreed on.

Preparation of workshop gets underway by Electronic Commerce Resource Center.

The workshop will address and exchange views on electronic commerce policies and frameworks and enhance regional cooperation on cross certification and recognition. It will allow APEC members to review and evaluate alternative policy models and approaches that can assist different economies to achieve implementation of electronic commerce.

The tentative program has been drafted (Please refer to the attachment). Comments and suggestions by member economies are being sought and highly valued for maximization of program benefits/outputs.

Phase II– VDO

Preparation of RFP for VDO production is being conducted by Electronic Commerce Resource Center and will be circulated for an approval from APEC Secretariat and the Oversight Committee.

4.2.13 Joint Implementation of Survey of Actual EDI Conditions in APEC Region

Surveys conducted until now vis-à-vis Japanese companies were done from the two viewpoints of domestic transactions and international transactions, providing insights into trends among Japanese companies. Survey results obtained thus far indicate that international EDI is increasing thanks to the realization of EDI using the Internet and Web

technologies. Accordingly, it is believed important to conduct not only surveys vis-à-vis companies in Japan but also surveys about the status of EDI overseas, and perform transverse comparative studies covering groups of countries or areas. It is believed that such surveys, by allowing a full grasp of the status of EDI among business-related countries or areas will enable the implementation of joint measures to promote EDI.

Furthermore, expanding the scope of such surveys to include APEC members is expected to contribute to the promotion of electronic commerce and revitalize the economy in the APEC region. Japan (MITI) is recruiting members to participate in the joint implementation of surveys on EDI in APEC countries or areas that can be used for comparison purposes. First, taking as reference the survey items covered in Japan, survey items suitable for each area and joint survey items would be studied. Participation just for the study of survey items is also greatly welcome. However, the preparation, distribution, collection, tabulation and analysis would be funded by each economy individually.

4.2.14 Pilot Internet EDI project and Published Guidelines

The APEC/Internet EDI Pilot Project (the project) is a pilot project of Internet EDI that is easy to install even for SMEs (small and medium sized enterprises) that aims to promote the liberalization of commercial transactions within APEC and is a project proposed by Japan's MITI (Ministry of International Trade and Industry) an conducted with the cooperation of APEC members.

This project aims to promote the growth of commercial (business-business) electronic commerce transactions by evaluating readily available hardware and software to make Internet-EDI easy to implement, even for SMEs. Japan has published Guidelines for Implementing EDI over the Internet, which are available at the APEC Web Site.

Japan has published guidelines for SMEs implementing EDI over the Internet

These guidelines "Guidelines for Implementing EDI over the Internet" compiles the results of the pilot project "APEC/Internet Pilot Project" conducted by Japan's Ministry of International Trade and Industry (MITI) in order to promote more inter-APEC business transactions. It also lists points to be noted in the designing, constructing, implementing, and operating stages of Internet EDI which is easier and less expensive than the current EDI.

Implementation of Internet EDI by SMEs is essential in the spread of EDI and it is an urgent issue in not only Japan but also in APEC region. EDI software for SMEs is being developed but they do not seem to be sufficient in terms of function, user friendliness, price, etc. In this environment, pilot project were conducted between Japan and Malaysia constructing an Internet EDI using the open network of the Internet compared to previous systems. By gathering the information obtained from this project and the know how obtained from previous EDI education activities, these guidelines have been compiled for the purpose of assisting the implementation of simple and inexpensive EDI systems for SMEs that have more constraints in terms of information technicians and equipment.

4.2.15 SME Electronic Commerce Study (1999)

PricewaterhouseCoopers was selected by the Asia Pacific Economic Cooperation (APEC) Telecommunications Working Group (TEL) under its Business Facilitation Steering Group (BFSG) to undertake a survey and

study on electronic commerce adoption, uptake and use by small and medium enterprises (SMEs) in all 21 APEC member economies.

At the 1997 APEC Summit in Vancouver, the APEC Leaders and Ministers "recognized the importance of electronic commerce and accorded high priority to identifying ways to maximize its social and economic benefits for all APEC member economies."

"e-business promises to define the ground rules for commerce in the 21st century"

Companies around the world are acting on the same imperative. A recent report by PricewaterhouseCoopers points out that "the world's leading organizations are reorienting themselves around e-business … indeed, e-business promises to define the ground rules for commerce in the 21st Century."

But large multinational firms are only part of the e-commerce story. Many smaller firms have emerged to take prominent – even leading – positions in segments of the burgeoning global electronic marketplace. Indeed, one of the most important features of electronic commerce is the opportunity and promise it holds for SMEs to extend their capabilities and grow.

SMEs are significant players in B2B electronic commerce, which constitutes 80% of all e-commerce activity

Moreover, SMEs are significant players in business-to-business (B-to-B) electronic commerce, which constitutes more than 80 percent of all e-commerce activity. SMEs that can demonstrate their capabilities to use electronic commerce will have a competitive advantage in the B-to-B marketplace. For example, most of the large firms currently developing and implementing B-to-B e-commerce strategies typically engage SMEs in their supply chains. For these large firms, the rate at which SMEs adopt e-commerce and enhance their capabilities could affect the scope and timing of their B-to-B e-commerce implementation. Alternatively, SMEs that do not keep pace with electronic commerce may become marginalized as suppliers.

enhancing the role and participation of SMEs in the global marketplace through electronic commerce is of critical importance to APEC

Enhancing the role and participation of SMEs in the global marketplace through electronic commerce is of critical importance to APEC. SMEs are key to economic growth and productivity in all of the APEC member economies.

The aim of this study was to undertake a qualitative assessment of the adoption, uptake and use of electronic commerce by small and medium enterprises (SMEs) across all twenty-one APEC member economies. It investigated the opportunities, benefits and the real and perceived barriers to the adoption and use of electronic commerce among SMEs in the region. In particular, this study focused on early adopters of electronic commerce on the assumption that these companies are the best situated to identify and evaluate the opportunities, benefits and inhibitors for e-commerce adoption and use by SMEs.

The main objectives of this study were to assess the following APEC SME characteristics with regard to electronic commerce:

- A general assessment of SME adoption of electronic commerce and future usage;
- An assessment of how the SME community uses electronic commerce, with an emphasis on the potential opportunities and perceived benefits of e-commerce by SMEs;
- An assessment of the perceived impediments and barriers to the adoption and use of electronic commerce by SMEs;

- An assessment of how SMEs perceive security and legal issues, and their opinion as to their importance to the uptake of electronic commerce; and
- An assessment of how SMEs perceive economies' interventions to promote and support the adoption of electronic commerce.

The study results will help the TEL, BFSG and other APEC working groups develop future work plans and help guide their policy and analysis functions and technology pilot project selection. Publication of the study results should also help SMEs and their business partners in larger companies to fulfill the leading role that APEC expects them to play in the development of electronic commerce throughout the region.

The most significant barriers to electronic commerce adoption for participating SMEs in APEC member economies are:

- Low use of electronic commerce by customers and suppliers;
- Concerns about security aspects of electronic commerce;
- Concerns about legal and liability issues;
- High costs of computer and networking technologies;
- Limited knowledge of e-business models and technologies;
- Unconvinced of the benefits of electronic commerce for the company; and
- Quality of telecommunications services inadequate for e-commerce.

Participating SMEs identified several measures to address perceived barriers and thus to encourage wider adoption and use of electronic commerce. The most important measures to be taken by government or others identified by SMEs are shown in the table below.

SMEs identify need for improvement to telecommunications infrastructure as top priority

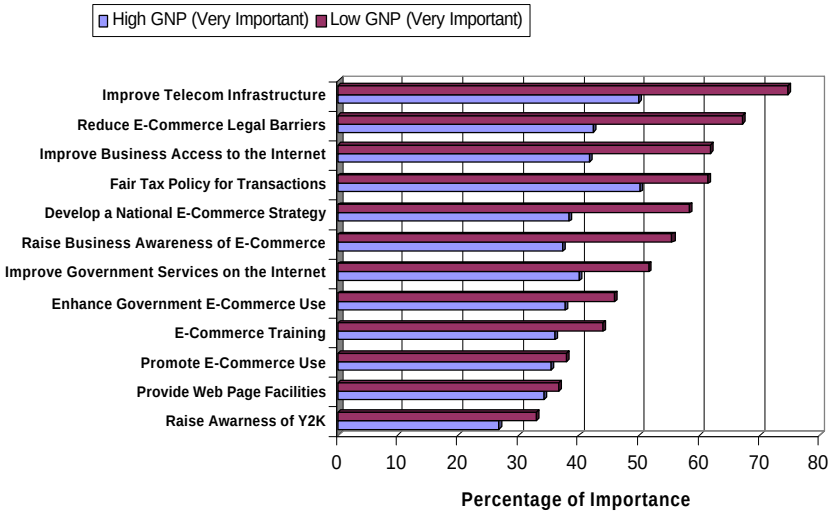


Exhibit 4.1: Measures to Increase Electronic Commerce Use among SMEs

This chart also shows that participating SMEs in lower-GNP economies are particularly convinced of the importance of government action. SMEs believe government has an important role to play in many areas in the development of electronic commerce, particularly in improving telecommunications infrastructure, business access to the Internet and addressing the legal and regulatory issues surrounding the use of electronic commerce.

Focus group participants often referred to the government's role in a variety of ways such as leader, promoter, facilitator, regulator, educator

SMEs in APEC economies believe governments have an important role to play in enabling SMEs to benefit from EC

and financier. While many SMEs believed that the government's main role should be that of a facilitator, SMEs in lower-GNP economies typically placed a significantly higher degree of importance on the role of government in the development of their own electronic commerce capabilities. For example, key informants in Malaysia suggested that the government plays, and will continue to play an important role in leading the adoption of electronic commerce amongst SMEs. By setting up the National Framework for E-Commerce, the Malaysian government is attempting to address important e-commerce issues such as infrastructure, security, cyber laws, customs and taxation, finance and trade.

Further, key informants suggested that there is a growing emphasis on government agencies working collaboratively with trade associations and private companies to come up with new initiatives in support of the adoption of electronic commerce.

Price Waterhouse Coopers' research confirms that SMEs in the APEC economies believe that governments have an important role to play in enabling firms to be competitive by promoting the development of electronic commerce. Measures identified by the study to be taken by individual APEC economies might include the following:

Developing the telecommunications infrastructure to improve business and consumer access to the Internet and to electronic commerce. This action was identified to be of particular importance for SMEs from lower-GNP economies. Specific initiatives might include measures to encourage the development of Internet Service Providers (ISPs), liberalization and regulatory reform to increase competition in the provision of telecommunications services and encourage lower rates and service innovation.

Enhancing the climate for investment including measures to attract and retain venture capital and investment in SMEs with potential for rapid growth. SMEs that could benefit from this type of investment include new start up e-business firms and other more traditional enterprises that are now implementing their electronic commerce strategies.

Enhancing the domestic market for electronic commerce. This step might include measures to ensure consumer and supplier access to the Internet and to appropriate electronic payment systems, the enhancement of consumer protection, and the maintenance of business ethics and good business practice in electronic commerce.

Addressing legal and liability concerns including measures to strengthen the domestic legal framework, such as: ensuring the validity and enforcement of contracts, intellectual property protection including copyright and trademark protection, and legal recourse mechanisms in disputes.

Addressing security issues to build trust and confidence in the electronic marketplace, including measures to ensure the authenticity of electronic documents, and the privacy and confidentiality of personal and corporate records.

Ensuring that fair taxation is applied to electronic commerce transactions including measures to ensure that transactions, conducted via electronic commerce receive neutral tax treatment relative to non-electronic transactions.

Raising business awareness of electronic commerce, including measures to promote greater awareness of the opportunities and benefits of electronic commerce for SMEs, such as training and skills development programs, and the distribution of best practices.

SMEs believe governments can improve uptake of EC if government procurement and government services go online

Enhancing government use of electronic commerce, including measures to promote government use of e-commerce in areas such as government procurement and the provision of government services that encourage the wider adoption of e-commerce among SMEs and other firms. While participants varied in their recognition of its value, we believe that government can play an important role as a model user. Further, Governments in lower-GNP economies may be able to benefit from the lessons learned by those in higher-GNP economies as they implement electronic commerce in their dealings with both businesses and consumers.

A copy of the report can be found at

http://www.apecsec.org.sg

Under "APEC Activities" "APEC Fora" "Telecommunications and Information Working Group"

4.2.16 DNS Survey

In September 2000 at APEC TEL22 AOEMA presented a report on the status of the Domain Name Registration Process in the APEC Region. The results are summarized as follows;

The domain name registration process is changing rapidly, particularly in the generic level domains. The management of the naming structure of the Internet has opened the provision of generic domains to the market and now there are many organizations that are able to provide domain name registration services.

In addition to this a whole new economy has grown up around the buying and selling of domain names.

AOEMA has published a comprehensive guide to the domain name registration process for all APEC economies

Meanwhile country level Domain Name Registration Authorities(DNRA) have their own problem. Most are struggling with being able to hire and retain qualified staff. The need for Internet skills is high and these skills are at a premium today.

In recent times, most DNRAs have come to terms with the dispute resolution process that has been internationally agreed to and many have adopted the international rules to some extent.

Automated registration services are not available from all DNRAs and instantaneous registration is rarely available due to the need to check on the current ownership of the name and whether the registering company is entitled to the name.

Costs vary widely depending on the economy from being free in some to one to two hundred US dollars in others. No country level DNRAs in the APEC economies operate in a competitive environment (i.e. more than one DNRA in the economy) at this time but there are some that are moving in that direction. Australia and Canada are notable examples of this process.

Language and alphabet differences in the region are broad but the Internet today is still largely English based. Those economies having the different language are working closely with those committees that are trying to establish a multi-lingual environment for the Internet.

While there are many issues that each DNRA is dealing with and there are many technical issues behind the process, this will be transparent to most businesses. They will find it relatively easy to identify and abide by the rules associated with establishing domain names in all the economies in the region

A copy of the report can be found at www.aoema.org

4.2.17 Database of SMEs in the region

As economies around the globe bring their Yellow pages on line, small businesses are finding that, by default, they are appearing on the web. The major problem is that, while a company may be in a Yellow pages database, they are still very hard to find unless the searcher has knowledge of them. Even if an organization is found, it is not always apparent if they can do what is required.

There are many other types of business databases around now as well. These databases have some information about products and location and are often associated with some B2B e-commerce portals.

capabilities database for SMEs in APEC region being developed

What is lacking for our region is a database of companies that includes a statement of capabilities. A clear understanding of a company's capabilities gives a prospective buyer a clear understanding as to the supplier's ability to fulfill a contract. The capabilities might include products manufactured, equipment available, types of jobs that can be undertaken, etc. For instance:

- A manufacturing company has certain types of presses and lathes that are relatively unique and has the skilled staff to handle them.
- A software house has specialty in PL1 programming including available skilled staff.

In a typical search of a Yellow pages directory, this type of information is very hard to find. What we are proposing is a database that is fully searchable thus revealing this type of information.

The benefit of being able to search on capabilities is that it could open new business opportunities for small and medium businesses in our region.

The aim of this project is to provide a capability database (search engine and company data) for those internet users who want to search out products, technologies, services or skills. Non-profit organizations (e.g. government, non-profit associations, NGO's) who have company information applicable to this purpose can supply their data to this database free of charge.

We have implemented the ability to store information in multiple languages, as it is an essential requirement of any database for this region.

To search the database go to www.aoema.org

4.2.18 International Multilingual Trade Project

The APEC region is rich in human resources and business knowledge. Across the APEC economies there are many millions of small businesses with a valuable role to play in the development of the region's economy. Many of these businesses, however, are precluded from doing business outside their own economy due to language barriers.

This means that a rich and varied reservoir of products and resources are being denied the broader business community in our region and around the world. For instance, many small manufacturing companies in the city of Ota in Japan are well known for their technological advancement and specialization in machinery and electronics, however these SMEs are not comfortable doing business in languages other than their own.

international multilingual project demonstrates how SMEs can overcome language barriers

For medium and larger organizations, it is only a matter of purchasing or hiring the skills required to conduct business across different languages and cultures. For most SMEs, however, the cost is prohibitive or they just don't know how to go about the process.

To address the issue of language translation for purposes of conducting online business transactions, the University of Illinois at Chicago is incubating a new research firm known as Cyber Tigers. The initial scope of this research firm was to develop language translation capabilities for basic business procedures. While considerable work has been done to date, Cyber Tigers is now looking to take this research out of the lab and apply it to real business situations. The methodology that is being used is called TigerTalk

Cyber Tigers and AOEMA have been exploring possibilities for extending this research project into the real business world of the APEC region and to involve various SMEs for purposes of testing and refining the language translation software products being developed by Cyber Tigers.

AOEMA and Cyber Tigers propose to further develop the software and the business transaction procedures by entering into a test phase in the APEC region. The idea is to work closely with SMEs to determine exactly what is needed, including translation, clarification of government rules and regulations, matching up with financial arrangements, shipping and logistics, etc. The end result is to enable two international parties to complete an end-to-end business transaction in their respective native languages.

To try out the system go to www.aoema.org

4.2.19 International B2B Interoperability Project

This project has been broken into three parts to be able to address the issues surrounding the interoperability of conducting B2B transactions in an International environment.

Business Process Interoperability

Catalogs and other business process interoperability among the linked MPs are as follows:

- Catalog
- Purchasing

- Language Translation
- Participant System

Infrastructure Interoperability

project dealing with 3 critical areas of interoperability – business process, infrastructure, systems

The infrastructure is defined as all sorts of elements and features that support any B2B marketplaces and their participants. The infra-related issues are as follows:

- Payment Issue
- Fulfillment Issue
- Security & Authentication Issue
- Infrastructure Information Adoption Issue (Tariff, Currency, Credibility etc)

System Interoperability

This issue is based on the results of mentioned above. Systems interoperability issues shall be presented when the infrastructure and business process interoperability issues are specified.

4.2.20 APEC e-Business: What Do Users Need?

Prepared for the APEC TEL by CSIRO (Australia)

This report attempts to characterize some of the business and technical challenges that companies face in moving to this new on-line world. Where appropriate, the issues concerning SMEs and international e-commerce are addressed specifically. It also summarizes the range of technologies that are available, including payment, security, messaging and 'off-the-shelf' packaged solutions.

The report concludes with an analysis of the major issues and challenges for adoption of international B2B e-commerce for SMEs. Finally, recommendations for actions to mitigate some of these issues are suggested.

The Way Forward

Technology is important but ideally needs to serve business issues rather than drive them. Some strategies that might be employed are outlined below.

- Use of low-cost ‘Web services’ technology might prove beneficial by easing integration with existing supply-chains. Integration with typical desktop accounting and business planning packages would be valuable to investigate.
- Similarly, the use of low-cost collaboration design technologies is of interest. In the future, large and small supply-chain partners alike might adopt tools that are easy-to-use. Again, integration with typical desktop accounting and business planning packages would be valuable to investigate.
- Use of open standards, based on XML, for business messaging should be adopted where possible. The complications that arise from interoperation between proprietary software across organizations are important factors that need to be taken into account.
- Integration solutions using open-source (i.e. public domain) integration technology are now possible. The costs and benefits for

technology important, but ideally needs to serve business issues rather than drive them

restricted budget, restricted functionality integration scenarios could be investigated.

- Leverage existing systems. In general, vendors provide limited integration across the enterprise, so business should use existing infrastructure and build an integration layer on top of it. Using wrapper technology, or interfaces using Web services, will insulate the legacy system and ultimately make the solution more flexible.
- The value of traditional message-based integration should not be forgotten. This provides a simple solution for distributed transactions. Using distributed components and messaging is another feasible approach to achieving real-time business integration.

4.3 ASEAN

Report of the e-ASEAN e-commerce industry dialogue held on 5th April 2001, Hilton Hotel, Singapore

The inaugural meeting of the e-ASEAN E-Commerce Industry Dialogue held on 5th April 2001 in Singapore was very well attended. A total of more than 50 participants representing the industry, government agencies and academia attended this first dialogue. A very lively and informal discussion covering a variety of issues took place over the course of the discussions.

Summary of Discussions (excerpts taken for this report)

Standardization and Harmonization Issues

There was a lot of interest on questions relating to standardization and harmonization, such as how to strike the balance between legislated standards and industry driven standards. Some participants stressed that ASEAN should ensure that their standards were consistent with international standards such as ISO/IDC, JTC1 and XML. They urged ASEAN public sector to look into how their standards bodies, such as Singapore's PSB and Malaysia's SIRIM, could collaborate in developing regional standards consistent with international norms.

There were also concerns expressed that standards should not be rigid or specific to any platform but should be open.

There were also suggestions that an ASEAN standards framework could include guidelines on competencies and common skills sets.

E-Commerce Legal Infrastructure

ASEAN EC group targets standardization, legal infrastructure, e-payment systems and digital divide as key issues

On the subject of e-Commerce legal infrastructure, participants observed that only 3 out of 10 ASEAN countries have e-Commerce laws. They also wanted to know if the Task Force was helping to promote UNCITRAL as the best model and whether there was a mechanism to regularize it. The EATF Secretariat responded that a few other countries were working on their own e-Commerce laws. A Reference Framework for EC Legal Infrastructure has been endorsed, and countries preparing their laws have been advised to use the UNCITRAL Model Law as the baseline and the Reference Framework as guide to minimum requirements. Presently, there was no mechanism to regularize the process.

E-Payment Gateway System

Some participants proposed that the Electronic Payment Gateway System should be linked through a common system, with images of cheques sent and cleared electronically. The regional clearing system should also include clearing of US currency, as it was currently routed back to the US for clearance. There had been complaints from merchants as this system took much longer to clear the cheques and credit card transactions. The body was informed that the ASEAN Bankers Association is currently working on a regional e-payment gateway.

Bridging the Digital Divide

Raising the concern on digital divide, some participants commented that there was disparity in the level of development of Internet Infrastructure as well as Internet competency amongst ASEAN countries. They were of the view that more emphasis should be given to the idea of an ASEAN Regional Internet Exchange (ARIX) and also proposed that a learning environment be created. They suggested that positive pressure be put on ISPs in the region to get them to be more co-operative to bring ASEAN up to speed.

Participants also felt that e-ASEAN should also focus on education and spend more on learning aimed at bridging the digital divide. Representatives from Malaysia and the Philippines shared their national programmes to bridge the digital divide. Notably, at the national level, Malaysia had introduced a National Internet Literacy Programme, which aims to train 2 million users in the next two years. However, there is limited funding and collaboration between the government and industry to ensure no overlapping of effort. The Philippines has also introduced the pilot project SchoolNet, which aims to provide connectivity to the high schools in the Philippines and to use the high schools as entry points to the community.

The following three components were highlighted as necessary to bridge the digital divide in ASEAN:

- Access to the Internet & technology
- Ability to use the services, and
- Availability of Content and Applications that will drive use.

4.4 ITU

The ITU, headquartered in Geneva, Switzerland is an international organization within which governments and the private sector coordinate global telecom networks and services.

The ITU is the leading publisher of telecommunication technology, regulatory and standards information.

http://www.itu.int

4.4.1 Asia-Pacific Telecommunication Indicators 2000

The publication consists of three parts: an analytical overview, regional statistics and a directory of telecommunication organizations. An overview of the region’s telecommunication sector is the subject of the analytical overview. It looks at regulatory and policy developments with a focus on the fast moving mobile and Internet markets. The statistical

section consists of regional indicator tables covering fixed, mobile, Internet and broadcasting data. Data is for year-end 1999, where available. A listing of the region's top operators by revenue and mobile and fixed subscribers is also provided. The directory section consists of the names and web sites of telecommunication ministries, regulators and facilities-based telephone and cellular operators in the region.

Highlights from this report:

Asia-Pacific's Growth – In the 1990s, the Asia-Pacific region emerged as the economic powerhouse of the coming millennium. The populations of the economies that circle the Pacific Ocean are younger, more dynamic and more entrepreneurial than those that surround the Atlantic Ocean. History, economics and demography are on their side.

The Information and Communications Technology (ICT) sector of the Asia-Pacific region exemplifies this shift in the world's power balance. There were almost three times as many telephone users in the region at the end of the decade as at the start. Asia-Pacific has been expanding, not only in absolute terms but also in its relative share of the world market. Asia-Pacific's one-quarter share of global telephone users in 1990 had become a one-third share by 2000. By the end of this decade, it could stretch to as much as 46 percent. By that time, two out of every three new users added to the world's telephone networks will be Asian.

In the mobile world, the changes are, if anything, even more striking. At the beginning of the 1990s, there were fewer than one million mobile users within the region. At the start of 2000, there were around 170 million. By the year 2010, Asia-Pacific could account for half the world market.

In the Internet too, while the region still lags behind North America and Western Europe, the fastest growing markets are those of the Asia-Pacific. One of the factors that is driving this growth is the high current level of investment in new international capacity across the Pacific region, notably in undersea cable and satellite infrastructure.

By the end of the current decade, the Asia-Pacific region will represent close to half of the total world market for telecommunications. Countries that currently have a teledensity (telephone lines per 100 inhabitants) in the range of 5 to 10 (such as China or Thailand) will have a teledensity over 30 by 2010, and those that are currently in the 1 to 5 range (such as India or Vietnam) will have a teledensity above 15. In all of those countries, ownership of mobiles will exceed that of fixed-lines, which means that a majority of families in those countries will have access to telecommunications in some form or another.

Asia rather than Europe may be the real trend-setter for mobile communications

From handyphone to I-mode: In the fast-growing field of mobile communications, it is often Western Europe that steals the headlines. However, there are a number of reasons to believe that Asia rather than Europe may be the real trend-setter for mobile communications:

1. The sheer density of the region, its large market size and even larger market potential as well as its propensity for rapid technological adaptation suggest that Asia-Pacific could shape the future of mobile communications. The two largest mobile companies in the world by number of subscribers, China Mobile and NTT DoCoMo, are both from the region.

2. One reflection of the diversity is the number of different mobile systems in use. Most regions have standardized around one or two core mobile technologies. In Asia-Pacific there are over half a dozen mobile technologies in operation, more than in any other region.
3. In spite of Indonesia's economic and political crises, mobile growth soared more than 100 percent in 1999, adding around one million new subscribers. It is projected that another million subscribers will be added in the year 2000. So, if Indonesia, even under such dire circumstances can triple its number of mobile subscribers, imagine the potential in other countries with far fewer problems.
4. The Republic of Korea and Chinese Taipei have joined Hong Kong SAR, long the competitive market leader, as being among the most open markets in the region. It is significant that these three economies were the first in the group to have more mobile than fixed telephone subscribers. Singapore, where mobile competition has been more restrained, was the last.
5. One of the most dynamic mobile markets has been the Philippines, which emerged as the largest ASEAN mobile market in 1999 and where the number of mobile telephone subscribers will pass the number of fixed during the year 2000. It has the region's largest pre-paid market, with over 80 percent of mobile cellular subscribers using airtime call cards.
6. Currently Korea is the leader in the use of WAP. However, mobile Internet has been plagued with problems.
7. Japan was the first country in the world to launch mobile Internet services when NTT DoCoMo started its i-mode service on 22 February 2000. In one year there were five million subscribers; six months later this had more than doubled. At the end of September 2000, more than 12 million people were using i-mode. Along with two other mobile Internet services, around 40 percent of all Japanese Internet surfers are logging in from a mobile. NTT DoCoMo is now the world's second largest ISP, after America Online (AOL).
8. While there is much talk about using the mobile handset as the window to the web world, a more practical use might be as a dial-up telephone for connecting computers or Personal Digital Assistants (PDAs) to the Internet. First of all, the screen on a mobile handset is small and not ideally suited to intensive web surfing. Indeed, WAP-based services do not allow access to non-compatible and non-portal web sites. Second, improved access speeds for mobile phones make them as fast as or even faster than fixed-line dial-up.

Internet in Asia-Pacific:

1. The region is also rife with deep differences in Internet access. While over one fifth of adults online in the developed economies of the region, less than one percent are using the Internet in the developing countries.
2. The contrasts are striking. Australia has four times more Internet host computers (one million) than all developing countries in the region combined (241,000), even though Australia's population is less than one percent of that of the region's developing countries. There are as many Internet users in the city of Singapore (900,000) as there are in all of its southern neighbor Indonesia, even though the latter has 50 times the population.
3. B2C e-commerce in selected Asia-Pacific economies (% making purchase):

Japan	55.8%
Taiwan	10.0%
China	9.0%
Singapore	8.0%

less than one percent of APEC developing economies using the Internet compared to over one fifth of adults online in developed economies

Korea	7.7%
Australia	5.0%

4. Books tend to be the most popular item purchased over the Internet.
5. The obvious problems are holding back the development of e-commerce in the region. In developing nations these include infrastructure limitations and low-income, while security and awareness are concerns in more developed economies.
6. The average Internet penetration in the region's developing countries was 0.5 percent at the end of 1999. In contrast Internet penetration in the region's more developed economies was over 20 percent. This makes it clear that low income is a major barrier to Internet access since it costs money to purchase a personal computer and pay Internet access charges. If the Internet is to expand in developing nations it must be through shared access. This is already evident when comparing the number of users to the number of subscribers. On average, less than two users share an Internet account in the region's developed economies, while in the developing ones, more than three users share the same account.
7. The development of public Internet access facilities is thus of major importance for expanding Internet access in the region. Shared facilities such as cyber cafes are a significant way of accessing the Internet for many developing countries in the region. Some ten percent of China's Internet surfers access the Internet from cyber cafes, compared to two percent in Singapore where incomes are higher and home access is much more prevalent. In the Republic of Korea, it is reported that over 43% of users access the Internet from cyber cafes. This has helped push that nation into the second largest Internet market in the region.
8. One problem the region has is that while governments voice good intentions regarding enhancing Internet access, these statements have difficulty being translated into action and are occasionally contradictory. There is a complex relationship between governments and the region's telecom operators, which in many countries are fully or partly-government owned. Thus what sometimes may be good for the nation may not be good for the national telecom operator and it is inevitably the latter that wins.

   One example is Thailand where all ISPs must be partially owned by the state-owned Communication Authority of Thailand. IT is argued that this restriction has held back the Internet industry and results in higher prices. Another example is Indonesia where the government stated that foreign investment in telecom and Internet business would be restricted. It later reversed itself after significant outcry, particularly from small domestic multimedia companies eager to attract overseas investment and know-how.
9. Another factor influencing a number of governments' Internet policy is content. Several are worried about access to political content that they fear would undermine their authority. Myanmar still does not allow unrestricted full Internet access, China seems confused about its Internet policies and newer ASEAN members also hesitant about promoting widespread Internet access.
10. Few governments have gone as far as Singapore's in concretely promoting an e-culture. Singapore has devoted a significant share of government spending to Information and Communication Technology (ICT) and has been successful at carrying out ICT plans. The government's website and e-citizen portal are unprecedented in providing online government services and information. Not content with having the highest household Internet access rate in the world, it is now devoting resources to bringing late adapters of ICT online. For

example, it has launched programs to develop Chinese, Tamil and Malay content and to get those communities connected.

Table 4.5: Dial-up Internet access prices in Asia-Pacific

Prices for 30 hours dial-up use per month (valid as at October 2000). US$ (Selected APEC economies):

Economy	Total (ISP + call charge)
Singapore	11.12
Malaysia	12.37
New Zealand	12.99
Thailand	13.21
Brunei	13.47
China	15.22
Hong Kong	24.02
Philippines	26.20
Australia	32.39
Korea	33.32
Indonesia	36.66
Vietnam	42.21
Chinese Taipei	74.29
Papua New Guinea	74.81
Japan	81.21
Average for 15 APEC economies	**33.57**

Singapore's average monthly Internet access charges were the lowest when compared to 14 other APEC economies in October 2000

4.5 OECD

4.5.1 The Work of the OECD on Electronic Commerce

http://www.oecd.org/subject/e_commerce/

This is an excerpt from a paper written by John Dryden, Head of Information, Computer and Communications Policy at the OECD, Paris, and highlights the global context of policies for the governance of e-commerce and outlines the current and potential role of the OECD and other international bodies in this new policy terrain.

Given the "born global" nature of electronic commerce, there is a need for globally interoperable policy solutions, both for the global electronic marketplace itself, and for digital infrastructure development. It is instructive to take the approach of the European Union as expressed by the actions of the European Commission, for example in the context of the development of the single market, and contrast it with that taken in other countries, notably the U.S. The next question is what this means for global electronic commerce and how national and regional approaches can be made to converge, to co-exist and to interoperate.

need globally interoperable policy solutions

Regarding the broad principles on which electronic commerce policies should be based, one is more struck by the degree of consensus rather than the areas of disagreement. The areas of consensus and disagreement emerge clearly enough from statements such as the US/EC joint statement on electronic commerce. (Joint statement released in conjunction with the E.U./U.S. Summit, Washington, D.C. December 1997).

There is a strong case for global supranational initiatives as complementary to national policies or regional governance. The potential role of the OECD and the other international bodies of global scope who

are active in the area is clear. Nevertheless, it is up to countries, individually and collectively, to decide how best to use these bodies.

The emergence of electronic commerce heralds a major structural change for enterprises and economies, particularly those of the OECD Member countries. It provides enormous opportunities for market-led growth and is expected to produce profound, positive, societal change. Growth rates are extraordinary. Even the most conservative estimates of the volume of transactions speak of a doubling every year. The U.S. research company Forrester predicted that the global Internet economy will be worth USD 3.2 trillion in 2003, up from USD 80 billion in 1998. This would be about 5% of the world's GDP.

global Internet economy estimated to be around 5% of world's GDP

Developing a coherent policy approach to electronic commerce is a challenge not only to enterprises seeking to exploit the potential of global markets, but also to governments and international organizations alike. At the OECD itself we recognize that electronic commerce will be an essential part of the economy of tomorrow. A study in the U.S., referred to in last year's annual report on the Emerging Digital Economy, told us that information economy-related activities accounted for one-third of the economic growth and one-third of the job creation. In fact, the earnings of those electronic commerce jobs were one-third higher than the average.

Clearly, much of the growth, incomes and jobs are being created in the "e-conomy", but relatively little is understood on how it works or how policies can be developed which will maximize its benefits for all strata of society. In fact one hears more and more concern about the "digital divide", which refers to the risks of the digital economy accentuating the gulf between the "haves" and "have-nots" within and between our societies.

http://www.oecd.org/subject/e_commerce/

4.5.2 OECD Reports on Electronic Commerce Issues

The following reports from OECD cover a range of subjects and issues relevant to Electronic Commerce

Digital Divide

To what extent is there a "digital divide" measured across OECD countries and within OECD countries? How big is the divide, how rapidly is it changing, and in what directions? To what extent are different social, cultural, business and spatial characteristics important? To what extent are rapidly diffusing new technologies reducing or changing the nature of the digital divide? What are the responses of governments, firms, workers and individuals to issues raised by the divide? How can we improve the common information base on the digital divide?

Business-to-Consumer Dispute Resolution

Online alternative dispute resolution mechanisms (ADR) hold the promise of providing fast, low-cost and accessible redress for a large number of small claims and low-value transactions arising from business-to-consumer (B2C) online interactions. A conference was help to explore these issues. The conference provided an opportunity for presenting, discussing and disseminating information on the diverse range of existing

online ADR mechanisms. Participants also explored how online ADR can improve trust for global electronic commerce by helping to resolve B2C disputes arising from privacy and consumer protection issues.

Enhancing the Competitiveness of SMEs in the Global Economy: Strategies and Policies

Governments worldwide have come to recognize the importance of SMEs and their contribution to economic growth, social cohesion, employment, regional and local development. Today, globalization and technological change bring new opportunities for SMEs to enter foreign markets and to reduce business costs, but there are also transition costs, new competitive challenges and risks.

Purpose is to increase the understanding of issues and policies related to SME competitiveness in the global economy – in particular, with regard to innovation, clusters and industrial districts, and electronic commerce – and to propose concrete and feasible initiatives through which the globalization of SMEs may be facilitated.

Electronic Commerce: Opportunities and Challenges for Government

emergence of electronic commerce represents major structural change, bound to affect the economic environment, the organization of firms, the behavior of consumers, the workings of government and all spheres of human activity

The emergence of electronic commerce represents a major structural change, which is bound to affect the economic environment, the organization of firms, the behavior of consumers, the workings of government and all spheres of human activity at global scale. How can we best promote electronic commerce? What economic principles should be adopted in light of this new electronic environment? This report by a group of leading business users assesses the current scope and economic future of electronic commerce. Strategic recommendations are addressed to governments with a view to facilitating the development of electronic commerce and maximizing its contribution to the creation of new businesses and jobs

Gateways to the Global Market: Consumers and Electronic Commerce

Information technology, especially the electronic network known as the World Wide Web, is changing the way that businesses and consumers interact. This expansive electronic network allows both businesses and consumers to transcend global barriers, gaining access to products and information in ways that were once unimaginable. However, traveling outside the realm of the terrestrial marketplace with its commercial and geographic restraints can also mean moving in an unpredictable environment without the security that traditional marketplace practices and consumer protection laws provide.

The Economic and Social Impact of Electronic Commerce: Preliminary Findings and Research Agenda

Though only three years old, electronic commerce over the Internet has the potential to transform the marketplace. E-commerce will change the way business is conducted. Traditional intermediary functions will be replaced, new products and markets will be developed, and new relationships will be created between business and consumers. It will alter the way work is organized and open new channels of knowledge diffusion

and human interactivity in the workplace. Workers will need to be more flexible as their functions and skills are redefined. The changes e-commerce will bring are far-reaching. They require new frameworks for doing business and a re-examination of government policies relating to commerce and skills. What is electronic commerce? What is the current state and likely future direction of e-commerce? What are the drivers and what are the inhibitors? What is its impact on costs, prices, and ultimately on economic efficiency? How is it affecting intermediaries? How do firms compete in the electronic environment? What market structure is likely to emerge? What is the impact on jobs? What types of skills will be needed? What major societal transformations will it entail? The full impact of e-commerce remains to be seen.

A New Economy? The Changing Role of Innovation and Information Technology in Growth

What is driving recent growth in OECD countries? Why is it that their levels of GDP per capita are no longer converging? Why is it that some countries, operating at the technological frontier, where advances are difficult, appear to be widening the gap? Whether or not it is appropriate to speak of a "new economy", innovation and technology play crucial roles. This study shows that success requires not some silver bullet, but a range of complementary factors that support the innovation-intensive growth exemplified by new information and communication technologies such as the Internet and Internet applications like electronic commerce.

Guidelines for Consumer Protection in the Context of Electronic Commerce

This publication is designed to help ensure that consumers are no less protected when shopping on line than they are when they buy from their local store or order from a catalogue. By setting out the core characteristics of effective consumer protection for online business-to-consumer transactions, the Guidelines are intended to help eliminate some of the uncertainties that both consumers and businesses encounter when buying and selling on line.

OECD Information Technology Outlook 2000: ICTs, E-commerce and the Information Economy

IT is significantly affecting the economy, the growth and structure of output, occupations and employment and how people use their time. The OECD Information Technology Outlook 2000 describes the rapid growth in the supply and demand for information technology goods and services and their role in the expanding Internet economy and looks at emerging uses of information technology. It reflects the spread and diversity of a technology that is underpinning economic and social transformation. It makes use of the new official national sources of data which are becoming available as statistical mapping of the information economy improves.

Taxation Aspects of Electronic Commerce

As part of its continuing work on the taxation aspects of electronic commerce, the OECD is releasing a comprehensive set of reports and technical papers that illustrate strong progress toward implementation of the Ottawa Taxation Framework Conditions. Taken together these reports

represent a major step forward toward reaching an international consensus on the taxation treatment of e-commerce.

The Digital Divide: Enhancing Access to ICTs

This Workshop examined access and pricing trends related to the digital divide within and across OECD countries, focusing in particular on ICT access, use and impacts. It addressed five broad topics: To what extent is there a "digital divide" measured across OECD countries and within OECD countries? How big is the divide, how rapidly is it changing, and in what directions? To what extent are different social, cultural, business and spatial characteristics important? To what extent are rapidly diffusing new technologies reducing or changing the nature of the digital divide? What are the responses of governments, firms, workers and individuals to issues raised by the divide? How can we improve the common information base on the digital divide?

Understanding the Digital Divide

The term "digital divide" refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to their opportunities to access information and communication technologies (ICTs) and their use of the Internet. It reflects differences among and within countries, and raises a number of questions. Where does it occur and why? What are its causes? How can it be measured? What are the relevant parameters? How wide is it? Where is it most critical? What are its effects likely to be in the short term? In the longer term? What needs to be done to alleviate it? These questions have only recently been raised, and it is not possible, as yet, to answer all of them with any certainty. This brochure presents data from the work of the OECD's Directorate for Science, Technology and Industry (DSTI) and is part of an ongoing OECD effort to measure the extent of the so-called "digital divide", a topic that is currently receiving a good deal of attention.

E-Commerce for Development: Prospects and Policy Issues

This new document analyses the potential contribution of the Internet and its commercial application to the development process in poor countries.

E-Commerce: Impacts and Policy

This document assesses the potential outcomes and economic impacts of e-commerce in the business-to-business and business-to-consumer spheres.

apart from the U.S. only about 10% of Internet users make purchases over the Internet and these are typically small value transactions

On B2C: Despite the extremely rapid growth in B2C e-commerce sales, they still account for a very small share of overall transactions. In the United States, where most Internet transactions take place – and largely among U.S. residents – sales in the final quarter of 1999 were equivalent to about 2/3 of a percent of retail sales. In Europe, B2C penetration is just 0.2 percent of retail sales, although in some countries like Sweden, the Netherlands and the United Kingdom it is similar to the rate of penetration in the U.S. Not included in these statistics are offline sales where the Internet has been used as an information source (e.g. for price comparisons) and influenced purchases. This can be especially important for expensive items such as cars. The relatively low penetration of B2C e-

commerce reflects the still limited number of Internet users for commercial purposes. Apart from the U.S., only about 10 percent of Internet users make purchases over the Internet and these are typically small value transactions.

On B2B: The greatest possibilities for e-commerce to reduce prices exist for goods and services which can be digitized, thereby allowing substantial economies in production and delivery costs, and for B2B e-commerce and B2B exchanges where opportunities exist for efficiency gains via lower procurement and inventory costs and better supply chain management. Many companies claim that putting their supply chains online has led, or will lead, to major cost savings. Estimates of the impact of e-commerce on prices cannot adequately take into account other characteristics of e-commerce which businesses appreciate, such as increased information and choice.

OECD Information Technology Outlook 2000

The Information Technology Outlook 2000 describes the rapid growth in the supply and demand for information technology goods and services and their role in the expanding Internet economy and looks at emerging uses of information technology.

The Bologna Conference for Ministers responsible for SMEs and Industry Ministers

The Conference (June 14-15 2000) aimed to increase the understanding of issues and policies related to SME competitiveness in the global economy and to propose concrete initiatives through which the globalization of SMEs may be facilitated.

Governments worldwide have come to recognize the importance of SMEs and their contribution to economic growth, social cohesion, employment, regional and local development. Today, globalization and technological change bring new opportunities for SMEs to enter foreign markets and to reduce business costs, but there are also transition costs, new competitive challenges and risks.

The Italian authorities (Ministry of Industry) and the OECD organized a High-level Conference of Ministers responsible for SMEs and Industry Ministers on the theme: "Enhancing the Competitiveness of SMEs in the Global Economy: Strategies and Policies". The Conference took place in Bologna, Italy on 14-15 June 2000.

The Conference aimed to increase the understanding of issues and policies related to SME competitiveness in the global economy – in particular, with regard to innovation, clusters and industrial districts, and electronic commerce – and to propose concrete and feasible initiatives through which the globalization of SMEs may be facilitated.

Attention was also given to issues and challenges faced by SMEs in emerging and transition economies and developing countries with a view to enhancing their partnerships with SMEs in OECD countries and to deepening the partnership between OECD Members and non-members in the area of SME policies.

What are the benefits of electronic commerce for SMEs? – The most obvious opportunity for SMEs arising from new information technologies is the vast potential for marketing products and services to customers throughout the world. Entrepreneurs can use the Internet to research this vast new market, gain a better understanding of customer tastes and preferences, and reach out to large talented audiences. But such opportunities are only the beginning.

the most obvious opportunity for SMEs arising from new information technologies is the vast potential for marketing products and services to customers throughout the world

The Information Society has the potential to revolutionize all aspects of business activities, from innovation and product development, procurement and production, to logistics and information coordination and dissemination. Today, more than ever before, a small enterprise can use new technologies to respond quickly to changing consumer patterns, customize goods and services to meet local demand, manage supply processes and inventories, and monitor production costs and quality control.

Why have some SMEs been slow to take advantage of electronic commerce? – An OECD survey carried out among business representatives points to a number of reasons for slow adoption by SMEs:

- Low use of e-commerce by customers and suppliers
- Lack of knowledge and technical skills among SME personnel
- Language problems
- Limited awareness among entrepreneurs about the opportunities and risks of e-commerce
- Relatively high cost of access to the Internet. This was an issue of considerable concern to many SMEs. Some survey respondents suggested greater liberalization of local telecommunications markets: efficient, competitive telecommunications systems will not only make it easier for SMEs to engage in electronic commerce, but will also reduce risk and potentially open up new markets by enabling greater access to the Internet by prospective customers. Some survey respondents suggested that governments could help reduce the cost of Internet access and investment in the necessary hardware by providing financial support, such as tax incentives.
- Payments with credit cards are not secure

What can governments do to promote the use of electronic commerce by SMEs? – A number of common policy remedies to deal with the most pressing obstacles to SMEs' adoption of electronic commerce were suggested by respondents to the survey. Foremost among these were recommendations for governments to promote greater awareness of the Internet and the opportunities provided by electronic commerce, both for the general public and, more specifically, for SMEs. A number of specific suggestions were:

governments need to promote greater awareness of the Internet and the opportunities provided by electronic commerce

- Disseminating information on the advantages of e-commerce.
- Creating conditions for its development: fiscal incentives, awareness programs, technical assistance.
- Introducing training and education programs.
- Developing legal frameworks conducive to the development of e-commerce.
- Promoting training and education (e.g. tax incentives for training).
- Promoting language and qualification courses, developing skills for business contacts.
- Promoting more international education programs.
- Professional institutions should provide more information about the opportunities and risks of e-commerce.

- Financing or co-financing training of entrepreneurs.
- Increased information dissemination.
- Cheap or free access to the Internet for SMEs (e.g. through telecommunications liberalization, tax incentives for investment).
- Introducing legislation to regulate credit card payments.
- Encouraging further improvement of the banking system.
- Providing more information about the safety of credit card payments.
- Regulation is a key issue for SMEs. The Internet enables firms to interact easily with customers and other companies across national borders. If individual governments enact different rules pertaining to online transactions in their jurisdictions, the benefits of electronic commerce would effectively be lost, especially for SMEs because many would simply be unable to comply with a plethora of national regulations. To the extent that intervention is warranted, governments should cooperate closely to avoid imposing conflicting or duplicative requirements on firms.
- Taxation and customs duties are further important issues for SMEs. The WTO's May 1998 Moratorium on Customs Duties on Electronic Transmissions was a significant step forward in promoting the Internet as a medium for international trade. If the moratorium were to end and/or if governments were to decide to impose new forms of taxation on e-commerce transactions, SMEs would be particularly affected by the higher costs and compliance burdens. Governments should thus consider extending indefinitely the policy of not imposing customs duties on electronic transmissions and should ensure that any taxation of electronic commerce is neutral with respect to other business transactions and consistent with internationally accepted principles.

NOTE: The above provides just a sample of the many policy issues that can affect electronic commerce. While large companies may be able to cope with some of the challenges, the added burdens and costs to SMEs can be especially difficult to absorb, effectively reducing the benefits of e-commerce as a business strategy. Governments should thus remain particularly attuned to the impact of their policy initiatives on the viability of electronic commerce as a means for SMEs to engage in global markets.

4.6 World Bank

The World Bank is the world's largest source of development assistance, providing nearly $16 billion in loans annually to its client countries. It uses its financial resources, highly trained staff, and extensive knowledge base to help each developing country onto a path of stable, sustainable, and equitable growth in the fight against poverty.

We live in a global knowledge economy—where knowledge, learning communities, and information and communications technologies are the engines for social and economic development. Having knowledge and knowing what to do with it matter the most-particularly for poor people who remain at the margins of the knowledge economy.

New communications technologies and plummeting computing costs are shrinking distance and reducing borders and time—and the advantages of greater knowledge and superior ability to learn are becoming even greater. The remotest village has the possibility of tapping a global store of knowledge far beyond

what one would have imagined a century ago, faster and more cheaply than anyone imagined only a few decades ago.

Forty years ago, Ghana and the Republic of Korea had virtually the same income per capita, but by the 1990s Korea's income per capita was six times Ghana's. More than half of that difference can be attributed to Korea's greater success in acquiring and using knowledge.

www.worldbank.org

Excerpts from "Global Economic Prospects", World Bank publication December 2000:

Electronic Commerce and Developing Countries: The Internet is globalization on steroids. It will boost efficiency and enhance market integration domestically and internationally, particularly in developing countries that are most disadvantaged by poor access to information. Although the Internet should enhance global growth, it also brings increased danger of economic marginalization to countries that cannot access it effectively. Taking advantage of electronic commerce requires policies similar to those needed to capitalize on the opportunities for trade: improved international coordination, for example, in ensuring interoperability of communications technology and confronting challenges to domestic tax and financial systems; an open economy promoting competition and diffusion of Internet technologies; and efficient social and infrastructure services, in particular a competitive telecommunications sector and well-educated labor force.

although the Internet should enhance global growth, it also brings increased danger of economic marginalization to countries that cannot access it effectively

Despite the obvious benefits of the Internet, uncertainty exists about the implications of this technology and its rate of diffusion.

Government action is critical to removing impediments to electronic commerce.

The gap in Internet access between industrial and developing countries will persist through the next decade.

Access to the Internet is grossly unequal, with 30 percent of the U.S. population online compared with an average of 0.6 percent in developing countries. Access, supported by the growing use of cell phones as a major link to the Internet, is expected to rise at a faster rate in developing countries than in industrial countries during the next 10 years. Internet access is likely, nonetheless, to remain limited in per capita terms, especially in the poorest countries, and to remain well below levels already achieved in industrial countries.

30% of U.S. population online compared with an average of 0.6% in developing countries

Prospects for Internet Access: Given the enormous investments required for telephone lines (and in some countries the continued dominance of the telephone system by inefficient monopolies), hopes for narrowing the digital divide rest largely on the spread of alternative means of accessing the Internet. The availability of cable, cellular phone, and satellite systems is likely to reduce dependence on telephone lines for access to the Internet during the next decade.

Impediments to Internet use and the role of policies in developing countries: The presence of network externalities, where all participants gain from each addition to the network, implies that market prices may not

fully reflect the total benefit to society from increased Internet access. Thus government has an important role in speeding Internet diffusion. Inappropriate policies and the lack of complementary services, particularly affecting the telecommunications sector, other infrastructure, human capital, and the investment environment severely constrain Internet access in developing countries.

(1) Telecommunications: Poor telecommunications will limit the growth of electronic commerce. The high cost of Internet access, the lack of local loop infrastructure necessary for basic dial-up modem access, and the poor quality of the local loop infrastructure that does exist all impede connections to the domestic backbone. Country comparisons show a strong relationship between usage price and Internet penetration. Internet use appears to be higher in countries where local phone service is charged at a fixed rate than in those where callers are billed by the minute. For many developing countries, the most important issue is the lack of telephone service to homes and businesses. The quality of access also is important, as some electronic commerce applications that rely on sophisticated technology and high user interactivity require low congestion and high bandwidth transmission between the user's access device and the host server. Wireless and satellite technologies provide an alternative to the high costs and inefficiencies of many domestic telecommunications systems. Although currently used primarily for voice, mobile phones "soon will be a much better device for many of the usual Internet applications," according to some technologists. (Latin America Looking to Wireless, The Standard, 9 May 2000).

poor infrastructure services are an important constraint on electronic commerce

(2) Other Infrastructure: Poor infrastructure services (other than telecommunications) are an important constraint on electronic commerce. Frequent and long power interruptions can seriously interfere with data transmission and systems performance. Mail service can be unreliable, expensive, and time-consuming in many developing countries. The lack of safeguards against fraud can severely restrict credit card purchases, the most common means of conducting transactions over the Internet. For example, many Latin American consumers are unwilling to purchase goods over the Internet because credit card companies will not compensate holders for fraudulent use of cards (in many industrial countries, cardholders have only a limited exposure to loss). This lack of security does not make consumer purchases on the Internet impossible. In China, companies are depending on cash payments and local distribution through taxis and bicycles to reach consumers (Fan 2000).

(3) Human Capital: A critical mass of highly skilled labor is needed in developing countries to supply the necessary applications, provide support, and disseminate relevant technical knowledge for electronic commerce. The work force in many developing countries lack a sufficient supply of these skills, and the demand for this specialized labor from industrial countries has further constrained the supply of this labor of this labor in developing countries.

(4) Investment Environment: Several regulatory impediments to the widespread adoption of electronic commerce exist in many developing countries. Duties and taxes on computer hardware and software and communication equipment increase the expense of connecting to the Internet.

Governments must provide supportive a supportive legal framework

for electronic transactions, including recognition of digital signatures; legal admissibility of electronic contracts; and establishment of data storage requirements in paper form, intellectual property rights for digital content, liability of Internet service providers, privacy of personal data, and mechanisms for resolving disputes.

Governments also have had considerable impact on Internet use through direct interventions. Singapore is providing grants to local companies to encourage participation in electronic commerce. Malaysia is wiring a zone south of Kuala Lumpur with fast communications. The “Wiring the Border” project is providing subsidies to small businesses along the Mexico-U.S. border to finance Internet access.

Government can support the spread of the Internet by switching to online services for its own transactions. Public sector procurement, many aspects of tax and customs administration, the processing of routine applications (such as car permits and real estate licenses) and other governmental functions can often be carried out through the Internet.

that most Internet business is conducted in English is currently an important constraint on using the Internet

(5) Language: That most Internet business is conducted in English is currently an important constraint on using the Internet. Estimates of the share of English used on the Internet range from 70 to 80 percent, but only 57 percent of Internet users have English as their first language. Per capita Internet use averages about 30 percent in those industrial countries where English is common, compared with about 5 percent in other industrial countries.

Internet content is limited in the local language of most developing countries. The amount of non-English material on the Web is growing, however. Spanish websites in particular are increasing, in part to serve the large Spanish-speaking community in the United States. Improvements in translation services (by people and machines), as well as Web browsers that recognize characters of different languages, should ease language constraints. There is growing recognition that English-only content is insufficient for an international economy.

Challenges to regulatory regimes in developing countries: Electronic commerce will pose difficult challenges for government regulation of tax and financial systems. Electronic commerce raises several regulatory issues that should be addressed through improved international coordination.

4.7 United Nations

4.7.1 UNCITRAL

UNCITRAL Model Law on Electronic Commerce The Model Law, adopted in 1996, is intended to facilitate the use of modern means of communications and storage of information, such as electronic data interchange (EDI), electronic mail and telecopy, with or without the use of such support as the Internet. It is based on the establishment of a functional equivalent for paper-based concepts such as "writing", "signature" and "original". By providing standards by which the legal value of electronic messages can be assessed, the Model Law should play a significant role in enhancing the use of paperless communication. In

UNCITRAL Model Law facilitates electronic commerce

addition to general norms, the Model Law also contains rules for electronic commerce in specific areas, such as carriage of goods. With a view to assisting executive branches of Governments, legislative bodies and courts in enacting and interpreting the Model Law, the Commission has produced a Guide to Enactment of the UNCITRAL Model Law on Electronic Commerce.

http://www.uncitral.org

Ongoing work

- A/CN.9/WG.IV/WP.88 - Draft Guide to Enactment of the UNCITRAL Model Law on Electronic Signatures
- A/CN.9/WG.IV/WP.89 - Legal aspects of electronic commerce - Legal barriers to the development of electronic commerce in international instruments relating to international trade: ways of overcoming them
- A/CN.9/WG.IV/WP.90 - Possible future work on electronic commerce - Transfer of rights in tangible goods and other rights
- A/CN.9/WG.IV/WP.91 - Possible future work in the field of electronic contracting: an analysis of the United Nations Convention on Contracts for the International Sale of Goods

4.7.2 UNCTAD

CAPACITY-BUILDING IN ELECTRONIC COMMERCE: IMPACT OF THE NEW ECONOMY ON TRADITIONAL SECTORS OF DEVELOPING COUNTRIES: ELECTRONIC COMMERCE AND TOURISM

Draft agreed recommendations

Noting the UNCTAD X Plan of Action, the outcome of the Expert Meeting on Electronic Commerce and Tourism, and also taking into account the note by the UNCTAD secretariat contained in document TD/B/COM.3/35, the Commission adopts the policy recommendations set out below as a means of promoting the development and growth of e-commerce, including e-tourism, in developing countries.

The Commission notes that e-commerce is making a considerable positive impact on world trade and business activities, but that for the most part developing countries play a negligible role, which has resulted in widening the international digital divide that affects developing countries in particular.

The current low level of participation in e-commerce by developing countries cannot be attributed to the lack of benefits of e-commerce for those countries; rather, it has more to do with the special constraints that developing countries are facing in this area; including lack of awareness, the high cost of connectivity, lack of infrastructure, legal issues and security problems, as well as the need to enhance national and international policies that encourage competition and investment.

The Commission also notes that tourism and the emerging e-tourism are of vital importance to the economies of developing countries by being a major source of income and employment and a major factor in promoting the development of other economic activities. It recognizes that policy measures for the development of the e-commerce aspects of e-tourism should reflect broader policies that address e-commerce in general.

Priority attention and support should be given to the development of e-tourism in order to maximize its contribution to sustained economic growth and the sustainable development of developing countries.

In the light of these considerations, the Commission recommends that:

GOVERNMENTS

1. Governments should become aware of and support, through all possible means, existing and potential regional and international initiatives aimed at narrowing the growing international digital divide.

governments should show leadership in promoting e-commerce and could support its expansion by using it

2. Governments, with the involvement of industry players, producers and local communities, should facilitate the development of national strategies and guidelines on e-commerce and sustainable e-tourism. Particular attention should be given to the improvement and liberalization of Internet services and telecommunications, investments in information infrastructure and the encouragement of the private sector in developing e-businesses.

3. Governments should show leadership in promoting e-commerce and could support its expansion by using it, for instance, in administration and procurement.

4. Governments should promote consumer confidence, privacy and intellectual property rights. Possible approaches include industry self-regulation, laws and regulations.

5. High priority should be given to the development and empowerment of institutions, including tourist destination marketing organizations (DMOs) and chambers of commerce that can support the promotion of e-commerce and e-tourism. These should be strengthened through the establishment of brand names, portals, databases, capacity-building, enhancement of consumer awareness and up-todate content on the Internet.

6. Regulatory authorities should facilitate the development of appropriate, technology-neutral payments and trade-financing systems that will promote and support the development of e-commerce and e-tourism.

7. Developing countries should ensure that efforts to promote on-line transactions are accompanied by the enhanced production of physical goods and services, satisfactory product delivery and fulfillment and the supply of adequate support services, particularly banking, insurance, transport and customs.

governments should encourage the development of local content on the Internet in local languages

8. Governments should create an enabling environment and encourage travel agents and other intermediaries to adapt themselves by using new information technologies and enhancing their expertise and creativity so as to improve their efficiency and ensure their continuity.

9. To the extent possible, Government should encourage the development of local content on the Internet in local languages and in the languages of the most important tourism consumers.

INTERNATIONAL COMMUNITY

10. International organizations involved in electronic commerce should cooperate and coordinate their activities to ensure an adequate exchange of information and the efficient use of resources.

11. Developed countries should provide necessary assistance to developing countries, particularly the least developed countries, so as to enable them to further develop e-tourism aimed at sustained economic growth and sustainable development.

12. Multilateral and bilateral donor agencies should provide financial support to e-commerce activities in order to empower enterprises in developing countries, particularly the least developed countries, with technology, human skills and policies encouraging competition and investment.

UNCTAD

13. UNCTAD, within its mandate, should contribute to strengthening the ability of developing countries, particularly the least developed countries, to develop and implement policies on e-commerce, by:

(a) Carrying out analytical and statistical studies on the implications, for the developing countries, of the economic, social and legal aspects of e-commerce, and in so doing complement and enrich from the development perspective the work being carried out by other international organizations, such as the World Trade Organization, the World Tourism Organization, the International Telecommunication Union, the World Intellectual Property Organization and the United Nations Commission on International Trade Law;

(b) Disseminate information to developing countries on approaches and elements of policies and best practices for e-tourism, taking into account successful experiences in the developing and developed countries;

(c) Organizing Expert Meetings, seminars and workshops aimed at assisting developing countries to learn approaches to be used in applying e-commerce in various economic sectors and activities, such as banking, transport, insurance and procurement;

(d) Raising the awareness of developing countries and collecting and disseminating information through various channels, including periodical publications, about different aspects of e-commerce, including the potential benefits of e-commerce, new Internet technologies, on-line trading practices and systems, payment systems, Internet strategies, ongoing work on e-commerce carried out in other international forums, developments regarding legal and regulatory issues and policy approaches adopted by other countries;

(e) Assisting developing countries in capacity building through training courses and technical
cooperation on various aspects of e-commerce generally, and in specific sectors, including e-tourism, e-transport, e-finance and enterprise development;

(f) Assisting developing countries, particularly LDCs, in identifying potential opportunities for the development of e-businesses in their

countries and promoting partnerships with e-businesses in developed countries;

(g) Assisting developing countries and their destination management organizations (DMOs), in cooperation with other relevant international organizations, in developing tourism portals in order improve their marketing of e-commerce and e-tourism;

UNCTAD, within its mandate and in cooperation with other international organizations, should continue to assist countries in transition in studying e-commerce issues

14. UNCTAD, within its mandate and in cooperation with other international organizations, should continue to assist countries in transition in studying e-commerce issues, capacity building, and developing and implementing policies on various aspects of e-commerce generally, as well as on its specific sectors.

TD/B/COM.3/L.17 26 January 2001

http://www.unctad.org/ecommerce/documents.html

4.8 Reports from Other Sources

4.8.1 Commerce Net

CommerceNet brings together leading business, government, technology, and academic minds into one community to focus on the advancement of eCommerce worldwide. CommerceNet accelerates the development and implementation of important new technologies and practices that will chart the course for the way companies conduct business. As a not-for-profit organization, we are able to create a collaborative environment that does not exist anywhere else with the same agenda.

CommerceNet serves as an essential focal point for the collaborative development and demonstration of solutions that will affect all businesses in the future.

www.commercenet.com

Barriers to Electronic Commerce 2000 Study: Over 1000 respondents from six countries completed this survey. More than 80% of the responses came from outside the United States, primarily from Asia. While not a random sample, the respondents represent a very wide spectrum of interests, backgrounds, experiences, and expertise on electronic commerce.

Top Ten Barriers to electronic commerce (full sample):

1. Security and encryption
2. Trust and risk
3. Lack of qualified personnel
4. Lack of business models
5. Culture
6. User authentication and lack of public key infrastructure
7. Organization
8. Fraud and risk of loss
9. Internet/Web is too slow and not dependable
10. Legal issues

SMEs in B2B relationship responded:

for SMEs in a B2B relationship, lack of qualified personnel, lack of business models, and fraud and risk are the main barriers

1. Lack of qualified personnel
2. Lack of business models

3. Fraud and risk
4. Legal issues
5. Not sure of benefit
6. Customers can't find me
7. Partner e-commerce readiness
8. Inconsistent tax laws
9. Proprietary technology
10. Vertical markets

All respondents in B2C relationship:

1. Security and encryption
2. Trust and risk
3. User authentication and lack of public key infrastructure
4. Internet/Web is too slow and not dependable
5. Lack of qualified personnel
6. Customers can't find me
7. Ability to make and receive payments
8. Legal issues
9. Culture
10. Cost justification

Notes from this survey:

- While the lack of qualified personnel is a barrier for all types of companies, for small and medium sized corporations it is an especially acute concern.
- Differences between perceived barriers between the U.S. and other countries partly reflect the fact that the U.S. is ahead in the adoption life cycle of electronic commerce.
- Companies in the U.S. are now grappling with some of the more substantive issues in implementing electronic commerce, such as interoperability with legacy systems and with complementary companies. By contrast, the dominant issues outside the U.S. are more perceptual, such as perceptions of security. Interestingly the issues of interoperability do not figure in the top ten barriers for non-U.S. companies at all. However, one might expect the interoperability issues to become more salient for non-U.S. companies in years to come.
- Some concerns that are common to U.S. and non-U.S. companies include lack of qualified personnel, culture, organization, and security and encryption.
- There is relatively high similarity between the concerns of small and medium companies in the U.S. and those outside the U.S. Seven of the top ten barriers are common between U.S. and non-U.S. small and medium companies. Factors that were considered important in the U.S. but not outside are complexity of electronic commerce, cost of entry, and no customer need. Similarly, factors that were perceived as major barriers outside the U.S. but not in the U.S. were inconsistent tax laws, proprietary technology, and vertical markets.

4.8.2 European Commission

Best Business Web Sites October 1999: The Enterprise DG of the European Commission is launching a number of projects with the aim of improving SMEs' access to electronic commerce in the European Union. In this way, it is promoting the competitiveness of European businesses in the global marketplace.

The Best Business Sites project will assist SMEs in their web ventures, which may range from the simple dissemination of information to highly sophisticated business transactions. To have an effective web presence, SMEs need guidance and information. They need to identify the best practices, the strategic choices, the problems and the requirements of a web site. However, there is a server lack of information resources and decision support tools tailored to the needs of SMEs.

Key findings:

European companies have begun to realize the potential of EC and are taking steps to implement its technologies, catching up with American companies, except SMEs lagging behind

- European companies have begun to realize the potential of electronic commerce and are taking steps to implement its technologies, catching up with American companies. However, SMEs lag behind larger companies and micro-enterprises lag even further behind.
- The vast majority of companies studied were SMEs, but the profile of the European companies on the Internet was different from that of the American ones. For instance, the average European firm was a larger company (or belonged to a group of companies) with more employees and a higher turnover than the average American firm. The European firms studied also had fewer customers on average than the American firms.
- It was concluded from the above, that the European web is more business driven while the American web is more consumer driven. Business-to-business web sites accounted for 61% of business websites in the EU, while the figure stood at 43% in North America. Business-to-consumer websites accounted for 39% in the EU and 57% in America. It seems that proportionally more American websites are targeting consumers with online sales, while more EU sites are targeting other businesses for relationship building.
- Websites come to serve four distinct business objectives: promotion, sales, interaction with customers, and interaction within the company (for larger ones).
- 91% of web sites stated they had achieved at least one business deal because of their website. However, the results do not always match the expectations of website owners. In contrast, some web businesses produced results that had not been anticipated, including penetration of international markets, replacement of existing communications media, improved reaction to customer demand, and brand awareness.
- These results came about with very low expenses and little personnel for the website, even though European companies tend to have larger budgets and more personnel.
- More than 85% of websites are available in only one language, but 32% of the European sites are available in two or more languages.
- 32% of American sites use credit cards for sales, while only 18% of European ones do. Europeans also do not use their sites for sales as much as the Americans.
- 90% of the websites that are used for customer service and support claim to respond to customer queries within one day.
- More than three quarters of website owners are satisfied with the results of their site.
- 71% of companies increased their turnover because of their website, mostly as a result of direct or indirect sales.
- 63% of companies also saved money because of their website, mostly in telecommunications, mailings, and office supplies and expenses.

- Early starters have also been more successful than late adopters of the web.
- Small companies and independent firms were found to be more successful than subsidiaries of larger companies.

4.8.3 The Economist

The Economist Intelligence Unit/Pyramid Research e-readiness rankings

"E-readiness" is shorthand for the extent to which a country's business environment is conducive to Internet-based commercial opportunities. It is a concept that spans a wide range of factors, from the sophistication of the telecoms infrastructure to the security of credit-card transactions and the literacy of the population. Countries need to tick off a long list of prerequisites, we assume, before they can stimulate the creative ferment that the US has witnessed over the past five years.

E-business leaders
These countries already have most of the elements of "e-readiness" in place, though there are still some concerns about regulatory safeguards.

E-business contenders
These countries have both a satisfactory infrastructure and a good business environment. But parts of the e-business equation are still lacking.

E-business followers
These countries--the largest group in our rankings--have begun to create an environment conducive to e-business, but have a great deal of work still to do.

E-business laggards
These countries risk being left behind, and face major obstacles to e-business growth, primarily in the area of connectivity.

E-readiness ranking (of 60)	Country	E-readiness score (of 10)
	E-business leaders	
1	US	8.73
2	Australia	8.29
4	Canada	8.09
7	Singapore	7.87
13	Hong Kong	7.45
	E-business contenders	
16 (tie)	Taiwan	7.22
18	Japan	7.18
20	New Zealand	7.00
21	South Korea	6.97
	E-business followers	
29	Chile	5.28
33	Malaysia	4.83
34	Mexico	4.78

39	Philippines	3.98
40 (tie)	Peru	3.88
42	Russia	3.84
46	Thailand	3.75
	E-business laggards	
49	China	3.36
54 (tie)	Indonesia	3.16
58	Vietnam	2.76
unranked	PNG	

Methodology: How we derive the scores

Our first round of e-readiness rankings, published to mark the May 2000 launch of the EIU ebusiness forum, were a rough proxy for "e-readiness", combining two variables: the EIU's business environment rankings, which themselves encompass 70 separate indicators, and Pyramid's connectivity scores.

Our new model is far more robust, thanks to the growing body of knowledge on the drivers of e-business worldwide. It tallies scores across six categories--including the business environment rankings--and 19 additional indicators. Each variable in our model is scored on a scale from one to ten. Where possible, the variables—connectivity in particular—rest on quantitative, statistical data; others reflect qualitative assessments by our country analysts.

In devising the more sophisticated methodology, we weighed the factors we believe determine whether a country is prepared to seize the opportunities presented by the Internet. Our guiding assumption remains that successful e-business is not possible without a positive business climate overall. But we also take into account more specific elements of Internet and e-business infrastructure: not just connectivity, but also social and cultural factors, the legal environment for e-business, the development of e-commerce and the existence of supporting e-services.

The six categories that feed into our rankings (and their weight in our model) are:

e-business cannot function without adequate telecommunications and Internet infrastructure

Connectivity (30%). E-business simply cannot function without adequate telecommunications and Internet infrastructure. "Connectivity" measures the access that individuals and businesses have to basic fixed and mobile telephony services, including voice and both narrowband and broadband data. Affordability and availability of service (both a function of the level of competition in the telecoms market) also figure as determinants of connectivity.

Business environment (20%). In evaluating the general business climate, the EIU screens 70 indicators covering criteria such as the strength of the economy, political stability, the regulatory environment, taxation, and openness to trade and investment. The resulting "business environment rankings" measure the expected attractiveness of the general business environment over the next five years. Calculated regularly as part of the EIU's Country Forecasts, these rankings have long offered investors an invaluable comparative index for 60 major economies.

E-commerce consumer and business adoption (20%). Payment and logistics systems form the backbone of this set of criteria. Here we evaluate the extent of credit-card ownership as well as the existence of secure, reliable and efficient electronic payment mechanisms, the ability of vendors to ensure timely and reliable delivery of goods, and the extent of website development by local firms.

the legal framework governing e-business is a vital factor than can enhance or inhibit the development of electronic trading

Legal and regulatory environment (15%). The legal framework governing e-business is a vital factor than can enhance or inhibit the development of electronic trading. We consider the extent of legal support for virtual transactions and digital signatures. Ease of licensing and the ability of firms to operate with a minimal but effective degree of regulation are other criteria.

Supporting e-services (10%). No business or industry can function efficiently without intermediaries and ancillary services to support it. For e-business markets, these include portals and other online intermediaries, web-hosting firms, application service providers (ASPs), as well as website developers and e-business consultants. The rankings assess the extent to which local companies and organizations have access to these services.

education and literacy are necessary preconditions to a population's ability to navigate the web and drive future domestic Internet development

Social and cultural infrastructure (5%). Education and literacy are necessary preconditions to a population's ability to navigate the web and drive future domestic Internet development. Because entrepreneurship and risk-taking play such an important role in building new e-commerce models, we also assess the national proclivity to business innovation and receptiveness to web content.

4.8.4 Alliance for Global Business (AGB)

A Global Action Plan for Electronic Commerce: Prepared by Business With Recommendations for Governments (2nd Edition, October 1999) – Alliance for Global Business (AGB)

Alliance includes:

BIAC – Business and Industry Advisory Committee to the OECD

GIIC – Global Information Infrastructure Commission

ICC – International Chamber of Commerce

INTUG – International Telecommunications Users Group

WITSA – World Information Technology and Services Alliance

electronic commerce provides SMEs with lower market entry costs

Small and Medium-sized Enterprises (SMEs) represent an increasingly important dimension of the global economy. Particular efforts should be made to promote SME involvement in electronic commerce to ensure that they can take maximum advantage of the ability of telecommunications and information technologies to deliver cost efficiencies, quality control and competitiveness in manufacturing and service industries. As one of the most dynamic features of a growing economy, SMEs play a critical role in creating employment and enhancing GDP. Electronic commerce provides SMEs with lower market entry costs and the ability to extend geographic reach to a much larger market.

Electronic commerce is changing the way we do business. We have moved from an industrial economy where machines dominated productivity, to an information-based economy where intellectual content is the dominant source of value added and which knows no geographic boundaries. In this new environment, education and lifelong learning will be essential not only for workers but for all in society. As industry, commerce, and services are transformed by technology, many skills, not only of employees but also of managers and the self-employed, need to be improved or acquitted. Future education will be supporting formal and non-formal learning arrangements and making it available to a much wider range of people, including adults returning to learn. The new information technology, such as interactive media and distance learning, will offer wider access and innovative approached to education. As future economic prosperity and social and political cohesion depend on a well-educated population, lifelong learning will be essential for everyone as we move into the 21st century.

it is important to recognize the need for global cooperation by both business and government to facilitate electronic commerce

It is important to recognize the need for global cooperation by both business and governments to facilitate electronic commerce. Otherwise, there is a risk that a large segment of the world's population may not be able to participate in the economic and social benefits that can arise from electronic commerce. The World Bank for example has recently estimated that an investment of $300 billion over the next five years will be required to upgrade the telecommunications infrastructure in developing and emerging economies. According to the World Bank, 55 percent of this investment will need to come from private capital, since public sources of funds are diminishing. Therefore, these countries need to take measures to ensure an appropriate investment climate.

Countries around the world should use electronic means of communications to deliver public services and to make public procurement procedures more efficient. This area requires increased attention to ensure that these processes and services keep pace with best practices. The benefits are government efficiencies, equalization of service provision to all citizens, and the demonstration of government leadership in the use of electronic commerce technology and services.

Business believes that a number of fundamental principles should shape the policies that govern electronic commerce, if the promises of electronic commerce are to be fulfilled.

1. The development of electronic commerce should be led primarily by the private sector in response to market forces.
2. Participation in electronic commerce should be pursued through an open and fair competitive market.
3. Government intervention, when required, should promote a stable, international legal environment, allow a fair allocation of scarce resources and protect public interest. Such intervention should be no more than is essential and should be clear, transparent, objective, non-discriminatory, proportional, flexible, and technologically neutral.
4. Mechanisms for private sector input and involvement in policy-making should be promoted and widely used in all countries and international fora.
5. Electronic commerce is global by nature. Government policies that affect it should be internationally coordinated and compatible and should facilitate interoperability within an international, voluntary and consensus-based environment for standards setting.
6. Transactions conducted using electronic commerce should receive neutral tax treatment in comparison to transactions using non-electronic

means. Taxation of electronic commerce should consistent with established, internationally accepted practices, and administered in the least burdensome manner.
7. Regulation of the underlying telecommunications infrastructure, when necessary, should enable actors to compete, globally, in an open and fair market. As competition develops, regulation should be phased out and there should be a greater reliance on competition law.
8. The protection of users, in particular with regard to privacy, confidentiality, anonymity and content control should be pursued through policies driven by choice, individual empowerment, industry-led solutions. It will be in accordance with applicable laws.
9. Business should make available to consumers and, where appropriate, business users the means to exercise choice with respect to privacy, confidentiality, content control and, under appropriate circumstances, anonymity.
10. A high level of trust in the Global Information Infrastructure-Global Information Society (GII-GIS) should be pursued by mutual agreement, education, further technological innovations to enhance security and reliability, adoption of adequate dispute resolution mechanisms, and private sector self-regulation.

4.8.5 International Finance Corporation

Ten Ways Nation States Can Participate in the Electronic Economy

1. Educate government officials, top civil servants, and voters on the nature of the electronic economy.
2. Cooperate internationally to regulate consumer protection and develop a priority list of network crimes and agreed punishments.
3. Invest or encourage investment in the physical infrastructure of the electronic economy, such as interactive networks and terminal access equipment.
4. Equip citizens with the means to log on to the global network of wealth, information, and power, recognizing that there will be a direct relationship between network access and the wealth of nations.
5. Replace the measures and statistics of the industrial economy with the measures and statistics of the electronic economy. Official statistics, which form the basis of trade negotiations, are derived from an outdated data collection model.
6. Provide individual consumer and citizen access to information networks as a right rather than a privilege.
7. Appoint a chief public information officer empowered to act as a champion of public information used to support consumers' and citizens' rights.
8. Use electronic tools to support government processes such as social pro-vision, education services, and public procurement.
9. Develop inward investment programs to attract and develop knowledge industries based on electronic networks. Make location-bound resources (connectivity, network infrastructure, taxation regime, price of bandwidth, education and information services, etc.) attractive to these enterprises.
10. Intervene directly to guarantee and regulate the digital exchange of money.

Charles J. Doyle, Glover T. Ferguson, and Hugh F. Morris, Accenture

http://www.ifc.org/publications/pubs/impwt99/effect/w9effect.html

4.8.6 International Chamber of Commerce

The ICC Electronic Commerce Project (ECP)

The ICC Electronic Commerce Project aims to create global trust in electronic trade transactions by defining best business practices for the digital age. The project focuses on three distinct areas:

International Chamber of Commerce sponsoring projects to create global trust in electronic trade transactions by defining best business practices for the digital age

GUIDEC
Trust in open electronic commerce requires a common understanding of mechanisms that are used to guarantee identities and authenticate transactions over electronic networks. GUIDEC (General Usage for International Digitally Ensured Commerce) was therefore chosen as the first ECP project, setting out harmonized definitions and rules for the use of electronic authentication techniques. The GUIDEC was posted on the ICC website in November 1997 and was widely referred to as among the first truly global pieces of business self-regulation for electronic commerce. Ira Magaziner, then still special advisor on Internet to the US President, praised the GUIDEC as providing guidance in a market where different definitions among jurisdictions threatened to undermine the utility of digital signatures in cross-border trade.

Electronic Trade Practices Working Group
The working group is creating a set of foundation rules for electronic trade and settlement. Its objective is to make trade more efficient by not only adapting rules to new technologies and media such as the Internet, but by taking advantage of these new tools to streamline trade transactions. Today, buyers and a sellers in different parts of the world have no legal framework for conducting their negotiations, making contracts, arranging for finance, transport or insurance on-line because most of the rules that apply to international trade still presume the use of paper. Given that paper has certain inherent weaknesses as an information carrier, these rules create barriers that are unnecessary in the digital environment. The ETP is currently finalizing a set of proposed rules in close coordination with ICC members in more than 130 countries.

E-terms service
This will be based on an on-line repository containing all the tools that are necessary to compose contracts on-line and conduct electronic transactions with a minimum of legal risk. Rules and terms of different kinds that might apply in the digital environment can be incorporated into electronic contracts by referring to a unique identifier automatically supplied by the E-terms repository. A prototype of the repository and service is currently being developed for tests among a group of volunteer users. E-terms will be especially useful for small and medium sized enterprises that do not have their own in-house legal expertise.

http://www.iccwbo.org/home/electronic_commerce/electronic_commerce_project.asp

4.8.7 WIPO

The 10 Point IP Checklist for E-Commerce

http://www.wipo.int/sme/en/

World Intellectual Property Organization (WIPO) serves as an international resource for understanding how intellectual property related to e-commerce

Many things you need to know as an introduction to IP as it relates to E-Commerce may be outlined in 10 points. WIPO has, on their site a

description of these 10 points and a self test at the end to gauge understanding.

The 10 Points

- Understanding What Intellectual Property (IP) has to do With E-Commerce
- Taking Stock of Your IP Assets Relevant to E-Commerce
- IP Issues When you Design and Build Your Web Site
- IP Issues Related to Internet Domain Names
- How Your E-Commerce Business is Affected by Patents
- IP Issues in the Distribution of Content on the Internet
- Using Care in Disclosures on the Internet
- Important Contracts and IP
- Partnerships with Government and Educational Institutions
- IP Concerns about International Transactions in E-Commerce

4.8.8 WITSA

World Information Technology and Services Alliance

www.witsa.org

With over 200 million users online to the Internet worldwide, electronic commerce now accounts for a growing proportion of world trade. The Internet business model, which gives suppliers direct access to customers and new levels of efficiency with less assets and lower management overheads, is being eagerly investigated by major corporations.

This report –the World Information Technology and Services Alliance International Survey of Electronic Commerce – details the results of an international study of the views of information technology industry associations from around the world on the best way to encourage the growth of electronic commerce. The aim of the research was to find out how aware businesses and consumers are of electronic commerce and to identify potential action areas.

The survey that forms the basis of this report involved contributions from WITA members in 27 countries. The recommendations that arise from it are aimed at international and national policy-makers, and at information technology companies and their industry bodies.

Issues of Concern

developing countries cite low levels of credit card use and restrictions on using credit cards over the telephone as a problem in implementing consumer EC

Trust: Security of payments is of paramount importance in the corporate acceptance, adoption and widespread deployment of electronic commerce. Developing countries cited low levels of credit card use and restrictions on using credit cards over the telephone as a problem in implementing consumer electronic commerce. Privacy ranked next among their concerns, followed by authentication – being sure of the identity and credentials of the party you are communicating with. Some three-quarters of the countries that took part in the survey believe that improving trust is vital to the development of electronic commerce.

Technology: Although Internet technology is still relatively new in many markets, WITSA members were confident that technical difficulties thrown up by a largely immature medium could be overcome. Respondents identified a wide range of technological barriers that need to be addressed. Top of the list was a need to make security systems more

widely available and to ensure they are more widely used. Efforts to integrate electronic commerce systems with existing enterprise systems and the lack of internationally recognized standards covering such activities as transaction processing, security and authentication were also identified. Networking bandwidth was a prominent concern among developing countries, many of who are still developing basic telecommunications infrastructures.

Workforce Issues: There was a strong consensus among WITSA members that people issues will play an important part in the development of electronic commerce. The shortage of skilled workers, a perennial problem for the IT industry, is the most important issue for the majority of respondents. The leadership of business executives was also called in question with a significant proportion of WITSA members believing that those who run enterprises are too averse to taking risks. Training and the cost of employing skilled workers were also high on the agenda, although there were some members who did not see the workforce as a stumbling block at all to the growth of electronic commerce.

Public Policy: As industry associations, WITSA members are closely involved in influencing public policy in their countries. Leading public policy issues highlighted by respondents included the development of standards for authentication that would ensure trading partners are legitimate; the impact on electronic commerce of the taxation of online sales and the confusion caused by conflicting international contractual and legal frameworks. Respondents also pointed to limits on the use of encryption by governments concerned about national security and fighting crime. The ability of governments to influence the growth of electronic commerce is underlined by the fact that over 70% of WITSA members say public policy is critical to the growth of electronic commerce.

Taxation: Although taxation scores highly in the public policy arena, overall it is perceived as less of a barrier than any other issue related to electronic commerce. Local sales taxes are perceived as most harmful to electronic commerce. Despite a lack of clarity on taxation in many countries, the majority view was that taxes were not an important barrier to electronic commerce.

Business Processes: While new Internet-only businesses such as auction sites and share-dealing services have been launched, the majority of organizations trading on the Internet are established businesses that must integrate their electronic activity with existing business processes. The biggest problem, identified by the survey, is a fear of opening corporate systems to outsiders: both customers and suppliers. WITSA members also pointed to a lack of business models for newcomers to adopt. Respondents also identified the logistical challenges of the real time environment of electronic commerce and the need to be sure of quality business results from electronic information exchanges.

Costs: In line with the emphasis on people issues, the most significant costs for those implementing electronic commerce are connected with organizational change. The costs of changing business processes and adapting corporate cultures to accommodate electronic commerce are seen to represent the biggest cost elements. Adapting existing systems, running dual systems, building new systems and buying new products and services are seen as less significant. This finding reflects the fact that the cost of technology and of the skills to implement it are beginning to decline as

electronic commerce features are incorporated in existing products and as skills become more widely available.

need to reassure users that they can trust the Internet

Consumer Attitudes: The experiences of WITSA member companies in convincing customers to adopt electronic commerce again underlines the need to reassure users that they can trust the Internet. Fear of committing personal information such as credit card numbers, addresses and telephone numbers to cyberspace was mentioned most often by WITSA members as a significant objection from customers. Fear of losing money by purchasing goods from unknown companies and the absence of regulation governing procedures in the event of disputes were also important reasons for being wary of electronic commerce.

WITSA – Readiness Report

Excerpt form report "Global E-Readiness Summary, May 2001"

e-readiness considers access, affordability and reliability of network, government leadership, information security, human capital and e-business climate to rank selected APEC economies

Country	Connectivity	E-Leader-ship	Information Security	Human Capital	E-Business Climate
Chile					
China					
Indonesia					
Korea					
Malaysia					
Mexico					
Peru					
Philippines					
Russia					
Taiwan					
Thailand					
Vietnam					

	Indicates that majority of conditions are suitable to the conduct of e-business and e-government
	Indicates improvement needed in the conditions necessary to support e-business and e-government
	Indicates substantial improvement needed in the conditions necessary to support e-business and e-government

Summary of E-Readiness Attributes:

Connectivity:

- Availability of wire-line and wireless communications services, community access centers (free and paid), and networked computers in businesses and homes.
- Affordability of reliability of network access, including the cost of service, downtime, and the prevalence of sharing access among individuals.
- Reliability of electrical supply for business-critical computer operations, and the ease of importing and exporting goods and of transporting them within a country.

Leadership:

- Priority given by government to promoting the development of an e-society on a national level.

- Extent of demonstrated progress on e-government, including efforts to automate governmental processes, offer services to business and citizens electronically, and create national portals.
- Quality of partnerships between industry leaders and government to improve E-Readiness.
- Level of effort to promote access for all citizens.

Information Security:

- Strength of legal protections and progress in protecting intellectual property rights, especially for software.
- Extent of efforts to protect electronic privacy.
- Strength and effectiveness of the legal framework to address and prosecute computer crimes, authorize digital signatures, and enable public key infrastructure.

Human Capital:

- Quality of and participation levels in the education system, with an emphasis on efforts to create and support a knowledge-based society.
- Penetration of ICT in schools and ability of educators to use and teach in accordance with the technologies.
- Culture of local creativity and information sharing within the society.
- Skills and efficiency of the workforce, and strength of efforts to retain skilled managers and technologies.

E-Business Climate:

- Existence of effective competition among communication and information services providers.
- Transparency and predictability of regulatory implementation, openness of government, rule of law, and general business risk (e.g., political stability, financial soundness).
- Openness to financial and personal participation by foreign investors in ICT businesses.
- Ability of the financial system to support electronic transactions.
- Sponsorship of science and technology parks as hubs of innovation and support for new enterprises.

Part Two - Experience

5 Review, Analysis, Summary Findings

The premise upon which this project is based is that if you condense and summarize the research conducted by all APEC fora and other relevant international bodies, you end up with a consistent list of well-defined impediments identified as the reasons for the slow uptake of electronic commerce by SMEs.

The point was made at the time of proposing this project to the TEL that it was time to amalgamate research findings into a single and concise list of impediments and to identify best practices for overcoming the issues. AOEMA pointed out that there was little reason to continue surveying economies to learn what we already know. Considering the directives from APEC Leaders and Ministers to find ways of making it possible for SMEs to participate in the online economy, it seems most appropriate that the TEL and other APEC fora begin the task of finding solutions to the problems.

With a clearly enunciated list of issues targeted for action and some sense of how to find resolution, a beginning point can be established. This chapter represents exactly that - a beginning point. We now have a list of 7 clearly defined impediments that represent the summary findings of all research reports included in the previous chapter.

The chapters that follow include viable business models for SMEs to consider when putting their business online and best practice examples from both SMEs and Governments working to overcome the specified impediments.

5.1 Impediments to Electronic Commerce and Recommendations From the Global Community

Economic Growth

Governments worldwide have come to recognize the importance of SMEs and their contribution to economic growth and sustainability.

'New Economy' and Electronic Commerce

With the 'new economy' SMEs need to be competitive in global terms and electronic commerce is recognized as a critical aspect of the 'new economy'.

Slow uptake by most SMEs

Governments are concerned about the slow uptake of EC by SMEs.

SMEs have concerns and expect government to resolve them

SMEs have many issues and concerns about implementing EC. They expect government to resolve these problems and to lead by example by putting government services online.

The following list of recommendations represents the collective opinion of APEC fora, OECD (including BIAC), GIIC, ICC, WTO, World Bank, EU and the Alliance for Global Business (AGB) as referenced in Section 4 of this report.

SMEs	Government
Responsibilities of SMEs: ❑ To recognize vast potential of Internet and identify ways to benefit ❑ Start using the Internet to become more familiar with possibilities ❑ Become aware of viable business models that could be adopted	**At minimum, Government should provide:** ❑ Awareness and promotion programs ❑ Visible national strategy ❑ Put government services online ❑ Coordinate government departments, industry bodies and educators to provide necessary support services

The most fundamental obstacle to electronic commerce is inability to access and use the network infrastructure. Access and use are functions of

- network capacity at local, country and international levels
- cost of network access and use
- availability and cost of access devices (telephones, personal computers)
- availability of technical skills to facilitate access

Without access, SMEs are not able to learn what is possible. Without access, the Digital Divide becomes an unfortunate reality. This is clearly the most fundamental of all issues and at minimum, community access points need to be established to facilitate the initial step of discovering the potential of the Internet.

Key inhibitors (perceived by SMEs):	**Recommended that Government:**
❑ Relatively high cost of access (and for some, even the cost of an Internet-enabled PC is too high) ❑ Telecommunications services generally of poor quality for EC (speed and quality of line), particularly outside metropolitan areas ❑ Lack of trust and confidence to put business online ❑ Low use of Internet and EC by customers and suppliers ❑ Lack of perceived benefit or business case ❑ Security of transactions ❑ Legal and liability issues ❑ Lack of knowledge and skills	❑ Provide some form assistance to help SMEs afford PCs (or other device) and Internet access (related to concerns over 'Digital Divide') ❑ Liberalize telecommunications market to promote competition and lower price ❑ Improve telecommunications infrastructure ❑ Address security, liability and legal concerns to build trust and confidence in the electronic marketplace ❑ Governments around the world must work together to achieve globally interoperable policies ❑ Provide training opportunities

Observations and Further Recommendations by International Bodies:

- ❑ Lack of urgency by governments to make necessary changes to legislation and government procedures as required for effective implementation of electronic commerce.
- ❑ Lack of interconnectivity between e-marketplaces, including payment systems, transportation and consignment tracking.
- ❑ Digital certificates not widely used.
- ❑ Need for more training and human resource development to support electronic commerce initiatives.
- ❑ Need to promote B2B transactions by assisting SMEs with guidelines for appropriate hardware and software products required to implement EDI over the Internet.
- ❑ Need to address language barriers of the Internet.
- ❑ Limited awareness among entrepreneurs of the opportunities and risks of electronic commerce.
- ❑ In general, government needs to be a leader, promoter, facilitator, regulator, educator and even financier.
- ❑ Governments can have a positive effect on the uptake of electronic commerce by SMEs by putting government services online and thus help companies and individuals to get over their initial fears of the online environment.
- ❑ Lower-GNP economies expect even more from their government in terms of demonstrating electronic commerce capabilities.
- ❑ Best practice models are important to help SMEs get over their initial fears and concerns.
- ❑ Governments must lead by example.
- ❑ Enhance domestic market for electronic commerce through improved access, consumer protection laws, and appropriate electronic payment systems.
- ❑ Enhance the climate for investment including investment capital for SME start-ups.
- ❑ Governments should consider tax incentives to reduce the high cost of Internet access.
- ❑ Need to do a better job of disseminating information on advantages of electronic commerce.
- ❑ Need to create conditions for electronic commerce to develop: fiscal incentives, awareness programs and technical assistance.
- ❑ Introduce legislation to regulate credit card payments.
- ❑ Encourage further improvement of the banking system.
- ❑ Concern over individual governments enacting different rules pertaining to online transactions in their jurisdictions, thus the benefits of electronic commerce would effectively be lost, especially for SMEs because many would simply be unable to comply with a plethora of national regulations.
- ❑ Governments should consider extending indefinitely the policy of not imposing customs duties on electronic transactions and should ensure that any taxation of electronic commerce is neutral with respect to other business transactions and consistent with internationally accepted principles.
- ❑ Need to develop legal frameworks conducive to development of electronic commerce.

Summary List of Impediments:

- **Access**: the most fundamental obstacle to electronic commerce is inability to access and use the network infrastructure (for some SMEs, cost of access is prohibitive or not justifiable; for others the issue is a lack of infrastructure quality and reliability).
- **Knowledge and skills**: most SMEs don't know enough about the online environment to understand how they can benefit and for those who do, typically they lack the necessary skills or required finances to take the first step. SMEs are also looking for viable business models.
- **Trust and confidence**: most SMEs find it hard to trust the online environment. When they don't see their government making electronic commerce a national priority and if most of their business partners are not yet online, then it makes them wonder why they should get involved.
- **Language**: for many SMEs, the dominance of English-only websites creates a barrier.
- **Security**: SMEs express considerable concern over the security of electronic transactions.
- **Legislation**: SMEs are not alone in their desire for globally consistent legislation that is conducive to electronic commerce (to address legal, liability, taxation, intellectual property, consumer protection, privacy and customs issues).
- **Financial**: SMEs need access to safe and reliable payment systems if they are to successfully conduct business online.

6 Guidelines and Suggested Business Models for SMEs

Impediments to EC	Guidelines for SMEs
Access: the most fundamental obstacle to electronic commerce is inability to access and use the network infrastructure. For some SMEs, cost of access is prohibitive or not justifiable; for others the issue is a lack of infrastructure quality and reliability.	At minimum, for access to the Internet: • Need reliable power source • Need Internet-enabled PC or other device • Need phone line or mobile connection • Need individual access account or community access point For electronic commerce to be successful, network infrastructure must demonstrate: • Adequate quality (clean lines to support data transfer) • Reliability (minimal line drops) • Bandwidth (adequate to support multimedia) • Performance (reasonable download speed) To be responsive to customers: • ISPs must endeavor to provide 24/7 service and stick to scheduled maintenance times so that e-mails can be responded to almost immediately
Knowledge and skills: most SMEs don't know enough about the online environment to understand how they can benefit. For those who do recognize the benefits, typically they lack the necessary skills or required finances to take the first step. SMEs are also looking for viable business models.	**Successful business models** • First determine your market – does your product represent a niche market; will you sell local, international or both; will your site be information only or transaction based? • Consider value of e-mail and remember the Internet is first and foremost an information resource (online brochures, product support). • How are you best positioned to benefit from the Internet – B2C or B2B or B2B2C? (i.e., "hub and spokes" or "agent-based" like INGECEP) • Create your own website or take advantage of external services? • Launch your business on existing portals (e-marketplaces, auction sites; agent-based, etc) or go it alone? • Should you be considering mobile commerce (emerging model)? • Importance of multiple channels (consider all options). • Online presence should be considered to augment and further promote your physical presence.

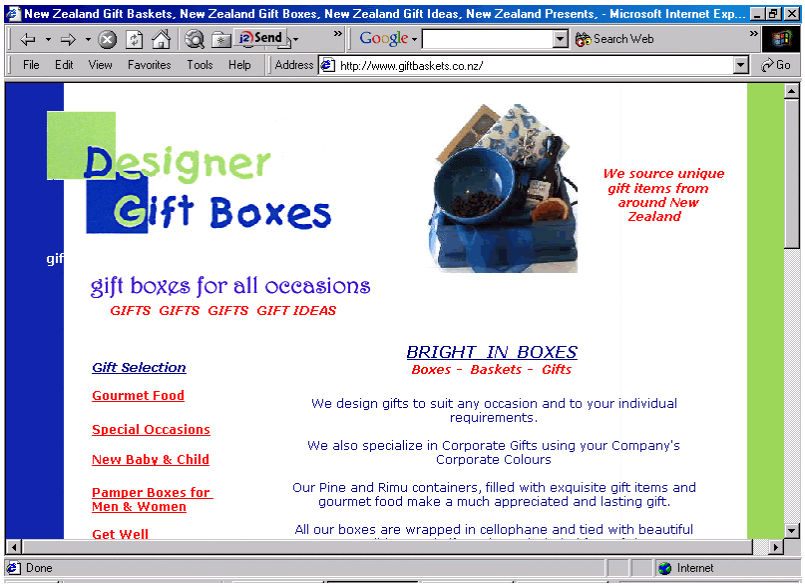
Impediments to EC	Guidelines for SMEs
Trust and confidence: most SMEs find it hard to trust the online environment. When they don't see their government making electronic commerce a national priority and if most of their business partners are not yet online, then it makes them wonder why they should get involved.	SMEs and government need to cooperate: • Governments need to demonstrate confidence in the online environment by putting government services online (including electronic commerce applications). • Governments should be facilitating the involvement of SMEs by developing programs that include online transactions. • SMEs need to take responsibility to learn about the online environment and discover ways for their businesses to benefit. • Trust and confidence will not develop until SMEs have first-hand experience of the online economy. Best way to get this experience is to go online and actually buy something.
Language: for many SMEs, the dominance of English-only websites creates a barrier.	For non-English speaking SMEs, there are translation options: • Machine-based - inexpensive but can be inaccurate • Human-based - very accurate but not always timely and definitely more costly than machine based translation • The AOEMA/TigerTalk method which works in a structured environment giving accurate and timely translations
Security: SMEs express considerable concern over the security of electronic transactions.	SMEs can benefit from the following reports: • Legal Guide - the legal guide outlines the best way for SME's to protect themselves • DNS - clearly outlines the registration process and identifies the resources for registering business names • Security strategies can be found on the TEL web site in the security overview document.
Legislation: SMEs are not alone in their desire for globally consistent legislation that is conducive to electronic commerce (to address legal, liability, taxation, intellectual property, consumer protection, privacy and customs issues).	Governments should: • Review current legislation to determine what changes are necessary to support electronic commerce. • Make legislative changes a matter of priority. • Articulate a national strategy for electronic commerce and actively promote it on a website that can easily be accessed by all citizens. • Work within a global framework when addressing legislative changes. • Consider best practices of other governments.
Financial: SMEs need access to safe and reliable payment systems if they are to successfully conduct business online.	SMEs need access to viable online payment systems and in many economies it will take some work on the part of government to make this possible.

7 Areas of Concern and Best Practice Solutions from SMEs

7.1 Designer Gift Boxes Christchurch, New Zealand

www.giftideas.co.nz
www.giftbaskets.co.nz

"I went online 3 years ago. I started in a small way, with a very basic website and orders started to come in right away. This was only a small part of my business at that stage but I could see the huge potential. Immediately I realized the importance of securing the appropriate domain names (i.e. "giftbaskets" and "giftideas"). Having those names allowed me to confidently go online.



I found it relatively easy to go on line. Setting up and managing my own website was actually easier than some designers lead you to believe. It was a very time consuming process getting the finished site, but the on-going improvements are fairly easy. While we do not have a so-called "flashy site" it's very effective, fast, easy to use and customers do comment on these qualities. The gift boxes speak for themselves and as with any business the quality of product, price and service is what brings you the repeat orders. This is evidenced by the referrals on the site and comments I receive.

I didn't have any problems getting a merchant account, or complying with the bank's conditions etc. Actually, I didn't consider other methods. I believe you have to have credit cards. It makes it easy for the buyer and is the preferred method of payment online. I have been paid by direct credit in some instances. I really haven't had any problems with payments.

I am still on Brent Connolly's site (a New Zealand based online mall) but this has only produced about 12% of the business. I listed my site on his mall about 18mths after starting my online business. I will, however, be considering other shopping malls in the future.

Costs associated with going online have not been an issue with me. However, managing my own site has been an important factor for me, as changes need to be made on a weekly basis. Cost would have been an issue in the beginning if I didn't have the ability to manage my own site.

Orders have come from all around the world and were mainly for gifts to be sent within NZ. In the last 12 months orders have come from overseas for export and now I receive a regular number of enquiries from overseas for various related products. Local New Zealanders are starting to use the site, but have been fairly slow and only about 5% of our business comes from within NZ. I find that New Zealanders have been slow to accept online shopping in general.

I started my business as home-based, with no immediate idea of a shop premises. Furthering the business online seemed a logical, relatively easy progression, with low overheads. The rapid increase and ongoing potential of business from the website will see this continue.

Good points about the Internet: Internet expands the potential number of clients from a local area to worldwide. Low overheads. Easy to communicate with customers using email.

Bad points about the Internet: Internet still very slow with conventional landlines. Many potential business clients still uneducated in use of the internet and wary of credit card use for ordering.

Wisdom to share with other SMEs: Don't waste a lot of money getting on the Internet unless 1)You have a good product that will sell online. 2)You are prepared to provide a personal service (still very important, even in this Internet age!). 3)You need to be able to be found and use the right domain names relating to what you do. 4) Its still hard work, the Internet/web site is not going to run your business for you.

In summary, I can honestly say I didn't experience major problems. It comes down to a lot of trial and error, as with any new business."

7.2 Warrenmang Winery and Restaurants Moonambel, Victoria, Australia

www.bazzani.com.au

This is all about a husband and wife team – Luigi and Athalie Bazzani – and it started more than 25 years ago with the opening of their first restaurant, Ristorante Bazzani, in country Victoria (Australia). Since that time many changes have taken place and new business ideas have become reality. Today they oversee an award winning winery, resort accommodation, two restaurants, and a conference venue.

Wine is considered one of Australia's premier exports and Warrenmang is recognized as one of Australia's more successful boutique wineries. Taking their business online was just part of an overall business strategy for Luigi and Athalie Bazzani. Their online presence supports their physical presence, as direct sales through their website is not their only marketing channel.

Their website serves as a cost effective marketing brochure to deal with potential wine buyers, tourists interested in their resort and accommodation, and corporations using their conference venue. For wine

connoisseurs, the website provides details about the wide selection of red and white wines from the Warrenmang winery, with additional references to awards for excellence. All this online information saves staff time on the telephone and provides a much better resource for potential buyers. As a small, family-owned and operated business, this is an important factor and a matter of saving time and money.

7.3 Red Earth Aboriginal Gallery Dubbo, New South Wales, Australia

www.redearthgallery.com.au

Lewis Burns was born in Dubbo, New South Wales, Australia where he spent his early childhood on the Talbragar Aboriginal Reserve near Dubbo. Lewis is the sixth of seven children. Lewis is known for his ability to blend traditional stories of the Wiradjuri with contemporary mediums and colors, his designs bring to life stories that have been handed down century after century. Lewis has made his mark on the international stage with works in many countries.

Lewis is a master craftsman of the didjeridoo and exports concert quality instruments worldwide. Lewis is also an accomplished didjeridoo player and is called upon on many occasions for his didjeridoo performances.

Lewis makes his world-class instruments and other Aboriginal crafts available to buyers around the globe via his website. Lewis also takes full advantage of email to communicate with other musicians when planning a concert.

“I have found the online environment to be ideal for selling my products and organizing my concerts. However, I have had lots of problems with my website and my email. There are a lot of times when my email doesn’t work, causing me to miss important messages or to appear unresponsive to potential buyers. This is just not acceptable and I blame both Telstra and the different ISPs I have tried. I have had to change my email address a number of times and this is not good for business.

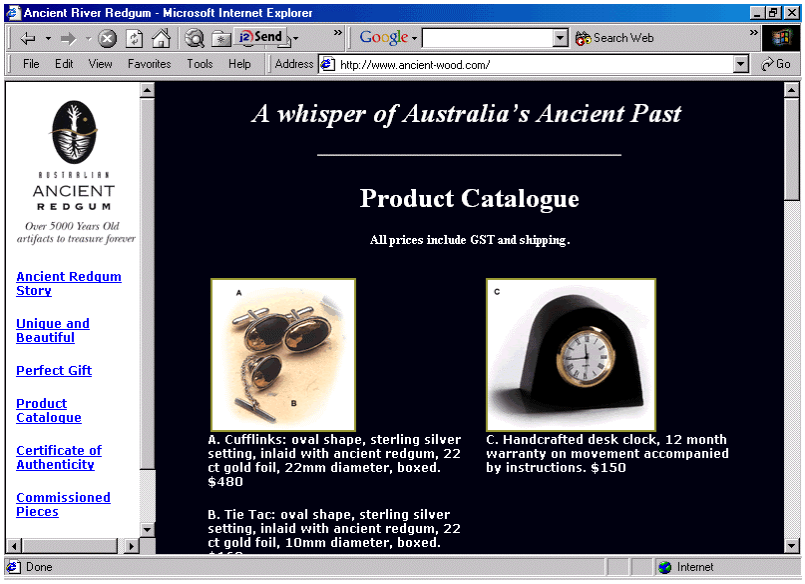
My website has also been a problem. I find it very hard to get the right people to work on it. Either they don’t do a good job or they are too slow

and miss deadlines. This is also a problem for my business. I think the cost of maintaining my website is too high and I have been having several discussions with the company that hosts it."

Dubbo is a town of 38,000 and located 450 kilometers west of Sydney.

7.4 Ancient Redgum Melbourne, Australia

www.ancient-wood.com



The Story of Ancient Redgum: "Over 5000 years ago, after the ice age, these magnificent trees grew on the banks of a wandering watercourse which would, thousands of years later, be called the River Murray. Australian Ancient Redgum has unearthed this natural treasure and commissioned talented artists and crafts people to create a range of both decorative and functional pieces. Choose from a selection of superb desk accessories or a piece of exquisite jewelry - each a work of art crafted first by nature and then by an artist who has revealed its natural beauty often embellishing it with precious metals.

Every piece of Australian Ancient Redgum is accompanied by an individual "Certificate of Authentication". This certificate is your assurance that the piece you have purchased is crafted from genuine Australian Ancient timber and is at least 5000 years old."

"We went on line about three years ago. We decided to go on line to keep in touch with the 21st century. At the time we were spending a fair amount on photography and developing prints for marketing purposes. It was also costing us a lot in postage. The opportunity to make the same information available online seemed like a cost-effective way to show interested people our products.

The process was very difficult at first as we knew nothing about how to get started. A student from Melbourne University was recommended to us and he sounded like a good choice. However, we did not even know what questions to ask him and that made the whole effort that much more difficult. We told him we wanted a web site to show our products. What we did not say was that we wanted to be able to make changes ourselves,

because in our ignorance we took that as being obvious. Why would you set yourself up for having to contact an outside resource every time you had to make a change on your website?

Currently our domain name is registered in the United States and our website is hosted by an American server. Our student advised us that this important if we wanted an international presence. However, the problem we face now is that anything we need to be change or upgrade costs us dearly. We have had no direct sales at all through the website. However, it has been extremely useful to direct enquirers to the site to look at our product range.

Our computer skills are not high and as our cash flow is limited, we have felt very trapped and really not sure which way to go from here. One really big issue has been our email. For some unknown reason we stopped receiving emails altogether addressed to “ancient red gum” and have had to rely on our personal email addresses. This problem has been going on now for months and we have been unable to get any kind of response from our ISP, Digeweb. We did not have access to the passwords etc., as our student resource had all that information but never bothered to give it to us.

After months of trying to make contact with him, he eventually answered his mobile phone and we discovered he was in Finland and wouldn’t return to Australia for another few months. After many frustrating months we finally heard from Digweb and were assured all our problems would be fixed. Well, they are not. With all the problems noted above, we have not been able to make the necessary changes to our website. At this point we want to have full control over our own website.

Even with all the problems we have experienced, we can’t say we have been disappointed. We still believe there is potential for financial success and we look forward to that happening in the future.

7.5 Simply OZ
Melbourne, Australia

www.simplyoz.com.au

From beanbag toys to lunchboxes, watches and kids’ costumes, SimplyOZ offers quality toys, many with unique Australian themes, to anywhere in the world. SimplyOZ is based in Australia and is strictly an online business using multiple channels to market to the world. With its own website and hundreds of listings on ebay, SimplyOZ is visible to millions of potential buyers. Nearly 5,000 toys have been sold individually over a 3 year period on ebay. Additionally, several bulk orders have been negotiated via the website and email.

SimplyOZ owner Carmel Bower stresses the need to understand your market and to always remember that providing customer service is the most important aspect of a business, regardless of whether you are managing a physical shop front or operating in the online environment. This is a lesson that Ms Bower believes she learned many years ago, but in her online dealings finds some people to be rude or worse yet, totally unresponsive in their email practices. This is one area that Ms Bower feels strongly about, as she feels a business can easily fail if it doesn’t pay enough attention to its email communications.

SimplyOZ went on ebay soon after it first came on the scene, believing it could deliver many benefits to a small and struggling business. While there are commission fees associated with selling on ebay, Ms Bower believes the benefits more than outweigh the costs. Ebay provides SimplyOZ exposure to millions of potential buyers, the opportunity to manage products in a “store” environment including photos and search capability (not unlike your own website) and payment mechanisms that facilitate and protect the financial relationship between buyer and seller.

This is Simply OZ’s “store” on ebay.

The best description of what ebay can offer a seller is found on ebay’s own website:

The eBay community is made up of individual buyers and sellers who come to the site to do more than just buy or sell—they have fun, shop around, and get to know each other, for example, by chatting at the eBay Cafe.

Through the bulletin boards, users meet and get to know each other, discuss topics of mutual interest, and petition one another for information. These bulletin boards are public forums that encourage open communication between users.

eBay becomes a part of users' lifestyles. Many users have created second businesses, or quit day jobs altogether, by selling items on eBay. For hundreds of thousands of others, eBay is the place to share a passion for items that are special.

The community is also self-policing, and users frequently form "neighborhood watch" groups to help guard against misuse or violations of site etiquette.

eBay also encourages open and honest communication between the community and the company. Frequently, members of the community organize grassroots movements to improve the environment in which they work and play.

The sense of community is alive and well offline too. In the past few months, eBay users have planned vacations together, chipped in and bought a special item for another user, and have even spent vacation time doing home repairs for a fellow eBay user. We even heard about a group of eBay users in Ohio who are getting together for a Labor Day picnic.

eBay, simply, is the home of a unique online community.

7.6 Peter Eu
Malaysia

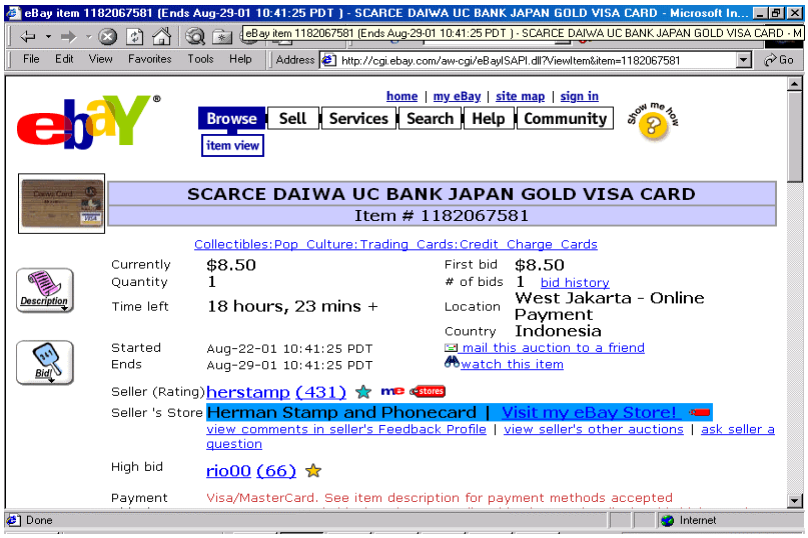
"I would be delighted to share some of my views and experience trading on the Internet. I chose ebay.com as my trading media due to the main fact that it has made a name for itself and hence they record very healthy hits from all over the world. So far I had no problems in delivering my products to customers all over the world but face problems of receiving payment as it could be a delaying factor in completing the transaction.

Many payment gateways like PayPal and Billpoint does not accept Malaysian seller (or rather the system as yet). However we rely on BidPay for Money Order transaction but the commission payable could be unrealistic i.e., purchasing an item worth US$5 may have to pay US$5 for a money order. A standard global system of payment at a cheaper fee (if developed) would definitely assist in expanding the trade tremendously. I personally feel that e-commerce would be very viable for trading goods inter-country where choice of goods is not easily available in one's country. That is where ebay.com has become renown."

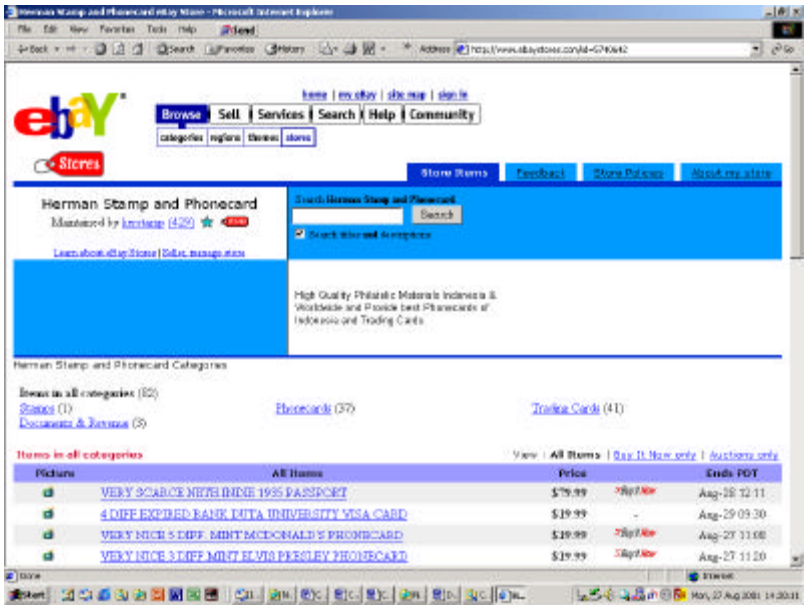
7.7 Herman Santosa
Indonesia

"Thanks for contacting me.
I am interested much in your project.
I am doing this e-bay selling channel and had developed quite good as well.
Actually I am doing this sales through e-bay as part time business.

Fyi, my monthly turn offer approximately US$ 4000-5000 including so much of the off-line trading. I am using this e-bay channel as a promotion lines and getting know more customers."



Mr Santosa has sold nearly 1,000 items on ebay over the past 2 years. His business is located in West Jakarta and he is developing a valuable network of potential buyers from around the world. He deals in stamps and phonecards. At any one time, Mr Santosa lists between 75 and 100 items on ebay.



Mr Santosa also takes advantage of ebay's optional "store" which affords him a website without the need to either have the skills himself or hire others to do the work for him. With the store option, sellers can provide potential buyers a search function and a gallery of pictures to further promote their listings.

7.8 Namhae Fishery Co.,Ltd Korea

www.namhaesea.co.kr
Namhae Fishery company has its own web site. It is a very pretty site but

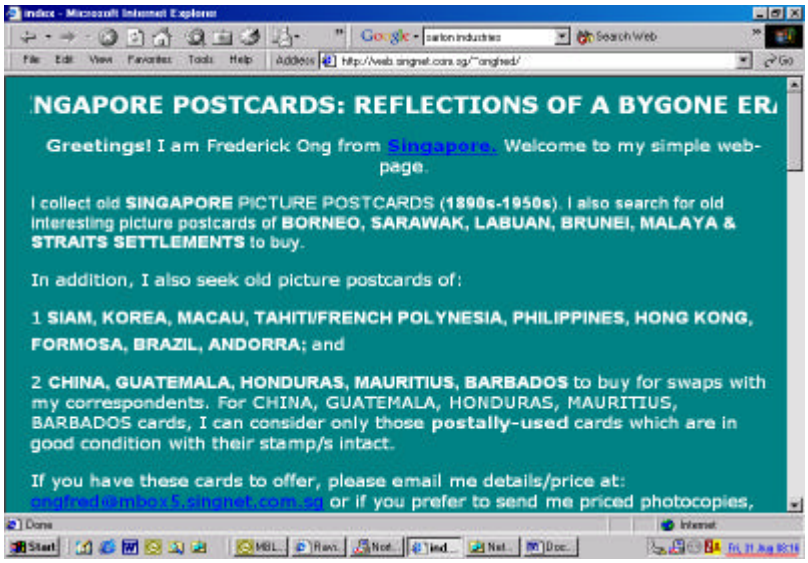
they still use an on line marketplace in order to extend their reach and the markets to which they have access. The mall that they use is the "Korean Marketplace" www.smipc.or.kr.

Namhae Fishery Co.,Ltd. is the small-wrapping company for Marine products, located at Sanjung Agricultural complex, Mok-po. We have provided fresh and low-price marine products (Frozen croaker, hair-tail, soup with mixed sea foods, and processing sea foods).

Additionally, we could furnish the automatic shellfish processing facility and nursery with the accumulated technology and consistent effort and investment to develop new technology.

7.9 Frederick Ong Singapore

“This is for me but still a hobby. It has not progressed into a "business" as per my definition, not yet anyway. I only started putting up my duplicates or items which I do not need on Ebay in May, less than 3 months ago.



I am not sure why, or how, I came to be the subject of your focus but I assumed you had probably visited my simple home-page on Singapore's postcards & simple history at http://www.singnet.com.sg/~ongfred/ which took me a long time to "launch" after many failed attempts going through "Books for Dummies" and ending up a Dummy!"

Once again the issue is raised about a lack of knowledge and skills and the need to do more to support the efforts of SMEs trying to get established in the online economy.

7.10 Cycle Service Oyama

www.cso.co.jp/index.html

Cycle Service Oyama - winner of Japan Electronic Messaging Association's Challenge Prize. The owner, Mr. Yoshiharu Oyama, has a through knowledge of bicycles as he used to help his father who owned a bicycle shop during his junior high school days. In 1996 he opened his own bicycle shop at a location only 20 minutes walk from the station in Matsudo City, Chiba.

Mr Oyama says he sells approximately 30 bicycles per month. They used to sell more, however, now people can buy them at supermarkets and discount stores at about 10,000yen. Considering this, it is quite good for a bicycle shop to sell 30 bicycles a month. With the price around 10,000yen, profits tend to be quite small.

Mr Oyama created a homepage and used the name "Cycle Service Oyama" to open his web-based shop in 1996 and he advertised his website as a trial. He didn't take it seriously at first - it was rather just for fun. He renewed the homepage one year later because he had been receiving inquiries more and more over that first year.

There are hundreds of bicycle manufacturers in the world. Since each manufacturer has about 20 kinds of bicycles, the total number of different models is in the thousands. Books and CDs are successful in the web market because there are too many of them to store in a shop. So are bicycles as it turns out.

There are 250 kinds of bicycles on Mr Oyama's web site currently. A bicycle shop might sell 30 bicycles per month, but certainly not more than 50. Mr. Oyama sells 50 at the store and 70 on the web per month. Popular kinds of bicycles on the web are quite different from what is popular in the store. While housewives and students tend to buy bicycles at the store for around 10,000yen, serious buyers will buy expensive bicycles online and pay more than 50,000yen. Mr. Oyama has found that most of his serious buyers (around 70%) are from prefectures other than Chiba, where is shop is located. This means Mr Oyama has successfully extended his customer reach

Although his shop is small and located in a rural area, Mr Oyama is receiving orders from all over Japan. Through his website presence, Mr Oyama is able to offer bicycles imported from Germany and others that are highly specialized and not previously available. With a small shop and very limited space, Mr Oyama takes advantage of the web environment to "showcase" all possible options while only a few models need to be stocked in the store.

For people living in this area of Chiba, it is very typical to buy a bicycle for the round trip between the train station and home. Considering the importance of bicycles for commuters, many are willing to spend the extra money for a better quality bicycle. Bicycles are also becoming very popular for cycling in the countryside on the weekends. With this growing interest in quality bicycles, Mr Oyama is in a very good position considering most shops in Japan only sell the inexpensive ones.

In addition to an online catalog, Mr Oyama's website offers very helpful information on bicycle maintenance. While Mr Oyama is happy about his success, he is a little concerned about staffing for the future since currently it is just himself, his wife and only two employees `managing all aspects of the business.

Mr. Oyama feels that the key to success is to provide customers with detailed information. He explains that it typically takes five email exchanges before he actually receives an order. He responds to many questions from his customers, as they go through the decision-making process and need to ask for details about many different models. Mr. Oyama believes email is ideal for this type of sales environment, however he feels strongly that emails must be responded to promptly. This makes for a very long day as Mr. Oyama has to manage his shop during business hours and then respond to emails at night. He explains that many nights he doesn't get to bed until two in the morning!

7.11 Interview with b2bpricenow.com (by the Digital Filipino) Philippines

How did this project get started?

“This project started towards mid 2000 when the Philippine e-commerce law was enacted. This gave room for people to do IT projects, but for us we wanted an IT project that has social relevance. We looked at several projects and we said that we want to undertake the biggest challenge. For the Philippines being an agricultural country, the biggest challenge is how to get IT to the farmers who are in the countryside. They are already the most marginalized and fragmented sector and is exposed to be even worse off since internet penetration is low in the provinces and even if there is, there is no relevant content for them view.

What is the role of the different partners?

Knowing that this is a monumental task, we made sure that we get both private and government sector to work hand in hand because this is a prolonged project. With a good concept in mind, we were able to form strategic partners who were willing to provide their product or services for free. And thus our agricultural e-marketplace site is free.

PRIVATE SECTOR

Technical Partner	Mr. Gabriel Leiva, President, Unisys Philippines
Content Partner	Mr. Gerry Geronimo President, Ating Alamin Productions
NGO Partner	Rep. Wigberto Tanada President, Philippine Rural Reconstruction Movement
Chamber Partner	Mr. Miguel Valera President , Philippine Chamber of Commerce and Industry

GOVERNMENT SECTOR

Agency	Sec. Leonardo Montemayor Secretary, Department of Agriculture Sec. Mar Roxas Secretary , Department of Trade and Industry
Lending Institution	Mr. Margarito Teves President, Landbank of the Philippines
Training Partner	Dr. Ofelia M. Carague Phil. State Universities and Colleges Education Systems Society (PSUCCESS)

Please describe what this project is about

This is e-commerce for farmers. b2bpricenow.com is an internet based agricultural e-marketplace. The cost to connect to the Internet in the Philippines is getting more affordable with the use of pre-paid Internet cards so users who own a computer can dial up to their ISP via their telephone lines whenever they wish to access the Internet. In doing so, they do not need to maintain a monthly subscription account where a minimum fee has to be paid whether they access the Internet or not. For those who cannot afford to buy their own computers, farmers can commute to the nearest Internet cafes and pay the owner USD 0.50 per hour, or they can go to any of the branches or field offices of our strategic partners and access the Internet for free. Our strategic partners have about 200 access points distributed nationwide.

Market information can be seen in our website for free but to further circumvent limited access to the Internet, we have used mobile communication. A farmer may not have a landline to access the Internet but he can have a mobile phone to access relevant price information in our website as long as there is a cell site in his area.

A practical use of this mobile technology is that a farmer can commute to the nearest Internet café in his area and apply to become a member. Once a member, he can have his own personal page where he can put his preferred buyers and sellers. Then he can commute back to his farm and

check the prices of his preferred buyers or sellers through his mobile phone.

The Philippines is the short messaging system (SMS) capital of the world, with 20 million SMS messages per day. Filipinos communicate and get their information through SMS. We have tapped this culture and provided two mobile applications. One is to for members to canvass and post the prices of their products of interest and the other is open to any mobile phone user to compare price indications of the top 10 most traded products per provincial region. The cost to access market information (i.e. price) via mobile phones using SMS is USD 0.05 or a dime per download or upload of price information.

Describe the results of your project so far

Government grants have always supported information and educational campaigns to farmers on how to use technology to increase their productivity. However, a recurring problem is that farmers are able to enjoy bountiful harvest only to find out that their produce has gone to waste because they were not able to market their products for lack of a marketing budget. Or they had to sell their products at depressed prices to middle men or traders just because they don't have timely access to market information. It is only now, with our agricultural e-marketplace that the government or grant-givers have supported an informational and educated campaign to farmers on how to use technology to market their goods and services. The internet is the most effective (24/7 nationwide) and yet inexpensive (free posting and free access to the internet) technology to market the products of the farmers.

All our strategic partners have mobilized all their personnel and resources and are working together towards a common goal of informing and educating our farmers on the benefit of e-commerce and our e-marketplace. We are on the fourth leg of our 21 key city ***Agriculture E-Business Roadshow Program*** where we conduct the following activities : explain what is e-commerce, show the benefits of participating in a free e-marketplace, teach them on the what constitutes a computer : hardware

and software, hands on training on how to get access the internet , get their email account and post and canvass at b2bpricenow.com

No amount of advertising can make cooperatives access the computer, there will be a lot of hand-holding before they embrace a new technology and the only way to do so is through a roadshow and regular training which our strategic partners are doing

Lessons leaned and advice to others

Although we realize that for this project to succeed, we need to get the support of the government since they have the mandate and resources to inform and educate farmers on the benefit of e-commerce; we decided that we should build this initiative without the government since they will only slow us down. So the path we took is to get the private sector involved with the project by making the e-marketplace operational before getting the government involved through information and education.

We also knew that for the government to financially support our e-marketplace through information and education campaign, we have to provide a free marketplace. Otherwise, if we are charging subscription, the government will not spend to inform and educate farmers to use our marketplace against another agricultural e-marketplace that is also charging subscription. If they do support us over our competitor, then they can be accused of unjustly favouring us.

The biggest cost for this e-marketplace project that comes from the private sector is the technology and the marketing component. In order for us to lower our cost and have the least burn rate, we negotiated with UNISYS to own 5% of b2bpricenow.com Inc in exchange to being called our technical partner. Hence we did not have to buy programming software for an e-marketplace and do not have to pay for any administration, maintenance and hosting charges on a monthly basis. We also negotiated with Ating Alamin, the premier TV and radio program focused on agriculture, to own another 5%. Hence, our advertisement spots in Ating Alamin TV and radio show is free for the 3 years.

Only when we had these matters tied did we approached the Department of Agriculture, Landbank of the Philippines and the Philippine Association of State Collages and Universities as our government partners in charge to inform and educate farmers using their personnel and resources.

Project potential

Form our experience, we believe content drives connectivity. No matter how many internet ready computers we send to the country side, they will not use the computer, much less access the internet if there is no relevant information for them to see. In the country side, especially in developing countries where agriculture is the dominant industry, the most relevant content for potential users is market information of agricultural products and services because this is what impacts their livelihood. By providing our free e-marketplace as content, we observe that farmers now clamor to their local government and other government agencies to provide them with inexpensive access to the Internet and proper training to be computer literate to access the Internet.

The potential of this project is monumental. In any developing country; in Asia, South America, Eastern Europe and Africa, agriculture plays an

important role in the lives of its citizen and the ability to market their products efficiently and inexpensively plus access to timely market information is a necessity. In this regard, we are offering our agricultural e-marketplace valued at USD 360,000 by Unisys to any government or grant giver who wishes to use our e-marketplace for free.“

7.12 Raviraj Trading Malaysia

Raviraj Trading was established in 1989. However as the business expanded, a decision was made to incorporate Raviraj Trading into Raviraj Sdn. Bhd. (RRSB).which came into effect in July 1989.

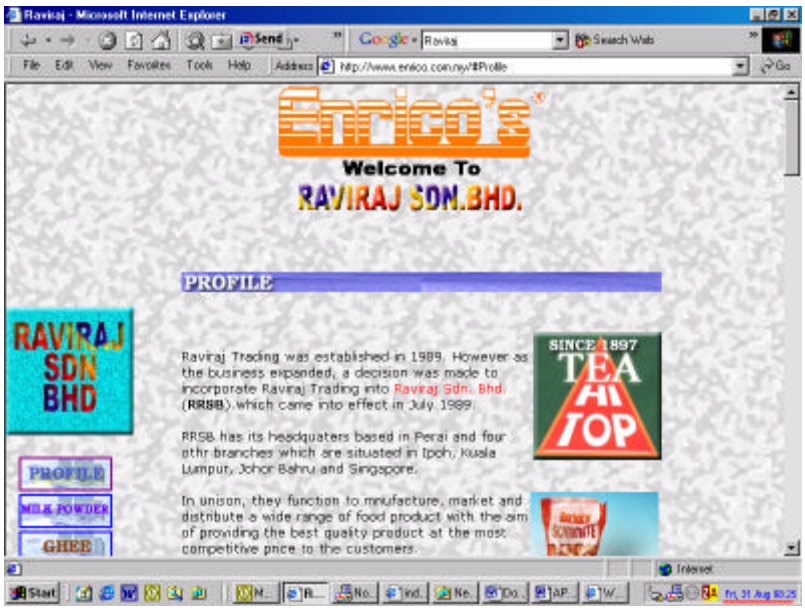
RRSB has its headquarters based in Perai and four other branches which are situated in Ipoh, Kuala Lumpur, Johor Bahru and Singapore.

In unison, they function to manufacture, market and distribute a wide range of food product with the aim of providing the best quality product at the most competitive price to the customers.

They were encouraged by MyBiz Malaysia to go online and, while feeling unsure of the reason to go on line at first, took the offer enthusiastically once the benefits were explained. They were one of the first customers in Malaysia for MyBiz.

Although the actual sales through the MyBiz connection has been small to be able to have, on line a listing of their products has enabled them to encourage their customers to see their range at any time.

MyBiz has been able to use Raviraj Trading as a reference site for their business and the CEO of Raviraj has spoken at many venues around Malaysia including at a recent AOEMA seminar.



7.13 Litao China

“Thanks for your message and interested in my story.
I am in china and you will notice few Chinese people use ebay.”

Mr Litao of China expresses a concern felt by many SMEs in Asia today – that there are very few users online. For most SMEs, this is reason enough not to go online themselves. There are, however, some brave SMEs willing to take the initiative and be part of the first wave. Many, but not all, have been financially rewarded for their efforts.

7.14 ThaiGem.com Thailand

www.thaigem.com

Background and Introduction

Selling gems and jewelry online is still in its early stages in Thailand, and it lags behind the United States. But it has made some noticeable inroads, and more and more companies are taking the Web seriously. E-mail has become the favored mode of communication, and many say that large-scale e-commerce is not far behind. The biggest gem e-commerce company in Thailand, and possibly the world, is 21-month-old Thaigem.com.

Created by gem wholesaler Nuntiya Care Stone Co. Ltd., it started small, with five items on eBay, and has grown to 144 categories of colored stones, with a total of more than one million items posted at any one time. Thaigem.com is a major supplier of the gems and jewelry sold on consumer e-commerce sites, such as eBay and Amazon.com, and trade sites such as GemKey. For each site, Thaigem.com might offer anywhere from 5,000 to 500,000 items at a time, contributing up to 90 percent of the total merchandise. In June 2000, Thaigem.com CEO Don Kogen told the local press that the company makes about 30 million baht (US$700,000) a month in revenue, and he expects that to grow to perhaps 100 million baht (more than $2 million) by the end of the year.

"We began by listing 5 items online (ebay.com), really just to see what would happen. These sold so we began listing more and more. When we first started, our e-commerce division had 3 employees; today we have more than 400 employees and experience such growth that up to an additional 50 people are hired each month."

As a result of this dramatic expansion, Thaigem.com now claims to be the "world's largest online gemstone and jewelry supplier" with over 1,350,000 items available for purchase over the Internet. Its products are widely distributed over 23 on-line auction sites (eBay, amazon.com, yahoo.com, etc.) and they are also available from the company's own very extensive website.

According to Gavin Linsell, the company's marketing and communications director, one of Thaigem's key advantages is its location in Chanthaburi. This eastern Thai city near the Cambodian border is truly one of the world's premier gem and jewelry centers. That ensures the company a steady supply of rough and finished products. It also allows Thaigem to buy in bulk, thereby keeping costs far lower than for most competitors.

Thailand's relatively skilled and inexpensive labor force plays an important role too because it allows the company to hire a staff large enough to efficiently manage its vast array of products. Each day, the company lists almost 25,000 new items, a process requiring large teams for data entry, photography, and website management.

Thaigem appears to have successfully avoided another pitfall that has plagued so many dot-coms – the high cost of acquiring customers.

Faced with the need to gain market share in highly competitive markets, many dot-coms have been forced to spend heavily on advertising and promotional campaigns. While this has often succeeded in winning new customers, it has also meant that the cost of acquiring these customers has been excessively high – up $250 per head in the case of the on-line brokerage E*trade. Thaigem has taken a very different route in acquiring its customers by making its presence known largely through on-line auction sites.

Thaigem's average monthly sales is US$1.5 million, and striving to raise that figure to US$2 million. Since its launch in June 1999, thaigem.com site claims to have received over 16 million hits. The number of daily transactions is 200 on average The content of the web site is updated regularly. With an inventory of more than 1 million items, Thaigem.com guarantees delivery within 72 hours. It also provides free insurance and a two-day product inspection period.

Utilizing the Internet not merely as another form of advertising, but as a medium to conduct business and generate profits, Thaigem.com has become the World's Largest Online Gemstone and Jewelry Supplier.

In 1998, Thaigem began to experiment in online. Initially listing 5 items on eBay, then adding more until by the end of that year, Thaigem had thousands of gemstones listed online and the website, Thaigem.com, was born.

Listing over 1 million individual items online, Thaigem.com caters for the diverse range of global preferences and tastes at extremely competitive prices. Buying in bulk directly from the mine owners and cutting houses enables Thaigem.com to offer low prices.

As a responsible corporate citizen, Thaigem.com believes in contributing to the improvement of their local community. Given the importance of the

English language in the global market, Thaigem.com runs a Free English Language School for underprivileged children.

The company's mission is to move most of its colored stone business online. Short-term goals are equally ambitious with the company aiming to make $2 million in sales per month on the big three auction websites within the next six months. "We've invested a lot of money and resources in this project (eBay) and our own website because we see the Internet as the way gems and jewelry will be traded in the future," said Nuntiya Care Stone CEO Don Kogen.

Buying in bulk, and manufacturing goods in cutting centers like Thailand and India, allows Nuntiya Care Stone to sell gems at lower price points. "We deal according to cost because volume is so big," Kogen said. On average, Nuntiya Care Stone adds a 5 to 15 percent markup on goods before posting them on auction websites. Markups are based mainly on availability of the roughly 144 different types of stones in the market the company sells online.

A hit counter is the only statistics mechanism on Thaigem.com's home-page so hard data on visits is guesswork, but Kogen estimates the page gets 200,000 unique hits per month while back page and links from the auction websites receive approximately 1 million hits each month. Nuntiya Care Stone hasn't been able to conduct in-depth market research until recently with the addition of Thaigem.com's shopping cart, which allows the company to track how customers use the website. Still, Kogen and Linsell said they have an extremely solid idea of who their customers are.

Convincing Chanthaburi's gemstone manufacturers to go on-line was not an easy. It is difficult to educate older people about the Internet. They've never had any experience with it. They are mostly gemstone miners who hit the jackpot about 30 years ago during the ruby rush in Cambodia.

The payment for the merchandise remains with an escrow company and we will not see the money until the buyer approves the product. If the merchandise that gets returned is not the same, then we're also protected.

Thaigem is one of the biggest customers of FedEx in Thailand. They shipped over 150,000 packages in the first year of operation.

Dealers who are giving e-commerce a miss believe buyers will always travel to Bangkok to buy. That could remain the case for a while yet, but already e-commerce is diversifying the industry, making the location of the dealers less important. Chanthaburi could become a good example. Located in the center of a former mining area, the city has slowly seen its importance slip over the past decade. Convenience was an issue; Bangkok took more and more business because buyers didn't see the need to travel an extra day to Chanthaburi.

Thaigem's observations about online auctions:

Online auctions have advanced from online garage sales to serious e-commerce solutions in today's e-conomy. One of the key players in this online evolution is eBay, the Internet's most widely recognized auction website that sells everything from Beanie Babies to blue sapphires in its 1,600 sales categories. There are 250,000 new items up for sale each day at www.ebay.com. Even the famous Tiffanys has auctioned loose diamonds (accompanied by GIA certificates) on ebay.

A presence on eBay can mean more than just sales, especially for those in the industry who have a website. The consensus amongst trade members is eBay provides auction e-commerce solutions for large and small companies selling anything from just about every price point. Ebay has successfully developed a workable online auction model in the ecommerce world from small businesses on up to Fortune 500 company websites

Impediments addressed by Thaigem:

Internet Access: Don Kogen, CEO of Thaigem, explains that when he first went online he was not able to reliably depend on local Internet access. He made the decision to take advantage of an overseas account until such time that Thailand's Internet industry could provide the service levels he required. The important point being that Don Kogen did not let the issue of access stop him from launching his business online.

Telecommunications Infrastructure: Thaigem's success and nearly instant profitability has afforded it the opportunity to help Thailand develop a more robust infrastructure. With millions of dollars invested in telecommunications upgrades for Chanthaburi, Thaigem has been instrumental in bringing the gem precinct of Thailand into the 21st Century.

Lack of Skills: When Thaigem first went online, it certainly didn't have the highly skilled staff it has today. In fact, CEO Don Kogen admits that it was he alone who took responsibility for web-related activities and he knew nothing about technology when he started Thaigem. He knew right from the start that the web would become a critical component of his business plan and consequently he made up his mind to learn the basics. Today Thaigem invests hundreds of thousands of dollars in developing the technical skills of his workforce. CEO Kogen strongly believes this has given his company a significant competitive edge. Thaigem is also contributing to the further development of the entire community of Chanthaburi in terms of IT skills in general.

Security: When Thaigem first went online, it took advantage of existing platforms like ebay and other auction sites that could provide the necessary security features required in electronic commerce transactions. After Thaigem became profitable, it was able to afford the best software available and has even developed its own software modules for functions like secure shopping carts. Again, Thaigem took advantage of what was available initially and later, after becoming profitable, was able to develop its own software to meet its specific requirements. As for the security of payments, Thaigem takes advantage of online escrow accounts – a way of protecting both buyer and seller from fraud. Buyer's money is put into escrow not paid out until the buyer receives the product and indicates satisfaction with it (having two days from time of receipt to decide).

Language: Thaigem has always operated in the English language. CEO Don Kogen is American born and hence the choice to operate in terms of English was an easy one. However, being located in Thailand, outside the main city of Bangkok, and dealing with many older Thais who are not comfortable with English, Don Kogen decided to make English language training available to his staff at no cost. As a humanitarian gesture, Thaigem is also making this training available at no cost to underprivileged kids in Chantiburi. Thaigem has made the conscious decision to train all staff in English so they can interact comfortably with the world of online consumers.

Transportation: One of the biggest issues Thaigem faced initially was that of transport. Being more than two hours outside Bangkok, one of the world's most congested cities, Thaigem had to quickly overcome the transport bottleneck of Thailand if it was going to provide good customer service. At first it was very challenging, with many unhappy customers. However, with lots of persistence and a strong desire to deliver superior customer service, Thaigem today delivers on its promise of a three-day turnaround. Using Fedex and being their number one customer, Thaigem actually houses the Fedex office in Chantiburi in one of their buildings.

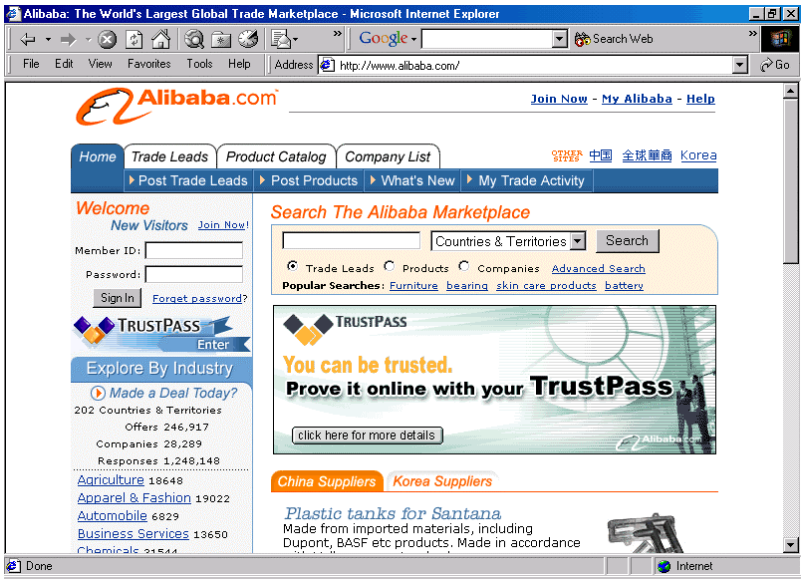
7.15 Alibaba.com

www.alibaba.com

Alibaba.com is one of many electronic marketplaces for global trade that brings importers and exporters together to find business opportunities. Alibaba has over 750,000 registered members from more than 200 countries, and is growing at a rate of over 1,500 members each day.

From Alibaba's CEO, Jack Ma, we learn how farmers in one of the poorest areas of China have become enabled on the Internet:

"Globalization and technology are not just benefiting technically-savvy companies in the big cities. They are also helping entire communities in rural areas of Asia. We recently learned of an inspiring story from the township of Quzhou, one of the poorest areas in Zhejiang province in China and a place where farming is still the dominant way of life. Seeking to promote enterprise, the local government piloted an e-commerce initiative. Although farmers in the area did not have Internet connection and did not know how to use computers, the local government established an Internet center in every big town to help farmers post trade offers on sites such as ours. For our part, we dispatched a member of our staff to train locals on how to properly use Alibaba.com. The initiative was so successful that it led to a number of large deals for the local farmers, including one contract with a Korean buyer worth US $1.5 million (for the sale of rabbit hides). Since then, businesses in the community have raised production levels and added staff to keep up with the increased demand for their products."



This is an example of how enterprising individuals can take advantage of available technologies and make a difference. This is but one example of how entire communities can become enabled to take advantage of electronic commerce by providing a community access point. With only one computer and one telephone line, local farmers now have the opportunity to benefit from lucrative contracts being offered by international buyers.

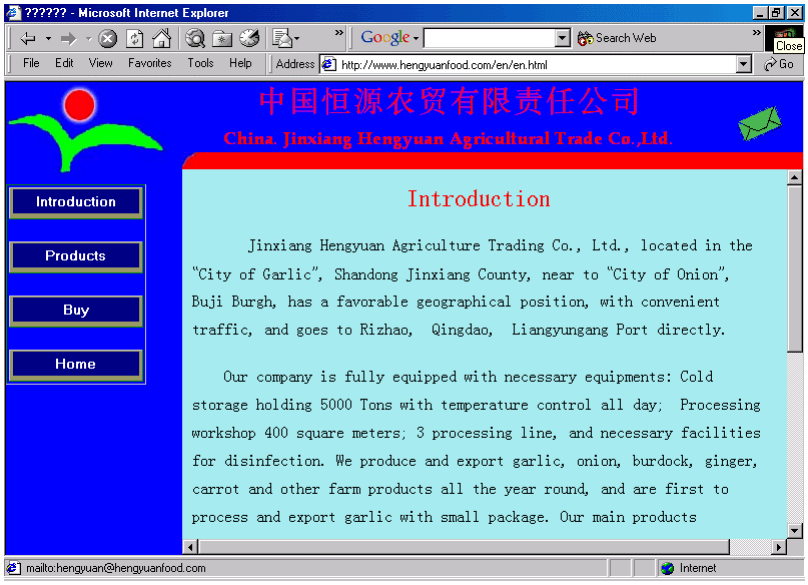
7.16 Jinxiang Hengyuan Agriculture Trading Co

www.alibaba.com
www.hengyuanfood.com

“I am a member of Alibaba.com, and I work in China for Jinxiang Hengyuan Agriculture Trading Co., Ltd., (www.hengyuanfood.com). Back in June 2000, I was introduced to Alibaba by a friend, and posted an offer to sell fresh garlic and ginger. To my surprise, I received a request for quote from Pakistan. I did not pay much attention at first, I just replied to him with a quotation the next day. We began to exchange our ideas and discuss cooperation through Alibaba.com.

At last, we reached an agreement on the price of garlic and ginger. I sent an invitation in faith to him to come to China and visit our factory, and he accepted. We finally signed our first order for garlic and ginger, a deal worth USD $67,000. We have continued to do business together, and in total I have shipped about 200 containers of agricultural products to Pakistan. We are currently working on developing new future cooperation plans.

Many thanks to the staff of Alibaba.com, who have helped to make these business opportunities a reality!”



7.17 Loloata Diving Resort
Port Moresby, Papua New Guinea

www.loloata.com

A diving resort, Loloata's website explains: "Loloata means many things to many people. In the Motu language, Loloata has a literal meaning created from the words "loloa" and "ta" which translates to "one hill." Many of our overseas guests find Loloata Island Resort a tranquil and more natural alternative the bustling capital city of Port Moresby, New Guinea. For locals, Loloata Island is a welcome getaway – a chance to unwind, commune with nature and enjoy true Melanesian hospitality.

To scuba divers, Loloata Island Resort means great diving, and a chance to observe some of the world's greatest coral reefs and meet a myriad of marine animals in their natural habitat."

An interview with the proprietor of Loloata in 1998 revealed that nearly all room bookings from overseas guests are done over the Internet, using email and this website. The proprietor further explained that she experienced a marked increase in inquiries immediately after the website was launched on the Internet. Previously she had to depend on phone and mail inquiries.

7.18 NOVICA.com
Cultural Products from South America and Southeast Asia

www.novica.com

NOVICA's Mission: "We want to give artists and artisans around the world a global platform to express their true artistic talents and to spur their creativity. And, we want to provide you with access to unique, hard-to-find items at great values that only the Internet infrastructure can allow. At the deepest essence of our philosophy, we want to create a bridge between you and the many talented artisans across the globe. We want you to know about who you're buying from. We want you to feel that attachment to the product and to the hands that created it. In the spirit of the Internet, let us bring you together. NOVICA. The World is Your Market."

Founded in 1998 and headquartered in Los Angeles, NOVICA.com makes it possible for artists from emerging countries to market their crafts to the world. With over 1,700 craftsmen featured on the website today, nearly 10,000 items are included in the online catalog from El Salvador, Brazil, Ghana, India, Indonesia, Mexico, Morocco, Peru, Thailand, Venezuela and Zimbabwe.

While artists make more money, customers get unique products at reasonable prices and the websites boost their profits. Textiles from Brazil, ceramics from Thailand, and stone carvings from Ghana are available with the click of a mouse. Unknown artisans from remote villages now have an opportunity to make a living from their art.

The economic impact on artists is significant. Master carver I Nyoman Subrata in Indonesia used to make around 6 million rupiahs a month. After he joined Novica, his income jumped to about 20 million rupiahs a month,

and he hired 17 carvers to help him. "We sell much more around the world. Now we can place our children in a good school," I Nyoman said. "Our lives are much better."

7.19 Rainbow Company Vietnam

www.vietnamcraft.com

“Rainbow Trading is one of the leading companies in producing and exporting Vietnam handicrafts. We own a big factory ourselves. Besides that, we have good relationships with the best craftspeople and factories. We ensure you get the best quality, best price and best services while buying with us.

For decades Vietnam closed the door to the world. That policy somehow was really great for development of handicrafts skills. No machines, no electricity, no modern technology, Vietnamese craftsmen have learned how to produce highest quality items that were used for themselves and many foreign tourists are surprised with the beauty of Vietnam handicrafts.”

7.20 Thailand Cooperatives Cooperative Promotion Department Thailand

The following information was reported by Thai Government officials at a recent AOEMA/NECTEC seminar.

Currently there are 5,341 cooperatives, with the following membership breakdown:

- 3,401 agricultural cooperatives with a total membership of 5,135,385 households involved
- 1,940 non-agricultural cooperatives with a total membership of 3,114,234 households involved

For the fiscal year 2000, cooperatives in Thailand totaled 12,065.46 million baht in business volume. The Thai government recognizes the

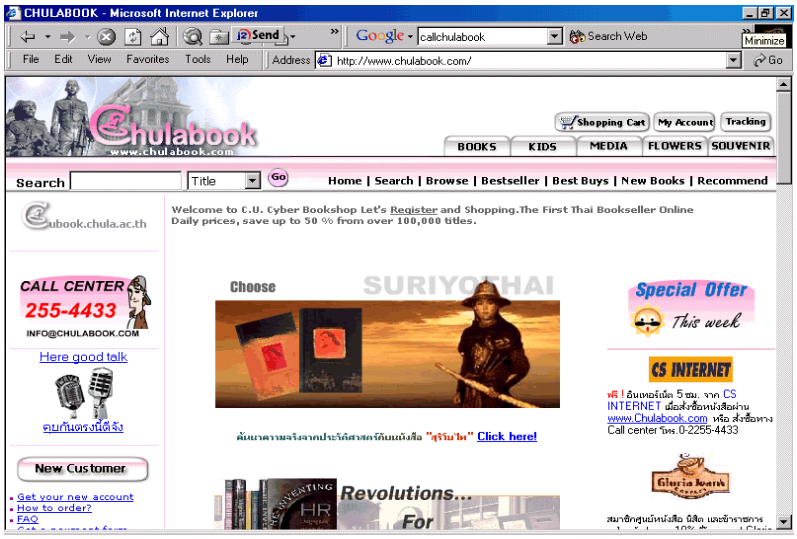
importance of introducing electronic commerce to meet the following objectives:

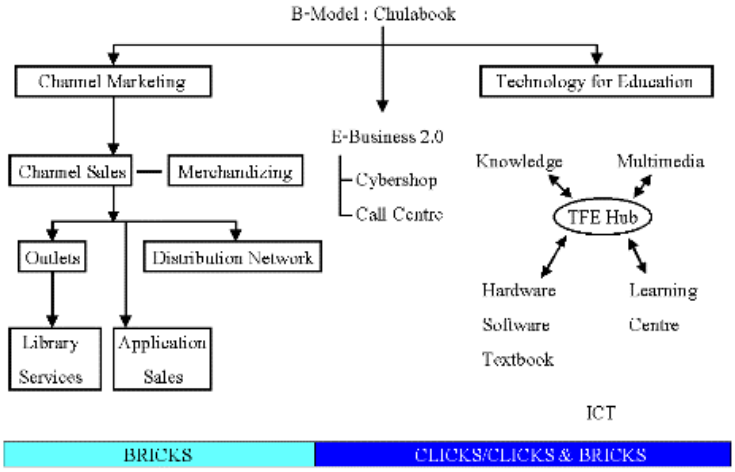
- to be as media of public relations via Internet
- to enlarge the marketing of cooperatives
- to make cooperatives understand the use of electronic trading
- to increase income of cooperatives from electronic trading
- to boost up the competition of production among cooperatives so as to upgrade products to required standard
- to promote exportation of cooperative products
- The Thai government believes cooperatives will benefit in the following ways:
- decrease the investment cost of public relations
- make cooperative products known in public
- not paying any costs in participating in e-commerce system of cooperatives

7.21 CHULABOOK.com Thailand

www.chulabook.com

This is the website for the first online bookstore in Thailand. The small business owner made the decision to have an online presence in addition to his physical shop primarily to improve service to his customers. Secondarily, he thought he could cut operational costs by taking advantage of online ordering from his suppliers. At this time it is too early to know if he has realized his goals, but his overall feeling is that benefits outweigh costs.





7.22 Cheju Special Co
Korea

Cheju Special Co, a family-run business, has been producing teas and vinegars made from Cheju mandarin oranges since 1994. This young company has been exporting their products since 1998, when they first began exporting to Japan. As of February 2001, Cheju Special started filling orders from France and the company looks forward to expanding their export business to other countries around the world. This successful small business has been designated as a "Superior Exporting Firm of the Small and Medium Business" by the Korean Export Assistance Center.

www.chejuwww.co.kr

7.23 Vietnam National Administration of Tourism
Vietnam

www.vietnamtourism.com

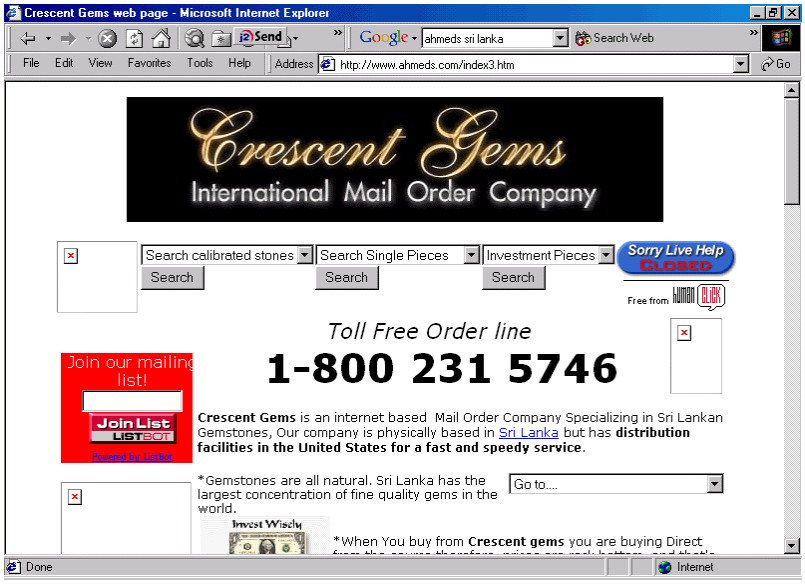
Government campaign to promote Vietnam as a tourist destination. Everyone that receives a visa to visit Vietnam now receives a glossy brochure with this website address prominently displayed on it.

7.24 Ahmeds Gems Sri Lanka

www.ahmeds.com

While the address shows Ahmeds the actual site is called Crescent Gems.

One of the few gem e-commerce operations in Sri Lanka, Ahmeds.com, was established by Ahmed Shareek and his brother in 1998. “It was an uphill challenge all the way,” says Shareek. “During the first days shipping was the biggest problem; I lost over 20 parcels at the hands of the post office, and I had to replace them at my own expense.” Problems like this are common to e-commerce companies throughout Asia; it can be prohibitively expensive to ship a package, even where reliable postal services exist. Not only does this kind of added expense limit e-commerce ventures, but difficulty in shipping into certain countries makes it hard to sell to customers in Asia. Shipping challenges are only part of the problem. In countries like India and China, for example, few people own a personal computer, and outside of major cities even phone service is spotty.”



7.25 Snow Co.- Ltd Japan

The AOEMA Business database lists small medium and large business in our region. One of the smaller companies is in Japan. They have no web presence, however, they have taken the step of including themselves in an online listing such as AOEMA's database or SMET(SME Trade Network) in Japan.

The company was established in Nov.- 1954 with the present capital of 3 million yen and a number of nine employees. It is specialized in designing and manufacturing of various machines and components by using state-of-the art numerical control and machining center.

The company is a reliable manufacturer in designing, machining and manufacturing of various products for test or mass production by using the latest numerically controlled lathe and machining center with the shortest delivery. Their clients in Japan are Masuda Mfg.- Tokyo Steel- Taisei- Fuji Creative Corp.- Ohara Gear Ind. and many others.

7.26 Snowboard company carving new niche in Japan Canada

Canadian-made snowboards are carving down Japanese mountains after a Toronto-based company got a tip from the Trade Commissioner Service about a business opportunity with Kabushiki Gaisha Freetime Japan.

Kuusport Manufacturing Limited, a member of WIN, sold 60 snowboards worth approximately $10 000. "While we have exported our snowboards and other products to Japan before, this was the first time we've been asked to provide a basic board for an OEM supplier," said Eric Sum, Kuusport's Director of Sales and Production. "It was a new opportunity that will hopefully open doors for us to this lucrative market."

WIN is a commercially confidential database of Canadian exporters and their capabilities.

www.kuu.com

Ron Kuus was born and raised in Toronto. His father was an avid sportsmen who kept his boys on a strict regime of exercise; the 6:00 am wake up call, the cold shower, several laps around the street park and cod liver oil before breakfast. This set the groundwork for a highly disciplined future.

Herbert Kuu's, Ron's father became interested in alpine and cross country skiing as the president of the Estonian Ski Club. He took every opportunity to get his children out onto the slopes. Herbert instilled in his children the bug of competition and innovative thinking. As a tool and dye machinist, he started developing products that he thought were needed in the ski market. One of the first products was the patented KuuSport Electric Ski Waxer. This nifty product was great for the alpine or cross country skier who wanted a waxer that was compact and easy to use.

Unfortunately, Herbert Kuus died at the age of 44, leaving three children without their regimented leader. As Ron puts it " it was like letting very strong, endurance trained Doberman's off their leashes. " Ron was fourteen. Skiing became a stabilizing force for Ron. It came naturally for him and it was the perfect place to channel his substantial energy. Curiously, he did not begin competing seriously until he reached the age of eighteen, after completing Seneca Colleges Engineering program. Ron competed with Seneca's Ski Team and the Collingwood Ski Team; but he knew if he really wanted to become one of the best, he would have to move out to the Rockies.

Ron moved to Alberta where he began skiing with the Norquay Ski Club. He worked his way up the ranking scale until he became the number one skier on the Alberta Ski Team. And in Alberta, like many other athletes, Ron suffered his fair share of bumps and bruises both politically and physically in his quest to beat the rest and be the best.

In addition to the Alberta ski team, Ron was a back up on Canada's National team and raced the Europa cup circuit. He raced professionally until he was twenty three years old. Ron always paid particular attention to the tuning and waxing techniques used by his teammates, competitors and touted by the product manufacturers. He soon became known as the "Wax-Guru" and took particular pride in tuning his and others skis.

After leaving the professional circuit, he accepted a ski scholarship at Simon Fraser University in Vancouver where he studied business. It was during these years that he became convinced that now was the time to pick up where his dad left off, adding all of his accumulated knowledge and experience. In 1984, he moved back to Toronto, Ontario.

From his mother's basement in the suburb of Scarborough, Ron started developing what was to become the core KuuSport Product Line: Waxes. He was persistent despite retailers who told him over and over again that he was crazy and couldn't possibly compete against such well established competition. By 1986 he had incorporated KuuSport and started flogging his wears to the retail trade. Ron was a one man show; inventor, developer, manufacturer, marketer, sales rep, customer service, secretary, mail and delivery boy and janitor.Stunned neighbours started to get stopped on the street by 18 wheel trucks looking for KuuSport, then watch the rigs backup into a suburban driveway.

From it's humble beginnings, KuuSport has developed a substantial line of waxing, tuning and accessory products for the alpine and Nordic industries, plus an incredibly successful line of parallel snowboard products which also includes the manufacturing of KUU boards Kuusport is still located in Scarborough, although many years ago we moved out of Ron's mothers basement.

We are proud to announce our fourteenth year of high quality, Alpine shop, Nordic and Snowboard products. Many of you have been with us for the last decade and are aware of the advancements KuuSport continuously strives towards: for the professional technician, retailer and beginner to expert skier. We are particularly excited because we have further increase our performance Wax Series to include MACH II white (the ultimate in warm temperature wax), White Lighting Base Paste and the Kuu Fluoro Cake. As always we continue to make subtle improvements to our line and appreciate the feedback we get from you.

7.27 E-mail to Remote Locations Indonesia

A comment made during an AOEMA seminar in Indonesia was very interesting and highlights the ingenuity of people when searching for answers to problems.

Evidently there is a man on a bicycle delivering “emails” to people who live in remote villages on one of Indonesia’s islands. It seems that several families in this particular area have children attending schools in other parts of the world and they want to maintain communications with their parents via email, however computers and phone lines are extremely scarce. One PC in the region is serving as a “mailbox” for several residents and the man on the bicycle delivers the “letters” to the homes of recipients.

A unique and creative way to overcome several problems – lack of PCs, only minimal phone lines, almost no skills in email or other computer applications.

7.28 Ladies' Professional Islamic Wear
Brunei

While in Brunei for an AOEMA sponsored SME seminar on electronic commerce, a woman asked to have a meeting outside the actual seminar to discuss a business idea she was considering. She explained that she has been making professional clothing for Islamic women in Brunei and was now interested in possibly taking this business venture online to market her line internationally.

Her biggest problem was that she didn't know how to begin the process and didn't know where to turn for help. Unfortunately, she isn't alone in her dilemma, as most SMEs either do not have resources available to them or do not understand where to find them if they are available. All governments and electronic commerce promotion bodies need to help SMEs by providing adequate resources and advertising their existence.

7.29 PDAsia
Hong Kong

With the dawn of the mobile commerce revolution approaching some companies have positioned themselves to supply goods and services for this technology. One such company is PDAsia. It is uniquely position to supply both the Chinese and English speaking market. Their product list is comprehensive and they deliver when they say they will. Also their prices are competitive and the products are up to date.

PDAsia Limited (abbreviated as PDAsia) is an integrated service company destined to provide quality services and products related to the Personal Digital Assistant (PDA) platform.

Founded and managed by a group of professionals and veteran Palm users in Hong Kong, PDAsia aims to leverage its in-depth knowledge of users' needs to promote and expand the use of PDA devices by pooling together the experiences and power of PDA users.

At the same time PDAsia is destined to support the use of PDA, and hope to expand the PDA community by recruiting new users to promoting the awareness of potential users of the fun and convenience that a PDA device can bring to their daily lives.

The Asia Pacific rim (especially the Greater China region) is the primary service target of PDAsia. PDAsia.com is the first website to provide rich PDA related contents in Traditional Chinese & English. Apart from selected international and local news on a daily basis, PDAsia.com also provides a sizable FAQ database, featured articles, interactive mail boxes which are all valuable tools to help users in every aspect of their PDA experience.

PDAsia also introduces various quality PDA related products directly to individual users. All products selected by PDAsia have undergone extensive, unbiased evaluation to fulfil the stringent selection criteria of PDAsia.

Apart from its web-based services, PDAsia also provides various commercial solutions, technical support and consultancy to enterprises. Its professional consultants provide full integration of PDA based solutions to client's business process, from the supply of mobile productivity solutions, tailored-to-fit training activities, to turn-key solution at enterprise level.

PDAsia also specializes in PDA applications development, product wholesaling, retailing, promotion and media projects.

7.30 Mobiles and SMS Philippines

June 21, 2001 Posted: 2:32 p.m. EDT (1832 GMT) By David Legard from IDG.net reported on the CNN website

One development gaining attention is the ability to offer local-language support for SMS (short message service), which has proved extremely popular in Asia. Nokia will announce support for Thai script later this year and is working on input support for Chinese characters, Halttunen said.

SMS has become a killer application in Asia as it has become an emotional tool, according to Halttunen. On Valentine's Day this year in the Philippines, the largest mobile operator recorded 140 million SMS messages sent in a country of 75 million people. Subscribers in the Philippines now send 10 SMS messages for each mobile phone call they make, researchers estimate.

7.31 M-Commerce - Sonera

Many people are wondering if mobile commerce is going to be a technology that small and medium businesses will be able to take advantage of. Sonera in Finland is showing the way and is opening up more market channels for SME's in the near future.

Sonera Mobile Pay is owned and supported by Sonera Corporation, a leading innovator in mobile and media market. Sonera's organization consists of the very best professionals in the telecommunications arena.

Sonera Mobile Pay offers a wide variety of applications from different vending machines to canteen services and from parking systems to new experiments. Dial soft drinks, golf balls, photo copies, tunes from a jukebox, clean up services or even electricity.

With Sonera Mobile Pay you pay only the exact amount. Nothing more.

Application examples in Helsinki:

CAR WASH AND VACUUM
- Esso, Vallila

CANDY / SNACKS
- Kinopalatsi, Kaisaniemenkatu
- Sonera GSM asiakaspalvelu, Kaivopiha

SOFT DRINK VENDING MACHINES
- Finnkino, Tennispalatsi, Salomonkatu 15

GAMES
- Pelikaani (Ray), Tennispalatsi, Salomonkatu 15

WEBSURFING
- Soneran GSM asiakaspalvelu, Kaivopiha

JUKEBOX
- Café Maestro, Fredrikinkatu 51-53

VIDEO RENTAL MACHINES
- Makuuni, Fredrikinkatu 48

PHOTO BOOTHS
- Rautatieasema, Vilhonkatu 13

7.32 Celcom Malaysia

Want an ice-cold drink and no coins for the vending machine? The first mobile-commerce service of its kind from Celcom, **Ring-A-Coke** allows you to enjoy one even if you don not have any loose change. Celcom is the first communications provider to commercially launch this unique service in Southeast Asia.

All you need to do is to look for a vending machine with the **Ring-A-Coke** sign:

- Call the Celcom GSM number at the machine
- Wait for 2 to 3 rings (your call will end automatically)
- Read the instructions on the vending machine LCD screen
- Make the selection within 10 seconds
- Enjoy your drink

Available at over 30 vending machines in the Klang Valley, Celcom **Ring-A-Coke** will be made available nationwide soon.

8 Government Guide

Listed below are examples of how APEC governments are working to help pave the way for electronic commerce. Each of the 21 APEC government sites is listed only once, even if their activities might fit into more than one category.

8.1 Online Government Services

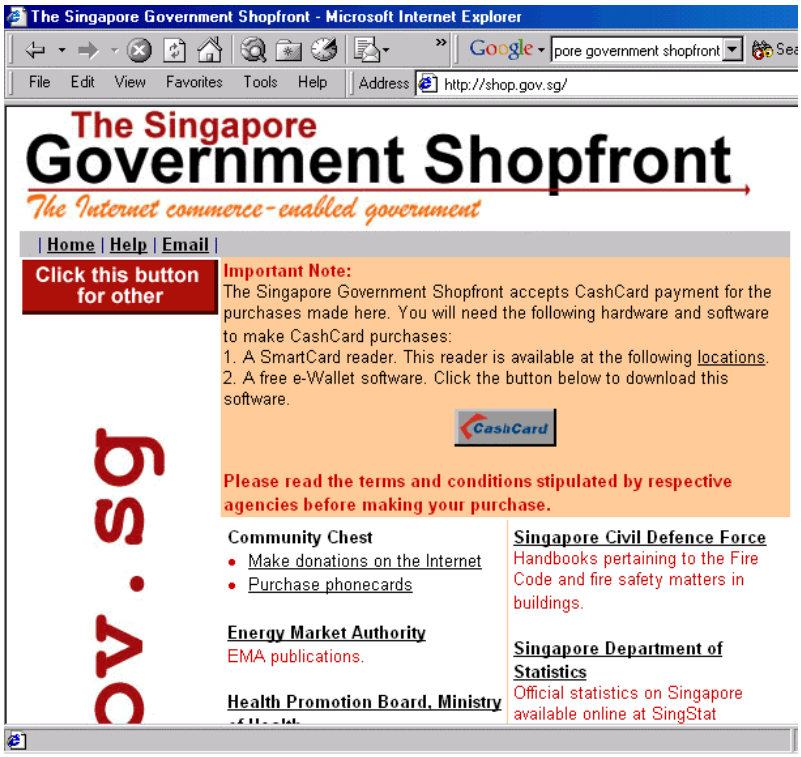
8.1.1 Canada

www.canada.gc.ca

8.1.2 Hong Kong

www.info.gov.hk

8.1.3 Singapore



shop.gov.sg

8.1.4 USA

www.firstgov.gov

8.2 Government Entry Points

8.2.1 Brunei

www.brunei.gov.bn

8.2.2 Chile

www.gobiernodechile.cl

8.2.3 China

http://www1.cei.gov.cn/govinfo/

8.2.4 Korea

www.korea.go.kr

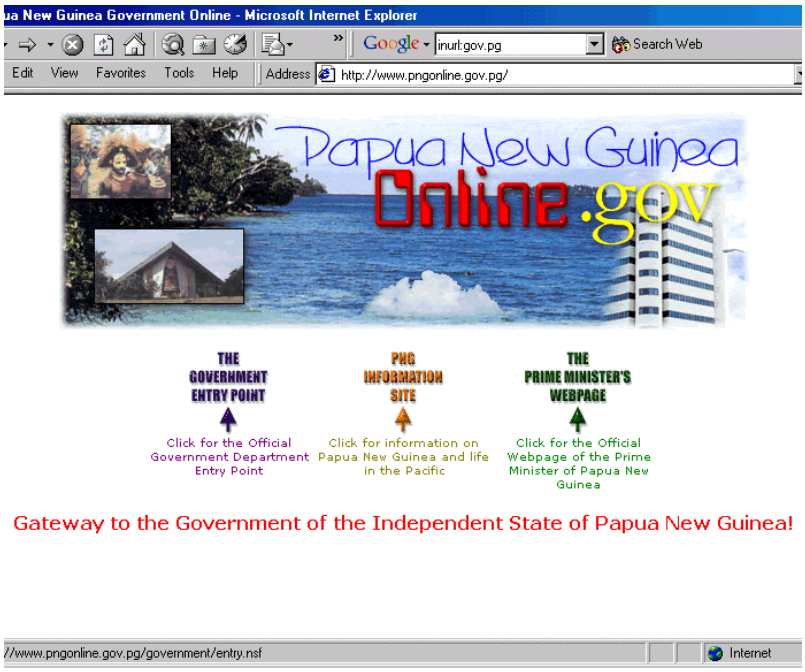
8.2.5 Mexico

www.precisa.gob.mx/

8.2.6 New Zealand

www.govt.nz

8.2.7 Papua New Guinea



www.pongonline.gov.pg

8.2.8 Peru

www.perugobierno.gob.pe

8.2.9 Russia

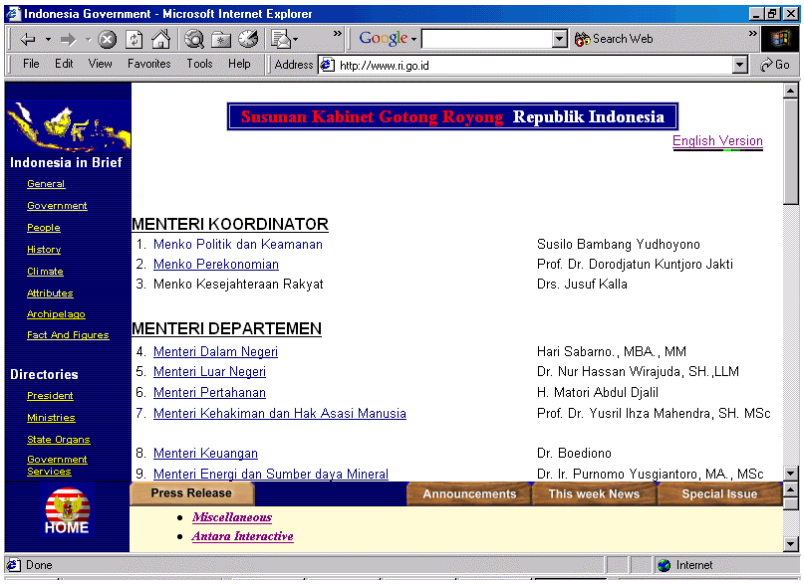
www.government.gov.ru

8.2.10 Chinese Taipei

portal.gio.gov.tw/gio/

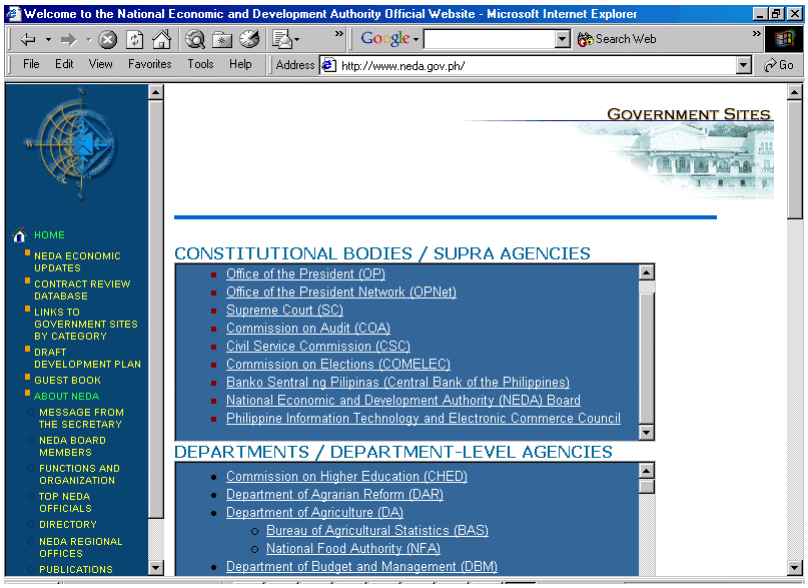
8.3 Online Government Directories

8.3.1 Indonesia



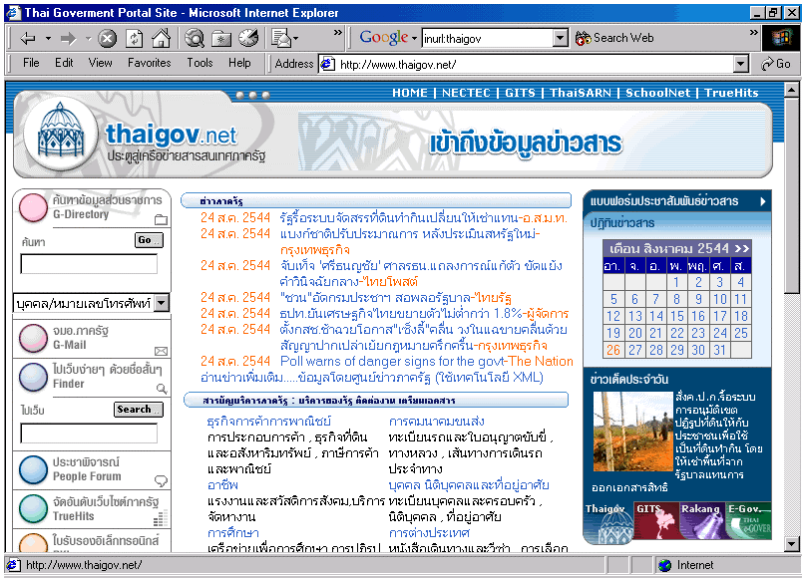
www.ri.go.id

8.3.2 Philippines



www.neda.gov.ph

8.3.3 Thailand



www.thaigov.net

8.4 Government Sponsored Support Services for SMEs

8.4.1 Malaysia

www.smidec.gov.my

The E-Commerce Grant for SME's

The E-Commerce Grant for SMIs is intended to assist SMIs to quickly integrate themselves into the mainstream of the Information and Communication Technology (ICT) in order to ensure their survival in a changing globalised market place

Qualifying Criteria

- Incorporated under the Companies Act 1965
- A manufacturing company with an annual sales turnover not exceeding RM25 million and with full-time employees not exceeding 150
- At least 70% of their equity are held by Malaysians, of which not more than 25% held by large companies

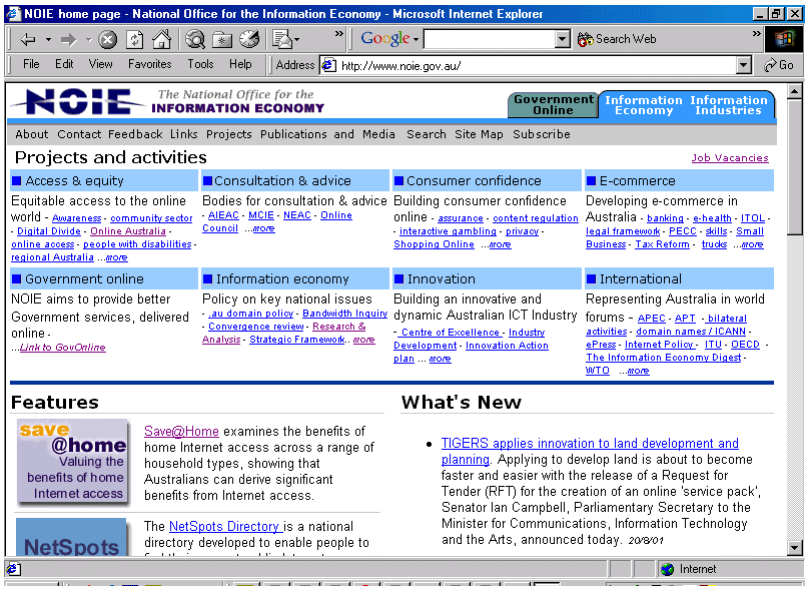
Objectives

Objectives of the E-Commerce Grant are:

- To encourage more participation from SMI companies in E-Commerce activities, the new way of doing business.
- To assist SMI companies in dealing with financial and skilled constraints in carrying out E-Commerce activities.

8.5 National Policy/Strategy sites

8.5.1 Australia



www.noie.gov.au

Consumer Confidence

Approximately 4 times a year, NOIE and the Treasury co-host an E-Commerce Assurance Roundtable which focuses attention on the wide range of 'trust' issues associated with business to consumer e-commerce. Recent topics include web site seals of assurance, web privacy, online marketing, international developments relating to e-commerce and consumer protection, and the development of an Australian Model Code for consumer protection in e-commerce. The Roundtable is an open group, comprised of government, industry and consumer bodies.

8.5.2 Vietnam

www.na.gov.vn

8.6 Governments Addressing Policy Matters

8.6.1 Japan

www.kantei.go.jp

"Information technology (IT) is bringing changes to industrial and social structures on a global scale, which is called the "IT revolution." In July 2000, the "IT Strategy Headquarters" was established within the Cabinet in order to promote comprehensive measures for the creation of an internationally competitive "IT nation" in which benefits of the IT revolution are shared by all Japanese. At the same time, the "IT Strategy Council," made up of 20 opinion leaders, was established in order to study the issue strategically and intensively by combining private- and public-sector strengths."