AFACT Year Book 2010

AFACT is the Asia Pacific Council for Trade Facilitation and Electronic Business. It's a non-profit, non-governmental organization that is open to participation from the representatives of member countries and experts from private sectors within the Asia-Pacific region.

AFACT Website
www.AFACT.org

AFACT Secretariat (Secretariat@afact.org)

PREFACE: I

AFACT Chairman, Mr. Kazumi Hirai

I'm very pleased to welcome you AFACT members to Tokyo and Yokohama in Japan for 28th AFACT meetings. It is our honor to organize the AFACT meeting in the year of 20th anniversary including the days of activities by Asia EDIFACT Board, the predecessor of AFACT.

The last meeting we organized for AFACT was 1992 as a co-founder of Asia EDIFACT Board, which was developed to AFACT in 1999, taking the opportunity to organize the meeting in Japan I would like to remind all the members the spirit of Asia EDIFACT Board to carry out the mission to promote trade facilitation and electronic business in Asia keeping a close partnership with UN/ECE WP4 and UN/CEFACT.

In the third year After the World Economic Crisis since in 2007, economies in Asia have become the key drivers for the recovery from the Crisis. That means trade facilitation by simplification of trade procedures and promotion of paperless trade in Asia became much more important than ever. Consequently it is our hope that AFACT meetings organized by JASTPRO would drive the activities by the experts from member economies toward the objectives of AFACT by cooperative works.

Tokyo

Japan

(Kazumi Hirai)

AFACT Chairman

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PREFACE: II

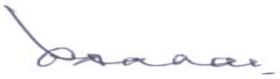
UN/CEFACT Vice Chair, Mr. T.A.Khan

The trend is clear – eCommerce is continuously growing. As the economy gradually recovers from the recent recession, eCommerce is poised to experience brisk growth. However, competition continues to intensify as greater numbers of merchants move online and existing online merchants enhance their Web operations. Information and Communication Technologies (ICT) can play in furthering and enhancing sustainable development. Everywhere in the developing world, especially in Asia Pacific, governments are launching ambitious ICT infrastructure initiatives, radically changing their communications policy frameworks and situating ICT at the heart of their development programmes and strategy.

Trade facilitation has been an important part of the AFACT agenda. All the AFACT countries and economies have emphasized and realized the importance of trade facilitation and accordingly developing their work programs. In order for the AFACT work program to succeed and the AFACT meeting/discussions to progress, the newly constituted three committees are in the process of prioritizing their work programme through collective action plans. A sustainable program to work out implementation of joint projects in member countries/economies, capacity building and similar activities need focus which is underway.

The erstwhile joint working groups (JWGs) have taken the challenge to re-organise their work programs as per the charter of the respective committee and put in their best efforts to see the AFACT fulfils its commitment towards trade facilitation and electronic business. I am confident that the three committees will play an active role in regular review of JWGs activities and would provide necessary support to them. Efforts are underway to increase cooperation between AFACT and global institutions like UN/CEFACT and UNESCAP so as to ensure that AFACT has sustainable work programme.

I would like to take this opportunity to thank Japan for hosting of AFACT 2010 meetings at short notice and also congratulate the AFACT Secretariat, for taking over the charge of AFACT activities. We hope that with permanent secretariat in place, AFACT would reach new heights.



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PREFACE: III

AFACT General Secretary, Mr. Mahmood Zargar

The secretariats in any community are one of the major components for implementing activities. Working with different people and groups is a hard work that secretariats usually confront with that. This issue for international organizations is much difficult because they have to make coordination among different people with different cultures. Adding up the ideas of different members in this case is not so easy.

AFACT secretariat is not an exception. It works under the AFACT chair and steering committee.

Iran as the permanent secretariat tried its best during almost one year activity after transferring from the Chinese Taipei. Here is a brief report of secretariat activities:

1. Transferring AFACT Secretariat from Chinese Taipei to Iran.
2. Design of the new website. (www.afact.org). AFACT website is going to be as a reference site in the field of trade facilitation: To start to reach this goal we want to add the following items to our website:
    a. Adding international and important links of Training programs in the field of trade facilitation like NUNExT.
    b. Adding the links of responsible organization (Focal Points) for trade facilitation in each country members.
    c. Introducing AFACT Active Projects.
    d. Addressing the related projects in other communities.
    e. Addressing the related workshops, seminars,…
    f. Link exchange with other related sites

3. AFACT conference call meetings - AFACT has most of its meetings through online conference calls. The secretariat has prepared a new facility and method for online AFACT meetings. The GOTOMEETING software in this system is used for this purpose which provides screen sharing among the members and the audiences can give their

presentations while hearing to each other and see the presenter screen. In one year activity of new AFACT secretariat we had more than 13 online meeting with this new system.

4. AFACT registration – It is decided that AFACT should be officially registered in international communities. The secretariat has started to do the related works need to reach that goal.
5. AFACT year book – The secretariat collect the country reports from country country members and then delivered the total 2010 year book to the 2010 plenary. Because late delivery of the country reports by some country members, we have prepared the book in CD format.
6. Attend in Asia-Pacific Trade Facilitation Forum 2010 – This event which organized by UNESCAP were hold from 5 to 8 of October in Malaysia. The secretariat attended very actively in it and did some negotiations with some responsible visitor from international communities. In this exhibition and forum, the secretariat also tried to introduce the AFACT to international society.

7. AFACT Brochure – The secretariat has prepared an AFACT brochure (Fig below) which defines the AFACT in brief. This brochure also distributed to the visitors in Malaysia exhibition.

8. Future Works – AFACT decided to increase its members and so we will coordinate any thing needed to reach this goal.

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About AFACT

AFACT is the Asia Pacific Council for Trade Facilitation and Electronic Business. It's a non-profit, Non-governmental organization that is open to participation from the representatives of member countries and experts from private sectors within the Asia-Pacific region.

The forerunner of AFACT was ASEB (Asia EDIFACT Board) established in 1990 in response to disseminate EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport) policies and activities in the Asia-Pacific region. After 8 years' contribution to facilitate international transaction within the region, through the simplification and harmonization of procedures and information flows, the need for re-engineering was raised in the 16th ASEB meeting to conform to the rapidly changing trend of EDI and EC, and to respond to the successful restructure of UN/CEFACT. As a result of re-engineering, AFACT marked down the era of ASEB in 1998. In 1999, the epoch of AFACT was officially commenced.

AFACT aims to promote the commitment and development of trade facilitation, electronic business policies and activities in the Asia Pacific region, mainly focusing on those promoted by UN/CEFACT (United Nations Center for Trade Facilitation and Electronic Business), to guide, stimulate, improve and promote the ability of business, trade and administrative organizations from members, as well as to exchange products and relevant services effectively within AFACT community.

Currently, there are 19 members from Afghanistan, Australia, Cambodia, China, Chinese Taipei, India, Indonesia, Iran, Japan, Korea, Malaysia, Mongolia, Pakistan, Philippines, Saudi Arabia, Singapore, Sri Lanka, Thailand, Vietnam. Each of which is represented by a local organization dedicated in promoting the application of standards and recommendations, e.g. UN/EDIFACT, developed by UN/CEFACT. PAA (Pan-Asian eCommerce Alliance) is the associate members of AFACT, which is dedicated to promote cooperation in implementing trade facilitation and eCommerce in this region.

There are three working Committees acting under AFACT, which has its own mission and programs of work. The committees are, Business Domain

Committee (BDC), Community Support Committee (CSC) and Technology and Methodology Committee (TMC)

The common mission of those working committee's are:

1. Developing methods to facilitate trade transactions, fit to the member economies and in conformity with f the standards and the recommendation developed by UN/CEFACT;
2. Promoting both the use of these methods, and associated best practices, through channels such as government, industry and service associations;
3. Coordinating its work with UN/CEFACT and other relevant international, regional and non-governmental organizations; and
4. Enhancing the cooperation among the AFACT members and promoting the objectives of the mission statement in the Asia Pacific region.

AFACT bylaws (Under Revision)

Article 1
Name

The name of this organization shall be the Asia Pacific Council for Trade Facilitation and Electronic Business (hereinafter referred to as “AFACT”).

Article 2

Mission Statement

AFACT aims to support in the Asia Pacific region policies and activities, especially those promoted by UN/CEFACT (United Nations Center for Trade Facilitation and Electronic Business), dedicates to stimulate, improve and promote the ability of business, trade and administrative organizations, to exchange products and relevant services effectively in a non-political environment.

Its principal focus is to facilitate international transactions, through the simplification and harmonization of procedures and information flows, and so contribute to the growth of global commerce.

Article 3

Terms of Reference

The principles of the mission statement are to be achieved by:

- Analyzing and understanding the key elements of international transactions and working for the elimination of constraints;
- Developing methods to facilitate transactions, including the relevant use of information technologies such as UN/EDIFACT and ebXML;
- Promoting both the use of these methods, and associated best practices, through channels such as government, industry and service associations;
- Coordinating its work with UN/CEFACT and other relevant international, regional and non-governmental organizations; and
- Enhancing the cooperation among the AFACT members and promoting the objectives of the mission statement in the Asia Pacific region.

Article 4

Structure

AFACT shall be a non-profit, non-political, voluntary and independent organization.

Article 5

Membership

Membership shall comprise two categories shown in Appendix 1 hereto:

- Member – The countries and economies in the Asia Pacific region represented by the agency assigned to promote and develop trade facilitation and Electronic Business. Such agency is recognized as the single focal point for UN/EDIFACT or UN/CEFACT related activities.Agencies of the United Nations can also be members.All existing members and associate members in the ASEB shall be automatically recognized as members of AFACT.
- Associate member – Any other organization from the Asia Pacific region or relevant international organization located in the region, committed to similar objectives as AFACT.

Any country, economy or organization wishing to join AFACT must submit an application for membership in writing to the AFACT Secretariat who shall circulate it to the Steering Committee members for consideration and approval, as well as to all members and associate members for consultation. If approved, the Steering Committee shall report to the Plenary on the approval of the application.

The Chair for the Plenary may also invite non-member countries, economies and experts as observers or special invitees.

Article 6

Plenary

The Plenary shall include members, associate members and observers, represented by their Heads of Delegations. A simple majority of the members is required for a quorum.

The Plenary Meeting shall be a forum to exchange views on any areas of common interest including the latest developments in each member or associate member under the ambit of the Mission Statement.

The Plenary shall be the highest decision making body of AFACT and shall have the responsibility of ratifying all major decisions and monitoring the execution of the adopted resolutions.

The preferred way of reaching decisions shall be by consensus. However, the Chair shall have the authority to call for a vote if, in his view, consensus cannot be reached on a particular issue. In such cases, a simple majority of all voting members constitutes a decision. In case of a tie, the chair shall cast the deciding vote.

Only members are eligible to vote. The vote shall be cast by the Heads of Delegations or their designated representative.

For dissolution of AFACT, the adoption of the Bylaws or a change to the Bylaws, a two-third majority of all voting members is required.

Absent members can have the option to vote by email or other means, or by proxy entrusted to the Chair or a fellow AFACT member.

The Plenary shall meet at least once a year.

Article 7

Officers and Secretariats

Annually AFACT shall identify a member to host the organization (hosting member).

The officers of AFACT shall be the Chair, two Vice-Chairs and the Secretary. The term of office for each post shall be one year.

The hosting member shall nominate the Chair, with one Vice-Chair being nominated by the next hosting member (Chair elect) and the immediate former Chair acting as the other.

At the start of each Plenary, the identification of next hosting member and the Chair elect shall be approved.

The hosting member shall nominate a person who shall be the Hosting Secretary of AFACT (hereinafter the hosting Secretariat).

Their term shall start immediately after the close of the previous Plenary meeting. In order to ensure a smooth hand-over between the two hosting Secretariats, a Joint hosting Secretariat shall exist for an agreed period, after the previous Plenary meeting.

The AFACT Secretariat shall be nominated by the Steering Committee and ratified by the Plenary for four years term, based on the Terms of Reference described in the Appendix 3, which shall be open for any AFACT member and reviewed every four years.

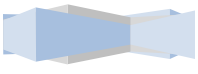
Article 8

Steering Committee

The Steering Committee is responsible for the management and coordination of AFACT between the Plenary meetings. The Steering Committee also supervises the progress status of the decision made by the Plenary meeting.

The composition of the Steering Committee shall be as follows:

- Chair (of AFACT)
- Two Vice-Chairs (of AFACT)
- UN/CEFACT Rapporteur for Asia (Advisor)
- Two Heads of Delegation appointed by the Plenary who will hold office as members of the Steering Committee for a term of two years.
- AFACT Secretariat



The Steering Committee is chaired by the Chair of AFACT.

The hosting Secretariat shall be present in all Steering Committee meetings.

The agenda for the Steering Committee meeting shall be circulated to the Heads of Delegations and Chairs of Working Groups for comments.

The Chair may invite Chairs of Working Groups for specific meetings, as appropriate and all Heads of Delegation shall be entitled to attend meetings of the Steering Committee.

Where required, the Steering Committee shall be empowered to take decisions on behalf of AFACT between Plenary meetings. In such cases, every effort shall be made to consult with the Heads of Delegations.

Steering Committee decisions shall be made by consensus.

The Steering Committee shall meet at least twice a year. This can be either in the form of a physical meeting or a virtual meeting.

Article 9

Working Groups

Working Groups may be established to focus on a specific area of interest, under the ambit of the Mission Statement.

To establish a Working Group, the interested parties shall submit a proposal, including the Terms of Reference, to the Steering Committee for approval and subsequently, to the Plenary for ratification.

Each Working Group shall appoint its own Chair and Secretariat. The term of service for the Chair and the Secretariat shall be for a period of two years.

Each Working Group shall submit its Work Program to the Steering Committee for endorsement.

The Working Group shall meet at least twice a year. This can be either in the form of a physical meeting or a virtual meeting.

The Chair of each Working Group shall report to the Plenary.

All Working Groups under the ASEB shall be automatically recognized as a Working Group under the AFACT. Each Working Group shall review and submit

their Terms of Reference to the Steering Committee for approval and subsequently, to the Plenary for ratification.

Article 10

Focal Point

Each AFACT member is required to have a single focal point, dedicated to the promotion, dissemination and implementation of AFACT objectives.

The focal point shall identify the Head of Delegation and a contact person who shall be responsible for communication with the AFACT Secretariat and all related parties.

Article 11

EDICOM

EDICOM is the annual conference and exhibition of AFACT. It features the latest technology and information on Electronic Data Interchange (EDI), Electronic Commerce (EC), UN/EDIFACT and other related activities including trade facilitation.

EDICOM shall be organized by the hosting member, adjacent to the Plenary, in consultation with the Steering Committee.

Article 12

Relationship Between AFACT and UN/CEFACT

As set out in its Mission Statement, AFACT seeks, amongst other objectives, to promote the aims, objectives and activities of UN/CEFACT within the Asia Pacific region. To this end, Asia Pacific delegations to UN/CEFACT provide a strong link between AFACT and UN/CEFACT.

The UN/CEFACT Rapporteur for Asia provides another significant linkage. The Rapporteur shall be appointed by the Plenary of UN/CEFACT on the recommendation of the AFACT Plenary. (The Mandate of the UN/CEFACT Rapporteur for Asia is attached as Appendix 2).

AFACT is also strongly encouraged to identify and nominate potential members to the UN/CEFACT Steering Group. These nominations shall take place after full consultation with AFACT and shall normally be made on behalf of AFACT, to the

UN/CEFACT Secretariat, by the delegation holding the Chairmanship of AFACT or by a delegation designated by the Chair.

Close coordination between AFACT Working Groups and UN/CEFACT Working Groups is strongly encouraged and both bodies shall use their best endeavors to ensure this coordination. This is most effectively achieved when there is a formal relationship between the respective groups.

Article 13

Expenses

The hosting member shall cover all expenses involved in organizing the Plenary Meeting, the Steering Committee Meeting and the meetings for the various Working Groups held before the Plenary Meeting.

The hosting member is entitled to charge a participation fee for each delegate. The amount to be charged shall be decided in consultation with the Steering Committee.

The AFACT Secretariat shall cover all the costs incurred in performing the responsibilities as the secretariat and maintaining the AFACT Website.

Article 14

Working Language

The working language of AFACT shall be English.

Article 15

Effectiveness

These Bylaws enter into effect on October 3, 2001, upon ratification by the AFACT Plenary.

Appendix 1

List of Members and Associate Members as of August, 2006

Afghanistan, Australia, China, Chinese Taipei, Cambodia, India, Indonesia, Iran, Japan, Malaysia, Mongolia, Pakistan, Philippines, Korea, Saudi Arabia, Singapore, Sri Lanka, Thailand, Vietnam

Associate Members:
eBusiness Asia Committee
Pan Asian eCommerce Alliance (PAA)

Appendix 2

Mandate UN/CEFACT Rapporteur for Asia

Within Asia, the Rapporteur shall:

* Promote and represent CEFACT's interest and activities to governments, inter-governmental organizations, relevant trade associations and business and trade facilitation organizations;

* Encourage the participation of experts in CEFACT's work program and stimulate the implementation of CEFACT's Recommendations;

* Coordinate CEFACT's activities in the area.

Liaison Relationships

This mandate shall be carried out, where appropriate, in liaison with Heads of delegations to CEFACT coming from Asia as well as in liaison with the secretariat of ESCAP and the Chairs of CEFACT's Working Groups.

Reporting Relationships

A report shall be presented by the Rapporteur to each CEFACT Plenary. The Rapporteur also has the right to raise issues directly with the CEFACT Steering Group (CSG) and shall be entitled to attend the CSG as an observer.

Duration of Appointment

Initially for three years, thereafter renewable every two years.

Appendix 3

AFACT Secretariat Terms of Reference1. Background

- When the Asia EDIFACT Board (AS/EB) was reformed into the Asia Pacific Council for the Facilitation of Procedures and Practices for Administration, Commerce and Transport (AFACT) in 1998, the Board

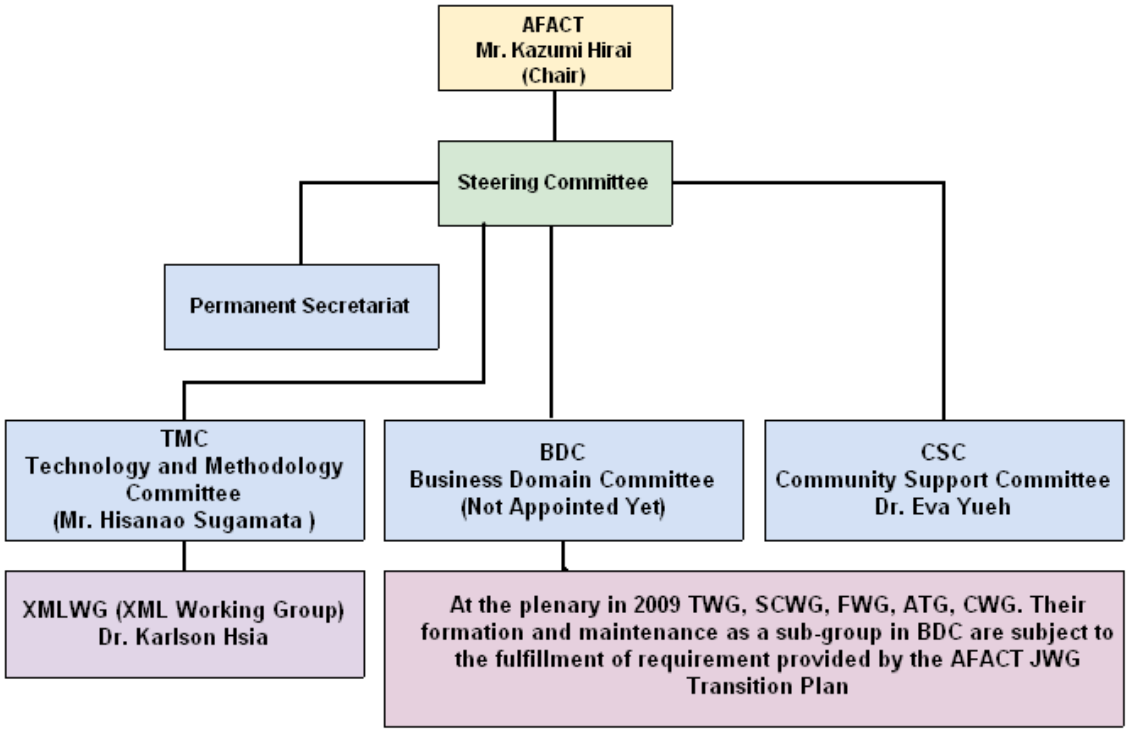
decided that AFACT did not have a permanent secretariat, and secretariat roles were served by the host secretariat in one year term. The running secretariat shall be provided by the host member which this new system shall be reviewed after two or three years experiences.

- In the Taipei AFACT meeting, the HoD of Islamic Republic of Iran suggested to consider for setting up a secretariat to manage AFACT in consistent manners. The AFACT Plenary has decided to establish a secretariat under AFACT in principle. Then, the Chair (Dr. Lin) allowed the Steering Committee to look for a secretariat within AFACT members.

2. Terms of Reference

- The purpose of AFACT Secretariat is to explore, review and identify the most practical approach for managing and operating AFACT tasks on Trade Facilitation and Electronic Business in Asia Pacific region.
- The AFACT Secretariat should coordinate with UN/CEFACT Rapporteur for Asia to achieve the responsibility of the AFACT Secretariat.
- Taking account of existing AFACT Terms of Reference, these shall include;
  a) To document all AFACT related activities and publish them on the AFACT web site,
  b) To maintain the AFACT web site in cooperation with other members' secretariat,
  c) To support the host secretariat for organizing AFACT Plenary meeting and its joint working groups' meetings, AFACT Steering Committee meeting and EDICOM,
  d) To facilitate the affairs in relation to new membership application,
  e) To attend AFACT related meetings to support the host secretariat,
  f) To attend UN/CEFACT Plenary meeting, if possible, to follow up its decision and discussion made during the meeting and feed back them to AFACT community, and
  g) Any other business.

2010 AFACT Structure & Members



Members

Afghanistan	India	Mongolia	Sri Lanka
Australia	Indonesia	Pakistan	Saudi Arabia
China	I. R. Iran	Philippines	Thailand
Chinese Taipei	Japan	Korea	Vietnam
Cambodia	Malaysia	Singapore	

Associate Members:

Pan Asian eCommerce Alliance (PAA)

2010 AFACT organization

2010 AFACT Steering Committee Board Members
2010 AFACT Heads of Delegations
2010 Members Secretariat List
2010 AFACT Committee Chairs
AFACT Member Focal Points

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28th AFACT Plenary

Yokohama, Japan

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Taipei EC/EDI Committee

SECTION I - GENERAL CONDITION UPDATE

1.1 Ranking in Global Index

Chinese Taipei's efforts to improve infrastructure and build capability for Information and Communication Technology (ICT) as recognized by several Global Indices in 2009 and early 2010 are shown in Table 1. According to the results released by the International Telecommunication Union (ITU), Chinese Taipei ranked 25th globally and 8th among the Asia Pacific (AP) region in the ICT Development Index. In terms of the Networked Readiness Index conducted by the World Economic Forum (WEF), Chinese Taipei was listed at 13th in the world.

Additionally, the Economic Intelligence Unit (EIU) pointed out that Chinese Taipei placed 16th and 15th in the e-Readiness Ranking and IT Industry Competitiveness Index respectively. In respect to the Global Competitiveness Index, analyzed by the World Economic Forum (WEF), Chinese Taipei placed 12th worldwide and 4th in the Asia Pacific region. More importantly, Chinese Taipei ranked 8th in the latest IMD World Competitiveness Yearbook 2010 ranking.

Table 1：Chinese Taipei's Ranking in Global Index

Time released	Ranking	Source	Index
March 2009	25(Globally)	ITU	ICT Development Index
	8(AP)		
June 2009	13(Globally)	WEF	Networked Readiness Index
	4(AP)		
June 2009	16(Globally)	EIU	e-Readiness Rankings
	5(AP)		
September 2009	15(Globally)	EIU	IT Industry Competitiveness Index
	4(AP)		
September 2009	12(Globally)	WEF	Global Competitiveness Index
	4(AP)		
May 2010	8(Globally)	IMD	World Competitiveness

Source: FIND, Institute for Information Industry (III, Sep. 2009)

1.2 Key ICT Index

1.2.1 Mobile Penetration Rate

According to FIND (Foreseeing Innovation New Digiservices, III) statistics, in 2006 the total number of mobile phone holders in Chinese Taipei amounted to 15.44 million, 67.8% of the population nationwide. However, in February 2009, the total number of mobile holder went up to 16.17 million with a respective penetration rate of 71.8%. This indicates a general trend of slight growth in mobile penetration rate.

1.2.2 Household Computer Penetration Rate

FIND surveys revealed that the Household Computer Penetration Rate in 2009 was 85.7%, a 2.8% increased compared to 2009. In terms of regional statistics, the highest computer penetration rates were in the northern part of Taiwan (90.1%), Taipei City (89.1%) and Kaohsiung City (85.8%), while the eastern and southern regions had 80.5% and 76.5% respectively.

1.2.3 Internet Penetration Rate

According to FIND statistics, the result indicated that the Internet Penetration Rate in 2009 was 69.9% with 16.13 million users, a 4.1% increase in comparison to 2008. When ranked by region, the highest Internet Penetration Rates were in the northern part of Taiwan (73.7%), Taipei City (73.6%) and Kaohsiung City (71.1%). However, rates in the southern part of Chinese Taipei (65.6%) and offshore islands (64.2%) including Kinmen and Matsu were much lower when compared to the three top regions above.

1.2.4 Rate of Connecting Internet via WiFi

The result of investigation conducted by FIND showed that 5.79 million users (22.1%) were connected to the internet via WiFi in Chinese Taipei in 2009, a 2.5% increase when compared to 2008.

1.2.5 Rate of Connecting Internet via 3G/3.5G

The result of investigation conducted by FIND showed that 1.51 million users (6.6%) were connected to the internet via **3G/3.5G** in Chinese Taipei in 2009, a 1.7% increase when compared to 2008.

1.3 Status of e-Commerce

Following more frequent activities in increasingly complex industrial network as well as an expanding range of transactions, reduction of transaction cost and

enhancement of competitiveness are factors which must also be taken into consideration. This is when establishing a unified standard becomes a key factor. When enterprises engage in many to many e-operations, the regularization of e-commerce standards for industries helps resolve issues and enhance the efficacy of information exchange. Therefore, e-commerce standards can be considered force prompting forward progress in industries.

In terms of industrial e-commerce standard development and application in manufacturing and commercial industries, agencies such as the MOEA Industrial Development Bureau have begun to adopt internationally accepted e-commerce standards in addition to encouraging the same in industries. The approach includes helping the information industry adopt international standards, such as RosettaNet, to boost data exchange and international networking capabilities.

1.3.1 B2B e-Commerce Market

According to the "2009 EC Legislation &structure Building-up Project" research conducted by the Domestic B2B E-Commerce Section of the Department of Commerce under the Ministry of Economic Affairs, demand of domestic enterprises on internal resource integration systems, including enterprise resource planning (ERP) and enterprise information planning (EIP) systems, was relatively unaffected by the financial crisis, even showing slight growth in 2008. In which, the information industry still leads in the utilization of information equipment; e-operations between upstream and downstream elements of the manufacturing industry shows that supply chain automation of enterprises is fairly advanced; in the finance and insurance industry, besides internal information transmission systems, client information has also been integrated; integrated information systems are less prominent in the construction industry, where non-computerized methods and e-mails remain mainstream methods for information transfer and order taking; The agriculture, fishery, forestry and livestock industries still have the lowest utilization rates of information systems. However, the current situation is expected to be changed by e-agriculture, an initiative that the government has been promoting in recent years; characteristics of the six main trading industries vary from one to another, so information system utilization and e-commerce application of the industries are distributed between the industries above.

The survey regarding governmental aid for enterprises, conducted in 2009, obtained different results from the past. Companies that were interviewed thought that elements of necessary government assistance, arranged according to importance, were: "provide information on related industries", "assist IT establishment", "assist training for implementing e-business", "establish laws and

regulations on network security and transaction mechanisms" and "provide guidance for electronic expenditure or tax exemption". Therefore, the government should provide more channels for enterprises to acquire industry information and simplify IT establishment or training to enhance market competitiveness of enterprises in future administration guidelines.

Looking at the overall market scale, Taiwan's B2B transactions e-commerce markets were worth a total of NT$99.914 trillion in 2009 and is projected to grow to NT$10.3201 trillion by 2013. The domestic B2B e-commerce market thus grew to a compound annual growth rate (GAGR) of 8.4%.

1.3.2 B2C Online Shopping Market

According to a survey of the "2009 EC Legislation & Infrastructure Building-up Project", 42% of e-shops in Taiwan don't have physical stores and 35.1% are the extension of existing physical stores. However, a high percentage of e-shops are still suffering deficits. Even so, sales of the B2C market today has reached a scale in the hundreds of billions NTD; in 2008, the scale of Taiwan's B2C market scale NT$170.3 billion. However, growth of the overall market is expected to slow down due to effects of the economic cycle, and forecasts expect to see growth rate drop from 24.8% in 2008 to 21.9% in 2009, with the over market scale remaining at roughly NT$207.6 billion.

Shopping online is very common among consumers. How different shopping websites attract different kinds of consumers shows that market positioning helps attract customers. When comparing past statistics, the gradual decrease of consumers that buy and sell online indicates a growing emphasis on convenience. Consumers' demand on unique, personalized products has gradually made oversea products increasingly more popular. Online product comparison and the increased influence of public praise will also become a consumer focus.

1.3.3 C2C Online Shopping Market

According to statistics, the average online consumption on the C2C platform was NT$8,276 in 2008, showing a slight increase from 2007 (NT$7,362). In terms of distribution in consumption volume, the number of consumers making purchases in the NT$5,000-29,999 range showed a relatively significant increase, growing by roughly 2% compared with last year, but there was a slight decrease in the number of consumers making purchases in the range NT$4,999 and under.

The C2C platform is no longer simply a second merchandise distributing center like its function in earlier days. Professional sellers have gradually developed a certain scale and are even operating their own brands, making the

platform one of the main sales channels for online marketing. Generally speaking, today's C2C platform suffers from a high portion of credit and security issues; the different creditability ratings of individual sellers has caused low confidence amongst online consumers, an issue which needs to be addressed.

1.4 Taipei EC/EDI Committee

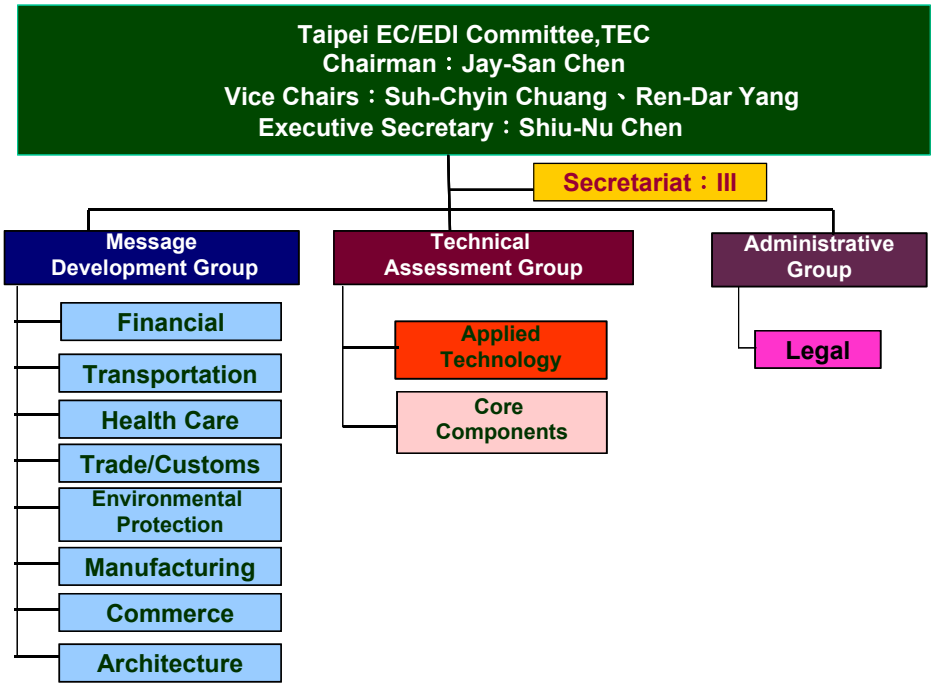
1.4.1 Introduction

The Taipei EDIFACT Committee (TEC) was established under the Central Standards Bureau (formerly the Bureau of Standards, Metrology and Inspection), Ministry of Economic Affairs, in 1992 to promote the National Standards of Electronic Data Interchange, and to participate in international standardization of organizations and activities. TEC shifted to the Bureau of Standards, Metrology and Inspection, the Ministry of Economic Affairs in 1999. Taking into consideration the fact that EDI application had extended to e-Commerce, it was renamed the Taipei EC/EDI Committee in 2000 with the same acronym it currently uses: TEC. The current structure of TEC is showed in Figure 1.

1.4.2 Constitution

The General Director of the Bureau of Standards, Metrology and Inspection chairs the Taipei EC/EDI Committee.

Figure 1-Current Structure of TEC



Source: Taipei EC/EDI Committee (TEC) Secretariat, July 2009

SECTION II – EDIFACT/EBXML/XML BASED STANDARDS DEVELOPMENT

2.1 e-Health Care Services

In early 2008, the Department of Health, Executive Yuan, initiated action to promote electronic patient records in accordance with the HL7 CDA/XML standard. Until the end of May 2010; we have already completed 108 templates for common used medical documents, and still continue to generate more templates that are requested by any interested parties. Additionally, in order to ensure the completeness and precision of our domestic electronic patient records standard, the electronic patient records standard management system was established in 2009. The system undertakes OID registration applications and queries, document identifier code registration applications, applications to add or amend data fields, and applications to add or amend CDA/XML models. It serves as a reference for hospitals and health care related industries when they develop electronic patient records services and products, and also as an agent to assist in integration of health care information across clinical users and the bio-informatics industry.

Table 2：108 Templates for Medical Documents

Document	No.	Document	No.
Nursing Emergency department Note	11	Conclusions Document	**1**
Consultation Note	12	Discharge Summary	**2**
Prescription for diagnostic or specialist care Document	13	Progress Note	**3**
Nursing Notes	14	Provider Orders - Inpatient	**4**
Evaluation and Management Note	15	Provider Orders - Outpatient	**5**
Vital Signs Measurement	16	Visit Note	**6**
Post-Operative Evaluation and Management Note	17	Provider Orders - Emergency	**7**
Anesthesia Records	18	Study Report - Pathology	**8**

Laboratory Report	19	Patient data Document - Emergency	**9**
EKG Study	20	Emergency department Triage note	**10**
Dentist visit note	31	Radiology Unspecified site and modality Study	**21**
TCM Visit Note	32	US Unspecified system Study	**22**
TCM Traumatology acupuncture	33	Nuclear medicine study	**23**
Admission History and Physical Note - Emergency	34	EEG study	**24**
Medical Records - Inpatient	35	CT Unspecified system Study	**25**
Admission history and physical note - TCM	36	Comprehensive History and Physical Note	**26**
Nursing Admission Evaluation Note	37	Laboratory Report	**27**
Pathology study	38	Nutrition + Dietetics Consultation note	**28**
Prescription for medication Document	39	Medical Records	**29**
Nursing Discharge summary	40	Summary of Death	**30**
Occupational therapy Initial assessment note - musculoskeletal	51	Medical Records	**41**
Rehabilitation Occupational Therapy Claims Attachment - Central nervous	52	Medical Records	**42**

Occupational therapy visit note	53	Provider-unspecified Progress note	**43**
Speech therapy Initial assessment note - Child	54	Inpatient Evaluation and management note	**44**
Speech therapy Initial assessment note - Language	55	Cytology Cervical or vaginal smear or scraping study	**45**
Psychology Evaluation and management note	56	Anesthesia Hospital Pre-operative evaluation and management note	**46**
Psychology Records total Encounter	57	Anesthesia Consultation note	**47**
Social work Evaluation and management note	58	Summary of Death	**48**
Study Report	59	Physical therapy Evaluation and management note - child	**49**
Medical Records	60	Physical therapy Evaluation and management note - Orthopedics	**50**
ON Service Note	71	Admission History and Physical Note	**61**
Weekly Summary	72	Evaluation and Management Note	**62**
Obstetrics Admission Note	73	Evaluation and Management Note	**63**
Labor and Delivery Records	74	Notes	**64**
Labor and Delivery Records	75	Progress Note	**65**
Newborn Note	76	Nursing notes	**66**

Burn Evaluation Note	77	Evaluation and Management Note	**67**
Burn Progress Note	78	Home Care Referral	**68**
Personal health monitoring report Document	79	Disease Severity Evaluation	**69**
Medical Records	80	OFF Service Note	**70**
Evaluation and Management Note	91	Note	**81**
Chemotherapy Records	92	Evaluation and Management Note	**82**
MRI Unspecified site study	93	Admission Evaluation Note	**83**
Mammography Study and Report	94	Discharge Assessment Note	**84**
Endoscopy study	95	Discharge Note	**85**
Peripheral Vascular Study and Report	96	Transfer Summarization Note	**86**
Spirometry study	97	Subsequent Evaluation Note	**87**
Audiology study	98	Visit Note	**88**
US Study - breast	99	Consultation Note	**89**
Study Report - cystoscopy	100	Post-Operative Evaluation and Management Note	**90**
		Study Report	**101**
		Nerve conduction study	**102**
		Electromyogram Study	**103**
		Radiation oncology Evaluation and management note	**104**
		Document summary -	**105**

	Radiation	
	Occupational therapy Evaluation and management note	**106**
	Occupational therapy visit note	**107**
	Health Quality Measure document	**108**

SECTION III – E-READINESS AND E-APPLICATION -- E-GOVERNMENT/E-BUSINESS RELATED PROJECT UPDATES

This section depicts the current state and future development trend of various standard-related projects that are carried out by the respective working groups under the Taipei EC/EDI Committee.

3.1 Manufacturing

In 2007 and 2008, due to previous efforts, the SCC invited IDB to join the "Customer-Chain Operations Reference-model (CCOR)" working groups to discuss the processes, metrics and best practices of sales activities and formulate the CCOR standard version one. The key processes include "Plan," "Relate," Sell," "Contract," and "Assist," and the five major metrics are "Reliability," "Responsiveness," "Agility," "Asset management" and "Costs," while the best practices are still under discussion. Because of the early involvement of CCOR standard, Chinese Taipei manufacturers which focus on their own brands or channel developments can benefit by learning from foreign success stories.

In November 2008, there was an international seminar hosted by the IDB to introduce the latest CCOR standard, including processes, metrics and best practices to local Chinese Taipei brand manufacturers such as Mio Technology, Johnson Health Tech., Gigabyte, and BenQ. The keynote speaker, Caspar Hunsche CTO of SCC, was very pleased to learn that Chinese Taipei companies want to adopt the CCOR standard as a means to improve their customer chain processes and activities to pursuit world class performance, and understand the meaning and value of standards for industries in Chinese Taipei. Due to the efforts, IDB was granted a "Commitment Award" by the SCC to show the contributions the IDB has made to the international standard community.

Since 2009, IDB has promoted e-Business standards of applications in the Manufacturing Sector through continuous efforts in the Manufacturing Sector Value Chain IT Application Project and Manufacturing Sector ICT Value-Added Project; companies using RosettaNet or XML as their e-Business standards include: Repon Group, Asia Optical and Wieson Technologies Co., Ltd. where Application scope includes: Order/Delivery information exchange with clients, tracking and information exchange with international logistics companies, etc. (Table 3).

Table 3：2009~2010 Summary of e-Business Standards Applied by Industry Companies (Source: IDB, MOEA)

Application Contents	Number of Connections	e-Business Standards	Industry Sector	Company Name
Order/Delivery information exchange with clients	**1**	Rosetta Net	Ball Bearing Drawer Slides	**Repon Group**
Tracking and information exchange with international logistics companies	**3**	XML	Optical Lens	**Asia Optical**
Order information exchange with clients	**5**	**XML**	**Electronic Connectors**	**Wieson Technologies Co., Ltd.**

Take Wieson Technologies Co., Ltd's e-Business applications in XML standards as an example: Wieson Technologies Co., Ltd started its business as a Connector and Cable manufacturer in 1990 and gradually expanded its product line to: RF and Antenna for Wireless Communication, Components in Optical Fiber, Automotive Electronics, Consumer Electronics, and LED Lightings. Wieson's customer base includes different industrial sectors including Computer Industry, Communication Industry, Automobile Industry and Consumer

Electronics Industry; Wieson Technologies' goal was to become a professional electronics OEM.

In order to reach the goal, Wieson reviewed the operational processes with clients and suppliers. The following problems were identified:

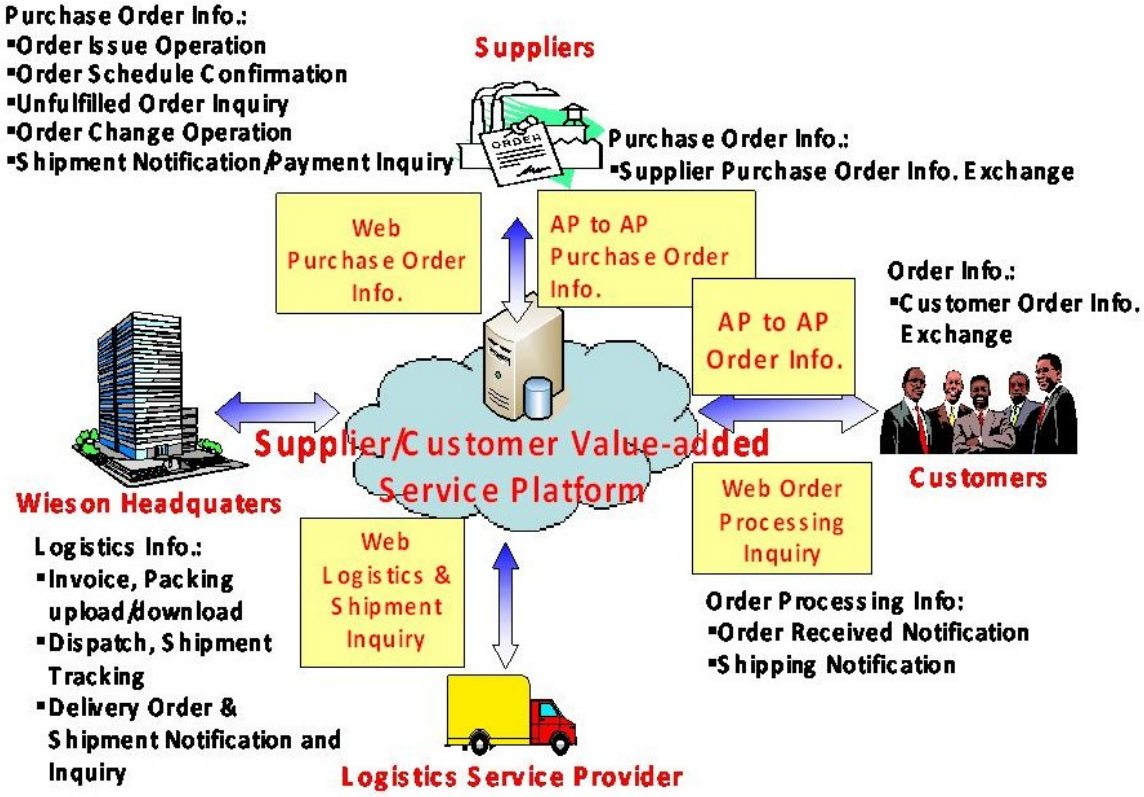
A. Orders Received: The majority of customer demands are customized products; after receiving and confirming the orders, the sales staff notify Customer Service in China to process customer orders and arrange delivery upon customer requests. Currently most customers of Wieson Technologies Co., Ltd order by fax or mail whereas for some major customers, Wieson Technlogies Co., Ltd has been using Browse connection to process orders and other business contacts. With Browse Connection, the headquarters of Wieson Technologies Co., Ltd. notifies factories to schedule delivery after receiving and confirming orders, also providing customers with subsequent delivery feedback. Nevertheless, this operation is excessively time-consuming and not speedy enough as customer service in giving feedback.

B. Supply-side: From issuing the purchase order to the supplier to progress management and follow-up, communication between parties is still done manually. Confirmation of orders, inventory stock, schedule delivery, and purchase order are still done by phone which makes it difficult to respond to customer changes in a timely manner as the average process time is too long.

C. Logistics Management: Currently, ERP is used only for Invoice and Packing List during delivery. However, for shipment notification and tracking inquiry, e-mail and telephone are used to inform customers; the information is not real-time nor as transparent as the manual operation approach and cannot be comprehensive and proactive while informing customers. This also does not provide a channel for the customer to make inquiries on the shipment status, hence it does not fulfill the customer service goals.

As a result, in order to improve customer service quality and those problems mentioned above, Wieson Technologies Co., Ltd utilized ICT and adopted XML standard to establish an information exchange with suppliers and logistics (Fig2). Through rapid responses with updated information for the needs of customers, the corporate image of Wieson Technologies Co., Ltd is enhanced.

Figure 2. Wieson Technologies Co., Ltd.'s IT Application Structure and the Content of XML Standard



3.2 Commerce

3.2.1 The Achievement of e-Business Consulting in B2B for Chinese Taipei Distribution Services Industry in 2009.

In order to give impetus to the business services operation in Taiwan towards the technological services and global development for the future business development, the Department of Commerce, Ministry of Economic Affairs has launched "The U-Commerce Innovation and Networks Development Plan" to spirit distribution services and create a diverse and integral model of customer service in the future through ICT, value-added services development, international business services and visibility enlargement. In addition, this will also to enhance operation efficiency and reduce operating cost.

"The U-Commerce Innovation and Networks Development Plan" in 2009 was tonally subsidy of 16 cases of commercial use, 10,741 trading partners utilized the business application and also invested NTD 2,275,000,000. It

affected business transactions or turnover by around NTD 8,899,000,000 after application, additionally creating 680 employment opportunities.

Table 4 : Introducing 16 applications of U-Commercial use (below):

Summary	Enterprise
In order to improve repair efficiency and quality, GIGA-BYTE implemented a global online maintenance service system and provided consumers with a means to download software online. The company aims to fulfill the customers demand by elevating brand image and gathering information on online maintenance service with overseas customers' demands to research and develop appropriate samples of new products for domestic suppliers	**GIGA-BYTE Technology CO., Ltd**
To create a diverse ordering service model which integrates with telephone, Internet, SMS, Kiosk etc. by using pre-paid cards to manage customer relationships, also cutting down ordering time and strengthening the quality of personal consumer services.	**An-shin Food Service CO., Ltd**
Setup the internal platform of knowledge community for enterprises and create the new food product recipe by using non-reuse food ingredients. In addition, with fully product category information to improve the quality control and maintain the fresh ingredients and then to provide customers the appropriate customer service model with a secure, safe and popular tastes.	**KANPAI Co., Ltd**
Providing logistics services and payment collection services for local SMEs, also combine the channels with physical	**President Transnet Corp.**

storefront and virtual store/online store to provide promotional services for businesses. Moreover, the products can be delivered and sold directly to customers all over Taiwan, also providing opportunities for the Otaku-market, creating new business opportunities and improving consumer service quality in a win-win situation.	
To develop an online sales service platform for e-Maker Personalized design, and to integrate design companies, printing press, various types of product manufacturers and consumers to adopt online design. With a complete customized product supply and value chain, so that the customers get exclusive, good quality personalized products at a bargain price.	E-free Media Information Co., Ltd
To create an innovative multi-functional product - the "Heran singing LCD", also setup the dealers' management and digital content protection system with the online music download service platform, to develop differentiated niche market competition, extend product and service to the global Chinese market.	Heran Co.,Ltd
To buildup the demand-driven supply service model for books and teaching materials, also combined with children's physical and psychological diagnostic evaluation tools. After careful understanding and analysis of children demands, custom teaching material for early childhood is provided.	QQzOO Inc.
To setup the kitchen design 3D display system and thread the construction management system for advance	Taiwan Sakura Corporation.

understanding of post-construction appearance. In addition, it complete within 5 days of a high quality service.	
Utilizes a physical and virtual interface to interact with consumers and gather information to adjust the service model so that customers can get the best quality service and goods.	**White-Wood-House Foods Co., Ltd**
To establish Knowledge of Chinese genetic testing and test service platform that is not only available for the online progress-checking but also improving service efficiency and guaranteeing patients' rights, so that it reduces cost of medical operations.	**BIONET Corp.**
To develop and construct a group of companies and suppliers of retail services platform commonality; also to enhance visibility in the international market through domestic suppliers and cross-channel systems of domestic and foreign trading opportunities	**TEST RITE International Co., Ltd.**
To provide an image of electronic communication and transactions in Taiwan with the global advertising industry, utilize the latest global information and stimulate innovation and design services to enhance quality and competitiveness.	**Fargochen Co., Ltd**
To develop service platforms for bookstores and libraries in Chinese Taipei and China for information transparency circulation and increased speed of operation and management efficiency and reduce settlement.	**Eslite Logistics Co., Ltd**
To construct the common digital imaging application service platform and it will be	**LEO Systems, Inc.**

image of paper, digitalization, and systematic efficiency and also provide services efficiency for financial and insurance industry and to improve operational efficiency, reduce operating costs and risk management.	
To provide a distribution service platform for the sales, order, delivery, payment and electronic invoice and other applications of the e-services to conduct application of e-services for SMEs, in addition to improving operational and management performance.	**BankPro E-Service Technology Co., Ltd**
To create optical lens design manufacturer service platform transactions, so that various industries can quickly offer consultation, to set and record customer information, etc. Almost 6 percent of traditional optical industry involve into optimization applications to improve the overall level of industry and consumer e-service quality.	**Perfect View Enterprise Co., Ltd**

3.2.2 Enactment of the Chinese Taipei “Logistics & Supply Chain Management Service Initiative” in 2009

To promote and support Logistics Service Providers (LSP) to enhance business scale and service capabilities in global marketplace, the Ministry of Economic Affairs led and sponsored the “Logistics & Supply Chain Management Service Initiative” program. The Ministry encouraged LSP to consolidate with each other and develop value-added logistics services while creating supply chain solutions through adopting ICT technologies to meet the ever-increasing needs of enterprises as business environments are changing dramatically. Sos as enterprises strive to enhance supply chain efficiency, lower inventory level and overall supply chain operational costs, eventually they become more competitive in managing global supply chains.

In 2009, the Department of Commerce supported 11 projects, including 3 logistics alliances, 4 niche logistics services, and 4 public e-logistics hubs.

A total of 388 LSPs and 148 enterprises have joined theses e-logistics hubs to initiate proceedings in Freight Document Exchange, On-line Booking, Supply Chain Visibility, VMI, Order Management, RMA, and ISF. The government's "Logistics & Supply Chain Management Service Initiative" has made a significant difference in enabling LSPs to provide integrated logistics services, exchange freight information efficiently, and provide timely shipment and inventory visibility along the supply chain. In addition, LSPs have increased their investment in ICT and e-logistics services by US$3.75 million. It essentially helps heighten the level of service, as well as the competitive edge of Chinese Taipei logistics industry. The service features that e-Logistics Hubs provide are illustrated in Table 5.

Table 5 : The Service Features of e-Logistics Hubs in 2009

No. of participant LSPs	*Led by LSP Companies*	No. of supported Hubs	Type of e-logistics Hubs	e-service functions
94	1. T.V.L. Global Logistics Co., Ltd. 2. Taiwan Express Logistics Group 3. Chien-Shing Customs Broker Co., Ltd.	3	Logistics Alliance	**1. e-Document** **2. e-Booking** **3. e-VMI** **4. Order Management** **5. Supply Chain Visibility** **6. RMA** **7. RFID** **8. Import Security Filing**
64	1. Jrexp Express delivery Co., Ltd. 2. Sound Hope Global Logistics Co. Ltd.	4	Niches Logistics	**9.**

	3. Union Best International Co., Ltd. 4. HCT Transportation Co., Ltd.			
230	**1. GCOM Information Service Co., Ltd.** **2. GoodService Information Co., Ltd.** **3. Prolink Solutions Co., LTD** **4. Toplogis Co., LTD.**	**4**	**Public E-Logistics Hubs**	

Furthermore, the Department of Commerce has developed 64 XML standard documents for logistics operations, fully complying with United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) ebXML, UMM, CCTS(Core Component Technical Specification), and NDR(Naming and Design Rule). Up to 2009, these standard documents have been adopted by 3,343 LSPs. This infrastructure not only expedites the deployment of e-logistics service among Chinese Taipei logistics industry, but also ensures interoperability with the global logistics community in the near future.

To fulfill the industry's demand for professionals and talent in managing logistics & supply chains, the Department of Commerce has sponsored non-governmental training organizations in providing vocational training and certification programs. In 2009, 133 professionals have completed training programs, 77 passed examination to receive certification from FIATA, SOLE, CILT, and other organizations.

3.3 Environmental Protection

The Taiwan Environmental Protection Administration (TEPA) has been developing a number of environmental-related data standards and information systems for environmental data exchange and sharing. The preliminary results accomplished over the past year are summarized as follows:

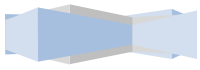
3.3.1. Environmental quality geographic data standards

In order to promote the circulation of environmental quality monitoring data and integrate heterogeneous geospatial data, TEPA has drafted a data standard of environmental quality monitoring, following the international standards that Open Geospatial Consortium and international standard organization have set. TEPA unified the content and format with the Geography Markup Language (GML) as a means to accelerate the electronic data exchange of environmental quality monitoring data. The standards also encourage integration with the geographic information system for more value-added applications. 20 air quality monitoring and water quality sampling geographic data standards were drafted in 2009. About 11 items of soil pollution and solid waste geographic data standards will be drafted in 2010. The standards can be announced after passing verification of a standard committee. Exchange and application of data on environmental quality will be more convenient.

3.3.2. Taiwan Environmental Data Warehouse System (TEDWS)

The TEPA has constructed an integrated data repository – the Taiwan Environmental Data Warehouse System (TEDWS), to consolidate and reconcile information from across disparate TEPA units and separate systems, including the Air Pollution Control System, the Water Permit Database, the Hazardous Waste Control System, and the Toxic Release Database. The TEDWS exchanges data through the usage of Web Services technology, XML file, through the 30 different information systems which are mentioned above, to make the exchange process easier and more reliable. The data extracted from heterogeneous sources can be transformed into a standard format so that it is more easily accessible to the public. Furthermore, the Data Warehouse can also create a powerful analytic platform for strategic decision-making.

3.3.3. TEPA Certifications for Customs Clearance Checking System (CCCS)



In line with the Facilitation and Networking of Trade Project, the TEPA has established a system that connects with the Customs system for cross

checking of Permits and Customs declarations to facilitate cargo clearance procedures. The system can access the existing systems of the Department of Waste Management and the Department of Environmental Sanitation & Toxic Substance Management, in order to acquire permit information. This system also checks customs declaration data (X801) against relevant data items in the related permit to ensure consistency between the declaration and the permit issued for the cargo. Having completed the check, the system will return a message of X802 to the Customs system. The Customs system can then proceed with following procedures after the X802 message. Through the checking process, cargo clearance can be completed without any paper work involved.

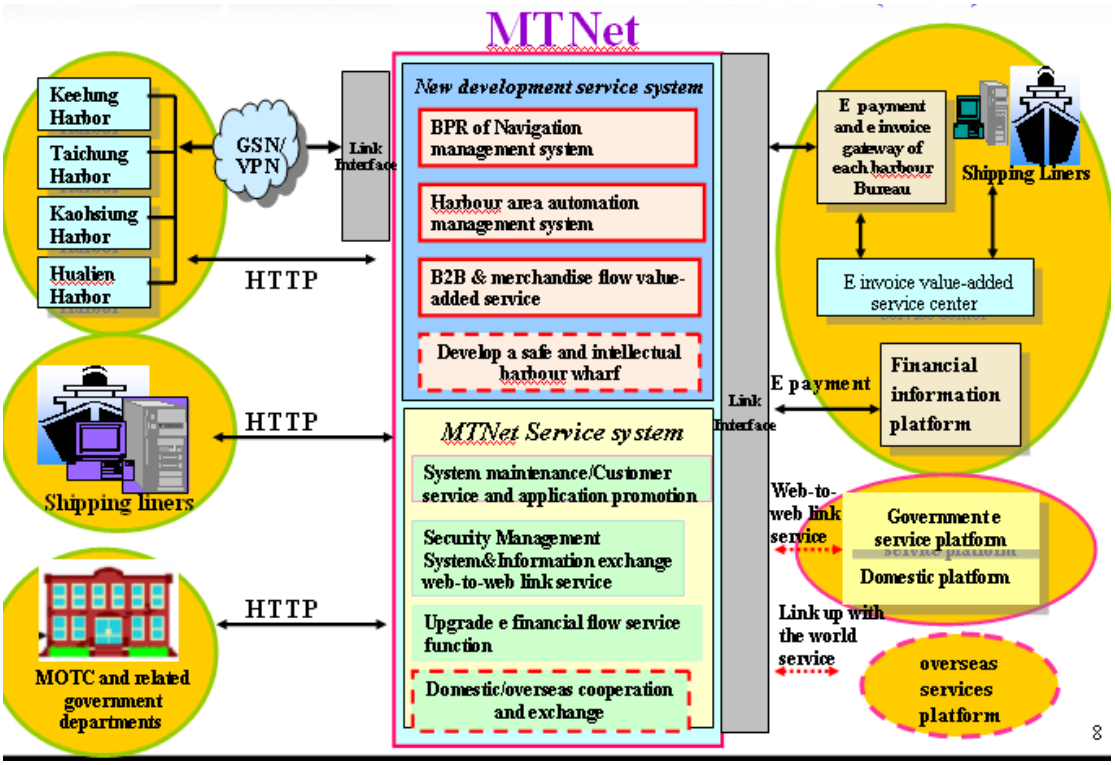
3.3.4. Water Quality Data Exchange System (WQDES)

The purpose of this system is to provide a platform for water quality data exchange, integration, and sharing in Taiwan. Currently, there are many organizations and agencies, including federal government agencies and local communalities, involved with water quality monitoring. It is very difficult to share water quality data since the information typically resides in geographically disparate and heterogeneous databases in different data formats and semantics. WQDES adopted XML as a standard for water quality data exchange among different agencies and implemented a number of software toolkits that can assist each agency to transform their data to a XML file, making data exchange more efficient.

3.4 Transportation

3.4.1 The Ministry of Transportation & Communications (MOTC) launched the "Maritime Transportation Net (MTNet)" since 2002, which acts as the integration architecture of a key channel for business parties to exchange information on marine transport and seaport stevedoring. Figure 3 shows the current structure of MTNet.

Figure 3. Structure of MTNet



3.4.2 The “e-Payment and e-Invoice system” is implemented under the MTNet to develop a network service application which enables users to complete payment operation at a single application entry point. This year, Kaohsiung port, Hualien port, Taichung port, Keelung port, Taipei port, Anping Port and Su-Ao port on line will promote more user. Currently this system has 126 enterprise users.

3.4.3 The “Navigation Administration Control” of MTNet has used the Business Process Reengineering (BPR) method to build a “customer oriented” administration system to save time on the application process. The “Shipping Industry Management System” of MTNet will offer users managing the institution of Shipping Industry, registration of changes, management of ship line, freight rate controlled. Its purpose is to preserve methodical marine transport. The “Entry and Departure Port Clearance Management System” of MTNet enables users to apply for vessel Entry and departure port clearance, verify every certificate of vessel, document of seaworthiness and amount of crew to dispose for safety, indeed check on shipping safety. The "Vessels Management System" of MTNET offers MOTC and Harbor

Bureau officers a means to efficiently manage Vessels of Chinese Taipei on ship purchasing/building, ship registration, S.I.(Ship Inspection) and certification issues. The "Marine Technologist Management System" of MTNET has offered users a means to maintain and manage training records, serving experience on ships, hire qualification/permission, and certification issues for Marine Technologists. This year the data exchange mechanism and database integration is completed and start the one time input and distribute automatically system implementation.

3.4.4 The “National Haebor and Stevedore Services Integrated System” of MTNet will offer users integrated interfaces and follow control of most of harbor and stevedore service functions that currently differ from harbor to harbor.

3.4.5 The “Port Access Passes system” of MTNet offer users applying for port of Keelung, Taichung, Kaohsiung and Hualien long or short-term access passes this year. Equip with RFID devices and enhance the performance of the port access process.

3.4.6 The IMO FAL Form Dangerous Goods Application System for Kaohsiung port, Hualien port, Taipei port will continue operation this year. The crew application system and passenger application system will be complete this year.

3.4.7 The MTNet begins to plan integration and interfacing with the Nation Single Window System for Chinese Taipei.

3.4.8 The MTNet is currently connected to 18 other government platform systems and exchanges of electronic data.

3.4.9 The MTNet completes a cross-strait shipping statistics system.

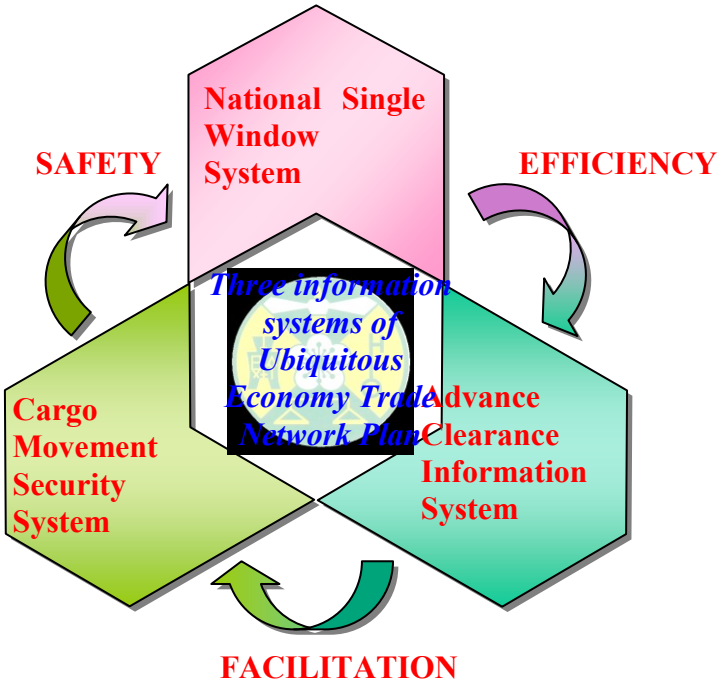
3.5 Customs

Being an island country lacking in natural resources, Taiwan fully depends on foreign trade to boost economic growth. Thus, enhancing international trade competitiveness is a very important issue in economic development. In terms of enhancing competitiveness, private sectors’ highly efficient management, active flexibility to emergent event and impregnable persistence to survive are surely important. However, it is even more important for the Customs to create a favorable clearance environment to help traders. As a pivotal connection between international logistics centers and a service-oriented governmental

organization, Customs is liable to simplify Customs operation, expedite clearance procedure, and reduce clearance costs to enable traders to remain competitive in international trade.

From 2009 onwards, Customs is making every effort to execute Ubiquitous Economy Trade Network Plan, which is also known as part of "I (Love)-Taiwan 12 projects" promoted and directed by the Council for Economic Planning and Development, Executive Yuan. The Customs is honored to take charge of 5 sub-projects. Among them are the establishment of three important information systems including the National Single Window System, Advance Clearance Information System, and Cargo Movement Security System. These systems should see completion within the next 4 years.

Figure 4. Ubiquitous Economy Trade Network Plan



After these projects are finished, the National Single Window System will be a main information platform and sole portal offering import/export declaration service, import/export query service and cross-platform interfacing service to various business operators concerning customs clearance, maritime shipping and licensing. The Cargo Movement Security System will create a RFID E-seal operation environment to process and control the movement of import/export/transit containers crossing seaports and airports. The Advance Clearance Information System will offer a convenient mechanism for customs clearance operators to make declaration in advance. The ultimate goal of establishing these systems is to build a world class single window and keep track with international trend such as WCO SAFE framework, WCO Data Model 3.0, etc.

While constructing these systems, we expect that difficulties and challenges will hinder the road to success. But, with the collaboration from inside and outside the organization, Customs has faith to fulfill the mission and to construct

a more facilitative and secure trade service environment for our Customs and trading partners by the year 2012.

3.6 Finance

3.6.1 Current Status of Financial EDI Standards Application:

Table 6：Refer to UN/CEFACT/EWG electronic data exchange standards

Indexes	Related Messages	Application System
D.95A	PAYEXT, CREEXT, DEBADV, BANSTA, AUTACK	**Payment process**
D.94W	CONTRL	**Control**
D.95 Draft **D.95A**	FINPAY BANSTA	**Cross-bank payment process**
D.95B	DOCAPP, DOCINF, DOCADV, BANSTA, DOCAMR, DOCAMI, DOCAMA, DOCARE, AUTACK	**L/C process**
D.95A	PAYMUL, DIRDEB, DEBMUL, CREMUL, BANSTA, FINPAY, CREMUL	**Lump-sum payment process**
D.95A	PAYEXT, CREEXT, DEBADV, BANSTA, AUTACK	**Foreign currency payment process**
D.95A	APERAK	**Notice process**

3.6.2 Current Status of Finance development using EDI:

Subscribers:

- Financial organizations: 22
- Clients: around 13900 users in the Electric, Information Service, Transport, Trade, Medicine, Pharmaceutical, Chemical, Finance industries, and so on.

3.6.3 Transaction statistics:

- In 2009, cross-bank transactions through Financial EDI reached a total of 2,785,472 transactions, with the total value of transactions being 78,809 million US dollars and the average value per transaction was USD 28,292.

Table 7：cross-bank transactions through Financial EDI

Average value per transaction	Total value of transactions	# of Transactions	
US$ 31,400	82,150 million US dollars	2,617,142	**2005**
US$ 29,300	81,092 million US dollars	2,774,598	**2006**
US$ 30,300	91,145 million US dollars	3,012,961	**2007**
US$ 28,249	90,422 million US dollars	3,200,862	**2008**
US$ 28,292	78,809 million US dollars	2,785,472	**2009**

3.6.4 Message Development of Financial XML Standards:

Regarding the development of e-Commerce financial messages, the following XML messages were designed for electronic data exchange between clients and banks. The messages are based on IFX (Interactive Financial Exchange) XML Implementation Specification v.1.4.

Basic services:	Service Account Inquiry Request/Response Service Profile Inquiry Request/Response
Bank services:	Account Inquiry Request/Response
	Balance Inquiry Request/Response
	Deposit Account Statement Advise Request/Response
	Deposit Account Transaction Inquiry

Request/Response

Payment services: Payment Add Request/Response

Checksum Add Request/Response

Payment Modification Request/Response

Payment Cancellation Request/Response

Payment Audit Request/Response

Payment Synchronization Request/Response

Payment Inquiry Request/Response

Account aggregation: Balance Inquiry Request/Response

Deposit Account Statement Advise Request/Response

Financing/Factoring: Credit Line Add Request/Response

Reimbursement Account Add Request/Response

Reimbursement Account Modify Request/Response

Reimbursement Account Cancel Request/Response

Reimbursement Account Inquiry Request/Response

Account With Bank Modify Request/Response

Account With Bank Inquiry Request/Response

Financing Bank Inquiry Request/Response

Credit Line Inquiry Request/Response

Financing Document Add Request/Response

Financing Document Cancel Request/Response

		Financing Document Input Request/Response
		Document Inquiry Request/Response
		Financing Document Verify Request/Response
		Financing Document Inquiry Request/Response
		Draw Down Add Request/Response
		Draw Down Cancel Request/Response
		Due Payment Notice Request/Response
		Reconcile Input Request/Response
		Supplier History Inquiry Request/Response
		Notification: Financing Synchronization Response
		Notification: Payment Synchronization Response
Funds Transfer	Transfer Add	Request/Response
		Transfer Synchronization Request/Response
		Transfer Audit Request/Response
Bill Presentment Service		
		Bill Inquiry Request/Response
		Bill Inquiry Request/Response
		Bill Status Modification Request/Response

3.6.5 Current Status of Finance development using XML:

There are 36 banks providing XML services to their customers.

3.6.6 Transaction statistics:

- In 2009, cross-bank transactions through Financial XML reached 500,317 deals in total. The total value of transactions was 4,710 million US dollars and the average value per transaction was USD 9,414

Table 8：cross-bank transactions through Financial XML

Average value per transaction	Total value of transactions	Transaction	
US$ 14,200	454 million US dollars	32,069	**2005**
US$ 11,300	646 million US dollars	57,214	**2006**
US$ 11,400	1,202 million US dollars	105,365	**2007**
US$ 10,052	2,121 million US dollars	210,998	**2008**
US$ 9,414	**4,710 million US dollars**	**500,317**	**2009**

The Bankers Association of The Republic of China participates procactively in IFX activities - not only in Banking /Branch banking / Web services working groups also through representation in the Steeling Group. We wish to introduce IFX standards into Asia to help promoting electronic data interchanges between trading partners and further facilitate e-business .

3.7 Construction and Planning

Electronic Procurement

1. The 2nd generation of the Government e-Procurement System went online on January 1, 2010, with integrated cloud computing services. Without logging in, suppliers may surf tendering and award notices and download tender documentation through http://web.pcc.gov.tw, including English summary tendering notices pursuant to the requirement of WTO Agreement on Government Procurement (GPA).
2. Since June 2010, suppliers may search tendering and award notices via cell phones anytime and anywhere.
3. The number of tenders announced via the e-Procurement System exceeded 400 thousand in the period from January 2009 till June 2010, and 22.21 million website hits were received during that period, an average of 1.2 million hits per month.

4. The e-Procurement System enables suppliers to obtain tenders via the internet 24 hours a day, thereby lessening the manpower expended by government agencies, reducing travel time and manpower costs incurred by suppliers, and combats bid-rigging. During the period from January 2009 till June 2010, the number of e-tender documentation downloaded by suppliers exceeded 1.92 million times; the ratio of e-tender documentation provided by government agencies reached 99.39%. Through the system, government agencies and private enterprises may save NT$1 billion in expenses and reduce carbon dioxide emissions by 5,262 tons per year.
5. One of the functions of the Government e-Procurement System is the Inter-Entity Supply Contract. During the period from January 2009 till June 2010, the number of orders using the system exceeded 449,000, with a total value of over NT$44.5 billion.
6. Data exchange standards: There have been 33 XML-based data exchange standards developed for government procurement. The 33 standards, as listed in Table 11, including e-Tender Management, e-Tender Notice, Common-Supply Purchase Order Management.

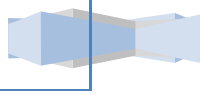
Table 9 : Standards Announced for Data Exchange in Public Construction in Chinese Taipei as of Dec 31, 2008

Standard Item	Type	Category
(1) Instruction for Tendering	e-Tender Management	**Government Procurement**
(2) e-Tender		
(3) Tenderer's Statement		
(4) Joint-Tendering Agreement Template		
(5) Construction Work Contract		
(6) Service Contract		
(7) Property Contract		
(8) Tender Log for Tendering Opening / Prize Negotiation / Award /		

Failure of Tendering Opening / Failure of Award **(9) Document Structure of Solicitation / Tendering** **(10) Document for Solicitation / Tendering / Contracting**		
(1) Open Tendering Notice **(2) Limited Tendering Notice** **(3) Selective Tendering Notice for Specific Procurement** **(4) Selective Tendering Notice for Establishing a list of Qualified Suppliers** **(5) Selective Tendering Notice for Inviting Qualified Supplier** **(6) Tender Award Notice** **(7) Tender Failure Notice** **(8) Efficiency Analysis Notice for Large Procurement** **(9) Debarred Supplier Notice** **(10) Suspended Debarred Supplier Notice** **(11) Outstanding Supplier Notice** **(12) Jointly Guarantee Supplier Notice** **(13) Experts and Scholars Listing for Procurement Evaluation Committee**	e-Tender Notice	

(14)Teachers for Procurement Training Courses **(15)Professional Procurement Officers**		
(1) Demand Inquiry **(2) Procuring-Entity Registry** **(3) Procuring-Entity Demand** **(4) Supplier Registry** **(5) Product Specification** **(6) Inter-Entity Supply Contract** **(7) Purchase Order** **(8) Notification**	**Common-Supply Purchase Order Management**	

(1) Construction Daily Report **(2) Supervision Daily Report** **(3) Progress Report by Week / Month** **(4) Progress Payment**	**B2G Project Progress Control**	**Construction Management**
(1) Program Control **(2) Project Control**	G2G Program Progress Control	
(1) Annual Business Report **(2) List of Professional Engineers** **(3) Certification Data of P.E.** **(4) Training Data**	PE and Consulting Firms Management	
(1) Document Index **(2) Meta- General Engineering**	Engineering Documents' MetaData	



(3) Meta- General Engineering Volume **(4) Meta- Contract** **(5) Meta- Construction Specification** **(6) Meta- Construction Plan** **(7) Meta- Completion Report** **(8) Meta- General Engineering Drawing** **(9) Meta- Design Drawing** **(10) Meta- As-Built Drawing** **(11) Meta- General Engineering Record** **(12) Meta- Minutes of Meeting** **(13) Meta- Engineering Photo** **(14) Meta- Engineering Tape** **(15) Attribute of Drawing** **(16) Review Comment List**		
(1) e-Envelope	**Transport Protocol**	**Others**

3.8 Trade Facilitation Plan

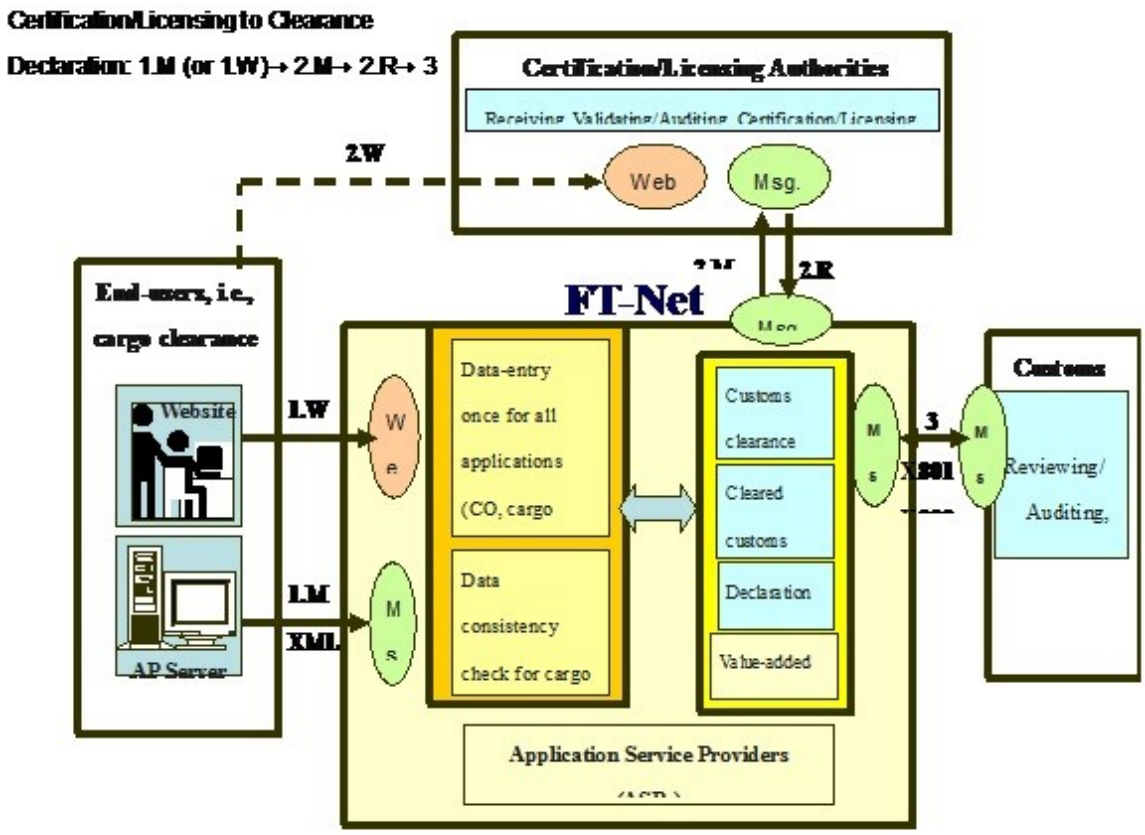
In response to worldwide trends in trade facilitation and simplification of trading procedures, Chinese Taipei launched the “trade facilitation plan” in 2003. The plan, managed by the Bureau of Foreign Trade, was derived from the “Barrier-free Customs Clearance Project” of the “Operation Headquarters Development Plans” in the “Challenge 2008: National Development Plan”, to develop “Facilitation and Digitization of Trade Processes”. The “Trade Facilitation Plan” plays a vital role in providing trade-related businesses with an integrated environment of trade management, customs clearance, licensing and inspection; moreover, it improves Chinese Taipei’s standing as one of the most facile countries in global trading. Businesses are no longer limited by time, location, or

level of digitalization. Overall customs clearance time is substantially shortened, with related costs, such as inventory and logistics costs, reduced as well.

To realize the objectives of the "Trade Facilitation Plan", Chinese Taipei established the Facile Trade Net (so called FT-Net) in 2005, which integrates 16 government agencies/authorities to build an on-line application system. Businesses can now apply electronically for import/export permits, certificates of origin, documents required for inspection, and quarantine-related documents either from BOFT, the Bureau of Standards, Metrology and Inspection (BSMI), the Bureau of Animal and Plant Health Inspection and Quarantine (BAPHIQ), or any other 13 relevant agencies. This FT-Net has not only sped up application procedures, but also customs clearance operations, and represents a big step toward realizing the goal of "paperless trade". Currently, over 90% of import/export applications are applied for via a paperless process (either by FT-Net or by the government website)

Once businesses apply for licensing and customs clearance via FT-Net, FT-Net automatically forwards applications to related governmental agencies. If validation is needed from different governmental agencies, FT-Net sends the case to Customs first for validation and then distributes it to the related agencies for final approval (as shown in figure 5). Via FT-Net, along with support from enterprises, we can efficiently integrate related governmental agencies and international trading partners and build up a facile trade e-environment which breaks down barriers.

figure 5. Facile Trade Net (FT-Net) Framework



Note: W stands for Web Submission, M stands for XML Message Application, and R stands for Application Response

.

To move forward with online integration of certification/inspection, Customs clearance, port authorization and related areas of concern, the BOFT launched the 2nd stage of the 5-year Trade Facilitation Network plan in 2007. The plan includes simplifying certification/inspection and documentation, risk control, inspecting trade-related laws and regulations and international cooperation. Likewise, it includes 5 different B2G and G2G mechanisms (as shown in Figure 6): 1) Verification and exchange of certification/inspection documents between relevant authorities; 2) Connecting certification/inspection authorities with the Customs' system in regard to document verification; 3) Online payments for services and application fees; 4) Tracking the status of applications for certification/inspection; 5) Notification of special cases. By sharing information and electronically transmitting attachments, each certification/inspection authorities can make more efficient use of limited resources, while also

enhancing the capability for risk control. At the end of 2009, 68 different certification/inspection attachments have been simplified and transmitted electronically. By 2011, the estimated number of simplified certification/inspection attachments will be 139, which is about 44% out of 309 total certification/inspection attachments.

The benefits and results that the Trade Facilitation Plan and FT-Net have achieved are listed as follows:

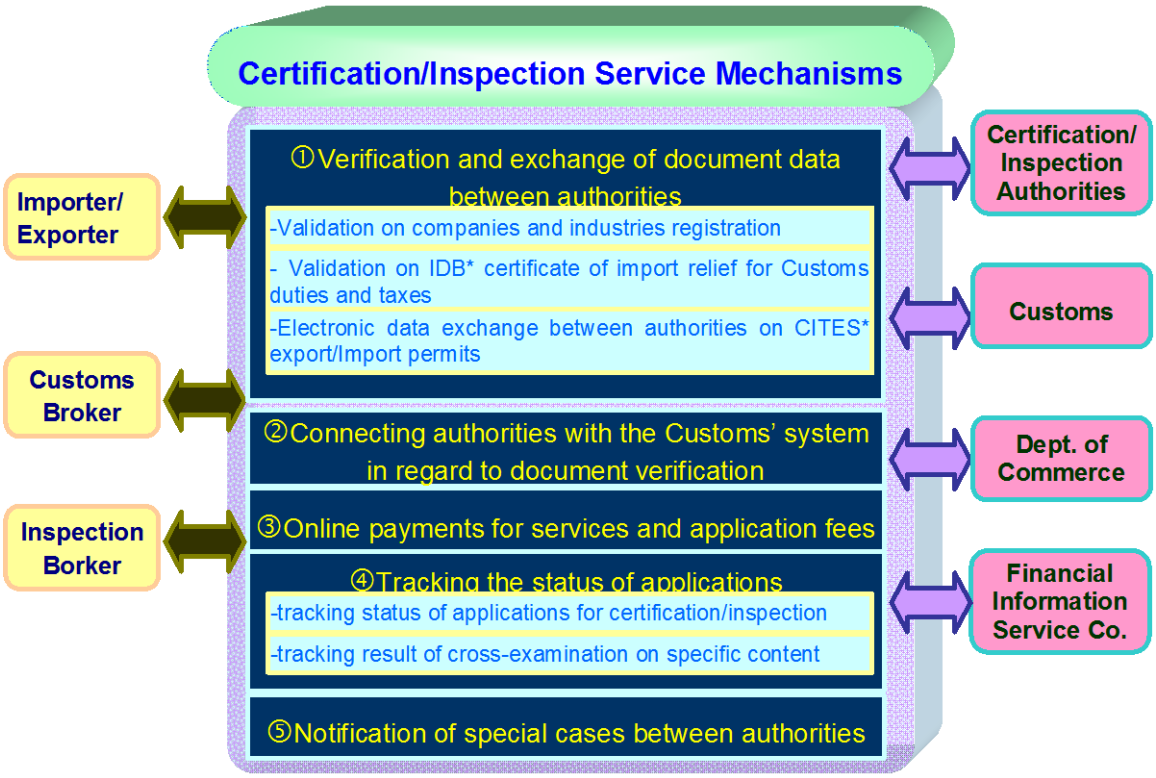
1. Benefits of simplification: Simplified rules and regulations help reduce inspection time by 50%. (e.g. Quarantine document review reduced from 3~7days to 32 hours; animal medicine certificates and permit documents from 12 days to 7 days; plant medicine certificates and permit documents from 14 days to 10 days). There is a reduction of about 11,000 licensing documents every year.

2. Benefits of digitization: Completed the design for 36 XML standard messages. Completed 7 common messages, including messages between Customs and certification/inspection agencies. From Mar. 2005 to Dec. 2009, more than 4 million (about 91.74% of the total) application documents have been processed via FT-Net, and have saved up to 23.43 million hours. (Time saved for businesses, certification/inspection agencies and for Customs clearance.)

3. Benefits of paperless trade: Direct benefits: FT Net linked together 16 certification/inspection agencies by 2009, allowing 90.66% of import/export applications to be transmitted electronically, which saved 9.38 million pieces of paper. Indirect benefits: decreased many manually audited documents, and reduced the cost of storage for paper documentation.

Chinese Taipei depends heavily on trade development. Therefore, further simplification and modernization on Customs procedures will help to build a barrier-free electronic customs clearance environment, and to increase our businesses' international competitiveness.

Figure6. FT-Net Value-added Service Mechanisms



*IDB: The Industrial Development Bureau

*CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

India Progress Report

28th AFACT Plenary

Yokohama, Japan

November 26, 2010

eTRADE Division

Department of Commerce

Ministry of Commerce & Industry

Government of India

New Delhi

SECTION I - GENERAL CONDITION UPDATE

1.1 Electronic Commerce(EC)/ Electronic Data Interchange(EDI) Users

In India, the growth of Internet awareness and usage is continuously improving. The metros and urban cities have experienced a high growth of Internet use since the year 2000. On an average there has been more than 30% year-on-year increase in the Internet adoption among urban population. At present, high growth is also seen in non-metros – an indication that the medium is getting increasingly pervasive among urban populace. Though the growth in rural areas is not that encouraging but initiatives by public agencies and private firms are being introduced to bring them at par with urban populace.

Buying and selling of products over electronic systems such as the Internet are poised to grow manifold as 3G services are launched and mobile broadband getting more ubiquitous. In India, there is an increased demand for data with multimedia functionalities in the mobile broadband access. The Indian government has plans to expand broadband coverage to connect every gram panchayat (an elected body looking after village administration) to broadband network by 2012.

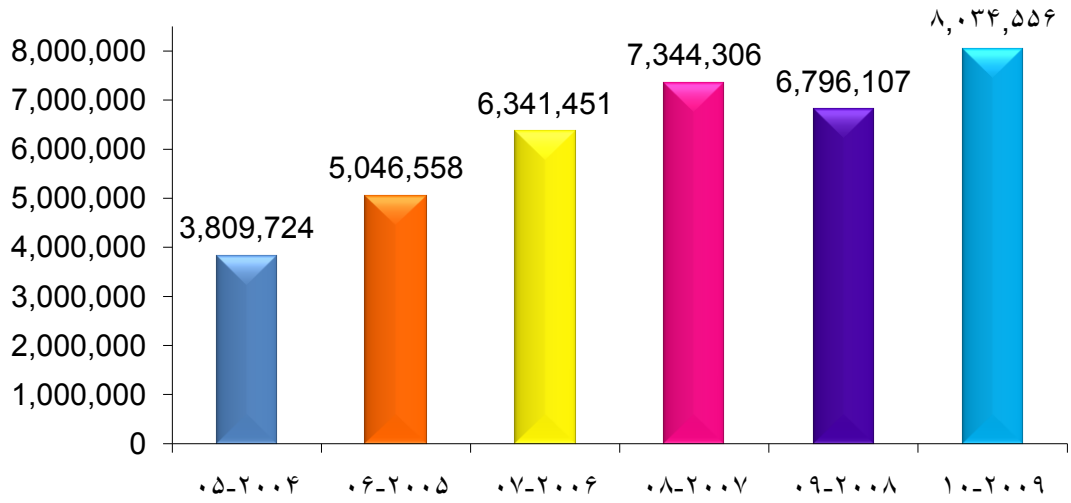
eCommerce is developing at fast pace in India due to political stability and excellent knowledge base created by vibrant education sector, which has led to an increase in number of highly trained personnel who have good programming and online skills. Unlike earlier days when the businesses needed specific skills, they had to incur expenses for plane ticket, hotel stay, and other needs of the professionals. But today, with eCommerce, businesses can make use of expertise of individual people, without having to limit themselves to geographical location. eCommerce has enabled businesses to reach national and global markets at low operating costs. eCommerce has led to unlimited shelf space for products and services and has revolutionized the buying patterns and choices. With huge amount of available information, consumers have the flexibility to pick up the product of their choice, make comparisons, and evaluate their prospective purchase.

Government agencies are equally benefited with eCommerce as it has facilitated easier tax collections, foreign trade facilitation, bill payments, health services, railway ticket bookings and numerous other services.

1.1 EC Market size & Growth

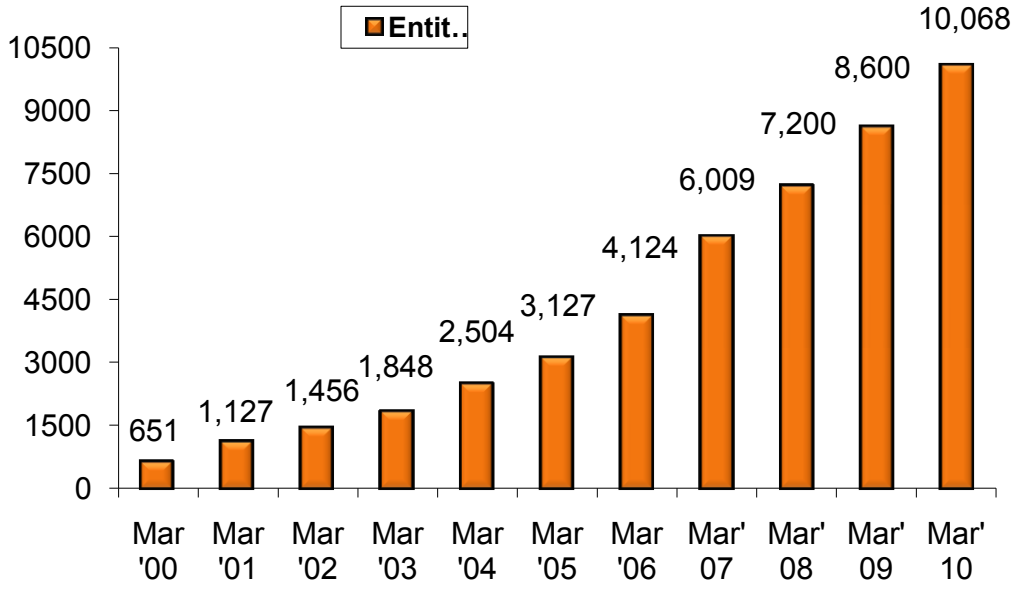
As per Manufacturers' Association for Information Technology (MAIT), the industry body for IT hardware manufacturer's in India, IT Industry annual performance review 2009-10, the total PC sales between April 2009 and March 2010, with desktop computers, notebooks and netbooks taken together, were 8.03 million units, registering a growth of eighteen per cent over the previous year. The cumulative average growth from 2004-10 is 16%.

Total PC (Desktops & Notebooks) sales: 2004-2010



Active Internet entities: (March 2010)

'000 Units



This translates to 74.7 million internet users (Entities are establishments/individual with internet connection; an entity may house/ be multiple user/s). The overall entities with internet grew by 17% over March 2009. The businesses accounted for 26% of the entities growing 11% while Households accounted for 74% growing 19%.

Mode of Internet access in Businesses: (March 2010)

March 2010	Internet connections - Contribution to the tot by Access type
10%	Dial up
11%	ISDN
9%	Leased line
62%	DSL/Cable Link
1%	VSAT
5%	Data Card
2%	Others

As of Sep 13, 2010

-- Total no. of phones: 710 million
Mobiles: 674 million
Landlines: 36 million
-- Total no. of PCs: 40 million
-- Internet accounts: 16 million
Broadband: 9.5 million
-- Active Internet users: 81 million

There are currently about 81 million Internet users in India, a number that is expected to triple by 2015 to 237 million. Internet use is concentrated mainly in larger cities. 95% of digital consumers use email; 62 % use instant messaging; 60 % use online music and 61% access news, 23% use social networks. A number of factors have been responsible for this amazing growth, including low tariffs, low handset prices and most notably a highly competitive market created by the government and the regulator.

Urban population in India is approximately 30%, with rural population comprising majority at 70%. According to the survey conducted by Internet and Mobile Association of India (IAMAI), the rural internet users have outgrown the number of urban internet users. The surge is attributed to increase in numbers of users in remote urban areas and towns and among lower socio-economic classes. Additionally, there has been an increase in usage of internet for activities like email, social networking, entertainment, and education. Further survey by IAMAI shows that as compared to a usage of 5.6 hours in a week in 2001, the usage has gone up to 15.7 hours a week a 2009. Indian youth (18-25 years), an early adopter of technology, contribute a major chunk of 44% in internet usage. This is followed by young men, who contribute 28% in internet usage. Together the youth and young men in (age group 25-35 years) contribute 72% internet usage.

The National Association of Software and Service Companies(NASSCOM) an industry body has reported that India's software and services exports should rise 5.5 percent in the year to March 2010 to $49.7 billion, , in line with an earlier forecast for 4-7 percent expansion. In the year to March 2011, it is expected to grow an annual 13-15 percent, with the recovering world economy boosting demand for outsourcing, The sector's export growth had slowed to 16 percent in 2008/09 from more than 20 percent in previous years.

As per a report by a leading international consulting group India’s IT-BPO (business process outsourcing) market (including exports) could touch $285 billion in 2020, growing at a compounded annual rate (CAGR) of 15 per cent. In 2009, it was $71.6 billion, after an impressive growth over the past decade.

India has also developed the trend of e-commerce and has emerged out as one of the leading nations to make use of e-commerce for online selling and buying of products. According to a report by a leading online shopping firm, earlier Mumbai which was known to be the center of e-commerce has now been replaced by the heart of our country New Delhi. New Delhi has completely overtaken Mumbai and has turned to be the largest e-commerce hub of the nation.

SECTION II – EDIFACT/ebXML/XML BASED STANDARDS DEVELOPMENT

2.1 Awareness and Education Programs

2.1.1 AFACT 2009 and EDICOM 2009

AFACT 2009 along with EDICON 2009 was organised in New Delhi from 2 – 6 Nov. 2009. The important recommendations of these meetings are given below:

Recommendations :

1. The members of Asia Pacific Council for Trade Facilitation and Electronic Business (AFACT) have resolved that we may collaborate with AFACT, UNESCAP, UNECE and United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) to facilitate paperless trading in the region. This will provide the facility for single window clearance and implementation in the region.
2. Simplification and Standardization of trade documents according to international standards and recommendations worked out by UN/CEFACT be adopted by the member countries/economies of AFACT.
3. All member countries/economies of AFACT underlined the need to create mirror working groups of AFACT as well as UN/CEFACT Forum in their country/economy. These mirror working groups need to actively participate in the work program of AFACT and UN/CEFACT.
4. Member countries/economies of AFACT have underlined the need to conceive and facilitate joint cross border projects.
5. Member countries/economies of AFACT re-iterated the need for the creation of a UN/CEFACT repository as a matter of urgency and priority.
6. It was also proposed that a two way communication channel needed to be set up between AFACT and UN/CEFACT groups in order to report difficulties experienced in the implementation of UN/CEFACT standards and recommendations.
7. The simplification of business processes and data requirements is a prerequisite for any automation, and should:
    a. be a first step before applying ICT solutions
    b. be done in consultation with all stakeholders
    c. focus on practical solutions.
8. Members of AFACT appreciated the move UNNExt from UNESCAP and UNECE and resolved that they should actively collaborate with this initiative.

2.2 Message Development Activities

The project eTRADE being pursued by the Department of Commerce facilitates the effective and efficient mode of transacting business in the area of foreign trade. The project is pursued in trade regulatory and facilitating agencies/organizations like Customs, Ports, Airports, Directorate General of Foreign Trade (DGFT), Banks, Container Corporation of India (CONCOR), Export promotion organisations etc who form part of the community partners of the project eTRADE. UN/CEFACT standards and recommendations are integrated in the project. The Single Window Port Community System (PCS), a constituent of this project, is currently being operationalised, which integrates following standards.

a) The industry standard Java Platform, Enterprise Edition (Java EE) is used to develop the PCS application. J2EE is built on the solid foundation of Java Platform, Standard Edition (J2SE) and is the industry standard for implementing enterprise-class service-oriented architecture (SOA) and next-generation web applications.

b) Apart from the widely used open source frame works like Struts, Spring and logging utility like log4J and reporting tools like Jasper reports, the following technologies are also used:

- AJAX: Ajax the most important technologies for the development of highly interactive web application and due to its features it have become extremely popular these days. When stakeholder clicks on something on an Ajax driven application, there is very little lag time. The page simply displays what they're asking for.
- XML: A widely used system for defining data formats. It is the most common tool for data transmissions between all sorts of applications, and is becoming more and more popular in the area of storing and describing information.

c) PCS Technical Architecture is completely based in Java 2 Platform, Enterprise Edition (J2EE). J2EE is a standard set of Java technologies that streamline the design, development, deployment, and management of component-oriented, mission-critical, enterprise applications.

d) It provides a component-based, server centric, multi-tier application architecture to support rigorous requirements of modern, extended e-business oriented enterprise application systems.

e) PCS file formats like XML and EDI (TXT) message structures are designed by adopting various international standards of UN/CEFACT. The Vessel and Container messages are compliant to UN/EDIFACT standards.

f) PCS Message Hub (M-Hub) is an Internet-based messaging platform, which allows stakeholders to carry out B2B transactions in a highly secure manner. M-Hub supports protocols like HTTP, HTTPS, FTP and SMTP. Messaging protocols like Web Services based on SOAP and XML are integrated into M-Hub.

g) Transwork is the one of key components of the Port Community System. It accepts incoming standard formats, like XML, TXT, UN/EDIFACT, etc and translates into other formats such as XML, TXT and UN/EDIFACT etc. Transwork Engine performs the actual translation from one message format to another.

SECTION III – e-READINESS and e-APPLICATION -- eGOVERNMENT/ eBUSINESS RELATED PROJECT UPDATES

3.1 Regulatory Sector

3.1.1 Directorate General of Foreign Trade

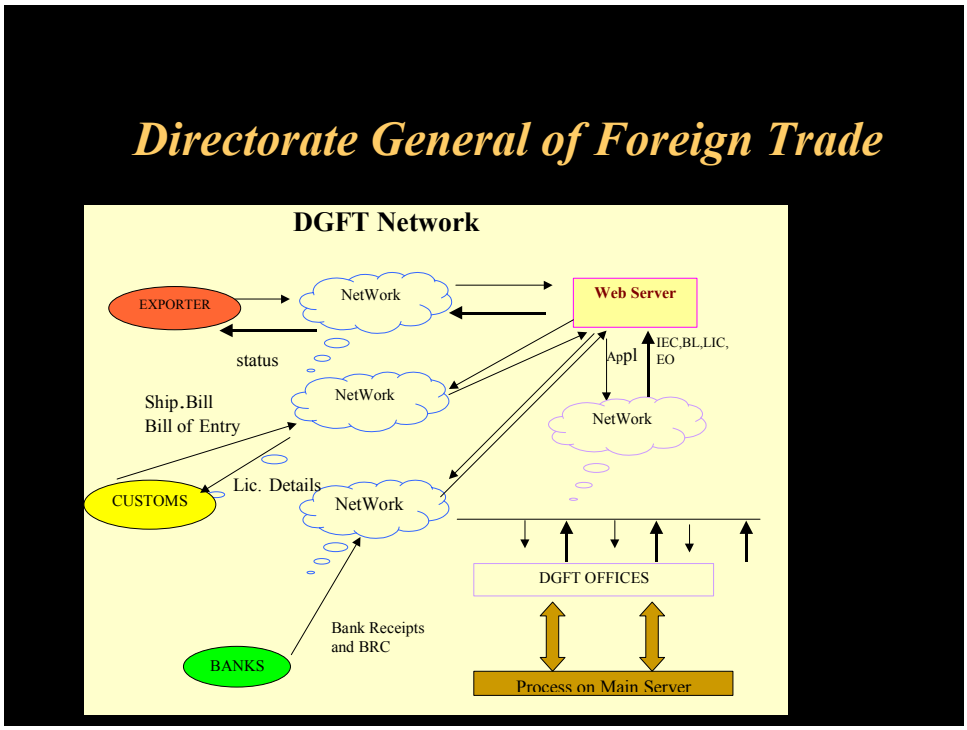
3.1.1.1 Nature of Project

Directorate General of Foreign Trade (DGFT) is an organisation under Department of Commerce, Ministry of Commerce and Industry engaged in formulation of Foreign Trade Policy of the country and its administer. All types of licenses required for export and import within the country are issued by this organisation. The interface with trade and industry is provided by the 36 offices of DGFT scattered through out the country. EC/EDI implementation stipulates day to day electronic interface with trade and industry and related organisation for electronic delivery of services.

3.1.1.2 Status

The basic objective of EDI initiatives is to improve services for DGFT user community, through greater transparency of operations and lowering transaction costs by reducing processing time for obtaining authorizations from DGFT.

As an important partner in the 'eTRADE' project, the endeavour is to successfully integrate with all relevant partners. DGFT has implemented an automated environment for web based electronic filing and provided a retrieval and authentication system of electronic documents based on agreed protocols and message exchange with its community partners primarily Customs, Banks and Export Promotion Councils, bodies at all the 36 Regional Offices of the DGFT. Payment of authorizations fee is made through the electronic fund transfer mode (EFT). Digital Signature has been integrated into the authorization application processing. Special initiatives have been taken to secure IT operations of DGFT by installing SSL, firewalls and redesigning the software applications.



Electronic data pertaining to various Export Promotion instruments and foreign trade requirements i.e. Importer Exporter Code, Duty Entitlement Pass Book (DEPB) shipping bills, DEPB scrip, Advance Authorizations and Export Promotion Capital Goods Scheme (EPCG) Authorizations is being exchanged with Customs. This has obviated the need for verification of Authorizations before allowing clearance. The message exchange system with Customs is being extended to cover all remaining categories of shipping Bills relating to different export promotion schemes.

Impact of EDI usage

At present, about 200,000 authorizations constituting about 99% of the total authorizations issued every year are processed on line in an EDI environment. The enhanced usage of EDI has significantly reduced the processing time from about 2 weeks to 24 hours. It is estimated that the impact of EDI implementation schemes of DGFT would reduce the incidence of transaction cost by about US$ 500 million i.e. 0.25% of our exports.

Up scaling EDI operations

EDI operations in DGFT have reached a stage of stability which now needs to be further consolidated and expanded. The scope and domain of the network is now being broadened by new initiatives and innovative improvisation which include;

- Coverage of new areas and schemes for EDI operations and integrating with additional network partners. The recent inclusion includes Export Promotion Councils for Exporter registration certificates, Indian Banking Association for Bank realization Certificates.
- Inclusion of additional service providers for EFT and digital signatures to provide choice and flexibility to user community, so that the quality of services improve at competitive prices.
- EDI technology is being strategically leveraged to reengineer the trade processes to remove inherent process redundancies so that transaction cost and time can be reduced.
- To import stability and system endurance, initiatives like installation of a disaster recovery site, building, software redundancies, prompt resolution of data errors through dedicated helpdesks, improving systems online response time by providing offline data facility for voluminous data and users in remote locations have been taken.

3.1.2 Indian Customs EDI System (ICES)

3.1.2.1 Nature of Project

Indian Customs EDI System (ICES) is a customs management system which automates the customs procedures by replacing the manual processing of customs documents by the computer assisted treatment of electronically-transmitted information. The system is a workflow based application and handles manifests and Imports and exports declarations. Electronic data interchange is important component of the application with integration with all the major stakeholders like custodians, banks, CHA/importers/exporters, shipping agents, lines, transport operators, CFS etc. The application also integrates with Risk Management system for faster clearance of cargo. The Centralized Directory Management System facilitates exchange of masters across applications – ICES/ACES/RMS/Service Centre/ICEGATE etc and the stake- holders for better integration.

The EDI exchange takes place through ICEGATE (Indian Customs & Excise Gateway) which is a centralized e-commerce portal and messaging hub to facilitate exchange of information electronically. The e-payment facility is available for the trading community for payment of duties electronically. The portal also provides real-time status of the documents under processing.

Some of the main features of the ICES 1.5 are :

- Enhances Graphical User Interface
- Centralized Directory Management
- Document Tracking System from ICEGATE Portal
- E-payment of import duties from multiple banks
- Remittance of export incentives like Drawback to the exporter's account through Nation Electronic Fund Transfer (NEFT) / RTGS
- Integration of import/export licenses issued by DGFT.
- National level MIS reports for policy planners and Ministries etc

3.1.2.2 Status

ICES is now operational at 76 major customs locations handling nearly 85% of India's International trade in terms of import and export consignments. ICES has two aspects:

- Internal Automation of the Custom House for a comprehensive, paperless, fully automated customs clearance system that makes the functioning of Customs clearance transparent.
- Online, real-time electronic interface with the trade, transport and regulatory agencies concerned with customs clearance of import and export cargo.

ICES is designed to exchange/transact customs clearance electronically using Electronic Data Interchange (EDI). A large number of documents that trade, transport and regulatory agencies (collectively called trading partners are required to submit/ receive in the process of live customs clearances are now being processed online. Approximately 56500 imports declarations and 125000 export declarations are getting processed on monthly basis under the Centralized environment. The volumes are expected to be doubled once the applications are rolled-out for all the locations. More than 60% documents are filed by the trade electronically through ICEGATE.

Two Systems are major Components of Custom automation and EDI

- The ICES automatically receive and process all incoming messages. ICES generate all outgoing messages automatically at the appropriate stage of the clearance process.
- ICEGATE & ICENET – which stand for the Indian Customs & Central Excise Gateway and Indian Customs and Central Excise Network respectively. ICENET is a network of all ICES locations, CBEC, Directorate of Valuation, NIC and DGRI.

The ICEGATE also provides for 24X7 helpdesk facility for its trading partners. To ensure secure filing, it is proposed to use digital signatures on Bill of Entry and other documents/ messages to be handled on the gateway.

The Risk Management System (RMS) has been deployed on the central server and this new version of RMS 3.1 has been launched at 20 locations. The Automation of Central Excise & Service Tax (ACES) application has been rolled out with all the modules. ICES – ACES handshake is under process.

3.2 Port sector

3.2.1 Port Community System (PCS)

3.2.1.1 Nature of Project

India is a major maritime nation by virtue of its long coast line of around 7517 Kms on the western and eastern shelves of the mainland and also along the islands, bejeweled with 13 major and 176 non-major ports, strategically located on the world's shipping routes, its long tradition of seafaring with a large pool of trained maritime personnel, and its dynamic and rapidly globalizing economy with a vast potential to expand its participation in trade and development.

Port Community System (PCS) is intended to integrate the economic flow of trade related documents/information and function as the centralized hub for all the ports of India and the other stakeholders like Shipping lines/Agents container Agents, Surveyors, Stevedores, Banks, Container Freight Stations, Custom House agents, Importers, Exporters, Railways/CONCOR, Government regulatory agencies etc. for exchanging electronic messages in secure manner.

The main objectives of the PCS are –

- Develop a Centralized Web Based application, which act as SINGLE WINDOW for the Port Community Members/stakeholders to exchange message electronically in secure fashion
- Reduce transaction time and cost in port business
- Achieve paperless regime in port sector
- Implementation of an e-commerce portal for port community
- Data repository for research and analysis

Apart from achieving the objectives, the following benefits are also derived:-

- Common information to multiple agencies
- Standardization of information exchanged
- Convenience 24x7 submission
- Timely Alert on e-mail during exception
- Online request and payment for services
- Management information system for reporting

3.2.1.2 Status

The PCS has been operationalised and went LIVE on 31/12/2007 for the first phase consisting of 31 messages covering Vessel and Container related messages among Major Ports(12) and Shipping/Container Agents, Shipping lines, Container Freight Station (CFS) and Custom House Agents (CHA).

The second phase covering Transport and Cargo related messages went LIVE on 31-3-2008. And subsequently Finance (Assessment) related messages and e-payment module went LIVE with Banks namely HDFC Bank, ICICI Bank, Indian Bank, IDBI, AXIS, Union Bank of India and IOB. Additional stakeholders viz. CONCOR/Railways/ Private Rail Operators, Banks and Stevedores are covered in it.

The Final phase covering Mercantile Marine Department (MMD) related messages also went LIVE and connectivity with Customs is in progress.

Data Center for PCS application has been commissioned at NICSI Data center, Delhi and Data Recovery Center at NIC DC, Hyderabad in IPA servers

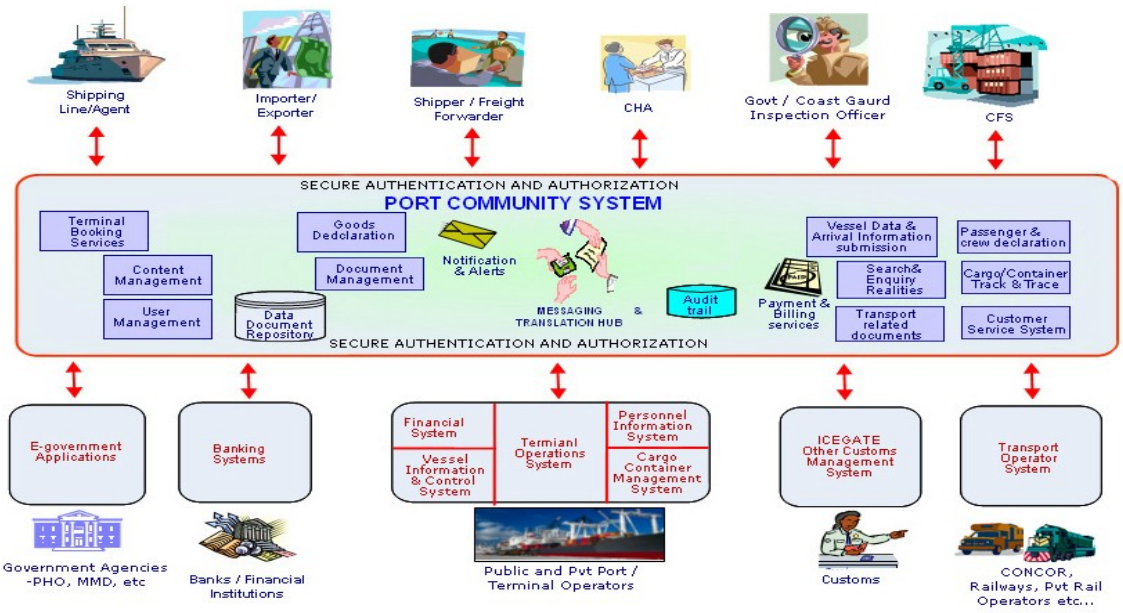
New URL www.indianpcs.gov.in has been introduced and started operational from 6th September 2010

Around 0.5 million messages are being exchanged every month through PCS. The system is capable of accepting messages in various formats including EDIFACT, XML etc.

Initiatives have already been taken to cover non-major ports under the ambit of PCS. Non-Major ports namely Mundra, Pipavav, Gangavaram and Dehaj have started testing for integration with PCS.

PCS is a comprehensive, highly secure extensible and scalable solution that meets the requirements of the trade community, Ports, Banks and Government Agencies and seamlessly integrates them over the internet coordinating all the activities in and around Port and beyond.

Primary outcome of the PCS is to achieve excellent level of enterprise integration for different players across different ports, thereby increasing the business value for all the players in the Port Community.

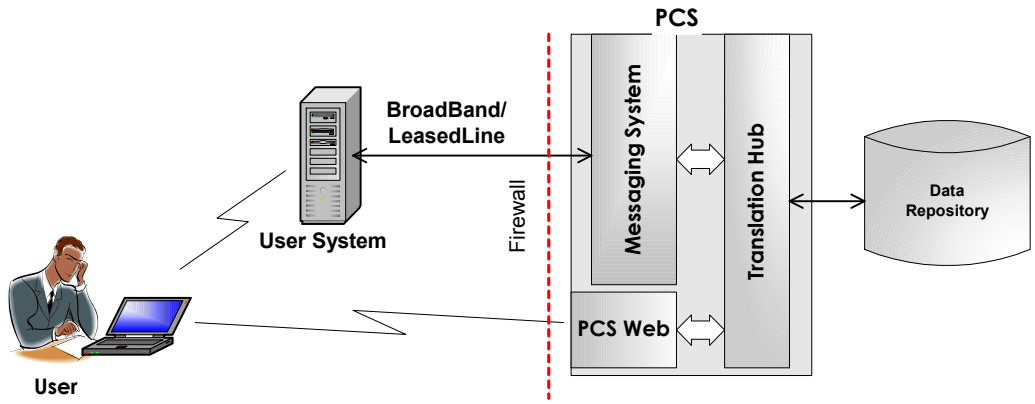


(Fig: Sea Ports Community System)

The implementation of PCS in India transforms Indian Ports from traditional Ports to modern Ports by bringing in a paperless regime. It minimises transaction time and cost to Indian export-import trade. Contribution of PCS to Indian trade, though not quantifiable in exact terms, will definitely herald new chapter in India by way of e-trade. However, it is expected to reduce a transaction cost at ports and empowered Indian Ports to join the premier league of international technology advanced e-ports.

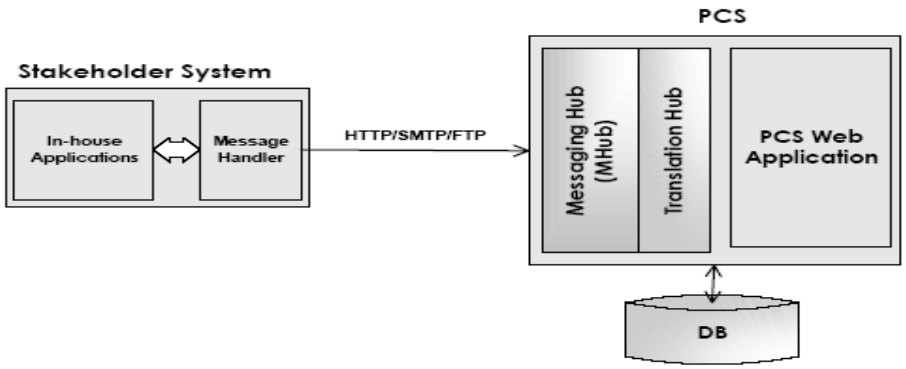
Interfacing mechanaism

- The Users from different stakeholders interact with Port Community System either by using the PCS Message Hub or through the PCS single window web application (called PCS Web) via PCS Portal directly.



System Interfacing workflow

- Clients (Stakeholder) need to have a Message Handler in their system to send or receive the messages from/to PCS as shown in the diagram below. This Message Handler can be a software program developed in-house, an application module part of in-house system or a third party messaging client for the gateway they choose for interfacing with MHub.



3.2.2 Container and Cargo Logistics System (CCLS)

3.2.2.1 Nature of Project

This project is a web based application of CCLS system (Container and Cargo Logistics System) being operational at Inland Container Depot - Tughlakabad, New Delhi. Through this software, any importer/exporter/shipping agent can file his documents including billing and take necessary print out's through internet from anywhere. Various Queries and Reports are also part of this web based software to keep track of containers at every stage and also to find out due amount to be paid to CONCOR. Application has also been integrated with major banks, so that customers can directly credit their PDA accounts through net banking facility.

3.2.2.2 Status

Centralised servers placed at ICD/TKD, New Delhi connects all 59 EXIM / Domestic terminals in INDIA through VSAT network with high degree of system security and redundancy features built in.

ISO Certification

h) **ISO 9001 and ISO 2000** : CONCOR has been conferred with ISO 9001 and ISO 2000 certification for its Quality Management System and its activities.

i) **ISO 27001:2005** : CONCOR, which has invested in developing state of the art IT systems and to support all the core business functions of the organization, information security has always been an important factor. To further consolidate Information Security drive of its IT Infrastructure, CONCOR has taken initiative to implement ISMS (Information Security Management System) framework for its IT Services. In December 2006, the ISMS framework was audited by STQC (Certification body of Department of IT under Ministry of IT) and was successfully certified for ISO 27001:2005. By getting its IT operations ISO 27001 certified, CONCOR management has shown its concern and intent towards better and secure services to its customers and commitment for its business partners.

Applications

In order to achieve total computerization of different processes in CONCOR, three main applications have been developed namely CCLS (Container and Cargo Logistics System), ETMS (EXIM Terminal Management System) and DTMS (Domestic Terminal Management System) to cater to different segments of commercial / operational working of various EXIM / Domestic terminals.

Container Tracking through Web

Status of any container lying at any ICD's or in transit can be searched through website www.concorindia.com

RF Technology

Radio Data Terminals using standard RF Technology are being used at all major ICD's to capture online container movements.

EDI Linkage

At all major ICD's, Data is being exchanged online with Customs and other related agencies under standard formats of EDI in order to avoid duplicity and also to get accurate information.

Automated Reporting Systems

Customers are sent automated emails at regular intervals regarding their Container Arrival / Departure information, transaction report of their Pre-Deposit Account etc under standard format.

A sample format of List of Containers Departed is given below.

List of Containers departed of Shipping Line : MAERSK INDIA PVT. LTD.

Container no.	Org. Stn	Dest Stn	Train no.	Departure Date
CAXU2071985	TKD	PPSP	TX30738	25-JUL-2009 22:30
MSKU3034993	TKD	PPSP	TX30738	25-JUL-2009 22:30
MSKU5246163	TKD	PPSP	TX30738	25-JUL-2009 22:30
PONU7583604	TKD	PPSP	TX30738	25-JUL-2009 22:30
PONU7844117	TKD	PPSP	TX30738	25-JUL-2009 22:30
GATU4026830	TKD	PPSP	TX30738	25-JUL-2009 22:30
MSKU2707955	TKD	PPSP	TX30738	25-JUL-2009 22:30
MSKU3965532	TKD	PPSP	TX30738	25-JUL-2009 22:30

GESU6012791	TKD	PPSP	TX30738	25-JUL-2009 22:30
MSKU0549212	TKD	PPSP	TX30738	25-JUL-2009 22:*30*

Electronic Transmission of Inland Way Bills

Inland Way Bills generated at ports are electronically transmitted to major ICD's for the convenience of Importers to make faster clearance of their cargo.

a) Security Features

User Access and application security have been given top priority in designing the project like,

1. Only registered users are allowed to access the application.
2. All users have been provided Digital Certificate and Electronic token.
3. At application level, user-id/password authentication is being done.

b) Redundancy Features

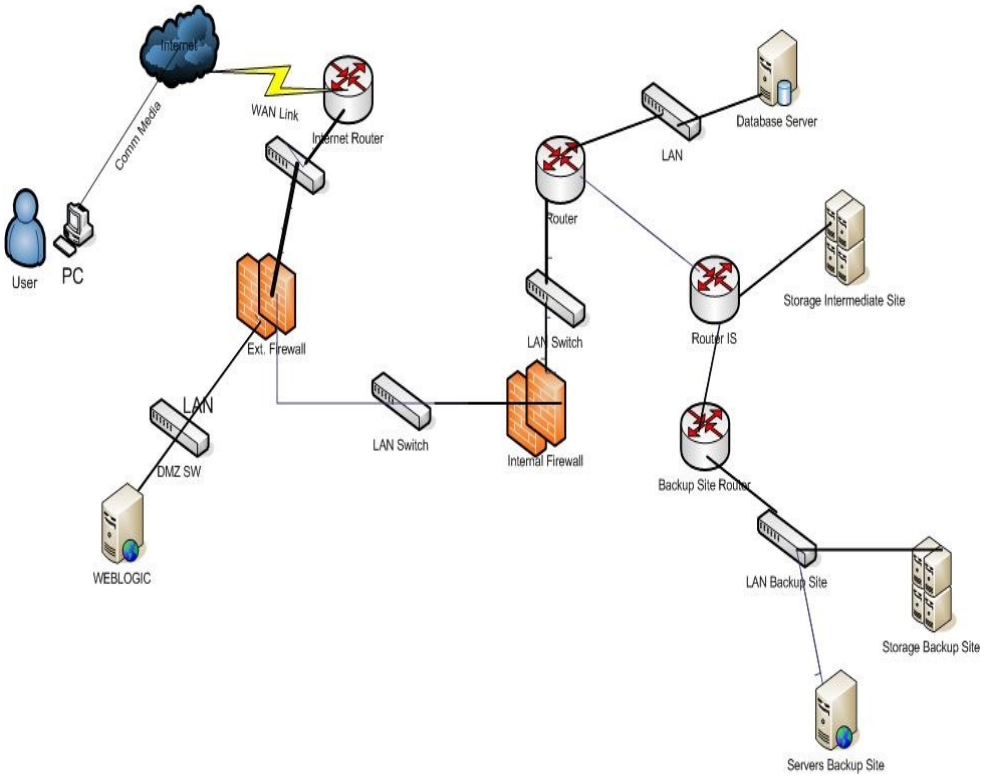
Redundancy features have built in at every stage right from power backup to automatic server / database / network backup so that users are provided uninterrupted availability of system throughput the year.

c) Backup Site

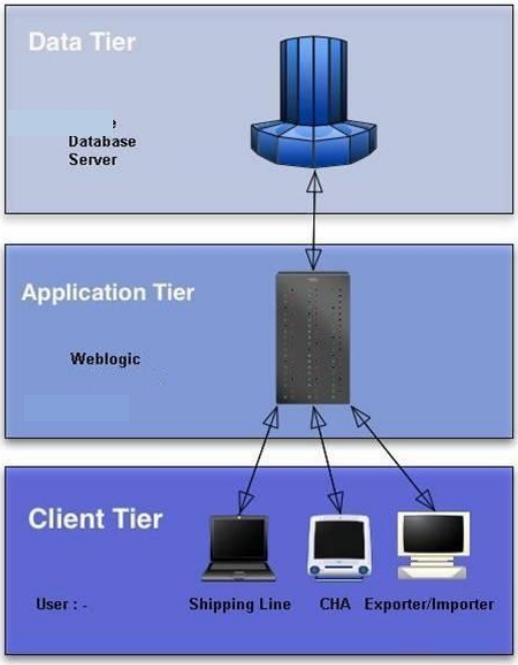
A remote backup site has been setup to provide a solid protection fence against potential of data loss due to any natural disaster or any other unforeseen events. The entire data backup activity has been automated so that problem due to any reason is not known to the user and the invaluable data is protected.

The E-Filing Project Infrastructure including connectivity to backup site is represented below.

Project Architecture



The E-Filing system architecture is illustrated below.



Functionalities Covered

All export / import functionalities have been covered in this project like

Imports :

1. Book Delivery of Containers
2. Filing of Request for Customs Examination Job-order
3. Generation of Gate Pass for Cargo/Container Removal

Exports :

1. Filing of CFN (Cargo Forwarding Note)
2. Export Container Booking
3. Empty / Loaded Container Arrival / Departure Permits
4. Leasing of Empty Containers between Shipping Lines

Billing :

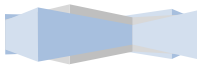
Customer billing takes place at all the stages automatically and the amount gets debited from his pre-deposit amount being maintained in the system.

Queries / Reports :

Various Queries and Reports have been provided to keep track of containers at every stage and also to find out due amount to be paid to CONCOR.

Benefits

- System is available online round the clock for data input and processing of documents instead of specific timings at ICD Counters.
- User can process his documents at his convenience from anywhere without coming physically to ICD premises.
- Through Net Banking facility, user can directly credit amount from his bank to his PDA account of CCLS system at ICD/TKD.
- User gets exact position of a container and amount due till that time round the clock online.
- Since system is integrated with digital certificate and electronic token, user access is totally secured.



3.3 Air Sector

3.3.1 Nature of Project

EC/EDI system is the pilot project to transact business electronically among the Air Cargo Industry stake holders and the same has been implemented in three phases. In the first phase the Customs and Custodian EDI was implemented. The messages originated at Customs end were integrated at Custodian end for Import and Export Cargo processing. Under the Second phase of Web/EDI implementation, all Cargo handling agencies and Airlines were associated and a web based Cargo Community System was developed by Airports Authority of India (AAI) to transact cargo processing between these partners thereby furthering the concept of paperless transactions. Under Phase-III the Barcode integration was implemented at IGI, Mumbai, Kolkata and Chennai Cargo terminals for instant data capturing and online updation of import and export cargo at various processing stages without manual intervention.

The community partners in Air sector facilitates EC/EDI based processing into the clearance of export and import consignments. The community partners in this case are custodian of cargo namely Airports Authority of India (AAI), Delhi International Airport Ltd (DIAL), Mumbai International Airport Ltd (MIAL), Bangalore International Airport Ltd (BIAL), GMR Hyderabad International Airport Ltd (GHIAL), Kerala State Industries Enterprises (KSIE), Airlines, Customs, Banks, and Agents etc. The EDI based cargo handling system and Electronic interface between trade partners is established. Barcodes are also integrated for the handling of import and export cargo for instant data capturing and online updation without manual intervention.

3.3.2 Status

The eight major airports at Delhi (DIAL), Mumbai (MIAL), Kolkata (AAI), Chennai (AAI), Hyderabad (GHIAL), Bangalore (BIAL), Thirvuvananthapuram (KSIE) and Ahmedabad (GSECL) have established electronic message exchange with Customs. Web based system have been developed by respective custodians for processing of Cargo at airports through electronic interface with their community partners like Airlines, Agents and Bank. All export transactions at Delhi, Mumbai, Chennai, Kolkata and Trivandrum airports are done through the system. The import transactions have also been started through this system at Delhi, Mumbai, Chennai and Kolkata. The payments of Custodian's Terminal / Handling Charges are also being made conveniently through web based EDI system. The cargo transactions are carried out electronically by the community partners from their offices itself.

Status	Description	Phases
Implemented	Between Custodian and Customs through direct connectivity.	**Phase I**
Implemented at metro airports.	Between Custodian and other trade partners i.e. Airlines / Exporter / Importer / Agencies & Banks, through web based EDI.	**Phase II**
Implemented in Export at IGIA, Delhi, Mumbai, Kolkata, Chennai, Hyderabad, Bangalore and Thiruvananthapuram Air Cargo Terminals. Import is implemented partially.	**Introduction of Barcode System (the automatic data capturing system).**	**Phase III**

The following statistical details would amplify the rich benefits derived on the EDI implementation in Air Cargo Sector.

EDI Benefits for Air Sector Community:

		Cost Saving	Time Saving	Process
After EDI	Before EDI	After EDI	Before EDI	
Airlines saved cost of Paper, machine & Manpower	3-4 Sets of hardcopies of Manifest were generated by airlines.	15 minutes	04 Hrs.	**Flight Manifest Submission (Hrs)**
Approximately 50% Manpower reduced on launching of e-Dos & no paper cost.	Man power required to visit Airlines/ Consolidators office & Document cost	Nil	2-3 Hrs.	**Issuance of Import Delivery Order by Airlines through Web.**
Approximately 50% Manpower required.	Manpower cost of CHAs	Nil	2 Hrs.	**Generation of Bank Challan - BC (Custodian Charges for Import Cargo Clearance) through Web.**
99 % saving of paper cost **Approximately 50% Manpower saving / better utilization by agencies.**	Paper cost to Airlines. Manpower deployment by Agencies to obtain hardcopy of carting order from Airlines office.	Nil	2 Hrs.	**Online issuance of Carting Order by Airlines.**
Approximately 20% manpower saving by Terminal operator. **Approximately**	More Manpower and Infrastructure required by Terminal Operator	Nil	2 Hrs.	**Issuance of Export Terminal Charge receipt.(TC)**

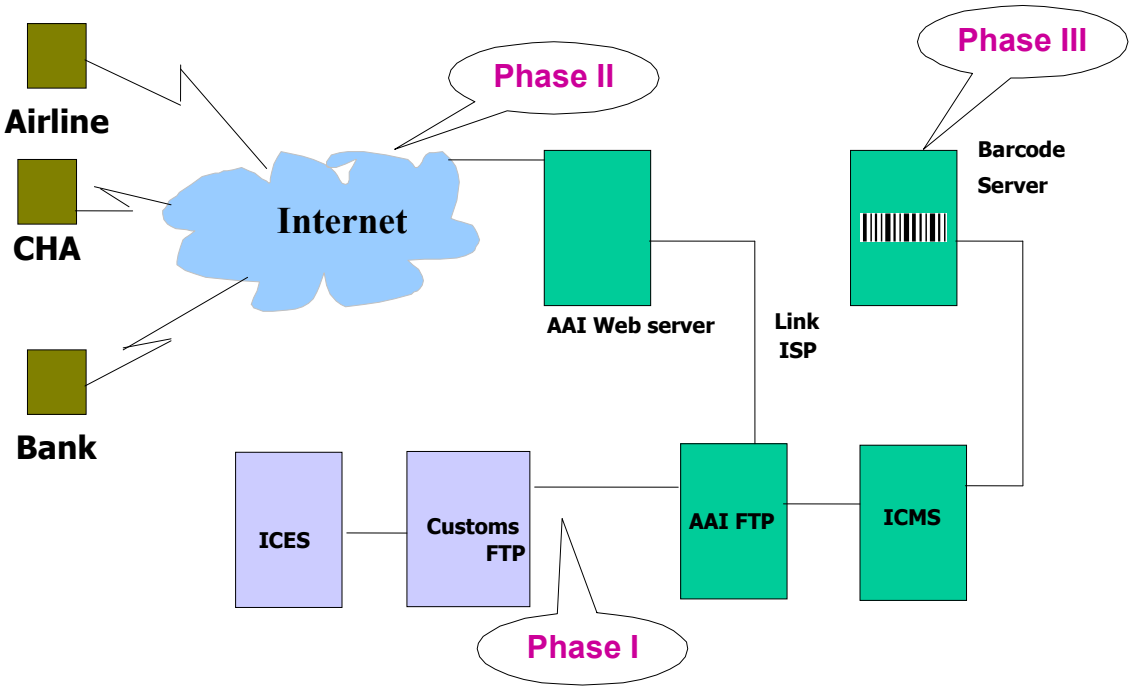
50 % manpower saving by Agents	More manpower required by Agents			
Nil	More Manpower Resources by trade partners	Nil	2-4	**Recording of daily transactions at user level.**
Nil	**More Input Cost**	**Instant**	**10-15 Hrs.**	**Import / Export Tracking**

Bar Code system for faster and automatic data capturing in export for acceptances of Export cargo at Truck dock gate, bonded gate & unitization stage and at the Import flight segregation area has also been implemented. State of art equipments like HHRDT i.e. Hand Held Radio Data Terminal, VMRDT – Vehicle Mounted Radio Terminal and Barcode Printers are being used to undertake the smooth implementation of Barcode system. The implementation of EC/ EDI in Air Cargo Sector has been proved a step toward faster and transparent processing which would ultimately lead to the scenario where agencies would be required visit Cargo Terminal only for physical tendering of their export cargo or taking deliveries of their import cargo.

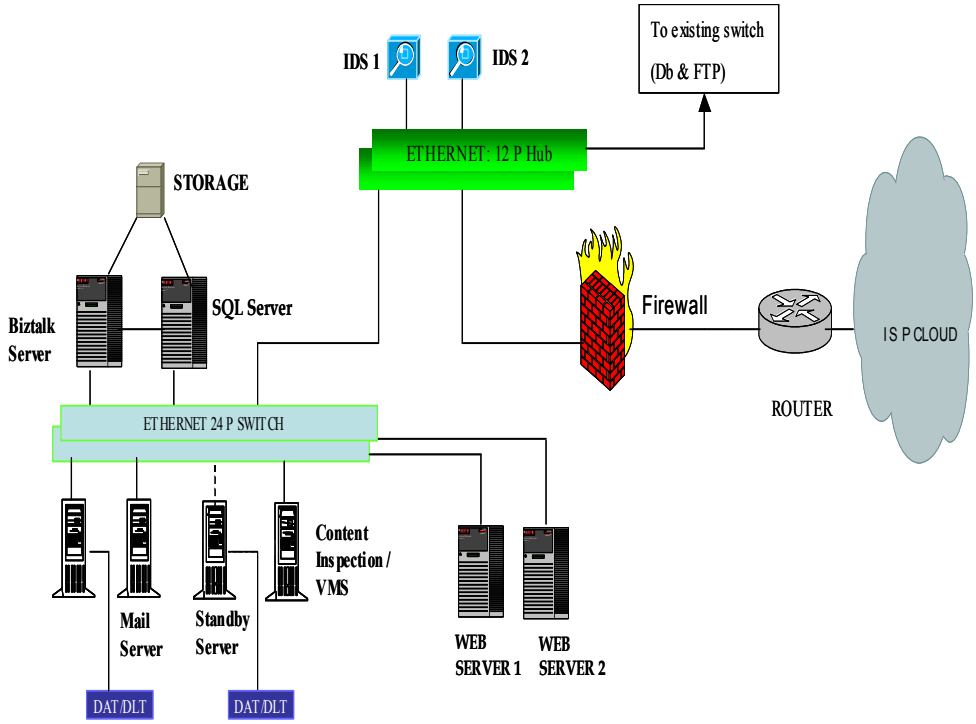
As regards the disposal of un-cleared / un-claimed Import cargo lying at cargo terminals in a more transparent and efficient manner, Delhi (DIAL) & Mumbai (MIAL) Airports have implemented a system for 'e-Auction' through web where the bidders community do the online bidding from their offices for the unclaimed import cargo resulting in decongesting the scarce Airport land and fetching more yield per package from the erstwhile manual public auction(s).

The block diagram of the existing web based ICMS system is depicted here-under:

(A) NETWORK LAYOUT FOR EDI



(B) HARDWARE & SOFTWARE SPECIFICATIONS of AAI Website



3.4 Financial Sector

3.4.1 National Payment Corporation of India

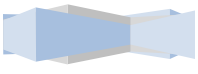
3.4.1.1 Nature of Project

Reserve Bank of India, after setting up of the Board for Payment and Settlement Systems in 2005, released a vision document incorporating a proposal to set up an umbrella institution for all the RETAIL PAYMENT SYSTEMS in the country. The core objective was to consolidate and integrate the multiple systems with varying service levels into nation-wide uniform and standard business process for all retail payment systems. The other objective was to facilitate an affordable payment mechanism to benefit the common man across the country and help financial inclusion.

3.4.1.2 Status

Indian Banks Association's (IBA) untiring efforts during the last three years helped turning this vision a reality. National Payments Corporation of India (NPCI) was incorporated in December 2008 and the Certificate of Commencement of Business was issued in April 2009. It has been incorporated as a Section 25 company under Companies Act and is aimed to operate for the benefit of all the member banks and their customers. The authorized capital has been pegged at Rs 3000 million and paid up capital is Rs 300 million so that the company can create infrastructure of large dimension and operate on high volume resulting payment services at fraction of the present cost structure.

Presently, there are ten core promoter banks (State Bank of India, Punjab National Bank, Canara Bank, Bank of Baroda, Union bank of India, Bank of India, ICICI Bank, HDFC Bank, Citibank and HSBC). The Board for Regulation and Supervision of Payment and Settlement Systems (BPSS) at its meeting held on September 24,2009 has approved in-principle to issue authorisation to NPCI for operating various retail payment systems in the country and granted Certificate of Authorisation for operation of National Financial Switch (NFS) ATM Network with effect from October 15, 2009. Membership regulations & rules are being framed for enrolling all banks in the country as members so that when the nation-wide payment systems are launched, all would get included on a standardised platform.



The Institute of Development and Research in Banking Technology (IDRBT), Hyderabad had been providing ATM switching service to banks in India through National Financial Switch. IDRBT decided to hive off its operational role on ATM switching to have focus on research and development. The Board for Regulation and Supervision of Payment and Settlement systems (BPSS) at its meeting held on September 24, 2009 has approved in-principle to issue authorisation to NPCI for operating various retail payment systems in the country. Reserve Bank of India has granted authorisation to NPCI to take over the operations of National Financial Switch (NFS) from the Institute of Development and Research in Banking Technology (IDRBT) on a 'as is where is basis' on October 15, 2009.NPCI has deputed its officials to IDRBT Hyderabad and NPCI has taken over NFS operations from December 14, 2009.

During the month of August the interbank ATM transactions processed through NPCI National Financial Switch (NFS) crossed the 100 million mark. The number of ATMs under NFS Network now stands at 61,702 and the number is growing at a rate of around 1000 ATMs a month. National Payments Corporation of India which provides the central infrastructure and routing service through the NFS can easily handle 300 million transactions a month. The switching fee of ` 0.50 is also lowest in the industry. More and more banks are joining the network While the primary site is located in the IDRBT Campus at Hyderabad, the back up site is being developed at Mumbai.NPCI proposes to build, implement and manage a Automated Clearing House (ACH) system would be a web based solution with built-in security features and multiple level data validation facility accessible to all participants across the country. The new centralized ACH solution will consolidate the current multiple ECS systems in due course of time and provide framework for removal of local barriers / inhibitors and harmonization of standards and practices. ACH platform will have national footprint which will cover 82000+ bank branches. The platform will be robust, secure and scalable with both transaction and file based transaction processing capabilities. It will have best in class security, safety, low risk, cost efficiency for all participants. We intend to create fully automated processes with the use of open standards and best industry practices. This will prescribe a single set of rules (Operating and Business), practices and standards which are common across the country for all Participants, Service Providers, and Users etc. ACH system would provide technology platform to enable participants to implement end to end straight through processing

mechanism. This system would provide scope for participants to design their own products to meet particular objectives of their business and shall support financial inclusion measures initiated by Banks, other financial institutions, Government etc by providing support to UID and Mobile based ACH transactions.

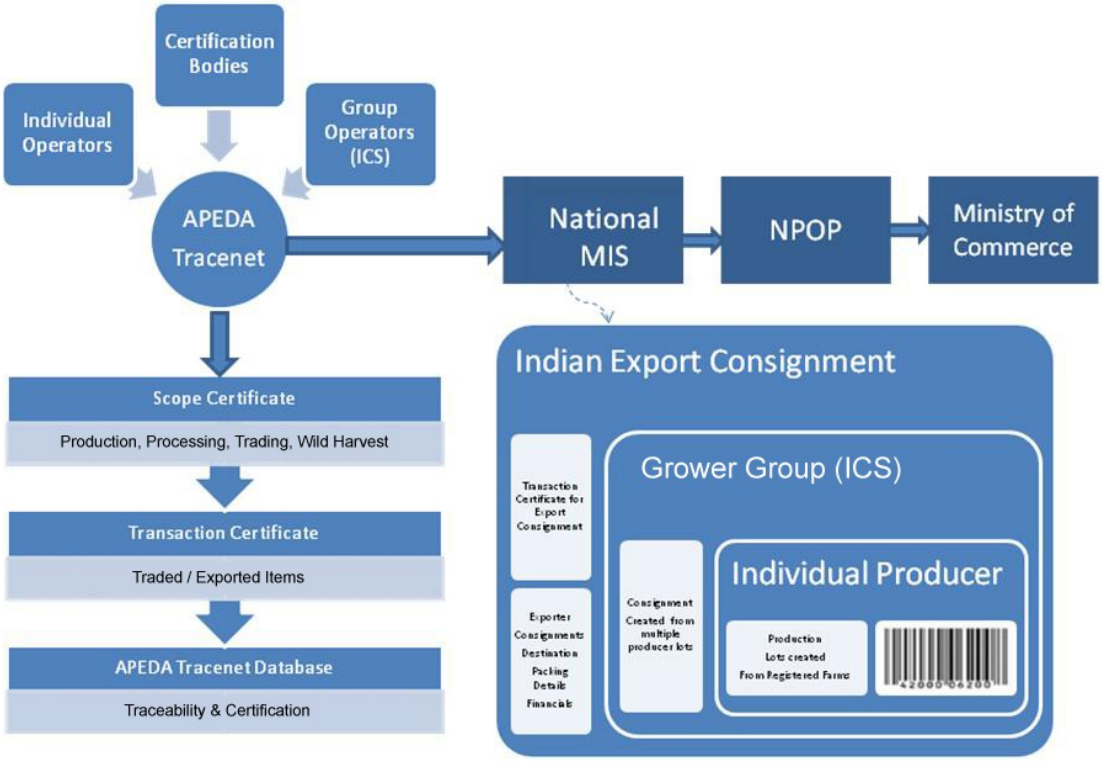
NPCI will also provide for Centralized Mandate Management Repository System (CMMRS). Facilities like data and mandate validation, positive confirmation of credit and debit transactions from / to the remitting / destination Banks etc. would also be provided by the new system.

Section IV :Other IT – enabled Service (ITeS) in Trade and Industry Sector

4.1 Tracenet - Traceability System for Organic Products

4.1.1 Nature of the Project

Tracenet is an Internet based Certification and Traceability system, to facilitate and monitor the process of certification of organic produce and their traceability products up to the farm level primarily for their export from India. Tracenet software is the first of its kind being implemented in the organic sector on a national scale any where in the world.



India's Organic Sector Universe

It is a web-enabled application, hosted in the data center at Agriculture & Processed Food Export Development Authority (APEDA) Head Quarters. The major stakeholders integerated in the traceability system of Organic Products are,

1. Accredited Certification Bodies in India
2. Grower Groups
3. Individual Operators (individual farmers, processors, trader)
4. APEDA, as the nodal agency

4.1.2 Status

All the Certification Bodies have been given a secured user name and password to login into the system.

The first stage is the registration of grower groups and individual operators in the system by their respective Certification Bodies and issuance of their login details. Afterwards, these operators can login to do the following:

Registration of Farmers

- Currently, there are 20 Certification Bodies (CBs) in India which certify agro product as Organic or in-conversion. Each of them is provided with a user name and password by APEDA to use the system.
- Registration of farmers and the Groups is done by these CBs and the system subsequently issues user name and passwords to these groups to enter their data in the system. Certificate of Registration is issued to these registered groups / operators.
- Each farmer and group is given a unique registration number at pan-India level.

Internal Audits

- In case of ICS, the ICS manager inspects each of its farmers by visiting all the field physically.

- 100% internal Inspection report is fed in the system without which details cannot be forward to the CB.

External Audits

- CBs do the annual inspection of the operators by visiting their field.
- Inspection report of an ICS / Individual has to be entered into the system before generation of Scope certificate.
- The system generates alert at various stages of the information flow to assist the CB making an informed decision and choosing right sample for auditing purpose.
- In case any major fault is found by the CB, scope certificate cannot be generated and the groups are advised to rectify the problems before they can get certified. (closure of major non conformities prior to issuance of scope certificate through TraceNet)

Getting a Scope Certificate

- After all the major Non-Conformities are closed down by the operators which were raised by their CB during external inspection, scope certificate can be generated by the CB through the system.
- SCOPE certificate is valid for 1 year and can be cancelled or suspended by the CB as per their discretion.

Getting a Transaction Certificate

- ICS can enter the details of their harvest and create batches (lots) of its products after approval of actual yield by their CB. They can create lot and enter the sourcing details of all the products they want to sell alongwith all the requisite details in the transaction certificate application on TraceNet.
- Application is forwarded to CB which then verifies it.
- Certificate is issued online in specified format of the exporting country after the physical documents related to transaction certificate application are received and verified by the issuing certification body.

Tracenet for Organic Products accessibility & user convenience

1. The software can be easily used - anywhere, anytime, 24 X 7, by all authorized stakeholders, supported by a dedicated call center, with turnaround time of 2 to 10 minutes. All they need to use is a commonly available web browser through their internet connection in a secured environment. (URL:http://apeda.com/apedawebsite/TracenetOrganic/TraceNet.htm)
2. The data structure has been localized by using standard database driven lists for offices of various government organizations and their area of control, districts, taluks, villages, pesticides residue limits, etc.,
3. Zero paperwork and Zero mistakes
4. Completely credible and foolproof
5. No certificate can be issued without going through the software.
6. It has virtually reduced duplication in data capture and enables instant reference of previous steps in the supply chain.
7. The inbuilt checks and balances in the software ensure that the succeeding step can be carried out only if the preceding steps were successfully complied with.
8. Finally and most importantly, APEDA can trace details of the consignment right up to the farm level.

How does this system ensure traceability?

- Every consignment that goes out of the country and also traded within India has an internationally scannable bar code printed on it with a unique 26 digit number of the Transaction Certificate (TC) using international standards.
- Using this TC No., all the lots that were used in any particular TC can be traced. Each Lot No. is identified with a unique number.
- From the Lot No., the system can trace from which farm(s) the produce was sourced.

Implementation

The traceability has been designed using the following system:

Each consignment of an exporter / trader is required to be accompanied by a Transaction Certificate (TC). Certification bodies can issue a TC using this Tracenet system, either based on a previous TC in case the product has moved through multiple handlers in the supply chain or based on a Scope Certificate if it was produced or processed by the same operator and he is himself the trader when it was directly procured from a farmer who, in turn, could either be an individual or a ICS.

Each Scope Certificate identifies the producer directly in case of an individual operator and hence a direct traceability can be established to the individual producer; the system maintains the complete track of the production and supply in a season and hence it automatically ensures not only traceability but also the maximum quantity that he can supply in the season.

In case of growers groups (ICS), the system mandates that the group owner maintains details about each batch that was produced and the sourcing that happened from the group producers for that particular batch. Hence each Transaction certificate issued to a particular group for exports or otherwise, is backed by the sourcing details of the individual batches that went into creating the consignment; Hence traceability up to the producer/farm level in case of group can also be established as complete registration of all producers within the group also happens in the Tracenet system.

Finally, no certificate can be issued by any Certification Body without going through this system.

APEDA organized more than 35 training programs at 20 major centers in India to sensitize and train certification bodies, grower groups, exporters and other stake-holders involved in the Tracenet system.

The data is centrally maintained and managed at APEDA's own data center in its headquarters, protected by firewalls and other security infrastructure. Access to the data is restricted by an authenticated username and password; each user gets to access only data relevant to his role and geographical coverage.

The following is a brief summary of achievements within 3 months of launch of the system (information as on 20th September, 2010):

Numbers	Entity
20	**Certification Bodies**
847 / 0.34 Million	**Grower Groups / Farmers**
1058	**Individual Operators**
1115	**Scope Certificates**
1353	**Transaction Certificates**

Major Benefits

This system shall result in following major benefits:

1. Consolidated database of all registrations and activities related to operators in India, including registration, inspection, production and export details.
2. Traceability of any export consignment to the producer, based on the concerned transaction and scope certificates.
3. Track of the operators shifting from one ICS to other or one CB to other.

Key Benefits envisaged for Operators and Certification Bodies

- A simple, user friendly system.
- Data Entry at the point of entry and Minimum data entry.
- Nil or minimum downtime for all applications so that all stakeholders mandatory/necessarily use only the online system for day-to-day transactions.
- The software can be easily used - anywhere, anytime, 24 by 7, by all authorized stakeholders. All they need to use is a commonly available web browser through their internet connection in a secured environment.
- Reduction in duplication of data capture and to enable instant reference of previous steps in the supply chain.
- It has been designed in such a way that no document can be issued without going through the software for critical transactions.

- The inbuilt checks and balances in the software ensure that the succeeding step can be carried out only if the preceding steps were successfully complied with.
- Consolidated reports to be generated by the system itself.

As far as the Government of India is concerned, the following are the major benefits envisaged:

1. Ensuring that all certification bodies follow an uniform interpretation of data maintenance requirements of NPOP and Ensure ownership for accuracy of data at the point of origin itself
2. Consolidation of data at a single location, enabling the Government for analysis as well as effective intervention in case of any complaints as well as removing the feasibility for tampering with the documents / maintained at operator/CB level
3. Facility for interested and authorized parties to verify the antecedents of any registrant in the organic sector of India as well as trace back the product and document movement in their supply chain for any particular consignment
4. Improvement in the overall quality of organic certification process, thereby improving the organic nature of the final product
5. Finally, helping to build the image of the country as a reliable quality supplier of organic produce, due to the centralized database of players and supply chain data

Security

The software has been developed using standard software engineering guidelines, with a multi-tier architecture, for development as well as deployment and has the necessary internet application security features built-in as per Open Web Application Security Project (OWASP) standards like Salted MD5, SQL injection, invalid input validation, etc., . It has already been audited by a CERT-IN accredited auditor for compliance with Internet Security requirements and has been found compliant on all critical internet safety standards and requirements.

Briefly, the following are the security implementations that have been carried out in the software system:

- User ID and Passwords are based on authentication mode
- Rights & permission for IT & other users
- Form Level Security
- Field Level Security
- Secure Encryption techniques
- Database security Audit trails/Log file generation
- Stamping of database record with date/time/user/node no. wise information for its last read/write etc.
- Creation and initialization of log file.

Moreover the certificates, though generated by the software, would still be manually signed by the authorized personnel of the certification body. Further, a fake certificate cannot not be issued by the operator through this system as he has to fulfill a number of linked steps as well as ensure the entire chain of data submission; and in case he issues the certificate outside the system, the same can be checked by any interested and authorized party as the data will be available in the Tracenet system for that certificate.

4.2 eProcurement

4.2.1 Nature of Project

The project envisages faster adoption of electronic procurement in government, at central/ state levels through adequate facilitation and enabling. Though an integrated procurement cycle comprises of all the three process stages – Pre-procurement [viz: Indenting, Requirement consolidation], Procurement [viz: Tendering, Bidding, Bid Opening & evaluation and Award] and Post Procurement [viz: payment-processing, Contract management etc.] processes – currently the project primarily concerns with electronic facilitation of the 'procurement processes per se', i.e. Tender preparation & publishing, Fee payment & Bidding, Bid Opening/ decryption, Tender evaluation and Award of contract. It is expected that as the organizations use and benefit from eProcurement, they would gradually also adopt electronic mode in 'pre' & 'post' procurement processes.

With the aim to ensure that the benefits out of the initiative really flow to the stakeholders, attempts have also been on first going through BPR exercises (to standardize processes & forms) in selective cases and then developing/ implementing solutions around those standardized processes.

Various initiatives:

Government initiatives towards implementation of electronic procurement have been taken at central as well as various state government levels. While independent state level initiatives have been concentrating on finalizing and implementing eProcurement solutions for their own departments/ agencies; the initiatives taken at Central government level have been targeting a multi-pronged approach as below: -

- In view of the perceived gains of cost efficiency with no cost to bidders, shorter procurement cycle and transparency etc. with the electronic mode of government procurement/ tendering process, Govt. of India, has been envisaging early and fast adoption of the eProcurement, in different government departments and offices at central and state levels, through a Mission Mode Project (MMP) on e-Procurement, being pursued by the Ministry of Commerce, with the help of the Dept. of Information Technology at the Centre. Earlier it stressed on taking up a few pilot states for enabling and funding their implementations; but now it is actively considering changing the approach to pursue an initiative of making a generic integrated eProcurement solution, platform and support all available for use by any interested government departments on demand, fully funded by central government centrally for the first two years.
- Assessing the government's e-procurement needs at a generic level and attempting to work out e-Procurement solution(s) to fulfill the common requirements of various departments having similar procurement processes. National Informatics Centre, Department of I T, is spearheading this approach.

Taking initiatives to facilitate various enablers of e-Procurement for faster adoption, like: i) Providing secure back-end infrastructure for hosting e-Procurement solutions within government domain at central/ state levels, ii) providing support for change management in states/ center through NIC, iii) Use of e-Payments in government transactions, iv) Preparing framework guidelines on security, audit-trail and archival needs for e-Procurement etc.

- Apart from Government, a number of successful e-Procurement initiatives have also been taken by public / private sector entities, notably BHEL, ONGC and Tata Steel to name a few, in view of it's obvious benefits. Many of them have also adopted electronic auctions very fruitfully, both Forward and the Reverse Auctions for extremely competitive buying and selling of bulk or high value goods.

Objectives and current thrust:

Though both, the government and private initiatives on e-Procurement, primarily target to achieve significant cost and process efficiencies through the exercise, equally important objectives being aimed at by government agencies are – maximum transparency through dissemination of information at every stage and ensuring wide and equal access to tender opportunities overcoming all barriers created by vested interests. These objectives are constantly being pursued and monitored by the Central Vigilance Commission (CVC), a government body, which advocates e-procurement as an effective tool to achieve these.

Government has also been putting thrust on formulating comprehensive capacity building programs in the area across different states/ organizations, for faster adoption of eProcurement and is inclined to initiate procurement policy reforms/ standardization, work out procurement frameworks & guidelines for uniform adoption/ adherence and similar other measures.

4.2.2 Status

- Electronic publication and dissemination (on government procurement portals) of procurement information (e.g. Tender notices/ details/ documents, Contracts/Orders etc.) has been made mandatory in the government sector.

- Electronic Procurement has being made mandatory above a decided threshold value of procurement, in many of the state/ central government departments. In most of the cases the threshold value has been kept at Rs 1 Million.
- National Informatics Centre (NIC) has successfully developed and rolled out a generic e-Procurement solution (eGP), for wide and easy adoption by any intending Government department/organization. The solution has already been widely implemented within government in several states like Orissa, Tamil Nadu, West Bengal, Haryana, Uttar Pradesh, Chandigarh UT and PWD Punjab, and some other public sector organizations, like: Mahanadi Coalfields Limited (MCL) Orissa have implemented this solution. Over all number of Tenders Published using GePNIC till 31st Aug 2010 is around 31120 worth Rs 552211.9 Million, with Orissa being the lead state in implementing GePNIC. Extensive GePNIC Training workshops for suppliers had to be organized in almost every district in Orissa, which has implemented eProcurement in many of it's departments. At the central government level, GepNIC has been implemented for procurements under "Pradhan Mantri Gramin Sadak Yojana" (PMGSY) scheme of M/o Rural Development in 15 states. So far around 80 rounds of Training workshops have been conducted and No. of people trained is more than 3000 (approx).
- After the completion of one year of GePNIC implementation, an Impact Assessment study was conducted at one of the Chief Engineer of Works Department, Orissa. The study shows that more participation of bidders in electronic mode, leading to competitive prices has enabled significant savings to the Government exchequer. In the manual biding the percentage of Excess quoted tenders with respect to Estimated Cost was 84%, which has been reduced to 41% after implementation of GePNIC eProcurement application.

- E-Procurement, under the Mission Mode Project of Govt. of India, is being reoriented with an approach to make available the enabling combination of 'a robust generic eProcurement software (GePNIC being considered), the backend operational hosting platform and a default level of support/ handholding facilities' to every government department of willing states/ union territories of the country, without any cost to them for a period of two years, so that they could quickly and easily adopt the eProcurement mode and reap it's benefits. The scheme is under finalization and would be implemented with the help of National Informatics Centre of Central Ministry of Information technology and could be fully funded by Government of India. Various other State & Central government departments, organizations and PSUs are also steadily adopting eProcurement on their own initiative.
- Several other states, like Andhra Pradesh, Madhya Pradesh, Gujarat, Karnataka, Delhi, Chhattisgarh etc. have finalized and successfully implemented eProcurement solutions on their own, with the help of various private solution providers. Andhra Pradesh, in particular, has been the pioneer in the area and by now has matured in it's implementations with 33 govt. departments using their solution and a volume of total 32329 number of Tenders worth 104436 cr for the year 2008 -09. Gujarat has floated more than 6000 tenders worth over 80000 million rupees and has achieved a cost reduction of 7% overall. Madhya Pradesh has been pursuing a BOOT model under which the private vendor would build, own, operate and sustain the facility for a period of 5 years for it's government department's use, with zero cost to the government itself.
- In Central Government --- Railways have adopted electronic procurement in a big way. They have already implemented in eight of their zonal railways; viz: Northeastern, Southeastern, Northwest and Eastcentral and others successfully and now have planned to go ahead in other eight, with the thrust through it's own organization CRIS (Centre for Railway Information Systems). Any day they have over 4000 live electronic tenders on their website, of which about 100 daily close for bidding and are opened for further processing. They had gone very systematically extending the facility one by one and taking up trainings for over 10000 suppliers till date.

- Among notable early implementers in government domain had been the Directorate general of Supplies & Disposal (DGS&D), which, some five years back, has gone ahead and implemented fully computerized 'pre' and 'post' tendering processes, including inspection, supply monitoring and electronic payments etc.; with the co-operation and active support from National Informatics Centre. Later they went further to also integrate the electronic tendering facility with the help of a private third party thus adopting end-to-end fully integrated and automated electronic procurement processes. They have been managing various Rate Contracts (i.e. a type of Framework Contract prevalent in India) worth over rupees 65000 million annually with around 1750 registered suppliers to facilitate procurement of over 300 major common use items, like: Automobiles, Electrical stores, IT hardware, Office items, Paper etc. by government departments.

The lead implementers among Public Sector Units are --- Oil & Natural Gas Commission, Oil India, Bharat Heavy Electricals Limited, National Thermal Power Corporation (NTPC), Gas Authority of India Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd., Steel Authority of India Ltd., etc. A good example in co-operative sector is Indian Farmer & Fertilizer Co-operative Ltd (IFFCO). Many of them have also implemented Electronic Auctions as well. Steel Authority of India Ltd (SAIL) has a robust and widely adopted eProcurement solution for the steel sector known as <metaljuction> which has been instrumental in channelising and popularizing order & procurement of steel goods in electronic mode in 'B' to 'B' segment.

4.3. eIPO (Intellectual Property Office)

4.3.1 Nature of Project

The Motto of the Total IT Solution project for Intellectual Property Offices (IPOs) in India is 'Quality Services: Any Time, Anywhere'. IPOs wants to provide its services on 24x7 basis by exploiting the Internet as the delivery channel of services to its customers globally. The Total IT Solution project for Intellectual Property Offices was initiated due to following reasons :-

- The administrative frameworks at that time needing to be harmonised with international practices to cope with emerging challenges;
- Most of the transactions in IPOs were paper based. There were huge backlogs due to paper based records and manual processing of Intellectual Property(IP) applications;

- Procedures relating to sorting, storage, searching and retrieval of paper-based records were cumbersome and time consuming;
- The process of obtaining information from Intellectual Property Offices(IPOs) was time-consuming for IP stakeholders;
- To cope up the increasing load of applications in IPOs, there was a need for simplification/re-engineering of work procedures and development of data bases to facilitate on-line search and also to create user friendly systems;

The scope of the project is

- To effectively deliver the customer services ;
- To improve interface and interactions among Indian Patent, Design, Trade Mark Registry (TMR) and Geographical Indications (GI) Offices, customer, citizens, business & industry ;
- To establish a single-window mechanism integrating the customer centric on-line services;
- Re-engineered work processes for effective and efficient delivery of services;
- To enhance transparency, speed and responsiveness;
- To automate workflow in IPOs Front-end and Back-end operations;
- To establish automated systems for e-filing of Patent and Trade Mark applications integrated with payment gateway and PKI solutions, delivery of customer centric services through Internet during pre-registration, registration and post-registration stages of Patent and Trade Mark applications;
- To enable event-based, on-line G2B and G2C interactions and transactions;
- To eliminate paper based activities and switch to paperless working;
- Accession to International Treaties which would involve data exchange with International IP offices;
- Introduce Video Conference facilities to conduct hearings;
- Creating a knowledge base / digital library for Intellectual Property.

4.3.2 Status

The broad functionality of IPOs automated system with re-engineered work . Processes is as under :

Features	Process
• **Accept online applications for activities like e-filing of new applications through web, Web based front office and back office system for new application filing, registration, renewal, restoration, dissolution, certificate issuance, extension of time, post registration services, opposition, search, notice of opposition, registration & restoration of Patent & TMs** • **Ensuring digital signature attachment on every form submitted online through e-filing route** • **Facilitate On-line Payments for on-line search and e-filing of Patent and TM applications** • **Digitisation of Patent and TM applications filed in Paper format**	**Application Filing**
• **Workflow for IPOs backend business processes** • **Workflow Administration and Tracking & Workflow based notifications and alerts** • **Auto-allocation of files/cases to officers** • **Automated handling of approvals from senior examiners/registrar** • **Managing workflow According to provisions of Act & Rules from time to time**	**Workflow management**

• Interactive Guidance • E-filing of Patent & TM applications integrated with E-payment & Digital Signature • Content management - Uploading the Intellectual Property information onto the web site • Uploading the journals onto the web site & archiving of Journals	Portal Services
• Online search facility for a particular trademark on payment of fee • Search for the status of a particular patent and trademark application by Applicant/agents	Search
• Email facilities has been given to IPOs internal users. Communications are sent via emails to IPOs users. • Internal Workflow based notifications and alerts are sent via emails to all the internal Patent and TM users and concerned parties • Intimation about Examination reports are sent to the concerned parties via email as well as posted on the web	Email
• Online credit card and direct debit to bank account authorization and payments for applications for various services in the IPOs by interfacing with a third party payment gateway provider	Payment Gateway Integration
• The Patent and TM application require PKI integration to digitally sign all attachments and e-forms submitted online. The PKI implementation ensures Digital Time Stamping of the online	PKI Implementation

transactions.

- **Provide secured mechanism for user identification, transaction & non-repudiation.**

Standards : WIPO ST.32 XML standard for PCT data interchange

IEEE standards for Documents on PMP, SRS, SDD etc. adopted

4.3.3 Outcomes i.e. impact/benefits resulting from the project:

- The "IPINDIA Computerisation Project" is an outcome of the Department of IPP, Ministry of Commerce and Industry for simplifying rules and procedures in the area of Intellectual Property, digitization of old records, making for e-centric, promoting on-line transactions and reaching out to IP stakeholders through Internet.
- Due to massive computerization and establishment of digital database of patent records, Indian Patent Office has been recognized as an Internal Searching Authority and an International Preliminary Examining Authority(ISA/IPEA) under the Patent Cooperation Treaty(PCT) of World Intellectual Property Organisation (WIPO), which is a specialized agency of the United Nations in the field of IPRs joining an exclusive group of 15 countries/organizations, which have so far been recognized so;
- Indian IPR offices are modernized by providing infrastructure support and strengthening by way of computerization and re-engineering work practices, and elimination of backlog of patent and trademark applications. New integrated Intellectual Property(IP) Office buildings with state-of-the-art ICT infrastructure are commissioned in Delhi, Kolkatta, Chennai and Mumbai;
- Statutory Timelines for Grant of Patents have been reduced to 52 months from 104 months. With the introduction of simplified and computer based re-engineered work processes, a patent can be granted in the earliest possible time of 8 months and a trade mark in 10-12 months as agianst8-10 years earlier.

- Time for issuing the Examination reports of the patent applications after filing the request for such examination has been substantially reduced which earlier used to take more than five years
- Digital database of over 0.2 million. patent documents and 77,000 design records has been created and made available in searchable mode on the website of Intellectual Property Office "http://ipindia.gov.in".;
- The IPINDIA Computerisation project services are available 24x7 anytime & anywhere through IPINDIA portal "https://ipindia.gov.in ";
- The e-filing service of the patent and trade mark applications in India has been launched in July' 2007. With the launch of e-filing facilities, the applicants can file their patent and trademark applications from anywhere in the world at any time at their convenience through Internet. Payments can also be made through the Payment Gateway of authorised bankers, which saves time and money and the hassles involved in visiting and filing the applications in the offices;
- **It** is possible to conduct a prior clearance search in order to determine whether any conflicting marks exist in the Indian Register of Trademarks.

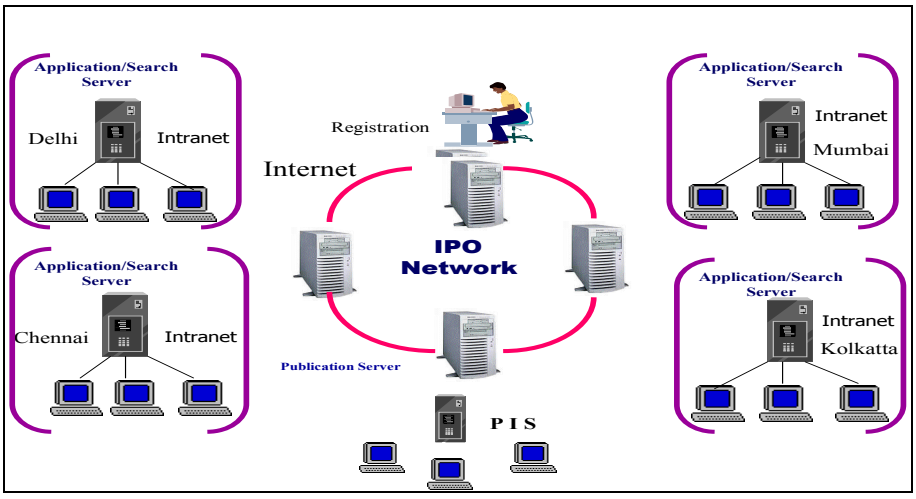
Features of the initiative

a. Citizen Centricity and User Convenience

- ICT enabled services and processes in IP administration provides on-line processing, monitoring and tracking of status information on real time basis;
- Front Office and back office integrated User Group interface through ICT platforms provides minimal public interface for time bound delivery of services with reduction in delay, improved transparency and help bridge the performance gap;
- Comprehensive computerization with Front Office and Back Office systems so as to facilitate on-line processing of Patents and Trademarks applications has been achieved;
- Digitisation of records of Patents, Designs and Trademarks for establishment of IP databases to facilitate IP Stakeholders has been initiated;

- A website of IP office namely http://ipindia.gov.in in NIC domain has been launched. In addition to IPR static information on Acts, Rules, Legislations and procedures, the website hosts Patents, Trademarks and GI journals, which are published on-line. The website provides e-filing facility for Patent and Trademarks integrated with Payment Gateway and PKI (Digital Signature) solutions. The website is also the channel for inviting public opinion and comments on proposed amendments in legislation and procedures;
- The channel for Interactive Guidance on the website provides a facility to serve the queries of stakeholders on real-time bases;
- On-line search facilities have been established and all the IP offices have been provided with facilities to ensure un-interrupted connectivity;
- Improved novelty search in patents is being ensured through connectivity to international databases.
- Transparency in the operations of the Patent office has increased manifold with the automation and modernization of the Patent Offices across India. The e-filing of patent and trademark applications through Internet, simplification of processing of patent applications and the ISA/IPEA status to the Indian Patent office has given an impetus to the overall patenting scenario;
- The abstracts of patent applications published after eighteen months and also the decision of the Controller enabling anyone to check the legal status of their patent applications was made online;

e-filing of Patent & TM Applications



b. Efficiency Enhancement

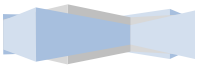
- Automated systems in IPOs has provided i) exchange of information with citizens, business or other government departments ii) speedier and more efficient delivery of public services iii) improved internal efficiency iv) reducing costs and increasing revenue;
- The citizen-centric services like e-filing, on-line search, online status etc. are made available on 24x7 basis on the website of IPOs http://ipindia.gov.in;The on-line services have been provided with user friendly interfaces;
- The automated systems of IPOs are capable of handling current work load and are attuned to handle anticipated load of IP applications to be filed during next five years;;
- IT infrastructure is capable of providing services on 24 x 7 x 365 Basis.

c. Cost Effectiveness

The outcomes and cost effectiveness of the IPINDIA computerization project are not in general quantifiable in either monetary terms or any other physical terms. Project benefits and outcomes, both tangible and intangible, are as under :-Intangible :

- Intellectual Property (IP) infrastructure has been recognized as one of the major components of economic infrastructure in the country. Establishing an enabling environment for creation, protection and utilization of Intellectual Property is of immense importance for technological, scientific and industrial development of the country.

- Recognising the importance of the modernization of IPOs for the economy, the Government has implemented projects for modernization of Patent Offices, Trade Mark Registry(TMR) and Geopgraphical Indications Registry(GIR) during 9th and 10th Plan. The focus of these projects was commissioning of four modernised offices in Delhi, Kolkata, Chennai and Mumabi, computerization with state-of-the-art ICT infrastructure and Internet facilities, digitization of records, launching of electronic filing(e-filing) service integrated with Payment gateway and digital signature solutions, establishment of online search facilities, establishment of Intellectual Property Training Institute(IPTI) to provide training and develop strategies for awareness creation.
- As of a result of these initiatives, timelines for patent and trade mark have come down considerably and backlog of over 44,000 patent applications and 3,75,000 trade mark applications was liquidated in the last three years. The trend analysis of Patent and Trademark application filing and Grant/Registrations is as under
    - (i) The filing of patent applications increased six-times from 4,824 in 1999-2000 to 34,291 in 2009-10. The number of patents granted increased 3.30 times from 1881 to 6184 during the same period.
    - (ii) Trade Marks filing increased two-fold from 66,378 in 1999-2000 to 141,906 in 2009-10. Registration of trade marks increased more than 8.4 times from 8010 to 67040 during the same period.
    - (iii) Average time taken for grant of patents reduced from about 6-10 years earlier to about 2-3 years. In case of trade marks, the average time for registration reduced from 7-10 years to 2 years.
    - (iv) e-filing system for patent and trade mark applications, which is user-friendly, speedy and transparent, has been launched.
    - (v) Provided for an institute with facilities for training of fresh Examiners as well as Controllers and Registrar's in the IPOs.



(vi) At the current level of increase in filling of Patent, Design, Trademark and GI applications, it is anticipated that the number of patent applications filed in 2011-12 will be about 72,000 compared to 34,291 in 2009-10. The number of trade mark applications is anticipated to increase to 2,05,000 compared to 1,41,906 during the same period;

(vii) With the establishment of state-of-the-art ICT infrastructure and on-line applications systems/services in IPOs, IPOs will be able to examine the increasing number of applications for patents, designs, trade marks and geographical indications in a reasonable timeframe without compromising on quality.

- 11th Five year Plan proposal is to strengthen the capabilities of Indian Intellectual Property offices, comprising Patents, Designs, Trademarks and Geographical Indications with a view to developing a vibrant intellectual property regime able to address the concerns of reliability, effectiveness and user-friendliness of the procedures and has the capabilities to enable Patent Offices to become International Searching Authority(ISA) and International Preliminary Examining Authority(IPEA); and (ii) to enable Trade Marks Registry to have facilities for International registration of Trade Marks.;
- The web based public search interface, e-filing, automated re-engineered work processes for timely processing of Patent and TM applications enhanced reveneue/benefit to the government;
- The IP modernized system with re-engineerd work processes & adoption of best practices has simplified transaction procedure, introduced transparency, improved the time to transact, minimized cost to IP stakeholders and increased internal efficiency. The increase in internal efficiency of IPOs has further minimized cost to government & increased the government revenue;
- Contribution to national innovation system by making available the patent information/documents online, which will facilitate channelising R&D;
- Speedy grant of rights enabling economic development;
- Establishment of credible IP infrastructure with state-of-the-art ICT infrastructure will have positive effect on foreign direct investment into the country;

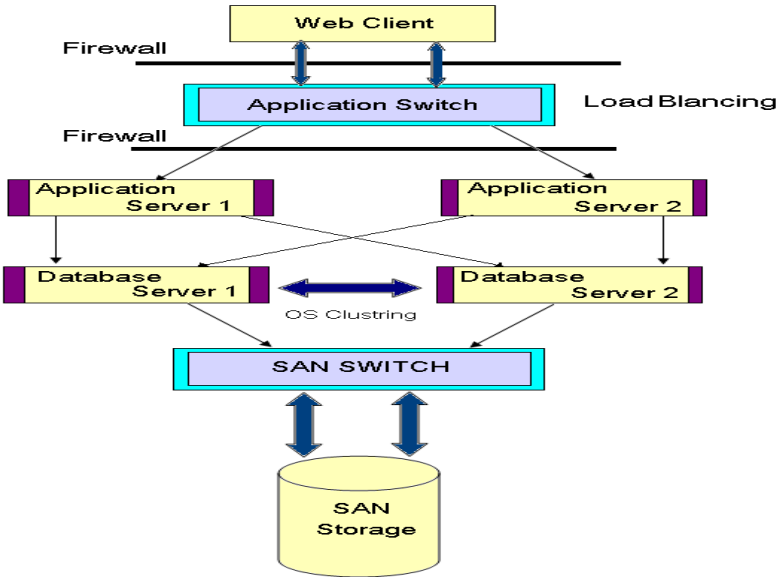
- Increased awareness among people and stakeholders will enable protection of traditional knowledge and or thwarting misuse by others in India and abroad;
- User friendly Intellectual Property System with facilities such as e-filing, e-processing and electronic public interface facilities;

Tangible

- Generation of more income for the Government through user charges being collected for the automated services provided by IP Offices;
- Generation of income through ISA/IPEA operations, especially from domestic applications and applications from countries in subcontinent;
- The revenue received through online payment gateway for Patent and Trade Marks applications filed online and Trade Mark Application online search interface is approximately Rs. 192 million.

d. Capacity Building and Organisational Sustainability

- Modernised IPOs buildings with state-of-the-art ICT infrastructure have been established in Delhi, Chennai, Mumbai and Kolkata;
- Several training programmes have been organised from time to time depending upon the requirement of IPOs automation project;
- Training has been imparted to IPO's operational staff for effective use of automation; Re-training has been conducted for users whenever application software is modified;
- User awareness programmes on e-filing have also been conducted for IP stakeholders(Agents and Attorneys) at various IPOs locations i.e. Delhi, Mumbai, Chennai, Ahemdabad and Kolkata. This helped in promoting e-filing of IP applications upto a great extent;
- Primary Data Center at Delhi and Disaster Recovery Data Centre at Mumbai with state-of-the-art ICT infrastructure have been setup for long term sustainability of automated systems and efficient service delivery;



- The automated systems for IPOs have been designed, developed and implemented in close coordination with their domain experts. This helped in creating IT resource manpower in Indian Intellectual Property Offices;

Progress Report Of the Islamic Republic of Iran

28th AFACT Plenary

Yokohama - Japan

November 26, 2010

Islamic Republic of Iran

Ministry of Commerce

Deputy Ministry for Planning and Economic Survey

Iran Centre for eCommerce Development (ICED)

Introduction

Today applications of information & communication technology have influenced mostly all aspects of our lives & eCommerce & eBusiness solutions have been used so widely that we can hardly ignore them!

eBusiness solutions have made revolutionary impacts in rendering services & those governments or sectors which use these solutions gain competitive advantages which can be hardly gained by competitors without introducing eservices!

Today almost all Governments in different sectors of the world have developed & prepared comprehensive eCommerce/IT or ICT plans and are on different stage of implementing those plans.

Based on the mentioned plans governments at one side try to develop necessary infrastructures for implementing eCommerce & eBusiness solutions in terms of eGovernment services & also implement eGovernment projects & on the other side try to encourage the society to use the new rendered eGovernment services.

Like other governments, the government of the Islamic republic of Iran also has planned to develop ecommerce in the country. Iran Centre for eCommerce Development (ICECD) which is the main government organizational body in charge of eCommerce development has defined & implemented a number of eCommerce projects in line with development of eCommerce in the country. These projects are namely single window, monitoring & organizing activities of virtual shops, public eProcurement & certification authority. Other governmental organizations have implemented eCommerce projects based on their duties too. In this report we review the latest progress made in eCommerce projects in Iran.

Iran Centre for eCommerce Development

Iran Centre for eCommerce Development (ICECD) was established in 2008 with the aim of establishment, implementation & development of eCommerce by using national & international tools & standards.

The ICECD has a national independent legal entity and it depends to ministry of commerce form governmental point of view.

Before ICECD, an office was in charge of planning and promotion of e-Commerce. The ICECD now has national authority and accountability for planning, implementation, and development of e-Commerce including trade paper less solutions.

The main working groups of ICECD are: public infrastructure & promotion of eCommerce applications, certificate authority, standards & international relations.

The main duties of ICECD are as follows:

Policy making and planning for eCommerce establishment in country

Planning and implementation of eCommerce projects across the country

Planning and implementation of eCommerce infrastructures

Compilation of eCommerce legal issues and regulations

Coordination of national eCommerce projects

Sponsoring eCommerce researches

Public training and institutionalization of eCommerce

Trade facilitation by using eCommerce tools, models & standards & establishment of trade single window

International activities plays an important role in ICECD & according to the statute of ICECD, the centre should provide national & international interactions in eCommerce.

The main projects defined in ICECD and the recent progresses made in projects are explained in the next section of this report.

Government root certification authority

The public key infrastructure project started in Iran according to part one, article 4 of the executive bylaws of article 32 of eCommerce law (2003). Government root certification authority (GRCA) started to operate on December 2007. In Islamic Republic of Iran due to hierarchical architecture, the public key infrastructure is trusted as the root & has a governing role in this area. It also has inspection responsibility regarding to other centers.

Now in addition to root centre, an intermediate centre with the name of Commerce Intermediate Certification Authority has been established. The commerce intermediate certification authority started to operate on March 2008. It is the custodian of certificate issue in government & public sector. Applications presented in commerce intermediate certification authority include client, digital signature, secure email authentication.

Government root certification authority has taken necessary actions to educate & giving information about certificate usage areas in eCommerce & e-Government areas for public & private organizations. In this regard we can mention the

activities done to promote usage of public key infrastructure & guiding the potential users of the system.

In order to manage certificates within the same government action, different assurance levels in public key infrastructure of Islamic Republic of Iran has been defined. According to the mentioned assurance levels, four levels of certificate for digital certificate & confidential certificate has been described. Thus the service providers will use a specific level according to their needs & the existing risks in their activity areas.

E-certificate policy making council ratified the administrative instruction of organizing the intermediate certificate issuing canters in a meeting dated May 2009. Thereby the required technical & legal ability to establish electronic certificate authorities for all public & private organizations according to guide directions has bean provided.

The latest activities done to develop certification authority are as follows:

- Preparing tariff price list for digital certificates.
- Defining especial programs to encourage the private sector to establish intermediate certificate authority.
- Defining the profile of digital certificates to prevent issuing certificates with different profiles & associated problems
- Guiding organizations to make their system PKI enabled.
- Establish a special laboratory to test applications which are PKI enabled
- Increasing number of registration authorities to improve access for public
- guiding software companies to produce PKI enabled applications

Plan for Single Window implementation

At the end of the year 2009, Draft of a plan for single window implementation in Iran was prepared & was placed on the agenda. Legal provisions that necessitate implementation of this project at the national level and make this project as a duty of Iran Centre for eCommerce Development are as follows:

A) Article 3 of the statute of Iran Centre for eCommerce Development

B) Economic Development Plan

c) Fifth country development plan bill

The most important steps that have been taken to implement the single window are as follows:

- Preparing technical & legal documents necessary for implementing the single window & approval of the plan to implement SW in a commission (article 32 commission) of the president deputy ministry for planning & strategic supervision
- Receive funding for capital acquisition project as one of the sub projects of the program for establishment of the trade facilitation during the fifth development plan
- Establishment of the deputy ministry for trade facilitation in Iran centre for ecommerce development after approval of the organizational chart & structure of the Iran centre for ecommerce development by the president deputy ministry for planning & human capital
- Establishment of the project management team in ICECD composed of the old and new recruited experts
- Development of the executive program of the project management & holding persistent sessions in line with the program
- Extensive literature review & benchmarking studies including the recommendations & documents published by the international organizations involved in trade facilitation such as UN/CEFACT. In this stage the single window system of more than 15 countries was studied & analyzed by the trade facilitation team.
- Identification & analysis of the "as is" stage in cross border exchanges (including documents & processes)
- Preparation of the roadmap & executive program for implementing single window
- Preparation of the architecture of the project in respect of the technical main modules, the final range of services and systems, various key actors &their roles in project implementation
- Preparation and publication of calls to identify active companies specializing in SW project and holding meetings with the mentioned companies in order to select consultant for the projects
- Identification of key organizations involved in export and import such as the Islamic Republic of Iran customs, foreign trade development

organization and ports and maritime organization and held several meetings with officials of these organizations

- Planning national committee for standardizing trade documents as an enabling arm for implementing single window
- Trying to activate EDIFACT national committee composed of key organizations and institutions as the main body of project management
- Consulting with organizations and experts in the field of trade facilitation at international level, in line with choosing the proper consultant for the project
- Taking Initial steps towards formation of the processes and procedures working group in partnership with key agencies involved in import and export processes

Monitoring & organizing activities of virtual Stores:

The purpose of this project is to monitor & organize the activities of active virtual stores in Iran. So far the following activities have been done to implement the plan:

- Preparing the byelaw of organizing virtual stores
- Identification of existing active virtual stores in the country
- Preparing guidelines & forms for licensing virtual stores
- Issuing more than 40 license for virtual stores
- Development of the instructions for evaluation of virtual stores & preparing the related evaluation criteria
- Designing the Iran Trust logo for trusted virtual stores
- Undertaking the preliminary steps for establishment of the trusted virtual stores web site (Iran Trust.ir)

Public e-Procurement system of IRAN

This project in IRAN has planned to be done in two main phases.

1- Public e-marketplace

- The first phase includes implementation of e-Marketplace in public sectors .It means that this phase include just purchasing process and

tendering process is not included. There is some steps in phase 1 which starts with supplier registration. Suppliers are allowed to register in this system under the same terms and conditions that mentioned in traditional purchasing law of Public .

The second step is pilot .In this step , only 26 types of goods will be covered and the system will be deployed by two public sectors(Ministry Of Commerce &Ministry of ICT). This step will be started in October 2010.

- The other types of products and Services will be covered in this phase of the project in next steps. Also all public sectors in IRAN will be included.

2- **Public e-Procument**

- The Second phase is planned to cover the tendering process .Also product ranking, supplier ranking and ….is planned to be done in this phase.

This project has planned to be done in 3 years completely. At the end of two phases, all Public sectors should use this system that is called (SETAD) for their procurement processes.

Infrastructure

Moreover, this is Possible to expand this system to use for across borders purchasing processes.

The three necessary infrastructures for this project are as below:

1- **Product and service coding**

- Iran uses a system of coding for goods and services that is named "Iran code". In this project, the goods and services that are coded in "Iran code" system will be included subsequently.

2- **Standardizing electronic catalogue of goods**

- There are some product catalogues has prepared before in "IRANCODE" system. The standardization of these catalogues has defined as a new project to be done parallel to e-Procurement project. In this project, supplier communities have a fundamental role.

3- **Electronic signature.**

- Electronic Signature, as a project, has done completely in IRAN and now it will be deployed as security infrastructure in this project.

Other government agency's projects:

In this part the projects of othet government organizations in Iran in line with development of eCommerce & rendering egovernment services are explained:

Import Registration Management System

In order to control the import of commodities (cargoes) to the country, a special procedure has been executed in the past years by Ministry of Commerce. Based on this procedure, all real and legal persons are obliged to receive the approval to import their relevant cargoes. For this approval, importer should submit Performa invoice and shall fill out the import registration form.

This process until last year was done manually. But now it is automated through Import Registration System (www.ioms.ir).

This system is start point of import procedure and it has a key role for government to manage and monitoring imports.

Importers can request required service (24x7) through internet and no need to attend physically.

Shipping Container Supply Management

Islamic Republic of Iran Shipping Lines (IRISL) owns a fleet of 115 oceangoing vessels with more than 3.3 million DWT along with 7000 highly efficient employee both at sea and ashore and being able of transporting 22 million tones of cargo annually.

Total solution software (ContSoft) implemented in IRISL in 2006 and since now it's operational in more than 200 agent offices in all over the world. Processes of this software begin from identification of customers and rate negotiation in origin to delivery of container in destination with the final target of door-to-door container carrier. This software has been designed in three below sections:

A) Customer relation:

In this section customers are able to sign up, request for container carriage and trace their container from origin to destination.

B) Documentation and container movement:

In this part , all information about carriage documents, bill of ladings, booking letters , manifests ,.... besides containers movements will be enter to the system by UN/EDI standards(such as CODECO and COARRI) and ebXML[1].

[1] E-Business Extensible Markup Language

C) Managerial Reports and controls:

Since all the information from all IRISL agents in all over the world are integrated in ContSoft data repository, SCSCo has been extracted an MIS[2] and DSS[3] subsystem from existed data warehouse so that these subsystems has been facilitated all kind of analyzing , planning and making decision for optimizing processes and activities.

Another benefit of these integrated data is ability for controlling the quality of activities and their supervision for their performance in aligned with increasing quality for customer services.

Designing, implementing and testing phases of ContSoft started since 3 years ago and it has been operational from beginning of April for Iranian and Asian and from beginning of July for European agents.

Some important features of this system are as following:

1. Modular designing
2. Ability for competition in similar software in global market
3. Knowledge based oriented approach
4. Ability to data interchanges by using ebXML and UN/EDI standards.
5. Proposing value added services to customers.

E-Customs Automation

Upgrading for e-Customs ASYCUDA ++ to ASYCUDA World (integrated with Trade Single Window)

Implementation of Automated System for Custom Data (ASYCUDA) of all procedures related to import and export for trade single window.

In an effort to streamline and harmonies the customs procedure with other public and private partners, the government of Islamic republic of Iran has selected ASYCUDA World as a tool for its custom administration in order to move toward e-commerce and e-customs. This project is a technical cooperation between the Islamic Republic of Iran Customs Administration (IRICA), UNCTAD and UNDP. Through this project, UNCTAD will provide appropriate technical services and other resources for the implementation of e-customs solutions through the latest

[2] Management Information System
[3] Decision Support System

state of art management information system ASCUDAWORLD. With such a tool, IRICA will establish a transparent clearance processing mechanism with a Document Tracking Utility available for all agents and will expand its Direct Trader Input (DTI) through the internet. The ASYCUDAWORLD system is based on a state of the art IT technology (Rich-Client, Java, XML …) that can be used as the core element of the implementation of e-government and e-business in the country.

ASYCUDA will be introduced in 7 phases as follows:

Phase I- ASYCUDA World transit prototype building & related training activities. It includes the training of national project team, the development of the Iranian ASYCUDA World Prototype.

Phase II- piloting ASYCUDA World transit in two offices. Piloting of the national transit eDocument

Phase III- Rollout ASYCUDA World transit in 10 custom offices. Implementation of the national transit eDocument.

Phase IV- ASYCUDA World other customs document prototype building. It includes the single administrative document, the manifest, et… .

Phase V- Piloting ASYCUDA World other customs documents in two offices.

Phase VI- Rollout ASYCUDA World other customs documents in 10 customs offices & automation of other custom documents.

Phase VII- connection and data exchange with different agencies interfacing with other government agencies & system.

At the moment phase 3 has been done & the project continues.

e- Banking

The Central Bank of Iran has considered quantitative and qualitative development of the electronic payment instruments as the essential solution for the problems arising from paper money and cheque payments. To this end it arranged long term programs with the help of the Banking system and the private sector. Some of the developments are as follows:

1. Expansion of the payment instrument issuance and appliance

Issued cards with a 64% growth in 2008 reached 38.5 million. The number of ATM terminals had a 34% growth in the same period. Investment on POS network development was also emphasized in 2008.

Card acceptance equipment in the Banks branches had also appropriate growth in 2008. By the end of 2008 the number of installed POS was more than estimated 300000.

2. Expansion of the electronic equipment installation:

Access to the equipment of electronic interchange is of essential importance. The banking network done it in three directions:

2.1. Expansion in the no. of POS and making a revolution in the payment of people through independent and direct use of card as payment instrument:

- Setup of POS terminals began in mid 2004. Its number grew 24 times in 2007 compared to 2005 or one for 168 person. Though comprehensive development of POS terminals and avoiding their overlap in the goods and services delivery centers is one of the serious challenges in this area.

2.2. Development of ATM network:

Concerning rapid growth of payment instrument issues and increasing various services presented through ATM terminals, banking system made provisions to procure, install and operate ATMs in 2007. Though it seems that ATM numbers are not proportionate to issued cards. The gap should be filled rapidly.

2.3.Offering of Value- added services through PIN-Pads:

Using PIN-Pads as electronic transaction accepting equipment in the Inter-bank network began at 2007. The funds transfer service is done by card identification through PIN-Pad connected to teller computers. This can be considered as the first full electronic online Inter-bank draft system of the country. PIN-pads had appropriate increase against fixed number of the bank branches in 2006.

Number of transactions done through electronic terminals of the country

Time	ATMs	POSs (Shopping centers)	PIN-pads (Branches)	Total
2006 (nine months)	334,991,608	10,400,199	15,241,143	360,632,950
2007 (nine months)	480,128,129	28,935,868	25,576,273	534640270
2006-2007	612,574,983	33,794,283	31,937,686	678,306,952

3. Central Bank provisions to develop payment systems and Electronic Banking:

Integrated and compatible regulations, standards and instructions concerned with banking payments and electronic money facilitates, easier and cheaper Inter-bank transactions, preventing parallel and non-standard activities, saves expenses and nvestments of the banking system. This gives the possibility to allocate resources to further expansion of the infrastructures and improvement of services quality. Following realization of the shortcomings and regulation constraints, serious actions has been done from 2002. Necessary updates made in the regulations and standards, especially those concerned with value-added services of SHETAB. In this regard the Central Bank and its Payment Systems Department operations are as follows:

3.1. Facilitating private sector participation in development of the electronic payment (Payment Service Providers)

3.2. Development of the inter-bank settlement and large-value funds transfer system “SATNA”.

3.3. Development of the cross-border and international card-based network via SHETAB.

3.3.1. Connecting of the SHETAB switch to the Qatar switch and development of international connections of card payment network.

3.3.2. Making negotiations and preparing preliminaries of linking to switch system of the United Arab Emirates and the Saudi Arabia through Bahrain GCC switch. It has important outcome for the cardholders.

3.3.3 Negotiations with the central bank of Kuwait on connection to the switch system of that country led to an agreement.

3.4. Developing and notifying guidelines, specifications and execution procedure of applying “SATNA” for customer to customer (C2C) and customer to bank (C2B) transactions.

3.5. Authorization of electronic bill payment transactions using POS terminals to increase level of access to E-banking through more than current 500000 terminals in the country.

3.6 Defining mobile phone as authorized terminal in the banking network makes payments of bills and purchased goods and services possible.

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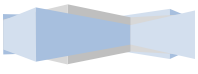
Yokohama, Japan
November 26, 2010

UN/CEFACT Japan Committee (JEC)



SECTION I – Single Window of Japan

1.1. Nippon Automated Cargo and Port Consolidated System (NACCS)

In October 2008, the Government of Japan had carried out the reform of key operator of Japanese Single Windows, i.e. NACCS in the following way:

i) Nippon Automated Cargo Clearance System, an independent administrative agency under the Ministry of Finance merged Port EDI system under the Ministry of Land, Transportation, and Infrastructure.

ii) It was privatized and renamed to "Nippon Automated Cargo and Port Clearance System Inc. But its abbreviation remains same as it was, i.e. NACCS.

iii) For the time being, the Government of Japan is the exclusive share holder.

This reform was done with a view to promote the efficient filed operation of the Next Generation

1.2 Next Generation Single Window of Japan, i.e. NACCS

In February 2010, NACCS launched the Next Generation Single Window of Japan.

This newer version realized the following developments (See the Diagram 2):

i) Integration of customs operation for sea-cargo (Sea-NACCS) and for air-cargo (Air-NACCS)".

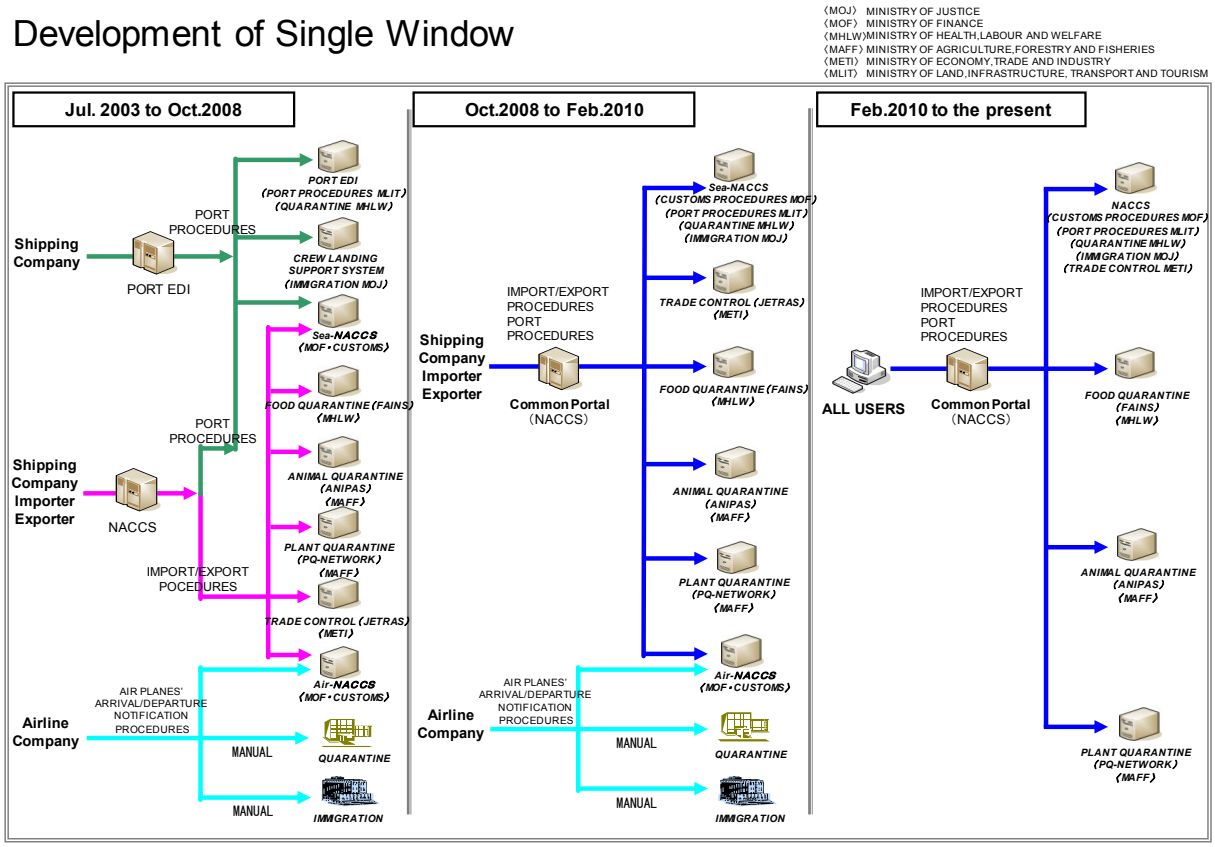
ii) Integration of import, export, emigration and immigration procedures other than customs

Diagram 1

Procedure	Jurisdiction	Systems merged
Port Clearances (Sea)	MLIT	Port EDI
Immigration of crew	MOJ	Port EDI
Quarantine of crew	MHLW	Port EDI
Export Trade control	METI	JETRAS
Arrival/Departure notification at the airport	MOF-Customs	Air-NACCS
Immigration of passenger at the airport	MOJ	Manual operation
Quarantine of passenger at the airport	MHLW	Manual operation

Diagram 2

Development of Single Window



The interface with the following non-customs system has been retained. It is planned that those three systems will be merged with NACCS by October 2013 (See the Diagram 3).

Diagram 3

Procedure	Jurisdiction	Systems merged
Food Quarantine	MHLW	FAINS
Animal Quarantine	MAFF	ANIPAS
Plant Quarantine	MAFF	PQ-Network

After the release of the next generation NACCS, it provides the common portal site by which stakeholders (Importers, exporters, custom brokers, carriers, NVOCC, carrier's agents) can enjoy a single entry for the applications required by the Ministries concerned (See the Diagram 4). Now NACCS process approximately 98 % of all import and export procedures.

Diagram 4 Procedures covered by Single Window System of Japan

Port	Procedure	Applicant	Authority to receive applications	Jurisdiction
Opera-tion at Sea ports	Arrival notice	Vessel Master or his agent	1) Quarantine station 2) Immigration office 3) Port authority	1) MHLW 2) MOJ 3) Local gov.
	Entrance statement	- do -	1) Customs 2) Quarantine station 3) Immigration office 4) Port state control 5) Port authority	1) MOF 2) MHLW 3) MOJ 4) Coast guard 5) Local gov.
	Maritime declaration of health	- do -	Quarantine station	MHLW
	Vessel entrance/clea	- do -	1) Customs 2) Quarantine station	1) MOF 2) MHLW

	rance statement		3) Immigration office 4) Port state control 5) Port authority	3) MOJ 4) Coast guard 5) Local gov.
	Crew list	- do -	1) Customs 2) Quarantine station 3) Immigration office	1) MOF 2) MHLW 3) MOJ
	Passenger list	- do -	- do -	- do -
Port	Procedure	Applicant	Authority to receive applications	Jurisdiction
Opera-tion at Sea ports	Airplane entrance / clearance statement	Airline	1) Customs 2) Quarantine station 3) Immigration office	1) MOF 2) MHLW 3) MOJ
	Crew list	Airline	1) Customs 2) Quarantine station 3) Immigration office	1) MOF 2) MHLW 3) MOJ
	Passenger list	- do -	- do -	- do -
	Import declaration	Importer or its agent	Customs	MOF
	Application for import animal	- do -	Animal quarantine station	MAFF

Import	inspection			
Related	Application	- do -	Plant quarantine station	MAFF
Proc.	for import plant inspection			
	Import notification of foods	- do -	Quarantine station	MHLW
Export	Export declaration	Exporter or its agent	Customs	MOF
Related	Application	- do -	Animal quarantine	MAFF
Proc.	for export animal inspection		station	
	Application	- do -	Plant quarantine station	MAFF
	for export plant inspection			

1.3 Other EDI Activities

- Japan Electronic Data Interchange Council (JEDIC)

  At the plenary of JEDIC held in April 2010, it was adopted the reform of its organization made in order to promote the project to build business infrastructure.

  Adapting the changing Supply Chain in industries, JEDIC (Japan EDI Council) has started the project which is utilizing UN/CCL (Core Component

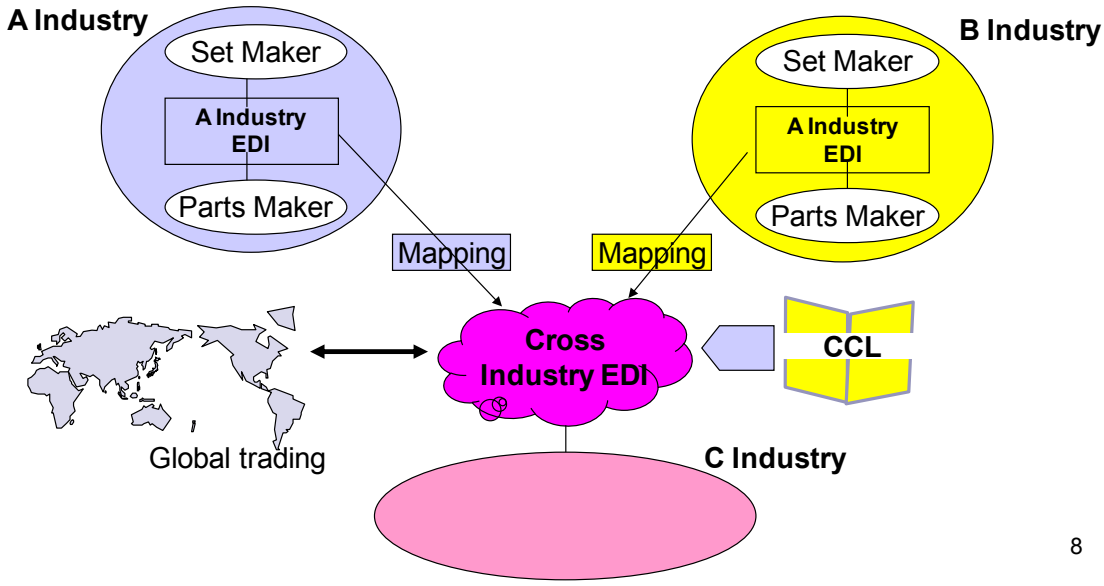
Library) for the business infrastructure in Japanese industries supported by METI.

Currently many SMEs are using EDI unwillingly. The reasons not contributing their business are as follows;

- ✓ To be forced to use Screen Type EDI which cannot be connected their own systems.
- ✓ To adopt multiple industry standards which their traders belong.
- ✓ To be forced to use their trading company's unique EDIs.

UN/CCL enables single interface EDI in multi industry environment. UN/CCL enables the fair business completion between Large Companies and SMEs and vitalization of SMEs.

In order to realize the single interface of EDI for SMEs, JEDIC introduces the Cross Industry EDI specification using UN/CCL . (see the figure below)



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The cross Industry EDI specification enables not only the fair business, but also speed up and cost reduction for changing Business Environment.

The first set of Cross Industry Specifications in Japan has based on the requirements of SMEs in the automobile Industries and Electronics Industries. Also they have interoperability with the ERP software for SMEs.

- Japan Electronics and Information Technology Industries Association (JEITA)

  JEITA is a new industry organization established in November 2000 by merging the Japan Electronic Industry Development Association (JEIDA) and Electronic Industries Association of Japan (EIAJ) to enter the 21st century. Its activities cover both the electronics and information technology (IT) fields. Within the JEITA, the EDI Center plays the role of promoting standardization which has been executing activities together with the

vendors and buyers, focusing on the EIAJ-EDI Standards in order to exchange business transactions.

JEITA uses EIAJ-EDI Standard based on CII syntax rules, a domestic business protocol standard, developed by the Center for the Informatization of the Japan Information Processing Development Center. The EIAJ-EDI Standard was established for promoting electronic ordering of materials in the electronic manufacturing industry, and has been revised as appropriate every two to three years. The latest version was issued in December 2001.

In December 2003, JEITA released "ECALGA (Electronic Commerce Alliance for Global Business Activities)" as EDI brand for the new era. "ECALGA" is intended to widely offer the solutions to the changing needs of new EDI in the Electronic industry, through newly developed messages which are to reflect the real time exchange of a forecast and stock information. At the same time, "ECALGA" changes EIAJ-EDI Standard to the ebXML base. "ECALGA" seamlessly combines all the business processes among the enterprises in the various fields including, but not limited to, the business segment of planning, designing, development, production, distribution and sales.

- The Distribution Systems Research Institute (DSRI)

  DSRI, a member of GS1, facilitates EANCOM (UN/EDIFACT subset) as the industry EDI standards for Japanese retail and distribution industry since 1997. Since 2000, DSRI has been developing XML/EDI Distribution Standard messages for the grocery industry. In 2004, message development and preparation of Reliable Messaging Protocol guideline have been carried out as follows:

  1) Development by XML schema of returns message.
     (12 messages were developed by 2000 – fiscal year 2004)
  2) Review and classification of necessary data items, based on data items for JEDICOS.
  3) Preparation of XML tags in Japanese and English languages, taking into consideration international standard specifications.

- Financial Sector

  Since March 1996, a function for financial EDI has been available in *Zengin* System, an electronic payment system mainly used for domestic credit transfer. Payer firms can attach a twenty-digit matching key, with which beneficiary firms can reconcile commercial and payment date, to payment instructions sent through *Zengin* System.

This function has been succeeded to its fifth-generation system, which start operation in November 2003. In parallel with the development of the new system, a working group of Japanese Bankers Association examined the possibility to introduce a scheme for financial EDI using XML. However, it has decided not to introduce such a scheme for the time being as there are legal and technical issues to be addressed.
MT103 Remit, which is a new message type of SWIFT's FIN for customer payment and has the financial EDI capability, is widely used in Japanese banks. By using MT103 Remit, payers can attach EDI data of up to 9,000 digits and of any type of formats including EDIFACT to a payment instruction. However, Japanese banks use SWIFT messages mainly in cross-border transactions, partly because the protocol and formats for most Japanese payment systems are incompatible with those for SWIFT.

Turning to C2F area, electronic methods to transfer money between individuals' bank accounts are widely used in Japan. According to a survey conducted in March 2005, funds transfer services are provided through the Internet by 79.2 percent of the 456 respondent banks. In addition, services using mobile terminals (e.g., mobile phones) are provided by 80.3 percent of the respondents.

- Travel, Tourism and Leisure (TT&L)

The initial EDI activity in the travel related industry in Japan started in 1992 soon after the establishment of TT&L work group in UN/EDIFACT. In order to internationally sell Japanese travel products, more than 30 travel related companies and associations have kept working in the name of EC Promotion Organization for Travel Industry to normalize the travel business processes and data by using XML/EDI based on the standards and specifications of UN/CEFACT Forum and OTA (Open Travel Alliance). The first working results on the Japanese original hotels (Ryokan) undertaken by the Organization were submitted to the Forum last year to be facilitated in the Small Scaled Lodging House Information Project and are now in its harmonization process. The second submission will be ready to the Forum during this year.
The TT&L EDI meeting with Taiwan TT&L industry has been held yearly either in Taipei or in Tokyo and in Dec, 2005 this was held in Taipei with the industry members of the two countries. The visit Japan campaign in

Japan has been undergone to promote Japan to the foreigners and the EDI standard activity is also activated these days.

1.4 Education and Awareness Programs

- **UN/CEFACT Japan Committee**

Japan EDIFACT Committee (JEC) was established in July 1990 as a supporting organization for UN/ECE/WP.4 (currently UN/CEFACT) and Asia EDIFACT Board (currently AFACT). JEC is composed of committee members representing various field of industry, which includes trade, finance and manufacturing. JEC sends delegates to AFACT meeting every year.
At the Plenary of JEC held 25th June 2007, it was renamed to UN/CEFACT Japan Committee (Abbreviation is same as now i.e. "JEC")

- **Japan Committee for UN/CEFACT Standards**

At the Plenary of JEC held 25th June 2007, it was resolved that TAG (Technical Assessment Group) and Japan Committee for UN/LOCODE shall be united and reform the captioned committee, which has the following two functions:

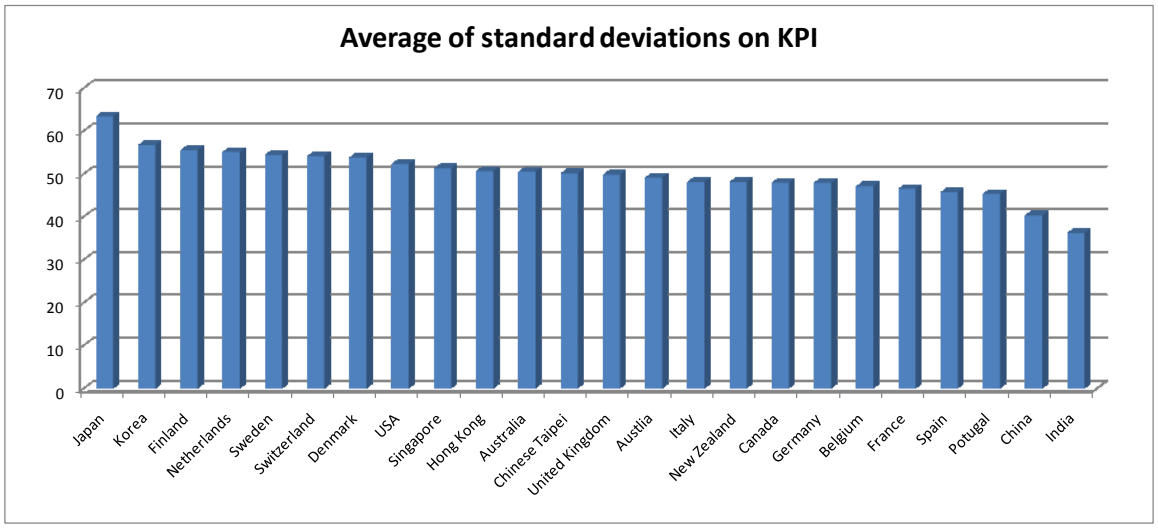
- TAG (Technical Assessment Sub-Group) Function
  With regard to the development of UN/EDIFACT standard messages, TAG has been playing a key roll in technical support by making technical assessment of DMR(Data Maintenance Request) from UN/EDIFACT users in Japan.
- UN/CFEACT Code Promotion function
  UN/LOCODE has been in use in Sea-NACCS and Port EDI system since 1999. For the purpose of successfully introduce these systems, the ex UN/LOCODE Japan committee was established in 1997. Currently the number of the registered UN/LOCODEs for Japan counts 1,616 in comparison with 400 at the beginning. The roll of the new committee is to maintain the codes and make a request for new codes in Japan. In the future, it is intended to enhance the roll of the committee to encompass UN codes other than locations.

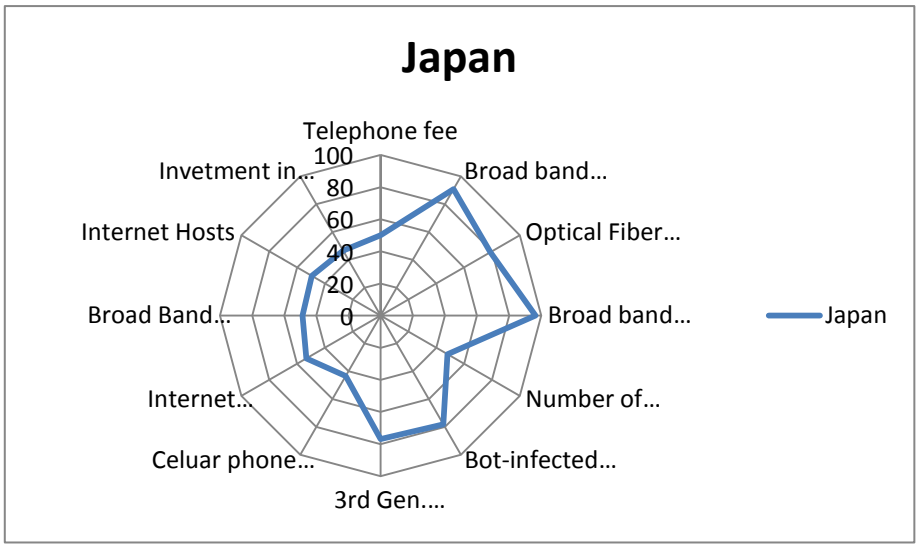
The new function is to promote any and all the code systems compiled and published as UN/CEFACT Recommendations, such as, but not limited to #3, #9, #20, #21, #22 etc.

SECTION 2- Governmental ICT Strategy of Japan in 2009

1.1 Overview

According to the white paper published in 2009 by the Ministry of Internal Affairs and Communications, Japan keeps the leading position in respect of ICT infrastructure, especially internet users in Japan have been enjoying economy of large scale investment in broadband internet services. However, adoption ratio on internet and cellular phones need to be improved.





Economy wise statistics of KPI on ICT infra structure (by Standard Deviation)

Economies	Telephone fee	Broad band Internet service fee	Optical Fiber Service ratio	Broad band width	Number of secure intenet servers	Bot-infected computers	3rd Gen. celular phone share	Celuar phone adoption rate	Internet adoption rate	Broad Band Internet Service adoption rate	Internet Hosts	Invetment in ICT	Average of standard deviations
Japan	50	90.8	78.9	96.3	48	78.1	76.8	43.5	53.4	48.7	49.5	46.7	63.4
Korea	57.8	52	75.5	50.8	51.1	50.5	70.8	45.6	57.3	58.5	37.7	73.2	56.7
China	40.6	47.6	50.8	46.1	35.3	42.3	32.1	29.3	25.8	28.7	37.8	67.5	40.3
Singapore	76.3	52	45.7	47.3	46.7	43.2	56.7	60	52.9	46.5	44.5	44.2	51.3
Chinese Taipei	81.3	47.6	51.9	46.4	44.8	42.2	44	50.9	51.1	47.3	46.2	48.2	50.1
Italy	45.1	52	46.5	46.8	37.6	46.1	50.7	66.3	45.8	43	49	48.5	48.1
Canada	48.6	45.4	44.5	47	61.1	46.6	46.4	36.1	55.5	55.1	43.4	44.9	47.9
Austlia	49.1	43.9	44.7	47	48	53.5	56.7	55	52.4	45.5	50.5	42.4	49.1
Netherlands	45.9	65.6	45.7	48.8	60.1	58.5	47.3	54.6	61.3	62	63.4	47.4	55.1
Finland	51.3	52	44.5	51.3	52.6	78.1	54.9	53.9	58.7	58.7	65.8	44.6	55.5
Switzerland	52.9	46.1	45.3	47	61.1	47.8	46	52.1	55.3	59.8	55	80.3	54.1
Australia	51.7	43.8	44.5	47.3	61	45.7	55.4	49.7	45.6	50.1	57.9	53.2	50.5
France	47.4	52	44.7	50.8	39.8	42.7	45.9	45.5	44.2	52.3	46.4	46	46.5
USA	45.9	52	47.3	48.3	69	46.6	52.9	44.2	55.3	49.7	78	38.5	52.3
New Zealand	42	44.1	44.5	47	61.6	49.5	43.2	49.4	54	46.7	53.2	42.4	48.1
Potugal	40.4	44.4	44.6	47.3	38.1	41.9	55.7	57.7	38.3	39.9	44.2	51	45.3
United Kingdom	48.9	47.6	44.5	47	59.3	44.6	48.7	55	55	52.9	42.7	52.1	49.8
Hong Kong	48.3	45.4	67.1	47	43	53.5	49.7	65.2	46.1	53.6	42	46.7	50.6
Germany	46.1	47.6	44.5	48.3	49.9	43.2	45	54.7	55	50.6	48.1	42.4	47.9
Spain	45.4	43.5	44.7	48.3	39.8	41.2	52.1	51.9	44.6	44.2	40.2	52.8	45.7
Belgium	45.9	45.4	44.5	46.8	41.4	50.5	39.9	49.7	52.4	53.2	51.4	43.9	47.1
Denmark	50.3	44.2	51.4	50.8	60.9	55.6	42.6	54.1	59.7	64.9	63.2	48.2	53.8
Sweden	52.1	52	59.1	50.8	54.4	55.6	53.9	53.4	59.2	64.9	52.6	44.6	54.4
India	36.5	43.2	44.5	45.8	35.3	42.5	32.4	22.3	21	23.2	37.5	50.3	36.2

Definitions	
Telephone fee	Monthly telephone fee devided by GDP per capita
	Data source: WORLD ECONOMIC FORUM 『The Global Information Technology Report 2008-2009』
Broad band Internet service fee	「Lowest sampled cost US$ per 100Kbit/s 2006」÷ GNI per capita by World Bank 「Key Development Data & Statistics」
	Data source: ITU 「WORLD INFORMATION SOCIETY 2007」
Optical Fiber Service ratio	Percentage of fiber connections in total broadband(Dec 2008)
	Data source: OECD "Broad Band Statistics"
Broad band width	Fastest advertised connection available among all surveyed operators, by country (Mbit/s) (Sept 2008)
	Data source: OECD "Broad Band Statistics"
Number of secure internet servers	Number of secure internet servers per 1 million population
	Data Source: The World Bank 「World Development Indicators Online Database」
Bot-infected computers	Bot-infected computers per 100 broadband subscribers December 2006
	Data source: OECD "Broad Band Statistics"
3rd Gen. celular phone share	Number of 3rd generation celuar phone per 100 subscribers
	Data Source: Pyramid Research Inc
Celuar phone adoption rate	Mobile cellular subscribers; per 100 inhabitants 2007
	Data Source: ITU "ICT Statistics Database"
Internet adoption rate	Intenet users per 100 inhab. 2007
	Data Source: ITU "ICT Statistics Database"
Broad Band Internet Service adoption	Broadband Intenet subscribers per 100 inhabitants 2007
	Data Source: ITU "ICT Statistics Database"
Internet Hosts	Internet hosts 2008
	Data Source: World Bank "Data Statistics, Country profiles" & CIA "The 2008 World Factbook"
Invetment in ICT	Investment in telecommunications 2006
	Data Source: IMD "World Competitiveness Yearbook 2008"

1.1 From “e-Japan Strategy” to “i-Japan Strategy 2015”

e-Japan Strategy

Since 2002, when the Government of Japan had decided and propagated “e-Japan Strategy” in order to become “the world’s most advanced IT nation,” followed by the revised one “e-Japan Strategy II,” which were implemented under the leadership of the IT Strategic Headquarters.

As a result, Japan attained the highest global standards, as demonstrated in our nation’s improved broadband infrastructure and its widened use, by the greater utilization of state-of-the-art cellular phones, and by the improved electronic commerce environment and its dramatic increase in transaction size. Dramatic progress at both the infrastructure and

consumer levels resulted in the world's highest standards in its market and technological environment. Japan is now transitioning from taking a following position to such foremost countries as the United States, which pioneered the IT revolution, to becoming a front-runner in leading the world to create an IT society for the next generation.

New IT Reform Strategy

Under the New IT Reform Strategy set out by the IT Strategic Headquarters within the Cabinet, in January 2006, focus was put on the ability of IT to reform the social structure. Not only will this characteristic of IT be used to benefit national life from a user-standpoint and improve industrial competitiveness, but also to reform the major societal challenges Japan faces, and to disseminate the achieved results to the world.

Ideally, our nation should primarily aim to achieve a ubiquitous network society, whereby "anybody, can use IT anywhere, at anytime," while taking care to assure security and protect privacy. And secondly, by this means, continue to be the most advanced IT nation with the world's highest-level of infrastructure, potential applicability and technological environment.

Priority Policy Program 2006

The Government also had set out "Priority Policy Program 2006" in July 2006 to explicitly identify the policy package to make all the Government to carry out the program with PDCA cycle continuing to assess achievements and speeding up the measures stated in this program, the Japanese Government aim to create a society where "anybody, anywhere, at anytime" can experience the benefits of IT.

Priority Policy Program 2007

Succeeding to the Priority Policy Program 2006, the IT Strategic Headquarters in the Cabinet has been developing "the Priority Policy Program 2007.

The revised one is constructed by the following policy packages:

- Policies to enhance productivity and efficiency both in the Government and the private sectors.
- Those to realize the safe and reliable society
- Those to develop a platform for innovation
- Those to attempt structural reforms by means of ICT
- Those to promote structural reform to enhance business

competitiveness through establishment of management by utilizing ICT

- Enhancement of the presence of Japan in the international competitive society by the provision of valued Information to the world.

1.2 The ICT Policy Roadmap 2008

On 25th January 2008, the Fukuda Administration which was established in September 2007, set out the Governmental Strategy captioned "Direction and Strategy for the Japanese Economy" propagating the Growth Strategies based on "Networking Ability and Environmental Prowess," in which showing the three goals as follows:

- Goal 1: An open country which develops together with the rest of the world
- Goal 2: A country where people can live without anxiety into their 90s
- Goal 3: A country that sustains economic growth even with a declining population

In accordance with the said Strategy, the IT Strategic Headquarters in the Cabinet has set out "ICT Policy Roadmap" in June 2008 (herein-after called "the Roadmap") , in order to reinforce the realization of the goals of both in "New ICT Reform Strategy" and the above mentioned Governmental Strategy.

The Roadmap showed prioritized item of National projects in three categories:

- To realize so-called "one-stop service" by e-Government both in central and local, especially in health care and social security sectors, which should be user-orientated.
- To be safe and reliable society harmonized with the Environment
- To realize the economic development by Networking Ability opened to the World

1.3 The Priority Program 2008 (Final Draft)

In June 2008, the IT Strategic Headquarters in the Cabinet had released the final draft of the Priority Program 2008 (here-in-after called "the Program"), which was compiled as an annual plan for the fiscal year of 2008, to carry out the policy programs shown in the Roadmap.

Among the the policy packages, most of which are succeeded from the Priority Program 2007, the Government initiated the following new projects:

1.3.1 Cyber Specific District

To develop a virtual community to invite concerned industries for which a special privileges to enable participants to carry out innovative trial of services over Internet.

1.3.2 e-Space

To incubate high-value added e-commerce space, pilot projects to deploy innovative ICT over the Nation.

1.3.3 The Digital Cultural Enlightenment

To serve the Nation digitized information services to disclose any and all the intellectual properties kept in public, such as in the National Diet Library, the National Archives of Japan, all the Governmental Offices both in central and local, major libraries, National Museums, and universities.

1.3.4 Digital Fusion to incubate innovative industries

To initiate pilot projects to constitute a new ICT frontier, which can be a platform for new innovative industries.

1.4 i-Japan 2015

In July 2009, the IT Strategic Headquarters in the Cabinet has published the whitepaper named "i-Japan 2015 --- Towards Digital *i*nclusion & *i*nnovation of the people by the people for the people."
In its vision, "the Digital Inclusion" means ICT should include all the nation like air and water fairly. On the other hand, "the Digital Innovation" should support the inclusion by ICT innovation which enables sustainable development of economy with solutions for the environmental issues.

Under this strategy, the Government of Japan has set the following three pillars to solve the National challenge to which we Japan will face in 2015: That is to say, decreasing income and productivity owing to the diminishing birth ratio and the world's fastest aging society, which will result in lack of competitiveness to be enhanced by activeness of the society:

- ICT at people's hand: It shall be available for every people like air
- Breakthrough by BPR on older practices which prevent application of ICT in every sectors.
- Development of confidence on the application of ICT by means of effective control of ICT security to ensure the privacy and to guard

against the risks of ICT.

Under the above mentioned strategy, it is set the following prioritized sectors , to which the implementation of the i-Japan is going to be carried out:

i) e-Government both the central one and the local one
ii) e-Medical care and e-Health
iii) e-Education & Capacity Building
iv) Development of new industry and re-vitalization industries and local economies
v) Further development ICT infrastructure

Singapore Progress Report

28th AFACT MEETING
Yokohama JAPAN
November, 2010

SEC
Singapore EDI Committee

SECTION 1 – General Status Update

1.1 IT Vision – Raising productivity and transforming business processes

Singapore's well planned strategy to harness computer power which began in the early 1980's was led by the Singapore Government. It began with the Civil Service Computerization Programme (CSCP), as part of the National Computerisation Plan. The goal was to make Singapore Government into a world-class exploiter of information technology (IT). The focus was to improve the operational efficiencies through automation and minimize paperwork.

The strategy was implemented through well drafted and executed action plans like e-Government Action Plan (eGAP) I ; the success of which triggered (eGAP II) which was launched in 2003, the focus in eGAP II was to adopt a customer-centric approach to delivering public services.

Three decades on the results of this strategy has paid rich dividends. Every government agency now has eServices for its citizens, residents and foreigners who interact with them on a day to day basis. This has enhanced the efficiency and productivity of the nation as a whole and has positioned Singapore as one of the most sort after nations for doing business.

The Singapore Government is now into the next phase of realizing the iGov2010 5-year master plan. Gov2010 is the Singapore Government's five-year master plan that leverages infocomm to continue to empower the customers and citizens. To achieve this vision, four thrusts have been identified: Increasing reach and richness of e-Services; Increasing Citizens mindshare in e-engagement; Enhancing the Capacity and Synergy in Government; and Enhancing the National Competitive Advantage.

The infocomm sector continues to be a key contributor to Singapore's economy. As per IDA's statistics the revenues for the infocomm industry hit S$62.74 billion in 2009 up from S$58.10 billion in 2008. Singapore was paced 1st among 22 countries, ahead of Canada and the United States of America in the Accenture's e-government study "Leadership in Customer Service: Delivering on the Promise". The fact that major technology companies have setup regional headquarters in Singapore bears testimony to its position as a global infocomm hub.

1.2 State Of the Art Infrastructure

The robust and reliable IT infrastructure that was put in place through National Infocomm Infrastructure (NII) initiative to meet the needs and demands of its economy and society is now being utilized to the fullest.

Some of the key figures published by Infocomm Development Authority Of Singapore (IDA) in its report for Infocomm usage in households and by *Individuals* for 2009 are below:

83% of resident households had access to at least one computer at home.81% of households had Internet access at home. Amongst households with school-going children, 95% had computer access at home. Almost all residents in the age group "7-14" years had access to a computer at any location. Some of the key figures published by Infocomm Development Authority Of Singapore Infocomm usage by *enterprises* for 2009 are below:

Computer usage amongst all enterprises reached 78% in 2009 . Computer usage by enterprises with 50 or more employees has reached 100%. The proportion of enterprises using Internet has reached 75%. Overall, 37% of enterprises in Singapore had a web presence in 2009.

The top Internet applications/services used by enterprises continue to be sending or receiving mails and information search, followed by activities involved in obtaining information from government organisations.

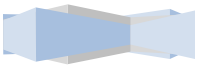
Moving forward, Singapore is looking into the deployment of a seamless, trusted and intelligent infocomm infrastructure that will be realized through its iN2015 Master plan. Such an infrastructure will empower individuals and businesses in Singapore to engage in high speed networked, infocomm-enabled services.

In recent years, Grid Computing has already increasingly been adopted across many industry sectors such as finance and banking, interactive and digital media, manufacturing and healthcare and life sciences. There is a concerted push to accelerate the development of Grid Computing for the business and commercial sector.

1.3 Infocomm for the masses

By tapping into the power of technology to reduce or simplify time-consuming chores, Singaporeans have more discretionary time on their hands. Almost all transactions with government departments are to be made through internet and communication networks – school admissions, tax submissions, permit or license applications, bill payments, and so on are processed electronically. Shoppers compare products by selectively viewing images and video-clips on computer screens, and make purchases through cashless transactions.

Singaporeans and tourists alike use multilingual and multimedia systems to preview cultural events and obtain admission tickets. Congestion on the roads has been reduced by computerized traffic control and electronic road pricing systems. Singaporeans can even avoid commuting altogether by working at home via high-speed broadband connections to their office and customers.



Cashless travel by use of smart cards on public transport has added to convenience. Use of biometric passports has added to the efficiency at immigration checkpoints and check in at air, sea and land ports and border crossings. Cumulative effect of these changes is that individuals will have the time and energy to engage in leisure activities that refresh their mental faculties or renew their social ties.

In order to achieve Singapore government's vision of an infocomm-savvy workforce and globally competitive infocomm manpower to drive national economic competitiveness, IDA has set a target to increase number of infocomm jobs by 55,000 to about 170,000 by 2015. The government also seeks to bridge the digital divide to empower and benefit the elderly, needy and people with disabilities.

This is done through a range of programmes and trainings that promote infocomm awareness, by providing infocomm access and tools to help the less privileged enhance their employability and integrate them to the mainstream of Singapore society.

1.4 Front runner in business facilitation

Singapore has a three-year history at the top of this ranking for small business startups according to World Bank reports . Singapore's business-friendly bankruptcy and labor laws, its low and quick-to-file taxes, and its generally high-tech approach to everything has gained recognition from leading world organisations. A new company can now be set up in four days thanks to improvements in Singapore's electronic business registration service.

Singapore's world-class infrastructure, transparent business practices and liberalized telecom market have attracted major telecom operators since the telecom and IT markets were liberalised in April 2000.

On top of that, a comprehensive system has been put in place to ensure an open and fair market that promotes both competition and co-operation among telecom players in Singapore.

Public and private sector training programmes sustain one of Asia's most infocomm-savvy workforces. And, some of the world's most flexible immigration laws ensure that businesses can recruit offshore talent when they need it.

Singapore nurtures and protects intellectual property. The Intellectual Property Office of Singapore leads a government-wide effort to guard intellectual property rights, and the Writing Down Allowance for Approved Intellectual Properties gives favourable tax concessions for innovations created in Singapore.

Singapore is also a natural test bed for new ideas and products. Its multicultural, multilingual citizens are tech-savvy and internationally recognised as 'early

adopters'. And hand-held devices of all kinds are commonly used for business and leisure, making Singapore a 'living lab' for wireless technologies.

More than 6,000 multinational companies with regional HQs or operations in Singapore bear testimony to its excellent standing among international business leaders and talent.

Section II - e-Readiness and e-Application - eGovernment/eBusiness Related Project Updates

2.1 E-Government – Strengthening home base

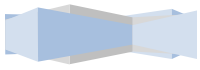
Continuous improvements and innovation has led to Singapore being ranked second in the Networked Readiness Index under the World Economic Forum's Global Information Technology Report 2009-2010. The report also ranked Singapore 1st in its readiness sub-index, which measures the extent to which individuals, businesses and the governments are prepared to use infocomm in their daily activities and operation.

IT adoption in the government sector is championed by eGovernment Policies & Programmes Division (EPPD) and the Government Infrastructure & Technology Division (GITD). These divisions plan, architect ,manage and operate the complex and diverse infrastructure needs of the various government agencies. The action plans for e-Government are synchronised with the National IT plan which aims to adopt state of art technology within the government and greatly enhance the experience of the general public in interacting with the various public service agencies.

Singapore Government through its Infocomm Development Agency (IDA) has designed various innovative, structured and economy relevant programmes which have achieved tremendous success in enabling both the public services and enterprises to effectively adopt infocomm technology. Some of these programmes are highlighted below.

The Government Technology Experiments & Trials Programme (**TREATS**) aim to identify suitable technologies for trials with Government agencies and encourage innovation in the public sector. One such trial was the Centrally Administered Desktop Firewall for the government(**CAFÉ**). The centrally administered desktop firewall solution enhanced the security of government desktop systems against cyber threats. The success of which resulted in a government-wide rollout of CAFÉ.

IDA's Infocomm Local Industry Upgrading Programme (**iLIUP**), which promotes strategic, mutually beneficial partnerships between Singapore's infocomm companies and infocomm multinational corporations (MNCs). iLIUP's underlying principle is to foster partnerships that result in enhancing local infocomm



capability and competitiveness and translating these into increased market share and revenue for MNC partners.

Governments new initiative called Standard ICT Operating Environment (**SOE**) aims for a standard ICT operating environment which will save the public service substantial costs by reducing ICT manpower costs, increase agility and robustness of ICT infrastructure, and enhance user convenience. With a common ICT environment, systems can also be deployed centrally, swiftly and at lower cost, as there is no need to duplicate testing effort of the common environment across multiple agencies.

The SOE programme comprises of a standard desktop operating environment, a standard messaging & collaboration environment and a standard network environment.

Critical Infocomm Technology Resource Programme (**CITREP**) is a training incentive programme to equip Singapore infocomm professionals with critical and emerging skills, thus enabling them to enhance their employability and to improve their organisations' competitive advantage.

With the aim of positioning Singapore as the hub for development and distribution for connected games the government has designed the Connected Games Programme . Singapore aims to leverage its strong infrastructure and robust intellectual property framework, to attract international game service providers to choose Singapore as the location of choice to hub their games as part of their deployment efforts.

Section III - Other advanced applications - IT – enabled Service (ITeS)

3.1 Infocomm@SeaPort programme

The Infocomm@SeaPort programme is a collaboration between the Infocomm Development Authority of Singapore (IDA) and the Maritime and Port Authority of Singapore (MPA). The programme aims to speed up business transformation and operational excellence in the port community through the use of innovative infocomm technologies. The programme forms part of IDA's Intelligent Nation 2015 IT Masterplan to transform Singapore into an intelligent nation and global city using infocomm. Enhance the connectivity and communications between players in the seaport community. The main goal of this project is to promote operational and service excellence and increase opportunities for the seaport community to attract new businesses.

Wireless-broadband-access at SEaPORT (or WISEPORT) project is a collaboration between MPA and IDA under the Infocomm@SeaPort programme to offer mobile wireless broadband network within 15km from Singapore's southern coastline, to allow real-time and data-intensive communications

between the ships and their customers and business partners. WISEPORT aims to provide high bandwidth, low-cost and secure communications channels for ships in our port within the coverage zone to more than 13,000 vessels that navigate through Singapore waters annually.
(Source: IDA Singapore)

3.2 OneInbox project

Driven by IDA , OneInbox is an electronic service that allows individuals and businesses to receive correspondences from government agencies.

Besides providing one-stop convenience to individuals and businesses, OneInbox will also offer potential cost savings to agencies by reducing the need for hardcopy correspondences. The proposed features for OneInbox are as follows:
• Login via SingPass;
• Email/SMS alerts to notify the arrival of correspondences in OneInbox;
• Forwarding to preferred email account(s);
• Save a local copy/print friendly version of correspondences;
• Online archival/retention of correspondences;
• Hyperlink to agencies' e-payment systems if payment is required;
• Hyperlink to agencies' other e-services in response to the correspondence; and
• Allow agencies to confirm receipt of correspondences sent.

OneInbox is expected to bring greater convenience to individuals and businesses, by providing a one-stop access to all correspondences from government agencies in place of hardcopy letters. To the individuals who travel frequently, and to the approximately 180,000 Singaporeans living abroad, OneInbox allows them to access government correspondences instantly, even when they are not in Singapore.

OneInbox also allows individuals and businesses to access the history of letters they received from the government, and eliminate the need for them to call up the agencies should they misplace their hardcopy letters.

Through the integration of the OneInbox with e-services of government agencies, it will also allow individuals and businesses to perform transactions with the government immediately upon receiving the electronic correspondence. The integration with government e-services provides convenience by connecting the receipt of a notification directly to the action to be taken.

(Source: Fact Sheet May 2010 released by IDA)

3.3 BioHub

In 1997, Immigration and Checkpoints Authority (ICA) then (Singapore Immigration & Registration agency) embarked on biometric technology project

and implement the Immigration Automated Clearance System. A decade since its successful implementation , ICA is now building a Biometrics Hub (BioHub) that will act as centralised repository of all biometric information belonging to Singapore citizens, permanent residents and foreigners living or working in Singapore , issued with valid residential pass.

The BioHub when completed in 2010 will provide other crucial biometric-related services such as the centralised screening, verification and administration of biometric information.

The BioHub will collaborate with multiple agencies that capture the biometric information and person can be identified more than one set of biometric information. BioHub will also enable external agencies like the Interpol that require biometric services to subscribe using secure web technologies.

3.4 BackPackLIVE!

With the goal of enabling schools to harness Infocomm technology the Ministry of Education (MOE), the Infocomm Development Authority of Singapore, (IDA) and Microsoft Singapore launched a four year initiative to encourage ICT practices among educator to develop self directed learning and collaboration.

The focus areas of BackPackLIVE! is to promote the innovative use of ICT to transform classroom practices through the support of Professional Learning Communities within and across schools. Educators will be able to tap on the expertise of overseas education consultants and local research partners to develop pilot projects on the use of ICT to achieve self-directed learning, collaborative learning and effective assessment. These consultants will facilitate discussions within the Professional Learning Communities.

The ultimate goal is to grow a local pool of industry partners with innovative ICT solutions for the education sector, and to nurture them into global players.

3.5 Infocomm Security Masterplan 2 (MP2)

The Infocomm Security Masterplan 2 (MP2), launched in 2008, is a five-year roadmap which aims to build upon the achievements of the first Masterplan by enhancing the tenacity of our economy against cyber attacks, thereby boosting the confidence of investors in choosing Singapore as a strategic and secure location for their investments.

Developed through a multi-agency effort led by IDA, under the guidance of the National Infocomm Security Committee, the five-year Masterplan will see the public, private and people sectors working even more closely together to secure Singapore's cyber space.

To achieve the objectives of MP2, some of the key initiatives include:

The Association of Information Security Professionals (**AISP**) is a Government and Industry collaboration which aims to transform infocomm security into a distinguished profession and build a critical pool of competent infocomm security professionals who subscribe to the highest professional standards. The first such association in Asia, it hopes to elevate the standing, professionalism and trust accorded to security practitioners here.

The National Infocomm Scholarship for Infocomm Security support one of the Masterplan's strategic thrusts to enhance infocomm security competencies. It aims to groom scholars in the area of infocomm security and to help ensure that the industry has a fair share of top talents. Through this initiative, scholars have the opportunity to be nurtured by leading infocomm security multinational corporations, local companies and Government agencies during their studies. This includes mentorship with companies and work stints overseas of up to six months.

The Cyber Security Awareness Alliance was established to raise Singapore's infocomm security competency among the public, private and people sectors. It amalgamate efforts from its members by bringing together different strengths and resources to build a positive culture of cyber security in Singapore where infocomm users adopt essential security measures such as firewall and anti-virus software. It also has programmes to raise awareness and adoption of essential infocomm security practices in the private and people sectors.

The Cyber Security Exercises enhance the emergency readiness and responsiveness to large-scale cyber attacks at the national level. These exercises serve as a mechanism to assess our capability and readiness to respond and recover from debilitating events that cause widespread disruptions. In addition, these exercises will also help to identify areas that will further improve the resilience of our national infrastructure and services.

The Sector-Specific Infocomm Security Programmes assess and develop customized solutions that meet the unique security requirements of each sector. It will start with the Government, Infocomm and Energy sectors as earlier assessment from the first Masterplan has shown these sectors to be among the most critical in Singapore.

3.6 Next Generation National Broadband Network (NGNBN)

The Next Generation National Broadband Network (Next Gen NBN) is the wired network of the Next Generation National Infocomm Infrastructure (Next Gen NII), a project under the Intelligent National 2015 (iN2015) master plan to transform Singapore into an intelligent nation and global city, powered by Infocomm.

It will entrench Singapore's infocomm hub status and open doors to new economic opportunities, business growth and social vibrancy for the country. It is

envisioned that Next Gen NBN will eventually provide nation-wide ultra-high speed broadband access of up to 1Gbps and more to all physical addresses in Singapore, including homes, schools, Government buildings, businesses and hospitals. At the start of its operations, the Next Gen NBN is expected to offer users broadband speeds of at least 100Mbps.

By 2010, 60 per cent of homes and offices can already expect to have access to this new, ultra-high speed, pervasive, all-fibre network and coverage is expected to reach 95 per cent by 2012.

In the near future, there will be a range of services riding on the Next Gen NBN that will empower business users at the workplace, as well as users at homes, schools and learning institutions.

The NGNBN has 4 industry Structures layers:

- Passive Infrastructure: Including wire lines and ducts which will be operated and managed by Passive Infrastructure company (NetCo)
- Active Infrastructure: Including switches and routers be operated and managed by Active Infrastructure Company (OpCo)
- Service: Retail Service Providers (RSPs) will purchase bandwidth from OpCo
- Consumers: who will be the end users of the service

OpenNet Consortium and Nucleus Connect have been selected as the NetCo and OpCo respectively by the Singapore Government.

3.7 Primary Care Partnership Scheme(PCPS)

Primary Care Partnership Scheme is an online claim submission and validation system for the hospitals, specialty and primary health care clinics under the National Heath Care Group throughout Singapore

With more than 40,000 claims being submitted each year, the challenge is to automate the claims submission and validation process via a web-based interface, to provide easy access of the Primary Care Partnership Scheme to over 300 primary healthcare, dental and private clinics.

CrimsonLogic's robust, scalable and flexible PCPS (Primary Care Partnership Scheme) system enables primary healthcare, dental and private clinics to perform online claims submission, patient validation and validation of claims.

Integrated with an authentication mechanism and the Clinical Management System (CMS), clinic administration, validation and enquiries can be performed real-time online. Claims validation and submission can be processed in one month, hence cutting down the processing time by more than 50%.

3.8 TradeXchange®

TradeXchange® is a neutral and secure trade platform that facilitates the exchange of information within the trade and logistics community.

Launched in October 2007, TradeXchange® provides seamless inter-connectivity among commercial and regulatory systems for the Singapore trade and logistics community. In addition, it offers a single electronic window for integrated workflow, submissions and enquiries to the Sea Ports, Airports, Maritime Authorities, Customs and Controlling Agencies.

TradeXchange® is a multi-agency initiative led by Singapore Customs, Economic Development Board and Infocomm Development Authority of Singapore.

With TradeXchange®, the trade and logistics community will enjoy simplified and seamless trade transactions through a single interface. It will enhance Singapore's position as the logistics and trading hub for the region and create new sources of growth, hence propelling. The Singapore trade and logistics sector to the next level of competitiveness. The key benefits of this system are : Single interface to multiple systems , Simplified trade information exchange , Faster trade documentation processing , Reduce errors with minimised data re-entry ,Improved efficiency ,lower business costs ,Increased global competitiveness.

TradeXchange® is an IT project initiated by Singapore Customs, Economic Development Board and Infocomm Development Authority of Singapore, and is the first IT project in Singapore to be implemented as a Public Private Partnership (PPP). CrimsonLogic Pte Ltd has been appointed by the Singapore Government as an independent contractor to develop, operate and maintain as well as drive the adoption of this project. CrimsonLogic is working with other content and service providers to offer the TradeXchange® services.

3.9 Wireless@SG

Wireless@SG launched its services in December 2006 with the aim of extending broadband access beyond homes, schools and offices to public places. It offers everyone free wireless access in high human-traffic areas. As of April 2010, there are close to 1.6 million subscribers, far exceeding the original target of reaching 250,000 subscribers by Dec 2008. Wireless@SG users have been clocking in longer hours from a monthly average of 2.1 hours per user per month in Dec 2006, to approximately 10.1 hours per user per month today.

In anticipation of future demands for higher speed Internet as media-rich online content becomes the norm, the access speed has been doubled to 1 Mbps since 1 Sep 2009 and the free service will continue until 31 March 2013. With this enhancement, Wireless@SG users will be able to easily access media-rich and

interactive websites as well as use bandwidth-intensive applications like video streaming.

Launched on 10 Feb 2010, Secure and Seamless Access (SSA) allows users to access Wireless@SG without the need to re-enter their passwords on each log-in (similar to how mobile phones automatically log-on to the mobile networks when the device is switched on).

SSA significantly enhances the user's experience, particularly for users who are using their mobile devices like Wi-Fi capable mobile handsets. SSA also allows quicker and easier access of applications such as email, VoIP, instant messaging and social networking.

(Source: Fact sheet on Wireless@SGprogramme ,IDA Singapore)

Thailand Progress Report

28th AFACT MEETING
JAPAN
November, 2010

Ministry of Information and Communication Technology

Section 1 - General Status Update

I. ICT Infrastructure

In the Knowledge based society, we recognize that the potential of Network and Broadband Internet play an important role in driving the development of our country. One of the most important factors that will enable ICT to bridge the digital divide is the development of quantity and quality of our ICT Infrastructure. This is related to the concept of "Equal Opportunity" to every Thai citizen, regardless of where they are.

The current ICT infrastructure of Thailand ranges from basic services to mobile-telephone, data, and internet services. The use of telephone has risen steadily, with penetration of fixed-line phone equivalent to 15.6 percent of the population per 100. However, in recent years the growth has been slowed due to the rapid expansion of mobile-telephone service.

ICT Infrastructure	Thailand
Population (million)	**64**
Fixed-line phone	7,032,000
Fixed–line phone per 100 persons	11.23
Mobile telephone	30,000,000
Mobile telephone per 100 persons	47.90
Numbers of Computer	2,500,000
Number of Computer per 100persons	3.98
Internet Users	11,900,000
Internet Users per 100 persons	18.59
Broadband Subscribers per 100 persons	0.91
International Internet bandwidth (Mbps)	7910.871

At the same time, the popularity of Internet usage in Thailand has soared during the period of 1999-2004. By the end of 2004 the number of internet users is approximately 12 million users. However most of the usage are involved with the use of instant messaging such as ICQ and MSN, chat services, the use of Web boards, the search for new information, the purchase of goods, the chance to play online games or to download games, software and music.

But despite the drastic increase in Internet usage, more than 50 percent of Thailand's internet users are based in Bangkok and its surrounding provinces which mean that people who live upcountry have fewer opportunities to gain access to new information and knowledge than do people living in Bangkok and the surrounding area.

In mobile telephone service providers, at present there are 7 mobile telephone service providers as follows :

Digital Mobile Phone Service Providers

- Advance Info Services Co., Ltd. (AIS) which operates GSM 900 –MHz and GSM 1800 –MHz digital service;
- Total access Communications (DTAC) which operates cellular and digital 1800 –MHz telephones
- TA Orange Co., Ltd. Which also operates cellular and digital 1800 –MHz telephones
- Thai Mobile Co., which operates 1900 –MHz digital telephones
- Hutchison CAT Wireless Multimedia Co., Ltd. Which has receives a concession from the Communications Authority of Thailand to operate digital CDMA telephones

Analog Mobile Phone Service Providers

- TOT Corporation which operates 470 – MHz or Cellular 470 telephones
- The Communications Authority of Thailand, which operates cellular AMPS 800 A-Band telephones.

In addition, in Telecommunication we have 4 major telecommunications operators in both government agency and private company which are CAT Telecom Public Company Limited (CAT), TOT Corporation Public Company Ltd. (TOT), TelecomAsia Corporation PLc and TT&T Public Company Ltd.

II. Future Outlook

In 2006 we expected that the number of mobile phone subscribers in Thailand will increase over 20% which results from 2.5 – 3G Technology, the growth of smart handset device market such as China and India, the affordable price, and the innovation of mobile applications etc.

A mega project of Thai Government is to provide and establish the integrated government infrastructure network through all country such as Thailand SchoolNet Project, Internet Tambon project, new low-cost computers project. All of these projects will support the use of Information Technology and increase the number of Internet users in different regions of our country, with leading to "bridging the digital divide".

In the next 2-3 years, moreover, Wireless telecommunication services and rapidly broadband internet with integrated content will be one of the key factors to help many service providers of Thailand leverage their business in severe market competition.

III. Government ICT Ultimate Goal

Ultimate Goal : Promote and encourage ICT use to enhance Thailand ICT into a Knowledge Based Society, increase our national competitiveness and become a regional leader in the ICT Industry. In order to attain this goal, basically, we have to focus on major key areas as follows:

(1) Wireless Opportunity for all

Use wireless Infrastructure to every citizen in our entire region in order to strengthen his or her accessibility and opportunity for using ICT.

(2) Enhance ICT knowledge workers

Employ ICT to enable knowledge workers in public sectors to work more efficiently and effectively.

(3) National e-Learning Citizen

While studying in class is not enough in the ICT age, searching more information and knowledge outside will gain advantages. Encourage and promote the use of e-Learning by providing the integrated communications services such as high-speed internet, wireless network, and on-line learning system to every citizen will accelerate effective self-learning of our people.

(4) Review Law and Regulations

Review and enact ICT Law and Regulation to be a practical use.

(5) Broadband Internet Society

Provide Broadband Internet to our society.

(6) Innovative Nation with Knowledge based Economy

Develop and drive Thailand towards Knowledge based Society and Economy by using ICT.

(7) World Animation and Multimedia

Develop our animation and multimedia software to be world class ranking.

IV. Strategic ICT Master Plan (2002-2006)

There are 3 major strategy groups which are as follows:

Strategy Group 1: *Enhance the quality of life for all Thai people towards the Knowledge based society*

Strategy 1: Provide Opportunities for the underprivileged to access knowledge and promote lifelong learning.

Strategy 2: Promote the development of equal opportunity for and use of information and communication technology.

Strategy Group 2: *increase the competitiveness of Thailand through ICT*

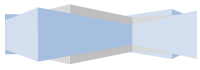
Strategy 3: Support the development of communication networks so that Thailand becomes the premier internet hub in South East Asia.

Strategy 4: Promote and support the development and use of the information and communication technology industry in Thailand.

Strategy 5: Review laws, regulations, concessions and measures to facilitate the development and use of ICT for increases efficiency and competitiveness.

Strategy 6: Promote the development of human resources in ICTs for global competitiveness

Strategy 7: Promote the research and development of information and communication technologies in Thailand that will enhance the economy and society.



Strategy Group 3: *Promote ICTs in governance and Public Administration*

Strategy 8: Turn the Ministry of Information and Communication Technology into a model showcasing the use of ICTs in governance.

Strategy 9: Accelerate the integration of government databases to facilitate government service delivery and governance.

Furthermore, we have put emphasis on 5e approaches which are e-government, e-Education, e-Society, e-Industry and e-Commerce. These can serve as an important tool to leapfrogging the development of our country into as knowledge based society.

e- Government: focuses on using ICT to provide better services to business and citizen. It also boost the efficiency of government operations as well as enhancing good governance and transparency.

e-Education: tackles life-long learning, computer literacy, human resource development and virtual education.

e-Industry: focuses on not only supporting the use of IT industry, but also supporting the production of IT hardware and software itself, as well as standardization.

e-Commerce: focuses on promoting IT in finance and tourism.

e-Society: is concerned with issued of the digital divide, quality of life, culture, health and public participation.

V. Overview of ICT Projects

The government of Thailand initiates many major plans and projects in order to develop IT for all over the country. The details are as follows:

(1) *Portal sited:* The Ministry of Information and Communication Technology (MICT) launched the e-Citizen web portal at www.ecitizen.go.th in April 2003. This portal provides a one-stop service for citizen for all government services.

(2) *MOENet:* According to the government policy to bridge the digital divide among schools and academic institution, Government provides telephone and Internet access to about 45,000 schools in Thailand under MOENet (Ministry of Education Network) Project. It has been in place since 2002; however, this project has been completed in the end of 2005.

(3) *Smart Card:* The Smart Card Project began in 2004 as a joint effort of the Ministry of Information and Communication Technology (MICT) and the Ministry of Interior (MOI). A large number of people, both in government and private sector have become excited at the prospect of having a multi-application Smart Card for such applications as citizen ID, health insurance, social security,

labor card, and other possible uses. MICT purchased 12 million Smart Cards at the end of 2004 and planed to purchase 26 million cards in each of the next 2 years, for a total of 64 million cards by 2006.

(4) *The ICT Computers for Children program:* It has been a part of the MICT's efforts to provide more opportunities for underprivileged children to access ICT. Used computers were donated by various members from both the public and private sectors and were refurbished and given to children, especially those in remote areas. This project was launched on 14 February, 2003 and continues to this day.

(5) *The ICT Computers for Thais:* Project is initiative aimed at bridging the digital divide and bringing Thailand into the Knowledge-based society by providing people with inexpensive computers. The target groups are those with a low income and high school and university students. Both desktops and notebooks are provided. Approximately 150,000 PCs have been ordered. The second phase involves notebooks. As a result of this, Civil servants and State Enterprise employees have been ordered 300,000 notebooks.

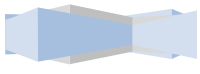
(6) *ICT City:* In order to increase the potential of Thailand as a center for the ICT industry within the region and as part of the larger e-Industry initiative, three ICT Cities will be established in Chiang Mai, Knon Kaen and Phuket.

(7) *TNET:* TNET is Broadband Internet Café. It is an information and e-Learning Center for students and tourists since 2003. TNET is not meant to compete with privately run Internet Café, but to serve as a high-quality and good service net café. At this moment, there are a lot of TNET branches in all regions around the country.

(8) *Open Source Software:* The Software Industry Promotion Agency (SIPA) is established to support and encourage Thailand to make major contributions to the open source community. It is hoped that this will help to promote Thai Software as a brand in the international software marketplace. The first project is Hospital OS, which is an open source software system for managing small (less than 100 beds) hospitals. Currently, we deploy in about 30 hospitals in Thailand. For the tome being, Hospital OS works in the Thai language only. SIPA is working with the Hospital OS developers to bring Hospital OS to the international community.

(9) *Cyber Inspector:* The ICT Ministry has formed a "Cyber Inspector" unit to monitor and prevent abuse of the internet. Cyber Inspector has also responsible for track and collect evidence to prosecute individuals who commit crimes on the Internet.

(10) *Thai National Warning Center:* Since the Dec. 26 2004 tsunami that killed more than 7,500 lives in coastal regions of southern Thailand, the Thai government has sought to strengthen its disaster-warning infrastructure. The National Disaster Warning Center enables experts to monitor, analyze, and



disseminate warnings about potentially deadly natural disasters. The Center is linked to disaster-related agencies—including Hawai'i's Pacific Tsunami Warning Center, the U.S. Geological Survey, and the Japan Meteorological Agency.

(11) *Revisions of existing laws and regulations pertaining to ICT:* Various laws and acts have been passed and many revised to keep up with the changing reality the ICT has brought upon us. Of these, the Electronic Transactions Act 2001 has been passed, while a draft Computer Crime Act, a draft Data Privacy and Security Act and a draft ICT Development and Promotion Act are now being prepared.

(12) *e-Logistics:* The ICT Ministry has taken forward the "Single-Window e-Logistics" initiative proposed by National Economic and Social Development Board as one of national agenda priorities to enhance the overall competitiveness of the country through an efficient logistics-related information flow. This project will deliver a national information network with a single web interface that enables the exchange of electronic documents and services among government agencies, businesses and logistics communication so as to eliminate inefficiencies in administering cross-border transactions and maximize the business value of ICT in fulfilling all import, export, transit-related regulatory and transportation-related requirements.

In this year, we aim to improve the service to Thai Citizens. The challenges are not only on providing individual service, but also in achieving a satisfactory level of available, affordability, reliability, security, and integration of services. In order to accomplish this objective, government will establish an important and essential ICT infrastructure for Thailand which is called Government Nervous System and e-Governments. The Government Nervous System represents the idea of integrating all government agencies with one comprehensive centralized network similar to what biological nervous system does for human.

Such digital nervous system will serve as an effective and efficient means for communications and information exchange among the agencies as well as for command and control of government functions from different level of departments.

The ICT Ministry intends to seek for parties who are interested in participating in the development of the GNS and e-Government. Thai Government is expecting to see the project completed in approximately 2 years later.

Section II – EDIFACT / ebXML/ XML Based Standards Development

2.1- Thailand e-Government Interoperability Framework (TH e-GIF)

In response to the government's directive in promoting cost-efficient exchange of information and linked-up services between applications of different platforms for

citizens, Ministry of Information and Communication Technology (MICT) has completed the preparation of Thailand e-Government Interoperability Framework (TH e-GIF). The framework aims to provide contractors commissioned to develop software solutions for government agencies with a set of guidelines that forms a basis of interoperability among applications in respect to process, data, and technical communication protocol.

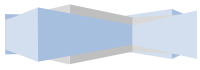
Thailand e-Government Interoperability Framework comprises of two major parts. While the first part deals with managerial aspect of applications integration and development, the second part provides a set of common rules that guides different phases of application development from the elicitation business requirements in terms of process and information to the derivation of XML Schema from information model. The common rules are based on internationally-accepted standards. They include:

- UN/CEFACT's Modeling Methodology for an analysis and modeling of process and information requirements
- UN/CEFACT Recommendation No. 34 on Data Rationalization and Standardization for International trade as a guideline for aligning data elements used within and across information domain
- UN/CEFACT Core Components Technical Specification (ISO 15000-5) for the construction of information model
- UN/CEFACT XML Naming and Design Rules for transforming CCTS-based information model to XML schema

Technical specifications including communication protocol and security measure required to ensure secure and interoperable exchange of information as well as organizational mechanisms for the management of Thailand e-Government Interoperability Standard have also been attached to the latter part.

Since TH e-GIF has been launched, MICT had initiated the electronic document transaction using cross platform interconnection system as a pilot task based on TH e-GIF standard to facilitate the governmental business. At present, MICT is in the third phase which has developed TH e-GIF standard in many categories e.g. Public Health, Labour, Commerce etc.

Section III – e-Readiness and e-Application – e-Government / e-Business Related Project Updates



3.1 The Establishment of National Root CA

On August 5-6 of 2010, Ms. Ladda Jaengkasemsuk, Director of Electronic Transactions Bureau, Ministry of Information and communication Technology, presided over the event "The Workshop on CA-CA Interoperability Framework in ASEAN" under CA-CA Interoperability Project at Siam City Hotel, Bangkok, which had delegates from ASEAN member states; Cambodia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam; and PKI experts from the EU, Japan, PAA (Pan Asian e-Commerce Alliance), Taiwan and Singapore as well as Certification Authority (CA) which are CAT, TOT and Thai Digital ID participate in this meeting. The meeting had approved the collaboration on digital signature recognition in ASEAN, as well as the establishment of the task force consisting of representatives from each member states to consider the issues.

Thailand has established a National Root CA (NRCA) to be the center of trust between domestic CA providers and as a trust point to foreign CA providers. It will ensure the confidence and reduction of the complexity of e-transactions including the cost of interoperability by themselves. In ASEAN, there are several CAs in operation and may encounter the same interoperability problem. Users may be required to trust such the unknown CA individually, which they may not be known and trusted. The transactions between countries in the ASEAN could not expand and increase as expected.

In this case, the CA-CA Interoperability Project was initiated by the Ministry of Information and Communication Technology, who is the member of ASEAN member states. This project is supported by ASEAN ICT Fund in order to establish a framework for CA-CA Interoperability among CA providers in ASEAN. The expected result of project will enable the certificates from different CA providers in ASEAN can be trusted among each others. This will have a positive impact on electronic communication and electronic transactions in ASEAN.

Therefore, this workshop can be considered as an important step in promoting the recognition on digital signature between ASEAN member states. Also, it will be a good starting point for gathering PKI-related information, knowledge sharing from successful PKI experts as well as brainstorming the issues related to the CA-CA Interoperability in each country. The gathering information is crucial for determining the guideline for CA-CA Interoperability between CA providers in ASEAN with efficiency and effectiveness.

In this workshop conference, the organizer had invited foreign-expert speakers to share knowledges and experiences about successful trust models, including presentation from ASEAN delegates to share knowledge and experiences on the development of internet security and PKI technology in their countries. The meeting had agreed to create the recognition on digital signature in ASEAN, as

well as the establishment of task force, consisting of representatives from each member states, to consider the issues such as legal recognition on foreign digital signature, and recognition criteria and technical interoperability model.

3.2 Thailand Single Window e-Logistics

Recognized as a means to promote trade efficiency and national competitiveness, Single Window e-Logistics has been prioritized as one of the national agenda since 2003. Several projects have been going on implementing to affirm Thailand's commitment in accomplishing the ASEAN Agreement and Protocol to Establish and Implement ASEAN Single Window.

Viet Nam Progress Report

28th AFACT Plenary
Yokohama, Japan
November 26, 2010

Vietnam e-Commerce and Information Technology Agency (VECITA)
Ministry of Industry and Trade

SECTION I - GENERAL CONDITION UPDATE

The global economic crisis greatly affected Vietnam's economy in 2009. Furthermore, natural disasters happening in many regions negatively impacted the economy growth rate and the life of a portion of people. In this situation, the government issued various policies and drastic measures in order to prevent recession, maintain economic growth and ensure social welfare. Enterprises also endeavor to stabilize business and production activities, expand domestic market and seek new international ones. Eventually, Vietnam economy stably developed with the GDP growth rate reached 5.32%. E-commerce also asserted its important role as the tool to help enterprises reduce operation cost and improve competitiveness in the increasingly competitive global market.

Vietnam E-commerce Report 2009-2010 is composed with the view to assess the implementation of e-commerce laws and policies, as well as the status of businesses' e-commerce application in 2009. Furthermore, the report summarizes and analyzes the implementation of important measures stipulated in the Master Plan on E-commerce Development for the 2006-2010 period, including online public service provision and e-learning. On that basis, the report proposes some suggestions for better implementation of e-commerce activities in 2010, establishing the foundation for constructing the Master Plan on E-commerce Development for the 2011-2015 period.

After 4 years' implementation of the Master Plan on E-commerce Development for the 2006-2010 period approved by the Prime Minister at Decision No. 222/2005/QD-TTg dated 15/09/2009 (Decision 222), Vietnam e-commerce have substantially grown and gradually come into life, contributing to the nation's overall development.

To prepare for the final year's implementation of Decision 222 and establish foundation for constructing Prime Minister's Decision on the Master Plan on E-commerce Development for the next 5-year period 2011-2015, in 2009 the Ministry of Industry and Trade conducted a survey on e-commerce application situation at more than 2000 enterprises nationwide. Based on the survey result, the Ministry of Industry and Trade releases the Vietnam E-commerce Report 2009 with in-depth analysis and assessment of Vietnam businesses' e-commerce status as of 2009. Also, the Report presents assessment of the implementation of some major tasks stipulated by Decision 222, including promulgation and implementation of e-commerce legal and policy framework, online provision of public services, and e-learning; as compared with the previous years' implementation.

Based on Law on E-Transactions, the Decision No. 1073 /QĐ-TTg dated 12/07/2010 was issued by the Prime Minister on approving the Master Plan on e-Commerce development for the 2011-2015 period

The Master Plan on e-Commerce development has main following contents

General objectives: E-commerce will become common and reach the advanced level of the members of the Association of Southeast Asian Nations (ASEAN), contributing to improving the competitiveness of enterprises and the nation, thereby accelerating the process of national industrialization and modernization.

Specific objectives::

1. All large-sized enterprises will conduct e-commerce transactions in the form of business-to-business, of which:

a/ 100% will use e-mails in their production and business operations;

b/ 80% will have websites regularly updated with information on their operation and product advertisements;

c/ 70% will join websites for goods sale (below referred to as e-commerce websites) for trading of goods and services related to their production and business operations;

d/ 5% will join e-business networks to exchange e-documents according to the standard of e-data interchange;

e/ 20% will apply special-use software to their production and business management;

f/ To form a number of online commodity exchanges for products made in Vietnam which are of high marketability in the world;

g/ To found a number of large-sized enterprises to provide e-commerce services with prestige at home and in the region.

2. All small- and medium-sized enterprises will conduct e-commerce transactions in the form of business-to-consumer or business-to-business, of which:

a/ 100% will use e-mails in their production and business operations;

b/ 45% will have websites regularly updated with information on their operation and product advertisements;

c/ 30% will join e-commerce websites for trading of goods and services related to their production and business operations.

3. Facilities to assist consumers in participating in e-commerce in the form of business-to-consumer will be initially formed, with which:

a/ 70% of modern supermarkets, shopping malls and distribution centers will accept non-cash payments made by consumers to purchase goods;

b/ 50% of providers of electricity, water, telecommunications and communications services will accept service charge payments made by households electronically;

c/ 30% of business establishments in such sectors as transportation, culture, sports and tourism will develop channels for e-transactions with consumers.

4. Most public services related to production and business operations will be provided online, of which:

a/ 80% of import- and export-related public services will be provided online at level 3 or higher levels before 2013 and 40% of these services will reach level 4 by 2015;

b/ E-customs procedure services will be provided online at level 3 or higher levels before 2013;

c/ Tax-related services, including value-added tax and personal income tax payment declarations, will be provided online at level 3 or higher levels before 2013;

d/ Business and investment registration procedure services, including grant of enterprise registration certificates, investment certificates and certificates of branch or representative office operation registration, will be provided online at level 3 or higher levels before 2013;

e/ 50% of public services related to commerce and production and business operations will be provided online at level 3 or higher levels before 2014. By 2015, 20% of these services will reach level 4.

Contents

I. Perfection of the system of legal documents on e-commerce

To review and revise existing relevant policies and legal documents and promulgate new ones to support and facilitate the development of e-commerce

and make it conformable with international practice and Vietnam's international commitments.

1. Legal documents concerning recognition of the legality of e-documents, including:

a/ Legal documents recognizing the legality of invoices and accounting documents in electronic form which satisfy specific criteria for use by enterprises in performing tax and accounting operations upon organizing online trading of goods or provision of services;

b/ Legal documents recognizing the legality of dossiers, applications and written certifications in electronic form which satisfy specific criteria for use by enterprises in performing part of or the whole process of business registration, investment registration or procurement bidding via electronic means;

c/ Legal documents recognizing the legality of written contracts on goods trading or service provision, permits, licenses or other certifications in electronic form, which satisfy specific criteria, to facilitate international trading and organize paperless trading.

2. Legal documents defining the provision of e-commerce services as a business line with a separate registration code.

3. Legal documents on taxation:

a/ Policies and legal documents providing value-added tax and enterprise income tax incentives in order to create a favorable environment for enterprises engaged in e-commerce and to encourage consumers to conduct online trading;

b/ Regulations on product headings and dutiable values applicable to export or import of digitalized products in compliance with international practice and Vietnam's international commitments.

4. Legal documents on consumer protection: regulations on consumer protection and assurance of legal protection of consumers in e-commerce transactions according to international standards as in conventional trading transactions.

5. Legal documents on management of e-commerce websites: regulations on registration and management of e-commerce websites based on a transparent and competitive business environment.

6. Legal documents on information safety:

a/ Legal documents on information safety in e-commerce transactions;

b/ National standards and technical regulations, which are applicable to parties to e-commerce transactions, suitable to transaction size, and conformable to national and international standards;

c/ Legal documents on protection of personal information in compliance with relevant laws, ensuring that personal information in e-commerce transactions is protected by law according to international standards and Vietnam's international commitments.

7. Legal documents on settlement of disputes and handling of violations in e-commerce:

a/ Legal documents providing for the legality of e-documents used as evidence;

b/ Legal documents on settlement of disputes by arbitration in c-commerce, covering a mechanism for online settlement of disputes;

c/ Penalties for violations of the law on e-commerce; competence and mechanism for inspection, examination, and handling of administrative violations in e-commerce by state management agencies in charge of e-commerce;

d/ Inclusion of hi-tech crimes and e-commerce-related crimes in the Penal Code.

8. Other legal documents:

a/ Legal documents on intellectual property, which are conformable to international practice and able to facilitate the development of e-commerce;

b/ Legal documents governing subjects emerging in e-commerce;

c/ Policies and legal documents promoting the provision of online services;

d/ Policies and legal documents for realizing models of online payment.

II. Development of human resources for e-commerce

1. To conduct public information work to improve public awareness about benefits of e-commerce:

a/ To develop programs on training of central and local economic management personnel and programs on intensive retraining of specialized e-commerce officers;

b/ To publicly inform benefits and skills of application of e-commerce to enterprises and consumers of major production or service sectors; to advertise typical enterprises which have succeeded in applying e-commerce and providing e-commerce services.

Box 1: Master Plan on e-Commerce development for the 2011-2015 period

1.1. E-COMMERCE APPLICATION AT ENTERPRISES ACHIEVED ENCOURAGING RESULTS

A survey by the Ministry of Industry and Trade on more than 2004 enterprises throughout the country in 2009-2010 showed that nearly 100% of enterprises implemented e-commerce application at different scales and levels.

According to the survey, 100% of enterprises are equipped with computers and each enterprise has 25.8 computers on average. 98% of enterprises have access to the Internet, of which 96% have by ADSL or leased line connection. 86% of enterprises use email for business purposes, of which the rates for large enterprises and SMEs are 95% and 78% respectively.

The highlight of e-commerce application in 2009-2010 is the increasing rate of enterprises utilizing e-commerce software for production and business activities. Aside from 92% of businesses using accounting software, enterprises bravely invested and implemented other specialized software such as human resource management (43%), supply chain management (32%), customer relation management (27%) and enterprise resource planning (9%). The implementation of these softwares will help to optimize and improve business efficiencies of enterprises. Besides, most of enterprises have also been aware of and started to use online public services provided by state agencies.

The efficiency of businesses' e-commerce application in 2009 has been obvious. While only 5% of total cost was spent for e-commerce and IT investment, on average 33% of business revenue came from orders via electronic means.

1.2.E-COMMERCE HAS DEVELOPED NATIONWIDE

After 4 years' implementation of the Master Plan on E-commerce Development 2006-2010, e-commerce development had extended beyond the big cities to spread all over the country.

According to the survey by the Ministry of Industry and Trade in 2009, 53% of surveyed enterprises are located outside Hanoi and Ho Chi Minh City. The statistics show that 100% of businesses are equipped with computers. Most of local enterprises are connected to the Internet, mostly by ADSL. Only about 2%

of surveyed businesses use dial-up connection, and 2% have not had Internet connection.

The assignment of staff specialized in e-commerce has been paid more attention by local enterprises. 27% of businesses appointed staff specialized in e-commerce. The issue of customers' data privacy has also gained more interest.

As e-commerce applications in enterprises intensified, the state agencies in localities were increasingly concerned about the issue of state management on e-commerce. With the coordination and guidance of the Ministry of Industry and Trade, 58 out of 63 provinces and cities have approved their own local plans for e-commerce development. Most of provincial industry and trade departments throughout the country have appointed e-commerce specialized staff to implement activities in this field.

Localities have also coordinated closely with the Ministry of Industry and Trade, together with Vietnam Chamber of Commerce and Industry to organize various activities of e-commerce training and awareness raising for businesses, state officials and citizens. Since 2006, the Ministry of Industry and Trade has held about 200 training courses for localities, of which over 90% are for provinces and cities other than Hanoi and Ho Chi Minh City.

With variable levels of economic development across localities, the rapid development of e-commerce application throughout the country shows that businesses and state management agencies in localities have been aware of the importance of e-commerce as a driver of economic development.

1.3. ONLINE PUBLIC SERVICES CONTINUED TO DEVELOP POSITIVELY

Online public service provision was an important task specified in Decision 222: "By 2010 government agencies must provide all public services online, in which priority are services such as electronic tax filing, electronics customs, electronic import/export procedures, electronic procedures related to investment and business registration, and specialized trade licenses...".

After 4 years' implementation of Decision 222, online public service provision of ministries, ministerial-level agencies, provinces, and cities directly under government have been dramatically improved. Up to now, some trade-related online public services have been provided at level 3 such as electronic certificate of origin (eC/O) issued by the Ministry of Industry and Trade, electronic customs procedure by the Ministry of Finance... At nation-wide scale, 18 provinces have provided online public services at level 3, many of which are related to trade and business such as issuing certificate of business registration, certificate of representative office establishment, certificate of foreign invested enterprise establishment...

Since October 2005 to 2010, the Ministry of Finance initiated the pilot implementation of e-customs procedures through 2 phases: narrow pilot from October 2005 to November 2009 and widened pilot from December 2009 to December 2011. The e-customs procedures was aimed to facilitating export activities of enterprises, step by step reforming customs procedures to conform with the international customs standards, and transforming manual customs procedures to electronic customs procedures. After the narrow pilot phase, the Ministry of Finance has set up and fixed a model of e-customs procedures that operate smoothly at the Customs Departments of Ho Chi Minh City and Hai Phong City, bringing visible economic benefits for businesses and the State through saving time, manpower, and costs. On that basis, since the end of 2009 the Ministry of Finance has expanded the pilot implementation of e-customs procedures to a larger scale.

The Ministry of Industry and Trade led the way in providing online public services supporting trade activities of businesses. Since early 2006, the Ministry of Trade (now the Ministry of Industry and Trade) has launched the electronic certificate of origin system (eCoSys) to manage and issue C/O for export businesses. So far, eCoSys has been implemented nation-wide, all businesses in demand can send C/O application via eCoSys to C/O issuance agencies under the Ministry of Industry and Trade or VCCI without entering any personal contact as before. By the end of November 2009, over 1,200 enterprises had joined eCoSys, and the total number of electronic C/O issued reached over 70,000.

Furthermore, in implementation of Prime Minister's Decision No. 30/QD-TTg dated January 10, 2007 approving the Plan on simplifying administrative procedures in state management areas for the 2007-2010 period, ministries and localities have also been promoting the provision of other online public services. Most of ministries' public services have now been provided online at level 2.

1.4. E-LEARNING HAS BEEN FORMED AND DEVELOPED

Although e-learning is a new field, it has developed rapidly. With obvious advantages such as the flexibility in time and studying places, e-learning creates a favorable environment for students, especially staff of organizations who can participate in online courses without any negative impact to their work.

E-learning has been popularly implemented in education insitutions at both college and university level. Many large enterprises and some state agencies initiated the e-learning application process. Several enterprises providing e-learning services were found to meet the high demand for this modern education method.

According to the survey by the Ministry of Industry and Trade on e-learning applications at universities and colleges, 37 of 62 surveyed institutions have implemented e-learning and 7 are planning to do so. None of the surveyees is uninterested in e-learning. Of the 37 institutions that have implemented e-learning, 9 have done so for more than 3 years, the remaining 28 have less than 3 years' experience in the field. In most institutions, the mode of application is still limited to sharing digitalized research and learning materials on computer networks. Some institutions have introduced learning management software in their e-learning system to manage the online teaching and learning process.

Aside from education institutions, enterprises and state administrative agencies also started to implement e-learning applications, especially big organizations with high demand for improving staff's knowledge and skills, such as the Ministry of Finance, the Ministry of Information and Communications, FPT Group, VNPT, Techcombank Vietnam, etc.

With many advantages that help to supplement the traditional education methods, e-learning is predicted to develop rapidly in the upcoming period.

1.5. PURCHASING GOODS AND SERVICES VIA INTERNET INCREASINGLY BECAME POPULAR TO A SEGMENT OF CONSUMERS IN BIG CITIES

Along with the recent rapid development of Internet and e-commerce, forms of trading via the Internet gradually developed and became popular to a segment of consumers, especially office workers and students in big cities.

The most popular form of trading via the Internet was the sale and purchase of goods and services on e-commerce websites. So far, many enterprises have sold their goods and services via e-commerce websites, especially enterprises in sectors of aviation, tourism, general supermarket…

By the end of 2009, trading via e-commerce websites has become popular for several categories of goods and services such as flight ticket, electronics goods, mobile phone, computer, books, tourism tour, hotel reservation, perfume, flower… In order to meet consumers' demand, enterprises also applied flexible delivery and payment methods, from online payment, bank transfer to cash on delivery.

Aside from professional e-commerce websites, recently, many social networks also appeared and attracted a hundreds of thousand members. With big numbers of participants, these social networks are becoming a promising potential market for businesses. Many enterprises and individuals have detected the potential and invested in these markets in various forms, including opening sales topics and leased favorable slots for their topics to sell goods or advertise

services. Sellers directly communicate with consumers under those topic threads and perform the sale contracts by flexible methods which are suitable for consumers.

SECTION II – EDIFACT/EBXML/XML BASED STANDARDS DEVELOPMENT

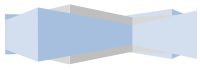
Vietnam businesses in many sectors started to establish business network combined with electronic data interchange applications according to international standards or standards that were adopted by businesses themselves. However, in recent years, State management agencies have only further focused on establishment and popularization of e-commerce standards to improve awareness for managerial stafs and provide technical implementation support for many business types. From 2002 until now, Ministry of Science and Technology with the mission of state management agencies in formulating e-commerce standards has formulated, promulgated and popularized many set of standards related to e-commerce sector, including standards related to trade data interchange, electronic data interchange for administration, commerce and transport (EDIFACT), data elements and interchange formats, XML schema definition, information processing, etc…including:

- TCVN ISO 7372:2003, Trade Data Interchange – Trade Data Element Directory.
- TCVN ISO 9735:2004, Electronic Data Interchange for Administrative, Commerce, and Transport (EDIFACT).
- TCVN ISO 8601:2004, Data Elements and Interchange Formats – Information Interchange – Representation of dates and times.
- TCVN ISO/TS 20625:2002, Electronic Data Interchange for Administrative, Commerce, and Transport (EDIFACT) – XML Schema Definition based on recommendations of EDIFACT.
- TCVN ISO 14662:1997, Information Technology – Open-EDI reference Module.
- TCVN ISO 6093:1985, Information Processing – Representation of numerical values in character strings for information interchange.
- TCVN ISO/TS 150000 ebXML: 2006 – Electronic business Extensible Markup Language.
- TCVN 7789 (part 1-6):2007: Information Technology – Metadata Repository.
- Decision 19/2008/QD-BTTTT dated 09/04/2008 stipulating IT application standards in State agencies and Decision 20/2008/QD-BTTTT dated 09/04/2008 promulgating IT application standard directory in State agencies in which there are many standards related to e-commerce sector under the group of data integration, information access and data specification.

Ministry of Finance and State Bank promulgated many legal texts guiding businesses
unanimously use IT standards that are applicable to the sectors of card payment, inter-bank

international transfer (such as ISO 8583, SWIFT) and information integration and interchange (based on XML foundation). Ministry of Finance also promulgated many legal texts guiding IT performance and application in customs activities (Decision 50/2005/QD-BTC dated 19/07/2005 by Minister of Finance stipulated pilot implementation process of electronic customs procedures for import and export cargoes, oicial letter 3339/TCHQ-HDH of General Department of Vietnam Customs dated 19/08/2005 guided e-customs procedures and processes, Decision1447/QD-TCHQ dated 23/02/2007 promulgated temporary regulations on formatting a number of remote e-customs declarations for customs information system). Presently, electronic data interchange from local customs departments to General Department of Vietnam Customs focused on web/Internet and traditional XML foundation. With the objectives of modernizing customs activities and harmonizing with international standards, General Department of Vietnam Customs have studied WCO and EDIFACT electronic data interchange standards to implement in the near future. The Ministry of Industry and Trade began establishing and implementing electronic certificate of origin issuing system (eCoSys) since 2006. Previously, eCoSys was developed based on web/Internet and traditional XML. In 2008, Ministry of Industry and Trade studied, established and promulgated the National technical regulation on electronic data interchange for issuing certificate of origin. This national technical regulation applied to agencies issuing electronic certificate of origin (eCO), agencies and individuals using eCO issuing service and value-added network companies. In addition, this regulation also stipulated technical processes and criteria related to electronic data interchange methods for issuing eCO that were managed or authorized to manage by Ministry of Industry and Trade, including initiation, implementation, control and supervision of electronic data interchange transactions for issuing eCO. This regulation application will better support for State agencies in managing import and export
digital data and gradually facilitate trans-border trade activities based on connection with
eCO issuing systems of other countries in the region and the world according to advanced
technology standards – EDIFACT of United Nations.
Besides the above technology standards, a number of agencies and businesses in the sector of finance – banking, communication – information technology, industry, trade and service also established, promulgated, and used IT standards that applicable to the sectors of information interchange, card payment, international transfer and system integration (such as XML, ISO 8583, SWIFT, etc…).

In Viet Nam, now EDI and Electronic service bring many benefits to enterprises by saving them time and costs in banking and financial sectors. For example, instead of going to customs agencies and spending a lot of time to handle export and import procedure, the enterprise will carry out these tasks through electronic customs system. The customs clearance process will be quickly completed by



using electronic equipment and electronic data process of customs agency. The enterprises will declare customs information according to the criterion and standard forms of General Department of Vietnam Customs. The completion of customs dossier must be guaranteed and it has the same legal effect as the paper one. After receiving electronic customs information, customs department will carry out the tasks of examination and acceptance of information. If the information is accepted, the customs department will issue the customs declaration code and classify the goods into the section.

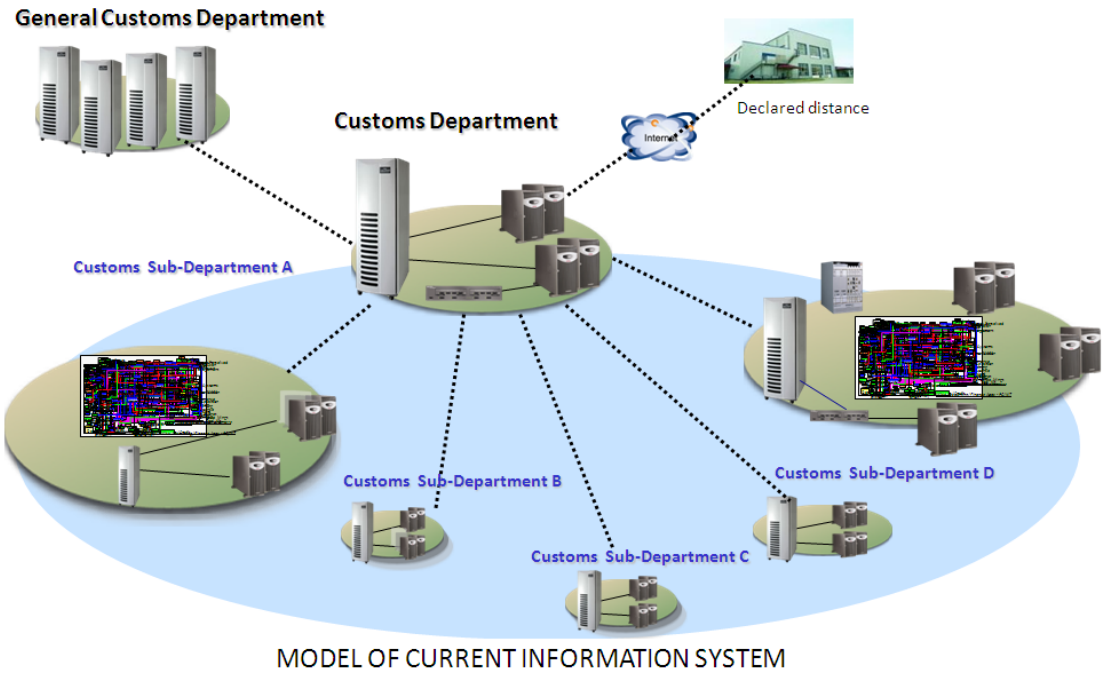


Figure 1. Model Electronic Customs Project

The objectives of the electronic customs project are transforming Ho Chi Minh City Customs (2010) and Haiphong Customs (2011) to electronic customs agencies. So far, the basis objectives as shortening customs clearance procedure, reducing paper documents and the costs for enterprise have been achieved. The turnover of import goods cleared through electronic customs increases quickly annually, from 8% in 2006 to 16% in 2007 and to 17.5% in September 2008 and increased around 10 percent annually.

The US Trade and Development Agency (USTDA) provided the Vietnamese Ministry of Finance with a non-refundable aid of US $718,600 to fund Việt Nam's national project on single window customs.

The signing ceremony, Hà Nội, September 15, 2010 – Photo: VGP/Huy Thắng

The project's common goals include facilitating trade, increasing state budget collection, strengthening state management over import and export activities, and ensuring the realization of commitments in ASEAN's agreement and protocol on single window mechanism which Việt Nam signed in 2008.

The project focuses on researching and assessing the existing legal framework, information technology systems and procedures and give recommendations on how to carry out administrative procedures. Three government agencies, the General Department of Customs, the Ministry of Transport and the Ministry of Industry and Trade, are major Vietnamese implementers of the project. Source: http://news.gov.vn/Home/US-backs-VNs-single-window-customs-project/20109/8664.vgp

Box 2: US funds Việt Nam's national project on single window customs

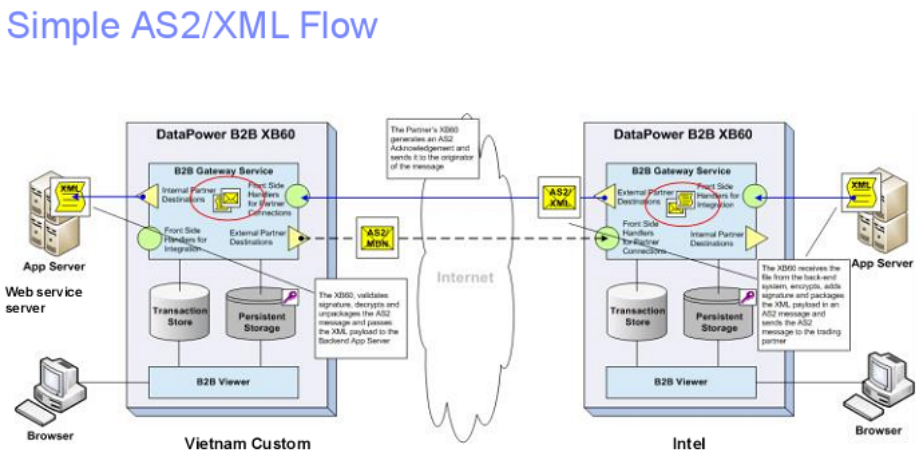


Figure 2: EDI project connecting customs to Intel by using IBM product

SECTION III – E-READINESS AND E-APPLICATION E-GOVERNMENT/E-BUSINESS RELATED PROJECT UPDATES

Report on internet statistics of Vietnam: Statistics on Internet development upto 8/2010		
- *Users*	**25441624**	
- *Users per capita*	**29.64**	**%**
- *Total International connection bandwidth of Vietnam*	**101992**	**Mbps**
- *Total domestic connection bandwidth*	**223340**	**Mbps**
(Connection bandwidth through VNIX)	**83000**	**Mbps**)
- *Total VNIX Network Traffic*	**60573210**	**Gbytes**
- *Dot VN domain names*	**165776**	
- *Vietnamese domain names*	**5276**	
- *Allocated Ipv4 address*	**8360448**	
- *Allocated Ipv6 address*	**46360852480**	
- *Total broad bandwidth Subscribers*	**3425254**	

Box 3: Statistics on Internet development upto 8/2010
http://www.thongkeinternet.vn/jsp/trangchu/index.jsp

During period 2009-2010, nunber of EC and IT Projects are implemented based on Decisions issued the Prime Minister as follows.

- Decision No.51/2007/QD-TTg issued the Prime Minister dated 12th April 2007 on approving the Program on the Development of Vietnam Software Industry towards 2010;

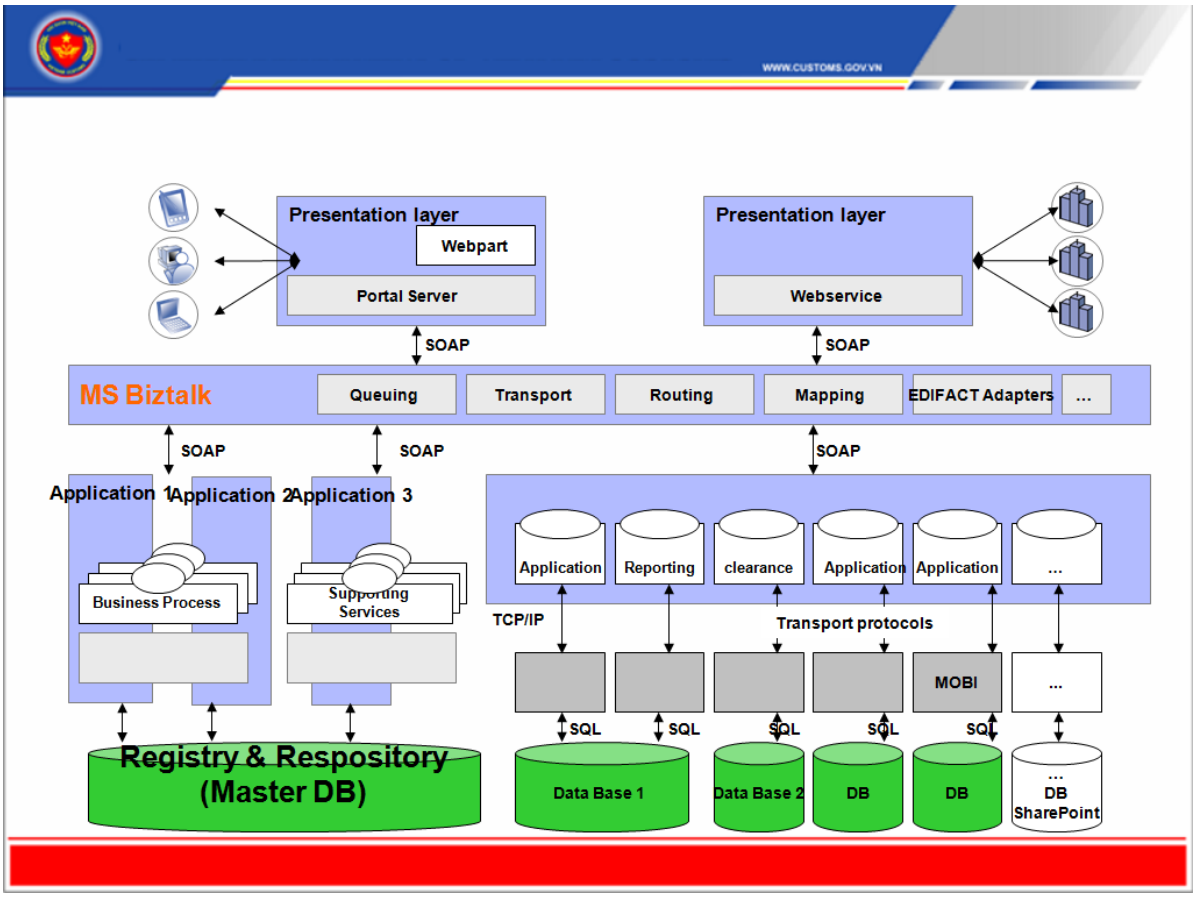
- Decision No.56/2007/QD-TTg by the Prime Minister dated 3rd May 2007 on approving the Program on Vietnam Digital Content Industry Development towards 2010;

- Decision No. 50/2009/QD-TTg by the Prime Minister dated 3rd April 2009 on promulgating "Regulations for managing Software industry development program and Vietnam Content industry development program";

- Decision No. 5056/QĐ-BCT by Minister of Industry and Trade dated 16th September 2008 on approving the Plan on the implementation of information technology development Program during the 2009 – 2010 period, assigning Vietnam E-Commerce and Information Technology Agency to be the investor for Project: " Building up e-business network for large scale enterprises";

1. Electronic customs project

The Ministry of Finance carried out the National Electronic Customs project. Electronic customs procedures were first implemented on a pilot basis in Ho Chi Minh City and Hai Phong City customs agencies. Then, it will be expanded to other customs agencies of the cities and provinces that are adequately qualified to execute electronic procedures.



However, the results of electronic customs do not reach the expectations. The percentage of enterprises joining electronic customs is not high. So far, electronic customs only benefit enterprises filing for goods that are classified in the blue section. The procedures for goods classified in yellow and red section are still quite complicated. Besides, the system's interconnection with trade agencies, tax authorities, treasury, banks, CO issuing agencies still not convenient, barring prompt and accurate information flow. Tax data entry for enterprises requires many steps and some steps are difficult to fulfill. Besides, the risk management mechanism between manual and electronic process is not uniformly applied, and many officers are not qualified for the job. Moreover, data transfer is slow and the e-declaration software is not user-friendly. The campaigns, propagandas to attract enterprises to use electronic customs procedures are not effective. Many enterprises are not well aware about the benefits of electronic customs so they have not invested in equipment and human resource appropriately.

Presently, General Department of Vietnam Customs is exerting efforts to improve the quality and accelerate the implementation of electronic customs service.

2. Electronic Data Exchange System of Unilever Vietnam and Metro Cash & Carry

Since 2007, Unilever Vietnam and Metro Cash and Carry agreed to implement Electronic data interchange project (EDI project). They are the first two businesses applying EDI in Vietnam.

After 9 months of building barcode mapping and connecting technologies with each other via hubs, the data have been read, understood and automatically processed. After 1 year, Metro Cash & Carry examined and successfully exchange invoices.
The main standard that the 2 businesses used including barcode EANCOM13 in accordance to EDI, GS1 standards to unify for each order and delivery product (Buyer order the product via its barcode and the Supplier will deliver the right product with its barcode), GLN standard of GS1 organization for Buyer's code and Supplier's code. In addition, other standards such as UN/EDIFACT and XML have been studied to apply in the near future. Other codes such as order and delivery place code, supplier's code were built according to EAN13 and have been registered.

Besides invoices, EDI project will expand to apply EDI to exchange other transactions such as invoice processing, electronic delivery notes. On the basic of this project, in the near future, Metro Cash and Carry will expand to other suppliers. Presently, Unilever is applying EDI to order process for one supermarket and about 240 suppliers, from this project, Unilever will expand to other suppliers nationwide.

3. Vinamilk's electronic business network system

With Vinamilk, modern IT system development plays an important role in its long-term business strategy. Current distribution and manufacture management system cannot provide information accurately, punctually for business and production management. Vinamilk built a new management system with 2 solution including Oracle E- Business Suite and SAP CRM (Customer Relationship Management) to solve this problem.

This system allows Vinamilk to manage all data from suppliers on online environment (Internet system uses SAP programs) or offline environment (use Solomon software of Microsoft). Centralized information will help Vinamilk make timely decisions as well as support planning. The information collection and management of sale agents were to satisfy customers at higher level.

After a successful pilot period, since 01/2007, Vinamilk has officially used Oracle E-Business Suite (EBS) version 11.5 and SAP CRM and since 4/2007, ERP program has been officially operated. With overall business management system, Vinamilk can manage all finance – account, procurement, sales and production situation as well as analyze the company performance with 16 agents from Hanoi to Cantho. This is the biggest ERP solution implemented in Vietnam.
SAP system was built based on SAP technology foundation. In Vinamilk, Net Weaver integrated information from ERP system, which used:
- Oracle EBS – the solution to solve the connection between suppliers and other processes within businesses including normalized modules such as Finance, order management, Procurement, manufacturing, etc…
- Microsoft Exchange: Email system.
- Solomon (now called Microsoft Dynamics SL) used at distributors and applied on PDA for sales persons.

These 3 applications were integrated into Business Warehouse by NetWeaver to serve smart reporting system; help Management Board have accurate and online information about business movement situation nationwide.
At data center in Vinamilk head office, there are 4 host computers IBM with other host computers that store solutions of Oracle EBS, SAP CRM and Microsoft Exchange. Vinamilk built this center with 7- level spare system – this is the highest spare rate according to international spare standard to ensure the system operate continuously.
IT applications to modernize distribution channel helps Vinamilk support effectively employees to improve skill and professionalism and ability to grasp market information by using information shared in the whole system. In addition, Vinamilk also manages all price and promotion policies in distribution system towards international standard and improve management capability in international integration process.

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- 2010 AFACT Heads of Delegations
- 2010 Committee Chairs
- 2010 Associate Members
- 2010 eBusiness Asia Committe

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Meeting History

	Year	Date	Place	Remark
1st	1990	Nov. 5~6	Tokyo, Japan	JS/EB Plenary
2nd	1991	Jun. 25~26	Singapore	JKS/EB Plenary & EDICOM '91
3rd	1991	Oct. 28~29	Tokyo, Japan	AS/EB Plenary
4th	1992	Jun. 11~12	Tokyo, Japan	AS/EB Plenary & EDICOM '92
5th	1992	Oct. 29~30	Seoul, Korea	AS/EB Plenary
6th	1993	May. 20~21	Beijing, China	AS/EB Plenary
7th	1993	Oct. 25~27	Seoul, Korea	AS/EB Plenary & EDICOM '93
8th	1994	Jun. 6~8	Kuala Lumpur, Malaysia	AS/EB Plenary
9th	1994	Nov. 28~30	Chinese Taipei	AS/EB Plenary & EDICOM '94
10th	1995	Jun. 5~7	Bangkok, Thailand	AS/EB Plenary
11th	1995	Nov. 1~3	Kuala Lumpur, Malaysia	AS/EB Plenary & EDICOM '95
12th	1996	Jun. 4~7	Manila, Philippines	AS/EB Plenary
13th	1996	Oct. 28~30	New Delhi, India	AS/EB Plenary & EDICOM '96
14th	1997	Apr. 30~May. 2	Singapore	AS/EB Plenary & EDICOM '97
15th	1997	Nov. 2~6	Colombo, Sri Lanka	AS/EB Plenary
16th	1998	Jul. 4~10	Tehran, Iran	AS/EB Plenary
Management Team Meeting	1999	Apr. 22~23	Singapore	

17th	1999	Sep. 5~10	Seoul, Korea	AS/EB—AFACT Plenary & EDICOM '99
18th	2000	Sep. 11~15	Chinese Taipei	AFACT Plenary & EDICOM '00
19th	2001	Oct. 1~3	Jakarta, Indonesia	AFACT Plenary & EDICOM '01
20th	2002	Oct. 28~Nov. 1	Kuala Lumpur, Malaysia	AFACT Plenary & EDICOM '02
21st	2004	Jan. 11~14	Karachi, Pakistan	AFACT Plenary & EDICOM '03
22nd	2004	Sep. 19~22	Singapore	AFACT Plenary & EDICOM '04
23rd	2005	Oct. 24~27	Hanoi, Viet Nam	AFACT Plenary & EDICOM '05
24th	2006	Aug. 7~11	Karachi, Pakistan	AFACT Plenary & EDICOM '06
25th	2007	Aug. 6~10	Bangkok, Thailand	AFACT Plenary & EDICOM '07
26th	2008	Oct. 13~16	Seoul, Korea	AFACT Plenary & EDICOM '08
27th	2009	Nov. 2~6	New Delhi, India	AFACT Plenary & EDICOM '09
28th	2010	Nov. 24~26	Yokohama, Japan	AFACT Plenary & EDICOM '09

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