JAPAN Progress Report

Japan EDIFACT Committee (JEC)

2006 Country Progress Report : JAPAN

SECTION I - GENERAL CONDITION UPDATE

1.1 Market Scale of e-Commerce in Japan

According to the Survey recently conducted jointly by METI (Ministry of Economy, Trade and Industry), ECOM (The Next Generation Electronic Commerce Promotion Council of Japan) and NTT Data, the scale of Japanese domestic BtoB e-Commerce market in 2004 exceeded 100 trillion yen. The total amount of 102.7 trillion yen (about US Dollar 0.9 trillion) is an increase by 33% over the previous year. The penetration rate of the overall industrial category is 14.7%. Automobile industry shows most remarkable achievement in BtoB e-commerce in 2004 due to increased business amount and expansion of electronic procurement, particularly in auto parts industry, that made the increase of 22% over the previous year. Automobile and electronic industries are two major driving forces to bring the Japanese BtoB e-Commerce unto the current status. Also notable in this year is that various industries began to tackle with e-Commerce.

Table 1: BtoB e-Commerce Market Scale 2004

Industrial Category	(in million yen)	(in million dollar) (@¥110)	(increase over previous year)	(penetration rate)
Food	2,486,000	22,600	177.2%	4.3%
Textile	2,465,000	22,409	119.3%	7.5%
Chemical	6,149,000	55,900	430.0%	11.0%
Steel	6,606,000	60,055	123.1%	16.4%
Machinery	7,407,000	67,336	198.3%	14.0%
Electronic	24,659,000	224,173	101.5%	44.7%
Automobile	34,302,000	311,836	122.3%	65.6%
Construction	4,190,000	38,091	118.1%	4.8%
Paper	1,158,000	10,527	236.3%	6.1%
Utility	2,000	18	–	0.0%
Finance	487,000	4,427	–	1.5%
Insurance	5,937,000	53,973	150.9%	17.2%
Travel, Transport	1,065,000	9,682	138.9%	4.1%
News, Broadcasting	286,000	2,600	2,200.0%	2.4%
IT	3,363,000	30,573	167.4%	33.1%
Others	2,137,000	19,427	657.5%	1.9%
Total	102,699,000	933,627	132.6%	14.7%

1.2 Electronic Government

The goal for establishing the Electronic Government (e-government) is to improve the user-friendliness of the administrative system, and to simplify and improve on the efficiency, reliability, and transparency of the administrative management. This will be done through the re-examination and upgrading of the current service and system.

In July 2003, The IT Strategic Headquarters adopted “e-Japan Strategy II”.

In order to accelerate implementation of this and to achieve the goal of turning Japan into the most advanced IT nation in the world by 2005, the e-Japan Strategy II Acceleration Package was adopted in February 2004 and clarify the priority measures that need to be addressed by the government.

Five areas are picked up where priority is given for achievement:

(1) International IT Strategies in Asia
(2) Reinforcement of Security Measures
(3) Promotion of Content Measures
(4) Promotion of IT Regulatory Reforms
(5) Promotion of e-Government and e-Local Government

When implementing this package, emphasis will be placed on the perspective of users and collaboration between government ministries and agencies will be reinforced and promoted.

1.3 Single Window System

The “Single Window” can be described as a system whereby all the trade related information and/or documents need only be submitted once at a single entry point.

This will expedite and simplify the information flows between trade and government and brings meaningful gains to all parties involved in international trade.

Japanese Government introduced in July 2003 the Single Window System by linking three major systems relating to international trade which are, Port EDI System, Nippon Automated Cargo Clearance System (NACCS) and Crew Landing Permission Support System. The system also covers a wide-range of trade related procedures such as animal quarantine, plant quarantine and port clearance.

1.4 Internet Users

According to Information and Communication White Paper 2005, it is reported that internet users in Japan amount to 79.5 million at the end of 2004. It is an increase by 2.8%

over the previous year and penetration rate is 62.3%. The White Paper also reports that, compared to the end of the year preceding the launch of the e-Japan strategy (2000), the number of internet users increased by about 32 million, and the penetration rate by 25.2 points.

SECTION II – EDIFACT/ebXML/XML Based STANDARDS DEVELOPMENT

2.1 Message Development Activities

2.1.1 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.

2.1.2 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.

2.1.3 Japan Shippers' Council (JSC)

JSC has been actively involved in UN/EDIFACT promotion and popularization activities. They have done this as a management body of the Japanese trading industry in response to the industry's expectations. UN/EDIFACT messages have been penetrating in the trading industries. Regarding XML/EDI area, the ebXML has been penetrated into JSC members as an international standard in XML/EDI works.

2.1.4 The TEDI Project

Since TEDI operating companies started commercial service in November 2001, TEDI has worked out not only to conduct various pilot tests but to define rules and practices with PAA (Pan Asian E-commerce Alliance) members to achieve electronic cross-border transactions in Asian region and succeeded to bring some of them into live operation. PAA developed standard messages using XML and adopted ebXML MS V2.0 as communication protocol and is studying to upgrade the standard messages based on ebXML in cooperation of ECOM.

More information regarding TEDI, can be obtained through the following web site.

TEDI Club	http:// www.tediclub.com
PAA	http://www.paa.net

2.1.5 Nippon Automated Cargo Clearance Systems (NACCS)

(1) NACCS

Japan has two automated customs clearance systems named "the Nippon Automated Cargo Clearance Systems for sea-cargo (Sea-NACCS) and for air-cargo (Air-NACCS)". These systems are operated by NACCS Center.

NACCS promptly and accurately handle customs procedures, legal procedures related to non-customs systems (e.g. food, plant quarantine, animal quarantine, trade control, port EDI) and other tasks related to international cargo and shipment handling.

NACCS is an on-line network system, composed of a computer system used in communicating with the center, and a terminal system located in each of the customhouses, customhouse brokers and other related industries connected with telecommunications lines. NACCS structure date exchange with inter-corporate systems on the EDI method. Now NACCS process approximately 95 % of all import and export customs declarations.

(2) Sea-NACCS

Sea-NACCS process customs procedures and private companies related services for import and export cargoes by sea. For imported cargoes, the on-line process begins with the arrival of a vessel in a port and continues through the unloading of sea cargoes from a vessel, import declaration and the approval of import. For exported cargoes, the on-line process is applied to a series of customs procedures and private companies related services including the delivery of sea cargoes to the Customs area(e.g. Customs warehouse), export declaration, the approval of export, the loading of cargoes to a vessel and departure from a port.

Sea-NACCS adopted UN/EDIFACT in submitting arrival report and list of loaded cargo, application for departure, etc. UN/EDIFACT Messages used in Sea-NACCS are as follows:

CUSRES (Customs response message)
CUSREP (Customs conveyance report message)
CUSCAR (Customs cargo report message)
PAXLST (Passenger list message)
CODECO (Container gate-in/gate-out report message)
COPARN (Container announcement message)
IFTMIN (Instruction message)
APERAK (Application error and acknowledgement message)
CONTRL (Syntax and service report message)

In addition, WCO customs data model was introduced into Sea-NACCS about export declaration (EX1) in December, 2005.

(3) Air-NACCS

Air-NACCS process customs procedures and private companies related services for import and export cargoes by air.

For imported cargoes, the on-line process begins with the arrival of an aircraft in an airport and continues through the unloading of air cargoes from an aircraft, import declaration and the approval of import. For exported cargoes, the on-line process is applied to a series of customs procedures and private companies

related services including the delivery of air cargoes to the Customs area(e.g. Customs warehouse), export declaration, the approval of export, the loading of cargoes to an aircraft and departure from an airport.

2.1.6 EDI in Japanese 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.

2.1.7 Port Logistics Information Network System (POLINET)

POLINET, operated by POLISA (Port Logistics Information System Association), formerly called as SHIPNETS, is the first cross-industry EDI network system in Japan and has been in service to exchange shipping documents among the freight forwarders, ocean carriers, tally companies and sworn measurers at major sea ports in Japan since 1993.

POLINET has started to handle UN/EDIFACT message formats since 1998, in addition to the traditional SHIPNETS standard message formats, and expanded the scope of the application areas to cover the import, terminal and container operations, and settlement activities, in addition to the export activities.

In February 2001, POLINET implemented new Internet EDI system using the internet

technology, and enhanced it in April 2002.

The Internet EDI system comprises Web-POLINET and Cyber-POLINET, both of which interface with the traditional VAN-to-VAN POLINET. The system in POLINET Center offers a format conversion capability between the Web, SHIPNETS and UN/EDIFACT formats. The Web-POLINET provides users with several capabilities to relieve the input burden. It is handy EDI system to be easily used and is suitable to small sized users who have no in-house system.

In April 2002, POLISA started eForwarder ASP service, an outsourcing service system which is capable to efficiently process the freight forwarders' day-to-day operations, including import, export documentation, warehousing, and billing activities. The utilization fee for the service is set low as compared with the cost in case of development made by individual company. The users are free from the system maintenance burden and may keep the investment risk minimum. It is expected that the eForwarder ASP service will contribute to expedite the diffusion of EDI in the port logistics community in Japan.

In 2002, POLISA carried out an investigation and study of XML/EDI which would be useful for EDI promotion of a medium and small-sized business. As a result, a port & harbor logistics XML/EDI standard guide was published in March, 2003.

Continuously in 2003, POLISA tried a proof experiment of mutual connection and cooperation between different private networks using XML/EDI (between POLINET and TEDI, and between POLINET and BOLERO). Based upon the proof experiment, a guide was published in April, 2004. This guide shows some informative guideline for private EDI networks to perform mutual network connection in order to exchange business information seamlessly between different networks.

Basing upon "EDI specification for network connection between Sea-NACCS and private system" published by NACCS Center in November, 2003, POLISA, from February 2006, started a new Sea-NACCS/POLINET network connection service where some key export business information could be exchanged between both network users. It is expected that freight forwarders can reduce input burden by using this service. It is also expected that EDI ratio becomes higher through expansion of the range of the EDI business partners.

2.1.8 Port & Harbor EDI System

This year's hi-lighted event is that "New simplified application forms for the ship arrival" has been adopted which are full aligned with IMO FAL application forms. The new applications have been used in the port & harbor EDI system in November 2005.

The "Port & Harbor EDI System" (Port EDI System in short) has been in service since 12th October 1999. WAVE (Waterfront Vitalization & Environment Research Center -

non-profitable organization) has been assigned to develop, operate and manage this system by Harbor Bureau of Ministry of Land, Infrastructure and Transport, Japan. The parties concerned of this EDI system are Port Authorities, Harbor Masters and Shipping Lines or their agents.

Since the launch on 12th Oct. 1999, the numbers of participants in the Port EDI System is increasing. As of end of June 2005, 113 Port Authorities, 99 Harbor Masters, 109 Guard and rescue offices, 83 Quarantine offices, and 1109 shipping lines, their agents or private berths are members of this system.

Shipping lines/agents have two options to transmit data required electronically, by UN/EDIFACT messages or through the web-screen (Web-EDI).

In the 1st stage, two UN/EDIFACT messages, BERMAN (Berth management message - UNSM in D00A) and APERAK have been implemented. Adding these two messages, an application of “dangerous (hazardous) goods handling operations (IFTDGN)” has been implemented in October 2000, thence expand to other major ports within this year. In order to implement IFTDGN, we cooperated with PROTECT Group (a users group to develop a harmonized user guidelines in Europe, and their latest version of user guidelines was endorsed as an international standard by IMO) to develop the harmonized message implementation guideline (MIG). Furthermore, we are modifying/changing BERMAN to cover more functions of pilot/tugboat service requirements in cooperation with TBG3 (Transport Sub-working Group under TBG).

Adding IFTDGN, two applications “vessel’s long term schedule and previous called port information (IFTSAI)” and “Passengers’ and crews’ information (PAXLST)” also have been implemented in October 2000.

With regard to the reducing redundant input data item issue, we are collaborating with the customs authority, the immigration authority and the quarantine authority to provide an electronic data input environment for users (shipping lines/agents), so-called “Single Window (SW) ” methodology. This is in service in July 23rd 2003, and once users transmitted Port-in/out related declaration or application data to the portal system, the data is automatically transferred to the related authorities. In Japanese SW, both the Port EDI system and the Sea-NACCS system play a part of portal system. The Port EDI system provides three input methods which are a web screen input, an application program on user PC and UN/EDIFACT messages, for the SW portal system.

Lastly WAVE has been dispatching their representative to various international meetings, such as TBG3/ITIGG (an official subgroup of TBG3 to develop harmonized MIG’s) and other global users’ group (SMDG) so as to develop and implement harmonized MIGs to be used in our system.

2.1.9 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.

2.2 Education and Awareness Programs

2.2.1 JEDIC (Japan Electronic Data Interchange Council)

JEDIC has conducted the survey on the EDI status for 59 industry associations in Japan. The result says that 59.4% of the companies are doing EDI in the procurement process and 53.9% of the companies are doing EDI in the area of marketing.

JEDIC publishes the EDI news letters and holds the EDI seminars regularly. Also JEDIC started the new promotion program for ebXML including the hands-on trainings.

2.2.2 ECOM (The Next Generation Electronic Commerce Promotion Council of Japan)

ECOM organized the research and the promotion for Electronic Commerce and RFID in Japan. The research report includes How to promote RFID in the various industries, How to build up the information models for the product lifecycle management based on the UN/CEFACT Modeling Methodology, and How to establish the Registry and Repository for ebXML.

2.2.3 JASTPRO (Japan Association for Simplification of International Trade Practices)

JASTPRO holds “EDI seminar” every year. The contents of the programs include;

1) Current status of Trade Facilitation and EDI
2) Characteristics of Japanese EDI in trade area
3) Port EDI system under single-window service
4) Japanese trade EDI activities with Asian counterparts

2.3 Status of ebXML Development

For implementing the e-Business Collaboration based on ebXML, the Model Sharing among the related business entities is the key. The Next Generation Electronic Commerce Promotion Council of Japan (ECOM, Chairman: Takuya Goto, Chairman of the Board, Kao Corporation) is performing activities which contribute to decision of the technical standard about a "core component" and the "modeling methodology" of ebXML. Furthermore, the activity for spreading use of ebXML technology through the actual business of Japan and Asian countries is also carried out.

In order to promote ebXML among the Small and Medium sized Enterprizes, ECOM developed and submitted the new specification of ebXML Messaging Service which can provide the Solution for Client-Server System to OASIS.

2.4 Working Groups and Committees

2.4.1 JEC

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.

2.4.2 TAG (Technical Assessment Group)

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. TAG members have reviewed the translated MDR (Message Design Rule Rev.5 & Rev.6), main points of EDIFACT Syntax Rules Ver. 4, as well as Ver.1.2 of MACH (Message and Code Handbook) and they had 11 meetings in 2005 fiscal year. They also studied about XML/EDI in line with the UN/CEFACT Forum groups work.

2.4.3 Japan Committee for UN/LOCODE

UN/LOCODE has been in use in Sea-NACCS and Port EDI system since 1999. For the purpose of successfully introduce these systems, the 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 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.

2.4.4 Special Committees

(1) Trade Procedures Simplification Committee

In the aftermath of the September 11 terrorist attacks in the United States, demand for the measures to assure tighter security is rapidly increased. Under such circumstances, to satisfy the needs of the international trade environment in terms of efficiency and security becomes universal concern among the parties involved. Since Japan fully rely on trade activities with other part of the world, it is an ultimate issue for Japanese trade community to find the solution to obtain adequate security without interfering efficiency in trade.

In the work program of this committee for this year, primal focus is placed on the research of security measures on various aspects of trade procedures. Some of these are already implemented, others are on the process of being implemented, and the rest are possible future plan. Analysis and evaluation is given to the effect of such measures onto the efficient trade flow. Security measures initiated in the private sector is also studied.

By gathering and sorting out all these available information, some directive condition for effective implementation of security measures in the trade procedure will be sought.

(2) Trade Network System Research Committee

The committee member visit an oversea country in order to study and research trade network systems from the viewpoint of trade and procedures facilitation. The outcome is reported to the trade industries and authorities concerned. The committee visited Korea in 2004 and China in 2005.

(3) Trade Procedures for XML/EDI Implementation Research Committee

XML/EDI using internet is the hottest theme in EDI business. XML/EDI is regarded the next-generation EDI that resolves the problems in legacy EDI and Web-based (Internet) EDI. JASTPRO launched this committee in order to study possibility of introducing XML/EDI concept into trade procedures. This approach is important to re-use resource of UN/EDIFACT and to keep inter-operability between UN/EDIFACT and XML/EDI. The committee continues to extend their efforts to simplify tag name for data element in UN/EDIFACT and explores the area of trade procedures based on object-oriented model.