Global Standards of e-Trade Process

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Korea Polytechnic University
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Vice-Chair of UN/CEFACT Intern’l Trade and Business Process 1 Group
Chair of (Asia-Pacific) AFACT Supply-Chain Working Group
Vice-Convenor of ISO/IEC JTC1 SC 32 Data Management Interchange Group
Member of ISO TC 68 Finance Service Group
Member of SWIFT Group
International Trade Reference Model

Buy

Prepare for export

Commercial Procedures
- Establish sales contract
- Order goods
- Advise on delivery
- Request payment

Transport

Transport Procedures
- Establish transport contract
- Collect, transport and deliver goods
- Provide waybills, Goods receipts, etc.

Regulatory

Regulatory Procedures
- Obtain im/export licenses etc.
- Provide Customs Declarations
- Provide cargo Declarations
- Apply security measures
- Clear goods

Financial

Financial Procedures
- Provide credit rating
- Insurance
- Execute payment
- Issue statements

Ship

Export

Pay

Prepare for import

Import
ISO/IEC 14662: Open-edi Reference Model

- **Business Operational View**
  - Business aspects of business transactions
  - Comply with BOV RELATED STANDARDS
  - Covered by Interrelated

- **Functional Service View**
  - Information technology aspects of business transactions
  - Comply with FSV RELATED STANDARDS
  - Covered by Interrelated

Viewed as business transactions.
ISO TC68 Repository (SWIFT)

ISO 20022 Repository

- Business Process Catalogue
  - Business Areas
  - Business Transactions
- Data Dictionary
  - Business Concepts
  - Message Concepts
  - Data Types

Change History Records
<table>
<thead>
<tr>
<th>e-Trade</th>
<th>B2B</th>
<th>e-Government</th>
<th>e-Education(e-Learning)</th>
<th>Global Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
</tr>
<tr>
<td>Service Application</td>
<td>Service Application</td>
<td>All Government Control</td>
<td>Service Guide</td>
<td>XML</td>
</tr>
<tr>
<td>Tax</td>
<td>Personnel Policy Support System</td>
<td>Service Application</td>
<td>Service Application</td>
<td>ebXML</td>
</tr>
<tr>
<td>Custom</td>
<td>Service Application</td>
<td>e-Learning</td>
<td>e-Learning</td>
<td>VAN EDI</td>
</tr>
<tr>
<td>How to export and import goods</td>
<td>Q&amp;A</td>
<td>ISP of school</td>
<td>ISP of Education Office</td>
<td>WEB EDI</td>
</tr>
<tr>
<td>Q&amp;A</td>
<td>Notice</td>
<td>Content</td>
<td>ISP of Education Office</td>
<td>e-Trade Solution (ERP, SCM etc)</td>
</tr>
<tr>
<td></td>
<td>Q&amp;A</td>
<td>Notice</td>
<td>Notice</td>
<td>Electronic catalogue</td>
</tr>
</tbody>
</table>

- Custom
- How to export and import goods
- Q&A

**Promote strategy of e-Business**

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<tr>
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<th>♦</th>
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</thead>
</table>

**e-Learning**

- Q&A
- ISP of school
- Content
- Notice
- Electronic catalogue
- Payment & settlement
- Goods & material standardization
How to selecting Buyer by e-Trade Portal site such as www.google.com or www.alibaba.com
- Collection

- Seller

- Buyer

- Advising (Nego) Bank

- Opening Bank

- Reimburse Bank

Document:
- L/C copy
- Invoice
- Packing list
- Bill of lading (Negotable)
- Inspection of certificate
- Certificate of origin
- Bill of exchange

- Cash Deposit (L/C Amount)
- Real Estate Deposit

- Request Payment
- Payment = Bill of lading
- L/C open
- L/C Sending
- L/C Amount Transfer
- L/C Amount Acceptance

- Shipping
Trade Process

1. Circular letter
2. Inquiry Letter
3. Offer
4. Counter offer
5. Sales Note (Contract)

6. Request Opening an L/C
7. Open [establish] an L/C
8. Advising Opened [established] an L/C

9. Shipping
10. Bill of Lading
11. Shipping document
12. Collection

13. Send a document (included Exchange of bill)
14. Send money
15. Deliver a document, (Bill of lading)
16. Payment
17. Shipping documents
18. Transfer Goods

Exporter (Beneficiary)

Buyer (Applicant)

Advising Bank (Nego Bank)

Issuing Bank

Port of Destination
ebXML Framework based e-Trade Process

1. Request Business Details
2. Build Local System Implementation
3. Register Implementation Details
4. Download Scenarios and Profiles
5. Agree on Business Arrangement
6. Final Business Transactions

XML

Business Scenarios
Business Profiles

Company A

Company B

eBXML Registry

eBXML Compliant System
ebXML Framework based e-Trade Systems

International
Central
Registry & Repository

Korea
Central
Registry & Repository

Electronic
Central
Registry & Repository

Samsung
Electronic

CPP
CPA
e-Business start

U. S. A
Central
Registry & Repository

Electronic
Central
Registry & Repository

IBM
Single Window
Trader (Incl. Transport)

Single Information Transaction System

Documents
Data

Payment Confirmation

Electronic

Integrated

Authority 1

Integrated

Authority 2

Integrated

Authority 3

Integrated

Authority 4
Authority 1

Authority 2

Authority 3

Authority 4

Trader
(Incl. Transport)

Electronic

Single Automated System
Trader (Incl. Transport) 

Electronic 

Single Automated System 

Interfaced 

Authority 1 

Interfaced 

Authority 2 

Interfaced 

Authority 3 

Interfaced 

Authority 4
As is: a Single Window

Current Situation for Government & Traders

Trader

Transport

Electronic

Customs

Paper

Agriculture

Health Dept
To Be with a Single Window

A 'Single Window' environment

- Trader
- Transport
- Customs
- Agriculture
- Health Dept

Single Window

Electronic

Paper
To facilitate international trade and electronic transfer of data for cross border trade

- Trade Facilitation: harmonized, standardized, linked with Conventions and Regulations, usable for intergovernmental agreements
- Electronic transfer of data: Digital Paper AND pure, simple eTransactions
- Cross border: trader, transport, customs statistic, Other Governmental Agencies

e-C/O(Certificate of origin), e-A/O(Agriculture origin) Orders, Commercial Invoice, Paking List, Offer, Sale(Contract)Note, Bill of Lading etc
- WCO: Alignment of WCO and UNeDocs data models
- Pakistan: UNeDocs PK Project
- PAA: Possible benefits of UNeDocs platform to PAA single window
- SITPRO: ASEAL’s plan to adopt UNeDocs
- IATA: e-freight Paperless Trade Project
- EU research project: ITAIDE for pan-European interoperability of EU taxation and customs systems
- Commercial pilots in the maritime oil industry: UNeDocs adoption
- Other presentations: Cost/benefits of UNeDocs, customization strategies, UNeDocsUK, Senegal & Kenya Single Window, Hong Kong SAR DTTN, Malaysia e-Document
**EDI**
- Limited to large organizations
- High cost-of-entry
- Rigid message sets
- Used by 5% of enterprises outside the Fortune 1000

**ebXML**
- Takes advantage of cheap Internet technology
- Built on EDI experience with input from EDI community
- Preserves EDI investment
- Designed for the other 95%
ebXML enables anyone, anywhere to do business with anyone else over the Internet

- 18-month initiative started in November 1999
to lead to exchange interoperability by IT solution vendor
- Specifications delivered on schedule in May 2001
- Developed in an open process by more than 4500 participants representing 2000 organizations in 150 countries on virtually every continent
Benefits of ebXML

- Lowers the cost/complexity of electronic business
- Facilitates global trade and puts SMEs and developing nations in the picture
- Expands electronic business to new and existing trading partners
- Converges current and emerging XML efforts
- Eliminates dependence by supporting any language, any payload, any transport
Features of a Single Window

- Single Window Facility
  - Parties involved in trade and transport to standardized information and documents with a single entry point.
  - All information in respect of international trade transaction, which is supported by a legal framework, privacy and security
  - Trade-related government information, duties and other charges
Benefits for government

- Correct revenue yields.
- Improved trader compliance
- Enable the use of sophisticated “risk management” techniques for control and enforcement purposes
- More effective and efficient deployment of resources
Benefits for trade

- Lower costs through reducing delays.
- Faster clearance and release
- Predictable application and explanation of rules
- More effective and efficient deployment of resources
Global standards of e-Business
e-Business Standards by UN/CEFACT

- International EDI Standard
- ISO 9735 (EDIFACT Syntax)

- XML-based e-Business International Standard
- Jointly developed with OASIS
- Technical Specifications of ISO
  - ISO/TS 15000-1 〜 15000-5
Electronic Document Exchange
XML or UN/EDIFACT

<?xml version="1.0" encoding="UTF-8"?>
<Invoice
   xmlns:urn:oasis:names:tc:ubl:Invoice:1.0:0.70 xmlns:n="urn:oasis:names:tc:ubl:Invoice:1.0:0.70" xsi:schemaLocation="urn:oasis:names:tc:ubl:Invoice:1.0:0.70:UBL_Library_0p70_Invoice.xsd">
   <ID>token</ID>
   <IssueDate>2003-02-14</IssueDate>
   <TaxPointDate>2003-02-14</TaxPointDate>
   <BuyerParty>
      <PartyName>
         <Name>Bills Microdevices</Name>
      </PartyName>
   </BuyerParty>
   <SellerParty>
      <PartyName>
         <Name>Joes Office Supply</Name>
      </PartyName>
   </SellerParty>
   <InvoiceLine>
      <ID>1</ID>
      <InvoicedQuantity unitCode="token">5</InvoicedQuantity>
      <Item>
         <Description>Pencils, box #2 red</Description>
      </Item>
   </InvoiceLine>
</Invoice>
Standardization of Invoice

Shopping mall in Hanoi

Pass the goods to the bus driver according to the Invoice

Rented Bus

Order by email using the invoice form

Deliver the goods after checking Quantity, item number and price

Shop owner in Da Nang
## Commercial invoice

<table>
<thead>
<tr>
<th>Item no. Date.</th>
<th>Description</th>
<th>Unit of Goods Price</th>
<th>Quantity</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006-9-5</td>
<td>Hand Bag For Beautiful Ladies</td>
<td>Us$ 100.00</td>
<td>10 pcs</td>
<td>Us$ 1,000.00</td>
</tr>
</tbody>
</table>
International Standard Proposal:
ISO SC 32 WG1 and UNCEFACT

UNCEFACT & ISO SC 132 TC 68에 무역관련
국제 표준전자문서 표준안 제출예정

Document: ebXML Framework 기반 e-Trade
관련 Int’l standard electronic Documents(30 documents)
Author: ebXML Framework 기반 e-Trade (산업자원부 지원)
Editor: Young Jae - Kim (Korea polytechnic university)
UNCEFACT TBG WG Vice - Chairman
Statute: Draft
Version: 1.0
Date: 01/02/2007

Orders (주문서)

<table>
<thead>
<tr>
<th>Item No</th>
<th>Description</th>
<th>Unit price</th>
<th>Quantity</th>
<th>Amount</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005. 2-21</td>
<td>Bags for the Beautiful lades</td>
<td>US$ 200.00</td>
<td>10</td>
<td>US$2,000.00</td>
<td>Red color</td>
</tr>
</tbody>
</table>
### International Standard Proposal:
**ISO SC 32 WG1 and UNCEFACT**

**ebXML Framework based Global Standard electronic Document of e-Trade related**

<table>
<thead>
<tr>
<th></th>
<th><strong>Private Sector</strong></th>
<th><strong>Public Sector</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Company</strong></td>
<td>Logistics</td>
<td>Insurance</td>
</tr>
<tr>
<td>Company</td>
<td>Month/year Order plan</td>
<td>Shipping Request, CNTR/Vessel, Air Freight booking Request, B/L, AWB, SWB, L/G, D/O etc.</td>
</tr>
<tr>
<td></td>
<td>Offer, P/O sheet, Order Confirmation, Shipping schedule, Inventory notice</td>
<td></td>
</tr>
<tr>
<td>Logistics</td>
<td>B/L, Cargo Tracking Service</td>
<td>B/L Information</td>
</tr>
<tr>
<td>Insurance</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Bank</td>
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## Korea KTNET services

<table>
<thead>
<tr>
<th>EDI Services</th>
<th>Trade Administration / Foreign Exchange</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Customs Automation</td>
</tr>
<tr>
<td></td>
<td>Logistics Automation</td>
</tr>
<tr>
<td>DB services</td>
<td>KCIS (Korea Customs Information System),</td>
</tr>
<tr>
<td></td>
<td>MFCS (Manifest Consolidation System),</td>
</tr>
<tr>
<td></td>
<td>Cargo etc</td>
</tr>
<tr>
<td>National Certificate Authority</td>
<td>PKI Based Certificate</td>
</tr>
<tr>
<td>Global networking Service</td>
<td>PAA (Pan Asian e-Commerce Alliance),</td>
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<td></td>
<td>ASEAL (Asia Europe Meeting for paperless)</td>
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<tr>
<td></td>
<td>GSCM (Global SCM)</td>
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<td>Global Consulting and system</td>
<td>Kazakhstan, Dominican republic etc</td>
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<tr>
<td>development</td>
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</tr>
</tbody>
</table>
# E-Docs for companies, KTNET

<table>
<thead>
<tr>
<th><strong>Trade Administration</strong></th>
<th>- E/L, I/L</th>
<th>- VISA for Quota Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- C/O</td>
<td>- Quarantine</td>
</tr>
<tr>
<td><strong>Foreign Exchange</strong></td>
<td>- L/C Opening / Advice</td>
<td>- L/C Arrival Notice</td>
</tr>
<tr>
<td></td>
<td>- Local L/C Opening</td>
<td>- Delivery Order</td>
</tr>
<tr>
<td></td>
<td>- Payment Order</td>
<td>- Open Account</td>
</tr>
<tr>
<td><strong>Customs</strong></td>
<td>- Export/Import Declaration &amp; its application to Customer Service</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Advices of Custom Clearance &amp; Application</td>
<td></td>
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<tr>
<td></td>
<td>- Duty Draw Back</td>
<td></td>
</tr>
<tr>
<td><strong>Logistics</strong></td>
<td>- Report on Departure / Arrival</td>
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</tr>
<tr>
<td></td>
<td>- B/L Insurance Advices</td>
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<tr>
<td></td>
<td>- Manifest Consolidation System (MFCS)</td>
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<tr>
<td></td>
<td>- AWB</td>
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</tr>
<tr>
<td></td>
<td>- Cargo Tracking</td>
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</tr>
<tr>
<td>Service Type</td>
<td>Count</td>
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<tr>
<td>-------------------------------------</td>
<td>--------</td>
<td></td>
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<tr>
<td>Trading company</td>
<td>17,876</td>
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<tr>
<td>Banks</td>
<td>82</td>
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<tr>
<td>Customs brokers</td>
<td>947</td>
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<tr>
<td>Forwarders</td>
<td>4,682</td>
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<tr>
<td>Licensing Agencies</td>
<td>161</td>
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<tr>
<td>National Certificate Authority User</td>
<td>38,319</td>
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</tr>
</tbody>
</table>
UNCFAC T ICG (Information Content Management)

UNCEFACT ICG Study & Research Registry
global standard Project last meeting (Senegal Meeting Nov. 2008)

- Participated Nations: France, Belgium, Korea, India, USA
- Finalise development Plan
- Review target Input / Output formats
<table>
<thead>
<tr>
<th>Promote strategy of global standards of e-Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>e-Trade</strong></td>
</tr>
<tr>
<td>Definition</td>
</tr>
<tr>
<td>Service Application</td>
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<tr>
<td>Tax</td>
</tr>
<tr>
<td>Custom</td>
</tr>
<tr>
<td>How to export and import goods</td>
</tr>
<tr>
<td>Q&amp;A</td>
</tr>
<tr>
<td>Q&amp;A</td>
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</table>
## e-Learning

<table>
<thead>
<tr>
<th>e-Education</th>
<th>ISP</th>
<th>e-Learning (systems)</th>
<th>Consulting</th>
<th>Global Standards</th>
<th>Q&amp;A</th>
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</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
<td>Definition</td>
</tr>
<tr>
<td>Service Area</td>
<td>Service Area</td>
<td>Service Content Curriculum</td>
<td>Service Content ISP</td>
<td>Information of Global Standard</td>
<td>Service Area</td>
</tr>
<tr>
<td>Contents</td>
<td>Service Area Schools and Training facilities Education Office</td>
<td>Course &amp; Program</td>
<td>Course &amp; Program</td>
<td>Electronic Document</td>
<td>Service Content</td>
</tr>
<tr>
<td>Service Application</td>
<td>Service Application</td>
<td>e-Business</td>
<td>e-Business</td>
<td>XML</td>
<td>Service Application</td>
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<tr>
<td>Other Service</td>
<td>Service Application</td>
<td>e-Government</td>
<td>e-Government</td>
<td>ebXML</td>
<td>Electronic Catalogue</td>
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<tr>
<td>e-Government portal site link</td>
<td>Service Application</td>
<td>e-Education</td>
<td>e-Education</td>
<td>VAN EDI</td>
<td>Payment &amp; settlement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e-Learning</td>
<td>e-Learning</td>
<td>Web EDI</td>
<td>Goods &amp; Raw material Standards</td>
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<tr>
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<td>Service Application</td>
<td>Service Application</td>
<td>Electronic</td>
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<td>How to study &amp; train e-Business by internet</td>
<td>How to study &amp; train e-Business by internet</td>
<td>Catalogue</td>
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<td>Service Application</td>
<td>How to study &amp; train e-Business by internet</td>
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<td>How to applicate e-Learning</td>
<td>How to applicate e-Learning</td>
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<td></td>
<td></td>
<td>Service Application</td>
<td>Service Application</td>
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Expected Benefits

After successful completion of this Global standards of e-Trade process,

- Discrepancy among ISO and UNCEFACT member economies in their capacities for paperless trading will be mitigated;
- ISO and UNCEFACT member economies will be better prepared to engage in paperless trading one another;
- Consequently, it is expected that Trade Volume among ISO and UNCEFACT economies increase 3 to 5 times
For any inquiry, please contact

<table>
<thead>
<tr>
<th>Dr. Yong Jae Kim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor of e-Business Department</td>
</tr>
<tr>
<td>Korea Polytechnic University</td>
</tr>
<tr>
<td>Tel : 82-31-8041-0676</td>
</tr>
<tr>
<td>Fax : 82-31-8041-1307</td>
</tr>
<tr>
<td>E-mail : <a href="mailto:yjkim@kpu.ac.kr">yjkim@kpu.ac.kr</a></td>
</tr>
<tr>
<td>Website : <a href="http://www.kpu.ac.kr">www.kpu.ac.kr</a></td>
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