Challenges in Implementing Trade Facilitation & e-Business over the Internet

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1. AFACT is the Asia Pacific Council for Trade Facilitation and Electronic Business

AFACT - Mission

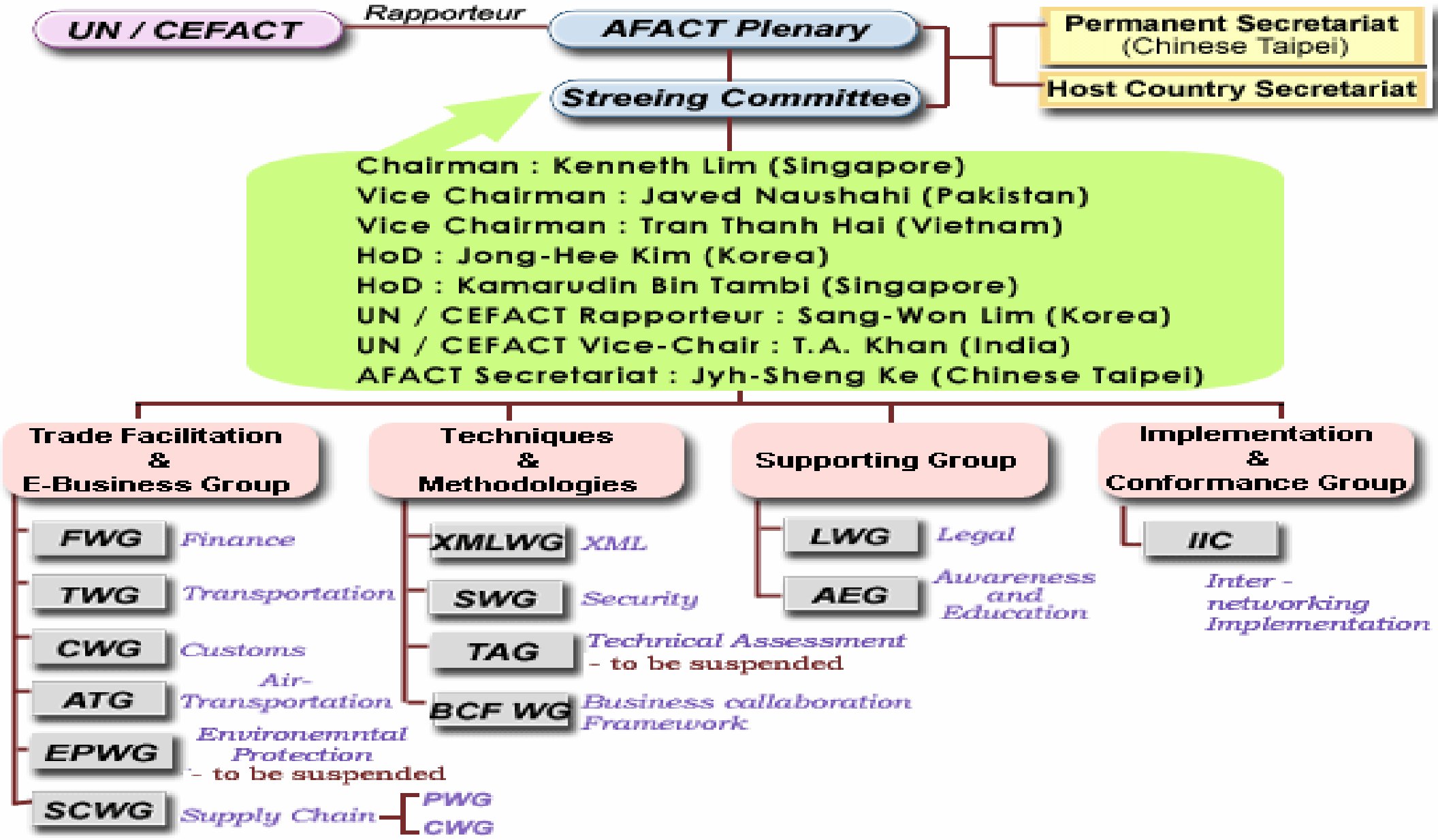
- AFACT aims to support in the Asia Pacific region policies and activities, especially those promoted by UN/CEFACT (United Nations Center for Trade Facilitation and Electronic Business), dedicates to stimulate, improve and promote the ability of business, trade and administrative organizations, to exchange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

AFACT – 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.

AFACT Structure



2. What is the global framework? UN/CEFACT Organisation

Organization of UN/CEFACT Forum & Permanent Groups

ATG

- WG1 - EDIFACT
- WG2 - XML
- WG3 - Other Technologies

ICG

- WG1 - Meta Data
- WG2 - Libraries

LG

- WG1 - ODR
- WG2 - Cross Border Certification
- WG3 - RosettaNet

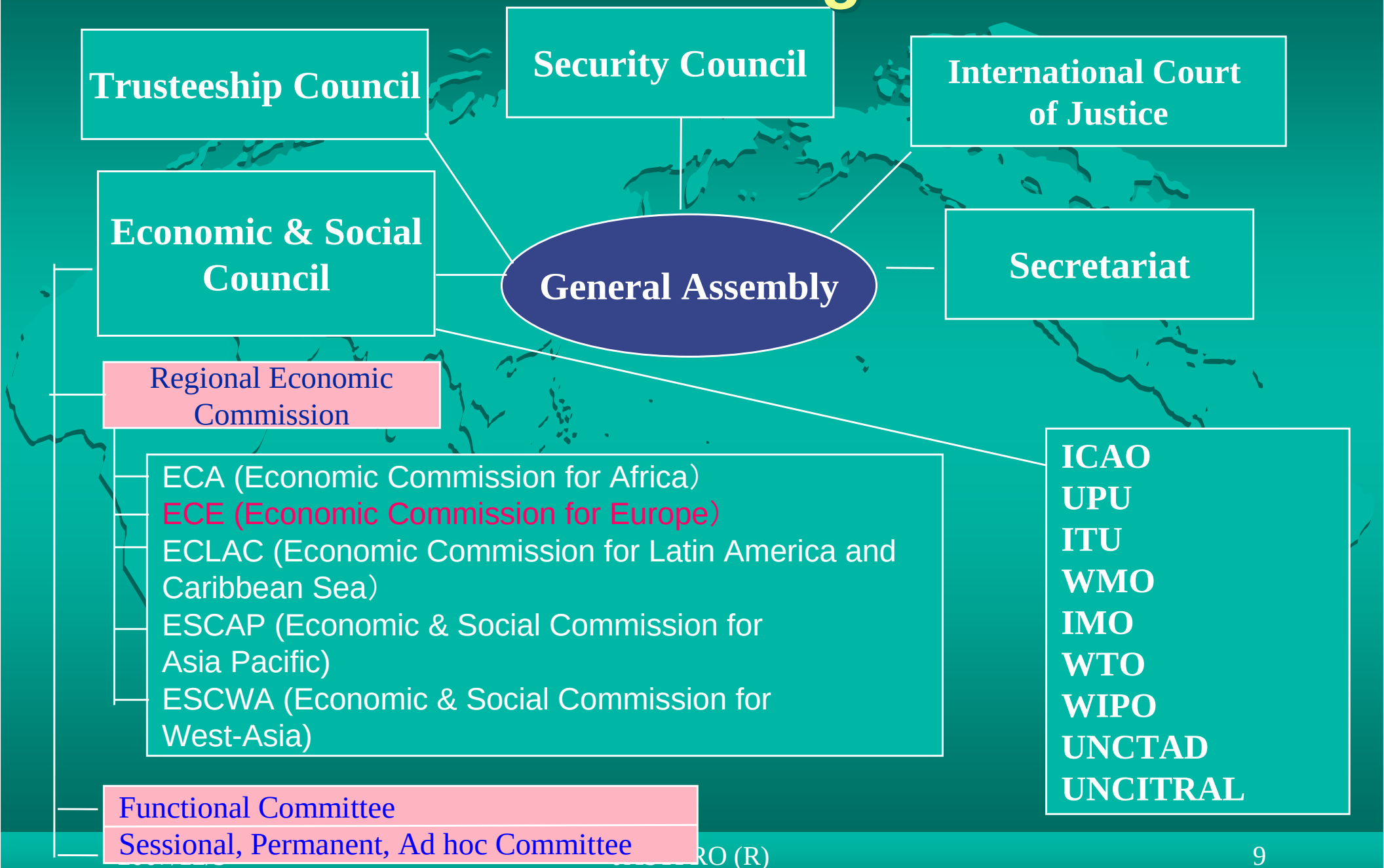
TBG

- WG1 - Supply Chain
- WG3 - Transport
- WG4 - Customs
- WG5 - Finance
- WG6 - AE&C
- WG7 - Statistics
- WG8 - Insurance
- WG9 - TT&L
- WG10 - Healthcare
- WG11 - SS, E&S
- WG12 - Accounting & Auditing
- WG13 - Environment
- WG14 - BPA
- WG15 - ITP
- WG16 - Entry Points
- WG17 - Harmonization & Documentation

TMG

- WG1 - Business processes
  - TG1 - BCF/UMM
  - TG2 - BPSS
  - TG3 - UBAC (Jointly with LG)
- WG2 - Core Components
- WG3 - e-Business Architecture

United Nations Organisation



UN/CEFACT Vision for Trade Facilitation & e-Business

- *Its vision is to develop and promote simple, transparent, effective processes for global commerce*

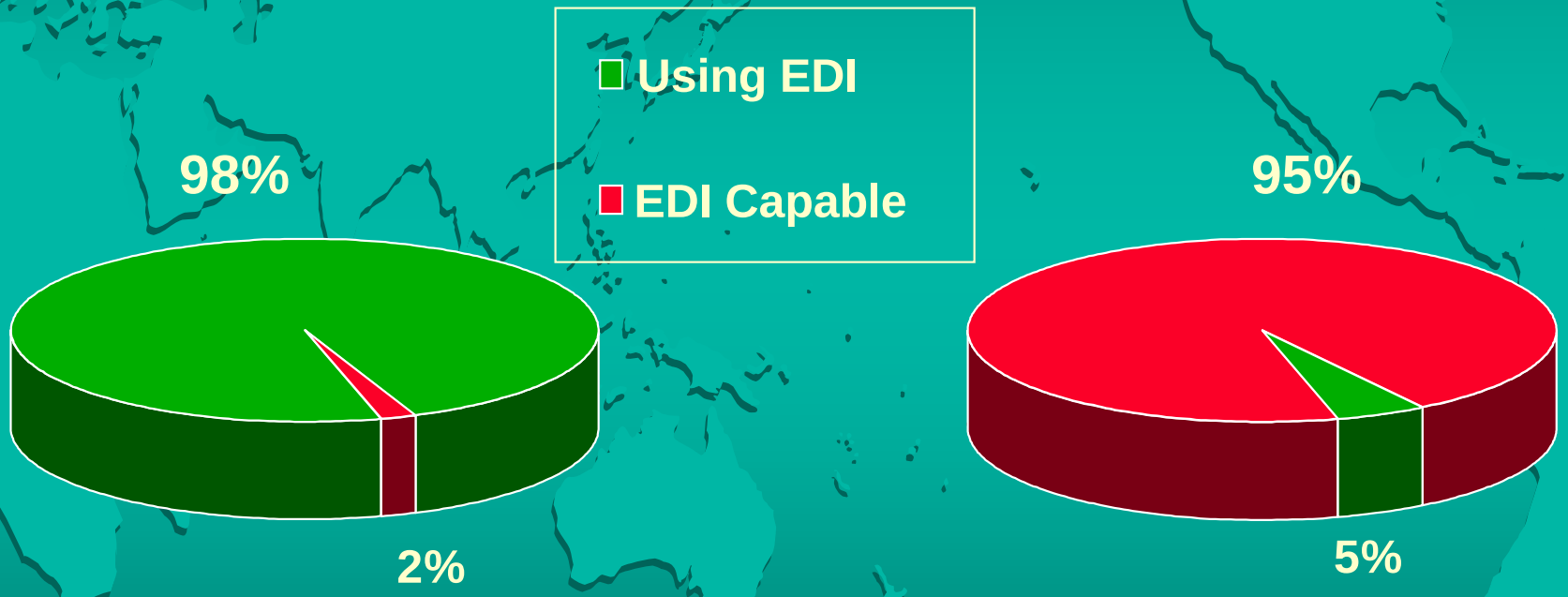
Objectives

- *Its objective is to contribute to the growth of world trade by making practical contributions to trade facilitation and e-Business which measurably benefit developed, transition, and developing economies, and their enterprises, irrespective of the size of the enterprise.*
- *Established in Geneva in 1997, it has a global remit and encourages close collaboration between public organisations and private business.*

3. Current Situation in Trade Procedures & e-Business

Success or Failure?

Did EDI reach critical mass after 25+ years?



FORTUNE 10000

(1000 in the top 10 Economies)

The rest of all Business that should be exchanging information electronically

Costs for Trade Procedures

Sources:

The survey has been made in the US by DOT and NCITD（National Committee for International Trade Documents） in 1970-1971. And the Report of “Paper Work or Profits in International Trade” was published in November 1971.

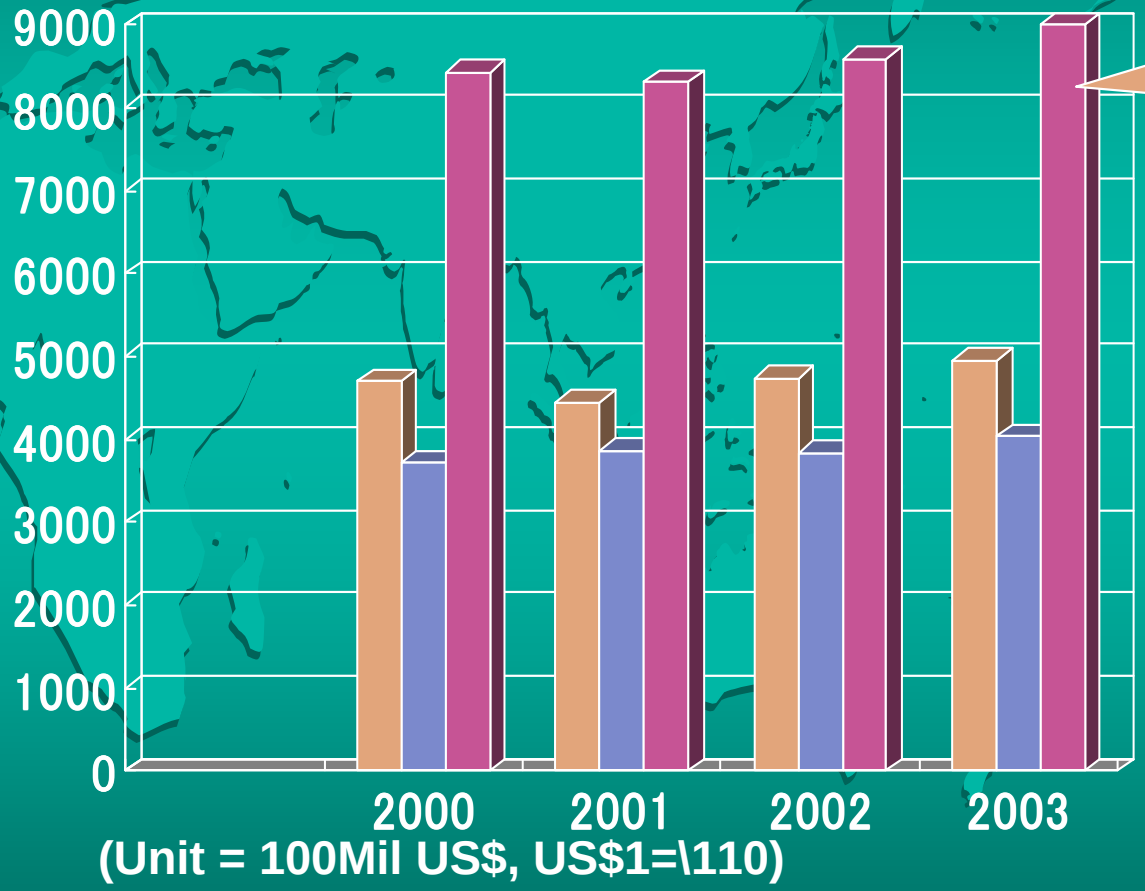
Costs for Trade Procedures
Survey by US DOT and NCITD (1970 – 1971)

- 46 enterprises/government agencies involved;
- 28 enterprises/one agency of 46 engaged in the export business of a single commodity;
- 125 documents in total used;
- Average 46 documents used for one unit of export/import business, and more than 360 copies produced;
- In the US, estimated that 828 million documents and 6.5 billion copies produced per year trade;

Costs for Trade Procedures (2)

- 64 man/hour used for an average unit of export/import procedures;
- In the US, 1 billion man/hour expended per year for producing documents of export/import, which equal to 144 million man/day works;
- Average document production cost: $351.04 per unit export/import business of trade ($375.77 for export & $320.58 for import);
- Estimating based on the total trade value, the total cost of document production reached 6.5 billion $ per year (equal to 7.5% of the US export/import total amount).

Costs for Trade Procedures in Japan Based on Trade Statistics



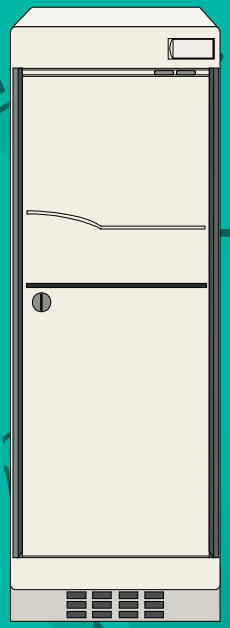
495.9 + 403.3 = 899.1 Billion US$
899.1 X 5%=44.955 Billion US$

Source: "The World 2004" by JETRO

Electronic Business Today

- EDI - limited to large organizations
- Expensive implementations that many companies can’t afford
- High cost-of-entry; inflexible.
- No business communicates solely in its supply chain
  - *need to exchange messages outside industry boundaries*
- XML initiatives underway for specific industries
  - *attempts at verbatim translation of EDI to XML*
- Consensus required on common requirements
- No common infrastructure means incompatibility, reinvention and segregated pockets of communication

What is EDI?
(Electronic Data Interchange)

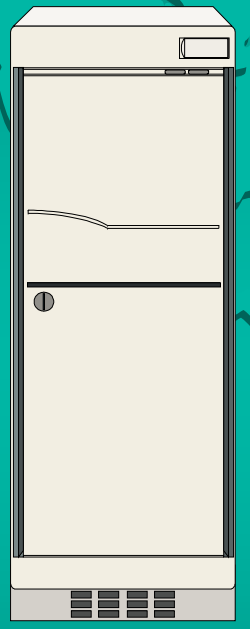


Company A

Application to Application

Between Companies

Based on Standardized Business Data



Company B

Strong Points of EDI

- Cross sectorial standards
- Formalized data flows (messages/transaction sets)
- Open standards
- Secure and legal interchanges
- Available tools and service providers
- Proven business benefits

Weak Points of EDI

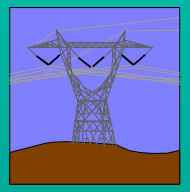
- Implementation Mechanics
- Maintaining and Updating the Standards
- Cost of Implementation, steep on-ramp
- Time to Implement
- No provision for process and information exchange, data only

Is There A Problem?

General consensus today that EDI implementation takes:

Too much time

Too much energy



Too much process

Why EDI is Not Being Taken Up Widely

- **Why are they not implementing EDI by SMEs*?**
  - cost
  - complexity
  - interchange agreements
  - different trading partners=different implementations
  - message instability
  - ambiguous benefits (cost justification)
  - legal reasons
  - security
  - future direction is unclear

* Small & Medium Enterprises

Trends of ICT Environment

- Hardware cost is reducing every year by the technological innovation,
- Internet is used widely in the world and covers everywhere, and it is easily connectable with trading partners in the world,
- Broadband is becoming popular, and
- Electronic Commerce and Electronic Business over the Internet is rapidly expanded.

Internet Users Ranking (Top 10 in the World)

Unit: Per 100 inhabitants

1	Falkland Islands	77.7
2	Iceland	64.9
3	Liechtenstein	58.5
4	Sweden	57.3
5	Korea, Republic of	55.2
6	United States	55.1
7	Japan	54.5
8	San Marino	53.1
9	Niue	52.9
10	Faeroe Islands	52.4

(Source: ITU (2003) World Telecommunication Development Report; ITU, World Telecommunication Indicators (as of February 2004)

Internet Users Ranking (Top 25 in Asia)

Unit: Per 100 inhabitants

2003			13	Indonesia	3.8
1	**Korea, Republic of**	55.2	14	**Mongolia**	2.1
2	**Japan**	54.5	15	Viet Nam	1.8
3	Singapore	50.3	16	India	1.6
4	Hong Kong, China	43.0	17	Bhutan	1.4
5	Chinese Taipei	38.3	18	Sri Lanka	1.1
6	Malaysia	32.0	19	Pakistan	1.0
7	Macao, China	26.0	20	Laos	0.3
8	Brunei Darussalam	9.9	20	Nepal	0.3
9	Thailand	7.8	22	Bangladesh	0.2
10	Maldives	5.3	22	Cambodia	0.2
11	**China**	4.6	24	Myanmar (Burma)	0.1
12	Philippines	4.4	24	Afghanistan	0.0

(Source: ITU (2003) World Telecommunication Development Report; ITU, World Telecommunication Indicators (as of February 2004), Note: including some data of earlier ears.

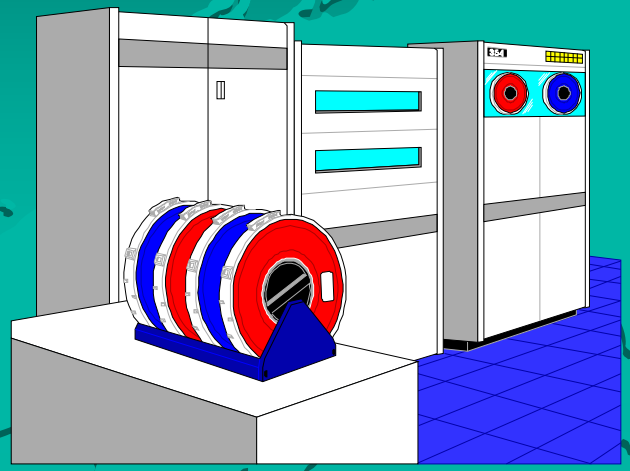
Expanding Internet Population in the World

Top 15 Countries in Internet Population							
		Internet Users (#K)	Share %			Internet Users (#K)	Share %
1	U.S.	160,700	24.13	10	India	16,580	2.49
2	**Japan**	64,800	9.73	11	Brazil	15,840	2.38
3	**China**	54,500	6.71	12	Russia	13,500	2.03
4	Germany	30,350	8.18	13	Australia	10,450	1.57
5	UK	27,150	4.08	14	Spain	10,390	1.56
6	**South Korea**	26,900	4.04	15	**Chinese Taipei**	9,510	1.43
7	Italy	20,850	3.13				
8	Canada	17,830	2.68	Top 15 Total		496,000	74.48
9	France	16,650	2.50	Worldwide Total		665,910	100.00

(Source: eTForecasts, Updated December 3, 2002)

4. The World Before XML

In-House Data



Value Added Network

EDI Message

eBusiness requires a paradigm shift

- Shift the focus on EDI standards to the business processes and the business practices behind them
- Decompose EDI business processes to the level of individual tasks that are more generic to the type of business
- Identify activities (i.e., transformations) and object classes that are likely candidates for standardization

5. Future of e-Business ebXML™

"Creating a Single Global Electronic Market™"

ebXML enables anyone, anywhere to do business with anyone else over the Internet

Sponsored by …

UN/CEFACT

(United Nations Center
For Trade Facilitation
And Electronic Business)

OASIS

(Organization for the
Advancement of Structured
Information Standards)

Hundreds of participants from all over the world

Businesses, governments, academia, institutions

A global electronic market

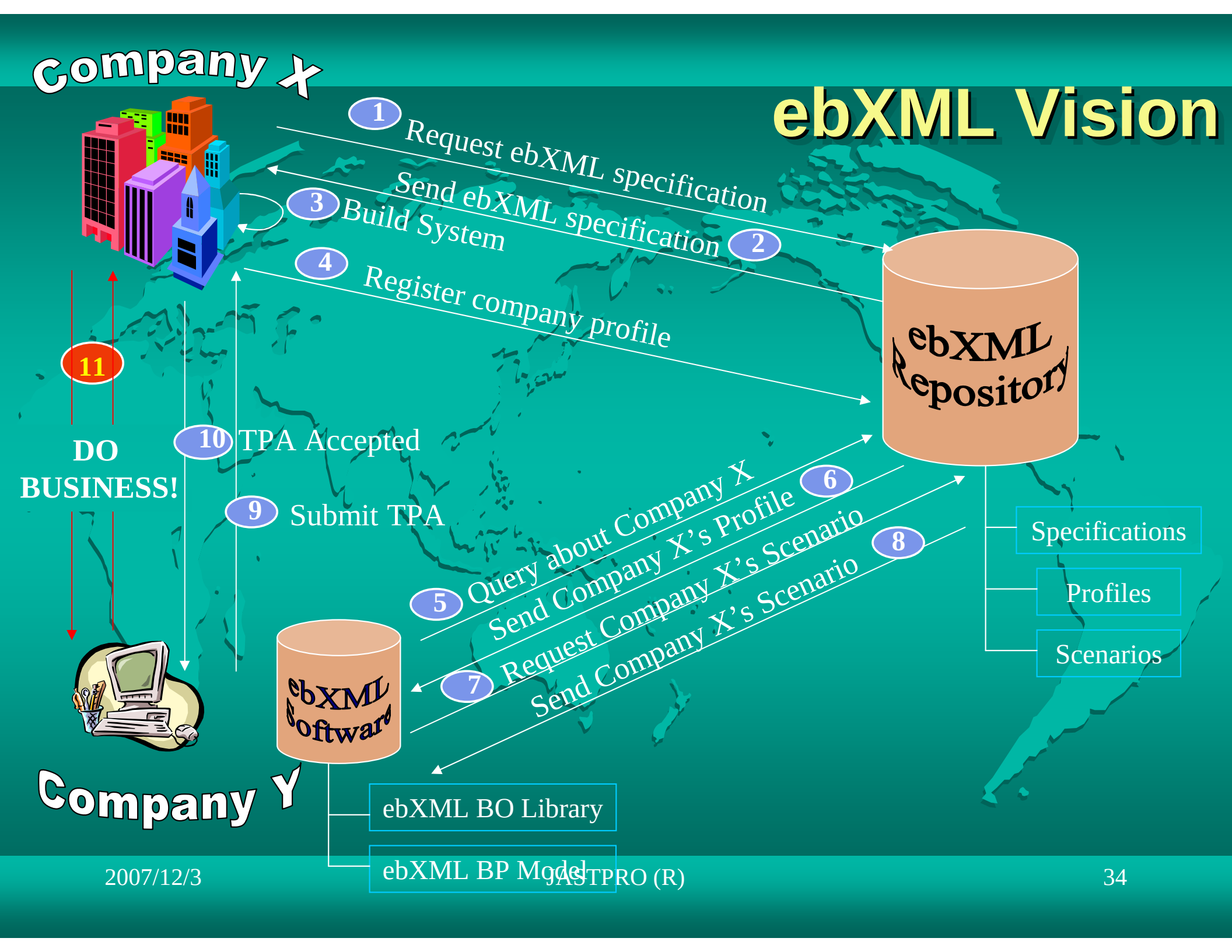
where enterprises of any size, anywhere can:

- Find each other electronically
- Conduct business through the exchange of XML based messages
  - *using standard message structures*
  - *according to standard business process sequences*
  - *with clear business semantics*
  - *according to standard or mutually agreed trading partner agreements*
- Using off the shelf purchased business applications

ebXML Characteristics

- Participation was (is) free and open to anyone, anywhere
- Complement, not compete
  - UN/EDIFACT, X12,…
  - protect existing infrastructure investment
  - “extend-and-embrace” versus “rip-and-replace”
- Focus on needs of SME
  - easy, low cost, rapid development & deployment
  - plug and play shrink wrapped solutions
  - built on open, available, proven standards
- Modular and inclusive
  - implement what applies to you

ebXML Vision



Main ebXML Concepts

- Business Processes – Defined as models, Expressed in XML
- Business Messages – Expressed in XML
- Trading Partner Agreement – Specifies parameters for businesses to interface with each other – Expressed in XML
- Business Service Interface – Implements Trading Partner Agreement – Expressed in XML
- Transport and Routing Layer – Moves the actual XML data between trading partners
- Registry/Repository - Provides a “container” for process models, vocabularies, and partner profiles.

Phase II – General Agreement

- OASIS and UN/CEFACT agreed:
  - to continue to advance the development, promotion, implementation and interests of ebXML.
  - to the following division of responsibilities:
    - **UN/CEFACT (Content & Context):**
      - Business Processes
      - Core Components
    - **OASIS (Infrastructure):**
      - Messaging (Transport, Routing and Packaging)
      - Registry and Repository
      - Collaboration - Protocol Profile and Agreement
      - Security
      - Conformance
    - **UN/CEFACT and OASIS:**
      - Technical Architecture
      - Marketing

Infrastructure Part of Technical Specs ready to use (as of June 2004)

- ISO/DTS 15000-1 ebCPP ebXML Collaborative Partner Profile & Agreement
- ISO/DTS 15000-2 ebMS ebXML Messaging Service Specification
- ISO/DTS 15000-3 ebRIM ebXML Registry Information Model
- ISO/DTS 15000-4 ebRS ebXML Registry Services Specification

Contents Part of Technical Specs

- ebXML CCTS Core Component Technical Specification – submitted to the ISO/TC154 for voting under the fast track process
- ebXML BPSS Business Process Specification Schema – under reviewing in the UN/CEFACT environment

Enter ebXML

- Worldwide project to standardize the exchange of electronic business data
- XML-based infrastructure to enable consistent, secure and interoperable message exchange
- Supported by hundreds of industry consortia, standards bodies, companies and individuals from around the world
- Sponsored by OASIS and the United Nations CEFACT

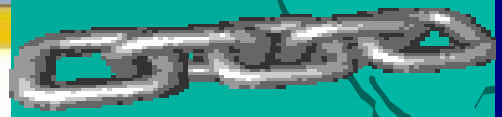
ebXML enables anyone,
anywhere
to do business with anyone
else
over the Internet

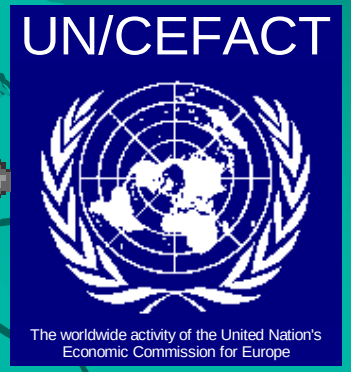
Conclusion

- Current EDI and XML/EDI would be used in parallel in future;
- So, current EDI and XML/EDI must be interoperable;
- SMEs may prefer to use XML/EDI because its initial cost is lower than current EDI;
- Current form-based EDI will be replaced by Object Oriented-edi in near future; and
- Standards developed for the current EDI should be re-used under the XML/EDI over the Internet.

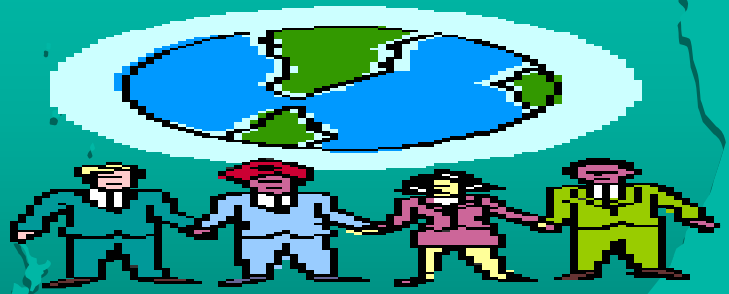
Thank you for your attention!

Questions & Comments





Global Collaboration



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Useful Web-sites URLs

- www.unece.org/cefact
- www.afact.org
- www.ebxml.org
- www.untmg.org
- www.iso.org/tc154