B2B STRATEGIES FOR COMPETITIVE ADVANTAGE

ebXML TRP
The ebXML goal:

To accomplish cross-industry XML-based business process integration.

Business events are building blocks that must be understood.

Determine the requirements for XML-based information exchange processes in application-to-application, application-to-person and person-to-person application environments.

Validate the requirements with at least one instance of cross-industry integration.
These six Components form the nexus of a new Business-to-Business technology specification.
ebXML Components

Source: ebXML TM – Duane Nickull
e-commerce Technologies

EDIINT (and new technologies)

Security
- S/MIME
- PKI

Network
- TCP/IP

Transport
- FTP
- IIOP
- SMTP
- HTTP

Directory
- LDAP
- X.500

Data Dictionary
- SIL
- EDIFACT
- ASC X.12

Data Format
- SIL
- EDI
- Objects
- XML

Presentation
- Graphical Presentation
- HTML

Source: VICS - somewhat
Why use XML?
Transcription Error Cost

The graph shows the relationship between the percentage of errors and the cost incurred. The x-axis represents the sample numbers from 1 to 10, and the y-axis represents the cost percentage ranging from 0.00% to 300.00%. The graph includes two sets of bars: one for the percentage of errors and another for the cost. The cost percentage increases significantly with the percentage of errors.
Sub-Optimized Value Chain

When the EDI community is not fully online, the effect on overall Network Efficiency is calculated as $n^2$.
The Cost of Paper vs. Electronic Transactions

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SC Example Cost Computation

- Assuming a fairly normal value chain implementation with 20% remaining offline, 20% of those online are SME’s that have integrated their Electronic Commerce interfaces to their back-office systems. The error rate is 3% from those online SMEs (80%) that have not integrated into their back-office systems.
- If it costs $10 million dollars to support a perfect world value chain then it would cost over $24.7 million dollars to support one with only 80% online and 3% errors for those online but not completely integrated with their back-office systems. Another way to express this is if it now costs $10 million to manage a value chain as described above then it would cost only $4 million to run one where all were online and there were very few errors.
- The cost saving are mostly accrued to the supply chain masters
Trading Partner Agreements
PartyInfo Element

- PartyId element
- PartyRef element
- CollaborationRole element
- ProcessSpecification Element
- Role element
- ServiceBinding element
- Override element
- Certificate element
- DeliveryChannel element
- Characteristics element
- Transport element
- Transport Protocol and Version
- Endpoint Element
- Transport Protocols
- Transport Security

Source: ebXML TP
Creation of a CPP

Describe

What Business Capabilities
It “CAN DO”
When conducting Business Process with other parties

Build

CPP

Party’s information
- Party name
- contact info
Transport Protocol
Transport Security Protocol
Messaging Protocol
Link to Process-Specification document
Time out/Retry
-etc.

(Example of CPP)
ebXML Flow
Creating a Trading Partner Agreement

1. Request ebXML specification
2. Send ebXML specification
3. Build System
4. Request to upload company information
5. Profile & Scenarios Accepted
6. Query about Company X
7. Send Company X’s Profile
8. Request Company X’s Scenario
9. Send Company X’s Scenario
10. TPA Accepted
11. Submit TPA
12. DO BUSINESS!

Source: ebXML TP
Creation of a CPA

1. **Negotiate CPA**
   - CPA for Party-A
   - CPA for Party-B

2. **Agreement on CPA has arrived**
   - CPA ID
   - Party’s Information
   - Party A
   - Party B
   - Transport Protocol
   - Transport Security Protocol
   - DocExchange Protocol
   - Time out/Retry
   - etc.

3. **Start Business activities with each other**

* Perhaps the most important element in the CPA is the Security Protocol…*
How are documents moved through the Internet – Transport-Independent
- SMTP
- HTTP

What is the packaging structure to ensure secure/reliable transport
- MIME *multipart/related*
- Support for Multiple Attachments

Reliable Routing/Delivery
- OnceAndOnlyOnce Delivery
- Persistent Storage
ebXML with SOAP

- SOAP (Simple Object Access Protocol)
  - Current Version 1.1
  - SOAP w/ Attachments

- ebXML is becoming compliant with the HP / Microsoft SOAP w/ Attachments Specification
Communication Protocol (SMTP, HTTP, etc.)

MIME multipart/related

SOAP Envelope

SOAP Header
- eb:MessageHeader
- eb:TraceRoute
- ds:Signature
/SOAP Header

SOAP Body
- eb:Manifest
- eb:StatusData
- sb:ErrorList
/SOAP Body

Payload

Payload

ebXML Message Envelope (MIME multipart/related)

ebXML Header Document (XML)
- Manifest
- Header
- etc ...

ebXML Payload Envelope (MIME)

Payload Document(s)
The **Characteristics** element describes the security characteristics provided by the delivery channel. The Characteristics element has the following attributes:

- a **nonrepudiationOfOrigin** attribute
- a **nonrepudiationOfReceipt** attribute
- a **secureTransport** attribute
- a **confidentiality** attribute
- an **authenticated** attribute
- an **authorized** attribute
Example – Messages in SMTP

Source: ebXML TRP specification
Summary

- Low cost, high functionality systems
- Support for the small and medium enterprise
- Use existing standards wherever possible
- Transport protocol independent
- Keep It Simple Stupid – KISS