

Comparing
ebXML messaging (ebMS)
AS2 for EDI,
EDI VAN
and
Web Service
messaging



Developed by
OASIS ebXML TC
members

Summary

- **ebXML** designed for B2B applications using ebMS (messaging) with CPA (partner coordination mechanism)
- **AS2 / AS1** – is “EDI over the internet”
- **EDI VAN** – legacy services for past 20 years – ftp delivery, now internet too
- **Web service** messaging – adaptation of **WSDL**-based XSD for B2B applications
- Web service **WS-I** – interoperability profiles – best practices and rules for combining WS standards – with extensive interdependencies



B2B Comparison Matrix

Feature	ebMS	AS1/ AS2	EDI VAN	WSDL	WS-I
Open public specification	Yes	Yes	Messaging	Yes	Yes
EDI payloads support	Yes	Yes	Yes	No	No
XML payload support	Yes	Yes	Yes	Yes	Yes
PDF and binary attachments support	Yes	Yes	Yes	Yes	Yes
Secure messaging with authentication	Yes	Yes	Partial	Yes	Yes
Reliable message delivery mechanism	Yes	Pending	Partial	No	Yes
Legal receipt verification support	Yes	No	Partial	No	No
Built-in audit log and tracking	Yes	Yes (for NRR)	Yes	No	Yes
Business process workflow enabled	Yes	No	No	No	Partial
Role and action use support in envelope	Yes	No	No	No	No
Conformance suite for implementations	Yes	Yes	No	No	Yes
Digital certificates and encryption	Yes	Yes	Yes	Yes	Yes
XML encryption support	Yes	No	No	Yes	Yes
Open source implementations available	Yes	Yes	No	Yes	Yes
Uses web services infrastructure (Apache/SOAP)	Yes	No	No	Yes	Yes
Asynchronous and Synchronous support	Yes	AS2 only	No	No	Partial
SMTP delivery support	Yes	Yes	Yes	No	No
Service & Operation levels authorization	Yes	No	Yes	No	No
Scores (totals):	18:18	11:18	9:18	9:18	13:18

SWOT Analysis

Comparing ebMS + CPA (ebXML)

with VAN services

Strengths		Weaknesses	
<ul style="list-style-type: none"> Open public standard Open source solutions Uses internet mechanisms Extensible for new techniques Supports push & pull delivery Any payload enveloping Robust partner / role model Business process aware Security mechanisms Interoperability proven Existing vendor adoption Simple business metaphors 	<ul style="list-style-type: none"> Setup & Install Support services Developer use Language support Marketing budget Backup & Archive 	<ul style="list-style-type: none"> Legacy EDI support Established network User handholding services Guaranteed level of service Domain specific adoption Forwarding and routing Conformance validation Market domain experience Backup and archiving 	<ul style="list-style-type: none"> Cost Proprietary mechanisms Customer lock-in Weak future support Business process linking Privacy concerns No contextual rules Setup times
Opportunities		Threats	
<ul style="list-style-type: none"> Provide foundation for global business Included in *nix distribution More government adoption Developer awareness & use 	<ul style="list-style-type: none"> Vendors switch to closed systems Vendor marketing 	<ul style="list-style-type: none"> Provide open standards based systems Allow SaaS approach Trusted intermediary Break into new eCommerce service areas 	<ul style="list-style-type: none"> Single point of failure Made obsolete by internet Go out of business

SWOT Analysis

Comparing ebMS + CPA (ebXML)

with AS2 / AS1

Strengths		Weaknesses	
<ul style="list-style-type: none"> Open public standard Open source solutions Uses internet mechanisms Extensible for new techniques Supports push & pull delivery Any payload enveloping Robust partner / role model Business process aware Security mechanisms Interoperability proven Existing vendor adoption Simple business metaphors 	<ul style="list-style-type: none"> Setup & Install Support services Developer use Language support Marketing budget Backup & Archive 	<ul style="list-style-type: none"> Legacy EDI support Open public standard Uses internet mechanisms Vendor (VAN) support Migration of existing EDI REST-style interfacing 	<ul style="list-style-type: none"> Setup & Install Point-to-point only No support for pull mode No partner / role model No business process link Backup & Archive Developer use Language support Static limited standard Delivery control details
Opportunities		Threats	
<ul style="list-style-type: none"> Provide foundation for global business Included in *nix distribution More government adoption Developer awareness & use 	<ul style="list-style-type: none"> Vendors switch to closed systems Vendor marketing 	<ul style="list-style-type: none"> Migration of existing VAN EDI to AS1/ AS2 based solutions 	<ul style="list-style-type: none"> EDI diminish in new deployments Niche solution only Future extensibility

SWOT Analysis

Web Service using WSDL

Web Service using WS-I

Web Service using WSDL		Web Service using WS-I	
Strengths	Weaknesses	Strengths	Weaknesses
<p>W3C-based approach</p> <p>Uses internet mechanisms</p> <p>Open source tools</p> <p>Web server support</p> <p>Security mechanisms</p> <p>Integration via XSD</p> <p>Limited content exchanges</p> <p>WSDL-based coupling</p>	<p>Not designed for B2B</p> <p>Enveloping restrictions</p> <p>Point-to-point only</p> <p>No support for pull mode</p> <p>No partner / role model</p> <p>No business process link</p> <p>Fixed XSD transactions</p> <p>Backup & Archive</p> <p>Level of service support</p> <p>WSDL limitations</p>	<p>W3C-based approach</p> <p>Uses internet mechanisms</p> <p>Open source tools</p> <p>Strong security model</p> <p>Integration via XSD</p> <p>WSDL-based coupling</p> <p>Large vendor support</p>	<p>Excessive complexity</p> <p>No partner / role model</p> <p>No business process link</p> <p>Fixed XSD transactions</p> <p>WSDL limitations</p> <p>Partner support & setup</p> <p>Total cost of ownership</p>
Opportunities	Threats	Opportunities	Threats
<p>Providing real-time supporting content for e-Business solutions</p> <p>Internal information feeds</p>	<p>REST-base ROA interfaces take over</p>	<p>Secure information feeds for high risk applications</p> <p>Internal information feeds</p> <p>Complex deployment environment needs</p>	<p>Complexity and cost reduce adoption to niche markets</p>

ebXML Maturity Model



ebXML messaging adoption vectors

	Maturity Level	Prime Business Benefits	Competitive Response	Scope	Technology Analysts	Success Factors
5	Abundant resources	Global Adoption	Vendors look to manage standards	Everyone and everything	Show how they predicted it all in the first place	WS-* viewed as niche toolset
4	Significant Resources	Dramatic reduction in number of meetings & PowerPoint slides	Support integrated as basic platform feature set	Partners, integrators, business users, the CIO's office, accounting, HR, sales	Run seminars, briefings, executive retreats	Developers free to build effective, enabling solutions
3	Lots of Resources	Network effects kick in. Value of ebXML resources finally realized	Vendors admit support, customers demand solutions	Integrators, business users, and folks in accounting	Discover critical impacts, write reports	Regular developers discover how to use
2	More Resources	More information becomes accessible. Interesting uses happen	Vendors develop alternative competing solutions	Application integrators, business users	Get paid to belittle and stop adoption with FUD	Advocates resolve issues, empower others
1	Initial Resources	Some information actually becomes accessible	Vendors ignore	Sponsoring business units	Add to watch list	Developers, nobody is watching

ebXML Messaging 2006 Roundup

- **Big Companies**

(for more product information see <http://ebxml.xml.org/products>
+ vendors own web sites)

- Oracle AS –
 - integration of ebXML messaging and CPA partner editor / linkage to BPEL engine
- BEA
 - Support for ebMS v1 and v2
- Sun – ebMS v2 and Sun Services Registry + java libraries & integration toolset
- IBM – native support for ebMS v2 and CPA for new WebSphere v6.1
- Fujitsu – full implementation suite
- Sybase – full implementation suite

- **Open source solutions**

- Hermes v1 (ebMS) and Hermes v2 (ebXML + AS2)
- OrionMSG v3
- Webswell Connect v3
- Tamgroup NEXUSe2e

- **Commercial tools + projects sampling from 2006**

- Oracle (Helena), Axway (GM/VW, T-Mobile), Xenos (NIA) and BNetal (US CDC / DHS), NEXUSe2e (Monsanto, Wilbur-Ellis)