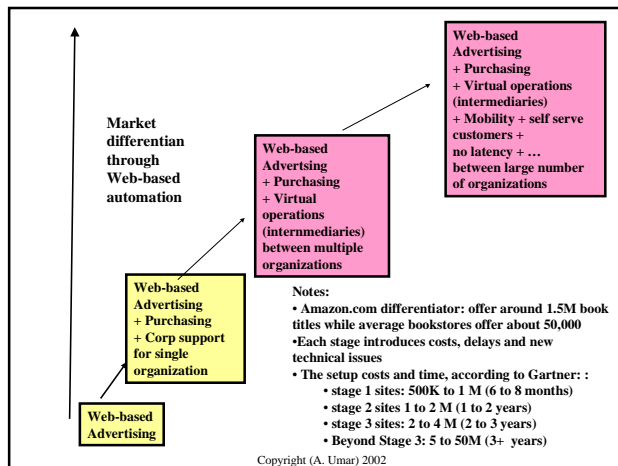
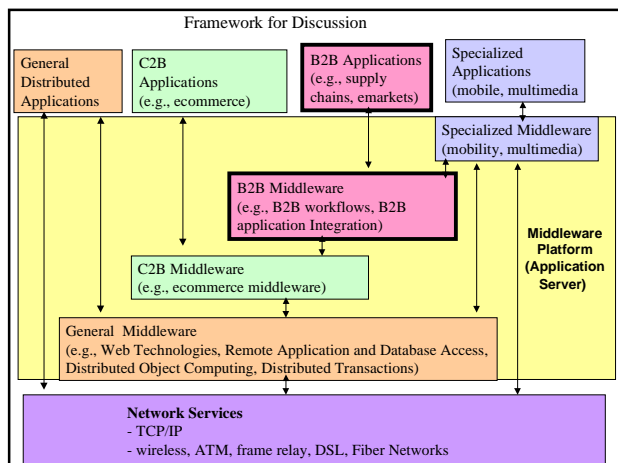


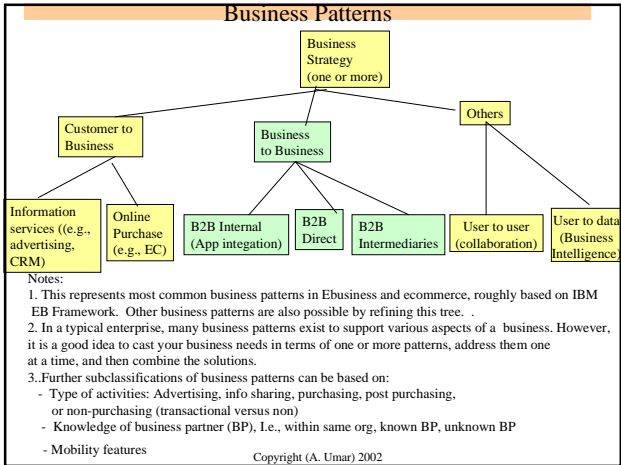
SESSION: Platforms for B2B Trade

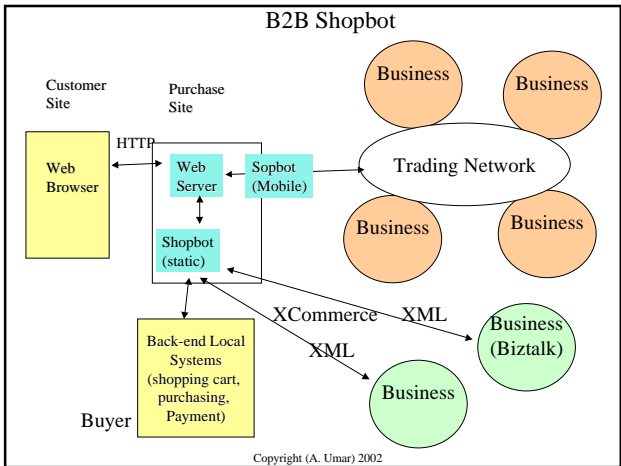
- Overview
- B2B-Direct: SCM
- B2B - Intermediaries (emarkets)
- B2B Middleware Overview
- Workflows
- Enterprise Application Integration
- XML for B2B - Standards
- Examples of B2B Platforms

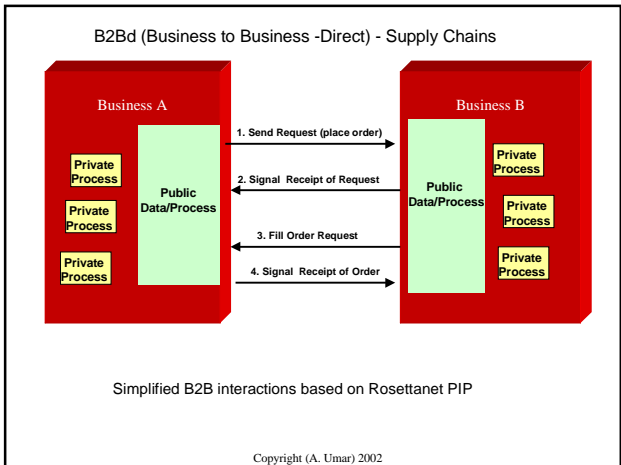
Amjad Umar

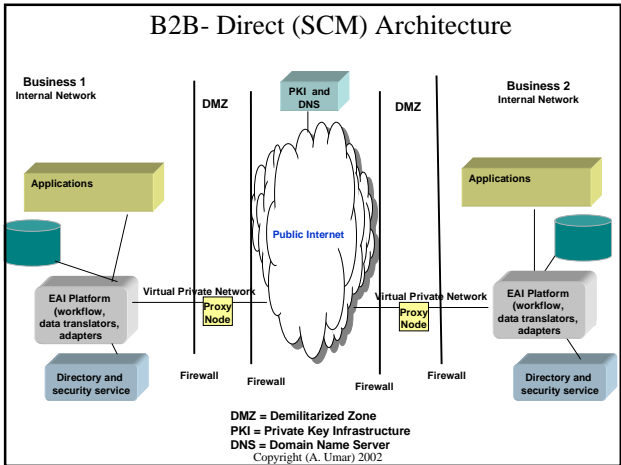


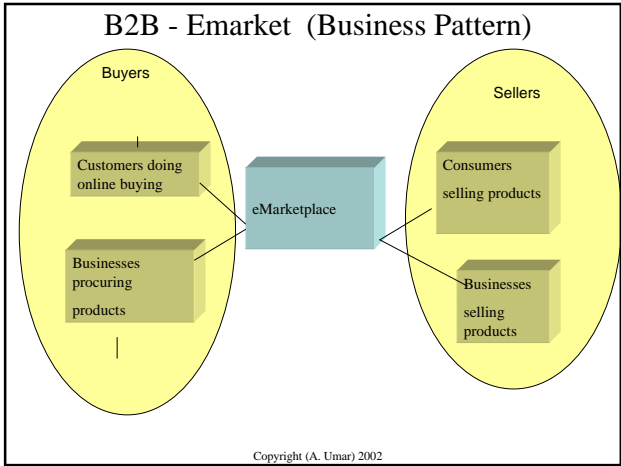


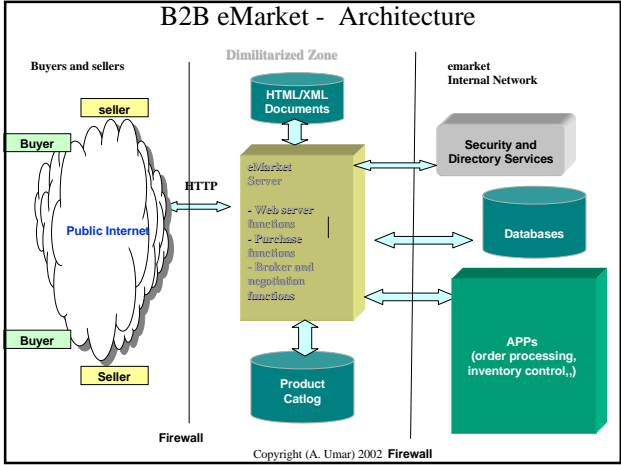










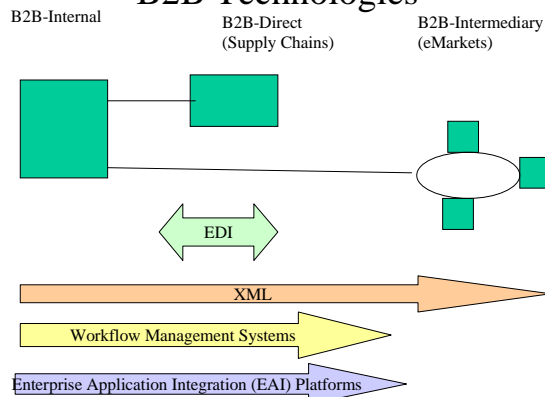


Choices in B2B Trade

- Representation of information (e.g., purchase order)
- “Choreography” between business partners (e.g., what happens if order cannot be fulfilled)
- Transport mechanisms:
 - Loosely coupled: email, FTP, MOM, Pub/sub
 - Tightly coupled: HTTP (get, Post), SOAP-RPC, CORBA, DCOM

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B2B Technologies

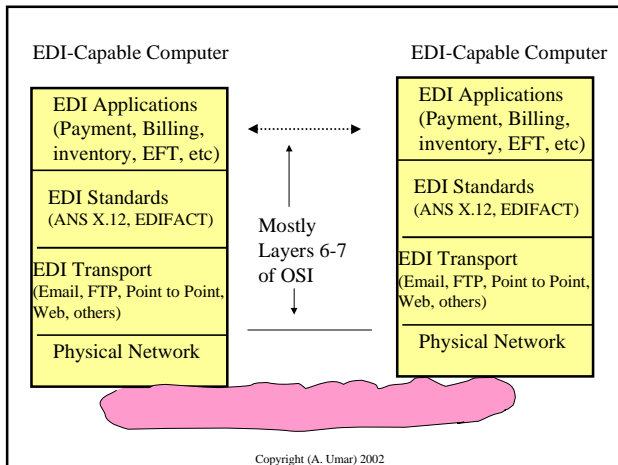


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Electronic Data Interchange (EDI)

- Developed in the 1960s to automate B2B activities
- EDI standards define formats for exchange of information through
 - ANSI X.12 committee for EDI-based order processing, shipping and receiving, invoicing, and payment. Examples are purchase order (X 850), request for quotation (X 840).
 - EDIFACT, developed by the United Nations, is a set of standards that are similar, but not compatible, to the US-based ANSI X.12 standards.
- Gateways (e.g., GEIS) translate EDIFACT and X.12.
- Translators (e.g., Sterling, Harbinger) convert data between business applications to EDI formats (e.g., extract data in Oracle database and convert it to an EDI invoice)

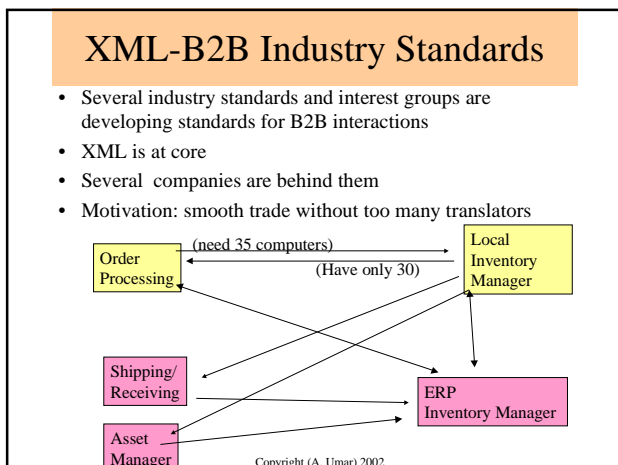
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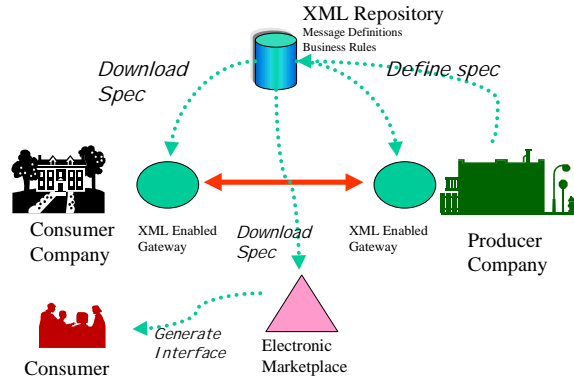
EDI

- EDI data can be transported by using mail, FTP, or Web.
- Early practice: EDI applications on mainframes communicate over proprietary networks (e.g, SNA) using point-to-point..
- Current trend: PC or workstation EDI applications over IP networks.
- Many vendors providing EDI support (GEIS, IBM, Harbinger, Sterling)
- EDI over Internet. Overshadowed by XML.
- XML Versus EDI

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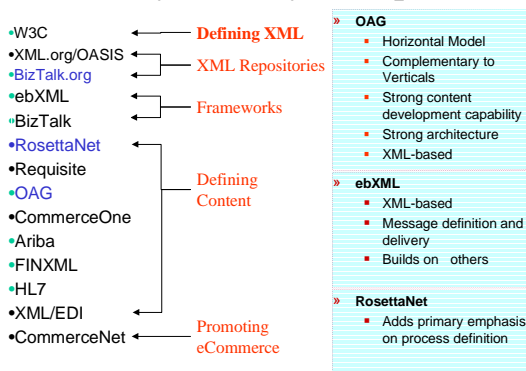


XML's role in E-commerce



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Industry Activity Groups:



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OAG: Open Applications Group (<http://www.openapplications.org>)

- One of the early organization of B2B integration bandwagon (since 1994), mainly supported all leading ERP vendors.
- Process and message specifications for business software integration
- OAGIS release 6.2 has 51 integration scenarios, has 122 business object documents (BODs)
- Has 48 member organizations (members of XML.Org, BizTalk.Org)
- 27 vendors have adopted this approach and 18 companies have implementations based on OAGIS.

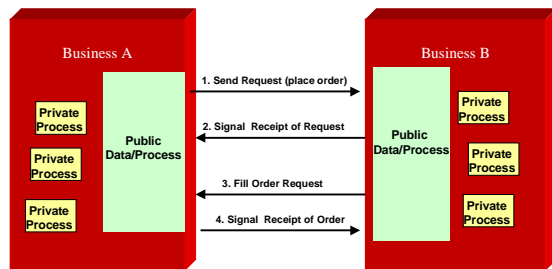
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- Derived from the Rosetta stone. Greek hieroglyphic correspondence.
- Streamline supply chain processes to benefit tech manufacturers and their partners.
- Supported by (virtually) all major h/w manufacturers.
- Many Public Information Processes (PIPs) defined. For example,
 - PIP3A1 Request Quote
 - PIP3A2 Query Price and Availability
 - PIP3A3 Transfer Shopping Cart
 - PIP3A4 Manage Purchase Order
 - PIP3A5 Query Order Status
 - PIP3A6 Distribute Order Status
 - PIP3A7 Notify of Purchase Order Acceptance
- Competing standards : cXML, BizTalk, CommerceOne.

Basic Philosophy: Non standard stuff does not add value!

19

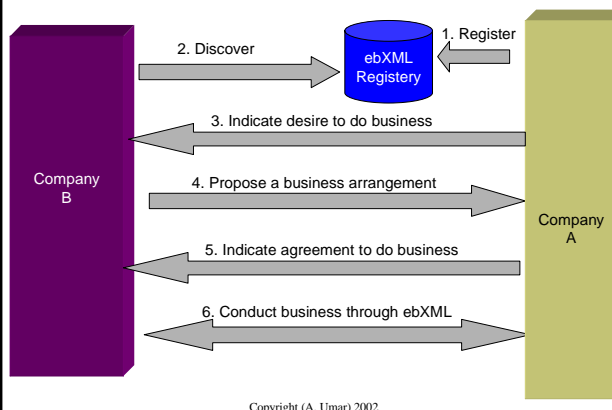
B2Bd (Business to Business -Direct) - Supply Chains (Rosettanet)



Simplified B2B interactions based on Rosettanet PIP

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ebXML (www.ebxml.org)



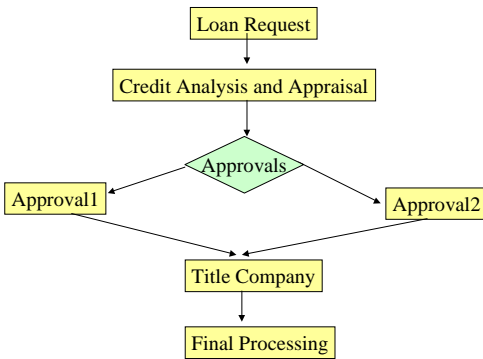
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WorkFlow Management

- Workflow: Automation of business processes - in whole or part
- Typically involves several workers (e.g., purchase approval)
- Origin: office automation, trend B2B trade
- Organizational challenges addressed by workflow management: :
 - Reacting quickly to changing business needs and conditions.
 - Refining key processes to optimize business
 - Tracking daily operations to ensure quality and throughput
 - Identifying reusable parts of processes to save effort, time and money
 - Redefine common business processes after mergers and acquisitions
 - Executing each business process exactly as defined
 - Integrating applications on different platforms into a business process
 - Showing compliance with standards (ISO 9000, etc)
 - Documenting processes in procedure manuals for staff training

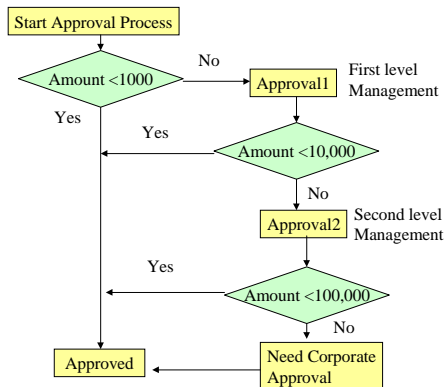
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Workflow Example of a Loan Approval Process



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Workflow Example of a Purchase Approval Process



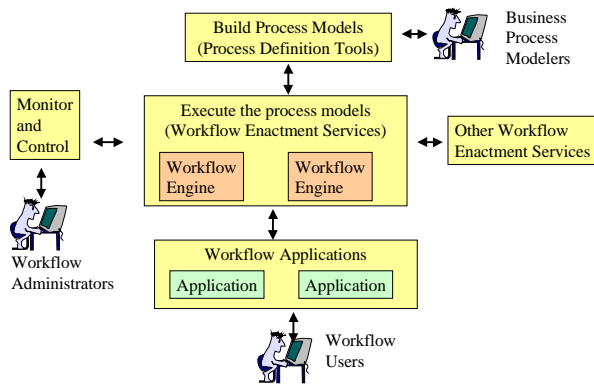
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Approaches used typically by Workflow Management Systems

- Simplify work by providing to-do-lists with prioritized work items (work lists)
- Coordinate front-end applications with automated back-end applications
- Analyze business processes audit trails for further improvements
- Document the business processes online in a workflow model
- Automate tasks by automatically starting programs
- Integrate existing and new applications running on heterogeneous platforms
- Navigate through the business processes automatically

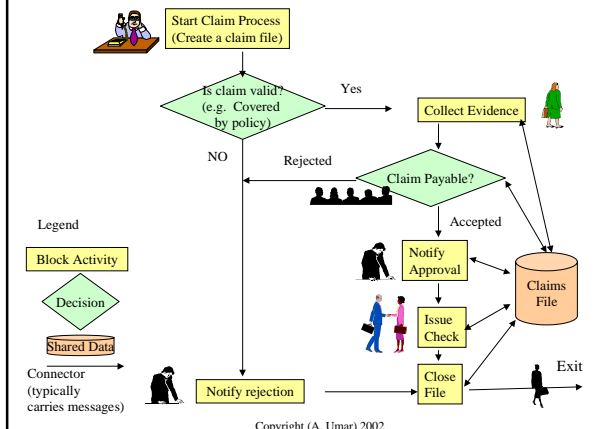
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Workflow Management System- Conceptual View



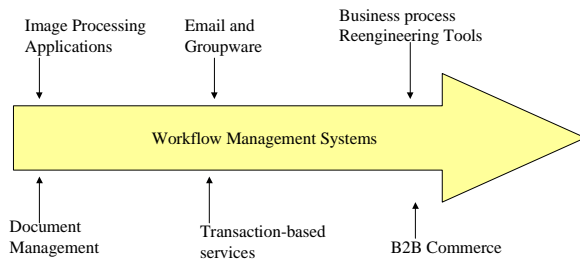
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Workflow Example of a Claim Processing Process



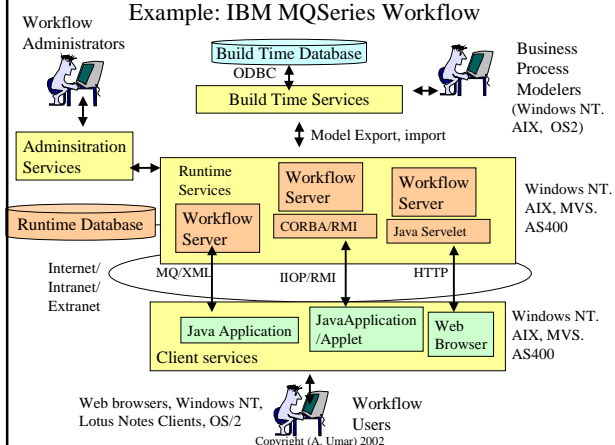
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Evolution of Workflow Management Systems



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Example: IBM MQSeries Workflow

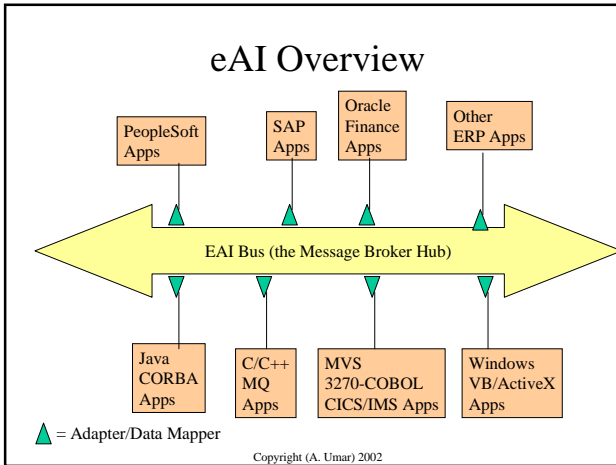


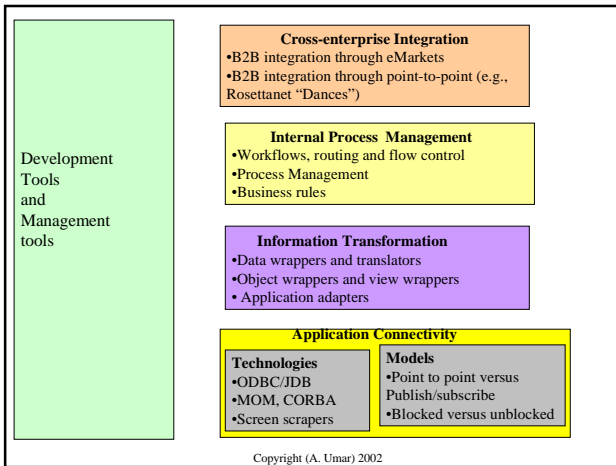
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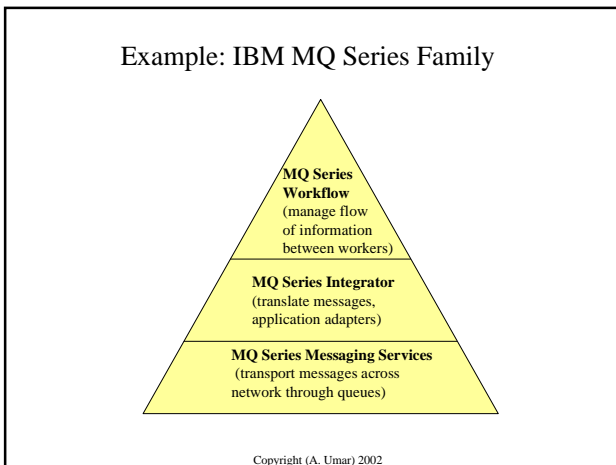
Enterprise Application Integration Platforms

- Many systems (networks, apps, business processes) from different vintages at different platforms need to interwork/interoperate wfor ebusiness
- Key challenge: Integrate systems
 - Within the enterprise
 - External partners
- Why?
 - On the average, a customer purchase involves 10 to 11 applications
 - These systems, if not integrated, can increase service time, introduce errors, increase "hassles"
- EAI platforms address the integration issues
- Origin: enterprises
- Trend: B2B

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Examples of EAI Platforms in industry

- Businessware from Vitria (www.vitria.com)
- Activeware from Webmethods (www.webmethods.com)
- MQ Integration family from IBM
- Tibco Integrator from www.tibco.com
- Fusion from sun (www.sun.com)
- Many others

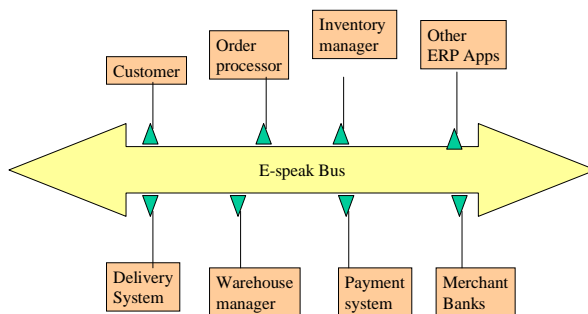
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B2B Platforms

- A wide range of B2B platforms are becoming commercially available.
- Examples
 - HP e-speak (www.hp.com)
 - Oracle exchange (www.oracleexchange.com)
 - IBM MQ Family (www.INM.com)
 - B2B EAI platforms (e.g., www.vitria.com)
 - aribanet platform (www.ariba.com)
 - commerceone platform (www.commerceone.com)

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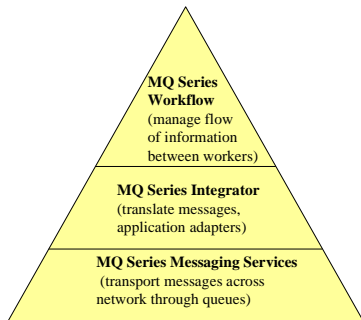
HP's E-speak



▲ = e-speak handlers

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IBM MQ Series Family



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Concluding Comments

- B2B activities are evolving
 - within an enterprise
 - B2B - direct (SCM)
 - B2B - indirect (emarket)
- B2B Middleware consists of:
 - workflows
 - EAI's
 - XML for B2B purchasing
 - EDI
 - Others
- B2B Platforms are becoming commercially available

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Main References (Web Sites)

- www.commercenet.com (a useful site for EC standrads)
- EC/EDI Center for Standards homepage (URL: www.edi.itsi.disa.mil)
- EDI Resources Centre Web Site: Web based EDI and e-business systems (URL: www.edicity.com)
- EDI resources for trainers, Classroom and Self-Study (URL: www.worldbank.org/html/edi/resource.html)
- [Extensible Markup Language \(XML\) 1.0](http://www.w3.org/TR/WD-xml) description at <http://www.w3.org/TR/WD-xml>
- www.xml.com, a very useful Web site for a great deal of information about XML
- [ebXML initiative](#) and the [XML/EDI group](#) Web sites
- www.biztalk.org (good site for XML ecommerce standards)

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Main References (Books)

- Kalakota, R., and Whinston, A., "Frontiers of Electronic Commerce", Addison Wesley, 1996.
- N. Adam, O. Dogramaci, A. angopadhyay, and Y. Yesha, "Electronic Commerce: Technical, Business, and Legal Issues", Prentice Hall, 1998
- "Surviving the Digital Jungle: What Every Executive Needs to Know About eCommerce and eBusiness", by Jack Shaw, 1999
- Xml by Example : Building E-Commerce Applications", by Charles F. Goldfarb Series on Open Information Management) by Sean McGrath (June 1998)
- "Xml for EDI : Making E-Commerce a Reality" by Hussain Chinoy, et al (May 2000)
- "Understanding BizTalk", by John Matranga, et al (March 2000)

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