

CS155b: E-Commerce

Lecture 9: Feb. 11, 2003

Introduction to B2B Commerce;
Covisint and VeriSign

Office Hours Canceled February 13, 2003

Professor Feigenbaum's office hours are canceled this Thursday, Feb. 13, 2003.

The TA will hold usual office hours on Wednesday this week. Please stop by if you have questions.

Electronic Commerce

Definitions

Electronic commerce is a set of technologies, applications, and business processes that link business, consumers, and communities.

- For buying, selling, and delivering products and services
- For integrating and optimizing processes within and between businesses.

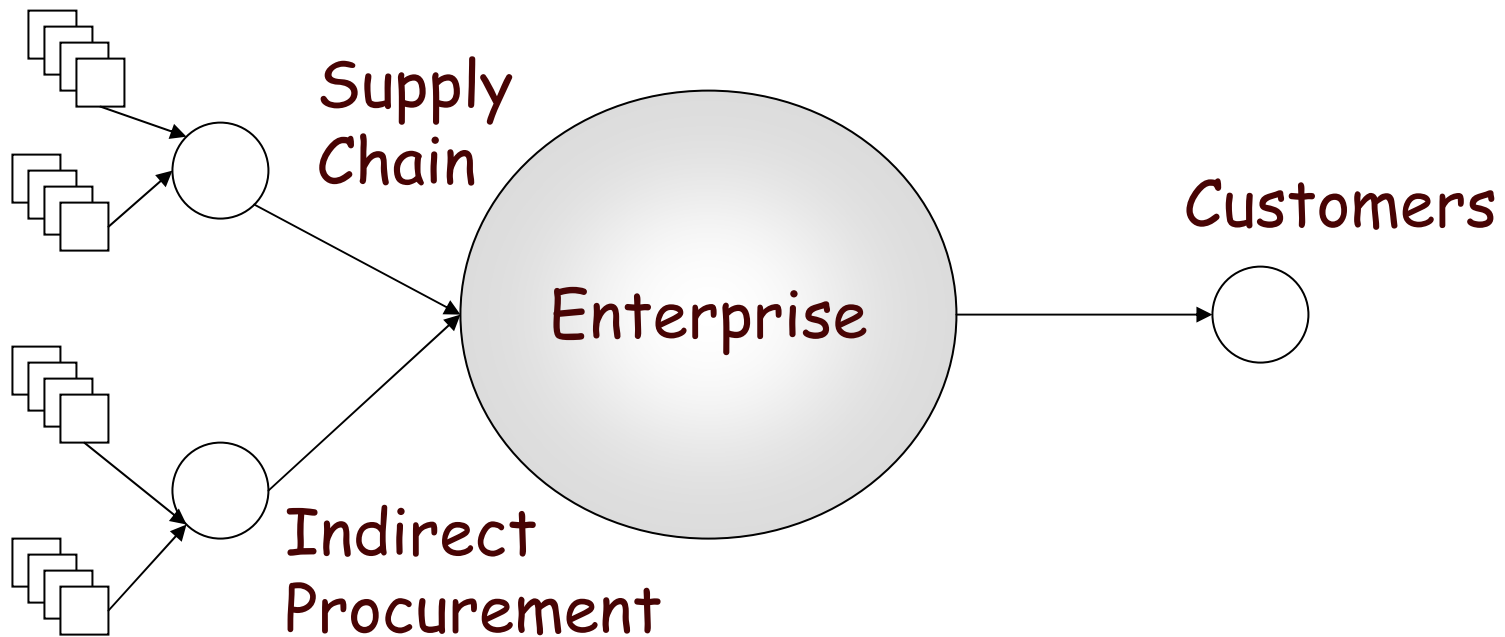
Definitions (continued)

- **B2B Commerce:** “Interactions relating to the purchase and sale of goods and services between businesses.” Estimated to be 70% of the US economy!
- **B2B electronic marketplaces (“B2Bs”):** Systems of suppliers, distributors, customers and infrastructure and service providers that use the Internet for communications and transactions.

Business Models for Electronic Commerce

- Stores and malls
- Virtual communities
- Purchasing center
- Auctions and reverse auctions
- ★ Value-chain service provider
- ★ Value-chain integrator
- ★ Collaboration and concurrent engineering
- Information brokerage

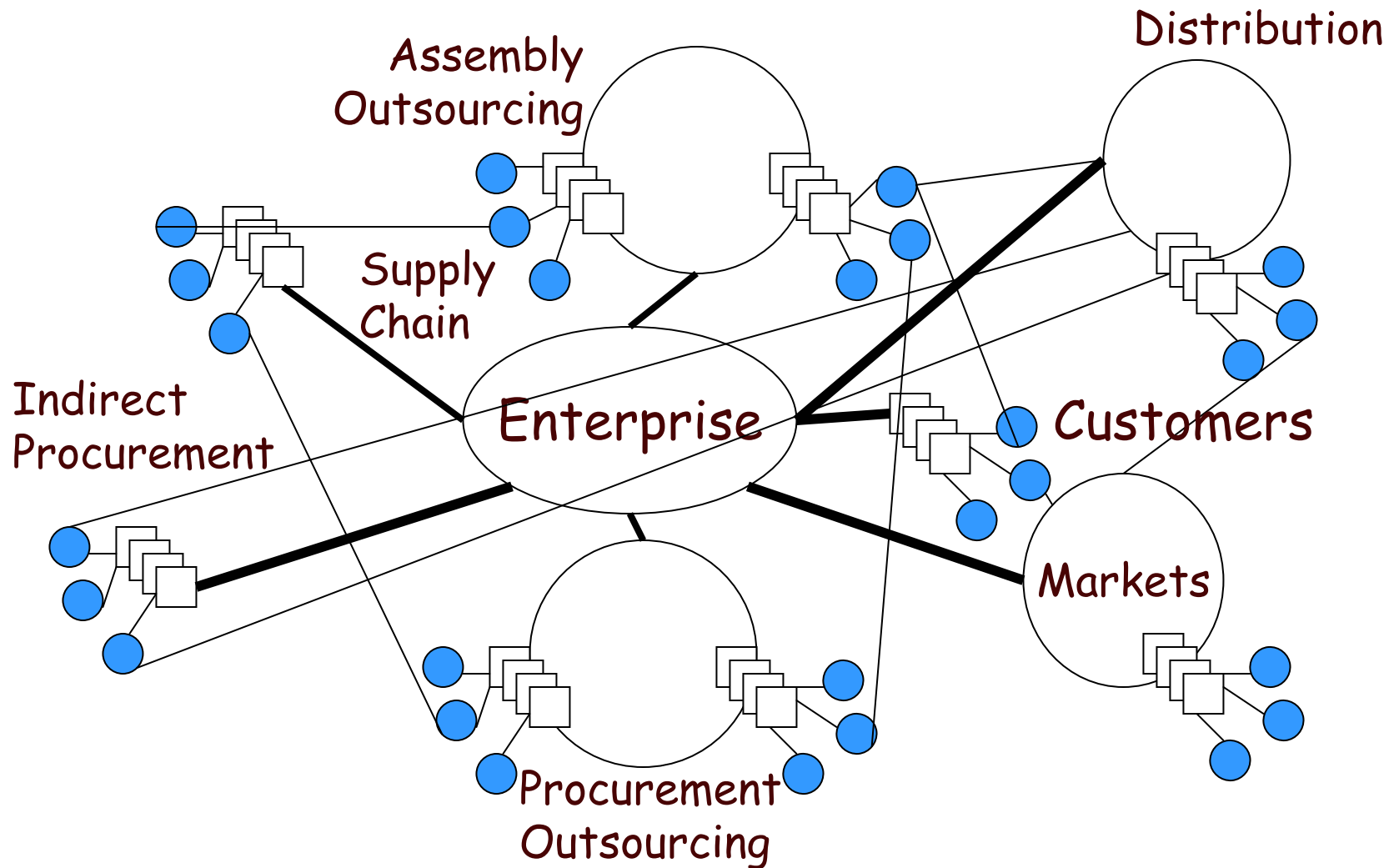
Traditional Enterprise-Centric View



Internet Business Models and Integration Requirements

The Internet enables new models for marketplaces, trading communities, outsourcing, open sourcing, buying consortia, supply chain integration and "virtual enterprises" that are fundamentally different.

Networks of Commerce Communities



Specific B2B Tasks

- Search
- Source
- Specify
- Negotiate and bid
- Order
- Receive goods and services

“Horizontal” B2Bs

- Serve many different industries.
- “Product focus” is broad.
- Examples (from early 2001)
 - HotOffTheWire (consumer goods for small and midsized retailers)
 - NTE (National Transportation Exchange, which sells unused trucking capacity to businesses)
 - equalFooting (obtains volume discounts for small businesses through “virtual aggregation”)

"Vertical" B2Bs

- Serve a single industry
- Product focus is on "the supply chain of one product category" or on "expertise and in-depth content knowledge for one industry."
- Examples (from early 2001)
 - Covisint (automotive)
 - MetalSite
 - BuyProduce

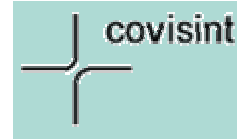
Revenue Models

- Transaction-related fees
 - Per-transaction
 - Flat (*e.g.*, monthly, yearly)
 - Value-based
- Membership/Subscription fees
- Value-added service fees
 - Logistics (*e.g.*, shipping)
 - Financing
- Advertising and Marketing
- Sales of Data and Information

Participant Ownership

- Advantages
 - Economies of scale
 - Technical expertise and content knowledge
 - Incentive to maintain high-volume participation
- Disadvantages
 - Barriers to niche-player and new-player entry
 - ★ Anti-trust Issues
- Alternatives
 - Ownership by technology firms
 - Ownership by 3rd-party investors, *e.g.*, venture capitalists

Covisint

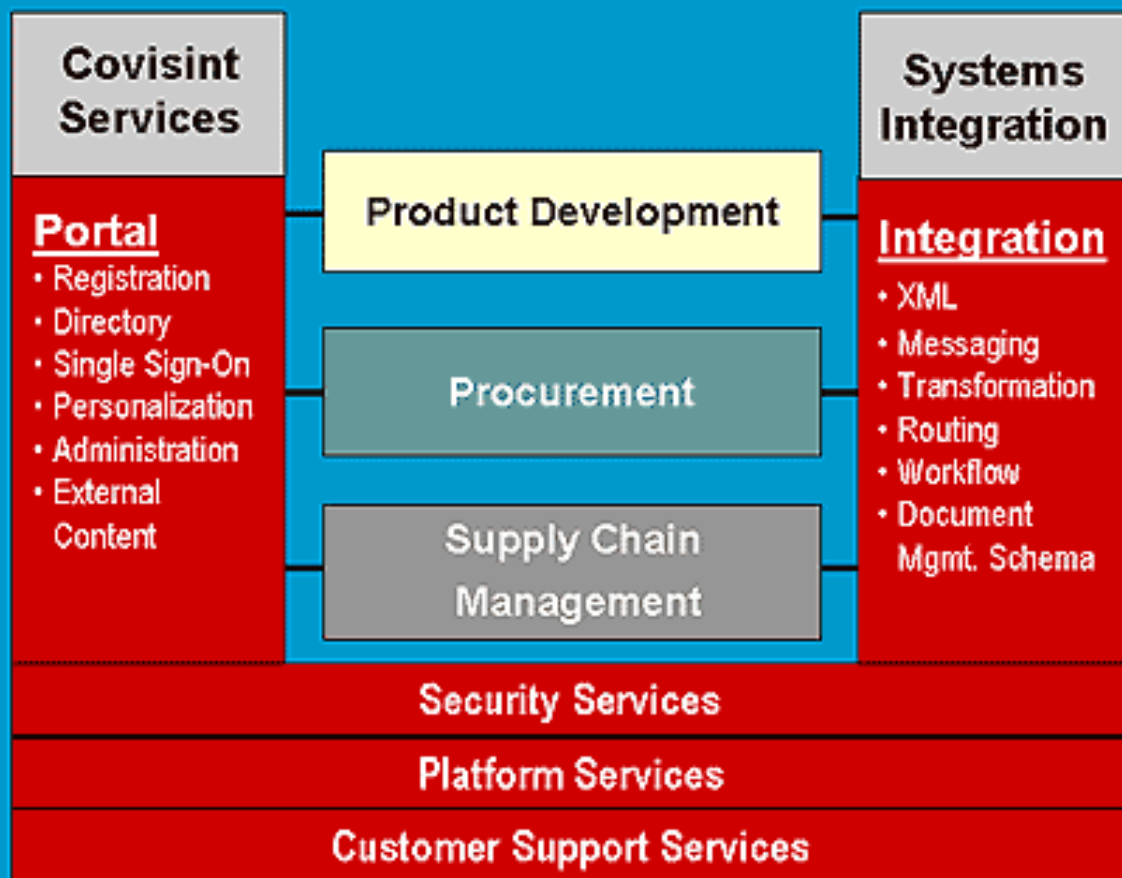


- Founded officially Dec 11, 2000 by Ford, General Motors, Nissan, and Renault.
- Started originally as a vision group 12 months earlier.
- B2B e-business exchange allowing automotive original equipment manufacturers (OEMs) and suppliers to speed the flow of material through the supply chain
- ? If Covisint lives up to its promise, consumers will eventually be able to custom-configure a car -- from engine size to upholstery color -- and drive it home a week after placing their order.

The Exchange

- Virtual Project Workspace
 - Desktop application that allows members to buy and sell automotive parts, supplies, and services
- Procurement
 - Auctions: Seller and Buyer auctions
 - Catalogs: Custom and Community
- Supply
 - SupplyConnect: Access to every step of the supply process
- Quality
 - Advanced Quality Planner: minimizes quality defects by web-enabling management of quality process requirements and deliverables.

integrated solutions



Revenue Model

- One-time licensing fees for members
- Flat transaction fees
- Variable-rate transaction fees
- Additional fees for auctions and catalogs
- Covisint hopes to tap into the \$1.3 trillion of purchased goods and services in the global automotive industry (eventually).

Unresolved Issues

- Initially, there isn't transparent, real-time, two-way supply-chain connections between the auto companies and all tiers of suppliers - no real improvement.
- Not all auto companies and suppliers will be signed up.
- Auto companies are the only ones to set the rules for the exchange.
- Rising tensions between software partners as Covisint delays final specs for application development.
- Other similar exchanges are planned by other automotive companies.

VeriSign: An Internet "Trust Services" Company

- Full name: VeriSign, Inc.
- Employees: 3100
- Stock Price (**VRSN**):
 - \$7.72 as of close, 2/10/03
 - 52-week range: 3.92-33.50
- Earnings Per Share: **-0.34** (3Q02)
- Provides Internet security certificates, payment services, and domain registration.



VeriSign History

- Opened headquarters in Mountain View, CA, in 4/1995.
- Founding mission: "Enable everyone, everywhere to use the Internet with confidence."
- Stratton Sclavos, current CEO, became president in 7/1995.
- IPO in 1/1998 at \$3.50/share.
- Merged with Network Solutions (most prominent domain registrar) 6/2000.

VeriSign (VRSN) Stock Chart

Source: Quicken.com (2/9/2003)

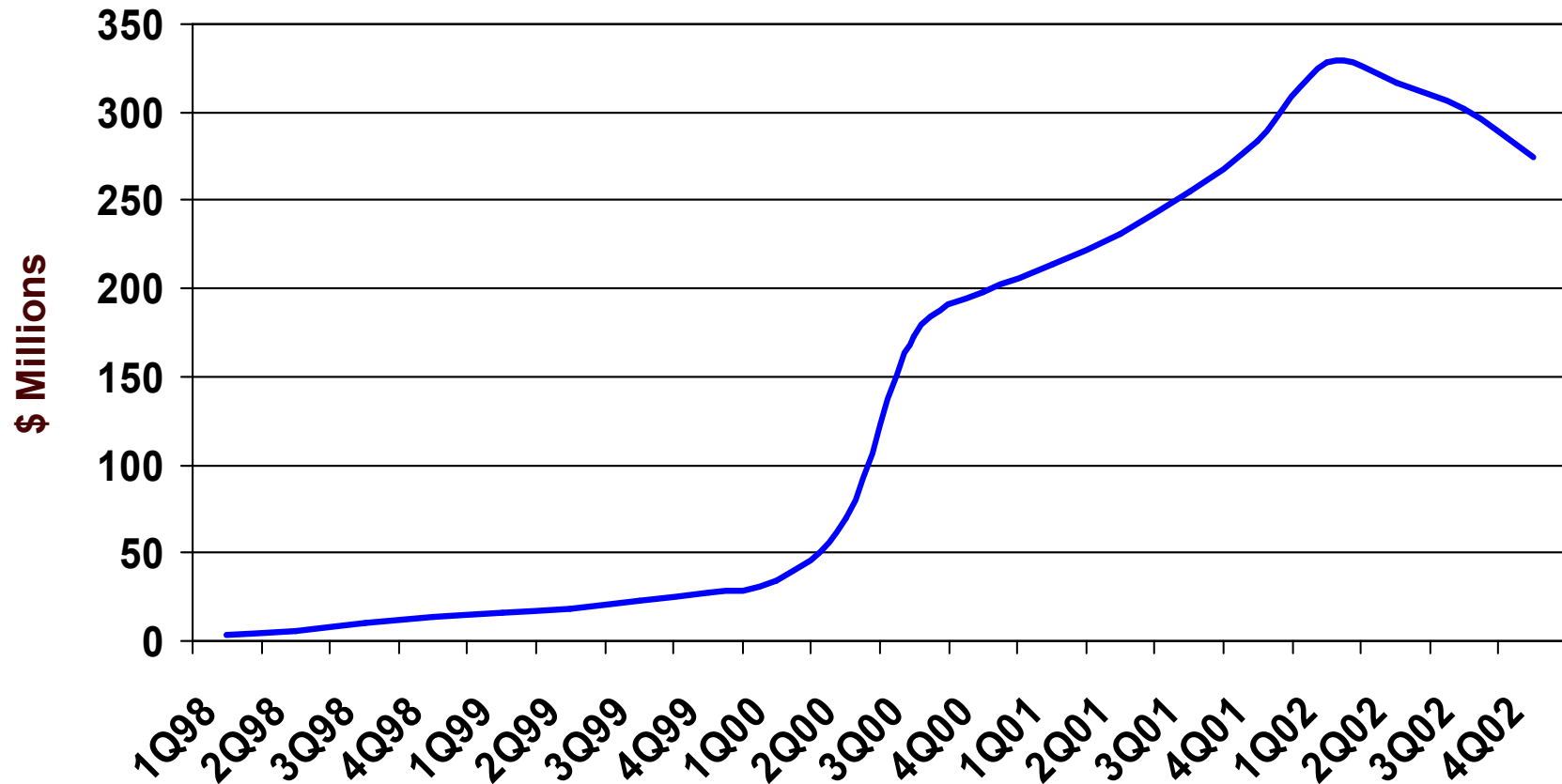


Period : Feb-9-1998 - Feb-9-2003

[S] = Stock Split

VeriSign Quarterly Revenues

Source: VeriSign Corporate Press Releases and SEC Filings



VeriSign Services

- **Domain Registration:** Network Solutions is the active registrar for 15.5 million domain names in .com, .net, .org, and .tv.
- ★ **Website Security:** Digital certificates, *e.g.*, to use SSL. Installed base of 305,000 certificates.
- **Payment Services:** Credit-card processing capability and other e-commerce tools. 19,000 active online merchants.
- **Global Registry:** Maintains top-level domains and global databases for DNS lookup. The directory contains over 30 million addresses and serves over 2 million lookups per day.

Second Written Homework Assignment

- Now available online
(<http://zoo.cs.yale.edu/classes/cs155/spr03/hw2.pdf>)
- Due Tuesday, Feb. 18, 2003, submitted online using the Classes server
- **Don't wait to check that:**
 - you are able to access the Classes server
 - you have added CS155 to your course list
- See instructions at the beginning of the homework assignment

Reading for February 13, 2003

- (More important for Homework 2)
Websites on Total Information Awareness (TIA):
 - <http://www.darpa.mil/iao/TIASystems.htm>
Read "Program Objective" on this page, and follow links to Information Paper and FAQs.
 - <http://www.epic.org/privacy/profiling/tia>
Read "Introduction" and "Recent News Flashes," and follow link to letter from the ACM.
- (More important for 2/18/2003 invited lecture)
Chapters 1 and 2 of Database Nation by Simson Garfinkel. Available in print form only; pick up handouts after class or outside TA's office.