



ROBERT H. SMITH
SCHOOL OF BUSINESS

Electronic Commerce at R.H. Smith

Dr. Howard Frank

Dean

Robert H. Smith School of Business

University of Maryland

College Park, Md.





RH Smith School Goals

ROBERT H. SMITH
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-
- Ascend to the top 15 Business Schools in the Nation
 - Provide a superb research and teaching environment for faculty and students
 - Give our graduates a first class Return on Investment for their time and expense



Key Strategies

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- Continue to develop first rate academic areas and centers with distinguished research, teaching and outreach.
- Differentiate Smith School with activities built around creation, management and deployment of knowledge and information.



Strategic Priorities

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-
- Research excellence
 - Academic program distinctions
 - Cross functional strategy
 - IT as core competency
 - Marketing the School
 - Generating resource support



First Year Core MBA Program

30 Credits of 54 Total (ELMs: “0” credits)

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Fall Semester			Spring Semester		
Week 1	Term A	Term B	Term C	Term D	Week 15
Module on “Foundations of Business”	Business Communications	Organizational Behavior	Global Economic Environment	Strategic Management	ELM “MBA Case Competition”
	Managerial Economics and Public Policy	Marketing Management	Human Resource Management	Strategic Information Systems	
	Financial Accounting	Financial Management	Managerial Accounting	Supply Chain Management	
	Data, Models, and Decisions		Elective		

- + ELM “Washington Week” during January of 1st Yr (week prior to start of Spring Semester)
- + ELM “Business Ethics” during last week of 2nd Yr-Spring Semester
- + BMGT 698 (MBA Consulting Project, 3 credits) during 2nd Yr-Fall Semester



Functional Concentrations

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-
- Accounting
 - Finance
 - Human Resources
 - Information Systems
 - International Business
 - Logistics
 - Management Sciences and Statistics
 - Marketing
 - Operations
 - Organizational Behavior
 - Strategy
- ○ ○ ○ ○ ○ ○ ○ ○ ○



Cross Functional Concentrations

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- Consulting
- E-commerce
- Entrepreneurship
- Financial engineering
- Global knowledge management
- Supply chain management
- Telecommunications
- Management of technology (1999/2000)
- Information security (2000/2001)



E-Commerce Concentration

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- BMGT 798I: Electronic Commerce: Technology and Business Models
- BMGT 798X: Electronic Commerce: Advanced Topics
- BMGT 798T: Electronic Channels of Distribution
- BMGT 798V : Telecommunications and Technology Policy
- BMGT 726: Telecommunications and Computer Networks
- BMGT 798 X: Real-Time Management of Supply Chains





798 I Electronic Commerce Technology & Business Models

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Organizations are finding that the development of a coherent World Wide Web presence and strategy has become a competitive necessity. Yet, few electronic commerce (EC) business models exist on how to build a successful web operation. Much confusion also exists regarding the technological infrastructure needed to actually implement an EC strategy. This course provides both the strategic and technical essentials of what a manager needs to know in order to manage and lead an electronic commerce initiative.

From a business perspective, the course examines the use of the web for the marketing and distribution of goods and services. We will focus on assessing the marketing and strategic impact of EC on areas such as publishing, retailing, entertainment, and travel. We will also study the policy and societal impact of EC on work, intellectual property rights, and electronic communities.

Students will develop an understanding of the technology infrastructure that enables electronic commerce. We will cover technical issues such as the Internet, Intranets, Extranets, Portals and search engines, electronic payment systems and security, and EC servers. Throughout the semester, students will learn to use a combination of technical components and tools such as Frontpage, Backoffice, Access, Oracle, and Internet Information Server (IIS) to build an actual commerce web site using features such as web access to databases and secure transactions.





798 I Syllabus-1

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Date	Topic	Readings and Issues	Assignments and Labs
Week 1: 9/1/99	Course Overview and Introduction	<ul style="list-style-type: none">Discuss syllabus, info sheets, books, and discussion databaseRead p. 21-78 of the Tyler Frontpage book	<ul style="list-style-type: none">Lab session 1: basics of HTML and Frontpage
Week 2: 9/8/99	Technology I: Technology Convergence	<ul style="list-style-type: none">Sirbu, "Telecommunications technology and infrastructure."Thyfault, <i>Informationweek</i>, April 13, 1998. "Resurgence of convergence."<i>Infoworld</i>, September 21, 1998. "Trying to widen the pipe."Thyfault, <i>Informationweek</i>, Jan 19, 1998. "Local connection."	<ul style="list-style-type: none">Lab session 2: advanced Frontpage elements
Week 3: 9/15/99	Technology II: Web Technology Infrastructure	<ul style="list-style-type: none"><i>The Washington Post</i>, October 14th, 1998. "How the Internet takes you there."Wilder & Dalton, <i>Business Week</i>, July 6, 1998. "At last telecom unbound"Leiner et al., <i>CACM</i>, February 1997. "The past and future history of the Internet."<i>Business Week</i>, June 14, 1999. "A Rosetta stone for the Web?"	<ul style="list-style-type: none">Lab session 3: database connectivity



798 I Syllabus-3

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Week 6: 10/6/99	Business to Business Electronic commerce	<ul style="list-style-type: none">● Palmer & Griffith, CACM, 1998. "An emerging model of web site design for marketing."● <i>Business Week</i>, June 22, 1998. "Log on, link up, save big."● <i>Harvard Business School</i>. "Network technology and the role of Intermediaries."● Optional reading (online) Sarkar, Butler, & Steinfield, <i>Journal of Computer Mediated Communication</i>, 1998. Intermediaries and cybermediaries.	● Case: Dell
Week 7: 10/13/99	Digital Goods	<ul style="list-style-type: none">● Brody, <i>Technology Review</i>, May-June 1997. Clicking on the webzines● <i>Business Week</i>, September 7, 1998. Yahoo! the company, the strategy, the stock● <i>Business Week</i>, March 2, 1998. Portal combat comes to the net● <i>Business Week</i>, October 26, 1998. The skinny on niche portals● <i>The Economist</i>, July 17, 1999. "Caught in the Web."	● Case: USA Today



798 I Syllabus-4

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<p>Week 8: 10/20/99</p>	<p>Tangible Goods</p>	<ul style="list-style-type: none"> ⊛ <i>Business Week</i>, December 14, 1998: "Amazon.com the wide world of e-commerce" ⊛ <i>Business Week</i>, December 8, 1998. "The meat and potatoes of online shopping" ⊛ <i>Washington Post</i>, July 15, 1999. "Barnes and Noble loses marketing virus." ⊛ <i>Washington Post</i>, February 8, 1999. "Manufacturers' online stores upset their retailers." ⊛ <i>Business Week</i>, July 12, 1999. "A hard sell online? Guess again." 	<ul style="list-style-type: none"> ⊛ Case: Leadership Online
<p>Week 9: 10/27/99</p>	<p>Customization</p>	<ul style="list-style-type: none"> ⊛ <i>The Economist</i>, July 11, 1998. "When shove comes to push." ⊛ <i>Business Week</i>, October 9, 1998. "Now it's your web." ⊛ Personally, On Personalization Read online 	<ul style="list-style-type: none"> ⊛ Case: Onsale Inc.
<p>Week 10: 11/3/99</p>	<p>Security and Electronic Payments</p>	<ul style="list-style-type: none"> ⊛ Kosiur, 1998, "Handling money on the Net" and "Security and electronic commerce." ⊛ Sirbu, "Credits and debits on the Internet." ⊛ <i>The Economist</i>, July 17, 1999. "Digital rights and wrongs." 	<ul style="list-style-type: none"> ⊛ Presentations by student teams on industry segment ecommerce analysis ⊛ Guest lecture on Web security by Dr. Sunil Hazari, Campus Computing Associate, Research Fellow, UMD.



798 I Syllabus-5

Week 11: 11/10/99	Web Success Factors	<ul style="list-style-type: none"> ⊛ Griffith and Palmer, 1999. <i>Business Horizons</i>, "Leveraging the web for corporate success." ⊛ Ware, Gebauer, Hartman, & Roldan, <i>Informationweek</i>, May 18, 1998. "Five sins of doing business on the web" 	<ul style="list-style-type: none"> ⊛ Presentations by student teams on industry segment ecommerce analysis ⊛ Guest lecturer: Eric Ashman, VP USWeb.
Week 12: 11/17/99	Auctions and Webbots	<ul style="list-style-type: none"> ⊛ <i>Red Herring</i>, August 1999. "The auction economy." ⊛ Guttman, Moukas, & Maes, 1998. Agent mediated electronic commerce: a survey Read online ⊛ <i>The Economist</i>, July 24, 1999. "The heyday of the auction." 	<ul style="list-style-type: none"> ⊛ Guest lecture
Week 13: 11/24/99	Electronic Communities	<ul style="list-style-type: none"> ⊛ <i>Business Week</i>, April 5, 1999. "Privacy." ⊛ Armstrong & Hagel, <i>Harvard Business Review</i>, 1996. "The real value of online communities." ⊛ Silberman, <i>Wired</i>, March 98. "Your thoughts: a permanent public record." ⊛ <i>Internet World</i>, July 15, 1999. "Tomorrow the world." ⊛ Optional: read online. Kirsner, CIO, December 1997. Community theater 	<ul style="list-style-type: none"> ⊛ Online class on online communities ⊛ Guest lecturer: Phil Gross, Entrepreneur in residence, Dingman Center, First Chief Financial Officer of America OnLine (AOL)
Week 14: 12/1/99	Presentations	<ul style="list-style-type: none"> ⊛ Team Presentations 	<ul style="list-style-type: none"> ⊛ Presentation of ecommerce sites ⊛ Distribution of final exam
Last Week	Exam due	Final Exam (cumulative)	<ul style="list-style-type: none"> ⊛ Takehome exam is due on December 8th.



798T Electronic Channels of Distribution

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This course examines changes in distribution channel structure and marketing strategy that are driven by information technology. Building up on the foundational concepts of marketing channel theory, the course will examine:

- how electronic channels differ from traditional channels,
- the value chain implications of electronic channels for information products versus physical products, and
- how electronic channels can augment or cannibalize traditional channels.

The course will focus on new market forms and processes that are emerging. Understanding these changes is crucial to strategic marketing and supply chain management.





798T Electronic Channels of Distribution

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Part A: Traditional Channels Versus E-Channels

Week 1 Introduction to the Course
Channel Forms, Functions
and Management

Readings: Narus & Anderson, "Adaptive Channels" *HBR* (1996)

* **Mini-Case:** Compaq Computers

* **Mini-Case:** Caterpillar Inc.

Week 2 Distribution Channel Management

Readings: Fites, "Make Your Dealers Your Partners" *HBR* (96)

* **Harvard Business Case:** Lotus Corp

* **Mini-Case:** AucNet

Week 3 Competing in Marketplace

Readings: Malone et al, "The Logic of Electronic Markets" *HBR*(89)
Rayport & Sviokla, "Managing in Marketplace" *HBR* (94)

* **Harvard Business Case:** Dell Online

* **Mini-Case:** Egghead Software & Gateway Computers

Week 4 Channel Structure
Entry/Exit Strategies

Readings: Strader & Shaw, "Electronic Markets: Impact and
Implication, *Handbook of Electronic Commerce* (1999)

* **Harvard Business Case:** Leadership Online

* **Mini-Case:** Barnesandnoble.com: Follower Strategy





798 T Electronic Channels of Distribution - 2

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Part B: Characteristics & Uniqueness of E-Channels

Week 5 **E-Channels & Managing Channel Conflict**

Readings: Anders, "Discomfort Zone", *Wall St Jr* (11/4/98)
Useem, "Cannibalize Yourself," *Fortune* (9/6/99)

* **Mini-Case:** Compaq.com

* **Mini-Case:** Daewoo Motor Co.

Week 6 **Disintermediation & Reintermediation**

Readings: Kannan, Chang, & Whinston, "Marketing on the I-Way", *CACM* (1998)

* **Mini-Case:** E-Channel Impact on Travel Services

* **Mini-Case:** Office Depot

Week 7 **Pricing on the E-Channel
Dynamic Pricing Strategies**

Readings: Kannan & Jain "Pricing of Information Products"

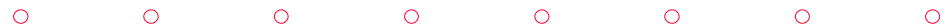
* **Mini-Case:** Priceline.com

* **Mini-Case:** National Academic Press

Week 8 **Implications of Auctions, BOTS,
and Demand Consolidation**

Readings: Anders, "How EBay will Battle Sham Bids"
Wall St Jr (3/99)

* **Mini-Case:** OnSale.com





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Week 9	E-Services	<p>Readings: "Free Software from Anywhere", Bus. Week (9/13/99) "Webware for Rent", Fortune (9/6/99) "H-P Places a Bet on a Slippery Idea," Wall Street Jrl (8/31/99)</p> <p>* Mini-Case: Intuit Inc. * Mini-Case: Net Banking 101</p>
Week 10	Online Consumer Behavior and Implications Loyalty and Lock-Ins	<p>Readings: Varion and Shapiro, "Lock-In Strategies" <i>Information Rules</i> (1999)</p> <p>* Mini-Case: QVC</p>
Week 11	E-Communities: Marketing and Product Development	<p>Readings: Chang, Kannan @ Whinston, "Virtual Communities and Their Intermediary Role in E-Business," <i>Info. Tech Frontiers</i></p> <p>* Smith School Case: Open Source Strategies * Mini-Case: VerticalNet.com</p>

Part C: Measuring the Impact of E-Channel

Week 12	Market Research on the Web Measurement Issues	<p>Guest Speaker: Mr. Maurice Bousierre, <i>CustomerInsites</i></p> <p>Online Research: www.knowthis.com</p>
Week 13	E-Business ROI & Business Plans	<p>Readings: "What is it Worth" <i>Business2.0</i>, (2/99)</p> <p>Guest Speaker: Mr. Michael Pusateri, <i>ProxiCom</i></p>
Week 14	Project Presentations & Report	○ ○ ○ ○ ○ ○ ○ ○ ○ ○



798 X Real Time Management of Supply Chains

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Business Practice and Technology Concepts

Week One

- Evolution of Integrated Logistics & Supply Chain Management
- Current Best Practices In Supply Chain Management
- Next Generation Best Practices: The Emerging Model of the Real-Time Supply Chain

Boyson & Corsi (Pages 1-53)

Week Two

- Supply Chain Design Efficiency & Optimization Modeling
- Advanced Planning/Dynamic Optimization Software

I2 Harvard Business School Case
I2 Product Materials

Week Three

- Supply Chain Optimization
- Supply Chain Opportunity Assessment
- E- Process Optimization

Ranadive, Vivek, "In A Heartbeat: How - -
Winning Companies Sense And
Respond To Change"
TIBCO White Paper & Products

Week Four

- Systems Translation/ Integration
- Event-Driven Enterprise
- Real time messaging
- Publish and subscribe technology

ERP ARTICLES





798 X Real Time Management of Supply Chains-2

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Week 5

- ORACLE, BAAN, SAP
- Owens Corning case
- New ERP Survey results

Internet Applications
EDI/VAN-EDI/Internet/XML

Week 6

- From Closed To Open Transaction Standards
- Electronic Data Interchange Via Private Value Added Networks and The Internet
- The Rise of XML
- The Shift To Hosted Applications

Explore Web Sites

Week 8

- Advanced Planning
- Middleware
- ERP
- Internet-Based Supply Chain Applications

On Military JV2010; Intelligent Agents

Week 9

- Next generation supply chain infrastructures
- Military As Lab for Netcentric Supply Chains
- High bandwidth connectivity on demand
- Comprehensive situational awareness
- Intelligent Agent technology

Boyson & Corsi pp149-192; appendix
pp.201-219





798 X Real Time Management of Supply Chains-3

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Applying Business Practice and Technology Concepts

Week 10

- Systems analysis
- Baselining, benchmarking and gap analysis
- Supply Chain Strategy Formulation

Week 11

- Dimensions of streamlining
- Physical Asset Management
- Human Resource Asset Management
- Cost Management
- Technology Management

Week 12

- Project Planning
- Technology Systems Selection, Testing and Validation

Week 13

- Submission of Individual Projects and hear student synopses of their Real Time Management Plans

Week 14

- To finish student synopses and to review the areas of coverage and lessons learned from past sessions





Electronic Commerce Extends Beyond Concentration

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-
- **Core and Elective Courses**
 - **MBA Case Competition: Last Year: *Barnes and Noble versus Amazon.com*, This Year: *“Competing in the Digital Economy” Case.***
 - **Executive Education Courses**
 - **Virtual Business Information Center**
 - **Faculty Recruiting**
 - **Student Placement**
 - **Corporate Projects**
 - **Research Program**



Electronic Commerce Extends Beyond Concentrations

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■ **BMGT 690- Strategic Management**

Term Paper: Competitive Battles in Digital Commerce

- E*Trade vs. eSchwab vs. Merrill Lynch
- eToys vs. Toys R Us vs.....
- eBay vs. Amazon.com vs....
- Reel.com vs. Amazon.com vs....
- Carpoint.msn.com vs. Autoweb.com vs. Autobytel.com vs. Cars.com vs. Ford.com
- Amazon.com vs. Barnesandnoble.com vs....
- Furniture.com vs. Living.com vs. Ethanallen.com
- CDNow vs. Amazon.com vs....
- WebMD vs. drkoop.com vs....
- Unext.com vs. Caliber Learning Network vs....



Executive Education

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“Competing in the Digital Economy”

- **New Business Models for the Digital Economy**
- **Creating Successful E-Commerce Strategies**
- **Managing the Supply Chain with Information Technology**
- **Understanding OnLine Consumer Behavior**



Virtual Business Information Center Electronic Commerce Page

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Electronic Commerce - General:

General

Associations

Government Links

Reference Sources

Benchmarking

Benefits and Barriers

Education:

Graduate Programs

Electronic Commerce Listservs

Research

Resources

Standards:

Associations

Trends

Vendor Technology





E-Commerce Research Projects

- Electronic coupons, Analysis of POS frequent shopper data, (Frito-Lay & Wegmans; Pepsi & Giant, IBM)
- Features of E-Commerce adopters of technology and organizational diffusers of knowledge
- Models of electronic “Communities of Knowledge”
- Financial intermediaries
- Customer satisfaction and loyalty on the Internet
- Branding on the Internet
- Customization and product bundling on the web
- Dynamic online pricing models
- Assessing e-business market friction: static -- transaction costs; dynamic -- menu costs and rate-of-change
- Channel conflict issues: cross elasticities of substitution between physical & electronic channels and price discrimination



The Robert H Smith School Net-Centricity Project

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Understanding the impact of net-centricity on:

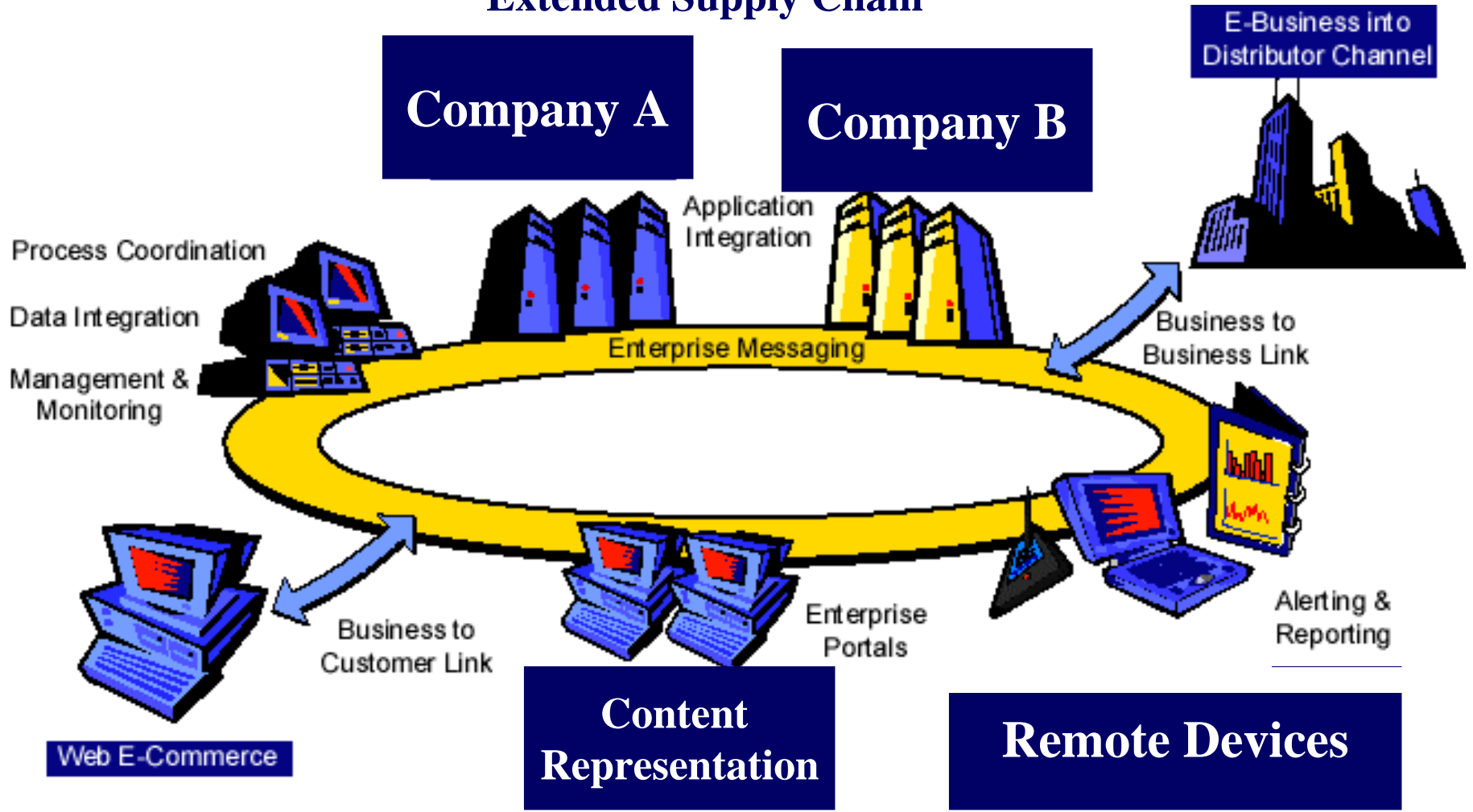
- The business model
- Inter-organizational and industry-wide networks, alliances, and supply chain relationships
- Organizational structures and processes
- Individual cognitive and psychological processes
- Consumer expectations, experiences and behavior
- Technological infrastructure for implementation



R.H. Smith School NetCentricity Laboratory

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Extended Supply Chain





University of Maryland Information Society Initiative

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- **Led by Robert H. Smith School:** *Decision Information and Technologies, Logistics, Finance, Marketing, and Management and Organization Departments*
- **U Maryland Departments and Schools:** *Computer Sciences and EECE, Economics, Psychology Departments, Schools of Public Affairs and Library Information Services*
- **U Maryland Research Centers:** *Supply Chain Management, Knowledge and Information Management, Institute for Systems Research, UM Institute for Applied Computing*
- **Government Contracts:** *DARPA, NSF*
- **Corporate Partners and Supporters:** *Sun, EDS, Oracle, TIBCO, NASDAQ, others*
- **Private Donors:** *Leo Van Munching, others*