

**MD850**  
**Advanced Topics in IT: E-Service Operations**

**Spring 2003**  
**Wednesday 7:00-9:30**

**Tentative Syllabus**

**Updated March 31, 2003**

**INSTRUCTOR:**

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**COURSE DESCRIPTION**

As the 1999-2000 holiday season came to an end, it became clear – more than ever before – that e-businesses were here to stay. Online sales revenues at consumer-oriented e-retailing services had grown quickly. Since then, retail e-commerce expenditures have maintained year-to-year growth rates around 20%, reaching \$35.9 billion during 2001 (Census Bureau, 2002). Such expenditures have been projected to be \$269 billion by 2005 (Jupiter Research, 10/2000). Alongside the business-to-consumer (B2C) segment, a powerful business-to-business (B2B) segment also emerged. The B2B segment, at \$336 billion in 2000, was expected to rise quickly to \$6.3 trillion (Jupiter Research, 10/2000).

In contrast to these impressive forecasts, real-world events since 2000 have directed our attention to the challenges in managing the operations of e-businesses. Since then we've observed the outright failure of entire segments of e-services. Some of these e-services were plagued by ill-conceived business models, while others have been harmed by operations issues such as poor service quality or insufficient capacity. As a result, the concepts and tools of Operations Management have begun to emerge as important factors in the management of electronic businesses.

This course will focus on the concepts and management of e-service operations. The topics of e-service operations management are still new and being re-defined by industry changes, but overall span issues such as (i) information technology of e-services, (ii) service

operations management, and (iii) related manufacturing and supply chain issues. As such, the learning objectives of this course are the following:

- To develop an understanding of e-service terminology and technology.
- To understand the various facets of the e-service operations function and their interrelationships.
- To appreciate the critical decision making tasks posed to e-service managers and the tools available for these decisions.

This course will introduce students to conceptual frameworks and analytical tools for *understanding, modeling, building* and *managing* the operations function of e-businesses. Specifically, the course will provide students with opportunities to develop an understanding and for acquiring skills necessary for managing the design and delivery of goods and services in e-businesses. The course will cover topics such as: e-service performance drivers, the design and delivery of e-service products, design of e-service processes, measuring and managing quality and flexibility, managing order procurement via e-service call center operations and order fulfillment via e-service supply chain operations. The course will be conducted using lectures, readings, case studies, web-based exercises, and a course project.

## **COURSE MATERIALS**

- **Books**
  - *Service Management: Operations, Strategy, and Information Technology*, James A. Fitzsimmons and Mona J. Fitzsimmons, Irwin/McGraw-Hill, New York, NY, 2001.
  - *E-Service: 24 Ways to Keep Your Customers When the Competition is Just A Click Away*, Ron Zemke and Tom Connellan, AMACOM, New York, NY, 2001, ISBN 0-8144-0606-8
  - *E-Commerce Logistics and Fulfillment: Delivering the Goods*, Deborah L. Bayles, Prentice Hall PTR, Upper Saddle River, NJ, 2001, ISBN 0-13-030328-3
  - *E-Service: New Directions in Theory and Practice*, Roland T. Rust and P.K. Kannan, eds., M.E. Sharpe, Armonk, NY, 2002, ISBN 0-7656-0807-3
  - *E-Commerce Operations Management*, Marc J. Schniederjans and Qing Cao, World Scientific, River Edge, NJ, 2002, ISBN 981-238-016-7
  - *E-Operations Management*, Patricia M. Janenko, AMACOM, New York, NY, 2002, ISBN 0-8144-0675-0
- **Online Readings** – will be listed on the class website
- **Case Studies** – will largely be available from Internet sites
  - Several of the case studies will be taken from the book *J2EE Technology in Practice: Building Business Applications with the Java 2 Platform, Enterprise Edition*, Rick Cattell and Jim Inscore, Addison Wesley, Boston, MA, 2001. This book is not a required purchase, as all of the cases are available on the Sun Microsystems website.
- **Discussion Notes and PowerPoint Overheads** – will be handed out during class, and will be available from the class website
- **Useful Background Reading** – where material from these books is necessary, it will be summarized and provided in the class overheads
  - *E-Business 2.0: Roadmap for Success*, Ravi Kalakota and Marcia Robinson, Addison Wesley, Boston, MA, 2001.

- *Service Management and Operations*, Haksever, et al., Prentice Hall, Upper Saddle River, NJ, 2000.

## **GRADING**

### Class discussion – 25%

Course participants are expected to contribute constructively to the class discussion. Doing so may require you to have read the assigned readings and cases, or to have carried out the assigned discussion activities prior to class. Grading for this component of the course will be based on: (i) being present in the class, and (ii) the instructor's evaluations of the discussion of the assigned readings and cases.

### Executive summaries and case presentation – 25%

Executive summaries are intended to ensure that all class participants are adequately prepared for the case discussions. On the discussion day of a case, all participants should individually submit an executive summary addressing the assigned questions for the case. Each student will also be required to sign up to present an analysis of one of the cases, with respect to the topic of the day, to start off the course discussion of the case.

### Course project – 25%

The course project is a group exercise consisting of several tasks to be completed using some e-service technologies. You will need to write up a short project report to document your experiences and findings. The project report should be around 10-20 pages.

### Final Exam – 25%

Preparing for and taking the final exam will provide the opportunity to: (i) reflect on the notes, readings, cases, assignments and class discussions, and (ii) integrate and internalize the concepts and methods discussed in the course.

NOTE: The Dean of the Carroll School, along with the faculty's Education Policy Committee (EPC), have notified Carroll School faculty that each CSOM class must hold a final exam at the end of the semester, and that this exam may only be held during Finals Week, unless the Dean is otherwise notified. As such, MD850 will hold a final exam during Finals Week. The format of the exam will be decided during the last few classes leading up to Finals Week.

**MD850: Advanced Topics in IT: E-Service Operations**  
**Spring 2003**  
**Tentative Topics**

<b>Week</b>	<b>Date</b>	<b>Topic</b>
<b>1</b>	January 15	Introduction to e-Service Operations: Definitions, Types, Challenges and Opportunities Student Introductions & Discussion of Personal Interests in e-Service
<b>2</b>	January 22	“Brick and Mortar” Service vs. “Pure” e-Service vs. “Hybrid” e-Service
<b>3</b>	January 29	e-Service Performance: Satisfaction and Loyalty
<b>4</b>	February 5	Managing and Improving Quality in e-Service Systems
<b>5</b>	February 12	Capacity Management: Modeling e-Services
<b>6</b>	February 19	Capacity Management: Load-Testing e-Services
<b>7</b>	February 26	Design and Development of e-Services
	March 5	<b>SPRING BREAK – NO CLASS</b>
<b>8</b>	March 12	e-Service Process Technologies
<b>9</b>	March 19	Analyzing Web Site Usage: Web Site Mining of Customer Information
<b>10</b>	March 26	Analyzing Web Site Usage: Recommender Systems
<b>11</b>	April 2	e-Service Network Infrastructure e-Service Technology: Software Components and Design Patterns
<b>12</b>	April 9	e-Service Design: Methodologies and Issues for Managing the e-Service Life-Cycle
	April 16	<b>EASTER BREAK – NO CLASS</b>
<b>13</b>	April 23	Inventory, Purchasing and Supply Chain Management in e-Services
<b>FINALS</b>	April 30	<b>FINAL EXAM</b> Wednesday, April 30, 7:00 p.m. – 9:30 p.m.

## Tentative Reading Outline MD850, Spring 2003

NOTE: This list is a tentative summary of the readings for each week. The actual assigned readings may change from time to time, especially for classes during the latter half of the semester. To keep yourself up to date on the list of required readings, as well as weekly assignments, you will want to follow the class website, which can be accessed from my BC web page (<http://www2.bc.edu/~heimgr/>).

E-SERV = *E-Service: 24 Ways to Keep Your Customers ...*

FUL = *E-Commerce Logistics and Fulfillment: Delivering the Goods*

ESNEWDIR = *E-Service: New Directions in Theory and Practice*

ECOM = *E-Commerce Operations Management*

EOM = *E-Operations Management*

FITZ = *Service Management: Operations, Strategy and Information Technology*

SUNCASE = cases from Sun Microsystems website, case questions posted on MD850 website

MD850WEBSITE = articles on class website

### **Week 1: Wednesday, January 15**

#### **Introduction to e-Service Operations: Definitions, Types, Challenges and Opportunities**

EOM, Chapter 1: Welcome to the World of E-Operations

ECOM, Chapter 1: Introduction

FITZ, Chapter 1: The Role of Services in an Economy

EOM, Chapter 2: Introduction to Operations Management

ECOM, Chapter 2: Research on Critical Success Factors in E-Commerce Operations Management

MD850WEBSITE, "The Premise and Promise of Sense and Respond," Stephan Haeckel, IBM, (<http://www-3.ibm.com/e-business/doc/content/resource/pdf/26418.pdf>)

### **Week 2: Wednesday, January 22**

#### **"Brick and Mortar" Service vs. "Pure" e-Service vs. "Hybrid" e-Service**

FITZ, Chapter 2: The Nature of Services

FITZ, Chapter 4: Service Strategy

FITZ, Chapter 8: The Service Encounter

EOM, Chapter 3: The Pure E-Operations Model: Requirements Definition and Quality Metrics

MD850WEBSITE: Business Models on the Web, Michael Rappa, (<http://digitalenterprise.org/models/models.html>)

EOM, Chapter 4: The Hybrid E-Operations Model: Requirements Definition and Quality Metrics

### **Week 3: Wednesday, January 29**

#### **e-Service Performance: Satisfaction and Loyalty**

##### ***Customer Loyalty***

E-SERV, Chapter 1: Remember the Klondike

E-SERV, Chapter 2: Know Your Competition – Your Real Competition

E-SERV, Chapter 3: Hockey-Stick Loyalty

### **Week 4: Wednesday, February 5**

#### **Managing and Improving Quality in e-Service Systems**

##### ***Satisfaction and Quality***

HANDOUT, Zeithaml, V.A., “Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence,” *Journal of Marketing*, 52, 1988, p. 2-7, 13.

MD850WEBSITE, J.M. Field, G.R. Heim and K.K. Sinha, “Managing Quality in the E-Service System: Development and Application of a Process Model,” Section 1-Section 2, approx. pp. 1-11. Make sure to look over Table 1 and Table 2.

##### ***Methods for Improving Quality in Services***

ECOM, Chapter 8: E-Commerce and Quality Management

E-SERV, Chapter 8: “Use Posttransactional and Real Time Web Surveys,” p. 175-176

E-SERV, Chapter 12: A Seven-Lesson Crash Course in E-Service Improvement

EOM, Chapter 6: Interpreting Operational Results and Improving Business Performance

CLASS DISCUSSION ASSIGNMENT: Visit the web sites of [www.bizrate.com](http://www.bizrate.com), and [www.epubliceye.com](http://www.epubliceye.com). Each of these web sites provides “expert shopper” and/or “customer” evaluations of customers’ perceptions of the quality/customer satisfaction of electronic transactions for a wide variety of e-Service companies. Examine the content of the evaluation methodologies of each of these sites, and compare the three approaches, considering:

- The content and analysis methods of the three methodologies for evaluating the quality of electronic transactions.
- Usefulness -- how can the three methods be applied to manage the full scope of transactions in an e-Service business?
- Completeness/Comprehensiveness -- are there any important e-Service attributes that these sites have overlooked? Are there any quality dimensions that you feel should be added or removed to have a comprehensive set of quality metrics for managing your "generic" e-Service?
- Advantages/Risks -- Are there any benefits from employing such services, outside of the ability to measure and manage e-Service quality? Are there any potential risks in employing -- or just due to the existence of -- such services?

Come to class ready to discuss the above issues.

### **Week 5: Wednesday, February 12**

#### **Capacity Management: Modeling e-Services**

SUN Professional Services,

- Chapter 5, Built to Last: Designing for Systemic Qualities

Kolawa, A., et al., *Bulletproofing Web Applications*, 2002

- Chapter 2, The Anatomy of a Web Application

Menasce and Almeida, *Scaling for e-Business*, 2000

- Chapter 1, p. 24-38, Models for e-Business
- Chapter 2, Customer Behavior Models
- Chapter 12, Preparing e-Business for Waves of Demand
- Chapter 13, Business to Consumer Case Studies

### **Week 6: Wednesday, February 19**

#### **Capacity Management: Load-Testing e-Services**

MD850WEBSITE: “Challenges in Scaling E-Business Sites,” Menasce, D.A., and V.A.F. Almeida, *Procedures of the 2000 Computer Measurement Group Conference*, 2000.

MD850WEBSITE: “Mercury Interactive’s Top 10 Performance Management Tips,” Mercury Interactive

MD850WEBSITE: “Enterprise Load Testing for Web Applications,” Newport Group, Inc.

MD850WEBSITE: “Load Testing of Web Sites,” Menasce, D.A., *IEEE Internet Computing*, July/August 2002, p. 70-74.

MD850WEBSITE: Dynamic Load Balancing on Web-Server Systems, *IEEE Internet Computing*, May/June 1999, p. 28-39.

MD850WEBSITE: “Web Load Test Planning,” A. Savoia, *STQE Magazine*, March/April 2001, p. 32-37.

MD850WEBSITE: “Trade Secrets from a Web Testing Expert,” *STQE Magazine*, May/June 2001, p. 54-59.

MD850WEBSITE: “QoS Issues in Web Services,” *IEEE Internet Computing*, November/December 2002, p. 72-75.

MD850WEBSITE: “Capacity Planning: An Essential Tool for Managing Web Services,” *IT Professional*, August 2002, p. 33-38.

### **Week 7: Wednesday, February 26**

#### **Design and Development of e-Services**

E-SERV, Chapter 4: The Anatomy of Customer-Pleasing E-Service

E-SERV, Chapter 5: Practice Easy-to-Do-Business-With Thinking

E-SERV, Chapter 6: Design for Distinction

E-SERV, Chapter 7: Personalize the E-Experience

HANDOUT, “Building an E-Commerce Infrastructure,” Deborah L. Bayles, *E-Commerce Logistics and Fulfillment*, 2001

HANDOUT, “Scammed!” wsj.com

**Monday, March 3 – Friday, March 7**  
SPRING BREAK!!!

**Week 8: Wednesday, March 12**

**The Service Process: Configurations of e-Service Process Technologies**

HANDOUT, SUNCASE, Chapter 2: “Overview of the J2EE Technology and Architecture,”  
*J2EE Technology In Practice*, Addison-Wesley, 2001.

CASE STUDY: SUNCASE, Chapter 3: “J. Crew Rebuilds its Web Presence with the ATG Dynamo Suite,” (<http://java.sun.com/j2ee/inpractice>) [How to Obtain: <http://java.sun.com/j2ee/inpractice/pdf/jcrew.pdf>] This case covers the technological stages that J. Crew went through as they progressed from their initial site, into a service process that could handle the number of service transactions they were experiencing as their online service grew.

**CASE QUESTIONS:**

1. What were the operational shortcomings/failures of the original J. Crew site design?
2. How did the J. Crew service product and service experience vision evolve over time? What role did J2EE technology play in these changes? Was the service process that they chose to use appropriate for their envisioned service product?
3. What operational advantages did the new process technology configurations facilitate for J. Crew?

**Week 9: Wednesday, March 19**

**e-Service Process Technology: Analyzing Web Site Usage – Website Mining of Customer Information**

“Data Mining: A Conceptual Overview,” J. Jackson, *Communications of the Association for Information Systems*, Vol. 8, 2002, p. 267-296. Please read pages 267-282. This article can be downloaded from the following page (<http://cais.aisnet.org/contents.asp>). When asked for a username and password, type “gheim” for the username and “temp” for the password.

MD850WEBSITE, Greening, D., “Data Mining on the Web: There’s Gold in that Mountain of Data,”  
WebTechniques, 1/2000.

(<http://www.webtechniques.com/archives/2000/01/greening/>)

MD850WEBSITE, Greening, D., “Tracking Users: What Marketers Really Want to Know,”  
WebTechniques, 7/1999. (<http://www.webtechniques.com/archives/1999/07/greening/>)

HANDOUT, “Mining E-Commerce Data: The Good, the Bad, and the Ugly,” R. Kohavi,  
KDD’01, Association for Computing Machinery, 2001.

CASE STUDY 1: “Funnel Report Mining for the MSN Network,” KDD-2001, p. 450-455. (Will be handed out in class)

This case/article describes Microsoft’s use of data mining to identify customer behaviors within their group of website properties

**CASE QUESTIONS:**

1. What is funnel analysis? How might managers find it to be useful?

2. How valuable is this technique for various sizes of e-Services? Is this only useful for an MSN size of site? Or can it be used in a smaller e-Service as well?

CASE STUDY 2: “Direct Communication with Consumers with a Smart Web Marketing System,” (<http://software.fujitsu.com/en/symfoware/navigator/asahibeer.html>)

This very brief case describes a different application of data mining, and is interesting to me because of the country (Japan), and the pictures of IT architecture required in doing the data mining.

CASE QUESTIONS:

3. What are the challenges in building such a web mining system?
4. What are the benefits from building such a web mining system using components such as those provided by a single vendor such as Fujitsu?

### **Week 10: Wednesday, March 26**

#### **e-Service Process Technology: Analyzing Web Site Usage – Recommender Systems**

“Recommender Systems,” P. Resnick, and H.R. Varian, *Communications of the ACM*, March 1997, (<http://www.acm.org/cacm/MAR97/resnick.html>).

“Study 1: Book and Movie Recommenders,” K. Swearingen and R. Sinha, Human Benchmarking of Recommender Systems, (<http://www.sims.berkeley.edu/~sinha/Recommenders.html>).

“Interaction Design for Recommender Systems,” K. Swearingen and R. Sinha, Human Benchmarking of Recommender Systems, (<http://www.sims.berkeley.edu/~sinha/papers/musicDIS.pdf>).

HANDOUT: “A Survey of Recommendation Systems in Electronic Commerce,” C.-P. Wei, M.J. Shaw, and R.F. Easley, *E-Service: New Directions in Theory and Practice*, R.T. Rust and P.K. Kannan, eds., 2002, p. 168-199.

“Automatic Personalization Based on Web Usage Mining,” B. Mobasher, R. Cooley, and J. Srivastava, *Communications of the ACM*, Vol. 43, No. 8, August 2000, p. 142-151 (<http://maya.cs.depaul.edu/~classes/ect584/papers/mobasher.pdf>).

CASE STUDY: “Amazon.com Recommendations: Item-to-Item Collaborative Filtering,” IEEE Internet Computing, January/February 2003.

This article is a report of Amazon.com’s recommendation systems, and a comparison to other possible recommendation systems.

CASE QUESTIONS:

1. What advantages and disadvantages does the collaborative filtering method used in Amazon’s recommender have, relative to the other possible methods?
2. In what way(s) does a product recommendation system such as Amazon’s need to be scalable?

NOTE: If you are interested in learning more about data mining, and website mining in specific, you may want to visit Dr. Bamshad Mobasher’s web site at DePaul University, for his course on Web Data Mining (<http://maya.cs.depaul.edu/~classes/ect584/lecture.html>) and his page of resources (<http://maya.cs.depaul.edu/~classes/ect584/resource.html>).

## **Week 11: Wednesday, April 2**

### **e-Service Process Technology: e-Service Network Infrastructure**

MD850WEBSITE: “Infrastructure Agility,” Meta Group, July 18, 2000,  
(<http://www-3.ibm.com/e-business/doc/content/resource/pdf/43747.pdf>)

### **e-Service Process Technology: e-Service Software Components and Pattern Technologies**

MD850WEBSITE: “Layering Applications,” JavaDude.com,  
[<http://www.javadude.com/articles/layering.html>] (Read up to the section on “Generic Exception Handling” ... it gets very Java-specific there.)

MD850WEBSITE: “Component-Based Development Using UML,” L. Zhao and K. Siau, Communications of the Association for Information Systems, Volume 9, 2002 [How to Obtain: Go to <http://cais.aisnet.org/>, click on “Contents” on the left menu, scroll down to the article (Volume 9, Article 12). Where you are asked for username and password, enter “gheim” and “temp”.]

MD850WEBSITE: Sun Microsystems, “J2EE Patterns: Why Use Patterns?,”  
(<http://java.sun.com/blueprints/patterns/index.html>)

MD850WEBSITE: “Patterns of Experience: A Review of IBM’s Patterns for E-Business Initiative,” Bloor Research,  
(<http://www-3.ibm.com/e-business/doc/content/resource/pdf/46578.pdf>) Also see  
([www.ibm.com/framework/patterns](http://www.ibm.com/framework/patterns)).

## **Week 12: Wednesday, April 9**

### **e-Service Design: Methodologies and Issues for Managing the e-Service Life-Cycle**

MD850WEBSITE, “A Product-Process Matrix for Electronic Consumer Services,” Heim, G.R., and K.K. Sinha, *Journal of Service Research*, Vol. 3, No. 4, 2000.

MD850WEBSITE: “Managing an Internet Portal,” Jan Damsgaard, *Communications of the Association for Information Systems*, 2002 [How to Obtain: Go to <http://cais.aisnet.org/>, click on “Contents” on the left menu, scroll down to the article (Volume 9, Article 26). Where you are asked for username and password, enter “gheim” and “temp”.]

MD850WEBSITE: Microsoft Operations Framework, “Executive Overview” [Download from class website, or go to <http://www.microsoft.com/mof>, click on “MOF Resource Library”, then on “Executive Overview”]

MD850WEBSITE: “Total Systems Management – A Customized Approach to IT Operational Environments,” IBM Global Services,  
(<http://www-3.ibm.com/e-business/doc/content/resource/pdf/26544.pdf>)

## **Week 13: Wednesday, March 26**

### **Inventory, Purchasing, and Supply Chain Management in e-Services**

MD850WEBSITE, “Putting the Horse First: B2B Exchanges Failed Because They Got Their Business Models Wrong,” M. Sawhney, CIO Magazine, May 15, 2002  
[<http://www.cio.com/archive/051502/netgains.html>]

MD850WEBSITE: “Let’s Get Vertical,” M. Sawhney, Business 2.0, September 1, 1999  
[<http://www.business2.com/articles/mag/0,1640,13124,FF.html>]

MD850WEBSITE: “How it Works,” J. Davis, Business 2.0, February 1, 2000  
[<http://www.business2.com/articles/mag/0,1640,13416,FF.html>] – click on “The Market Maker”

MD850WEBSITE: “Making New Markets,” M. Sawhney, Business 2.0, May 1, 1999,  
[<http://www.business2.com/articles/mag/0,1640,12988,FF.html>]

CASE STUDY: “ChemUnity.com,” P. Lehtivaara, C. Cordon, and T.E. Vollmann, Supply Chain Forum: An International Journal, Vol. 3, No. 1, 2002 [How to Obtain: Go to <http://www.supplychain-forum.com/archives.cfm>, the link to the file is about a third of the way down the page. Click on the link and you’ll get a pop-up window. Then click on “See” within the popup window. A PDF file will be downloaded to you computer, which you can print or save.] ChemUnity.com appears to be one of the few survivors in the B2B procurement service space. Many other services (e.g., Chemdex.com, which became Ventro.com and now Nexprise.com) were set up to do similar things a couple of years back, and failed shortly after they were started.

#### CASE QUESTIONS

1. What is the value proposition behind ChemUnity.com? How was it operationally going to be carried out (in terms of types of bids that could be made, size of orders, etc., in April 2000)?
2. Look at the [www.chemunity.com](http://www.chemunity.com) site and examine the services that are now provided in 2003. Have they stuck to their original plans? Is the system (in terms of the e-services offered today) now a better or worse system for fulfilling the value proposition behind ChemUnity.com?
3. What was the revenue model in 2000 (i.e., how did they think they would make money)? What is their revenue model in 2003 (HINT: On their website, see “Sourcing Portal for Sellers”)? Do you find this change to be surprising?

RELATED SITE: If you would like to see how these procurement services work, a person who helped build Chemdex.com has archived demos about how Chemdex.com worked.  
[<http://www.dekana.com/borg/index.php?page=chemdex>]

**FINALS WEEK, Wednesday, April 30, 7:00 p.m. – 9:30 p.m.**

**FINAL EXAM!!!**

### **POTENTIAL SUBSTITUTE TOPIC**

#### **Order Fulfillment and the Forward Supply Chain**

MD850WEBSITE: “The Battle for the Last Analog Mile,” Mohan Sawhney, mohansawhney.com [Also available as “The Longest Mile,” Business 2.0, December 1999, <http://www.business2.com/articles/mag/0,1640,13296,FF.html>]

E-SERV, Chapter 8: Deliver End-to-End Service

FITZ, Chapter 15: Service Supply Chain Management

ECOM, Chapter 3: E-Commerce and Supply Chain Management

### **POTENTIAL SUBSTITUTE TOPIC**

#### **Service Failure, Service Recovery, and the Reverse Supply Chain**

MD850WEBSITE: “The Cost of Service Failure,” The Hindu Business Line Internet Edition, [<http://www.blonnet.com/catalyst/2002/08/29/stories/2002082900170400.htm>]

MD850WEBSITE: “Service Recovery Practices,” Great Brook Consulting ([http://www.greatbrook.com/service\\_recovery.htm](http://www.greatbrook.com/service_recovery.htm))

E-SERV, Chapter 10: Make Recovery a Point of Pride

E-SERV, Chapter 11: Build a Retention Strategy

EOM, Chapter 5: E-Operations: The View from the Inside

### **POTENTIAL SUBSTITUTE TOPIC**

#### **Forecasting and Scheduling**

ECOM, Chapter 6: E-Commerce and Forecasting and Scheduling Management

CASE STUDY: “Mixonic.com: Customizing Music CDs Over the Internet” [Available from class website.] This case is about a CD duplication house that produces custom CDs to order via an e-Service system on the Internet. Mixonic.com allows (i) individual customers to upload their own musical content and create one or more CDs for themselves and their friends, and (ii) other companies to use the Mixonic.com infrastructure as an ASP to create CDs that they can sell to their markets (e.g., dawsonscreekcds.com, WeddingCDs.com) Media duplication companies have many interesting scheduling issues involved in the items that they produce.

#### **CASE QUESTIONS:**

1. What physical items are involved in the production of a CD? What digital items are involved in the production of a CD?
2. What forecasting activities do you expect must be performed by Mixonic.com? What scheduling activities must Mixonic.com perform?
3. Will this model of music distribution work? Which market segments might be interested in such a service? Which market segments might not be interested in such a product?
4. What intellectual property issues must Mixonic.com deal with?
5. Are there any competitors in this CD duplication space?