

**MD254**  
**E-Service Operations Management**

**Spring 2003**  
**Monday/Wednesday 3:00-4:15**

**Tentative Syllabus**

**UPDATED March 9, 2003**

**INSTRUCTOR:**

Dr. Gregory R. Heim  
Operations and Strategic Management Department  
Wallace E. Carroll School of Management  
Boston College  
140 Commonwealth Avenue, Fulton Hall 352A  
Chestnut Hill, MA 02467

**BC Phone:** 617-552-0462

**BC Fax:** 617-552-0433

**BC E-Mail:** heimgr@bc.edu

**Cell Phone:** 617-596-9028

**Web Page:** <http://www2.bc.edu/~heimgr/>

**Office Hours:** Monday/Wednesday 4:30-6:00, and by appointment.

**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**

### **• Required Books**

- *Service Management: Operations, Strategy, and Information Technology*, 3<sup>rd</sup> Edition, James A. Fitzsimmons and Mona J. Fitzsimmons, McGraw-Hill, New York, NY, 2000, ISBN 0-07-242419-2
- *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 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** – URLs for 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 Supplemental and Background Books** – where material from these books is necessary, it will be summarized and provided in the class overheads
  - *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-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, MD254 will hold a final exam during Finals Week. The format of the exam will be announced during the last few classes leading up to Finals Week.

**MD254: E-Service Operations Management,  
Spring 2003  
Tentative Topics**

<b>Week</b>	<b>Date</b>	<b>Topic</b>
<b>1</b>	Monday, January 13	Introduction to e-Service Operations: Definitions, Types, Challenges and Opportunities Student Introductions & Discussion of Personal Interests in e-Service
	Wednesday, January 15	Background on Operations Management
<b>2</b>	Monday, January 20	<b>MARTIN LUTHER KING, JR. DAY – NO CLASS</b>
	Wednesday, January 22	The Nature of Traditional (“Bricks and Mortar”) Services
<b>3</b>	Monday, January 27	Pure e-Services: Operational Issues
	Wednesday, January 29	Hybrid (“Bricks and Clicks”) e-Services: Operational Issues
<b>4</b>	Monday, February 3	e-Service Performance: Customer Loyalty
	Wednesday, February 5	e-Service Performance: Service Quality, e-Service Quality, and How Customer Satisfaction and Service Quality Drive Customer Loyalty
<b>5</b>	Monday, February 10	(cont’d)
	Wednesday, February 12	Traditional Service Design and Development
<b>6</b>	Monday, February 17	<b>SNOW DAY – Classes were cancelled</b>
	Wednesday, February 19	(cont’d)
<b>7</b>	Monday, February 24	Design and Development of e-Services
	Wednesday, February 26	Aligning the e-Service Product and the e-Service Process
	Monday, March 3	<b>SPRING BREAK – NO CLASS</b>
	Wednesday, March 5	<b>SPRING BREAK – NO CLASS</b>
<b>8</b>	Monday, March 10	e-Service Design: Methodologies and Issues for Managing the e-Service Life-Cycle
	Monday, March 12	The Service Process: Configurations of e-Service Process Technologies
<b>9</b>	Monday, March 17	e-Service Process Technology: e-Service Network Infrastructure

	Wednesday, March 19	e-Service Process Technology: e-Service Software Components and Pattern Technologies
<b>10</b>	Monday, March 24	e-Service Process Technology: Analyzing Web Site Usage – Data Mining
	Wednesday, March 26	e-Service Process Technology: Analyzing Web Site Usage – Recommender Systems
<b>11</b>	Monday, March 31	Capacity Management Issues in Physical Service Environments
	Wednesday, April 2	(cont'd)
<b>12</b>	Monday, April 7	e-Service Capacity Management
	Wednesday, April 9	Forecasting and Scheduling
<b>13</b>	Monday, April 14	Order Fulfillment and the Forward Supply Chain
	Wednesday, April 16	<b>EASTER BREAK – NO CLASS</b>
<b>14</b>	Monday, April 21	<b>PATRIOT’S DAY – NO CLASS</b>
	Wednesday, April 23	Inventory Management in Services
<b>15</b>	Monday, April 28	Service Failure, Service Recovery, and the Reverse Supply Chain
	Wednesday, April 30	<b>STUDY DAY – NO CLASS</b>
<b>FINALS</b>	Tuesday, May 6	<b>FINAL EXAM</b> Tuesday, May 6, 9:00 a.m. – 11:30 a.m.

## **Tentative Reading Outline MD254, 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 ...*

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 MD254 website

MD254WEBSITE = articles on class website

### **Week 1: Monday, January 13**

#### **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

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

#### **Background on Operations Management**

EOM, Chapter 2: Introduction to Operations Management

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

MD254WEBSITE, "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: Monday, January 20**

MARTIN LUTHER KING, JR. DAY – NO CLASS

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

#### **The Nature of Traditional ("Bricks and Mortar") Services**

FITZ, Chapter 2: The Nature of Services

FITZ, Chapter 4: Service Strategy

FITZ, Chapter 8: The Service Encounter

### **Week 3: Monday January 27**

### **Pure e-Services: Operational Issues**

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

MD254WEBSITE: Business Models on the Web, Michael Rappa,  
(<http://digitalenterprise.org/models/models.html>)

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

#### **Hybrid (“Bricks and Clicks”) e-Services: Operational Issues**

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

CASE STUDY: “Rice Epicurean Online Shopping: Decadence or Destiny?” B. Ives and G. Piccoli, *Communications of the Association for Information Systems*

[How to Obtain the Case: Go to <http://cais.aisnet.org/>, click on “Contents” on the left menu, scroll down to the article (Volume 9, Article 18). Where you are asked for username and password, enter “gheim” and “temp”. Note that you may also access this through the BC library, via the page <http://www.bc.edu/libraries/resources/ejournals/a-z/s-index/>.] This case study describes the experience of a family relying on an online grocery shopping service offered by an eight-store grocery chain in Houston, Texas. The grocer, Rice Epicurean, is able to field a sophisticated web shopping experience inexpensively and quickly by relying on an Application Service Provider, MyWebGrocer, for the underlying information technology.

#### **CASE QUESTIONS:**

1. Which traditional (physical/person-to-person) service aspects are involved with Rice Epicurean delivering e-services? What operational challenges do they provide?
2. Which aspects of the e-service (the online, digital portion) are provided by Rice Epicurean? Which aspects of the e-service are provided by MyWebGrocer?
3. What are the competitive and/or operational performance advantages of the “bricks and clicks” approach used by Rice Epicurean, relative to a traditional grocery store, and relative to a “pure play” online grocer?

### **Week 4: Monday, February 3**

#### **e-Service Performance: 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

MD254WEBSITE, “Fostering Customer Loyalty in the Electronic Marketplace,” IBM Global Services, (<http://www-3.ibm.com/e-business/doc/content/resource/pdf/26534.pdf>)

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

**e-Service Performance: Service Quality, e-Service Quality, and How Customer Satisfaction and Service Quality Drive Customer Loyalty**

FITZ, Chapter 3: Service 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.

MD254WEBSITE, 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.

MD254WEBSITE, “Customer Loyalty in E-Commerce,” D. Gefen, *Journal of the Association for Information Systems*, p. 27-34 [How to Obtain: Go to <http://jais.isworld.org/>, click on “Contents” on the left menu, scroll down to the article (Volume 3, Article 2). Where you are asked for username and password, enter “readjais” and “readjais”.]

**Week 5: Monday, February 10**

Continuation of above topic.

**Week 5: Wednesday, February 12**

**Traditional Service Design and Development**

FITZ, Chapter 5: New Service Development and Process Design

FITZ, Chapter 6: The Supporting Facility

FITZ, Chapter 7: Service Facility Location

ECOM, Chapter 4: E-Commerce and Product and Process Design Management

**Week 6: Monday, February 17**

**SNOW DAY – Classes were cancelled.**

**Week 6: Wednesday, February 19**

Continuation of above topic.

**Week 7: Monday, February 24**

**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

**Week 7: Wednesday, February 26**

### **Aligning the e-Service Product and The e-Service Process**

MD254WEBSITE, “A Product-Process Matrix for Electronic Consumer Services,” Heim, G.R., and K.K. Sinha, *Journal of Service Research*, Vol. 3, No. 4, 2000. [Note: FITZ, Chapter 9: Internet Service contains much of the same as in the article]

HANDOUT, “The Real-Time Service Product: Conquering Customer Time and Space,” R.T. Rust and R.W. Oliver, in: *New Service Development*, J.A. Fitzsimmons and M. Fitzsimmons (eds.), Sage Publications, 2000.

HANDOUT, “Customerization: The Next Revolution in Mass Customization,” J. Wind and A. Rangaswamy, *Journal of Interactive Marketing*, Vol. 15, No. 1, Winter 2001, p. 13-20.

CLASS DISCUSSION ASSIGNMENT: Apply the product-process framework in the Heim and Sinha paper. Visit the websites of a few e-retailers and try to classify their e-service products in one of the four categories of the e-product taxonomy: Niche Market, Market Extender, Dynamic Mass Market, and Customized Mega Market. For example, visit [www.michelescelebrations.com](http://www.michelescelebrations.com), [www.baltcoffee.com](http://www.baltcoffee.com), [www.gemm.com](http://www.gemm.com), and [www.autoweb.com](http://www.autoweb.com). Come to class ready to discuss the above.

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

## **POST SPRING BREAK TOPICS AND READING LIST**

### **Week 8: Monday, March 10**

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

MD254WEBSITE: “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”.]

MD254WEBSITE: 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”]

MD254WEBSITE: “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 8: Wednesday, March 12**

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

HANDOUT, SUNCASE, Chapter 2: “Overview of the J2EE Technology and Architecture”

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: Monday, March 17**

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

MD254WEBSITE: “From Idea to IPO: Building a Successful and Supportive E-Business Infrastructure,” IBM Global Services, 2000,  
(<http://www-3.ibm.com/e-business/doc/content/resource/pdf/46564.pdf>)

MD254WEBSITE: “Infrastructure Agility,” Meta Group, July 18, 2000,  
(<http://www-3.ibm.com/e-business/doc/content/resource/pdf/43747.pdf>)

MD254WEBSITE: “Quality of Service: Evolving to the Next Generation,” IBM E-Business Infrastructure, October 2001,  
(<http://www-3.ibm.com/e-business/doc/content/resource/pdf/48158.pdf>)

CLASS DISCUSSION ASSIGNMENT: Read “Portal Operation on \$150 a Day: Recreation.gov Builds a Bridge Between Government Agencies.” (<http://www.newarchitectmag.com/documents/s=2286/na1002k/>). Come prepared to discuss the infrastructure issues mentioned. If you are interested in seeing how Web Services are being used to facilitate an agile infrastructure, go to Recreation.gov, and click on the links for “Share Recreation Data” and “What is RecML?”

CLASS DISCUSSION ASSIGNMENT: This is an example of how Amazon.com has built an adaptable infrastructure that utilizes Web Services. First, read the HANDOUT one page article (“Amazon’s Tightwad of Tech,” Business 2.0, Feb. 2003) about Amazon’s infrastructure, and take a quick look at this site (<http://www.simplest-shop.com/>) mentioned in the article, which is built on Amazon’s infrastructure. To find out more about this, you can go to Amazon.com’s developer site (<http://www.amazon.com/webservices>). Click on “How To” in the menu and scroll down on that web page to see some interesting examples of how the Amazon.com infrastructure allows different e-services to be deployed. Particularly interesting are the “Amazon Browser” (which also browses Google) and “Amazon Java Applet” (which also provides web services from Google, Froogle, and other sites.) The link to “Web Services FAQ” provides some information on how Amazon is using Web Services. You too could build yourself an Amazon.com outlet store!!!

### **Week 9: Wednesday, March 19**

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

MD254WEBSITE: “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.)

MD254WEBSITE: “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”.]

MD254WEBSITE: Sun Microsystems, “J2EE Patterns: Why Use Patterns?,”  
(<http://java.sun.com/blueprints/patterns/index.html>)

MD254WEBSITE: “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 10: Monday, March 24**

#### **e-Service Process Technology: Analyzing Web Site Usage – Data Mining**

MD254WEBSITE: “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.

MD254WEBSITE, 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/>)

MD254WEBSITE, 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.

### **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>).

“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: Monday, March 31**

#### **Capacity Management Issues in Physical Service Environments**

FITZ, Chapter 10: Forecasting and Demand for Services

FITZ, Chapter 11: Managing Waiting Lines

FITZ, Chapter 12: Queuing Models and Capacity Planning

FITZ, Chapter 13: Managing Capacity and Demand

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

Continuation of above topic.

CASE STUDY (Monday, March 24): “SimonDelivers.com Web Site Gets Indigestion and Crashes,” Star-Tribune.com, Jan. 9, 2003 [Available from class website.] This news story provides a case of an online grocer in Minnesota whose website crashes for several days, yet the company must continue delivering and dealing with the queues of customers who need their services.

CASE QUESTIONS:

1. Was SimonDelivers.com’s plan for stable capacity of its online services sufficient?
2. How well did SimonDelivers.com management deal with handling the queues of customers who still were relying on having the grocery delivery service available?

### **Week 12: Monday, April 7**

#### **e-Service Capacity Management**

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

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

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

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

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

#### **Forecasting and Scheduling**

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

CASE STUDY: “Mixon.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?

#### **Week 13: Monday, April 14**

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

MD254WEBSITE: “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

#### **Wednesday, April 16**

**EASTER BREAK – NO CLASS**

#### **Monday, April 21**

**PATRIOT’S DAY – NO CLASS**

#### **Week 14: Wednesday, April 23**

##### **Inventory Management in Services**

ECOM, Chapter 7: E-Commerce and Inventory Management

ECOM, Chapter 5: E-Commerce and Purchasing Management

MD254WEBSITE, “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>]

NOTE: The following [“HISTORY”] articles are not required, but are very interesting, if you want to understand what some of the seminal writing was that influenced the B2B frenzy of the 1999/2000 period.

HISTORY: “Let’s Get Vertical,” M. Sawhney, Business 2.0, September 1, 1999

[<http://www.business2.com/articles/mag/0,1640,13124,FF.html>]

HISTORY: “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”

HISTORY: “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>]

#### **Week 15: Monday, April 28**

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

MD254WEBSITE: “The Cost of Service Failure,” The Hindu Business Line Internet Edition,  
[<http://www.blonnet.com/catalyst/2002/08/29/stories/2002082900170400.htm>]

MD254WEBSITE: “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

#### **Week 15: Wednesday, April 30**

STUDY DAY

**FINALS WEEK, Tuesday, May 6, 9:00 a.m. – 11:30 a.m.**  
FINAL EXAM!!!