

Chapter 4: The Networked Enterprise

Overview

This chapter discusses the various ways that networks are used in business. This includes the hardware and software necessary for e-business and e-commerce as well as the Internet and World Wide Web. The concepts covered in this chapter are applicable in most businesses today, so understanding them is critical for success.

Lecture Notes

A. Collaboration Tools

Meet the need for effective communication alternatives, efficient means for coordinating work efforts, and methods for managing tasks and projects. E-business and e-commerce supported by groupware, IT infrastructure, the Internet and the WWW.

1. **Communication Tools** allow people to communicate in a variety of ways:
 - a. E-mail can be used to send internal or external messages; documents can be attached; file management skills are necessary to remain organized.
 - b. Voice mail is used to organize phone messages; can be retrieved from anywhere.
 - c. Fax transmission allows copies to be sent over telephone lines.
 - d. Web publishing includes hyperlinked documents for business activity.
2. **Conference Tools** – allow users worldwide to meet and work collaboratively. Teleconferencing is meeting with a group of people electronically using telephone or computer networks. Electronic conferencing ranges from audio conference to a full-motion video conference.
 - a. Audio conferencing is a sound link of three or more people at two or more separate locations; low cost, but may require speaker phones or Internet access.
 - Follow guidelines for successful conferences (p. 77) regarding the agenda, moderator, size of the group, identification system, and documentation.
 - Utilize enhancements like e-mail, fax, electronic whiteboard, and slow-scan video.
 - b. Computer conferences can be used to transmit information using bulletin boards (or a discussion forum) and post messages as threads in the discussion.
 - c. Chat sessions are simultaneous discussions using Internet Relay Chat (IRC) as long as a multimedia computer is used so a microphone and speakers are available.
 - d. Data conferences are in real time; they use a shared whiteboard where information can be viewed, revised, and saved.

- e. Video conferences allow sound and actions to be shared in the conference, but they require more involved equipment.
 - One-way conferencing allows video transmission only from one location to another, audio is two-way; used for lecture/training, and other presentations.
 - Full-motion video conferencing allows all participants to see and hear everyone; complex and expensive; location should be a quiet, convenient, interior room; acoustics should be analyzed carefully; determine the best room design for sound and vision.
- 3. **Coordination Tools** – are useful for managing joint work efforts, task and project management software.
 - a. Electronic calendars can be installed with joint rights for users and assistants; excellent for determining meeting times, can be accessed from PDAs.
 - b. Project management software enables tracking of projects to be sure tasks are completed on time, accountability.

B. Using the Internet and the WWW

The Internet (*the Net*) is the largest example of networking today; it provides the primary infrastructure for e-business and e-commerce. The World Wide Web (WWW) is a set of standards for working with information on the Net; the global acceptance of the standards is what has led to the tremendous growth of e-business and e-commerce.

1. The **Internet** began as a government project in 1969. Be sure to point out that no one owns or manages the Internet (today) and that anyone can have access to it with appropriate hardware and software.
 - a. Access is available through company LAN and Internet service provider; telecommuters can work from home and connect to their office through a SLIP/PPP server.
 - b. Communication is available through e-mail, instant messaging, newsgroups, listservs, Internet relay chat, file transfer using ftp, information retrieval, and Internet phone. *Point out the various domain names in e-mail addresses; students can analyze them and learn more about the person they are e-mailing. Students may have experience with many of these forms of communication; solicit specific examples during the discussion.*
2. The **World Wide Web** (WWW) was developed in 1989 (20 years after the Internet) by scientists. Uses standard hypertext markup language (HTML) for formatting pages on the Web.
 - a. A Web browser navigates the Web by translating HTML into a Web page; Netscape and Internet Explorer are two most commonly used. The browser allows you to retrieve, view, and print information from the Internet.
 - b. A Web site includes all of the pages maintained by an organization or individual; a home page is the first page.

- c. A Web address is called the uniform resource locator (URL) requiring a unique, registered name from the domain name system (DNS).
- d. Web searches can be done with the Web browser or using search engines. All students should know how to select good key words when they are searching for information. They also must be aware that all information that is retrieved from the search will not apply to the task at hand; they will need to evaluate each site.

C. The Digital Organization: Integration and Collaboration

The Internet and World Wide Web are at the heart of the networked enterprise. Internal and external networks are common. Integration of information within an industry or across the world is now seamless. Internet technology is key for digital integration expected in business.

1. **E-Business** is the internal integration to support communication and business operations electronically.
 - a. Internal networks support the coordination and management of business processes within the organization.
 - b. The Intranet, a private Internet only available to certain people, uses a Web browser to find information the organization distributes.
 - c. An enterprise system provides timely information organization-wide, keeps information flowing freely between different divisions.
2. **E-Commerce** is conducting business online (primarily over the Internet).
 - a. Business-to-consumer (B2C) is the electronic selling of goods and services directly to consumers, disintermediation (skips intermediary steps).
 - b. Business-to-business (B2B) sells only among businesses.
 - c. Consumer-to-consumer (C2C) sells among consumers, like e-bay.
 - d. Mobile-commerce makes the Web accessible from anywhere (wireless phones, PDAs, etc.).
3. **Collaborative Commerce** is the electronic connection of operations.
 - a. Private industrial networks are designed to coordinate the activities of multiple organizations.
 - b. Electronic data interchange provides exchange of standard documents between businesses, often uses private networks.
 - c. An Extranet provides limited access to private intranets by authorization; used to coordinate and communicate with business partners and customers.

Additional Resources for Students

Recommended readings (no texts should be more than two years old):

- Fuller, Floyd and William Manning. *Computers and Information Processing*.

- Groneman, N. and J. Meroney. *Information Systems Applications, Evaluation, and Selection*. South-Western Publishing Co.
- Long, Larry and Nancy Long. *Introduction to Computers and Information Systems*. Prentice-Hall, Inc.
- Meyer, Marilyn and Roberta Baber. *Computers in Your Future*.
- Norton, Peter. *Introduction to Computers*.
- O'Leary, Timothy J. and Linda L. O'Leary. *Computing Essentials*. McGraw-Hill.
- Regan, Elizabeth A. and Bridget N. O'Connor. *Automating the Office – Office Systems and End-User Computing*. Macmillan City.
- Ricks, B., A. Swafford, and K. Gow. *Information and Image Management*. South-Western Publishing Co.
- Robek, Brown, and Stephens. *Information and Records Management*.
- Shelly, Gary and Thomas Cashman. *Learning to Use: Microcomputer Applications*. Boyd and Fraser Publishing Co.
- Silver, G. A. and M. L. Silver. *Data Communications for Business*.
- Tilton, R., J. Jackson, and S. Rigby. *The Electronic Office: Procedures and Administration*. South-Western Publishing Co.

Current issues of periodicals or business publications are also an excellent resource. Some of the following periodicals have an accompanying Web site.

Current Periodical	Web Address
<i>Gregg Reference Manual</i>	
<i>IAAP Complete Office Handbook</i>	http://www.iaap-hq.org/products/handbook.htm
<i>Modern Office Technology</i>	
<i>Network Computing</i>	http://www.networkcomputing.com/
<i>Networking Management</i>	
<i>OfficePro</i>	http://www.iaap-hq.org/officepro/toc.htm
<i>PC Computing</i>	