

- 1  Chapter 11  
Computers and Society: Home, Work, and Ethical Issues
- 2  Chapter 11 Objectives
- 3  Living with Computers
  - 1 **How has society benefited from computers?**
  - 2
    - ✦ 1/3 of economic growth attributed to digital technologies
    - ✦ Users can make well-informed decisions due to instant access to information from anywhere
    - ✦ Students have more tools to assist them in learning process
- 4  Living with Computers  
**How are computers used at home?**
- 5  Living with Computers  
**What is the main reason computers have infiltrated homes?**
- 6  Living with Computers
  - 1 **How have computers changed home communications?**
  - 2
    - ✦ Transmit text, voice, sounds, video, and graphics over Web
- 7  Living with Computers
  - 1 **What is the purpose of videoconferencing software?**
  - 2
    - ✦ Have live conversations with others
- 8  Living with Computers
  - 1 **What is computer-based training (CBT)?**
  - 2
    - ✦ Learn by using computers with instructional software
    - ✦ Also called computer-aided instruction (CAI)
    - ✦ Web-based training (WBT) uses Internet technology
- 9  Living with Computers  
**What are the advantages of CBT over traditional training?**
- 10  Living with Computers
  - 1 **What is distance learning (DL)?**
  - 2
    - ✦ Delivery at one location and learning at another
    - ✦ Most colleges offer some form of distance learning; some include degrees
- 11  Living with Computers
  - 1 **What is edutainment?**
  - 2
    - ✦ Type of educational software combining education with entertainment
- 12  Living with Computers
  - 1 **What are effects of the digital divide?**
  - 2
    - ✦ Separates the haves from the have nots
- 13  Living with Computers
  - 1 **What music and video options are available on a computer for**

**entertainment?**

- 2 ❖ Play CDs or DVDs
- ❖ Online radio
- ❖ Purchase on Web and download to hard disk

14  Living with Computers

- 1 **How are computers used to manage finances?**
- 2 ❖ Balance your checkbook, pay bills, track personal income and expenses, track investments, and evaluate financial plans

15  Living with Computers

- 1 **What is online stock trading?**
- 2 ❖ Buy and sell stocks online without using a broker
- ❖ Organize investments
- ❖ Set up alerts

16  Living with Computers

- 1 **How does the government use computers?**
- 2 ❖ Government Web sites provide citizens with up-to-date information

17  Living with Computers

- 1 **How do government employees use computers as part of their daily routine?**
- 2 ❖ 911 call center
- ❖ Police have online access to FBI Center (NCIC) via police cars equipped with computers and fingerprint scanners

18  Living with Computers

- 1 **What are other uses of computers in government?**
- 2 ❖ Government Web sites allow you to
  - file taxes
  - apply for permits and licenses
  - pay parking tickets

19  Living with Computers

- 1 **How are computers used in health care?**
- 2 ❖ Maintain and share records
- ❖ Monitor patient's vital signs
- ❖ Assist in research and diagnosis
- ❖ File insurance claims
- ❖ Conduct medical tests
- ❖ Communicate with patients
- ❖ Surgically implant computerized devices
- ❖ Assist in operations with computer-controlled devices
- ❖ Aid in surgery

20  Living with Computers

- 1 **How can the computer and the Web aid patients?**
- 2 ❖ Provide up-to-date medical, fitness, nutrition, or exercise information
- ❖ Access databases of doctors and dentists

- ❖ Talk to others diagnosed with similar conditions using chat rooms
- ❖ Order prescriptions online

21  Living with Computers

1 **How can a computer aid in fitness?**

- 2
- ❖ Exercise equipment often has a built-in computer to
    - track progress
    - monitor physical conditions
      - heart rate
      - pulse

22  Living with Computers

1 **How do scientists use computers?**

- 2
- ❖ Help them collect, analyze, and model data
  - ❖ Use Internet to communicate with colleagues around world

23  Living with Computers

**A cochlear implant (chip) allows deaf person to hear**

24  Living with Computers

1 **What is an electronic book (e-book)?**

- 2
- ❖ Some Web sites allow you to download entire book to your computer
  - ❖ Cost is about the same or less than cost of purchasing print version

25  Living with Computers

**What are features of global positioning system (GPS) in your car?**

26  Living with Computers

1 **What online services are available for car buyers?**

- 2
- ❖ Shop online for a car
  - ❖ Obtain loans, leases, insurance, and warranties
  - ❖ Sell a used car

27  Living with Computers

1 **What are reasons to telecommute?**

- 2
- ❖ Reduce time and expense spent in traveling to office
  - ❖ Eliminate travel during unsafe weather conditions
  - ❖ Allow flexible work schedule
  - ❖ Provide convenient, comfortable work environment
  - ❖ Advantages
    - Higher job satisfaction rates
    - More productive workers
    - Reduction in employer overhead
    - Healthy for environment

28  Emerging Technologies

1 **What is virtual reality (VR)?**

- 2
- ❖ Use of computers to simulate real or imagined environment that appears as three-dimensional (3-D) space
  - ❖ Used for games, training, engineering, e-commerce, science, and medicine

29  Emerging Technologies

1 **How is the experience of a simulated environment sometimes enhanced?**

- 2
- ❖ Software requires you to wear specialized headgear, body suits, and gloves
  - ❖ Headgear displays artificial environment in front of both eyes

30  Emerging Technologies

1 **What is artificial intelligence?**

- 2
- ❖ Application of human intelligence to computers
  - ❖ Can sense actions and, based on logical assumptions and prior experience, take appropriate action to complete task

31  Emerging Technologies

1 **What is an intelligent agent?**

- 2
- ❖ Any software that independently asks questions, pays attention to work patterns, and carries out tasks on behalf of user

32  Emerging Technologies

1 **What is a network agent?**

- 2
- ❖ Sophisticated type of intelligent agent that performs tasks on remote computers before bringing results back to user
  - ❖ Sometimes called a bot

33  Emerging Technologies

1 **What is a robot?**

- 2
- ❖ Computer-controlled device that moves and reacts to feedback from outside world

34  A Healthy Work Environment

1 **What are areas of concern for a healthy work environment?**

- 2
- ❖ Long-time computer use can lead to health complications

35  A Healthy Work Environment

1 **What precautions can reduce the chance of developing tendonitis or carpal tunnel syndrome?**

- 2
- ❖ Take frequent breaks during computer session
  - ❖ Use wrist rest
  - ❖ Exercise hands and arms
  - ❖ Minimize number of times you switch between mouse and keyboard

36  A Healthy Work Environment

**How can you ease eyestrain when working at the computer?**

37  A Healthy Work Environment

1 **What is ergonomics?**

- 2
- ❖ Applied science devoted to comfort, efficiency, and safety in workplace

38  A Healthy Work Environment

1 **What is computer addiction?**

- 2 ❖ Occurs when computer consumes someone's entire social life
- 39  A Healthy Work Environment
  - 1 **What is green computing?**
  - 2 ❖ Involves reducing electricity and environmental wastes while using a computer
- 40  A Healthy Work Environment
  - What are some green computing suggestions?**
- 41  Ethics and Society
  - 1 **What are computer ethics?**
  - 2 ❖ Moral guidelines that govern use of computers and information systems
- 42  Ethics and Society
  - What do you think about ethical issues?**
- 43  Ethics and Society
  - 1 **Why is information accuracy important?**
  - 2 ❖ Inaccurate input can result in erroneous information and incorrect decisions based on that information
  - ❖ Evaluate Web page's value before relying on its content
- 44  Ethics and Society
  - 1 **What are the ethics of using computers to alter output?**
  - 2 ❖ Alteration could lead to deliberately misleading photographs
- 45  Ethics and Society
  - 1 **What are intellectual property rights?**
  - 2 ❖ Intellectual property (IP) refers to work created by inventors, authors, and artists
  - ❖ Intellectual property rights are rights to which creators are entitled for their inventions, writings, and works of art
- 46  Ethics and Society
  - 1 **What is an IT code of conduct?**
  - 2 ❖ Written guideline that helps determine whether specific computer action is ethical or unethical
- 47  Summary of Computers and Society: Home, Work, and Ethical Issues
  - ❖ Living with computers
  - ❖ Emerging technologies
  - ❖ A healthy work environment
  - ❖ Ethics and society