Chapter 4
Specialized Application Software

Introduction
• Software that for years was only available for mainframe computers is now available for microcomputers. Specialized application software makes it possible to perform advanced tasks at home.
• Home users can now create Web sites, work with graphic images, and create music or art.
• Robots now provide security and assistance in homes.
• Competent end users need to be aware of specialized applications such as: graphics programs, audio and video editing software, multimedia, Web authoring, and artificial intelligence.

Specialized Applications
• Graphics Programs
• Audio and Video Software
• Multimedia Programs
• Web Authoring Programs
• Artificial Intelligence
  • Virtual Reality
  • Knowledge-based Systems
  • Robotics

Graphics
• Desktop publishing
• Image editors
• Illustration programs
• Image galleries
• Graphic suites

Graphic Design & Desktop Publishing
• Programs that allow you to create publications
  • Mix text and graphics
  • Professional quality
• Popular programs
  • Adobe InDesign
  • QuarkXPress
  • Microsoft Publisher

Image Editors
• Programs for creating and editing bitmap images
  • Bitmap images use dots or pixels to represent an image
  • Bitmap images are also called raster images
• Popular programs
  • Adobe Photoshop
  • Corel PhotoPaint
  • Paint Shop Pro
  • GIMP - Freeware
Illustration Programs

- Programs used to create & edit vector images
- Drawing programs
- Vector images use geometric shapes or objects
- Popular programs
  - Adobe Illustrator
  - CorelDraw
  - Corel Designer (technical Illustration)

Image Galleries

- Libraries of electronic images
- Used for a variety of applications
  - Two basic types
    - Stock photographs
    - Clip art
  - There are numerous
  - Web image galleries

Bundled graphic programs

- Can buy a larger variety of graphics programs at a lower cost
- Popular suites
  - Adobe’s Creative Suites
  - CorelDraw Graphics Suite
  - and more

Audio and Video

- Video editing software
  - Enhances digital video footage
  - Apple’s iMovie & Final Cut Express http://www.apple.com/finalcutexpress/
  - Windows Movie Maker
- Audio editing software
  - Creates and edits audio clips
  - Can create your own MP3s
  - Apple’s Garage Band, and Sony’s ACID

Digital Video Editing

- Capture Video
- Edit a Movie
- Create a DVD

Multimedia

- The integration of a variety of media into one presentation
  - Video
• Music
• Voice
• Graphics
• Text
• Should include user interactivity
• Adobe Rich Media PDF
  • http://www.pdfpictures.com/ebrocures.html

13 Links & Buttons
• Links can be to...
  • Video
  • Sound
  • Graphics
  • Text Files
• Buttons are links and provide the ability to navigate through a presentation

14 Developing Multimedia Presentations
• Plan and Analyze
• Design
• Create
• Support

15 Multimedia Authoring Programs
• Special programs used to create multimedia presentations
• Bring together all the video, audio, graphics, and text elements
• Popular programs
  • Adobe Director
  • Authorware
  • Toolbook

16 Web Authoring
• Corporations use the Web to reach new customers
• Many individuals create their own personal sites, called Web logs or blogs, to keep in touch with friends and family
• Web Site Design
  • Web Authoring Programs

17 Web Site Design
• Interactive multimedia form of communication
  • Create a graphical map of overall content
  • Add multimedia elements like animation
    • Adobe Flash
    • Morphing

18 Web Authoring Programs
• Known as Web page editors or HTML editors
  • Provide support for Web site design
  • Creates HTML coding
• Popular programs
  • Adobe Dreamweaver
  • NetObjects Fusion
Web Authoring Sequence

Artificial Intelligence
- Attempts to simulate human senses, thought processes, and actions
- Designed to help people and organizations become more productive
- Three areas of AI
  - Virtual reality
  - Knowledge-based (expert) systems
  - Robotics

Virtual Reality
- Artificial or simulated reality
- Generated in 3-D by a computer
- Commonly known as VR, artificial reality, or virtual environments
- Virtual reality modeling language (VRML)
  - Used to create real-time animated 3-D scenes
  - Cosmos Worlds from Cosmos Software

Knowledge-Based (Expert) Systems
- Artificial intelligence that uses a database for assistance
- Database is known as a knowledge base
- Many use "fuzzy logic"

Robotics
- The field of study concerned with using robots
- Robots are computer-controlled machines
  - Mimic the motor activities of living things
- Three types of robots
  - Perception system robots
    - imitate human senses
  - Industrial robots
    - preform tasks
  - Mobile robots
    - used for transport tasks

Careers in IT
- Graphic designers use computers to format and create publication-ready material
  - Books
  - Magazines
  - Newsletters
  - Newspapers
- Generally requires completion of a program, good communication skills, and artistic ability
- Desktop publishers and graphic designers can expect to earn $30K - $50K annually

A Look to the Future
Artificial Intelligence
- Research is being done to give robots a sense of values so they can make decisions independently
• The Saya robot has been developed in Tokyo
• It is being used in business as of 2007:
  do a Google search for Saya!