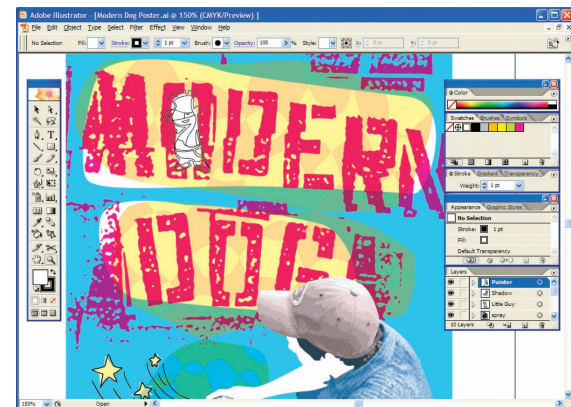


# Chapter 4

## Specialized Application Software

# Competencies (Page 1 of 2)

- Describe graphics software, including desktop publishing, **image editors**, **illustration programs**, **image galleries**, and **graphics suites**
- Discuss **audio** and **video editing software**
- Describe **multimedia**, including **story boards** and **multimedia authoring programs**



# Competencies (Page 2 of 2)

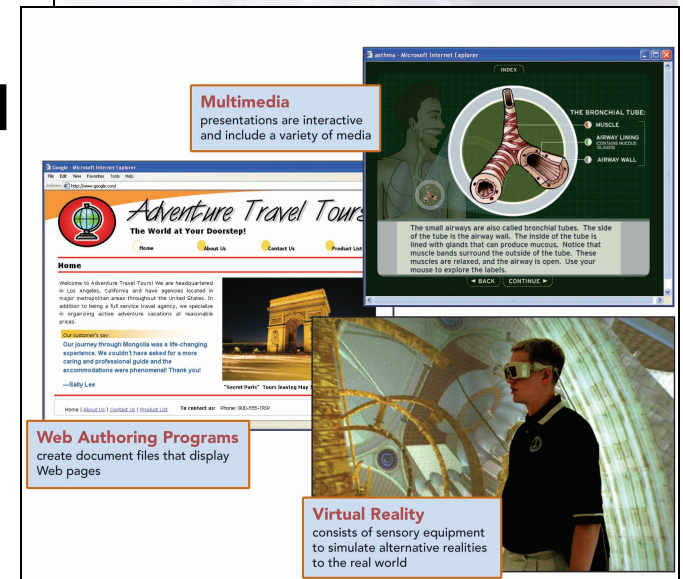
- Explain **Web authoring**, **Web site design**, and **Web authoring programs**
- Describe **virtual reality** and **VRML**
- Discuss **knowledge-based (expert) systems**
- Describe **robotics** including **perception systems**, **industrial robots**, and **mobile robots**



4-3

# 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

# Desktop Publishing

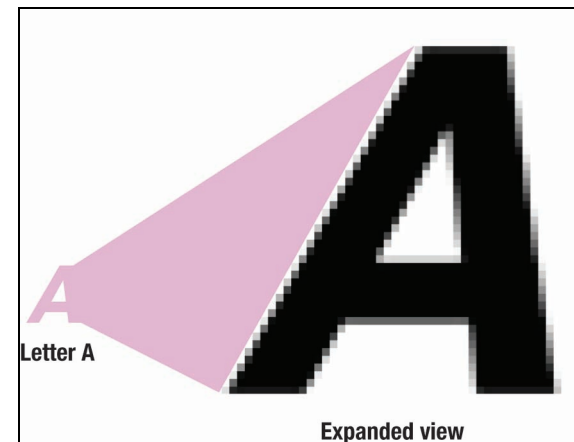
- **Programs that allow you to create publications**
  - Mix text and graphics
  - Professional quality
- **Popular programs**
  - Adobe PageMaker
  - Microsoft Publisher
  - QuarkXPress



[Return](#)

# 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**
  - Microsoft Paint
  - Adobe Photoshop
  - Corel PhotoPaint
  - Paint Shop Pro

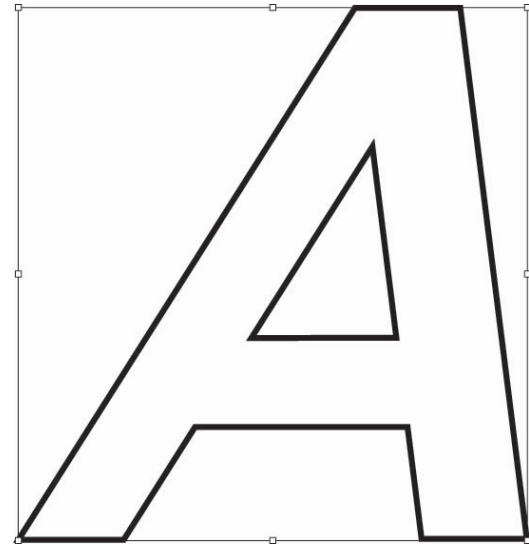


[Return](#)



# Illustration Programs

- Programs used to create & edit **vector images**
- **Drawing programs**
- **Vector images use geometric shapes or objects**
- **Popular programs**
  - Adobe Illustrator
  - CorelDraw
  - Macromedia FreeHand
  - Micrografx Designer



[Return](#)

4-9

# Image Galleries

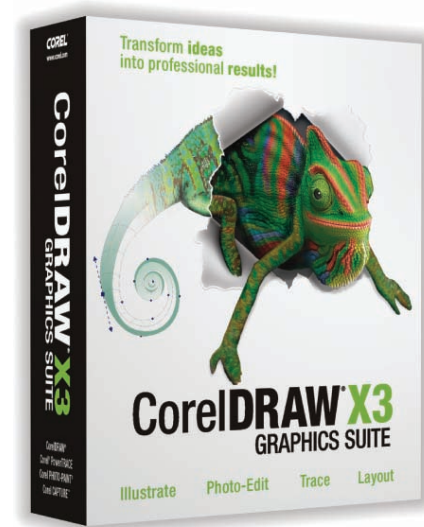
- Libraries of electronic images
- Used for a variety of applications
- Two basic types
  - Stock photographs
  - Clip art
- There are numerous **Web image galleries**

Organization	Site
Classroom Clipart	<a href="http://www.classroomclipart.com">www.classroomclipart.com</a>
ClipArt.com	<a href="http://www.clipart.com">www.clipart.com</a>
Free Clip-art	<a href="http://www.free-graphics.com">www.free-graphics.com</a>
Graphics Factory	<a href="http://www.graphicsfactory.com">www.graphicsfactory.com</a>
MS Office clip art	<a href="http://office.microsoft.com/clipart">office.microsoft.com/clipart</a>

[Return](#)

# Graphic Suites

- **Bundled graphic programs**
- **Can buy a larger variety of graphics programs at a lower cost**
- **Popular suites**
  - **CorelDraw Graphics Suite**
  - **Adobe's Creative Suites**
  - **Macromedia's Studio**



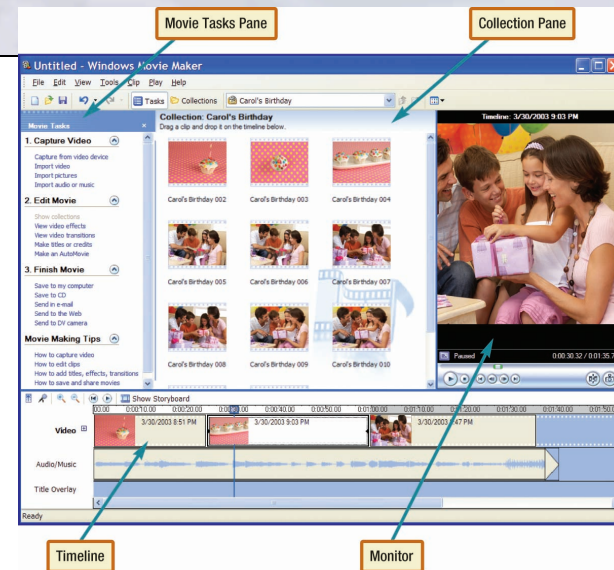
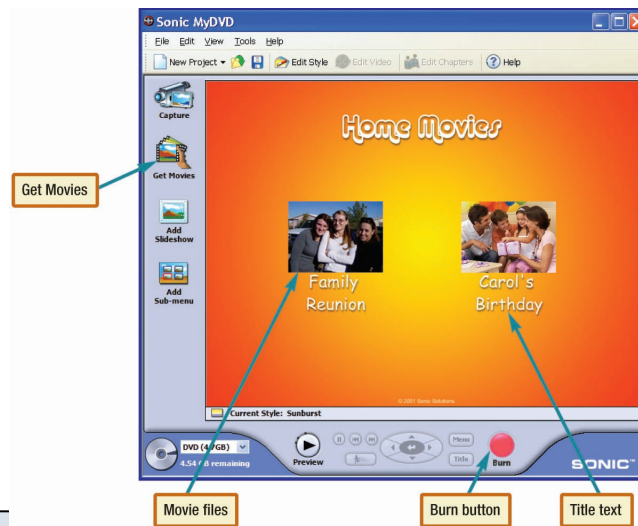
# Audio and Video

- **Video editing software**
  - Enhances digital video footage
  - Apple's iMovie & Windows Movie Maker
- **Audio editing software**
  - Creates and edits audio clips
  - Can create your own MP3s
  - Apple's Garage Band and Sony's ACID



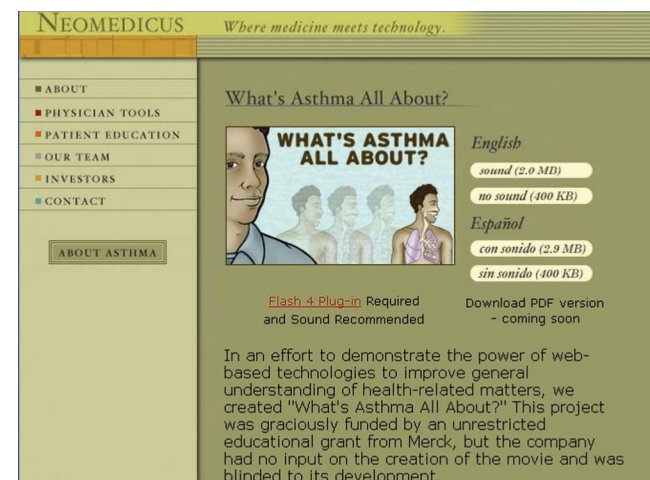
# Digital Video Editing

- 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**



# Links & Buttons

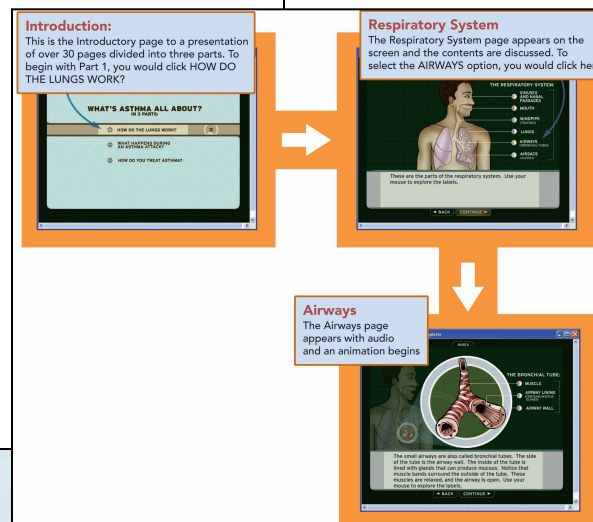
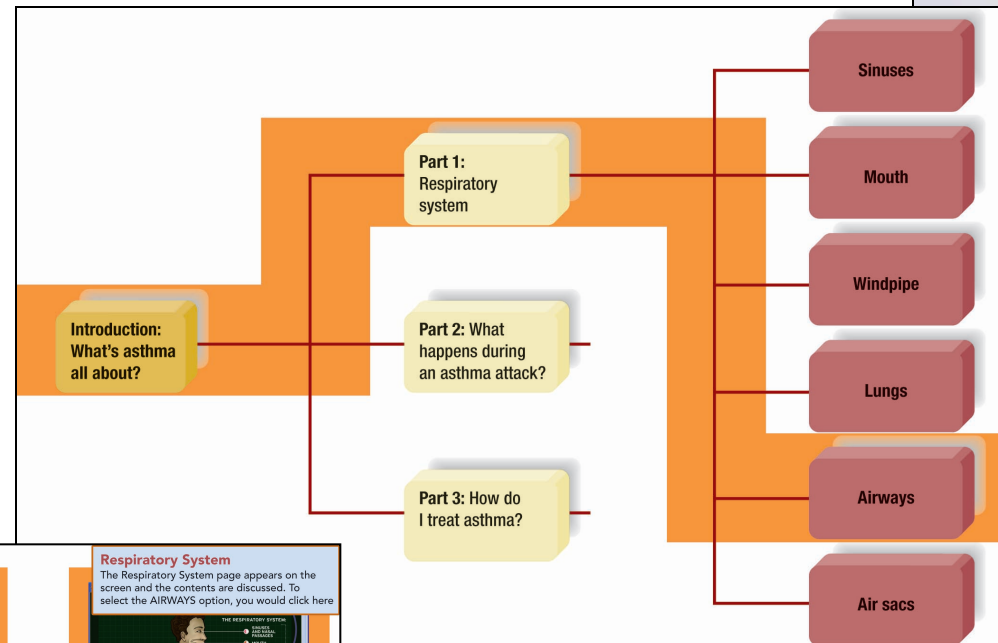
## Links can be to...

- Video
- Sound
- Graphics
- Text Files
- **Buttons are [links](#) and provide the ability to navigate through a presentation**



# Developing Multimedia Presentations

- Plan and Analyze
- Design
- Create
- Support





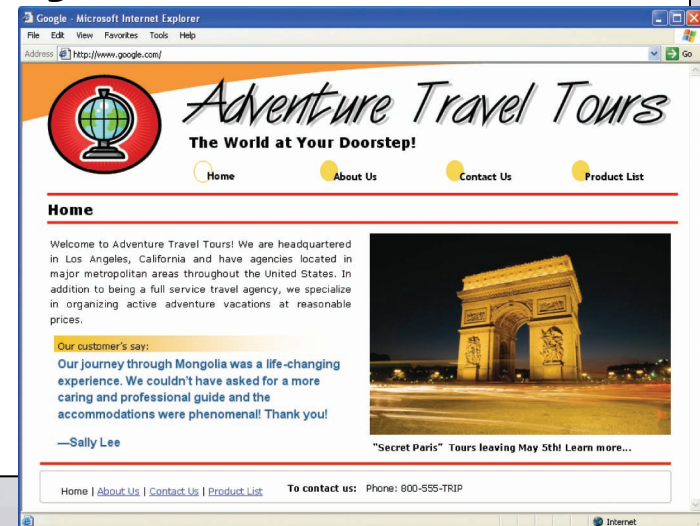
# Multimedia Authoring Programs

- **Special programs used to create multimedia presentations**
- **Bring together all the video, audio, graphics, and text elements**
- **Popular programs**
  - **Macromedia Director**
  - **Authorware**
  - **Toolbook**



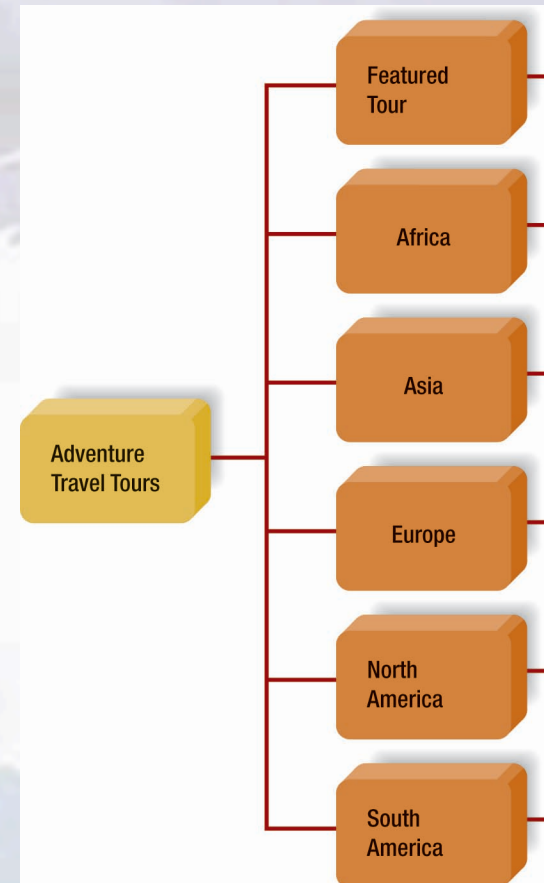
# Web Authoring

- 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](#)



# Web Site Design

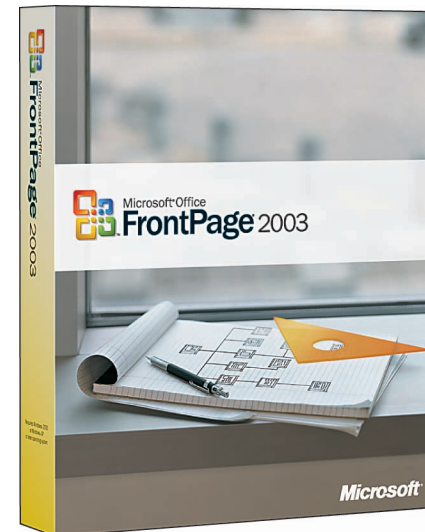
- **Interactive multimedia form of communication**
  - Create a **graphical map** of overall content
  - Add multimedia elements like **animation**
    - Macromedia's **Flash**
    - **Morphing**



[Return](#)

# Web Authoring Programs

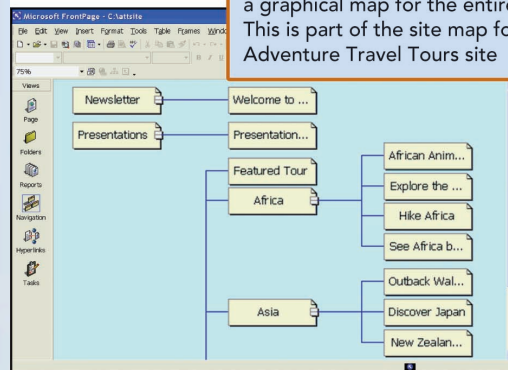
- Known as **Web page editors** or **HTML editors**
  - Provide support for Web site design
  - Creates HTML coding
- Popular programs
  - Macromedia Dreamweaver
  - NetObjects Fusion
  - Microsoft FrontPage



# Web Authoring Sequence

## Graphical Map

FrontPage provides tools to create a graphical map for the entire site. This is part of the site map for the Adventure Travel Tours site



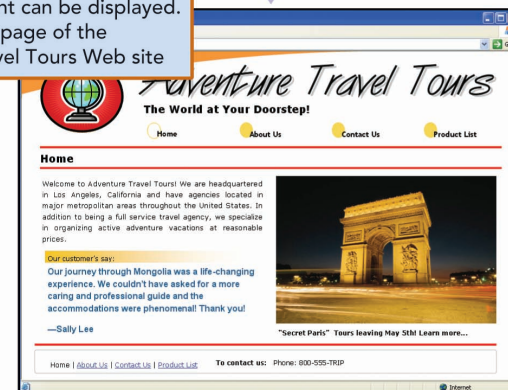
## HTML Coding

Using descriptions of each Web page, Microsoft FrontPage creates HTML code for the entire site

```
<html>
<head>
<meta http-equiv="Content-Type" content="text/html; charset=
<meta http-equiv="Content-Language" content="en-us">
<title>ATT Home</title>
<meta name="GENERATOR" content="Microsoft FrontPage 5.0">
<meta name="ProgId" content="FrontPage.Editor.Document">
<meta name="Microsoft Theme" content="artsty1111, default">
<meta name="Microsoft Border" content="tib">
</head>
<p>&quot;I envy you, for this is the first step on an advent
lifetime!&nbsp;&nbsp;&nbsp;I wish I could go back to 1984 and experienc
Adventure Travel tour again.&nbsp;&nbsp;&nbsp;I now experience that sam
through the
```

## Web Page

Using a browser, the completed HTML document can be displayed. This is the first page of the Adventure Travel Tours Web site



# 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**



[Return](#)

# Knowledge-Based (Expert) Systems

- Artificial intelligence that uses a database for assistance
- Database is known as a **knowledge base**
- Many use "**fuzzy logic**"



[Return](#)



# 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
    - Industrial robots
    - Mobile robots



# Careers in IT

- **Desktop publishers** 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 can expect to earn \$25K - \$42K 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 is under development in Tokyo**



# Discussion Questions (Page 1 of 2)

- **Describe graphics, including desktop publishers, image editors, illustration programs, image galleries, and graphics suites.**
- **Discuss audio and video editing software.**
- **What is multimedia? How are multimedia presentations developed?**

# Discussion Questions (Page 2 of 2)

- **Describe Web authoring, including Web site design and Web authoring programs.**
- **Discuss three areas of artificial intelligence.**