Chapter 1: What Is Multimedia?

Overview

- Introduction to multimedia
- Applications of multimedia
- Primary delivery methods of multimedia

Introduction to Multimedia

- Multimedia is a combination of text, art, sound, animation, and video.
- It is delivered to the user by electronic or digitally manipulated means.
- A multimedia project development requires creative, technical, organizational, and business skills.
Examples

Measuring Angles

You can measure an angle between two collinear points and then use the measure of the angle and the orientation to estimate the location of those points.

1. Click on the toolbar with any graph to see on it. The screen will display the current interactive. A red line and an arrow will be visible. The arrow will be used to select a line.

2. Click on the line to select it. The line and the arrow will be highlighted.

3. Use the slider or moving arrows to select the angle you want. The arrow will be rotated until it is oriented for your measurement.

4. Click the view button. The current angle will be reflected to the base angle radio and the original difference remains will be reflected.

5. Click the angle button. The current angle will be returned to the screen.

6. Click the angle button again. The current angle will be returned to the screen.

7. Click the angle button again. The current angle will be returned to the screen.

Text Images

Examples cont.

Geo/Grey Manual

A Web page

Video

A tool tip

Introduction to Multimedia (continued)

- Multimedia becomes interactive multimedia when a user is given the option of controlling the elements.
- Interactive multimedia is called hypermedia when a user is provided a structure of linked elements for navigation.
- Multimedia developers develop multimedia projects.
Introduction to Multimedia (continued)

- The software vehicle, the messages, and the content together constitute a multimedia project.
- A multimedia project shipped to end users with or without instructions is called a multimedia title.
- A project can also be launched on the Web.

Introduction to Multimedia (continued)

- Multimedia projects can be linear or nonlinear.
- Projects that are not interactive are called linear.
- Projects where users are given navigational control are called nonlinear and user-interactive.

Linear Structures

Linear structures in conventional media
Introduction to Multimedia (continued)

- Authoring tools are used to merge multimedia elements into a project.
- These software tools are designed to manage individual multimedia elements and provide user interaction.
Applications of Multimedia

- **Business** - Business applications for multimedia include presentations training, marketing, advertising, product demos, databases, catalogs, instant messaging, and networked communication.

Multimedia is a very effective presentation and sales tool that greatly increases viewers' retention rates.

Applications of Multimedia (continued)

- **Schools** - Educational software can be developed to enrich the learning process.

The figure on the right shows a selection of instructional videos used for training emergency medicine specialists. Such online e-learning provides a cost-effective vehicle to learn clinical techniques outside of the hospital setting.
Applications of Multimedia (continued)

- Home - Most multimedia projects reach homes via television sets or monitors with built-in user inputs.
  
  Genealogy software such as Reunion from Leister Productions lets families add text, images, sounds, and video clips as they build their family trees.

Applications of Multimedia (continued)

- Public places - Multimedia will become available at stand-alone terminals or kiosks to provide information and help.

  Kiosks in public places can make everyday life simpler.

Delivering Multimedia

- Virtual reality (VR)
  
  - Virtual reality is an extension of multimedia.
  
  - It uses the basic multimedia elements of imagery, sound, and animation.
  
  - It requires terrific computing horsepower to be realistic.
• Virtual reality (VR) (continued)
  – In VR, cyberspace is made up of thousands of geometric objects plotted in three-dimensional space.
  – The standards for transmitting VR in Virtual Reality Modeling Language (VRML) documents have been developed on the World Wide Web.
  – VRML documents have the file extension .wrl.

• Copper wire, glass fiber, and radio/cellular technologies also serve a means for delivering multimedia files across a network.

• The primary media for delivering multimedia projects are:
  – Compact disc read-only (CD-ROM)
  – Digital Versatile Disc (DVD)
Delivering Multimedia (continued)

- Compact disc read-only (CD-ROM)
  - CD-ROM is the most cost-effective distribution medium for multimedia projects.
  - It can contain up to 80 minutes of full-screen video or sound.
  - CD burners are used for reading discs and converting the discs to audio, video, and data formats.

Delivering Multimedia (continued)

- Digital Versatile Disc (DVD)
  - Multilayered DVD technology increases the capacity of current optical technology to 18GB.
  - DVD authoring and integration software is used to create interactive front-end menus for films and games.
  - DVD burners are used for reading discs and converting the discs to audio, video, and data formats.

Summary

- Multimedia is a combination of text, graphic art, sound, animation, and video.
- Multimedia projects can be linear or nonlinear.
- Multimedia projects are often stored on CD-ROM or DVDs. They can also be hosted on the Web.
Summary (continued)

- Multimedia is widely used in business, schools, public places, and at home.
- Virtual reality is an extension of multimedia.