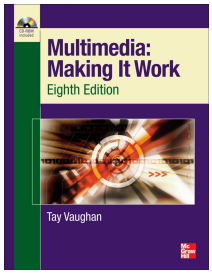
Chapter 1: What Is Multimedia?



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Overview

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

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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.**

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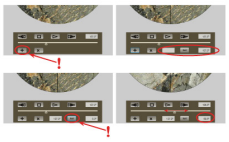
Examples

Measuring Angles

You can measure the angle between a reference point and some other position using the cross-hairs and the angle read-outs.

1. Click on the button with an upright cross (+) on it to show the cross-hairs. This will cause a new button, labelled Set, to appear, together with two text fields: the one to the left of the Set button (the base angle read-out) will be blank. The other (the angular difference readout) will show a copy of the current angle of rotation.
2. Use the slider or stepping arrows to rotate the slide to the position you want to use as the reference for your measurement.
3. Click the Set button. The current angle will be copied to the base angle readout and the angular difference readout will be set to zero.
4. Use the slider or stepping arrows to rotate the slide to the position where you want to measure the angle.
5. Read the angle in the angular difference readout.

Text



Images

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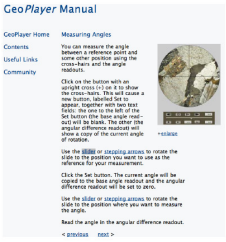
Examples cont.



A Web page

Video

A tool tip

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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.**

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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.**

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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.**

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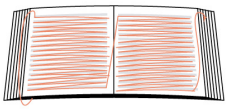
Linear Structures

Book: physical arrangement of text and pages implies a linear reading order.



Film: fixed order of frames defines a single playback sequence.

Linear structures in conventional media

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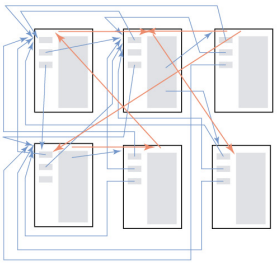
Non-Linear Structures



Hypermedia: links between pages permit multiple arbitrary reading orders.

Non-linear structures (1)

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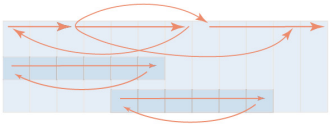
Non-Linear Structures cont.



Flash: jumps between frames controlled by interactivity; independent movie clips play in parallel.

Non-linear structures (2)

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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.**

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Applications of Multimedia

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

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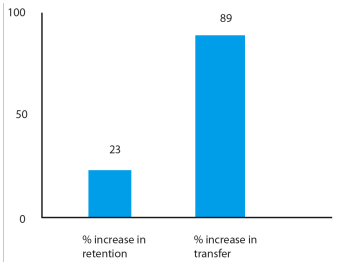
Applications of Multimedia *(continued)*



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

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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.

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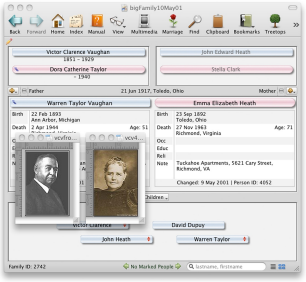
Applications of Multimedia *(continued)*

- **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.

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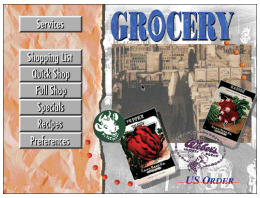
Applications of Multimedia *(continued)*

- **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.

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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.

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Delivering Multimedia *(continued)*

- **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.

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Delivering Multimedia *(continued)*

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

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Delivering Multimedia *(continued)*

- **The primary media for delivering multimedia projects are:**
  - Compact disc read-only (CD-ROM)
  - Digital Versatile Disc (DVD)

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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.

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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.

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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.**

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Summary *(continued)*

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

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