Maharaja Agrasen Institute of Technology
ETCS 211
Computer Graphics & Multimedia
UNIT 3

Introduction to Multimedia

Objective

What is Multimedia

Elements of Multimedia

Types of Multimedia

Importance of Multimedia

Multimedia Products

Q & A

What is Multimedia?

What is Multimedia?

Derived from the word "**Multi**" and "**Media**"
◦ **Multi**
  ◦ Many, Multiple,
◦ **Media**
  ◦ Tools that is used to represent or do a certain things, delivery medium, a form of mass communication – newspaper, magazine / tv.
  ◦ Distribution tool & information presentation – text, graphic, voice, images, music and etc.
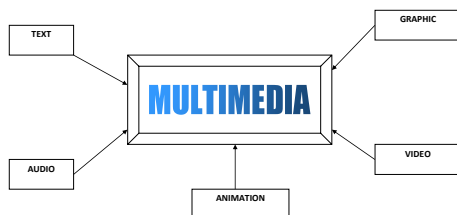
Definition of Multimedia

Multimedia is a combination of text, graphic, sound, animation, and video that is delivered interactively to the user by electronic or digitally manipulated means.

Elements of Multimedia

Elements of Multimedia
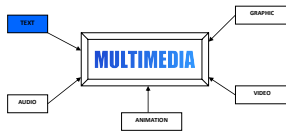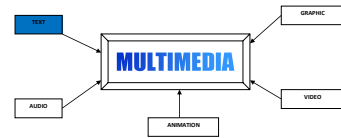
TEXT

- A broad term for something that contains words to express something.
- Text is the most basic element of multimedia.
- A good choice of words could help convey the intended message to the users (keywords).
- Used in contents, menus, navigational buttons

Elements of Multimedia

TEXT

- Example

ROAD SAFETY

First, before crossing the road, make sure you look to your left, to your right and then left again

Then, walk carefully to cross the road
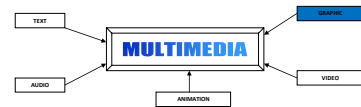
Elements of Multimedia

GRAPHIC

- Two-dimensional figure or illustration
- Could be produced manually (by drawing, painting, carving, etc.) or by computer graphics technology.
- Used in multimedia to show more clearly what a particular information is all about (diagrams, picture).

Elements of Multimedia

GRAPHIC

- Example

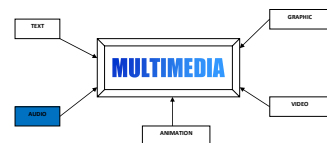# Elements of Multimedia

AUDIO

- Produced by vibration, as perceived by the sense of hearing.
- In multimedia, audio could come in the form of speech, sound effects and also music score.

Elements of Multimedia

AUDIO

- Example

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Elements of Multimedia
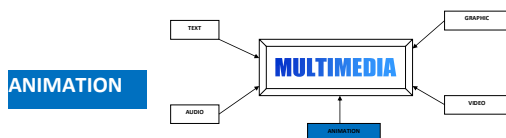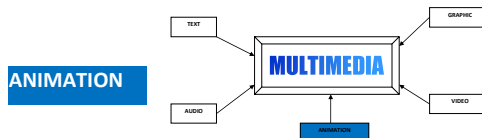

ANIMATION

- The illusion of motion created by the consecutive display of images of static elements.
- In multimedia, animation is used to further enhance / enriched the experience of the user to further understand the information conveyed to them.

Elements of Multimedia

ANIMATION

- Example

Elements of Multimedia
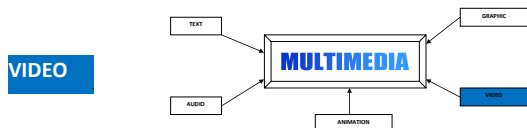
VIDEO

- Is the technology of capturing, recording, processing, transmitting, and reconstructing moving pictures.
- Video is more towards photo realistic image sequence / live recording as in comparison to animation.
- Video also takes a lot of storage space. So plan carefully before you are going to use it.

Types of Multimedia

Types of Multimedia

Interactive Multimedia

When the user is given the option of controlling the elements.

Hyper media

- A combination of hypertext, graphics, audio, video, (linked elements) and interactivity culminating in a complete, non-linear computer-based experience.

Example
Interactive Multimedia

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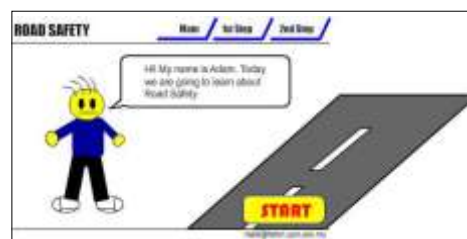## Example

Hyper Media

Main Page
1. Video link
2. Image link
3. Audio Link
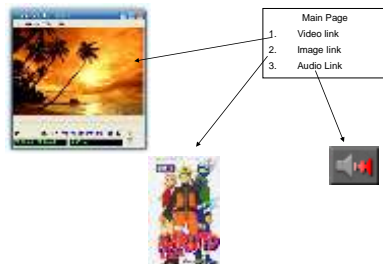
Linear VS Non-Linear

LINEA

A Multimedia Project is identified as Linear when:
◦ It is not interactive
◦ User have no control over the content that is being showed to them.

Example:
◦ A movie
◦ A non-interactive lecture / demo show

Linear VS Non-Linear

NON-LINEAR

A Multimedia Project is identified as Non-Linear when:
◦ It is interactive
◦ Users have control over the content that is being showed to them.
◦ Users are given navigational control

Example:
◦ Games
◦ Courseware
◦ Interactive CD

Importance of Multimedia

Importance of Multimedia

There are a number of fields where multimedia could be of use. Examples are:-
◦ Business
◦ Education
◦ Entertainment
◦ Home
◦ Public Places

Importance of Multimedia

Business
◦ Use and Applications
  ◦ Sales / Marketing Presentation
  ◦ Trade show production
  ◦ Staff Training Application
  ◦ Company Kiosk

Importance of Multimedia

Education
◦ Use and Applications
  ◦ Courseware / Simulations
  ◦ E-Learning / Distance Learning
  ◦ Information Searching

Importance of Multimedia

Entertainment
◦ Use and Applications
  ◦ Games (Leisure / Educational)
  ◦ Movies
  ◦ Video on Demand
    ◦ Online
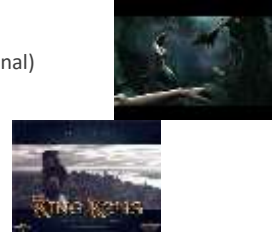
Importance of Multimedia

Home
◦ Use and Applications
  ◦ Television
  ◦ Satellite TV
  ◦ SMS services (chats, voting, reality TV)

Importance of Multimedia

Public Places
◦ Use and Applications
  ◦ Information Kiosk
  ◦ Smart Cards, Security

Multimedia Products

Multimedia Products

Briefing Products

Reference Products

Database Products

Education and Training Products

Kiosk

Entertainment and Games

Multimedia Products

Briefing Products

- Small, straightforward, linear products used to present information quickly and concisely.
- Characteristic of briefing product:
  - ✔ Short Development Cycle
  - ✔ Limited Number of Presentations
  - ✔ Usage of text to present information with limited use of graphic, audio and video.
  - ✔ Have few navigational controls. (mouse click and button press to move from one page to another)
  - ✔ Content and the format are suitable for the audience and fulfill the purpose of the presentation.

Multimedia Products

Briefing Products

- Good briefing presentation depends on:
  - ✔ The understanding of the presented subject.
  - ✔ Seamless integration of content.
  - ✔ Consistent layout

- Example:
  - ✔ Corporate Presentation
  - ✔ Sales Presentation
  - ✔ Educational Lectures

Multimedia Products

Reference Products

- Often used for answering specific questions or for general browsing of information. (stored on CD/ DVD ROM)
- Characteristic of reference product:
  - ✔ Used by wide range of user (small – adult)
  - ✔ Have navigational menu, book marking, searching, printing utility

- 2 Basic classes of reference product:
  - ✔ **Generalized Content** (dictionary/encyclopedia)
    - ❑ Broad treatment of content at a limited depth
  - ✔ **Detailed Content**
    - ❑ Focus on specific area and provide extensive information.

Multimedia Products

Reference Products

- Good usability and success depends on:
  - ✔ The developers understanding the body of information and how the end user will want to access it.
  - ✔ Help function should always available to explain how to access and use the information
- Examples are electronic forms of:
  - ✔ Encyclopedia
  - ✔ Dictionaries
  - ✔ Cookbooks, Historical, Informative
  - ✔ Scientific surveys.

Multimedia Products

Database Products

- Similar to reference product in a sense that large amount of information are made available to the end user.
- Focus on storing and accessing the actual data (multimedia data such as text, graphic, audio, animation and video)
- Characteristics of Database Products are:
  - ✔ Manages multimedia data (large data)
  - ✔ Descriptive finding methods
    - ▪ Content based search
  - ✔ Simultaneous access
    - ▪ Online database
  - ✔ Relational consistency in data management.

Multimedia Products

Database Products

- Examples are:
  - ✔ Google Search
  - ✔ Google Earth

Multimedia Products

Education and Training Products

- Similar to textbook or training manuals but have added media such as audio, animation and video.
- Make up a significant share of the multimedia market ranging from pre-kindergarten to postgraduate offerings from technical to corporate training products.
  - ✔ Instructor Support Products
  - ✔ Standalone or Self-Paced Products
  - ✔ Combination Products
- Shares the same characteristics as Reference Product

Multimedia Products

Kiosk Products

- A product which is usually stationed at public places and allow the user to find information interactively and also other types of transaction.

- Characteristics of Kiosk Products:-
  - ✔ Limited target users and usage.
  - ✔ User friendly and easily used by user.
  - ✔ Fast response.

Multimedia Products

Kiosk Products

- Categories of Kiosk
  - ✔ Point Of Information
    - ❑ Provide certain information (example map, timetable etc)
  - ✔ Point Of Sales System
    - ❑ Allow users to purchase or make orders
- Example of Kiosk Products:-
  - ✔ Instant Photo Booth
  - ✔ Banking Kiosk (money deposit, cheque)
  - ✔ University Information Kiosk

Multimedia Products

Entertainment & Games

- Most popular
- Shipped in the form of Interactive CD / DVD ROM.
- Characteristics of E & G Products:-
  - ✔ Immersive.
  - ✔ Requires constant feedback and interaction with the user.
  - ✔ Challenging and sometimes intriguing for user
  - ✔ Enabled online play for more than one user experience.

Q & A

Q1. Which one of the following is the characteristic of a multimedia system?
a) high storage
b) high data rates
c) both high storage and high data rates
d) None of the above

Q2. _____ refers to any type of application or presentation that involves more than one type of media, such as text, graphics, video, animation, and sound.
a) An executable file
b) high data rates
c) Multimedia
d) Hypertext

Q3. A _____ can be added to your presentation and then used to go to a variety of locations ---- for example, a web address, an e-mail address, a custom show or document, just to name a few.
a) Menulink
b) Hyperlink
c) Toollink
d) slidelink

Q4. What are the Elements of multimedia?
 a) Text
 b) Audio
 c) Animation
 d) All of the above

Q5. Type of multimedia
 a) Interactive
 b) Hyper
 c) Linear VS Non-Linear
 d) All of the above