

# FUNDAMENTAL OF MULTIMEDIA

## INTRODUCTION TO MULTIMEDIA

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# Chapter Description



- Expected Outcomes
  - Be able to understand the multimedia and its concept
  - Be able to know the usage of multimedia
- References
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  - Savage, T.M., Vogel, K.E. An Introduction to Digital Multimedia 2nd ed.. 2013. Jones & Bartlett Learning ASIN: B00LZM6ESY.
  - Parag Havaladar, Gerard Medioni. Multimedia Systems: Algorithms, Standards, and Industry Practices (Advanced Topics) 1st Edition. Cengage Learning. 2011. ISBN-13: 978-1418835941
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# Definition and Terms Used



- A few definition of Multimedia
  - *Multimedia* means that computer information can be represented through audio, video, and animation in addition to traditional media (i.e., text, graphics drawings, images).
  - Multimedia is a presentation of a (usually interactive) computer application, incorporating media elements such as text, graphics, video, animation, and sound, on a computer (McGloughlin, 2001).



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# Definition and Term used

- **Multimedia Technology**
  - refers to both the hardware and software used to create and run multimedia application.
- **Multimedia Application**
  - Application which uses a collection of multiple media sources e.g. text, graphics, images, sound/audio, animation and/or video.



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# Definition and Term used

- A good general definition of Multimedia:
  - *Multimedia* is the field concerned with the computer-controlled integration of text, graphics, drawings, still and moving images (Video), animation, audio, and any other media where every type of information can be represented, stored, transmitted and processed digitally.



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# Types of Multimedia

- Discrete media
  - Text
  - Graphics (generated by computer)
  - Still Image (captured from outside of computer)

Discrete media refers to text, still images or graphics which are composed of non-time-dependent fragments. Time is not part of the semantics of discrete media.



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# Types of Multimedia

- Continuous media
  - Sound
  - Video (captured from outside of computer)
  - Animation (computer generated)

Continuous media refers to information media, such as sound and motion video, the presentation of which requires a continuous play out as time passes or time-dependent fragments. Time is part of the semantics of continuous media.



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# Why Multimedia

- Ease of use
- Intuitive interface
- Immersive experience
- Self-paced interaction & better retention
- Better understanding of the content
- Cost effectiveness
- More fun = greater efficiency



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# Multimedia Elements

- Text
- Images
- Sound
- Video
- Animation



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# Multimedia Applications

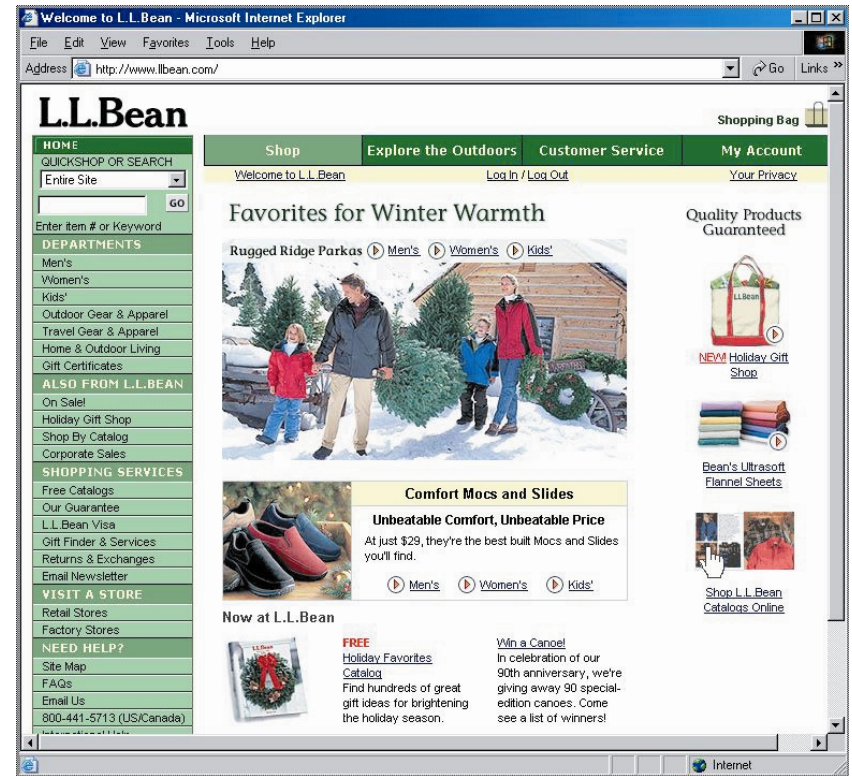
- Business and Industry
- Education
- Entertainment
- Government and Politics
- Medicine & Nursing
- Encyclopedic Resources
- Application Development Packages



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# Business and Industry

- Interactive Multimedia Merchandising
- Videoconferencing
- Multimedia Travel Systems (FEDEX)
- Financial Services
- Real Estate
- Corporate Training
- Day Trading



Source: <http://www.lbean.com>



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# Education

- Learning Theories & Multimedia
  - Cognitive vs Behavioral
- Encyclopedia.
- Living Book.
- Distance Learning for virtual classrooms or online schools.
- Computer-based training (CBT) that allows people to learn at their own place.



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# Entertainment

- Cinema (SFX)
- Video Games
- Virtual Reality (VRML)



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# Government & Politics

- The role of government is to provide services to their citizen including
  - Economy growth : to enhance the economy such as tourism for promoting more visitors.
  - Education : helps in increasing the quality of education such as using multimedia applications to make the students more understand of perceiving their knowledge
  - Quality of life : use multimedia to make life better such as promote the healthy life for all citizens.



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# Electronic Government

- improve both how the government operates internally as well as how it delivers services to the people of Malaysia.
- improve the convenience, accessibility and quality of interactions with citizens and businesses;
- improve information flows and processes within government to improve the speed and quality of policy development, coordination and enforcement.



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# Medicine & Nursing

- Medical Training
- Anatomy and Physiology
- Virtual Surgery
- Videoconferencing Network
- Online Resources



Source :<http://www.healthscout.com/animation/68/34/main.html>



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# Encyclopedic Resources

- Encyclopedia on CD and DVD
- Online Encyclopedia ([www.harunyahya.com](http://www.harunyahya.com))
- Internet Resources



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# Application Development Packages

- Presentation Packages
- Hypermedia Programs
- Animation and Multimedia Sequencing
- Authoring Systems
- Web Page Creation Tools
- Instructional Management Systems



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# Emerging Technology

- Biotechnology – drug design with 3D visualization
- E-learning – distance learning, online degree.
- Wireless – application of 3G, videoconferencing with handphone
- Knowledge engineering – constructing a video crime scene.
- Virtual Reality – using 3d modeling to represent the real object such as Augmented Reality
- Hologram – representing the object in real



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