

Unit: 10 Multimedia

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What is multimedia?

- **Multi**: more than one
- **Medium** (singular): middle, intermediary, mean
- **Media** (plural): means for conveying information
- Media in the press, newspaper, radio and TV context - **mass media**
- Media in communications: cables, satellite, network – **transmission media**
- Media in computer storage: floppy, CD, DVD, HD, USB – **storage media**
- Media in HCI context: text, image, audio, video, CG – **interaction media**

*Multimedia is a **presentation** of a computer application incorporating media elements such as **text, graphics, animations, audio, and video.***



What is Multimedia in terms of Computing

Computing: Computer-based technologies and applications

→ What computers? → Various forms of computers/devices!

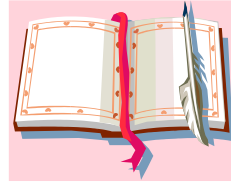
In terms of computing, four fundamental multimedia attributes:

- **Digitized:** All media including audio/video are represented in digital format
- **Distributed:** The information conveyed is remote, either pre-produced and stored or produced in real-time, distributed over networks
- **Interactive:** When the user is given the option of controlling the elements of the multimedia project .
- **Integrated:** The media are treated in a uniform way, presented in an orchestrated way, but are possible to manipulate independently

Definition of Multimedia:

Computer-based techniques of text, images, audio, video, graphics, animation, and any other medium where every type of information can be represented, processed, stored, transmitted, produced and presented digitally.

Benefits of Multimedia



10% of what they read



20% of what they hear



30% of what they see



50% of what they hear and see

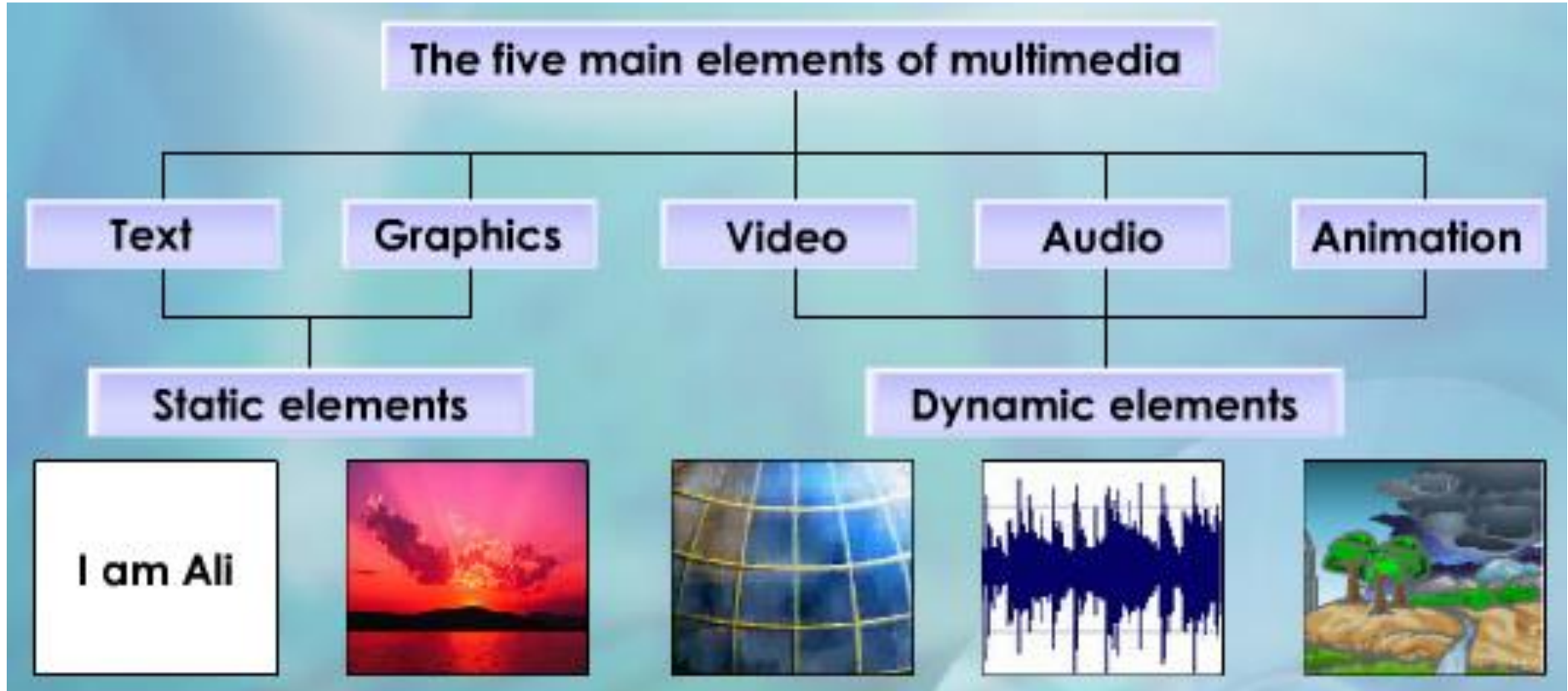


80% of what they hear, see and say

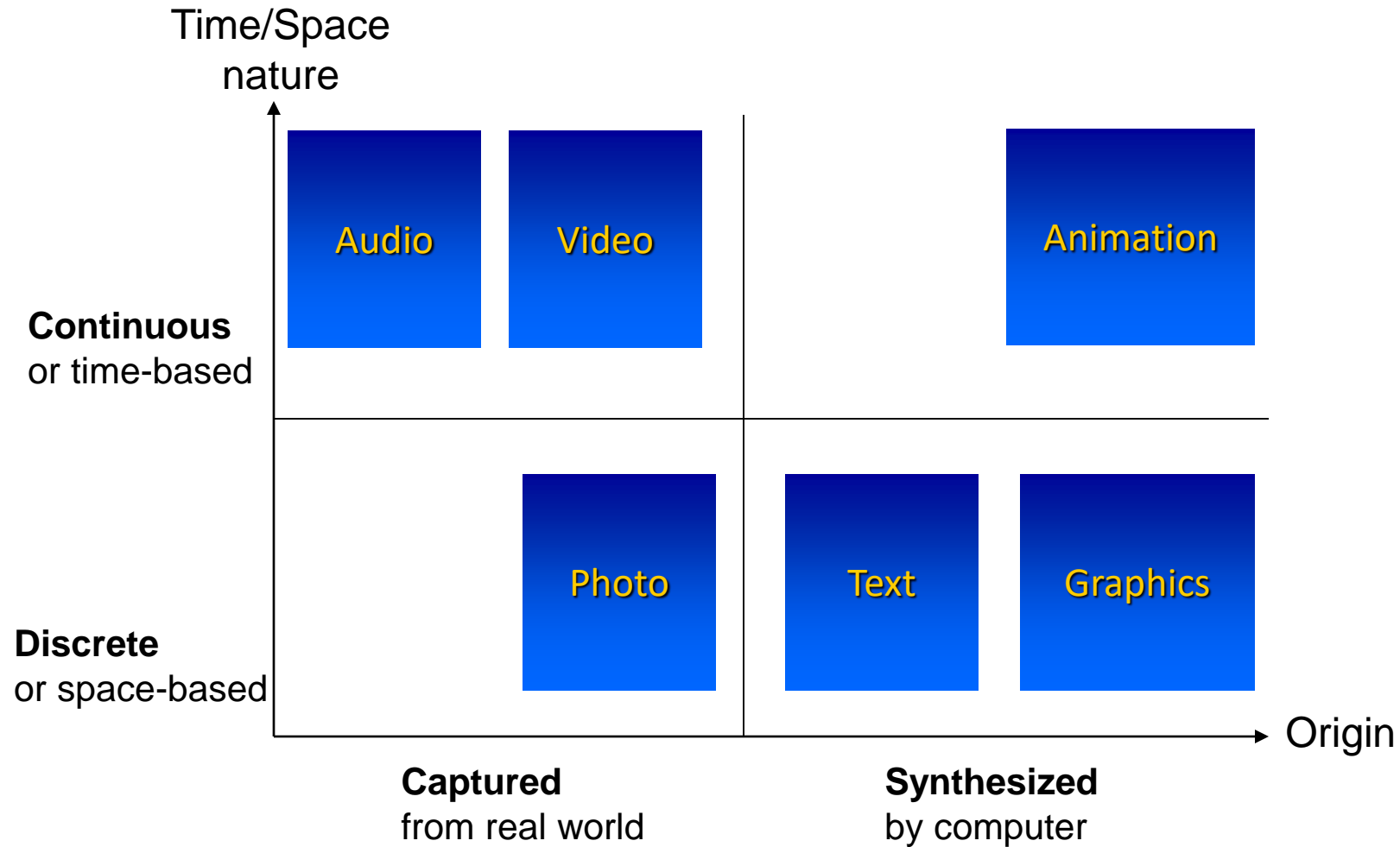


90% of what they hear, see, say and touch

What are the media components/Elements?



Classification of media types



Characteristics of Multimedia System

1. They must be computer-controlled.

User is able to view, hear, and see using a Multimedia PC System.

2. They are integrated.

At least one **discrete** and one **continuous media** combined for information presentation design sharing

3. The information they handle **must be represented digitally**.

Consists of various form of media i.e. text, graphics, audio, video, and animations; created, stored, processed, and transmitted **DIGITALLY**.

4. The interface to the final user **may permit interactivity**.

User is able to navigate, interact, create, and communicate.

Benefits of using multimedia in software

- Ease of use
 - User friendly, increase user's effectiveness
- Intuitive Interface
 - Allows user to determine functions of an application by their own intuition
- Immersive Experience
 - Software application takes over the entire computer screen, allows user to focus on application

Benefits of using multimedia in software

- Self-paced interaction and better retention
 - allows information processing at one's own pace
- Better understanding
 - simultaneous presentation of different media provides richer & broader range of information.
- Cost effectiveness
 - less training, less technical support

Problems with Multimedia

- **Investment costs**
 - multimedia involves **high volume of content**
 - expensive **copyright** and **royalty**
- **Technical barriers (accessibility issues)**
 - **upgrade** IT and PC infrastructure
- **Socio psychological barriers**
 - Generation gap
 - Learning rates
 - Learning in group/individual
 - Importance of teacher
- **Legal problems**
 - Copyright

Where to use multimedia ?

- Business
- Government
- Education
- Broadcasting and Entertainment
- Research and Development
- Health
- Many More....