

MULTIMEDIA TECHNOLOGY AND APPLICATIONS





WHAT IS MULTIMEDIA

- ❑ Multimedia is media and content that uses a combination of different content forms.
- ❑ Multimedia includes a combination of **text, audio, still images, animation, video, and interactivity content forms.**



Text

Audio

Image

Animation

Video

Interactivity





MULTIMEDIA RESEARCH TOPICS

Multimedia processing and coding.

Multimedia system support and networking.

Multimedia tools, end-systems and applications.

Multi-modal interaction and integration.





MULTIMEDIA CHARACTERISTICS

Diversity

Integrativity

Interactivity

Real-timing





HISTORY OF MULTIMEDIA

- **1984**: Apple→Macintosh
 - Image Processing: Bitmap
 - Graphical User Interface: Windows, Icon
 - Interactive Device: Mouse



**Macintosh Graphical
User Interface**



Power Mac G5





HISTORY OF MULTIMEDIA

□ 1985: Commodore → Amiga Multimedia System

- Graphics Processor: Agnus 8370
- Audio Processor: Paula 8364
- Video Processor: Denise 8362
- Multi-tasking OS: Menu, Icon, Multi-Window



□ 1986: Philips/Sony → CD-I Interactive CD

- Release CD-ROM international standard





HISTORY OF MULTIMEDIA

- **1987**: RCA→DVI (Digital Video Interface)
- **1989**: Intel/IBM→ActionMedia 750
- **1991**: Intel/IBM→ActionMedia 750 II
- **1992**: Microsoft→Windows 3.1



95/98/Me/2000/XP/Vista/Win7

- **1996**: Intel→Pentium Pro



MX(Multimedia Extension)

PC→MPC(Multimedia Era)





MULTIMEDIA COMPUTER

- ❑ Multimedia Computer (MPC): a computer that is optimized for high multimedia performance, enabling rich multimedia experience.
- ❑ $MPC = PC + CD-ROM + SOUND BOARD + GRAPHICS CARD + MULTIMEDIA OS$





MULTIMEDIA SYSTEM ARCHITECTURE





MULTIMEDIA SYSTEM COMPONENTS

- Hardware
 - Computer



- Multimedia Cards

Graphics Card



Audio Card



Video Card





MULTIMEDIA SYSTEM COMPONENTS

Peripheral Equipments



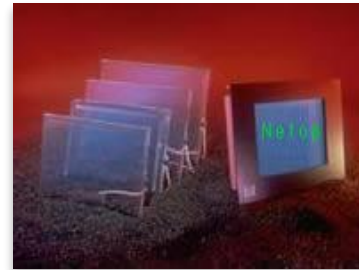
MIC + Headset



**CD/DVD
ROM**



Scanner



Touch Screen



LCD Monitor



**Digital
Camera**



Digital Video



Web Camera



Projector





MULTIMEDIA SYSTEM COMPONENTS

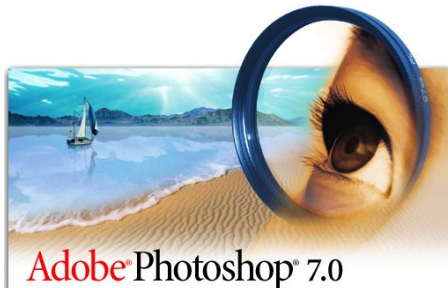
Software

System Software

- Multimedia Drivers
- Multimedia Operating System

Support Software (Develop Tools)

- Text : Cool3D, Microsoft Word, etc.
- Audio: CoolEdit, Audition, Cakewalk, etc.
- Graphics/Image: CorelDRAW, Photoshop, PhotoImpact, etc.
- Animation: Flash, 3d Max, Maya, etc.
- Video: Premiere, Media Studio, etc.





MULTIMEDIA SYSTEM COMPONENTS

- Multimedia Authoring Tools
 - PowerPoint
 - Authorware
 - Dreamweaver
- Multimedia Programming Languages
 - VB, VC++, C#, Delphi, etc.
- Multimedia Applications





APPLICATIONS OF MULTIMEDIA

- Advertisements
- Art
- Education
- Entertainment
- Engineering
- Medicine,
- Mathematics
- Business,
- Scientific research
- Spatial temporal applications





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