

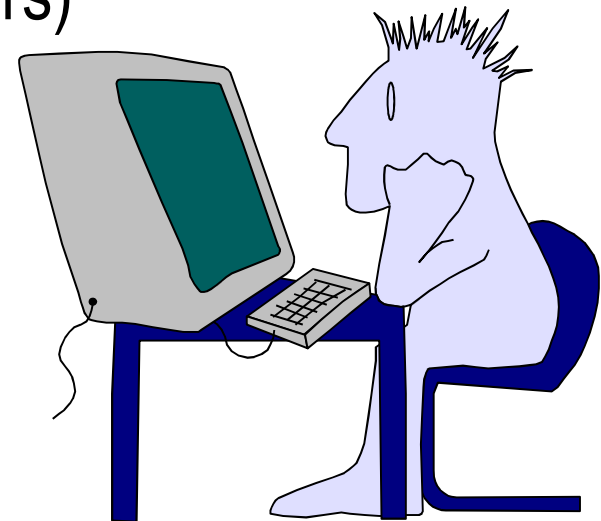


# Hardware Components of a Multimedia System



# Computer System Components

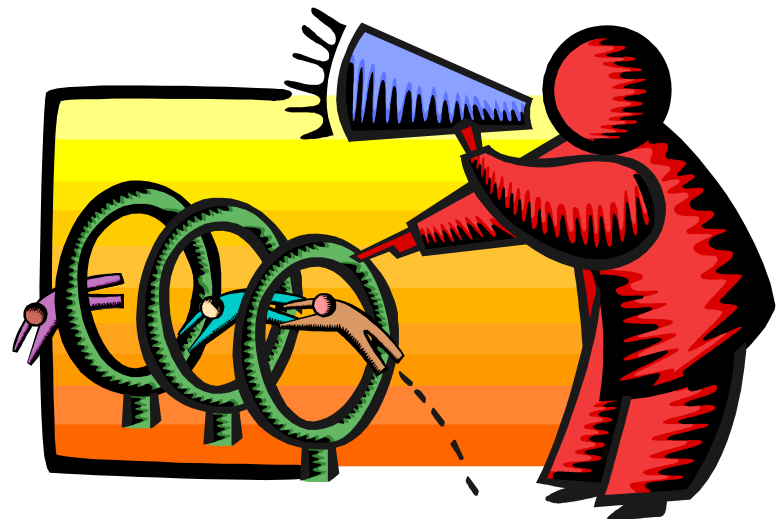
- **Processor** – data processing and transfer
- **Memory** – RAM (128 or 256 MB) and hard-drive
- **Monitor** – resolution (# of pixels)
- **Video card** – color quality (# of colors)
  - 8 bits = 256 colors
  - 16 bits = 65,536 colors
  - 24 bits = 16.7 million



# Computer System Components

## • **Audio card** – sound quality

- 16 bit standard
- **Sampling** – changing analog signal to digital signal



# Computer System Components

## • CD-ROM drive

- 650 MB
- Reads data and transfers it to computer
- Transfer rate: 1x = 150 kbps to 12x = 1800 kbps
- Seek time: 200 milliseconds (+/-)

## • Hard drive

- 20+ gigabytes
- Transfer rate: 100 MB/s
- Seek time: 8.9 ms





# Development Versus Playback



## Development systems

- Best product quality using fastest and most powerful computer
- Will also lower production cost by reducing production time

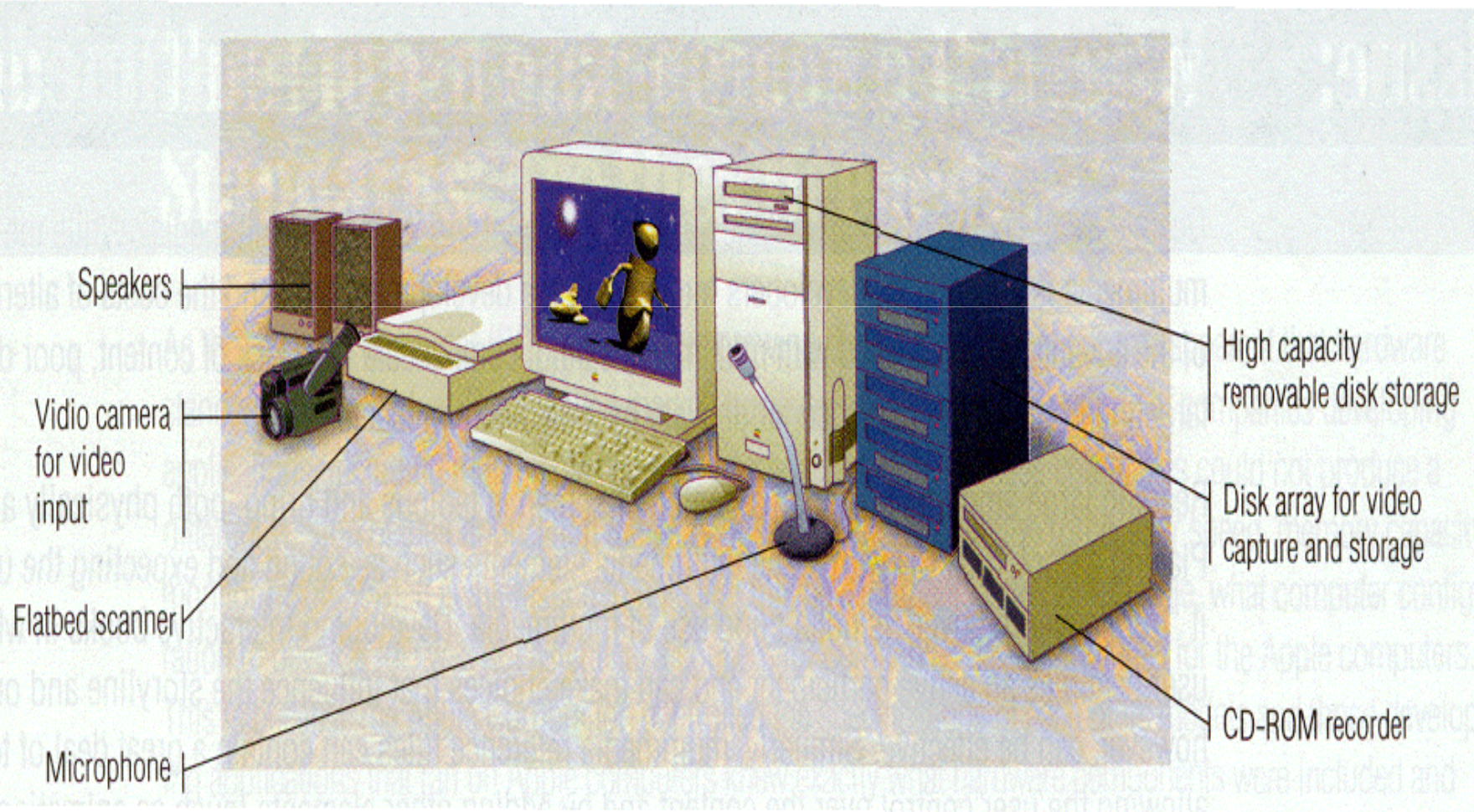


## Playback systems

- Computers in use. Mostly not at the high end of available technology



# ● Typical Multimedia Development System



Scanned image: from Multimedia Concepts – James Shuman



# Development System

✦ **Processor** – min. Pentium 3

✦ **Memory** – 256 MB RAM and up

✦ **Video capture card** – capture, digitize & store video

✦ **Monitor**

- Min 20" for detailed editing
- 2 monitors: to work and display as title is created

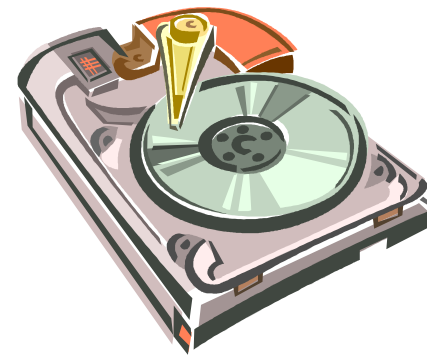
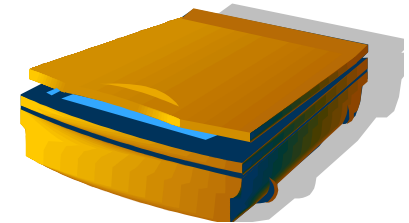
# Development System

## ✦ Peripherals

– **Scanner** – flatbed, handheld, or negatives

– **External storage:**

- Syquest (135MB)
- Iomega zip (100 or 250 MB)
- Jaz drive (250 MB)
- External hard drive (60+ GB)

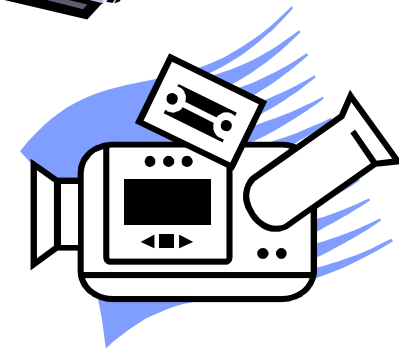
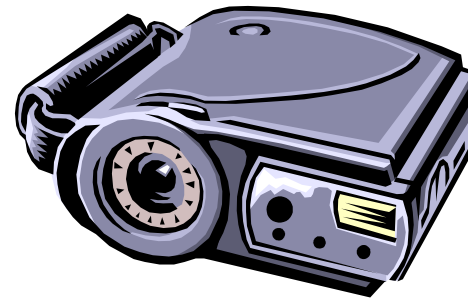




# Development System

## ✦ Peripherals

- CD-RW
- Digital still camera
- Microphone
- Other components:
  - Digital video camera
  - DVD drive
  - USB or fire-wire connections





# Multimedia PC History

✦ **MPC** - specifications for hardware and software

✦ **MPC logo:**

- Software ran on MPC machines
- Developing software was less risky:
  - Customer reassured what software would work for them
  - Hardware was built to MPC specifications
  - Developer knew MPC software would run on any MPC machine

# MPC Comparison

<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
2 Mb of RAM	4 Mb of RAM	8 Mb of RAM
386 / 16 Mhz	486 / 25 Mhz	Pentium / 75 Mhz
30 MB hard drive	60 MB hard drive	540 MB hard drive
1 X CD-ROM	2 X CD-ROM	4 X CD-ROM
8 bit digital sound	16 bit digital sound	8 bit CD-quality sound
16 color video display	65,536 color video display	65,536 color video display

# The End



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