

Introduction to Information Systems

Essentials for the Internetworked E-Business Enterprise

Eleventh Edition

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3

Chapter

Computer

Hardware

Chapter Objectives

-  **Identify the major types, trends, and uses of microcomputer, midrange, and mainframe computer systems.**
-  **Outline the major technologies and uses of computer peripherals for input, output, and storage.**
-  **Identify and give examples of the components and functions of a computer system.**
-  **Identify the computer systems and peripherals you would acquire or recommend for a business of your choice, and explain the reasons for your selections.**

Computer System Categories

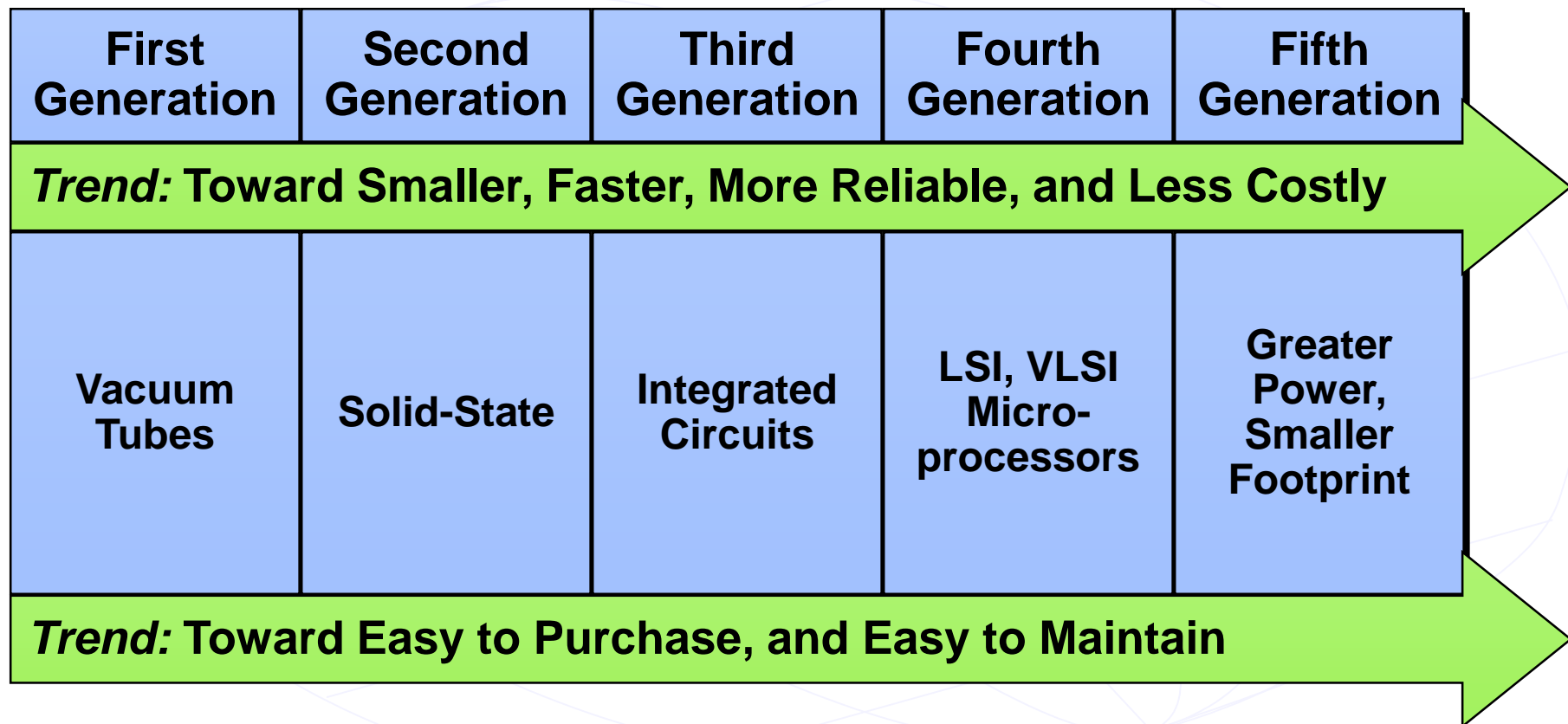


**Mainframe
Computers**

**Midrange
Computers**

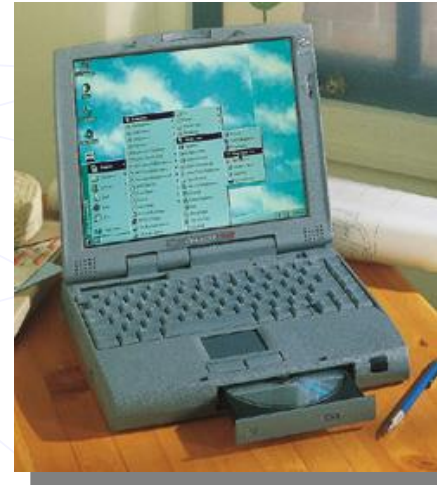
Microcomputers

Trends in Computer System Capabilities



Microcomputer Systems

- Handheld Computers
 - PDA, Information Appliances
- Notebook Computers
- Desktop Computers
- Workstations
- Network Server
 - Powerful microcomputer used in small LANs



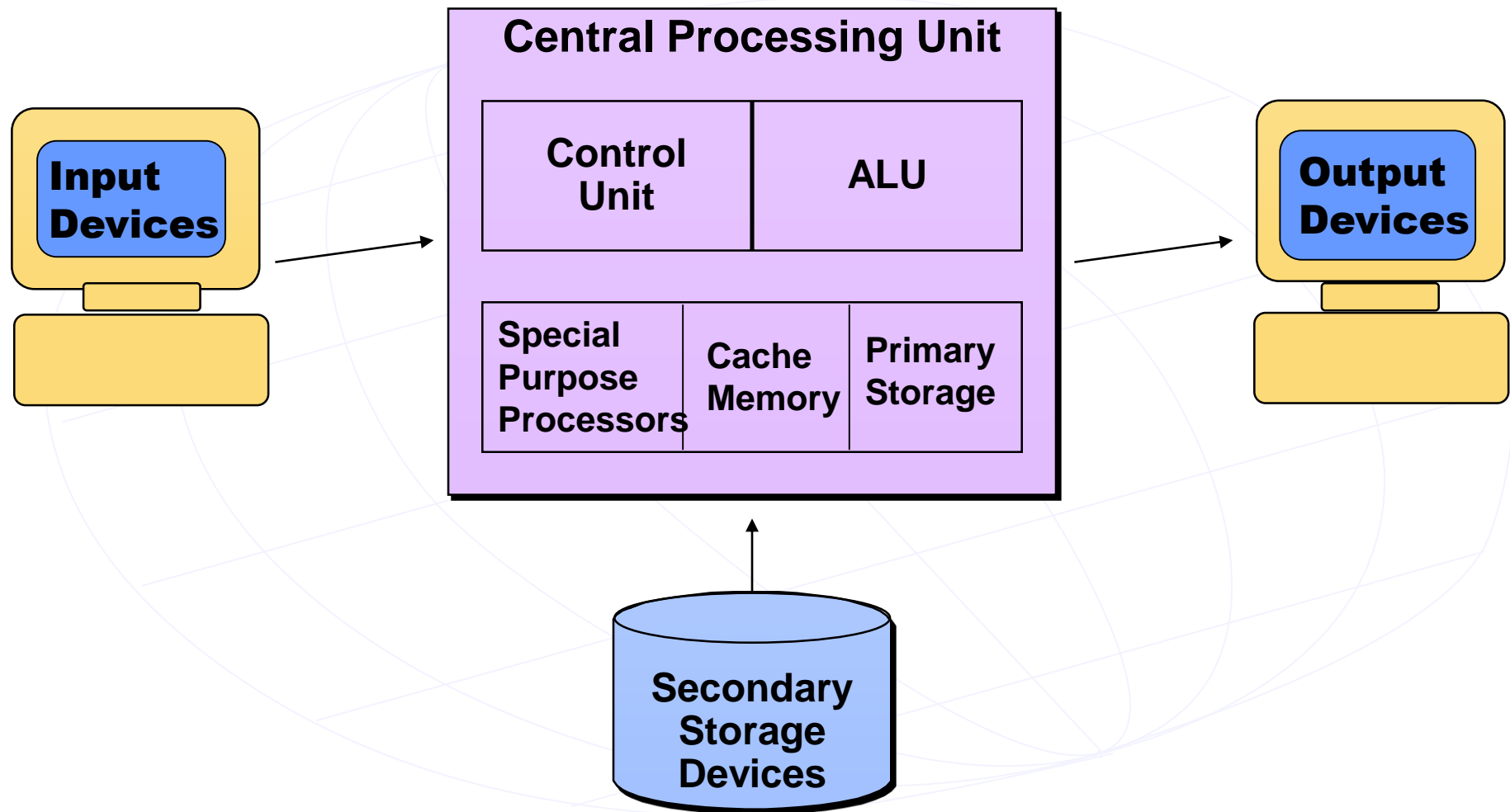
Network Computers and Terminals

- Network Computer
(Thin Client)
- NetPC
- Network Terminal

Benefits

- Lower purchase cost
- Easier maintenance
- Easier software distribution and licensing
- Computer platform standardization
- Reduced end user support requirements
- Improved manageability

Computer System Components



Input Technology Trends

First Generation	Second Generation	Third Generation	Fourth Generation	Fifth Generation
Punched Cards Paper Tape	Punched Cards	Key to Tape/ Disk	Keyboard Data Entry Pointing Devices Optical Scanning	Voice Recognition Touch Devices Handwriting Recognition

Trend: Towards Direct Input Devices that Are More Natural and Easy to Use

Common Input Devices

- Keyboard
- Pointing Devices
- Pen Based Computing
- Speech Recognition
- Optical Scanning
- Magnetic Ink Character Recognition
- Smart Cards
- Digital Cameras



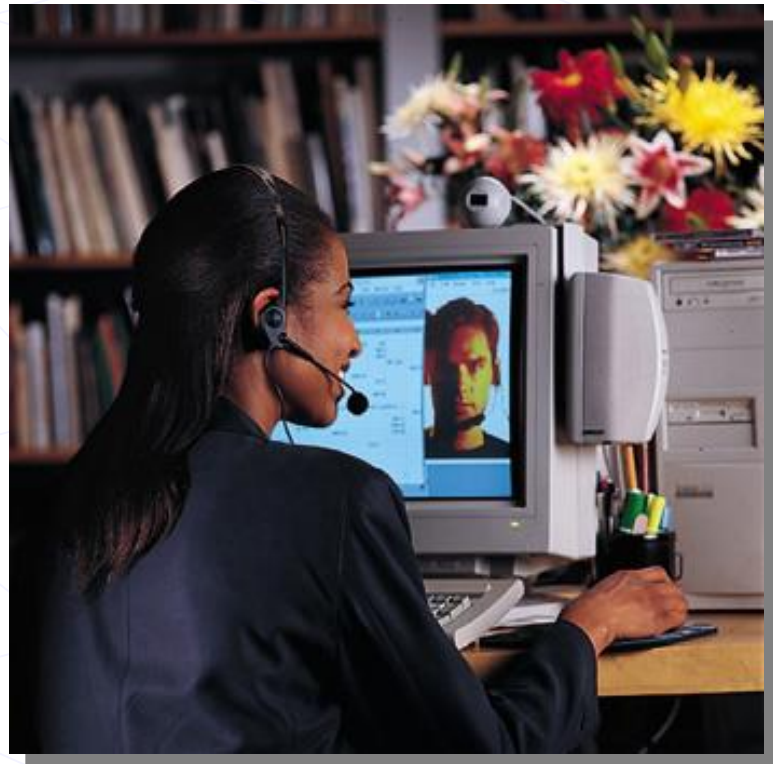
Output Technology Trends

First Generation	Second Generation	Third Generation	Fourth Generation	Fifth Generation
Punched Cards Printed Reports and Documents	Punched Cards Printed Reports and Documents	Printed Reports and Documents Video Displays	Video Displays Audio Responses Printed Reports and Documents	Video Displays Voice Responses Hyperlinked Multimedia Documents

Trend: Towards Output Methods that Communicate Naturally, Quickly, and Clearly

Common Output Devices

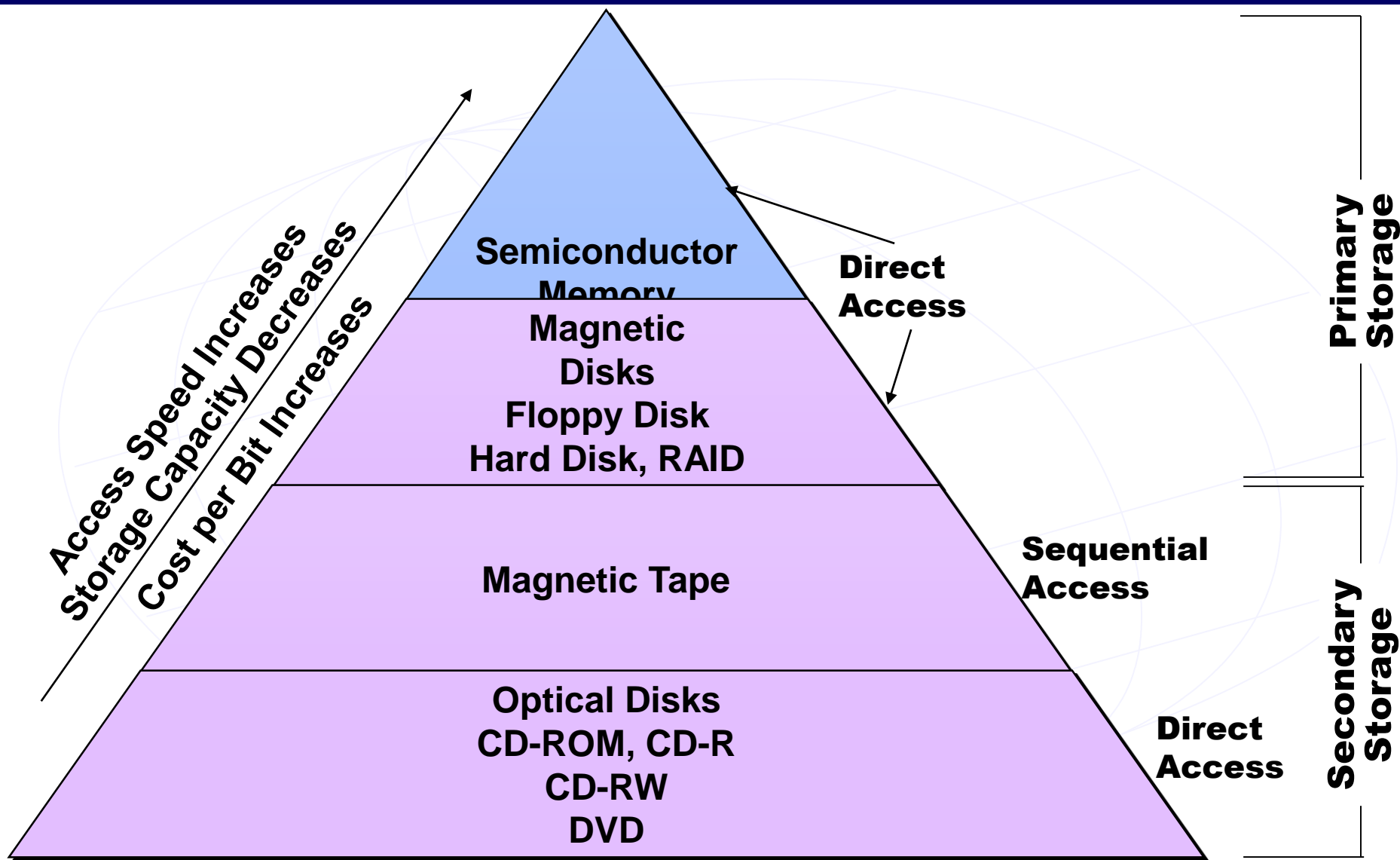
- Video Output
 - CRT
 - LCD
- Printed Output
 - Inkjet
 - Laser



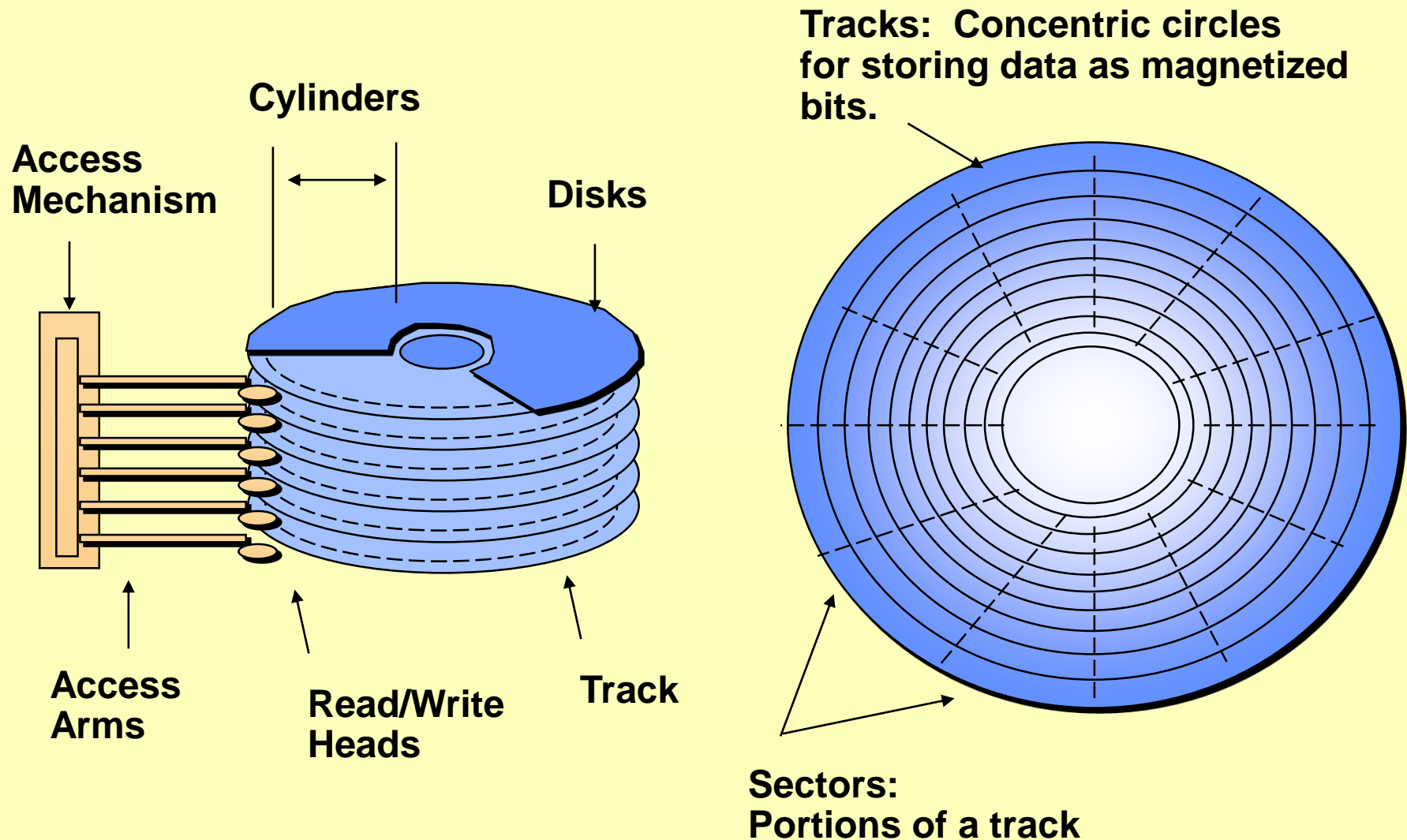
Storage Trends

Primary Storage				
First Generation	Second Generation	Third Generation	Fourth Generation	Fifth Generation
Magnetic Drum	Magnetic Core	Magnetic Core	LSI Semiconductor Memory Chips	VLSI Semiconductor Memory Chips
Trend: Towards Large Capacities Using Smaller Microelectronic Circuits				
Secondary Storage				
Magnetic Tape Magnetic Drum	Magnetic Tape Magnetic Disk	Magnetic Disk Magnetic Tape	Magnetic Disk Optical Disk Magnetic Tape	Optical Disk Magnetic Disk
Trend: Towards Massive Capacities Using Magnetic and Optical Media				

Primary & Secondary Storage Media



Characteristics of Magnetic Disks



Chapter Summary

- A computer system is a system of information processing components that perform input, processing, output, storage and control functions.
- The hardware components in a computer include input and output devices, a central processing unit (CPU), and primary and secondary storage.
- There are three major categories of computers: microcomputers, midrange computers and mainframe computers

Chapter Summary (cont)

- Microcomputers are used as personal computers, but are also interconnected in a variety of telecommunications networks.
- Midrange computers are increasingly being used as powerful network servers and for many multi-user business data processing and scientific applications.
- Mainframe computers are larger and more powerful and are used to handle information processing needs for large organizations .

Chapter Summary (cont)

- Peripheral devices used for input and output come in a variety shape and sizes. Future trends are towards devices that communicate naturally and are quick and easier to use.