

Computer Technology

Review

Multi-User Computers



Supercomputers...

the most powerful computers
made

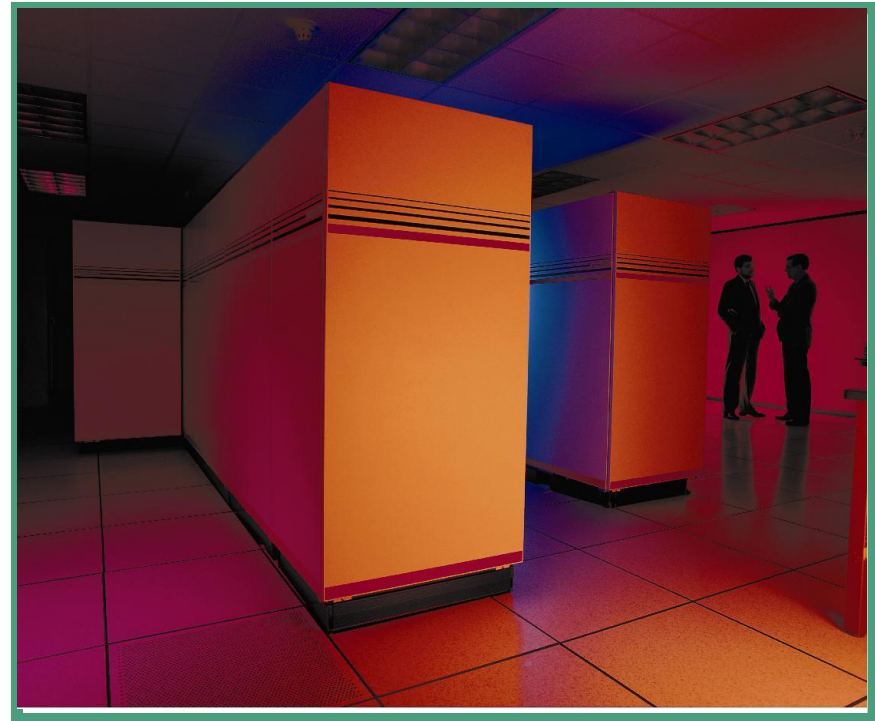
Multi-User Computers

Mainframes...

allow several users access to the same computer. About the size of a refrigerator and cost \$1 million.

Minicomputers...

smaller and less expensive than mainframes. They have largely been replaced by **Servers and workstations.**



Single-User Computers

Workstations...

the power of a minicomputer but less expensive.



Single-User Computers



Personal Computers (PC)...
dedicated to serving
one user

Portable Computers

Laptop

- computers with flat screens, that are battery-operated and lightweight



Palmtop

- computers that are pocket-sized; power is not lost over portability



Special-Purpose Computers

Special-Purpose...

often attached to sensors to measure and/or control the physical environment

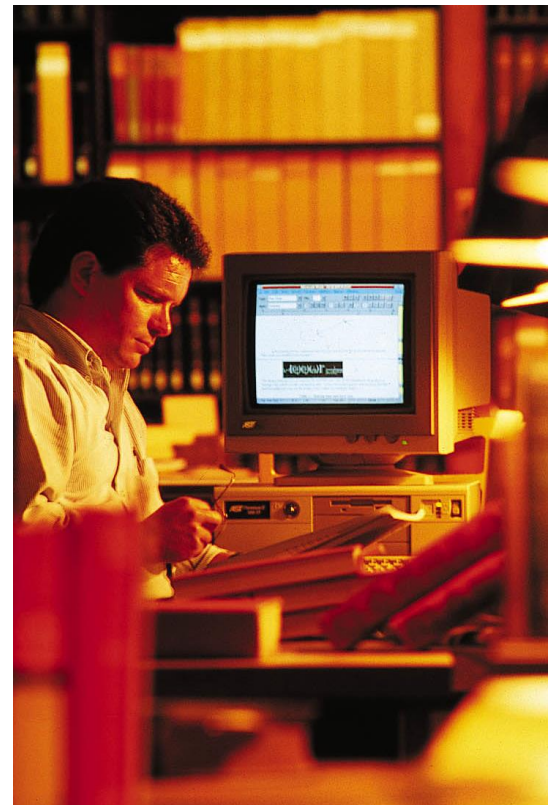
Embedded...

used to enhance consumer goods



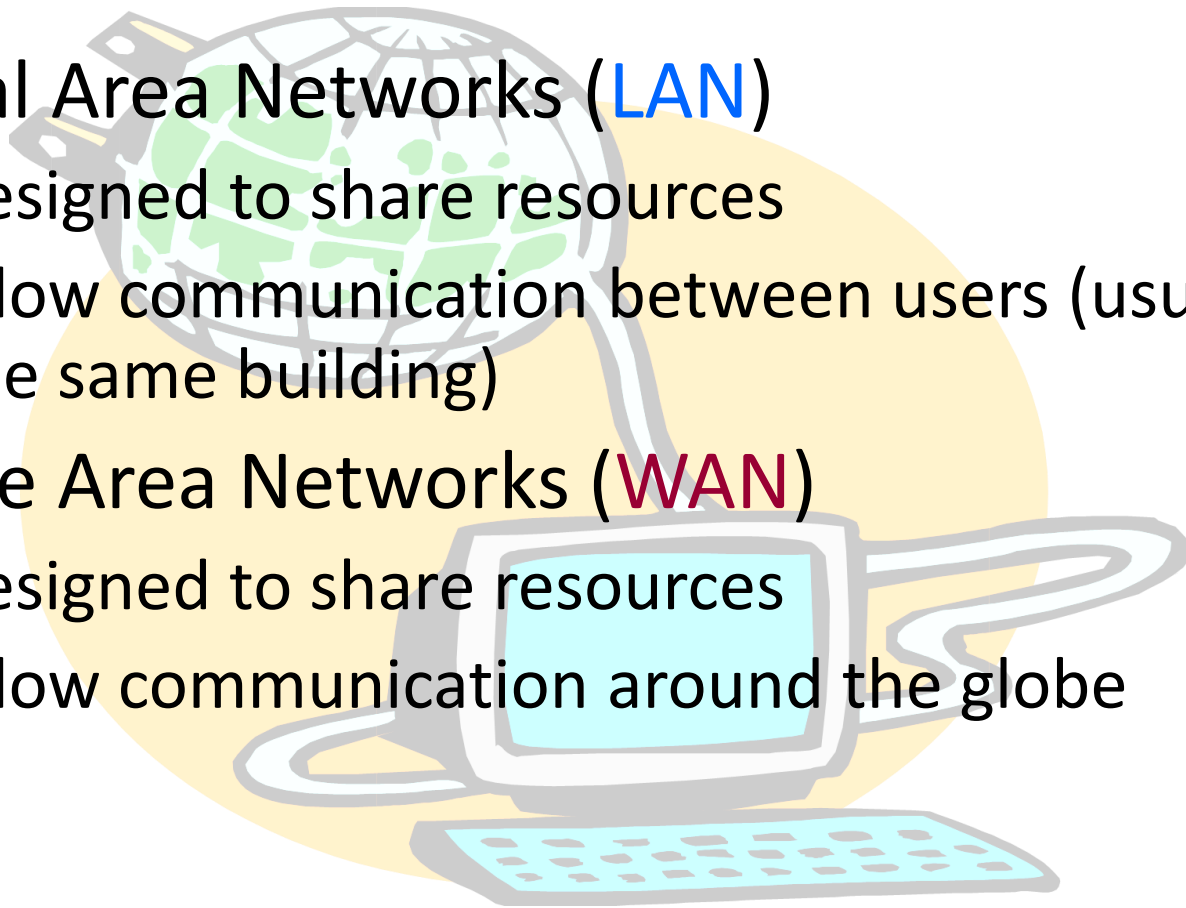
Basic Network Anatomy

- A computer network is any computer system that links two or more computers
- There are three essential components in a network:
 - Hardware
 - Software
 - People



Computer Connections

- Local Area Networks (**LAN**)
 - designed to share resources
 - allow communication between users (usually in the same building)
- Wide Area Networks (**WAN**)
 - designed to share resources
 - allow communication around the globe



LAN (Local Area Network)

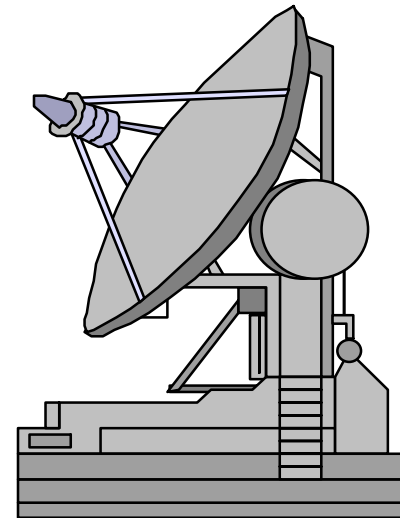
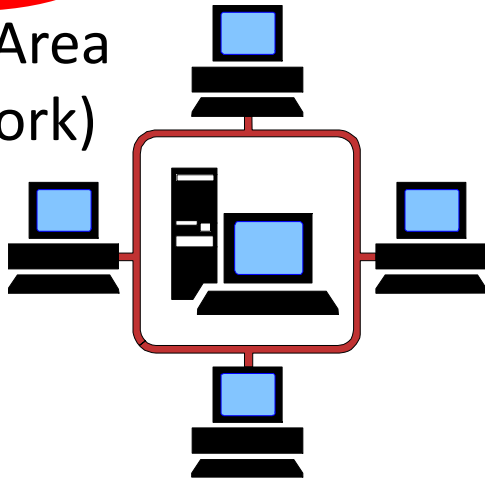
A **LAN** is a network in which the computers are physically close to each other

- They typically share peripherals (printers and servers)
- Each computer and shared peripheral is a *node* on the **LAN**

Networks Near and Far

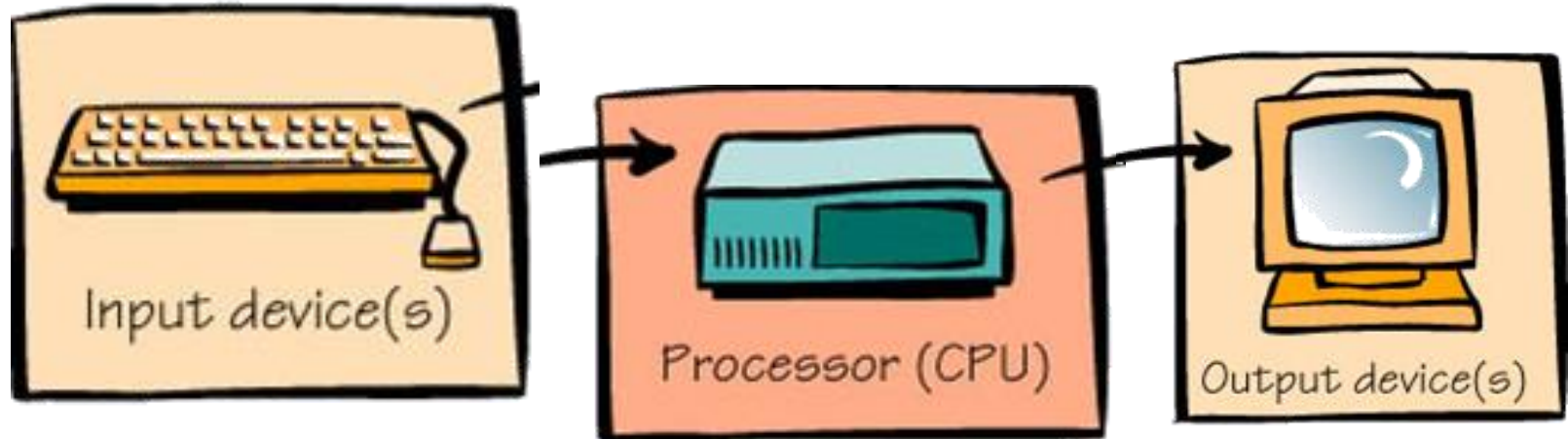
There are two general types of computer networks:

LAN
(Local Area Network)



WAN
(Wide Area Network)

What Computers Do

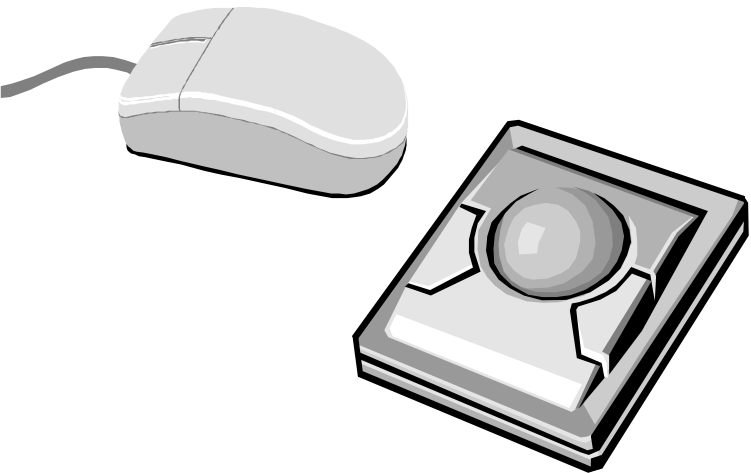


Receive input

Process
Information

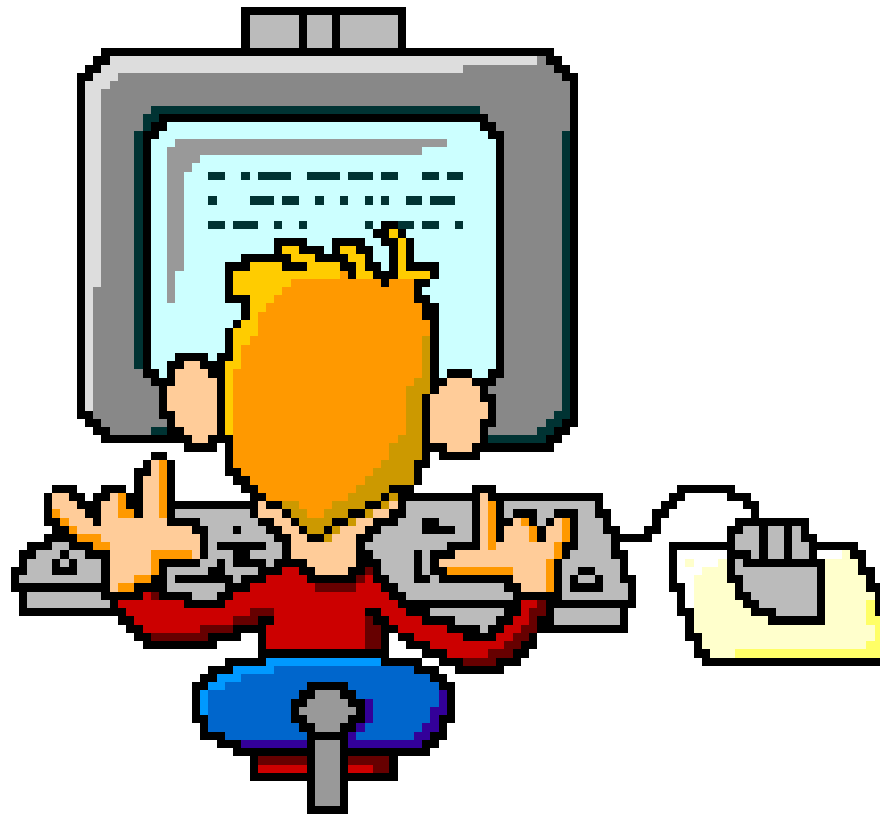
Produce Output

Input Devices



- Computers accept information from the outside world
- The keyboard is the most common input device
- Pointing devices like the mouse also receive input

Input: From Person to Processor



The Omnipresent Keyboard

Keyboards are used to input and manipulate information with keys such as **Letters and Numbers...**



The Omnipresent Keyboard

...**Function Keys** that send special commands...

...and **Cursor Keys** that allow you to move around the screen



Pointing Devices



Touch pad



Track point



Trackball

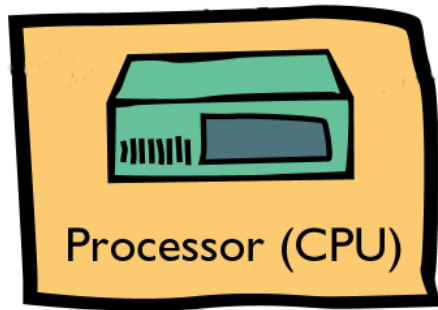


Joystick



Touch Screen monitor

Process Information



- The processor, or central processing unit (CPU), processes information and performs all the necessary arithmetic calculations.
- The CPU is like the "brain" of the computer.

The Computer's Memory

RAM (random access memory):

- is the most common type of primary storage, or computer memory
- is used to store program instructions and data temporarily
- unique addresses and can be stored in any location
- can quickly retrieve information
- will not remain if power goes off (volatile)

The Computer's Memory

- **ROM** (read-only memory):
 - information is stored permanently on a chip.
 - contains startup instructions and other permanent data.

