

Information systems - inputs, storage, processing and outputs

Difference between information and data

Input peripherals

Output peripherals

Storage devices and media

Basic networking

Key points

Inputs - the raw data that is fed into an information system. Number of ways of doing this via input peripherals.

Storage - data is stored in the information system so it can be used when needed. Can be stored temporarily (while a program is running) or more long-term via storage devices.

Processing - term used to describe the way information systems convert raw data into useful information.

Outputs - the visible or audible result of data processing - information that can be used. Outputs are made via output peripherals

Feedback - term used when outputs are used for further inputs.

Think - what is the difference between information and data?

Input peripherals - peripherals are pieces of hardware connected to a computer. Input peripherals are devices that input data into the system.

Examples of input peripherals are:

[*Manual input*] Keyboards, concept keyboard, touch screens, mouse, keypad, microphone, joystick.

[*Automated input*] Bar code reader, OMR (Optical Mark Recognition), OCR (Optical Character Recognition), Scanners, Infrared detectors, Pressure sensors, Light sensors, Card readers, MICR (Magnetic Ink Character Recognition]

Output peripherals - devices that provide information in an accessible form after data processing.

Examples of output peripherals are:

Speakers, Printers (Inkjet, Dot matrix, Thermal, Laser), VDU / Monitor, Plotters, Motors

Also

Some devices are both input and output:

EPOS terminals - Electronic Point of Sale

EFTPOS terminals - Electronic Funds Transfer at the Point of Sale



Storage Media

Storage devices and Media

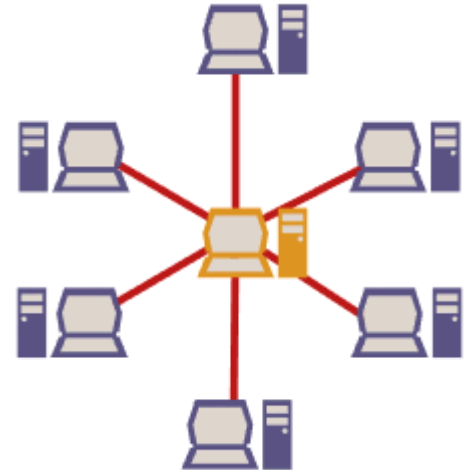
Backing storage is used to keep data or programs. Backing storage devices are the hardware peripherals used to store data. These devices write data onto backing storage media and read it back.

Hard Disks - usually built into the computer itself, usually storing the operating system, applications and the user's data.

Floppy Disks - removable storage. Relatively small amount of data generally 1.44 megabytes and slow access times. Can be written to many times.

CD-ROMS - Compact Disk-Read-Only Memory - read by laser beams in the CD Drive. Hold over 600 megabytes of data and much quicker to access than a floppy disk. Normally write once, read many, although some CD-Roms are re-writable.

Also DVDs (Digital Versatile Disks) and ZIP drives (high-capacity removable disks similar to floppy disks)



Basic networking

LANs - Local Area Networks - computers on one site.

WANs - Wide Area Networks - cover different sites.

Workstation - PC on a network.

Server - computer where shared data files and software are stored. Some networks have many servers. Examples include file server, web server and e-mail server.

Advantages of networks - sharing of information, easy communication, expensive peripherals (e.g. colour laser printers) can be shared, central installation of software makes upgrades easier + allow tight control over data.

Disadvantages of networks - can be expensive to set up, vulnerable to security problems, vulnerable to server crashes, complex networks require a network manager to keep it running.

Passwords - usernames and passwords allow users to log onto their files. Yet users must change their passwords frequently to prevent access by someone who has discovered the password and to reduce the chances of someone discovering the password.

Data security on networks - by limited access rights of the network to certain users, restricting the physical access to the network, using virus scanners, making sure important files are read-only, making regular back-ups and using a firewall to prevent intruders from the Internet.