

Notes on Peripherals

There are four main characteristics of hardware devices to remember.

<i>Accuracy</i>	How close the data input or output is to the original. Accuracy is concerned with the resolution, bit depth and sampling of a peripheral device.
<i>Capacity</i>	The amount of data that can be stored on a device- for example, the amount of data that can be stored on a hard disc.
<i>Speed</i>	How fast data be transferred between the computer and a peripheral device.
<i>Cost</i>	Self-evident

I will label a few main input and output devices along with some backing storage devices.

Input Devices

Keyboard

Accuracy= the key that the user types must always be the key that appears on the display, o that a keyboard must be 100per cent accurate.

Capacity= Keyboards do not store large amounts of data. However, a small number of characters will be stored in the buffer in the interface until the processor is ready to input them into main memory.

Cost= Keyboards cost between £10 and £30 pounds.

(Depending on the label attach to them but it really doses not make a large difference)

Speed = the speed of data transfer of a keyboard is clearly dependent on how fat the user can type. A good typist can type around 75 words per minute.

Video-Capture cards

Accuracy = This is determined by the resolution, the bit depth and the number of frames captured per second.

Capacity = the video data is stored on the hard disc of the computer itself.

Speed = Speed is measured by the number of frames that capture by the card per second. Typically, a video-capture card will support up to 30 fps frames per second.

Cost = Pries range from around £50 pounds to a few hundred pounds.

(The most powerful graphics card in the world The GTX 690 can range from £550 to £700).

Scanner

Accuracy = this is determined by bit depth and resolution (dpi). Typically a scanner will have a resolution of 2400 dpi and 24bit depth.

Capacity = the capacity of a scanner is not of concern, as the data Is transferred directly to the main memory in the computer when an image is scanned.

Speed = the speed will depend on how fast the computer will transfer data to the scanner then back to the computer. The type of interface used will be a factor also be it USB, SCSI or Parallel etc it will have an effect on the transfer speed.

Cost = Scanners can cost any where from 40 or 30 pounds to 1000 pounds or more as the more expensive ones give a higher resolution

Digital Camera

Accuracy = this is influenced by the number of mega pixels and the bit depth. Typically, a modern digital camera would support around 10 mega pixels.

Capacity = A digital camera has memory card to store the images. The capacity of the cards can range from 128 Mb to several Gb.

Speed = the speed at which images are downloaded to the computer is dependent on the computer itself and on the type of interface being used.

Cost = Cameras can cost any where from £40 pounds to £1000 of pounds depending on its specifications.

Output Devices:

If you do not know what Monochrome means it is Black and White, also a nice tip would be if you ever see a scene in a movie that is black and white call it Monochromatic, it will one make you look smart (possibly) or two be used as a good technique in English.

Inkjet Printers =

Accuracy = this is a measure of the resolution and bit depth of the printer. Typically, an inkjet printer would have a resolution of 2400 dpi and a true colour.

Capacity = A buffer in the printers interface stores data until the printer is ready to accept it.

Speed = the speed of a printer is measured in the pages per minute (ppm). The speed of inkjet printers can be as high as 15 ppm for monochrome printing but slower in colour.

Cost = the price of an inkjet printer can start at 30 pounds and can go up to a few hundred depending on the quality of the printer.

Laser printers

Accuracy = this is dependant on the resolution and bit depth of the printer. Most of the time a laser printer like an inkjet printer, will have a resolution of 2400 dpi however the laser printer operates at a much higher speed.

Capacity = the laser printer can store a large amount of data until the printer is ready to accept it.

Speed = Laser printers can print 32 ppm in monochrome. Speeds for laser printers are faster than for inkjets.

Cost = Prices start at a few hundred pounds but rise to many thousands for top-end colour laser printers.

Backing Storage Devices

Floppy Disk

Capacity = A floppy disc has a capacity of 1.44 megabytes, has slower data-transfer rate than a hard disk, is a direct-access device and costs about 10p (or less)

Magnetic tape

Capacity = Magnetic tapes have capacities which can be as large as several gigabytes. (WOW)

Speed = the speed of data transfer can go up to as high as 4.8 Mb per second.

Access = Magnetic tape has sequential access to data.

Solid-State Storage Devices (SSSD)

Capacity = Memory sticks and memory cards typically have a capacity in the range of 128 Mb to 16 GB.

Speed = Memory cards and memory sticks can operate read and write speeds of hundreds of megabits per second.

Cost = the cost can vary from a few pounds to a few hundred pounds.

DVD (Digital Versatile Disc)

Capacity = the capacity of a DVD goes up to 32 GBs

Speeds= at present, 16x DVD Write, 8x rewrite and 16x Read are typical speeds.

Cost = DVDs did cost a lot more than CDs but since then the price for DVDs is quiet low (depending on the content on the disc)

There are more types of Input, output and backing storage devices but I have not listed them all hear. I hope this document helps everyone with there revision on Peripherals.

Source of information = Bright Red Publishing's Higher COMPUTING booklets.