Input devices

Keyboard

The keyboard is usually a long rectangle shaped piece of plastic with rows keys. The keyboard is used to type letters and numbers into a word processor. They are also used for gaming; some keyboards have with special gaming features. A keyboard used to be used to give commands to operate the computer before there the invention of mice. A keyboard can be connected to the computer by USB port or wirelessly. Some keyboards are designed for use by people who are visually impaired.

The Waterside library has a keyboard on every computer; there are two types of keyboard in the library, the average sized plain coloured keyboards (above left) used mostly people without eyesight problems and then the larger sized keyboards (above right) for visually impaired members with a contrasting coloured keyboard. The contrasting coloured keyboard makes it easier for the visually impaired to identify buttons on the keyboard. The good thing about the larger sized keyboard is that the keys help the user to recognise when they have been pressed with a nice distinct click. The libraries facilities are available to the whole community including the visually impaired. It would be unfair for visually impaired people if they were not able to use the same facilities just because the equipment didn't suit their needs. The Library has made a big effort to make sure all sections of the community are able to use the facilities available without feeling excluded and discriminated against. If the library didn't have this specialised equipment the visually impaired members would find that they make lots of mistakes when typing and this would put them off using the library again.
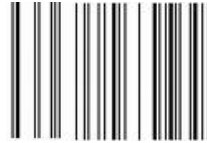
Lawrence Breslin

Mouse

There are two types of mouse, they are optical or roller ball. Mice can be wired or wireless. A mouse is an object that the user holds under one of the user's hands. Most mice have two buttons the left and the right. Sometimes the mouse may have a wheel between the left and right buttons. The wheel is used to scroll up and down. The mouse is used to control the motion of the cursor, which is displayed on the monitor. It can be used to open and close windows by clicking on icons and carry out tasks such as printing.

All computers in the library have a normal mouse connected to them however there are two mice connected to the computers with a large keyboard, the special mouse (above right) and the Dell wired mouse (above left). The library uses wired mice because wireless mice are easily stolen as they are not attached to the computer, people can not move a wired mouse away from the computer it is wired to. The special mouse is used by people who find it difficult to use a normal mouse, for example a person who had his fingers taken off in an accident and only had a palm left would not be able to hold a mouse or click, however they would be able to use the other mouse as they could their palm to roll the ball around and press the buttons. This equipment can also be used by people with learning difficulties, poor visibi lity and limited hand movement. All these types of people could not have used a computer independently without assistance from members of staff, by having this special mouse means members of staff spend less time assisting one library members and are more able to help other people and organise stock. This arrangement ensures that people with disabilities are not discriminated against and are made to feel welcome in the library.

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Barcode scanner

A barcode scanner is a laser light that scans barcodes. They save time and money. A barcode scanner can be connected to the computer through USB. They are used in shops to scan items that are purchased, issued or returned. In the library staff use a barcode scanner located at the issue desk to in libraries to scan the barcodes on stock and members cards. Before libraries used barcode scanners had to type the code in by keyboard, this took time and often mistakes were made when typing in codes, resulting in members and stock details being inaccurate.

The library needs its information to be accurate as people don't want to find that stock have had taken out under there member number by mistake and that they have to pay for it because it wasn't returned. A barcode scanner is quicker and more accurate then entering in codes by a keyboard. This means that the staff can give their members a good quality service which will encourage them to use the library.

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Flatbed scanner

A scanner scans and converts documents in to a digital image. That can be stored on the computer. It can be use by members of the library and staff. The advantage is that users can scan images/documents so as they can be sent by email or inserted in to documents.

The flat bed scanners are available to staff and members in the library. They are not used very often. This is because digital cameras and phone cameras are very common and people can easily get pictures into digital format. However they are available if anyone wants to scan an A4 document. They are free of charge to use but their use is supervised by a member of the library staff.

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Storage devices

Hard drive

A hard drive is a storage device that records data. There are two types of hard drives External Hard Drives and Internal Hard Drives. The external hard disk drive is similar to internal hard disk drives; they include a normal hard disk drive which is mounted in a disk enclosure. Key benefits to using external disk drives are adding additional storage space or adding an easily removable backup source. It could also be useful for preventing the heat from the drive increasing the heat inside a computer case. The internal hard disk gives computers the ability to remember things when the power goes out. Key benefits to using internal disk drives are that it stores and retrieves data much faster than a floppy disk and CD-ROM and has a large storage capacity. It does not need connected every time the user needs to use it.

In the library members are not allowed to save on to the hard drive, this is because members could be saving viruses on to the computers or filling the computers hard drive up unnecessarily. If members were allowed to save on to the hard drive all the files saved on that computer station would be available to opened, read, viewed and edit the file unless it has been saved as a password protected file. This means that any user could look at another users documents, so long as they are saved on the hard drive of the computer and there is no password.

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Floppy disk

A floppy disk is a data storage device. Floppy disk is a plastic square shaped object with a disk of thin magnetic storage inside it. Floppy disks are read and written by a floppy disk drive.

The library computers no longer have floppy disk drives on their computer. This means that members can not use floppy disks on the computers in the library. If the library computers did have a floppy disk drive and people could use floppy disks most people would still prefer to use other storage devices as they are more robust and hold a lot more data.

Lawrence Breslin

Optical disk

There are three types of optical disk they are DVD, CD and blu ray. DVDs are of the same as CDs, but they store more than six times as much data. CDs are used to store music these can be played in CD or DVD player. You can't play blu ray DVD on a normal DVD player but you can play DVDs on a Blue-ray player. Blu ray players are backward compatible; this means that blu ray player can also play normal DVDs.

In the library members can not use optical drives because they are blocked instead they must use an external optical drive. The library has two external optical drives these can be borrowed from the issue desk. Members plug them in to the USB port and can then use them to open files saved on a compact disk or save on to a disk, listen to CDs and play DVDs. If a member needed to save his or her work but did not have another compatible storage device like a memory pen or have forgotten to bring it with them they can borrow the external optical drive and buy a compact disk from the issue desk and save on to that. This means that members are still able to save there documents even if they don't own another storage device or haven't brought it with them. Members can request the external optical drive and use it to play music, CD's or DVD's.

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Memory pens

Flash memory data storage device are also known Flash Drives, Memory Sticks, Pen Drives, and Memory Pens. Memory pens are more effective at transferring data than floppy disks or burning CD's. Storage capacities can range. The USB is usually protected by a removable cap. There is no external power required.
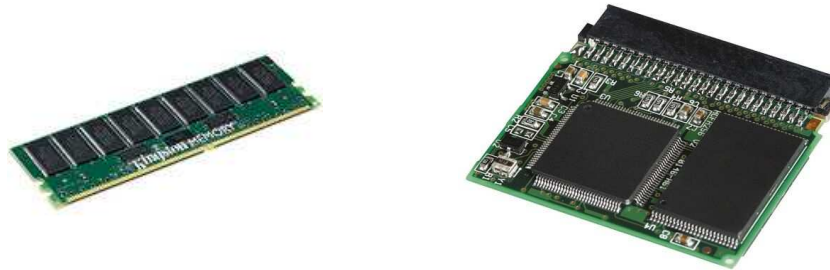
Memory pens easily taken to any library and plugged in to the USB port, the documents can be opened at any computer they are plugged on to. Members of the library can use memory pens to save data on as they are unable to save on to the libraries computers hard drives. The library computers have two USB ports at the front of the computers to make it easy for the members to connect their memory pens.

Lawrence Breslin

Random access memory

RAM is the most common computer memory, it is used by programs to perform tasks while the computer is on. The data which is in the RAM will be lost when the computer power is switched off so it is important to save before switching off. Random access memory can improve performance, the more RAM in a computer the faster it will perform. There are several different types of RAM available for computers; these vary in cost and speed.

The amount of RAM on the computers in the library is 512Mbyte memory . The library didn't need to buy extra RAM for their computers as the amount all ready on them was sufficient for general use and more than adequate for use in libraries where people use the computers for basic tasks such as word processing, surfing the internet and checking emails. The memory size is also adequate for the staff to run galaxy and any other software they need. By taking the standard memory the library were able to save some money which they were able to use in other areas.

Lawrence Breslin

Magnetic tape data storage

Magnetic tape is most commonly packaged in cartridges and cassettes. The device that performs actual writing or reading of data is a tape drive. When storing large amounts of data, tape can is less expensive than other data storage. Tape storage is used with large computer systems, mainly for backups and archives. However magnetic tape is much more likely to get damaged.

In the library every evening when the library is closed a member of staff will put a back up tape in to the server. Staff will back up the server while the library is closed at night. The library has six tapes, one for each day of the week that the library is open, Monday to Saturday. They back up the server so that they have a copy of the data they collected that day, in case they were to have a problem with the server all the would have to do is install the Magnetic tape on the server again. If the library did not back up copies every night and they were to have a problem with the computers that meant that all the data was lost, they would have to restart from the last place saved and this would mean that they lose every thing that was taken out or returned after the last back up tape was copied. If they have a back up copy from the evening before the only information lost would be from after the copy was made.

Lawrence Breslin

Output devices

Monitor

Monitor is just another name for the screen. The CRT monitor creates a picture out of many rows or lines of tiny colour dots. The more lines of dots per inch, the higher and clearer the resolution. The benefit of a TFT monitor is a separate, tiny transistor for each pixel on the display. Because each transistor is so small, the amount of charge needed to control it is also small. The image is refreshed several times per second.

The library has monitors similar to the ones in the above picture on the right which is a TFT monitors. The library has large screens so that the screens are easily seen by all users. Many people with poor eye sight find it easier to see a large screen, so the library larger screens to accommodate there needs. The library has tried to make the computers useable by every one so the people do not feel discriminated against. The TFT monitors do not take up a lot of desk space. They produce less radiation than the old CRT type. They give off a bright, steady image which does not cause eye strain. The TFT monitors that the library has are part of a standard Dell package. TFT monitors are very difficult to read if you are not looking directly at them. This means that computer users have more privacy because other people in the library will not be able to read their screens.

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Printer

There are three main types of printer are laser, Dot- Matrix or Inkjet printers. The laser printer is very expensive to buy but cheap to run. The output in a laser printer is very high quality, and it prints very fast. Dot- Matrix printers are very old, very slow, and very noisy. They also have a poor output quality, however there's cheap to buy and fairly reliable. Inkjet printers are cheap to buy. The quality of print is high, and they are quite fast printers. However, the printer inks are very expensive and if the print out gets wet, it can smear.

The library uses laser printers because they are cheap to run. The library has two printer a coloured printer and a black and white printer The printers are located at the issue desk. Staff regulate prints through the issue desk computer using the pc counter software, members have to pay the staff for the prints (15p for black and white and 50p colour) then staff allow the prints to be printed. This save paper and money as before people would print lots of pages and they would only want one of the pages. Members would only pay for the one they wanted. Staff would use the printers to print out notices, flyers, posters and letters.

Lawrence Breslin

Computer speakers

Computer speakers are use to play sounds from the computer. They range widely in quality and in price. The computer speakers are usually small plastic boxes. Some of the slightly better computer speakers have equalization features, improving their sound quality.

The library computers do not have speakers; they like to keep the library quiet so that people can concentrate with out distractions. Members my use head phones to listen to sound as these are quiet and can only be heard by the person wearing them Head phones can be purchased at the issued desk for around £2 or members can use there own.

Lawrence Breslin

Processors

The processor is a part of a computer which carries out calculations and does all of the processing that has to be done. The processor is often called the CPU. The speed of the processor is measured in MHz and the larger the number the faster and more powerful the processor is. A processor must be cooled by a fan other wise it will over heat. Modern processors are either dual or quad which makes them very fast.
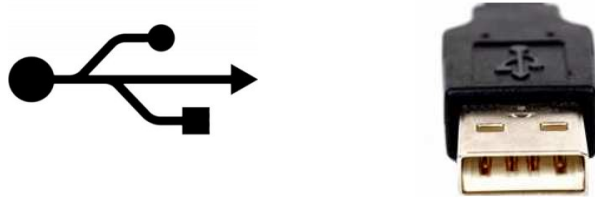

The libraries computers use a Pentium IV 2.4 GHZ processor. This is a fast processor which allows users to have multimedia programs running and allows multi tasking. They are very suitable for general computer use.

Lawrence Breslin

Ports and Cables

Universal Serial Bus

Nearly every computer comes with Universal Serial Bus or USB. USB is a standard connection port for many devices such as Memory pens, keyboards, mice, joysticks and digital cameras. Before USB, connecting devices to your system was often a hassle. Modems and digital cameras were connected via the serial port which was quite slow.

In the library the computers have two USB ports to the front and two to the back. USB ports are easy to connect to, they are faster and smaller. Users can plug a range of device in to USB ports such as cameras, air darts, MP3 players, external optical drives, mice, keyboards, memory pens and much more.

Lawrence Breslin

Serial Port

The serial port has been used on computers for years. Many of the newer systems have done away with the serial port completely in favour of USB connections; most modems still use the serial port, as do some printers and digital cameras. Few computers have more than two serial ports. Computer mice and even keyboards were used on serial ports.

In the library USB ports have taken the place of Serial ports. All thought the computers in the library still have Serial ports they are considered to be older technology and are rarely used or needed in the library. They do however come as a standard part of the Dell computer which the library has purchased.
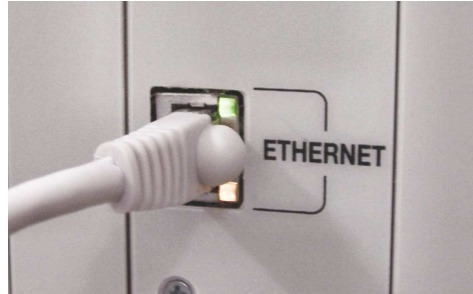
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Parallel port

The parallel port is still commonly used for printers however USB is becoming more popular. A PC sends data to a printer or other device using a parallel port. The standard parallel port is capable of sending 50 to 100 kilobytes of data per second .

Parallel ports are not used on the library computers as most devices are now connected using the faster USB connection. These ports come as standard on the computers which the library has bought.
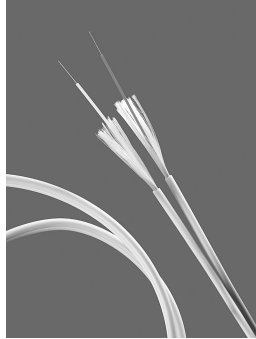
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Ethernet port

An Ethernet port is used to connect a computer to a network. In the library all computers are connected to the network using a CAT5-e cable with a RJ-45 connector.

These are at the back of the computer and the members are not allowed to remove them.

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Fibre optic cable

Fibre optic cables are made from two types of glass. Fibre optic cables are thinker than a human hair and are very flexible. These cables carry information using pulses of light. Fiber optic cables are very fast.

The library uses optic fibres to connect their servers to the internet, the speed is very fast and there is no interference. Fibre optic cables are very expensive, but they give an excellent internet connection which in fast and reliable.

Lawrence Breslin