Business Systems
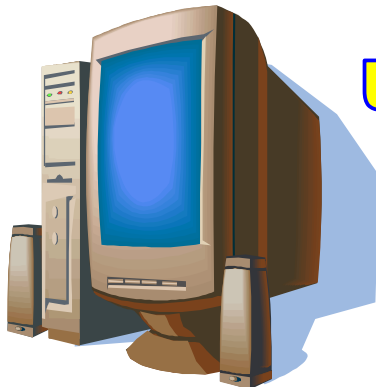
Portfolio

A report of an investigation into 2 different organisations' uses of ICT

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Introduction

Organisations from all over the world use ICT in every day life. ICT in businesses has many advantages. Some of the advantages of ICT in businesses are that you can write up letters and newsletters on Microsoft Word. I will research ways two organisations use ICT. One of the two organisations I will be investigating will be Cardinal Heenan Catholic High School which is in Leeds. My report will include comments on:

· Hardware Requirements
· Backup/Security
· Software used
· Information required for the system
· Inputs/Outputs
· Why ICT is solving issues for the school, rather than some other solution e.g. cheaper, faster, more efficient

CARDINAL HEENAN

Administration

The mainstream of the day to day organization of administration everyday jobs take place in the school office. This is a place were things such as a register and contact to the outside world takes place. The organization of the school is all completed in the office.

Email Correspondent

To be capable to reply to e-mails the secretary requires to be able to have a section of software called Microsoft outlook which is a fast and easy way to respond to an e-mail several miles away. To be able to use Microsoft outlook use need to have a basic PC with a cable link to the Leeds Learning Network, this enables the school to transmit e-mail free of charge.

Pupil Record

To be able to run the school well there must be clear records of the pupils in which the teachers and staff can access in an emergency. To be able to store this information the school ought to use software called Capita Sims Database which allows the school to bring up to date records from one computer. In order to have access to the pupil's records the school must have connections with the Leeds Education Authority.

School Trip Money

The school keeps track on all school trips money with a software package called Microsoft Excel which allows people to see who has paid and who hasn't and what left over costs are essential to be paid. The package makes it easy for staff to prepare a trip as it calculates the expenses without calculators or pens.

Letters

Letters are often produced to inform pupils about up and approaching events happening at school. The letters formed include daily notices and staff bulletins. Most of the letters are formed on Microsoft Word.

Newsletters

Newsletters produced in school are comparable to the letters produced in school as they are there to notify pupils about past and present events taking place in the school. Newsletters like letters are produced on Microsoft Word and photocopied to large sufficient amount. All newsletters follow a certain pattern including the badge of this school in the top corner.

Purchasing items for use in school

Each department is approved so much money for purchasing supplies. Every department will order there supplies and then Mr Dean will deal with the invoices and paperwork concerned with the order. All the purchases made are monitored by the Leeds Learning Authority who are then capable of keeping a financial watch on the school. This can only work if a package called FAB is on the internet.

Registers

Registers are taken in school for each class everyday in case of an emergency. The registers can be altered by the office if a pupil comes in late or requires to leave for a medical reason.

Timetables

Timetables are controlled by the office so a pupil or teacher can be found without difficulty. Every pupils and teachers timetable is stored. It is a speedy and simple way to find individuals in case of an emergency.

THE CURRICULUM
Reports and Effort grades

Reports are published once a year to explain parents how their child is performing at school and how there child can progress more. Effort grades are produced more often to give you an idea about the quantity of effort a pupil is putting in to their work. Reports used to take a long time to construct as the teacher would have to write out an individual report for each student but now a piece of software called 'Bromcom', the teacher only has to decide on a report which best fits the pupil and after that send it on to be published.

Register

Registers are used in morning and afternoon registration in order to find out if any student is absent or have gone home. 'Bromcoms' are used as they permit the data to be typed in and sent to a central computer by radio waves. The Bromcom is capable of holding plenty of information as well as the register. The Bromcom is replacing previous paper registers as this is a much faster way of taking the register.

Publishing work for intranet and school website

Work created by pupils and teachers may be placed on the school intranet or the school website for other people to see. Macromedia Dreamweaver is used by the school to publish the work on either the school website for the intranet. Leeds Learning Website manages the school website making certain the content is fine for people to see. The internet and intranet are helpful for pupils and teachers as they help pupils with there homework and teachers finding out what other teachers were teaching their pupils. The internet allows the general public to find out how the school is run and what the school is studying.

Research for lessons

Teachers need to know what they are going to teach to their class days in advance. They may use the internet to find out research on what they are teaching and there is an explorer package which finds out information over the internet but to use the internet you need a link to the Leeds Learning Network.

Correspondence with other teachers

Communicating with other teachers is quick and easy, thanks to an e-mail service and internal phone service. These allow teachers to communicate across the school and tell them if they need to be some were in the near future. Communicating by e-mail is done on a package called Microsoft Outlook.

Presentation of curriculum materials

The presentation of important documents is down to Microsoft Powerpoint a package which allows slides showing information to be shown in class full of pupils or to parents at an event like parents evening. The presentation is displayed on a large screen via a projector. The presentation can be put on smartboard where changes can be made.

Homework

Pupils can do their homework on Microsoft Word, Excel or PowerPoint. It can be saved regularly and even if the pupil makes a mistake it can be easily deleted unlike hand written work. You can also download images off the internet which saves time and effort.

Research

You can research work from the internet for homework or coursework. It is faster than looking it all up in books. Teachers also research things off the internet for lesson plans or homework. The school uses Leeds Learning Network cables to access the internet.

WESSEX WATER

Introduction

Wessex Water is one of ten district water supply and sewerage businesses of England and Wales. Even though not the largest, it is regarded as one of the most excellently managed and most triumphant.

They are dedicated to giving all our customers outstanding standards of service by providing high quality water and environmental services that protect health, improve the environment and provide customers superior value for money.

Wessex Water is acknowledged by the water industry regulator, Ofwat, as the most organized operator in England and Wales.

They believe that clients are stakeholders in the corporation along with the environment, our employees and shareholders.

As part of their ongoing programme to progress in customer service Wessex Water was the earliest water company to assign an independently selected client as a director.

Other initiatives include their guaranteed standards of service which go well further than the industry's standard levels.

Building Management

ICT is used to look after buildings. It reduces energy use after office hours. It furthermore provides an improved working environment. It reduces CO-2 emissions. It as well produces cheaper bills alongside with higher profits.

Data such as temperature, light level, wind and wind direction is composed from a weather station. The figures are sent to the building management system.

Using TREND software different parts of the building can be checked. A number of the items that can be selected from the main menu are lighting, alarms, temperature and air quality. Strategy can also be checked from the main screen.

The software is run via a mouse and a keyboard. Data is not just collected from within the building but also from the weather station. The building environment is controlled with the TREND software. If the building is dark the lights will come on. If the temperature within is hot the window will open. You can override the TREND software. A few sensors in the toilets sense movement and so the light comes on. The taps also detect movement and turn on when someone places their hands underneath. To save water they turn off when the person leaves.

Building control helps the environment. It also provides excellent conditions for the employees.

The inputs: temperatures, air quality, wind direction/speed, movement an time.
The outputs: heaters, motors, fans to blow air, light switches and taps.

DTP (Desk Top Publishing)

DTP results in reduced costs of hiring specialists. The staff are able to get quick answers. Using DTP high quality documents can be produced. Changes can be made very quickly.

These are some of the paper documents used by Wessex Water: Invoices, newsletters, customer letters, educational materials and leaflets. These are produced by a team of specialists in the head office. Ouark Express is used to lay out the text, images and artwork on the documents. Adobe Photoshop is used to develop the artwork. Adobe Illustrator is used to create images. PowerPoint presentations are also used by the team.

Colour laser printers are used to print the work. The final work is sent to the printers on CD or ZIP disks. Small documents can also be sent by e-mail. This system is very easy to use and so is used regularly.

The inputs: images, graphics, text and numbers and artwork.
The outputs: laser printers, CD/ZIP disc/e-mail and on screen.

Web Design

These are some of the advantages of having a website. A lot more information is available and customers are able to pay online. It also cuts down the use of paper documents. It provides cheaper advertisements and changes can be made easily.

Wessex Water has a website with the following information available: customers, students, job seekers, shareholders and people with special needs. The website is maintained by a web designer using an Apple Mac computer with special software. Dreamweaver is used to lay out the text, images and artwork on the website. The Adobe Photoshop is used to develop artwork. The images come from digital cameras, onto CD and Zip discs. Work is printed off on a laser printer. The final web pages are uploaded onto a web server.

The inputs: images, graphics, text and numbers and artwork.
The outputs: on screen, laser printer, CD/Zip disc/e-mail and web server.

GPS

Wessex Water has many vehicles working in a large area. They have GPS transponders attached to them. They send the vehicle position and code number to the operations centre. This happens through a satellite link. The name of the driver is displayed on large screen at the operations centre. If an incident arises they can see who is closest to it. A call is made to their mobile phone.

They are able to monitor each of their drivers and see where they are. This system saves a lot of time and money.

The inputs: location, vehicle identifier code (via satellite link).
The outputs: location overlain onto map onto screen.

Lone worker

Customers want their bills to be as low as possible. Part of the bill is the cost of the employees. Lower bills, higher profits and better worker safety are ensured by the 'lone worker' system.
On site the worker tells them his location and how long he expects to be there. This information is put onto the system. They are highlighted in green. If they turn red they are declared overdue and are contacted on their mobiles. If this is not possible another worker is contacted to assist him. If the worker is in danger the emergency services are called out. In 2003 a worker was rescued from the bottom of a well.

The inputs: employee name, job location and time to complete the job.
The outputs: screen, sound alarm and location on map.

Telemetry

Wessex Water must know about the delivery of water at any time. This would require thousands of employees.
Sensors are used to record information about water quality, pressure and level. They are connected to a high speed data link. This constantly sends data to the operations centre. The information is displayed in the main operations room.
The software can be used for such things as choosing locations display and to set levels for alarms to sound. GPS is used along side the system. Against the nearest engineer to a specific site can be called.

The inputs: pressure, pollutants, water levels and valves.
The outputs: alarms and screens.

The Internet

Wessex Water tries not to use any paper for messaging each other in the office and they use it a lot more to contact customers and suppliers. IT is really quick for employees to send a message to a number of people in my team and for them to respond. They can attach documents and files to the e-mail if required.
There is certainly a lot less paper being wasted and communication is also better. They use Outlook for e-mail, but also use Word to write the text for the e-mail. If they receive mail, they can either read them on the screen or print them off using a laser printer. As well as e-mail they have internet access and that is a real bonus for them ordering materials and equipment. Since it is so quick they don't need to have too much stock in the offices- they can get extra really quickly. They are able to receive what they need very quickly.
They did have problems with viruses in the early days, but now run a virus package on all internet traffic and e-mail.

General Systems

Whilst we have a lot of very specialized ICT systems, they also have a lot of general things- printers, faxes, copiers, workstations, a mixture of CRT and TFT monitors,

mice, keyboards, data projectors, smart cards. They also have a huge number of mobile phones in use, in fact, if the phone network broke down they would really be in bad trouble. They use Office XP. There is a large team managing all o the ICT and they occasionally bring in consultants for specialist work. It is everywhere at Wessex Water.

Video Conferencing

Wessex Water is a subsidiary of an Indonesian company. There are many times in the year when the executives in Indonesia want to meet with executives. To do so would involve a huge expense, worker tiredness and stress and be a waste of time. Videoconferencing allows them to meet whenever they want. They use a Polyspan camera running Viavideo software. It has a built in microphone, and have a large LCD display to watch the people at the other end and an interactive whiteboard. Data can be transferred through the data connection to the internet so they can show a PowerPoint presentation live to staff in Indonesia. The software is amazingly easy to use- enter the phone number, press dial and moments later they are talking to and watching staff live in Indonesia.

This system is very easy to use as people on the other side of the world can be spoken to.