

PC Basics



SAMPLE

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The Internet

E-mail

- Email allows you to send a message to another person almost instantly, anywhere in the world. It requires both computers to be connected to the Internet. As well as sending a text message, files can be sent as email attachments.

Instant messaging (IM)

- Instant messaging (IM) provides a mechanism for real-time communication between two or more people sending text messages via their computers. This is different from sending an email which once sent may be read sometime later by the person you sent the email to.
- Some types of instant messaging software let you speak rather than having to type your messages. You can use your web cam so that you can see the person you are talking to.

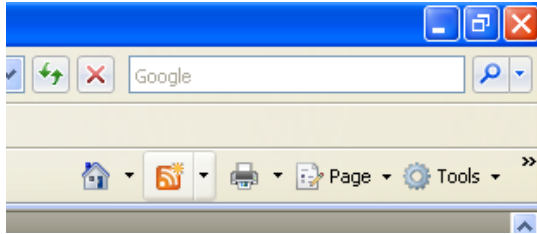
Voice over Internet Protocol (VoIP)

- Voice over Internet Protocol, (VoIP pronounced voyp), is a technology that allows you to talk with other people via the Internet. You can talk at no extra cost to other people using VoIP on their computers. You can even make calls to real telephones at a much cheaper rate than normal. This system is ideal when you need to make a lot of long distance or international calls. You can use VoIP by just installing a microphone and headset, or you can purchase a special VoIP compatible phone, that will normally plug into one of the USB sockets on your computer. A well know VoIP product supplier is Skype, who produce a range of excellent phones.



Really Simple Syndication (RSS) feeds

- RSS (Really Simple Syndication) is a method used to publish information that needs to be frequently updated. Such as news headlines, tickertapes or podcasts. A RSS document is called a "feed" or "channel".
- You need software called an RSS reader to read and update RSS content. You can then subscribe to a feed using the RSS reader. The RSS reader regularly checks for updated content and then displays the new content. Most good news websites will have the option of an RSS feed. In most cases to subscribe, you need only click on a button within the site.



Blogs

- A blog (a combination of the words web and log) is a website on which chronological entries that can be viewed by visitors. The word Blog is used as a verb and describes the activity of maintaining a blog.
- Blogs can provide information on a vast range of subjects, and often contain personalised views on a particular subject. Some are devoted to news, politics or current affairs. Readers can often comment interactively on the blog while other blogs are more like a shared, personal diary. Some blogs have become incredibly popular and been made into published books.
- Blogs are mainly text based with the odd picture, but they may also contain music and video contents.
- The blog search engine Technorati tracks well over 100 million blogs. You can visit Technorati at:

<http://technorati.com>

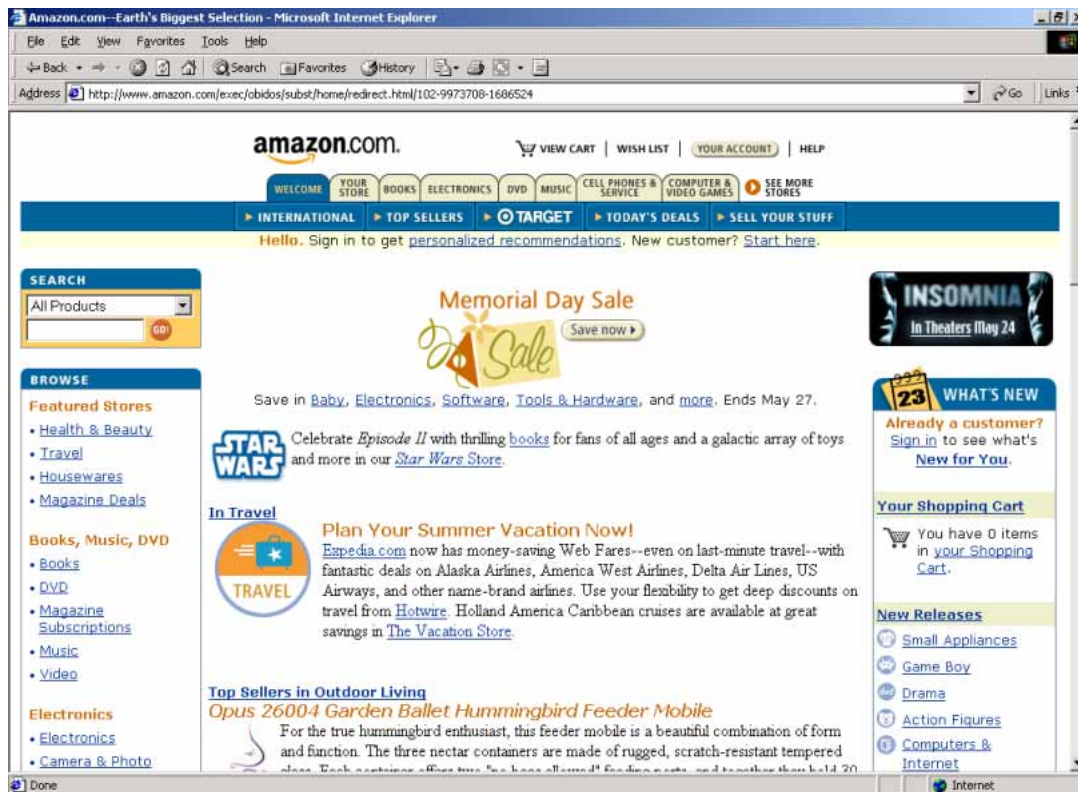
Podcasts

- A podcast is a way of providing content such as radio programs in a form that can be easily downloaded and listened to later on a PC or mobile device such as an Apple iPod.
- The term "podcast" is a combination of the words "iPod" and "broadcast".
- Many web sites allow you to manually download content.
- The thing that makes a podcast different is that once you subscribe to a podcast it will be downloaded automatically for you.

E-commerce

- The phrase e-commerce is a buzzword that relates to buying or selling via the Internet. Increasingly you can purchase directly via a Web site by selecting the goods or services that you require and entering your credit card details. When you send your credit card details these SHOULD be encrypted by the site operators so that no one can intercept your details. Most sites that accept credit card payment are on secure services and your Internet browser program will normally inform you (via a pop-up) when you are entering or leaving a secure server.
- There are numerous web sites from where you can purchase online, a famous example being amazon.com. Most Internet based shopping sites use a "shopping

cart" system. As you browse the site, you can add any products you want to purchase to your cart. Once you have placed items in the cart, you can then move to the checkout stage. At the checkout you enter your name & address, select the type of delivery you want, and enter your payment details.



- **There are many advantages using e-commerce:**

Services available 24 / 7:

Unlike a normal shop that closes in the evening, you can shop via the Internet 24 hours a day, 7 days a week, and 365 days a year.

Large stock range:

A larger range of stock can be carried than a conventional store. The stock does not have to be distributed and duplicated over many physical stores, but rather it can be held in one central distribution warehouse.

Detailed product information:

A detailed product description for each product, along with a picture can be given. There can even be links to the product manufactures own web site.

Ability to compare prices:

Many sites claim to offer you the very best prices. You can use the information on these sites to compare prices.

Equal delivery to town and country:

The fact that you may live in the countryside, far from the nearest town makes no difference at all when shopping via the Net.

Right to return defective goods :

Most e-commerce web sites will have a 'Returns Policy' and it is advisable to read this prior to purchase. In many cases you will find that the law gives you a right to return defective goods or even goods that are not quite as you expected.

- **Disadvantages of e-commerce include the following:**

Possible credit card fraud:

Some web sites have been set up solely to trick you into providing your credit card details, that can later be sold to criminals so that they can make purchases with your money. When it comes to credit card fraud there is basically one rule 'wherever humanly possible the bank never pays: - someone else does', make sure that someone is not you. Check the small print on your credit card agreement.

Is the web site genuine?:

When you purchase from a company such as amazon.com, you know that the company is well respected, is unlikely to go bust tomorrow, and above all will not attempt to 'run off with your money'. But what about when you purchase online from a company you have never heard of? Look for clues. Is there a client list on the site? How long has the company been trading. Are full contact details provided? If in doubt ring the phone numbers provided on the site and try to decide whether the company sounds genuine. Ask for references from other customers. Just because you see trade association logos on a site, do not assume that the use of these logos is genuine. There are organisations now whose sole purpose is to verify that other web sites belong to honest companies.

What about returning faulty goods?

If the goods arrive and are substandard, who pays to return them? Where do you return them to? Be sure you know about a company's returns policy, BEFORE you make an online purchase.

How are you covered when you purchase goods from another country?

This is a minefield. Each country may have its own laws relating to consumer protection. Be warned!

Can you talk to a real person?

I recently heard a radio presenter who purchased a computer online, through a very well known PC manufacturer. He purchased the computer for his daughter, in good time for Christmas. As Christmas drew near he tried to find out what was happening, but was unable to talk to a real person and was forced to rely solely on email contact with the company. The computer eventually turned up in February. Never buy from a company that does not provide you with full contact details including a telephone number.

E-banking

- The phrase e-banking relates to managing your money online. Instead of having to go to the local branch, or telephoning them, you can pay your bills online and move money from one place to another. Some online banks have no physical branches at all, making it a very profitable operation for the bank. There are security considerations relating to online banking, with numerous examples of poor security coupled with sloppy operations.



- Most banks now offer some form of online banking. This has the advantage to the bank that costs can be reduced. Some banks are completely online, with no physical branches at all. The customers benefit from 24-hour access to banking services. The downside is that this leads to many job losses in the banking industry and when things go wrong there is no physical person you can go and see and make your complaints to. Some leading banks have demonstrated a degree of incompetence when it comes to the security of their online systems and many people are very reluctant to trust online banking systems yet.

E-government

- Census:** Every few years, census details are taken and entered into large computer databases. This data can then be used to extract useful information and predict trends. In some cases this data is also being made available online, so that it becomes even more accessible and useful.
- Vehicle registration:** All car and lorry details are kept centrally; this makes it easy to find the owners of cars, which can be useful for police, customs and

security services.

- **Revenue collection:** Increasingly aspects of government revenue collection are being computerised, which in many cases involves online systems as well.
- **Electronic voting:** Governments are experimenting with online voting systems, often in response to appallingly low voter turnout. Security remains the main obstacle to the extension of this idea.

E-learning

- E-learning refers to learning via the Internet or working through a disk based tutorial. There are many advantages, but also some disadvantages.
- **Student registration and timetabling:** There are many specialist programs designed to computerise these otherwise time consuming tasks.
- **Computer Based Training (CBT):** Computer Based Training (CBT) offers a low cost solution to training needs where you need to train a large amount of people on a single subject. These programs are normally supplied on CD or DVD disks and combine text, graphics and sound. Packages range from general encyclopaedias right through to learning a foreign language. As an alternative to training via CD or DVDs, CBT can also be delivered via the Internet.
- **Using the Internet as a homework resource:** The Internet is the ultimate resource for getting the information necessary to complete a student's homework. The Internet can also be used to set and collect homework (via email).
- **Distance learning systems:** E-learning is a term used to describe studying via the Internet. It can take many forms ranging from a simple web version of printed books, through to advanced use of video images with sound. In many cases there can be real-time two-way communication between the teacher and the student.

Advantages include:

- One trainer can train many people at many different locations.
- If the training is solely computer based, then the students can work at their own pace, and repeat parts of a course that they do not understand. Also the teaching can be at any time, 24 hours a day, and 7 days a week.
- Often e-learning solutions are cheaper to provide than other more traditional teaching methods.

Disadvantages include:

- There may be no opportunity to ask a question of a real person.

- The Internet connection may temporarily fail for some reason.
- You may have to pay for the connection time, by the minute.
- The download speed may be too slow for some forms of e-learning.
- Because of the increased time required to produce some types of e-learning packages, the e-learning tutorials may not be available for some time following the release of a new version of software, or a new certification syllabus.

Teleworking

- Tele-working is a broad term that refers to people working at home connected to the rest of the organisation via a computer network. Communication is via email or the telephone. This arrangement has advantages and disadvantages to both the employer and the employee.

- **Advantages include:**

Reduced or zero commuting time.

This saves time (and money) for the employee and reduces environmental overheads, as less commuting means less car pollution. It means that the employee does not arrive at work already stressed from car jams or late train connections.

Greater ability to focus on one task:

As there are fewer interruptions from low priority phone calls, there is a greater ability to concentrate and focus.

Flexible schedules:

In many cases, as long as the job gets done, it does not matter when the job gets done. This means there is time for other activities, such as picking up the kids from school. It also means that work can be finished in the evening if required. If it is a beautiful day, why not take advantage of the weather, and finish your work later.

Reduced office desk space requirements:

The cost of Office space can be very high and tele-working can help to reduce these costs if a proportion of the staff works at home. "Hot Desking" is a term used to indicate that people do not have a desk dedicated to their exclusive use. People simply sit at any desk and log on to the networked computers using their own ID, that will allow them to uniquely access their own work stored within the computer system. Hot Desking is popular when staff spend a proportion of their time working at home, or at sites outside the main office complex.

- **Disadvantages:**

Lack of human contact:

Many people cite this as the single biggest factor when switching from a regular

office job, to tele-working. In fact many companies now arrange company gossip networks, just so that people can keep in touch.

Negative impact on teamwork:

If you never see the rest of the team it is hard to feel part of the team. To some extent this is offset by video links and by occasional get-together meetings.

Self-discipline:

It can take a lot to work from home and remain focused on work. It is all very well saying 'I will take the afternoon off and work this evening', but come the evening you may not feel like working.

Possible Employee Exploitation:

If workers are isolated from each other there is the possibility for companies to take advantage. Some large companies using tele-working restrict trade union activity (or if they can, ban it altogether).

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Sharing on the Web

Online communities & groups

- It is important to understanding the concept of online (virtual) communities. These can take many forms including:
 - Social networking websites
 - Internet forums
 - Chat rooms
 - Online computer games

Social networking websites

- These sites allow you to link up with other people, to share news, experience and gossip. Some, such as 'Friends Reunited' are specifically designed to let you find friends that you have lost contact with.

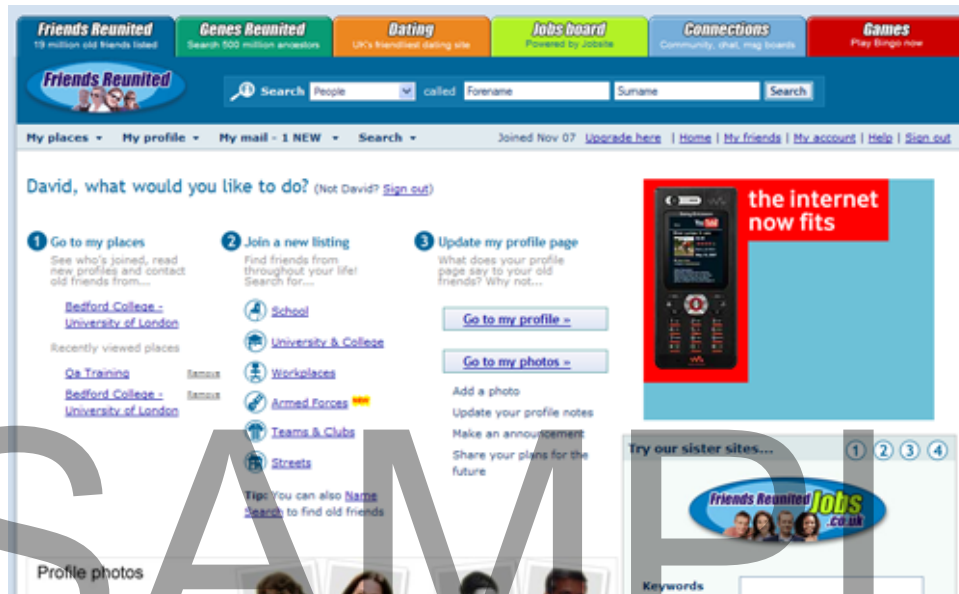
- **MySpace**

The screenshot shows the MySpace Australia homepage. At the top, there is a blue header with the MySpace logo and the tagline 'a place for friends...'. Below the header is a search bar and a navigation menu with links like Home, Browse, Search, Invite, Film, Mail, Blogs, Favourites, Forum, Groups, Events, MySpace TV, Music, Comedy, and Classifieds. The main content area features a 'Cool New Videos' section with four video thumbnails: 'Microphone Check??', 'Shaolin Monk Demonstration', 'Vibrating Cat Freak Out', and 'Daft Bodies'. To the right of the videos is a red banner for 'WWW.MYSPACE.COM/IMPACT'. Below the videos is a 'Member Login' section with fields for E-Mail and Password, a 'Remember Me' checkbox, and 'LOGIN' and 'SIGNUP!' buttons. Further down is a 'Find Your Friends on MySpace' section with a checkmark and text: 'Check your Gmail, Yahoo! and AOL contacts and find them on MySpace!'. At the bottom, there is a 'Cool New People' section with profile pictures of 'Stegs', 'luke', and 'Matthew'. A large 'SAMPLE' watermark is overlaid across the center of the page.

- BeBo



- Friends Reunited



Internet forums

- An Internet forum is a web based application that lets you join in online discussions. You can post your views or comments for all in the forum to see and react to. Try searching the Web for information on message boards and you will find that there is a discussion for you, whatever your interest!

Chat rooms

- The term 'chat room' has had a lot of media attention over the last few years. The term has evolved to include any web based mechanism to share your news with others on the web. The communication is in real time, i.e. you can talk to other individuals, rather than leaving messages. Try searching the Web for more information and examples.

Online computer games

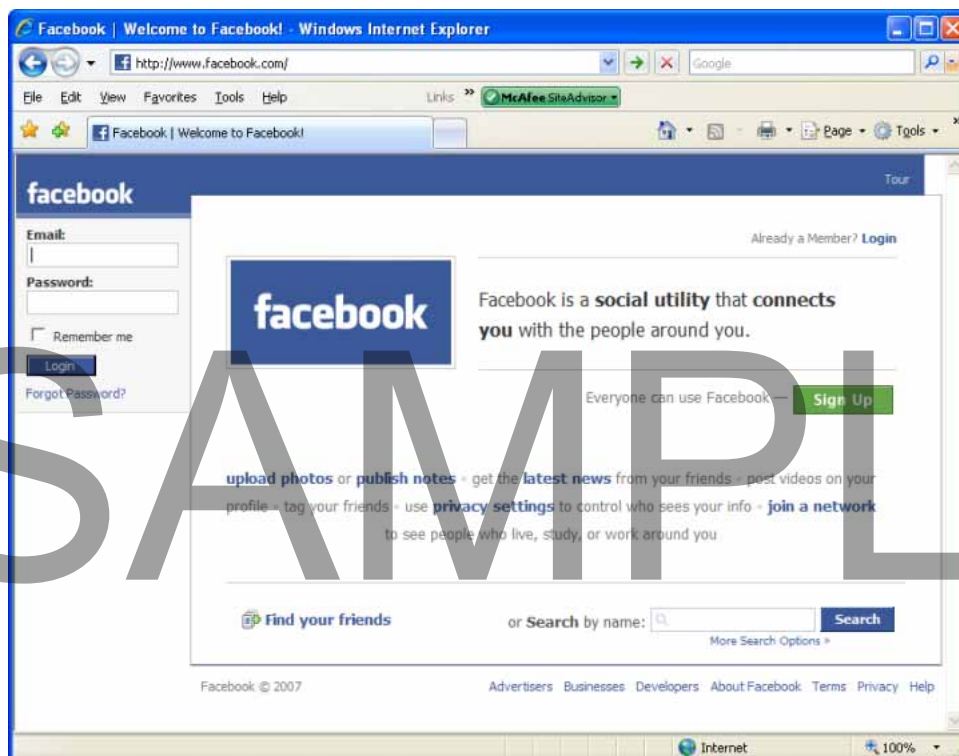
- Online games are games that are accessed and played via the Internet. In many cases you can play against other people. Try searching the web using the phrase 'online computer games' and you will find lots of sites you can access.

Publishing and sharing content online.

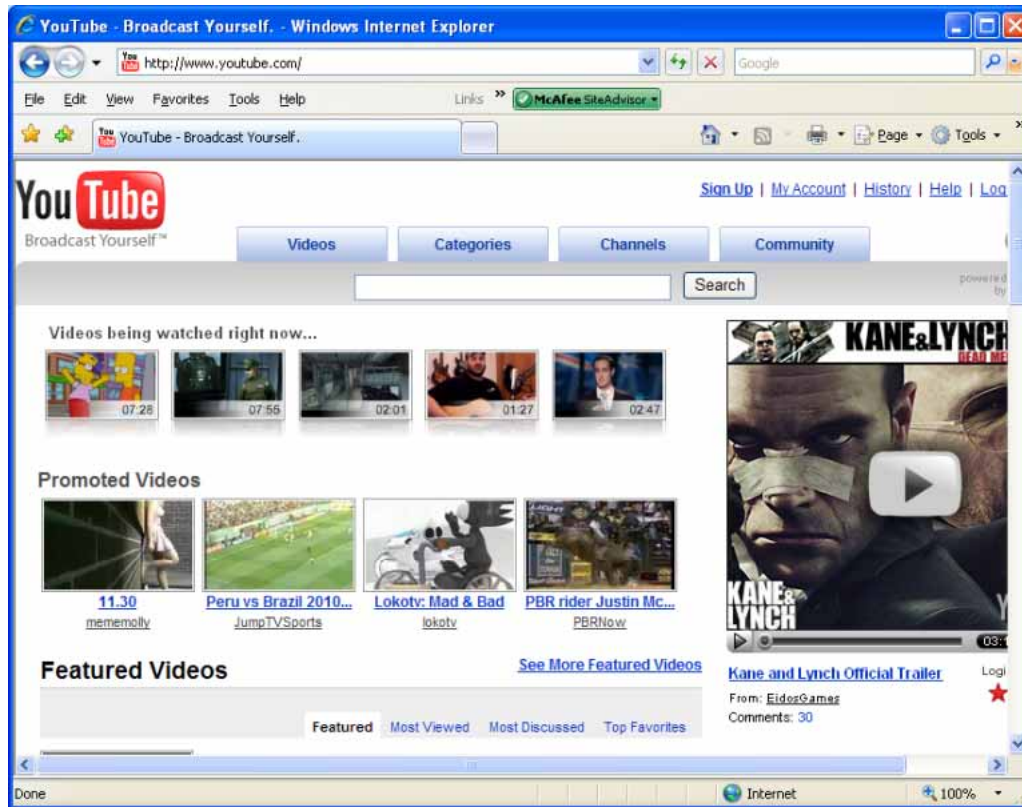
- It is important to understand the ways you can publish and share content online. You can set up your own web log (blog). You can even set up your own podcast.

Sharing your photos, videos and sound clips.

- There are many web sites that allow you to upload pictures, audio clips or video clips. Facebook is a good example of a site that you can upload items of interest to.



- YouTube contains clips that have been uploaded from people around the world. If you have something to share give it a go.



Precautions when accessing online communities

- You should take basic precautions when accessing online communities including the following:

Keep your profile private and limit the amount of personal information you share:

In many cases you can keep your profiles private and only share limited information with other users as you get to know them. Remember that a criminal armed with just your age and address may be able to access your bank details. Use common sense on the Web!

Be aware that posted information is publicly available:

Remember that information that you post is often publicly available and can be used by fraudsters.

Be wary of strangers:

The Internet can be a dangerous place. Do not take information from people you meet on the Internet at face value. If you are a child, how do you know the person that you are talking to is a child of your age rather than someone pretending to be something that they are not? Be very cautious of arranging to meet people that you have met via the Internet and make sure that any meeting is in a public place, and preferably take a friend along.

Health, Safety & Environmental Issues

Ergonomics

- Ergonomics covers the physical environment and design of equipment to maximise the quality of an employee's well-being. This covers everything from the design of the computer, the computer desk, the chair and even the design of the lighting within a room.
- Take regular breaks, have regular eye tests and get a good desk and chair to maintain good posture.

Repetitive Strain Injury (RSI)

- Often referred to as RSI. This is a condition caused by constant use of the keyboard or mouse. You should take regular breaks to help avoid this type of injury. You may want to consider the use of a pad on which you can rest your arms, which will help to some extent.

More information: <http://www.rsi-center.com>

Lighting issues when using a computer

- It is vital that the correct type of lighting is used in conjunction with your computer use. Many people find that banks of overhead fluorescent, tube lighting gives them headaches. Natural light is better, but can cause reflected glare off the computer screen. Too much light can cause as much eye strain as too little light. The direction of the light is also a consideration. If you are facing a bright light source while concentrating on your computer screen, this can lead to eye strain.

Screen and keyboard positioning

- When sitting at your computer you should have a monitor at eye level that can be adjusted to suit you. In addition, you may want to consider a footrest. Neck pain and backache can result from prolonged bad posture.
- **Screen:** Your screen should be fully adjustable so that your eyes are at the same height as the top of the screen. You may wish to use a filter attached to the screen to reduce glare. If the screen is badly focused, too bright or appears to flicker, then get a qualified technician to take a look at it. You should periodically refocus into the distance, as opposed to always gazing at a screen a few inches from your eyes.

Keyboard: Use a good keyboard and you may also wish to use a wrist pad to relieve pressure on your wrists.

Mouse: Use a mouse mat to make the mouse easier to use. Ensure that you

have enough space to comfortably use the mouse. If your arms or fingers become tired or painful when using the mouse, take a break and do something else.

Seating issues when using a computer

- If you spend a lot of time sitting at your desk using a computer it is vital that you pay attention to the type of chair you are sitting in. Your chair should be fully adjustable, and be able to be moved up or down. It should have an adjustable back. If your chair is not easily adjusted it can lead to permanent back injury.

Recommended computer usage techniques

- You should take regular breaks to avoid staring constantly at the screen and straining your eyes. During regular breaks, refocus your eye between short and long distances as this can reduce eye strain.
- During your regular breaks, you may also wish to do some practice stretching exercises. These should be done only after medical advice so that they are appropriate for each individual.
- You should consider using the best (i.e. most expensive) monitor that you or your company can afford. The better the monitor the better the screen resolution and the higher the refresh rate. For detailed work, you should also consider using a larger screen size. In many countries, your employer has a legal duty to pay for eye tests for employees as and when they request it. You can get filters that fit in front of the screen and reduce glare.
- You may wish to use a footpad to rest your feet while using the computer.
- Make sure that the area where you are using the computer is adequately lit and well ventilated.
- Ventilation is especially important if you are using a laser printer, which may produce ozone when printing.

More information:

<http://intranet.linst.ac.uk/student/services/health/computer.htm>

<http://www.ibm.com/ibm/publicaffairs/health/summary.html>

<http://www.ics.uci.edu/~chair/comphealth2.html>

Cable issues

- You should always use the power cables that were supplied with your computer or cables of a similar quality. Make sure that the cables are safely secured at the back of the desk and that you have power points located near the desk. If your desk has a cable ducting system make sure that you use it. Avoid long trailing cables as you or other people can easily trip over them and cause injury to

yourself or others. Apart from personal injury, accidentally pulling out a power cable could cause your computer to lose power and you will lose data as a result. Network cables tend to be delicate and easily damaged and the most common cause of failure to log onto a network server is that someone has accidentally dislodged or damaged the network cables.

Power point issues

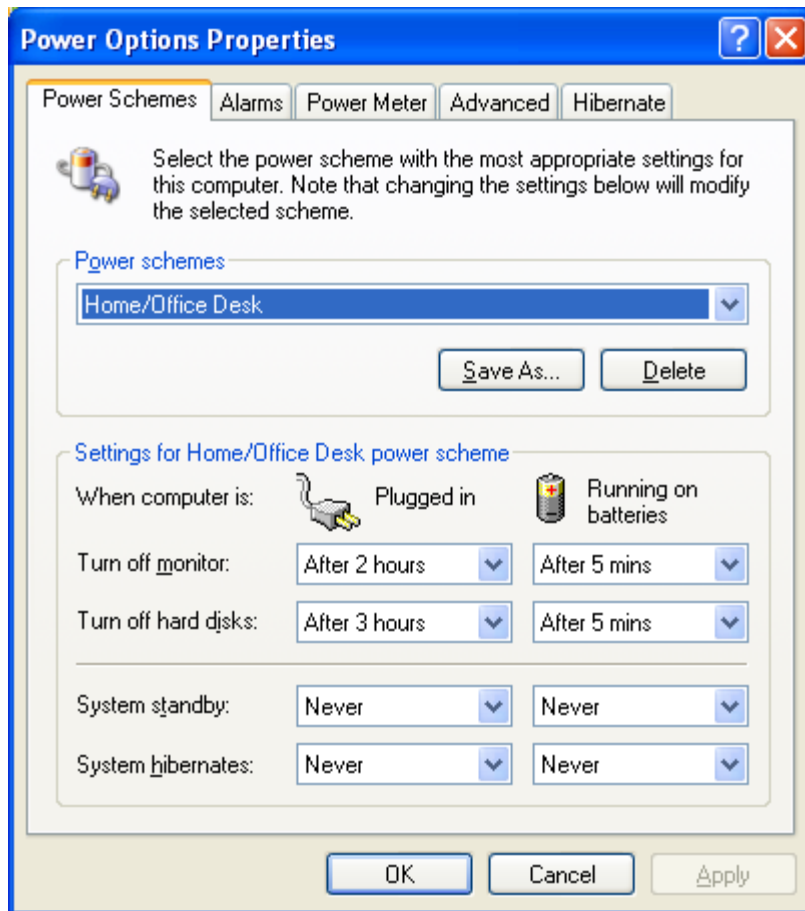
- Overloading of a power point is dangerous and a potential fire hazard. If you need more power sockets, have them properly installed by a qualified electrician.

Computer recycling

- You should have a separate bin for paper that can be sent for recycling (be sure that sensitive material is first shredded).
- Printer toner cartridges can be sent for recycling; in fact some charities now collect spent toner cartridges, and send them for recycling. You may also wish to consider the use of recycled toners in your printers (but be aware that in some cases this may invalidate the printer's guarantee).
- Rather than dump unwanted computer equipment, see if you can get them recycled, or even collected and used by charitable organisations.
- Where possible the use of on-screen manuals and help systems, rather than printed manuals, will save on the amount of paper consumed. This equates to less trees being cut down.

Computer energy saving options

- You may consider switching off computers and monitors when they are not being used.
- Many monitors and other peripherals will automatically switch into 'sleep' mode after a period of inactivity. This means that even though the computer is still switched on, it will consume less power.
- Power saving options are illustrated below.



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Security Issues

Computer logon user name (ID) and password.

- **Passwords:**

If your computer has a password that prevents other users from accessing it then do NOT give this password to anybody else. Do not write the password on a card and prop this up next to the monitor and above all do not attempt to hide your access passwords on the underside of your desk (this is the first place most criminals would look if trying to break into your system). Make sure you do not forget your passwords; in many cases, data cannot be recovered once the password is lost.

- **User IDs and passwords:**

A User ID is normally used to logon to a computer, or computer network. It uniquely identifies you to the network. In addition you use a password that is only known to you. The password guarantees that no one can access the network and impersonate you (in theory). Once you have logged on (i.e. connected) to the rest of your computer network, you will have been assigned access rights to the network. Your network administrator will have defined these access rights. The idea of access rights is that you only have the ability to connect to, or share, devices that you have authority to use. In other words, the network administrators often have access rights to just about every computer, printer, modem etc on the network. You on the other hand may have access rights to print to only certain, specified printers and you may be able to access only certain data held on the network.

Passwords

- Your password is the only thing that will prevent someone else logging into a computer using your user ID and impersonating you. It is important to choose a password that cannot be easily guessed by other people. Ideally a password should be at least 8 characters long & contain a mixture of words and numbers. It is also recommended that you change your password regularly; some computer systems will require you to change your password periodically. Never share your password with others.

Off-site backups

- It is no good backing up your data only to leave the item, you backed up to next to the computer; if someone steals your computer it is likely that they will also steal your backups too. If you have a fire, then again you will lose your backups if the backups are stored next to the computer. Ideally, backups should be stored off-site at a safe location. At the very least, consider storing your backups in a fireproof safe, which will give some protection against fire damage.

The need for backups

- The most important thing which you store on your computer is information. Often the contents of a hard disk can represent years of work. If the hard disk stops working one day you could lose all those years of work. For this reason it is VITAL that you take regular backups of the information that is stored on the computer. In large organisations this backup procedure is normally performed automatically by your computer support team, where the data is normally held on a centralised, networked computer.

In smaller organisations, it is often up to the individual to organise some sort of data backup. If nothing else is available, copy your files to a USB memory stick or CD/DVD disk and make sure that these backups are stored away from the computer, ideally off-site. If there is a fire and your office burns down, if your backup disks are stored next to the computer they too will be incinerated.

Organising your computer for better backups

- When you think about it, you have a computer containing many programs and also a large amount of data that you have created, then it is only the data that really needs to be backed up. If you create a folder structure that contains only data then only this folder (plus any sub-folders of this folder) needs to be backed up.

Complete vs. incremental backups

- A complete backup means that you backup all the data on your computer. This has the advantage that the entire hard disk can be backed up, but suffers from the disadvantage that this process can take a long time if your computer contains a lot of data. An incremental backup means that once a week you can perform a complete backup, but every night for the rest of the week, you only backup files that have been newly created or modified since the last backup, saving time. With the right backup software, this process is automatic, and normally you only have to select full or incremental.

Firewalls

- A firewall is a system that secures your network from access by unauthorized users. A firewall can be implemented via software, hardware or by a combination of the two. If you are using broadband for Internet access, it is vital that some sort of firewall is in place to stop people trying to hack into your computer.

Computer viruses

- Viruses are small programs that hide themselves on your disks (both diskettes and your hard disk). Unless you use virus detection software, the first time that you know that you have a virus is when it activates. Different viruses are activated in different ways. **BEWARE:** Viruses can destroy all your data.



- Viruses hide on a disk and when you access the disk (either a diskette or another hard disk over a network) the virus program will start and infect your computer. The worst thing about a computer virus is that it can spread from one computer to another, either via the use of infected disks, or over a computer network. The Internet allows you to access files from all over the world and you should never connect to the Internet unless you have a virus-checking program installed on your computer. It is vital to keep your virus monitoring software up to date. Many anti-virus programs, such as Norton Anti Virus allow you to update the program so that the program can check for recently discovered viruses.

More Information:

McAfee Anti-virus software <http://www.mcafee.com>

Norton Anti-virus software <http://www.symantec.com/avcenter>

AVG anti-virus software <http://www.grisoft.com/>

- There are many ways in which a virus can infect your computer. A very common way that viruses gain access to a computer, is when people download files from the Internet. Never download files from a website unless you are sure that the website can be trusted. Many anti-virus products now rate websites and mark those that are known to distribute viruses, with a warning.
- For the same reason you should never open an e-mail attachment unless the e-mail has come from a trusted source.
- Another common route of virus infection is by attaching portable storage disks to your computer that have been supplied to you. In most cases, good up-to-date virus checking software should offer you pretty good protection against catching a virus when downloading or sharing files.
- In many organisations, attaching an un-authorized storage device to a computer is an offence that can result in dismissal from the organisation.
- The safest way to use a computer is to not connect it to a Local Area network or the Internet. This is called a 'stand-alone' computer, providing that you do not use disks on that PC that have been used in other computers, this type of computer is virtually immune from any form of intrusion.
- Unfortunately it is the ability to connect to other computers or indeed the Internet, that makes the modern computer so versatile and so useful.

- Always make sure that all computers require an ID and password to access them. Make sure that all relevant 'security patches' from Microsoft have been applied.
- Make sure that the password is long enough, contains a random mixture of numbers and letters, and that the passwords are changed on a regular basis.
- There are many examples, where people have used passwords that relate to something personal, such as a partner's first name, the dog's or cat's name, etc. For a determined, serious computer hacker, these are easy to guess. If you have a system, where lots of different passwords are required to access the system, then security often breaks down and computer users will sometimes keep a list of these passwords in their disk. This defeats the whole object. If you forget your network access password, the network administrator should be able to assign you with a new one.



- If you discover a virus on your computer don't panic. If your virus checker alerts you to a virus, then the chances are that it has caught the virus before the virus could infect your computer and cause damage. For instance you may insert a disk into your computer and the virus checker should automatically scan the disk. If the disk contains a virus, a message will be displayed telling you that the disk is infected, and it should automatically remove the virus. The other common method of infection is via emails.
- If you work within a larger company, you should have a company IT support group that will come and rid your computer of viruses. Be sure that you are familiar with your company's policy regarding viruses.
- Anti virus software can only detect viruses (or types of viruses) that the software knows about. As such it is vital that you keep your anti virus software up to date so that it can detect new viruses that are constantly appearing.



Malware

- The word Malware is a combination of the words "malicious" and "software". Malware is software designed to install itself and run without your consent and without your knowledge. Sometimes when you download free programs from an internet site, they come bundled with hidden programs that you did not ask for and will not want. Often these hidden programs send back marketing information to companies. Sometimes they may have more sinister purposes, such as sending your credit card details to criminals intending to steal from you.
- When installing free programs you find on the net always read the licensing terms, as often the malware content is hidden away within this long document.

Spyware

- This is different from a virus. Details such as your online browsing habits can be sent, without your knowledge, to marketing companies, or even criminal organizations that will try to get information such as your credit card details or access passwords.

Worms

- A computer worm is a self-replicating computer program that sends copies of itself to other computers via a network. It can copy itself from computer to computer without your knowledge.
- It is different from a virus because it has no need to hide itself within another program. Many worms can reduce your available bandwidth due to their copying activities, but otherwise do not actually damage your files. However there are also destructive worms that will attack or compromise your data.

Trojans

- A Trojan horse (often just called a 'Trojan') is a type of software that you normally expect to do one thing, but in fact it does something else that you did not intend. A Trojan is not a computer virus and does not try and copy itself across your network. It is basically just a program that you need to run. Sometimes you may run this Trojan program when you actually think you are running a legitimate program. The name comes from the classical story of the wooden Trojan horse.

Scareware

- These are popup messages that you may see displayed within a web browser, such as Internet Explorer, that falsely warn you that your computer is infected with a virus or spyware. They invite you to click on the popup link to solve the problem and then ask you to pay for software that will allegedly fix the

problem. In many cases the software that you then purchase is useless.

NOTE: Do not confuse scareware scams with legitimate popup messages from the virus checking program that is installed on your computer.

SAMPLE

Legal Issues

Copyright

- Most programs that you purchase are copyrighted and you must not copy them. If you do so you may be breaking the law and if caught, you could find yourself being prosecuted. Many people will buy a copy of a game and make a copy for their friends or other family member. This is also normally unlawful. Even lending your program disks to other people may be breaking the law in most cases. There are numerous organisations, such as FAST (the Federation Against Software Theft), that are dedicated to preventing the illegal copying of software. In a business situation, if your manager tells you to copy software, ALWAYS first make sure that you have a licence that entitles you to copy the software, because in many countries, you will be personally liable for damages.
- Most text that you will find on the Internet is copyrighted. Never copy text without authority to do so and always quote your sources.
- There are many sites offering free graphics and clipart. Some are genuine and have the authority to offer you a free download of images. Many sites however may not have this authority. Popular examples are pictures, sound clips, or movie clips from Star Trek. If you visit the official Star Trek site (www.startrek.com) you will see that use of images, and even the name 'Star Trek' is protected and may not be used on 'fan sites'. Even downloading sound clips to replace the bleeps that Microsoft Windows makes is often illegal. Some sites even allow the 'free' download for complete films or music tracks. If you can download a free film before it is even officially available on video/DVD, it is a pretty good bet that the site is unauthorised. Cover yourself. Get written permission to use downloaded materials and 'if in doubt - don't' is the safe rule. Because CD / DVD disk writers have become so widely available, it has become possible to copy entire CD or DVD disks that can contain software, games or data. Do not do this. Always be careful of software that you may find advertised at very cheap prices, it may be illegally copied.

Copyright Issues when copying files

- **Transferring files across a LAN:**
You need to be careful that you do not accidentally make copies of software via your Local Area Network (unless of course you are authorised to make such copies).
- **Downloading files from the Internet:**
You need to be VERY careful when downloading files from the Internet. Just because a site may say you are free to download materials from the site, does not necessary mean that the owners of the Internet site have the authority to allow you to do this. It is possible to download entire software packages from the net, even entire movie films. In many cases however it is not legal to do so.

- **Copying disks:**
If you purchase software, you may, in some cases be allowed to make a single, backup copy of the disk. You are not allowed to distribute copies to family and friends. You are certainly not allowed to copy and re-sell commercial software.
- **Freeware:**
This is software that can be copied or downloaded free. It is often fully functional. Examples may include software developed by organisations such as Universities, where the aim was not to profit from the software. It is very important not to confuse freeware and shareware.
- **Shareware:**
This is where you can use software for a free trial period. Sometimes the shareware versions may be fully functional, but after a time period will either start to display an annoying message, asking you to register (i.e. pay for) your software, or in some cases it may stop working altogether after the trial period. This 'try before you buy' method of getting software is becoming increasingly popular with the major software suppliers.
- **User Licences:**
If you have more than one PC, then you can either purchase a separate copy of the software you require for each PC, or better: you can purchase a user licence. This user licence allows you to make copies and install them on each computer.

Site licences are used by larger organisations

- Many large companies do not go out and buy a certain amount of 'shrink-wrapped' copies of each software product that they need, instead they will buy a site licence. These site licences are different in their small print, but generally mean that the companies purchasing the licence can make a fixed number of copies available to their staff, normally via a company network.

Checking software licence status

- Normally if you click on the **Help** drop down menu within an application, there will be a command such as **About**. Clicking on this option will often display your software product identification number.

Product registration and activation.

- When you purchase software you are often invited to register the product in return for access to updates and product support. This is normally done using an online form but in most cases you will also have the ability to print out a form and register the software via the postal service. Sometimes registration is compulsory, but in most cases it is optional.

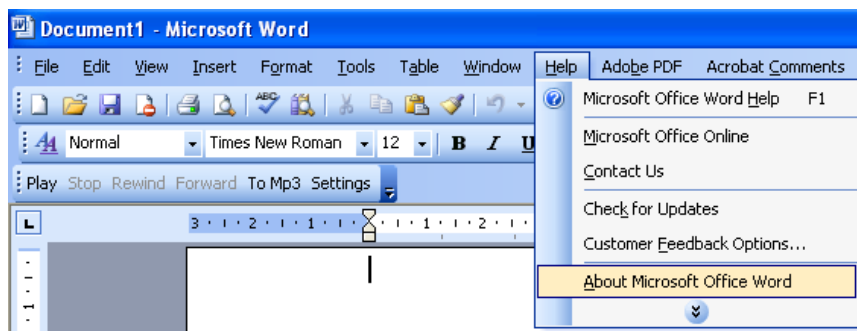
- Product activation is different from product registration. Product activation normally requires that you enter a serial number in order to activate the product. Many products such as Microsoft office will only work for a limited time without being activated. This gives you time to either activate the product via an online form, or via a telephone hotline.

End-user license agreements

- Normally when you install software these days there is a step within the installation routine in which you have to agree to be bound by the end user licence agreement. This agreement can be very large and is drawn up to protect the manufacturers of a product from being prosecuted due to faulty software. It also defines how many copies of the software you are entitled to. I recently printed out a Microsoft end user agreement and it was over 15 pages long.

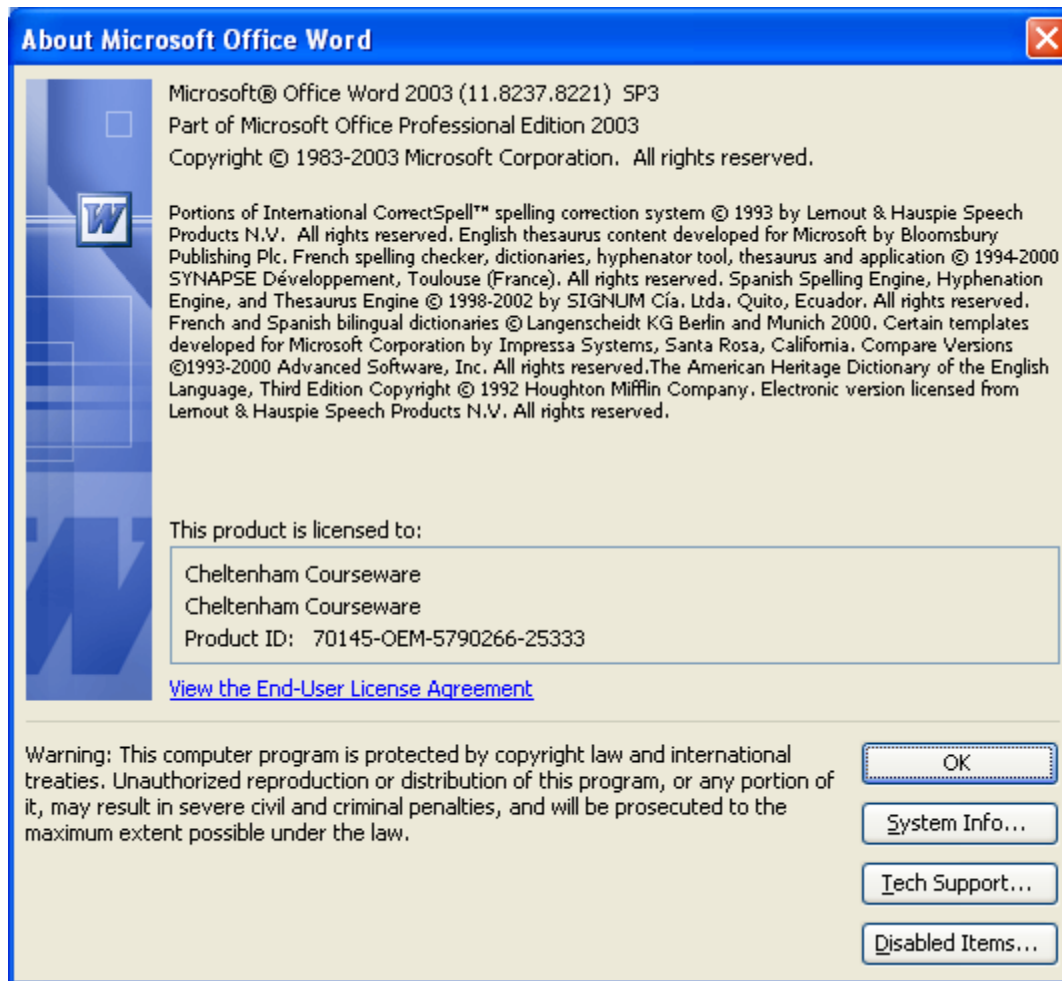
Checking the license agreement within Office 2003 software

- To view the licence agreement within Word 2003, click on the **Help** drop down menu and select the **About Microsoft Word** command.

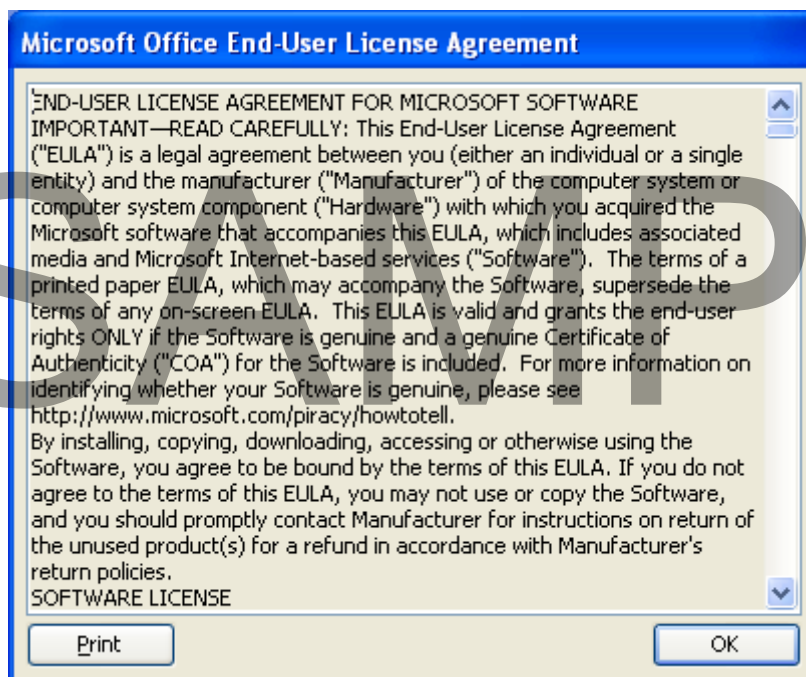


- This will display the **About Microsoft Word** dialog box.

SAMPLE

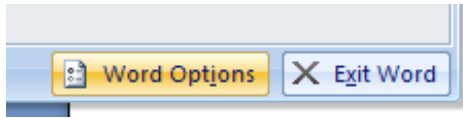


- Click on the **View the End-User Licence Agreement** link within this dialog box. This will display the licence agreement, as illustrated

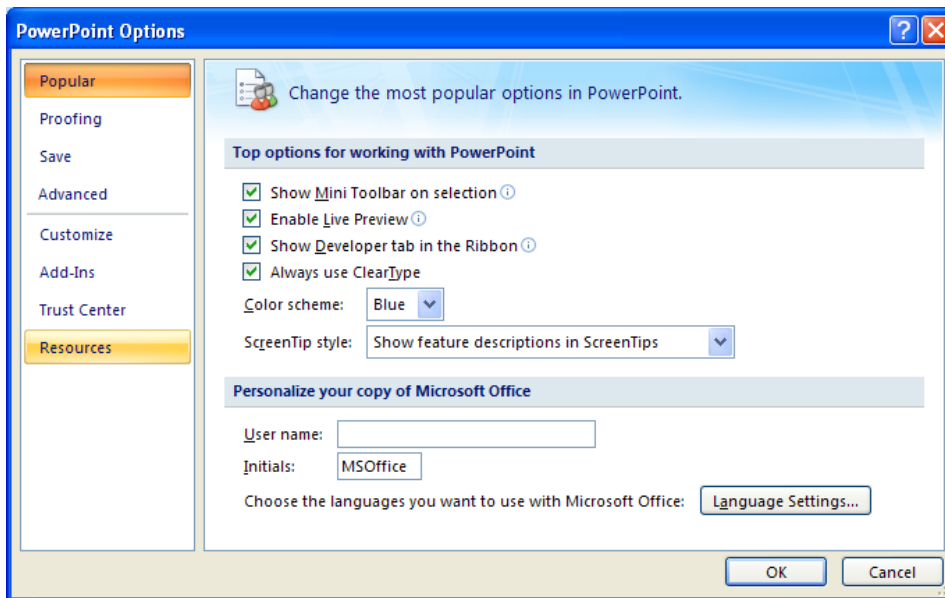


Checking the license agreement within Office 2007 software

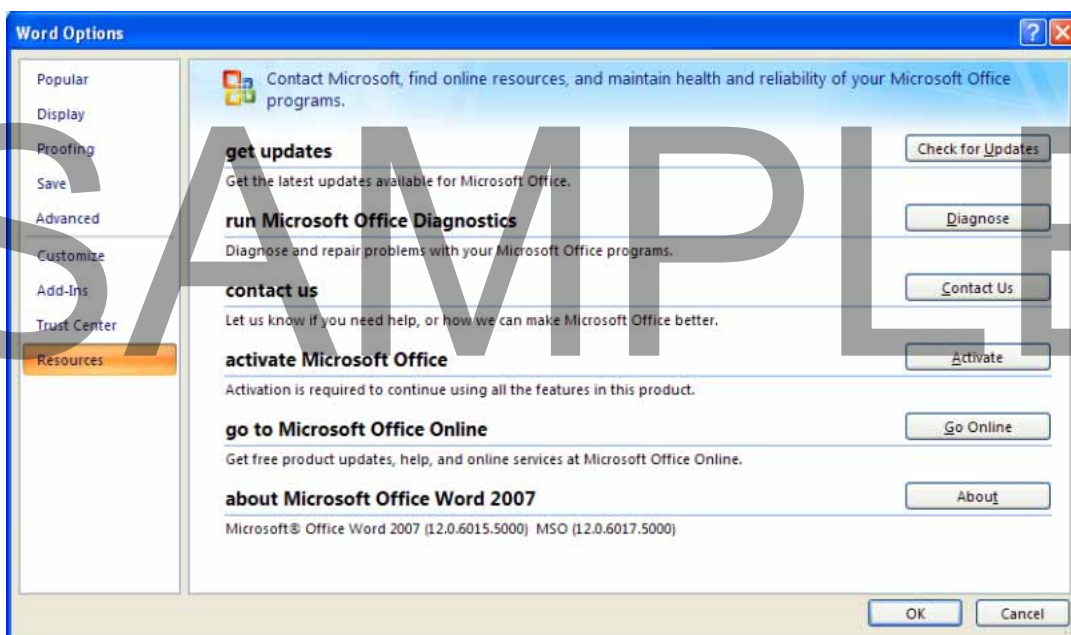
- To view the licence agreement within Word 2007, click on the **Office Button**. You will see a dialog box open and in the bottom-right corner of the dialog box you will see the following buttons. Click on the **Word Options** button.



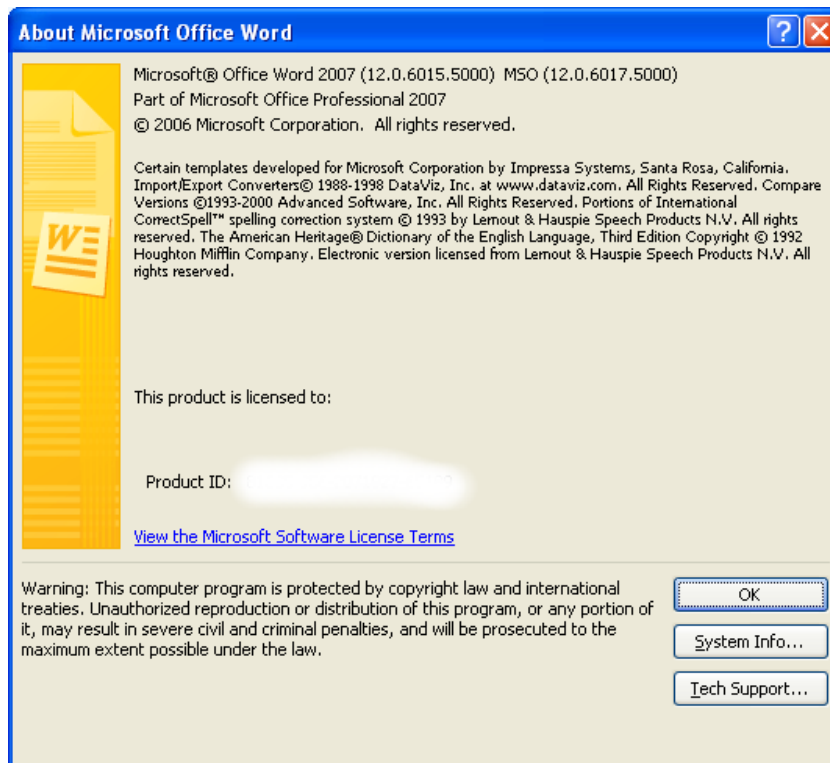
- You will see the following dialog box displayed.



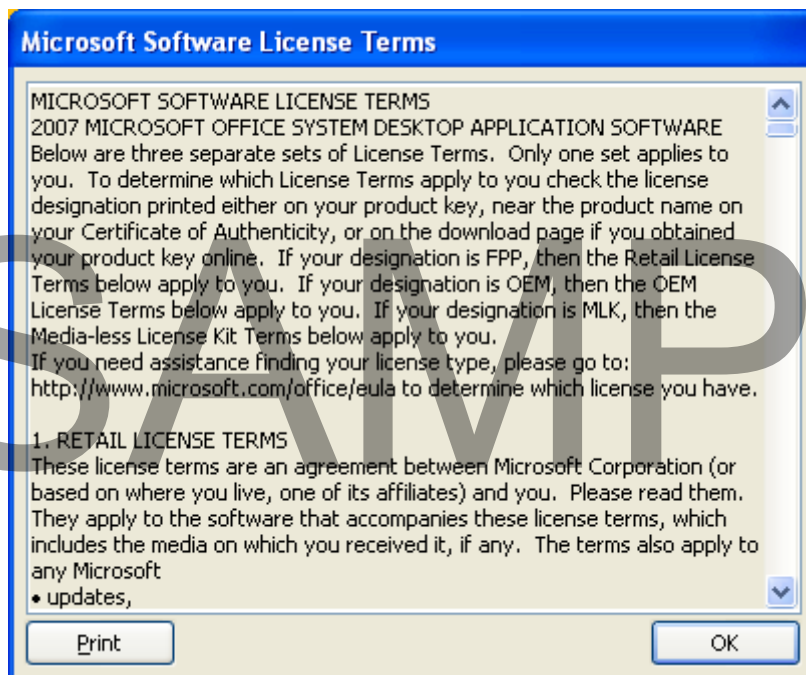
- Click on the **Resources** option (displayed down the left side of the dialog box). This will display the following.



- Click on the **About** button to the right of the **About Microsoft Office Word 2007** option. You will see the following.



- Click on the **View the Microsoft Software Licence Terms** link to view the terms and condition of your licence. You will see the following. Notice that you can print the terms and conditions if you want.



Types of licence agreements

- It is important that you understand that there are different types of software licence agreements.
- As well as traditional commercial agreements you need to understand the terms:
 - Shareware
 - Freeware
 - Open source

SAMPLE

End of the preview sample



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