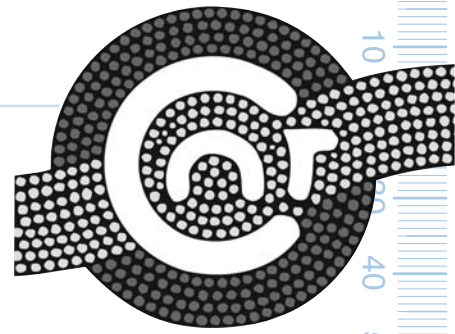


Looking after your computer in the bush



A computer is an expensive investment but one that is becoming increasingly more common in remote communities. In an office environment, computers are generally protected from the effects of environment but out in the bush it is another matter. Humidity, high temperatures, dust, water and vermin are some of the potential problems. This BUSH TECH provides some practical ways you can look after your computer in the bush, so that it increases the life time of computer, improves the general performance of your computer and helps safeguard your data.

MINIMISING THE ENVIRONMENTAL RISKS TO COMPUTERS IN REMOTE AREAS

Clean environments

Computers operate best when they are used in a clean environment and when they themselves are kept clean. Computers that are going to be used in dirty/dusty areas should be protected or cleaned more often. One preventive measure is to use an air cleaner in the room where the PC is located. There are also special cases and enclosures for computer hardware that are designed for industrial environments to safeguard against damage due to dirt but remember these must allow for ventilation (keep your computer some distance from the structure). If you remember to regularly clean the computer area and the computer equipment this will reduce the risk of dirt getting into your computer.

Effects of water

Electricity (cords, cables), computer equipment and water don't mix. Computers can short circuit if water gets into the cords and cables. Additionally, there are some even greater risks to you or other people's safety if water is around electricity. If the area you are working in is close to water it is essential to remove your computer.

Effects of vermin

Vermin (dogs, rodents and insects) are unwanted in the work environment. Vermin can cause damage to a number of parts of the computer, but particularly the cables resulting in loss of electrical power and damage to the equipment. The best way to keep vermin away from your computer is to regularly clean the area.

Effects of humidity

Extreme heat and humidity is a contributing factor to corrosion and possible condensation which can cause equipment in your computer to fail. Your computer will tend to heat up more if it is located near a window, jammed up against a wall or boxed in to case. The important point is to ensure that there is adequate ventilation to the computer. You should allow enough space for your cooling supply fan to circulate air.

In tropical Australia, if your computer is stored in an un-air conditioned room, the effects of humidity are significant. The cooling supply fan, even when it is in the best operational mode, may not be enough to cool your system down. Additional intake fans that are fitted with a filter may be an option where money is available.

Providing a room that is appropriate for the hardware is also a key factor. The general rule of thumb for room temperature is that computers operate best at temperatures around 15 to 24 Celsius. In tropical and arid Australia, the best environment for the computer is one with regulated temperature settings, air conditioning and active ventilation of the entire room. This is not always possible, but perhaps obtaining a few fans for the room your computer is stored in, could be a cost effective option.

Effects of dust

Combinations of humidity and dust are particularly harmful to your computer. Dust gets into the system which can clog up the fan and can over-heat your system. Dust can also create short circuits, especially in the power supply. The best way to protect your computer from overloading is to blow the dust out of your computer regularly (once a month). This can be done by opening up your computer case and using an air compressor, cloth or feather duster to remove the dust.

Parts of your computer that require particular attention:

- **KEYBOARD** Dust, water and other sticky substances cause the keyboard to function poorly. The spillage of these substances into the keyboard will prevent the keys from moving up and down. Keyboards also have very small switches under the keys that can eventually get clogged by dust and smoke and then stop functioning properly. You can keep the keyboard covered when not in use and avoid having substances near the keyboard while it is being used.
- **HARD DISK DRIVE** The hard disk drive has to work in a very clean environment, but also needs to "breathe" to allow for atmospheric changes. The drive has a vent that is covered by a filter. Dirt and smoke can clog the filter and eventually cause the drive to fail.
- **FLOPPY DISK DRIVE** The floppy disk drive heads are in contact with the disk surface. Small particles come off the disk and remain on the head. A special cleaning disk needs to be used to ensure the heads are kept clean. As well, dust and other particles can enter the drive through the front cover and clog up the mechanisms inside.
- **CD-ROM DRIVE** The laser in a CD-ROM needs to be cleaned. This can be done with a special cleaning CD. The CD is placed in the drive and allowed to run through a sequence that cleans the laser.
- **PRINTER** The type of printer determines the maintenance required. Laser printers usually require some cleaning when

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a new drum or toner cartridge is replaced. Instructions usually accompany the replacement parts. Occasionally, toner gets spilt inside and then the printer needs to be cleaned by a service technician. Ink Jet printers also need occasional maintenance as the ink jets become blocked. The printer usually has a cleaning cycle that will perform this task. Instructions are always in the manual.

- **MOUSE** Often fluff and dirt sticks to the ball and then wraps around the little rollers inside the mouse. The new mouse mats have a special surface that helps prevent the build-up of dirt in a mouse or have a look at box 3 for cleaning methods.
- **POWER SUPPLY AND PROCESSOR FAN** If the fan in the computer stops, eventually the processor will get too hot and fail. These fans do tend to wear out, this being indicated by strange whirring noises from within the case and need to be replaced when faulty.

When all else fails...

BACK UP, BACK UP, BACK UP

A simple rule with computers is to always back up the data on your computer. In office environments, this can be done through a network. However with personal computers your options are often limited to saving your information on disk or CDs, which depends on what hardware is within your computer. If you back up your data, this will mean that even if your computer breaks down, you are still able to access all your information/files on another computer.

Box 1

How do I clean my computer?

1. Never submerge your computer, keyboard, monitor or other devices in water.
2. For most computers, a clean, dry cloth is the best cleaning option.
3. Glass cleaners can be used to clean monitor screens but don't use these on laptops or flat screen type monitors.
4. Clean the keyboard using a can of compressed air or feather duster. This will help to blow the debris and dust out of the nooks and crannies.
5. Open the computer case and blow out the dirt and dust that's accumulated in the innards. You can use compressed air or cloth to remove the dust off.

Box 2





Looking after laptops

Laptops are good if you are moving from place to place. Some ways of protecting these is through a shock proof, hard case. There are many different models of these on the market. Some examples of the variety include: shock absorber springs in corners of the case, case lined with foam, rubber or cushion material, cases can be made with aluminium, plastic or other hard wearing metals and materials.



Box 3

How do I clean my mouse?

1. Remove the tracking-ball access plate according to the arrows.
2. Remove the ball and examine for any distortion. If there are any deformities; replace the mouse tracking ball or the entire unit.
3. Look in the mouse cavity that houses the tracking ball and remove any lint or dust.
4. Look at the rollers that would normally border the tracking ball. These rollers usually get a greasy build-up. Take a tiny pan head screwdriver and scrape off the build-up.
5. Use compressed air to give a final dusting.
6. With the tracking ball, use a lint free damp cloth to wipe off any grease or dust on the tracking ball. **DO NOT USE ISOPROPYL ALCOHOL** for the moisture in the lint free cloth, **USE WATER** and make sure the mouse is completely dry before re-inserting it back into the tracking ball cavity.
NOTE: Alcohols will shrink the mouse ball
Replace the tracking ball cover and test.