Preventive Maintenance of a PC

The average PC user doesn't think much about problems that can occur with a computer until the problem actually occurs. Once a failure happens, the repairs can be costly and time-consuming. There are, however, preventive measures that a user can take to decrease the likelihood of running into problems with the computer's smooth and efficient operation and also to lessen any damage that does occur despite best efforts to avoid failures.

Computer failures occur for a variety of reasons, sometimes because of human error and sometimes because of factors in the environment that cause a computer to malfunction (or a combination of human and environmental factors). These factors can include excessive buildups of dust, heat or magnetism; viruses picked up from the Internet or from storage media shared between different computers; static electricity shocks or power surges; carelessness, such as spilling liquids into a computer or bumping or dropping the hard drive casing; software that has not been configured correctly or a PC's setup that has been handled incorrectly; incorrect handling of upgrades.

The following tips will help lessen the likelihood of PC failure:

- Do not place a PC directly near a heating or cooling source, such as heating vents or air conditioners. Both excessive heat and cold can damage a PC. This includes putting the PC in the path of direct sunlight. Do not place a PC near water sources that can splash onto the components or drip down into them. This includes open windows through which rain can come and also under plants than can drip water down into them. Manufacturers often recommend that PCs be in a humidity-controlled environment, but again the PC should not be positioned so that an air conditioner is blowing cool air directly onto the unit (as temperature drops, the likelihood of static electricity increases). Also keep the PC's air vents unobstructed. Do not smoke around a PC.
- Do not connect power sources directly into wall outlets but rather connect them first to some form of surge protector. Surge protectors prevent electrical surges from destroying hard drives and erasing data.
- Buildups of dust can seriously hamper a PC's ability to cool down, and even if you never open your computer's case dust can still get in through the drive openings. An efficient way to clean dust from the inside of a computer is with compressed air, blowing dust away from the motherboard and other components. You should **never** blow air directly into a Floppy Drive as this can cause dust to lodge in the drive and cause it to malfunction. Users who are not familiar with working inside a computer case should take the unit to a professional for cleaning because it is possible to do more harm than good to a computer if you do not know how to safely work inside of a case.

- Be extremely careful when moving a PC from one location to another. Even small jolts can dislodge chips and expansion boards.
- Keep the root directory organized. Only keep your system's startup and software initialization files in the root directory. Application files and their data belong in a separate directory from the root directory.
- Do not store data files in the same directory that you store the software. This will eliminate the possibility of accidentally erasing or overwriting a software file.
- Keep a set of backup rescue disks for the operating system.
- Keep a backup copy of original software, either on CD or floppy disk. This type of software copying is perfectly legal.
- Keep meticulous records of default settings, any changes you make in a system's CMOS setup that differ from the default settings, and any maintenance you perform on the system. You can often use this record to backtrack when you are troubleshooting a problem and will become valuable if you decide to upgrade any of the system's components. It is also possible for the CMOS to lose settings and you will want a record of the setup to reconstruct it.
- Keep meticulous records of any expansion cards you install and the procedures you follow to install them.
- Save all documentation that comes with your PC and its components. You may need to refer to the documentation if something goes wrong.
- Do not compress your hard drive. Compressed hard drives are more likely to become corrupted than those that have not been compressed.
- Keep backup copies of any important data on a removable medium. Hard drives **can** fail and having important data on more than one medium can save a lot of stress and headaches.
- Install a virus scan program that automatically scans for viruses when the system boots. Do not download any files from the Internet unless you are certain the source is not transmitting a virus to you. Do not use any storage media that has been used in another computer unless you are certain the other computer is free of viruses and will not pass the virus on to your system.

Getting into the habit of maintaining the health and integrity of your system will save you money and time in the long run