ABORT, RETRY, FAIL...
RECOVER!

Losing an important file could cost you your job. If you know how to recover the lost file, you have not only managed to save that data, but also your job

You held down the [Shift] key while deleting a group of files in order to save yourself the trouble of having to empty them from the Recycle Bin and then realised that you did not mean to delete one of those files.

Or, you were so absorbed in your work that you did not save it, and then when the local electricity board chose to remind you of their existence, your unsaved work became history.

Grr!! Growl !!!!...

Losing data is a frustrating experience that all computer users are subject to.However, a well-prepared person usually finds himself in a better position to regain his data.

Have you lost it?

Data loss happens either due to human carelessness or because data was not saved and some electrical fault caused your computer to be turned off, or because your application or Windows crashed at a crucial time.

Viruses could be another cause. Present-day microcode organisms are a step ahead of theirancestors and aim at mass destruction. You could lose your entire hard disk at the stroke of midnight of

recovery professional, an option that is likely to be so expensive that you will find it cheaper to get a new hard disk and redo everything from the last backups.

Protection Pays

There is not much you can do to recover your data if you don't have backup protection already in place. The ideal protective gear for your PC includes a utility software toolkit, an anti virus application and a reliable backup application. A good utility kit (such as Network Associates' Nuts & Bolts or Symantec's Norton Utilities) will include an undelete utility, a disk maintenance tool (perhaps even a disk editor for those who must get down to the bits), a Registry analyser and a general system maintenance tool. Get an anti virus tool that provides

April 26th (WIN-CIH virus), rather than just a file as in the old days.

Physical disk errors are another possible culprit. What do you do if your floppy disks decide that they cannot serve you anymore? Hard disk drives are also prone to such problems, though it takes much longer for a hard disk drive to become corrupt. The first signal of a failing hard disk data read/write error is when appears on some part of the disk.

Any data that was stored in such a part is permanently lost. As time progresses, areas surrounding the damaged parts start to fail and soon the entire disk is unusable.

Sometimes, the end is more dramatic. The hard disk makes a loud screeching sound, goes silent and refuses to respond. This happens when the hard disk's head, which floats less than a millimetre above the disk surface (platter), crashes into it at about 4,500 rpm. The head scrapes along the platter, irreversibly damaging both itself and the platter in the process.

It is impossible to recover data from such a damage, except by visiting a data

BASICS

NOW YOU SEE IT, NOW YOU DON'T

What happens to files in the Recycle Bin when you empty it?

Windows considers the file deleted, but it really isn't gone fragments of the file still exist on your hard disk. Undelete utilities piece together these fragments into a complete file, when asked to undelete it.

This retrieval, to an extent, is made possible by the way Windows organises your disk.

Hard disks hold millions of bytes of data and because dealing with each byte separately is inconvenient, Windows organises them into groups called clusters. One set of such clusters is reserved for what is c a l l e d the File Allocation Table (FAT) and consists of links to all the files in any particular directory. Each directory has a separate File Allocation Table, and stored within each table is the information about the file's attributes the size and the (first) cluster where the file's contents are stored.

If the size of the file is larger than the size of the cluster, a pointer placed at the end of the cluster indicates continuation of the file into the next cluster. This logical next cluster may or may not be the physical next cluster.

When a file is deleted, Windows (or DOS) simply replaces the first letter of the file name with a special character (ASCII character 229) to indicate that the file has been deleted. The clusters that the file used are marked as unused even though the actual contents continue to exist within them. An undelete utility therefore has to just ask the user to recall the first letter of the file, then mark all the clusters formerly in use by the file, as in use again.

Trouble occurs when another file uses up a cluster from the deleted file. Since the deleted file's clusters are marked as free space, they can be occupied by any file that needs to expand in size. Windows applications tend to create many tempo-

software

Smart at Work

What's your problem?   And how you can solve it
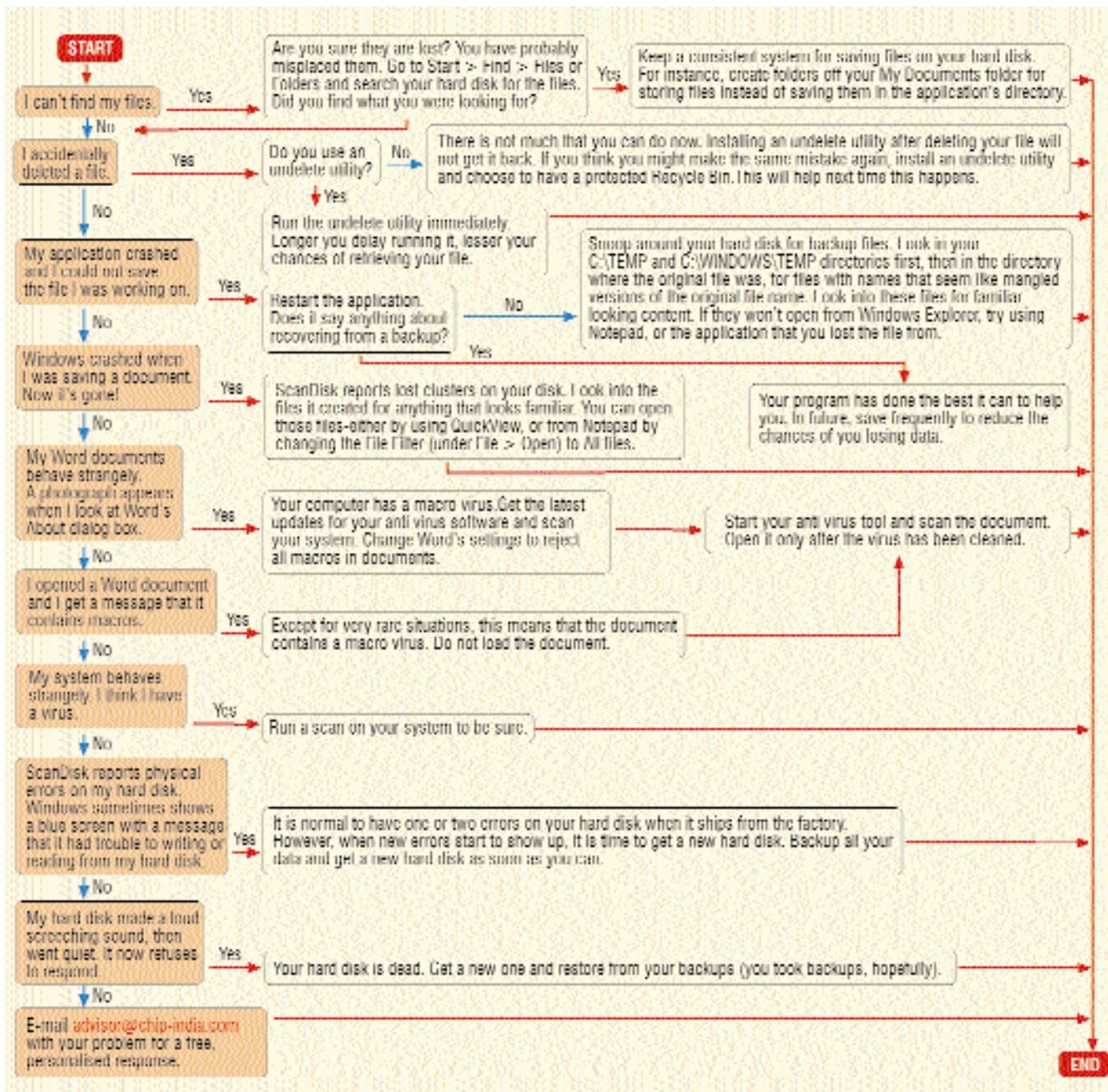
frequent and easily obtainable updates.

There was a time when a once-in-three-month update was fine. But now when viruses like Melissa survive in the wild for barely a month but wreck massive damage within that short span, frequent updates are a must.

Get an anti virus tool that hasan automatic upgrade feature. If this feature works well with your Internet access

method (direct connection, gateway or proxy server), it will save you the bother of frequently fishing for updates.

Finally, backup as often as possible. If you find backing up on floppies inconvenient and unreliable, look for someone who has a CD-Writer and get your data backed up on a CD-R. Or go in for a Zip drive or LS-120 drive.

While not as reliable as CDs, these

disk formats work well. New developments also make it possible to take backups online.

Sites like w w w.freedrive.com provide free and secure personal storage space—you can place any data in this space with the guarantee that it is inaccessible to anyone but you or your assigned delegate.

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