

Radio Days – 2013-12-07

Discussion – Recycling Old Computers

Computers are like shoes: they become old, lose their tread and breed scuff-marks around the edges. Like shoes, computers also become a part of the way we are because they have become comfortable and easy to slip into. Breaking-in a new computer can be compared to breaking-in a new pair of shoes or boots: both can be painful during the adjustment period!

Shoes, when worn-out, are just dumped into the rubbish bin, the recycling bin or the Salvo's bin for somebody else to use. Doing that with computers can lead to problems: computers are bad for the environment so should always be recycled rather than just sent to the tip with the rest of your rubbish.

A Cautionary Tale

Some years ago now, a second-hand computer changed hands for money. Shortly after this transaction was completed the computer decided that it did not want to continue working. The new owner contacted the old owner and asked for a refund. The old owner refused, stating that it was now the new owner's property.

The new owner took the computer to a repair shop and asked if there was anything that they could do to get it working again. The answer was that it was dead, but that they could recover all of the data off the old disc. The new owner accepted, and was duly handed an external disc with the data from the old computer's hard disc together with a new computer which worked.

This data proved to be interesting, especially when the new owner discovered that the old owner was a member of a family which did not approve of pornography! His revenge? He created a website then uploaded all the pornography from the old computer's hard disc to the website. The new owner then donned a sandwich board and walked up and down the street where the computer's old owner lived with his family. The sandwich board asked people to visit the new website to see what the computer's old owner had stored on his computer.

The computer's old owner did not like this treatment so sued the computer's new owner to have the website taken down and the sandwich board removed from his residential street. The judge dismissed the action on the grounds that the old owner had relinquished all rights to the old computer, and the data on its hard disc, when he sold it. The website stayed up and the computer's old owner was thrown out of the family home in disgrace.

A Better Way

As usual, there is a better way to handle the disposal of an old computer so that it does not come back to bite you later. You may not have pornography on your old computer (though one client did discover that their computer was being used by a hacker to store pornography in a special secret place on their hard disc!) but you may still have data which you do not want to fall into the wrong hands.

This data could be family photographs or business details from an accounting program. For full security you should take steps to ensure that your old computer is wiped completely clean of old data which could cause you embarrassment. There are a number of steps to take, in the correct order, to ensure that all your data and programs are removed from your old computer before you recycle it.

These steps, in order, are:

- Copy your data from your old computer to your new one
- Wait for at least a month to ensure that you have not lost any data in the transfer
- Reformat your old computer's hard disc then re-install Windows
- Wipe all the unused space on your old computer.

Step 1 – Copy Your Data

The first step is to copy all your data from your old computer to your new computer. The easiest way to do this is to use a USB stick or an external hard disc to hold your data while you are doing this. I have found that the best way is to get all a client's data onto the external medium then to remove the old computer and install the new computer in its place.

Now you can copy your data to your new computer, making sure that it is copied into the correct place. Many people were a bit vague about where their data was stored on their old Windows XP computer only to find that Windows 7 and Windows 8 are far more fussy about where photos, music and videos are stored. This means that many people, for the first time, have their photos, music and videos stored in the folders which Microsoft designed for them!

The program which I use to copy files is *SyncBack*: the free version will do everything that you need to copy the files which you can find to your external device.

Step 2 – Wait a Month

When copying your data to the USB stick or external hard disc it is easy to forget all sorts of data which then becomes important after you have lost it. The sorts of data which fall into this category are:

- Emails
- Addresses
- Internet favourites

Once you have determined that you have lost some of your more important data it is then time to re-start your old computer and find where your files are stored. There are four programs which I use to find files. Three of these programs are easy to use and the fourth, ZTreeWin, takes some getting used to but is really powerful for when you need its power.

These programs are:

- UltraSearch
- Search Everything
- Copernic Desktop Search
- ZTreeWin

Together these program will find most of your files. The first two programs find files by their name or part of their name; the third program finds certain types of file by text stored in the file and the fourth program finds files using either or both methods. Some of these files will be in unexpected places: all can be copied first to your external device then to your new computer. This means that the extra month or two that you kept your old computer will more than have been worth the effort.

Step 3 – Reinstall Windows

Once you are convinced that you have removed all the data from your old computer it is time to reinstall Windows. This will give your old computer's new owner a clean start with your old computer (if you give it to somebody) or that nobody who gets your recycled computer can find and use your old programs and data.

One of the questions which you will be asked during this reinstallation is *Do you want to format your hard disc?* and you should answer *Yes*. Reformatting your old hard disc removes all the index entries to your old files but does not remove your old files.

Removing the index entries is a start, but does not remove your old data. If you want to see just how much data is left after formatting your old disc then please download and install a program called *Recuva*. This program is very useful when it comes to recovering files from formatted discs. I remember a client whose sister formatted her camera card before copying the photographs off it. I was able to recover 621 photographs from this formatted card, much to my client's delight, using *Recuva*. Yes, it took some time but the results were worth it.

Many people think that formatting a hard disc or deleting a file actually removes it from a hard disc. It is easy, using a program like Recuva, to show that the file's data is still there even if the file does not show up in a folder listing. This is why you do the fourth step.

Step 4 – Wipe Your Hard Disc

The final step in preparing your computer for recycling is to wipe all traces of your data from its hard disc. The easiest program which I know for this is called *CCleaner*. To wipe your hard disc just download, install then run *CCleaner*: now click on *Tools* then click on *Drive Wiper*. This displays a page with several options.

The options you should take are:

- Free space only
- Security – this has several options
- Drives – select all your drives if you have more than one

The degree of wiping that you need to remove all traces of the files on your hard disc will determine which *Security* option you select. There are four options:

- 1 pass
- 3 passes
- 7 passes
- 35 passes

The more passes you select the more securely your data will be removed and the longer that the process will take. For most people one of the two middle options (3 or 7 passes) will be the best: any more is overkill unless you are the head honcho of the largest drug-running ring in the world and you keep all the details of your operation on your computer.

Please remember that this disc wiping could take days (literally!) if you have a large hard disc and you choose a large number of passes. There is a trade-off between security and time.

Please also remember to make sure that your computer will not turn itself off before your hard disc has been wiped. To make sure that your computer will keep running for the needed time please go to *Control Panel » Power Options* and set these options:

- Turn off the display: 10 minutes
- Put the computer to sleep: Never

Now let your computer do its task while you drink coffee in the sun.

Clearing Optical Discs

Optical discs, CDs and DVDs, cannot be wiped like hard discs. If you need to make an optical disc unreadable the best way is to cut it in half as half-discs cannot be read. Any reasonably strong scissors will do this job and ensure that your optical discs are completely safe from the wrong eyes. After cutting a disc in half please recycle it so that its materials can be reused.

Further Information

SyncBack	www.2brightsparks.com
UltraSearch	www.jam-software.de/ultrasearch
Search Everything	www.voidtools.com
Copernic Desktop Search	www.copernic.com
ZTreeWin	www.ztree.com
Recuva	www.piriform.com
CCleaner	www.piriform.com