Backing Up your Device
2018-06-08 Meeting Topic – John Hale

Computers:

We emphasised how important it is to back-up the data stored on your device's hard drive to an external data storage device such as an external hard drive (or a flash drive) or to 'the cloud'.

Each has its advantages and disadvantages:

External Hard Disk Drive Advantages:
- Simple to set up and use
- External HDDs are not costly these days
- Unlikely to be infiltrated by online hackers
- Quick transfer of data files via USB
- Can be programmed to make regular backups

Cloud Storage Advantages:
- Often free space available
- You can access files from anywhere as long as you have an internet connection
- Files are backed up to remote servers - even if you lost your computer, they would be safe

External HDD Disadvantages:
- Drive, and your files on it, could be stolen
- If the HDD is damaged, you could lose your backed-up files
- Drive could fail, like all drives with moving parts

Cloud Storage Disadvantages:
- File uploads could take time if your internet is slow
- Despite encryption, your files are stored away from you so could be accessed or deleted
- Larger file storage can be costly
- No access to your files if internet goes down

We discussed various ways of making regular backups of your computer's drives. I mentioned that I do not use the Microsoft default of saving documents to the C drive but instead always partition my computers' hard drives immediately after purchase to make partition one (Drive C) contain all programs and the operating system while the second partition (designated Drive D) has a full directory structure which accepts all my documents, photos, audio and video files etc generated and saved by the programs running on the C drive. This makes backing up my all important documents (which are all on the D drive) an absolute doddle!

I then demonstrated (using Windows 7 laptop) my regular use of a paid-for program (currently $49.95) called **Casper** (from US company Future Systems Solutions) which, after initially taking perhaps 30 minutes to make its first backup (a clone of the computer's drive), thereafter only has to do an incremental backup which takes about one or two minutes for my Documents drive D, and about six for the Programs drive C.

You can get further details about Casper at: https://www.fssdev.com/

Casper generates absolute clones of the computer's drive(s) whose files can therefore be accessed, and dragged and dropped in the usual way, using Windows Explorer.

For small backups a **USB flash drive** could be used.
As with all solid state devices, I pointed out that you should never defrag them due to the wear-leveling algorithms they use.

Paul Lurie (and Steve Millar) spoke about backing up on Windows 10 using **File History** *(see separate document).*

I then mentioned that it is advisable to make a **System Image** (ISO file) backup to an external HDD from time to time – especially of the C drive containing the O/S and programs etc. This is a lengthy process which can typically take over an hour to complete. While it will enable you completely to restore your computer's hard drive to the state it was at the time the image was taken (eg if you were starting with a replacement disc after failure), unlike the clone mentioned above, you cannot access individual files saved within the image file.

Additionally, two backups are worth making regularly are:
- **Registry backup:** Type Windows+R then Regedit/File/Export and save your Registry
- **System Restore:** Go to 'System Properties' then 'System Protection' then 'Create'

Cloud Storage can use Dropbox; Google Drive; Microsoft OneDrive; Amazon Drive etc, most of which give you between 2 and 15 Gb of free storage. After that you will have to pay for storage according to their price plans of, typically, £60-80 per year for 1Tb.

iPads and iPhones:

We then turned to backing up iPad tablets (and iPhones, which use the same system) in iOS 11. When purchasing an Apple device, you have access to 5Gb of data storage 'in the cloud'. As long as you are connected to the internet, this makes automatically backing up your iPad or iPhone very easy – you don't even have to schedule it as it happens automatically if your device is on and has a wi-fi signal. You can also back up your device to your Windows (or Mac) computer but this uses Apple's own iTunes which must be installed on your computer (plus a USB to 'lightning' lead). Note: After you do this, ensure you have switched the backup method back to iCloud or the automatic cloud backups may not happen!

To set up automatic iCloud backups in your device, do the following in iOS 11:
- Open System Settings
- Tap your name at the top
- In the right pane tap iCloud
- In the right pane scroll down a bit and tap iCloud Backup
- In the right pane switch the iCloud Backup to 'ON' [it may be on already]
- Automatic backups should now take place
- You can 'force' a backup by tapping 'Back Up Now'

The main message is: Please back up all your devices *somewhere* before disaster strikes and all your hours of computer work are lost forever!

John Hale 2018-06-09