

## Tip of The Month: Cloud storage of our computer files

When we save a file “in the cloud”, our information is actually stored in data centres, massive buildings filled with hard drives. These hard drives have to be running at all times. This is why “cloud” storage uses so much electricity, and why globally it creates a huge carbon footprint that now exceeds the emissions from the whole of the airline industry!

It has been calculated that storing 100 gigabytes of data “in the cloud” for a year produces 0.2 tons of CO<sub>2</sub>e. A single data centre uses the same amount of electricity as can power up to 50,000 homes. Global “cloud” data capacity is projected to more than double by 2025 compared to 2020.

Data centres also require a continual water supply for use in cooling and humidity control. Larger centres can consume up to 5 million gallons of water each day! Not to forget the mining of rare-earth elements used in computer components.

The fact that the environmental costs are hard to perceive is what makes them so insidious.

The greatest benefits of “cloud” storage are convenience and the ability to recover files if a computer or smartphone is damaged or lost. There is however always a risk of unauthorised access to our information.



The most sustainable and viable alternative to using cloud data storage is to back up files on an external hard drive. It only requires a fraction of a kilowatt to save all the information backed up and on the computer. The cost and size of external hard drives, including solid state, are falling. The

downside is that if lost or destroyed all of the data is permanently irretrievable.

I have a solid state hard drive of 510 gigabytes on my mid range laptop plus an external 1 terabyte hard drive with my archived files. All my current files including programmes fill around half the laptop drive. About once a week I back up all my files onto a second 2 terabytes external hard drive using a simple programme.

**The tip of the month is to consider what really needs backing up on the “cloud” and if possible storing some or all your computer files on an external hard drive, thereby reduce your computing carbon footprint and saving yourself the ongoing costs.**

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