

The fickle Memory Stick, Pen Drive, flash drive, USB. Be very careful with your work if your USB is approaching super-saturation.

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During the mid 1970s, 1976 to be precise, the five and a quarter inch floppy disk was introduced and it was wonderful because it enabled computer users to back-up around 100,000K of data/work. The process was quite slow and often involved using a source disk (i.e. the one with the material on it which was to be copied), copying selected material from that source disk and then inserting a fresh destination disk upon which those data were to be pasted. We thought it was wonderful even if we had to have our wits about us and even though the process, by today's time-frames, was very, very slow.

But then, six years later, in 1982, (which for the discerning historian is a mere twenty-nine years ago), the five and a quarter became replaced by the 3½ inch floppy disk. Very quickly, the "put a 5¼ inch disk in; copy; put the next disk in; paste" routine became replaced by what was known as the "Macintosh shuffle". Basically, that meant that we substituted a 5¼ floppy for a much firmer and more compact 3½ inch disk until, eventually, twin disk apertures (or disk slots) appeared which obviated the need for that shuffle. And wouldn't you know it – in 1997 they introduced a CD that was readable and writeable. Pretty well immediately, we, the purchasing public were exhorted to change our ways and so we continued the back-up mantra by copying everything onto CDs. Like its predecessors, these disks relied upon moving parts and that rendered them fickle as is the case with practically all technologies which have movement.

You've probably anticipated the next phase: the sale of CDs halved almost overnight when Flash drives entered the accessories market. In reality, flash drives don't have any moving parts although the name 'drive' has persisted. Since they were first introduced in the year 2000 they've steadily grown in storage capacity and robustness whilst becoming ever-smaller in physical size. Two terabytes are ready to go on sale and the durability of these wonderful little devices has been put at ten years. To give you some idea of it all, my first memory stick was a mere 250 megabytes in size and I've still got it. My most recent one (of the eleven I have in all) can store five gigabytes of data and it's really very tiny in size. But there's a catch to using memory sticks and that's why I'm penning this note.

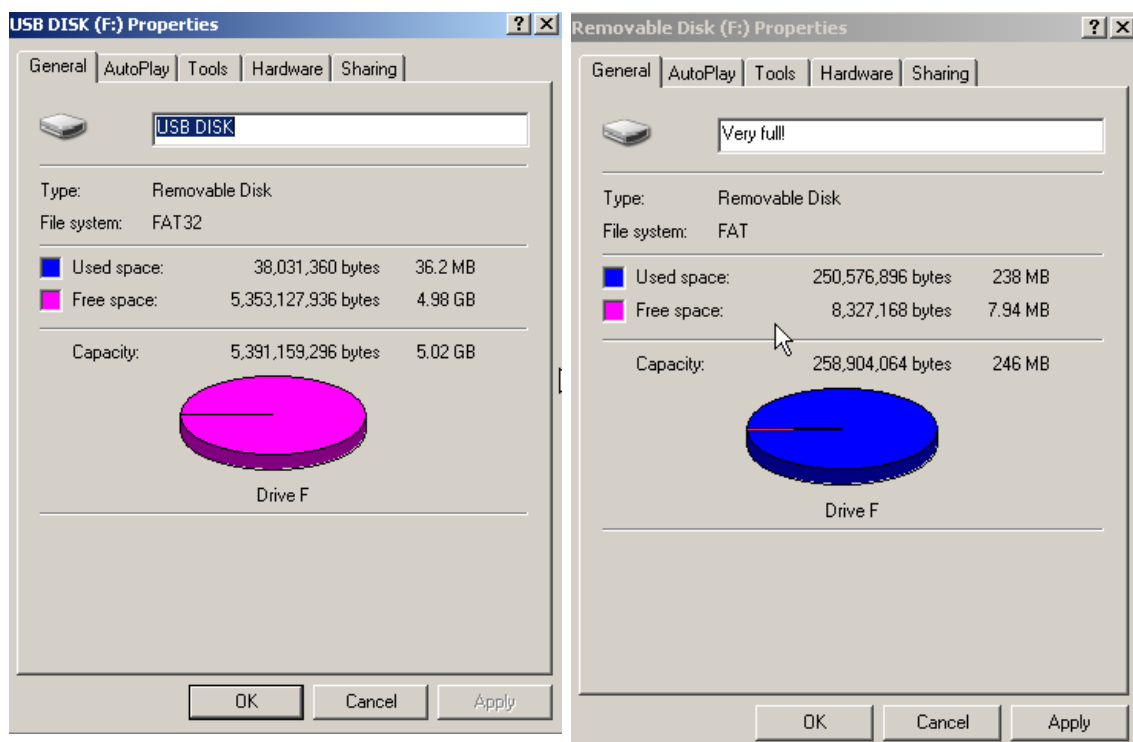
A couple of years ago, when the capacity of memory sticks reached two gigabytes and prices became demonstrably affordable, individuals, agencies and institutions assumed largess. They'd buy these wonderful pen-drives (call them what you will) and encourage staff to use them which they have – wonderfully well. Almost too well.

The trouble is that two years on, the myriad of two gigabyte USBs are now nearing fullness; they've reached a form of clogged-up super-saturation where nothing else can be added and things are too clogged up to even permit removal! So they die. They become useless

unrepairable accessories precisely because they're chock-full and choked up with data. They can, therefore, no longer be used. At the Manukau Institute of Technology, computer help staff have told me informally that they're seeing some two or three staff owned clogged/corrupted memory sticks on a daily basis. That's an awful lot of academic work that's become lost and that's a high cost to any institution. There are a number of preventative measures, though, which can be brought into play:

First, avoid using your memory stick as a mini-hard drive. It's not a hard drive and was never intended to be one so use it only as a transporter. Copy the files you are working with onto your desk computer or onto your lap-top and work with it from there. Your computer affords a far more secure platform for progressing your work. I think we've all been guilty of writing directly into a pen-drive – I certainly have. But I pretty well stopped doing that altogether when two close colleagues lost a complete degree they'd been writing because their memory stick became corrupted.

Second, be vigilant in monitoring the capacity of your memory stick. That means that you should regularly check to see how much space has been used on your USB and you should also be very aware of just how much space is still available. To do that, all you have to do is right click from within the list of items you activate when you open the stick and then select "Properties". You'll generate a picture like this one (on the left) which shows that my latest USB is very empty as of now. But compare that to the properties of my very first stick (on the right) and there's an entirely different picture. The second one is very much at risk.



There's a *third* measure that that you can use to protect your work and that is to use "Dropbox". I earnestly encourage you to use this free Internet cloud-based accessory. What it does is very simple: it stores data (things you're working on) in the ether and it constantly makes sure that the version you work on that's been stored in your Drop box is the most up-to-date version available. What's more, you can retrieve your work from Dropbox simply by logging onto the Internet and going into your Dropbox account. You can do this from any computer on the planet that is connected to the Internet. It all boils down to a very convenient 'strewth' that any work you store in Dropbox will be updated for you the next time you open it up on another Dropbox enabled computer!

A *fourth* strategy involves using Google sites but to use 'sites' you must have a Google Gmail account. Because Dropbox offers only a relatively small storage capacity (at this point), it might be quite useful for you to subscribe to Google Sites so that you can use it as an additional cloud-based storage tool. Like Dropbox, this storage system is currently free and it will enable you to store ten gigabytes. I hope it remains free.

Fifth and finally, do, from time-to-time, make a point of backing up the entire content of each of your memory sticks. It's a laborious task but I can promise you it's well worth the effort. I know of an academic who lost a memory stick whilst she was overseas and hence all of the work she'd completed vanished from her possession. Prompted by her experience, I took each of my sticks and copied each of them onto an external hard drive I operate at home. Scheduling additional backing up sessions is worthwhile even though I must confess to not always practicing what I preach in that regard.

So what have I proposed? I guess the thrust of it all has been to suggest that even though technological solutions have steadily come off the creativity conveyer belt, those solutions tend to be temporary at best and they're invariably quite fickle. And insofar as the most recent generation of memory sticks is concerned, the crunch time for taking precautions against losing all of the work from the past two years appears to be about now. So why not take some precautions to make sure that your fickle memory sticks, USBs, call them what you will, are secure and non-corruptible. Happy backing up and fruitful 'Dropboxing' everyone.