

THE ACADEMY OF PLUMBING 5 – MACHEALTH: DON'T CALL ME...

This month I thought I'd try and put myself out of business by imparting a few tricks and procedures which, if followed, will reduce your need to call people like me in the first place. Let's start with a few of bits of software that ought to be on every hard drive, and one that shouldn't.

APPLEJACK

This is not a program, as we know it. It's actually a UNIX Shell Script which works a bit like a macro in that it instructs various UNIX utilities included with OSX to run and do their work, then checks the results of each before moving on to the next stage of the process. It will:

- repair the hard drive you're booted from, which nothing else can;
- repair wonky file permissions and restore them to their default state;
- re-create the hidden system /tmp folder (used by many applications and processes for temporary file storage) if one doesn't exist for some reason. The lack of a /tmp folder can be the cause of lots of seemingly unrelated problems;
- delete system and user cache files. Stale data in UNIX caches can again be the cause of lots of seemingly unrelated problems, especially after an operating system or security update;
- remove Virtual Memory swapfiles, again potential repositories of corrupt or stale conflict-causing data following a system update; and
- verify the validity of preference files and quarantine any duds.

Not bad for a free bit of software, eh? The only fly in the ointment is that it doesn't run in OS X like a normal application, but has to be run in UNIX Single User Mode which, when entered, causes the screen to turn black and fill with frightening UNIX gibberish in white text. No matter. We're made of sterner stuff than that and can cope with a little UNIX command-line geekiness when we have to, so here's what to do:

- Download and install AppleJack (<http://tinyurl.com/phvdd>). You need to be an administrator or know an admin username and password to complete the installation. Most of you will be by default.
- Restart the Mac in Single User Mode by holding down the Apple and S keys immediately after you hear the startup chime, keeping them held down until the grey apple appears on the screen. Then release them.
- The screen will then turn black and fill with gibberish in white text. The gibberish will eventually stop at the line localhost:/root#, at which you type "applejack AUTO restart" (that's lowercase "applejack", a space; then uppercase "AUTO", then another space; then lowercase "restart", but without the quotes), then press the Return key twice.

AppleJack will proceed to get UNIX to fix your drive, repair permissions, clean out cache and swap files, verify preference files and reboot your Mac, which will initially seem slow as it rebuilds caches. It will quickly speed back up to normal, though, and usually feel faster and more fluid than it did before being AppleJacked. Ah, how we nerdy types love inventing verbs.

So, AppleJack is probably the nearest thing we have to a maintenance magic bullet, unless you're running an Intel Macintosh. At the time of writing, AppleJack doesn't run on Intel Macs. Its

programmer, Christopher Widholm, has recently acquired an Intel Mac mini and is busy porting it, though, so I daresay an Intel version will appear before long and may even be available by the time you read this.

SMARTREPORTER

Yes, I know I've mentioned it before. In fact, I think I've never not mentioned it in this column. And yet, in my cheery travels in my white van (Oi! Get out of my way you ****) I still encounter Macintoshes ungraced by this piece of free insurance.

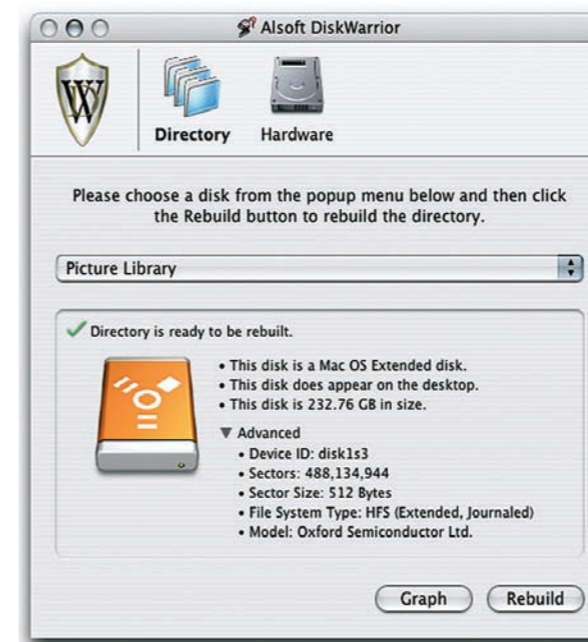
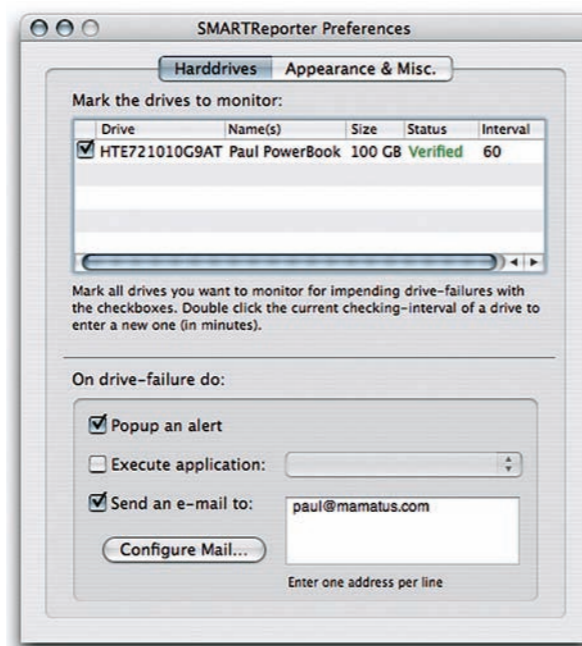
Modern hard drives have what is called S.M.A.R.T. onboard. S.M.A.R.T. is an acronym for Self-Monitoring, Analysis and Reporting Technology, which must have taken a bit of coercing to arrive at. Anyway, S.M.A.R.T. is a pretty smart way for the drive to check the state of its hardware, calibrate itself and warn you if it's not behaving as it should, ie is about to fail.

The problem is, the warning goes nowhere: it is invisible except from within Disk Utility, is resolutely ignored by OS X and you live in blissful ignorance of your failing drive until your un-backed-up PowerBook suddenly crashes at the end of a long, expensive day's shooting and refuses to restart. Ever. SMARTReporter polls the drive's S.M.A.R.T. hourly (or more frequently if you prefer) and will warn you in a number of attention-grabbing ways if the drive reckons it is about to fail.

It will also display the current state of health of all of your internally-connected hard drives and externally-connected SATA drives in a number of attractive ways.

What's not to like? Well, it won't check FireWire drives because Apple have yet to see fit to implement S.M.A.R.T. reporting over FireWire in OS X, but that's hardly SMARTReporter's fault. Get it from (<http://snipurl.com/qdaw>) and install it now. It's free.

It saved me when my PowerBook's hard drive failed a few months back, and I was able to back up my day's data before the drive finally packed up. What would you rather do, spend two minutes installing this thing, or look a **** when your PowerBook fails on a shoot and takes your work with it? I'm thinking of levying a surcharge for fixing Macs that are not running SMARTReporter...



DISKWARRIOR

Venerable, dependable, excellent, concentrates on doing one thing well. Remember those virtues? DiskWarrior has them all and can sort out problems small and large that fsck (Apple's built-in disk fixer) cannot, including fixing the illegal text-encoding somewhat ironically contained within some files in the Legal folders installed by Adobe CS2 apps, and the surprising disk directory damage their presence can cause. Basically, if DiskWarrior can't fix it, it can't be fixed and you're looking at data recovery instead. Get it here: (<http://tinyurl.com/2zmn2>). The current version 3.0.3 doesn't run on Intel Macs, but that's because Alsoft are taking the time to make the Intel version completely bug-free, which is rather more than can be said of most software publishers. It can however be run on a PowerPC Mac to fix an Intel Mac running in Target Disk Mode and connected via FireWire.

NORTON UTILITIES

Ah, how the mighty are fallen. Once a must-have; nowadays at best of marginal use, at worst pure poison. If you run it out of habit or OS9 nostalgia, turn it off. If you were sold it by some smooth-talker, get your money back. Don't run Norton Disk Doctor. It can do little of use that is not done better and more safely by fsck (which is what AppleJack invokes) or DiskWarrior and can do a very great deal of harm. I can't supply a screen-shot because I don't have this software on my drive.

Equally, Norton Internet Security is of little practical use if you run OS X's built-in firewall, especially if you connect to the Internet via an Ethernet-based router rather than a USB ADSL modem. Norton Antivirus will get rid of viruses, but has been fingered recently for damaging drives that didn't have viruses on them in the first place. You don't need it. Delete.

PROCEDURES

- Run AppleJack monthly. It'll do you no harm.
- Run it after every crash, especially a crash involving a Kernel Panic, the fancy name given to that weird lock-up when the screen goes grey and a box appears telling you in four languages that you need to restart your Mac.
- Run Repair Disk from Disk Utility (in Applications/Utilities) over your other drives monthly, too.

More location e-mail

Gosh, it's a fast-moving old world, isn't it? Two more solutions to the problem of sending e-mail when on location have emerged, if you're still stymied having tried all the other tricks so far. WifisMTP (<http://snipurl.com/udxp>) can figure out which ISP is providing your wireless hotspot and tell you the name of its SMTP server. Assuming you don't have to authenticate to use it, all you do is whack it into the SMTP server field of your e-mail application and you're off.

It transpires that a little-known benefit of a Google Mail account (at least, little-known to me until recently) is that you also get access to an SMTP server running on Port 587, avoiding port-blocking of port 25 by ISPs and again allowing you to send mail. (<http://snipurl.com/udxo>).

Mind you, if you're staying with someone who has wireless or broadband access, why not just ask them for their ISP login information? I did this in Sweden last month (Telia were port-blocking and PostFix didn't work) and it worked a treat, no authentication required.

OPERATING SYSTEM UPDATES

When an OS Update or Security Update appears, read (<http://www.MacFixit.com>) for latest user reports and decide whether or not you want to do this now or wait a bit: occasionally there can be a nasty bug in an OS Update or Security Update, such as the one a while back which disabled ftp service. Have a full backup available. Here's my procedure:

- Make sure you have AppleJack installed.
- Don't accept Software Update's offer to update your OS for you, but instead download the relevant OS X Combo updater (<http://tinyurl.com/2epus>).
- Run AppleJack.
- De-authorise any Adobe CS2 applications.
- Connect an external FireWire hard drive large enough to hold the contents of your boot drive, erase it with Disk Utility, then use SuperDuper! (<http://tinyurl.com/euu4l>) to make a bootable backup of your boot drive (read the instructions, it's simple).
- When that's finished, disconnect the external drive and run the Combo updater. Don't do anything else on the Mac while it's running.
- After the Mac has finished restarting, restart it again in Single User Mode and again run AppleJack.
- Re-Authorise CS2.
- Then do a few ordinary tasks to check that everything works properly. If it doesn't and you want to revert to your previous system, you have a full, working, up-to-date backup from which to do so.

Do all of the above and you are unlikely to have much trouble at all with your Macintoshes, and after all, that's what you want. You don't really want to have to call out a plumber, do you?

Er, you weren't intending to take that on the aeroplane with you, were you, sir? Those of you still hungry for information can keep up by periodically checking my blog at <http://www.thedigitalplumber.co.uk>, where you'll also find my contact details.