Top OS X tips

The ultimate Mac tune-up

By Rob Griffiths

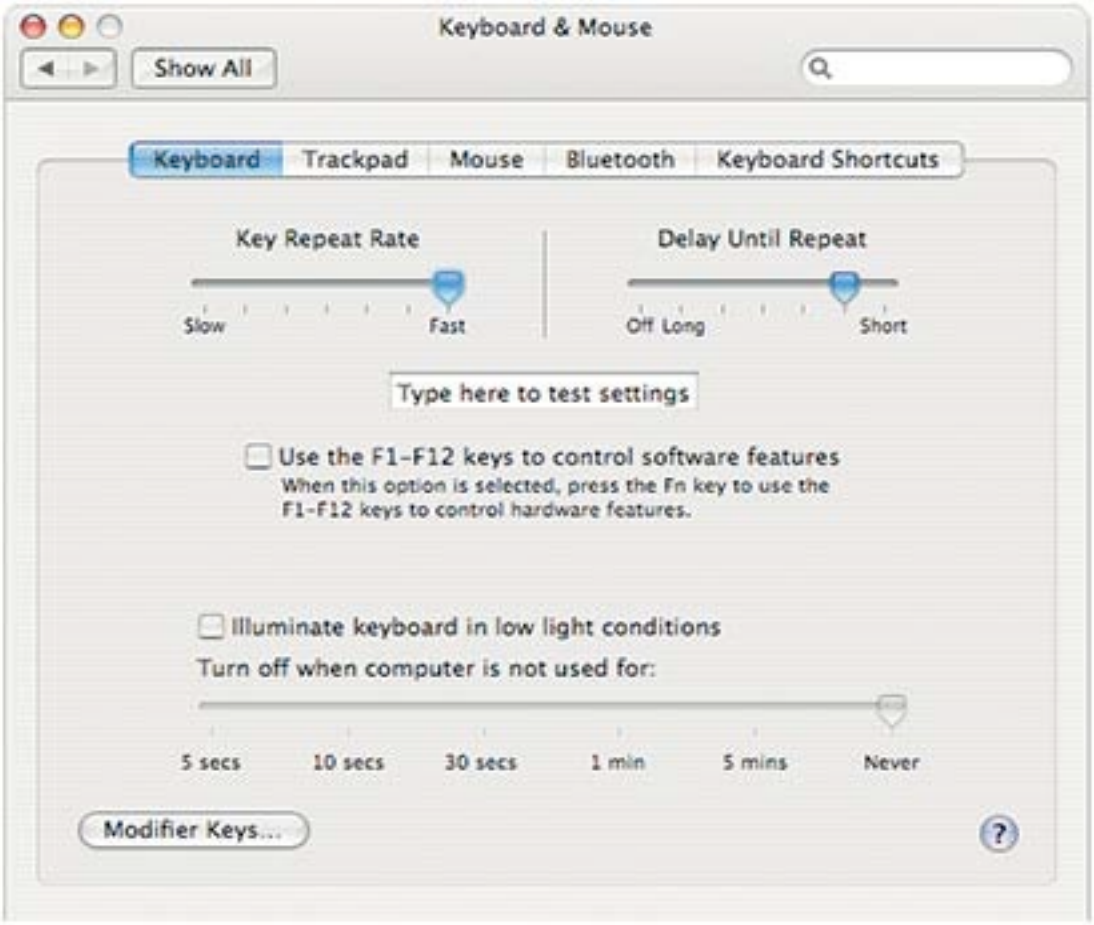
Want more speed from OS X? The operating system is pretty good at keeping itself in good shape, so there isn't actually a whole lot you can do to improve OS performance. You can, however, give it a few little boosts. None of these techniques will turn your aging G3/500MHz iBook into a new dual-G5 Power Mac—but every little bit helps.

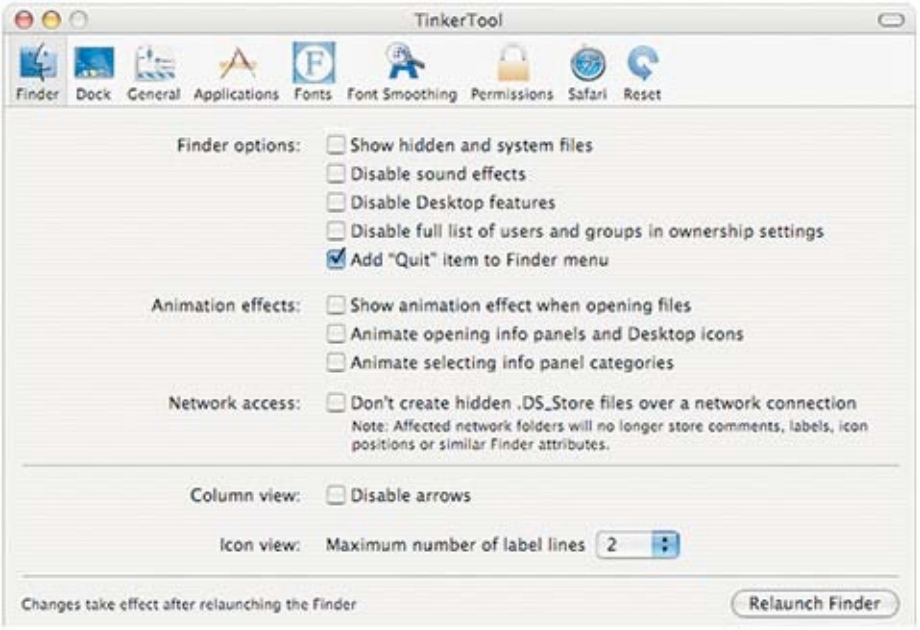
Reduce desktop clutter

The desktop can be a great place to drop stuff, but because of the way OSX handles desktop icons, putting stuff there can also slow your system down. The operating system treats each desktop icon just like a full-size Finder window—the icon takes up a chunk of memory, and the system has to track its position and size at all times. Drop enough files and folders on your desktop, and you may start to notice side effects (such as spinning beach balls) when you're trying to do something as simple as open a new Finder window. Here's one simple way to cut down on the clutter (and system drag) without losing that handy storage place: create a folder or two on your desktop (call them Need To Look At and Things To Do, for example), and then move all the items from your desktop into the new folders.

Tweak the Finder

Although the Finder's various visual animations can be nice eye candy, they can also be real resource hogs. TinkerTool makes it easy to turn them off.





When you increase the key repeat rate and decrease the delay before repeat, you can make your keyboard feel faster.

For machines with older video cards, disabling some of the Finder's visual animations (zoom effects, scrolling info panels, and so on) can provide a notable increase in speed. Although you can do this in Terminal, the easiest way is to install Marcel Bresink's TinkerTool utility ($9). In the Finder section, remove the check marks from all the boxes in the Animation Effects part of the page, and then click on the Relaunch Finder button (see top screenshot). And here's another tip: in the Dock section of TinkerTool, you can enable the Suck In effect, a third animation style for minimizing windows. This is probably the fastest of the three (the other two are Scale and Genie), but it's available only in TinkerTool (or via Terminal).

Skip disk image verification

When you mount a disk image, OS X first verifies the disk's checksum to make sure that nobody has tampered with the data on the disk image. Theoretically, that step is important. But when you're dealing with disk images from trusted sources (which is most of the time, I hope), it's redundant. (In five years of OS X usage, I have yet to have a checksum test fail.) Thankfully, you can easily disable this

feature. If you downloaded TinkerTool earlier, just look in the Applications section and choose the Skip Checksum Verification When Opening DMG Files option. If you don't have TinkerTool, open Terminal and type defaults write com.apple .frameworks.diskimages skip-verify true. From now on, you won't see the checksum-verification progress box. To reenable it, repeat the above command but change true to false .

• For more on checksum security, see the sidebar on Page 2.

Change the Dock animation

Open the Dock preference pane and change the Minimize Using pop-up menu to Scale Effect. (If you have TinkerTool, you can use that utility's Suck In effect, which is faster than Scale.) On many machines, especially those with slower video cards, you'll notice that windows minimize to the Dock much more smoothly when this effect is enabled. While you're in this preference pane, deselect the Animate Opening Applications option; when this option is turned off, you'll no longer have to waste time watching an application's icon bounce around before the app opens.

Speed up your keyboard

Switch over to the Keyboard & Mouse preference pane and open the Keyboard tab. Then set the Key Repeat Rate setting to Fast and move the Delay Until Repeat slider closer to the Short end of the bar (see bottom screenshot). Both of these changes will make your machine feel more responsive. For instance, text will disappear at a much quicker rate when you hold down the delete key. You can do a bit of experimenting to find the settings that work best with your typing style.

Concerning disk image checksums

One of the OS X speed-up tips from our March ‘06 issue (on the previous page) had to do with had to do with speeding disk image mounting by skipping the disk checksum verification step. (That’s what’s happening when you see the little progress bar zipping across the screen before the image mounts.)

When you disable the checksum verification, disk images will mount much more quickly. However, this tip prompted one reader to post some concerns about the advice:

One of the “Top OS X Tips” listed in the March ‘06 issue is to disable disk image verification as a means of speeding up mounting disk images. This is horrible advice. Even with trusted sources, images can get corrupted or someone may compromise the system from which you are getting the data. The fact is that checksuming helps maintain data integrity and security.

Even if we don’t understand why it is there or trust the source, it should be left well enough alone. The time saved by turning off such a knob can be wasted tenfold dealing with a problem that would have been caught had the test been left alone. Considering many people have moved away from Windows to OS X with an eye on simple security, it is bad advice when we chip away at inherent checks and balances in the name of speed.

I replied in the original thread, but we felt that the question was important enough to merit separate coverage. What follows is a slight rewrite (to add detail, clarify some things, and reformat for presentation as an article) of my original response.

After re-reading the tip to make sure I hadn't written something I didn't intend to write, I told the original poster that I stand by my advice: disabling checksums is a reasonably safe way to speed up your Mac. That doesn't necessarily mean it's a 100% safe thing to do, and I even commented as much in the article. But it is really quite safe. I'll try to explain why …

As an aside, I didn't know when I wrote the tips article that Apple themselves have made skipping checksum verification as simple as checking a preferences box. Launch Disk Utility, open its Preferences, and go to the Mounting tab. Uncheck Verify Checksums, and it's now disabled. You'll receive no warning about the dangers involved in skipping checksums, either. If this were really such a dangerous thing, you'd think Apple would warn you about it, but they don't. Not even in Help will you find any warnings about the importance of verifying the checksums.

The poster had two concerns—data integrity and security. Let's discuss security first …

Consider a disk image containing a hacked piece of code. The hacker has to create the disk image holding their cracked code themselves. They cannot modify files on software distribution disk images directly, since they are Read Only media (try dragging something onto an application's disk image sometime; it's write-only). So the hacker had to download the application they wanted to hack, install it locally, modify it to insert his/her malicious code, and then create a new disk image with their modified code on it. When they do this, they would also create a new disk image checksum automatically, as part of the process. Then they somehow have to get their hacked disk image onto a trusted site. Assume they do that, and you now download it …

When you mount the hacked disk image, the checksum **will** verify, assuming there aren't any errors when reading the image. So the disk image will mount just fine, providing you with a false sense of security, that there's no hacked program on the image. "Gee, this disk must be fine, because the checksum verified." Unfortunately, that's far from true. Apple themselves describe it this way:

The checksum is a way for a disk image program to verify all information for the given image is there.

That's all the checksum does—it verifies that what was read off the disk image matches what was actually on the image. Wikipedia's page on checksums says this (the emphasis on accidental is theirs, not mine):

These types of redundancy checks are useful in detecting *accidental* modification, such as corruption to stored data or errors in a communication channel. However, they provide no security against a malicious agent, as their simple mathematical structure makes them trivial to circumvent.

So the checksum provides zero protection against hacking. What about data integrity errors?

When you have checksum verification enabled, if the checksum fails, you'll see an error message and the image won't mount. Most of the time, such errors are caused by unreadable data on the disk image—there's a file there somewhere that the Mac just can't read, so the checksum fails. If you disable verification, and there's bad data on the disk image, guess what happens? It still won't mount, because it still can't read the data. You'll still see an error message, too, so you know something's wrong with the image.

If it does happen to mount, then you'll probably have nothing but troubles with it. So in this very precise situation, the checksum would help you discover that there's something wrong with the disk. As anecdotal real-world evidence, I've had checksum verification disabled for a number of years now. And I download a ton of stuff from the net—on average, probably anywhere from 10 to 15 disk images a week, every week, and I've been doing that for over five years. So that's about 3,000 disk images in five years, give or take a few hundred.

In all that time, I've yet to mount something that caused troubles for my system (other than when I was intentionally testing a piece of malware), and I can count on one hand the number of times I've had a disk image fail to mount. In those rare cases, re-downloading the image always fixed the problem. Now just because it's worked fine for me doesn't mean that there might be some incident that occurs because you skipped disk image verification—as with most tips, proceed at your own risk. I also make backups on a daily basis, as I my system tends to live on the bleeding edge, given how many different tips and tricks I test on it.

Conclusion

So basically, verifying the checksum simply shows you that the disk image mounting program correctly read all the data on the image, at which point it mounts. Skip the verification, and the image mounts, since all the data's there. Hence, disabling the checksums will not make you any more likely to install a virus (because such hacked code will have a valid checksum) nor will it let a corrupted disk image mount (because the disk image mounting application won't be able to mount something it can't read). As noted above, however, proceed at your own risk, but I personally feel this is one of the safer speed-up tips you can implement.