AutoDoubler
Fast Automatic Background Compression of Files

One of the most basic laws of computing states that no matter how big your hard drive is, sooner or later it will fill up. Actually, it's always sooner—never later. I was on the verge of proving this law to be true when AutoDoubler arrived. It was a very close call—I *almost* had to start throwing things away.

AutoDoubler is the new compression program from Salient, the company that brought DiskDoubler to the Macintosh world. DiskDoubler has won many awards and has been licensed to software companies all over the world. I have been a satisfied DiskDoubler user since it first came out, so I was eager to try Salient's new product, which promised to be even more revolutionary.

For those who might not know, DiskDoubler adds a menu to your Finder which allows you to compress—and later expand—any file on your disk, thus giving you more room. DiskDoubler is wonderful because you don't have to stop what you're doing to run a separate program. Use of DiskDoubler is simplicity itself: select a file or folder and choose "Compress" from the "DD" menu. Moments later that file is reduced in size by an average of 50%. When you're ready to use the file, just double-click it as you normally would, and it will automatically expand and launch. Your files can even automatically recompress themselves after use if desired. Months of problem-free use have built my confidence in DiskDoubler.

Now Salient has released AutoDoubler—a separate product, designed to go beyond DiskDoubler's funtionality by automatically compressing whole hard drives. Although some functions of AutoDoubler and DiskDoubler overlap, many users will want both.

I was pleasantly surprised at the ease of installing AutoDoubler, and I was even more pleased after installing it. Before installlion, my 105MB drive was down to less than 9MB of free space. After installing AutoDoubler, I left my computer for a couple of hours and came back to find that I had almost 45MB free. This was especially impressive when you consider that I had previously compressed a lot of the files on that disk with DiskDoubler. The net result of this compression is that my 105MB drive is now the equivalent of a 173.5MB monster.

Interestingly, the Finder always shows the expanded sizes of compressed files and folders when you use the "Get Info" command. This is because AutoDoubler is completely transparent, even to the Finder. You can use the Status dialog in the AutoDoubler control panel to see the effective disk size. If you have DiskDoubler, you can use its "Savings" command to see the compressed size of the file itself.

How Does It Work?

All compression programs operate on the assumption that files contain some repetitive patterns of data, and substitute smaller hunks of code for the repeated parts. Think how many adjacent white pixels might be in a typical MacPaint document. A compression program can look at a picture and exchange the code "288 x white" for "white, white, white, white, white…" (288 times).

Don't mistake disk compression for archiving, which is an older technology originally developed for backing up data. Archiving always involves running a separate program to achieve reduction in the size of files. Archiving programs are mainly useful for compressing files which are to be sent across phone lines with a modem, but they are not convenient at saving disk space for data which must be regularly accessed. DiskDoubler can archive files in this manner, but AutoDoubler offers something new; with automatic compression of all files and programs, every computer user can benefit from the extension of the capacity of their hard disk storage space.

Criteria for Compression Software

When looking at disk compression software, there are four things to consider: compression ratios, data safety, speed, and ease-of-use. All of these aspects are important, and the ideal compression program should provide a balance of all four.

Size. Compression ratio is important for obvious reasons; if you don't save very much space, why bother? Compression ratios with any program will vary according to the type of files compressed. Database files and paint files tend to be the most compressible, with savings reaching as much as 75%. Applications and bitmap fonts are at the opposite extreme; they do not compress very much. Expect something in the neighborhood of 25–33% savings on these types of files. Other files—spreadsheets, word processing documents, page layout files, and the like—will fall in between. You can hope for an average savings of 50%—hence the names AutoDoubler and DiskDoubler.

AutoDoubler will not compress files in your System folder. This is done for both safety and speed reasons. Also,

PostScript printer fonts will not compress, since they are already as small as they can be. So, if your System Folder is bulging with goodies, you should expect a lower overall compression average.

Safety. Data safety is probably the most important characteristic we must expect from compression software. It doesn't matter how good a compression ratio, or how fast the program works, if we can't reliably get our data back. I've used DiskDoubler for many months and AutoDoubler for several weeks now, and I haven't had any problems. There may be a few areas of concern (which will be discussed later), but I feel that my data is reasonably secure with Salient products, provided I follow a few safety guidelines.

Salient suggests a few lab tests to check the safety of compression programs, including hitting the Mac's restart button while a file is being compressed. Both Salient products create temporary files during compression and expansion. Even if the worst occurs, these files provide a safety net for your data. Error detection is also provided, as are several other safety features.

Speed of compression is of course a strong selling point, and this is where AutoDoubler will really surprise many people. AutoDoubler does not seem unusually fast at compressing files (compared to DiskDoubler or the competition), but it does its work in the background, so that you are not even aware of it happening. Once your Mac has been left idle for several minutes, AutoDoubler automatically begins to scan the disk and compress files and applications.

When AutoDoubler first starts working, it compresses files using an extremely fast compression technique. After compressing, if it still has not met the free space goal you specify, then it compresses the files even smaller using a slower compression technique that saves more space. Remember that all of this is done in the background—when your Mac is idle.

When it comes to decompressing files, however, AutoDoubler is unbelievably fast—so fast, in fact, that I cannot tell the difference by the speed of launching a program whether it is compressed or not. That's fast!

The last criteria is *ease-of-use,* and AutoDoubler really shines here. Installation was basically a one-click process. After that, everything is automatic. If you really want to poke around, you can open AutoDoubler's Control Panel, and play with some of the settings—such as how long before scanning starts, how old files should be before AutoDoubler will compress them, which files (if any) to exclude from compression, etc.

Are There No Drawbacks?

Does all of this seems too good to be true? There are a few small problems that you should be aware of before blindly jumping in with AutoDoubler. In the weeks since the product was released, a few conflicts have surfaced. For instance, AutoDoubler is incompatible with GateKeeper and ClickChange, but then, several other products are also incompatible with these two. I found that the combination of AutoDoubler and Norton FileSaver caused my Mac to be unacceptably slow. My solution was to remove FileSaver, but Salient is working to overcome this problem.

There are a few important programs—FileMaker Pro, TouchBase, and HandOff II—that conflict with AutoDoubler when filesharing is turned on under System 7. Since I am not currently using filesharing, this was not a problem for me. There have also been unconfirmed reports of conflicts with Microsoft Word 5, but everybody *expects* conflicts with Microsoft products.

There are some "self-modifying" programs which might behave strangely under AutoDoubler. A number of games fall into this category, since they write high scores directly into the program's code. My high score in Tristan (57 million+, honest) did not get recorded. The solution here is to exclude these programs from the compression process by adding them to AutoDoubler's exclusion list (see below).

The folks at Salient have acknowledged these problems and are working on correcting them. In fact, several bug fixes have already been released and are available on America Online (and, presumably, from other sources). Also, Salient has provided a built-in solution to potential problems; in the AutoDoubler Control Panel, any file may be excluded from compression, either by name or by date or by label.

AutoDoubler has one "feature" that some people won't like: when you copy a file from a compressed drive to another disk, the copy will expand during the copy process. Salient states that this was done to prevent people from inadvertently sending compressed files to someone who doesn't have a way to decompress them, but in practice this makes backing up files to floppies more of a hassle; you have to own DiskDoubler (still a separate product, remember), and you must use its "Compress To…" command in order to move a compressed file to a floppy. There should be a way to circumvent this; the necessity for using DiskDoubler and having to go through a dialog box defeats much of the transparency that otherwise characterizes both DiskDoubler and AutoDoubler. Salient has stated that the two products might be merged at some time in the future, but for now it's tempting to look at this as a marketing feature; you need to buy both products to get all of the benefits.

by Jim Alley

AutoDoubler

Salient Software
124 University Avenue, Suite 300
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Retail price: $79; Street price: $49

(Registered users of earlier versions of DiskDoubler can upgrade to the latest version for $15. Those who purchase it after April 15, 1991 may order a free upgrade. A "sidegrade" is available to AutoDoubler for $29.)

Requirements: Mac Plus or later, System 6.0.4 or later. Compatible with all Macintoshes, including PowerBooks and Quadras. If you are using DiskDoubler, you must have a recent version of it in order to work properly with AutoDoubler.

Late notice: Salient has shipped a free upgrade to all registered users: AutoDoubler version 1.0.4. This speaks well of the company's commitment to service, and also reinforces the advisability of registering your software purchases.

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