Macintosh: How Often Should I Defragment My Hard Drive? (7/95)

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TOPIC ---

I have read that my hard drive can become fragmented over time causing the performance of my computer to degrade. Should I frequently defragment my hard disk?

DISCUSSION --

The file system model used on Macintosh computers is designed to work with a certain degree of fragmentation. This is normal and does not significantly affect performance for the majority of users.

Fragmentation occurs when you delete and create files. For example, suppose you create three files, then delete the second one. If you introduce a fourth file, which is larger than the size of the second file, the Macintosh file system may put a portion of the fourth file in the space occupied by the second file, and put the remainder after the third file. To access the entire file, therefore, the file system has to look in two places.

Defragmentation software attempts to put everything in tidy blocks, so it would move the files around until they are all contiguous, thus the file system only has to look in one place.

In reality, however, the nature of the files, the nature of the work you are doing, the nature of random-access disk mechanisms and the exact order in which the files are segmented can all have a bearing on the resulting performance. In general, there is not significant degradation of performance from normal use of your computer.

If you create and delete a huge number of files, your hard drive may become fragmented to the point that you may see a slight slow-down of file system performance. At this point, you can either use a defragmenting utility, or back up your hard disk and use Apple HD SC Setup to reinitialize it.

WARNING: Reinitializing erases all the files on your hard drive. Make sure you have a complete backup because you will need to restore all your files once initialization is complete.

It should not normally be necessary to defragment your hard disk frequently.

Another thing to consider is that the defragmenting process generally results in a huge amount of disk activity, due to the amount of data being incrementally transferred. Some disk defragmenting software packages also cannot completely recover, if a critical portion of data on the hard disk should be in "transit" when the software fails, you may run the risk of losing that specific file, or all data on your hard drive.

Apple recommends keeping a current backup of your hard drive. You should be especially careful to fully backup your hard drive before running any defragmentation software.

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