SOP Defragmenting Your Hard Drive

Bob Merrill 11/10/00

Background

If you record a bunch of sound files onto your hard drive, the computer looks for the first free space on the drive. If you imagine recording fifty files onto your brand new drive, you could imagine each file using space that follows the file before, marching toward the end of the drive in a quest to fill it up. Audio files can be pretty big, so they can march pretty far pretty fast.

Now, imagine deleting ten of those fifty files, and not the last ten, or ten that are next to each other. This leaves holes on the drive. The computer is smart enough to grab the first available free space, which would normally be in one of those holes.

The hitch comes when you record in a hole, and fill it up before you are finished recording. The computer just grabs the next free space. So a file ends up in little bits, or "fragments", sprinkled all over the drive. This causes big challenges for the computer, as well as for the hard drive, as they race to grab the next bit from some distant place on the drive.

Without getting into the particulars of what the drive has to go through to get at these bits, the solution is to rearrange the bits so that each file is a continuous piece of information on the drive, and that all the free space is at the end. You can see that as soon as you do this, you start working on scattering things into bits again, or "fragmenting."

This procedure explains how to "defragment" your drive.

NOTE: Defragmenting can take a long time, depending upon the size of your drive, how full it is, and how fragmented it is. Before running this procedure, block out a significant amount of time. You should probably not use your computer. During lunch (1 or 2Gig drive) or overnight (9 or more Gigs) can be good times to defragment.

Assumptions

This procedure assumes that you know how to use the Start menu on your PC. It also assumes that you know how to delete files from your computer's hard drives, and that you know which drive you want to defragment.

Procedure

1. Delete any files you don't need on your audio drive. See "SOP Managing Files on the Server" for more information.
2. Click the Start menu button (in the lower left corner of the screen) and go to Start>Programs>Accessories>System Tools> Disk Defragmenter. A **Select Drive** dialog appears.
3. Select the drive you and to defragment. For audio purposes, it is usually your audio drive. You should probably defragment all drives on your system at some point.
4. Click OK. The defragmenting process begins. A progress bar appears. A message appears when defragmenting is complete.
5. To see a visual representation of the process, click the **Show Details** button.

   NOTE: If your drive is only slightly fragmented, or doesn't need defragmenting, a message appears, giving you the percentage of fragmentation. You can still choose to defragment your drive by clicking the Start button.