To Partition The Hard Drive, Or Not To Partition? That Is The Question.

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Now with the inclusion of large hard drives in the new computers one is faced with the question of whether to partition it or not and what are the advantages, if any, to doing so. The question may be more - What are the disadvantages of not partitioning?

The normal practice of putting everything on the C: drive was fine for the period when we only had drives from 20 to the whopping big 420 MB size. Now with the new 1 to 4 Gig drives there are some things to consider that we did not even think about before. When data is stored on the drive each byte takes up a certain amount of space. The method of writing that byte and how much space is also carried with it as overhead (called CLUSTER SIZE) is dependent upon the size of the disk section, called a partition. If the size of the entire disk or partition is less than 512 MB, every file will occupy 8K of space. If the size is between 512 and 1 GB, then every file will occupy 16K of space. If the size is over 1 GB, then every file will occupy 32K of space! Example: an AUTOEXEC.BAT file normally uses .5K of space, with 16K cluster size the file will take up 15.5K of space. With 32K cluster size the same file will take up 31.5K of space. Now it is not hard to see that if you have a 1 GB or more HD, you can lose access to some of the drive. It has been stated that on a 1 GB HD, one will lose 25% of the available disk space! If you have a 2 GB HD with only 1 partition you can lose up to 40% of the space. If you have a machine with a program that will give you a count of USED and AVAILABLE disk space, try it on a 1 GB HD and you will most likely not be able to account for 23 to 25 percent of the total disk space when you add those 2 figures together!

So, why doesn't everyone just do it to the drive when you get a new machine? Well, for one thing the ones who set up the new machines would not know how large to make each partition unless you specify that when you order the machine. For another, many of the machines are pre-configured and in the box already so it would have to be unpacked to set it up in the manner you want, mostly though it comes down to the point that it takes time and that would either raise the price of the machine or mean (-HEAVEN FORBID-) less profit! (The margins are not really great nowadays!)

> *"...there are some things to consider that we did not even think about before."*

You do not have to use FDISK & FORMAT in DOS to get the job done, there are 3rd party disk managers such as ONTRACK & PARTITION MAGIC to make the job easy.

There are other advantages also, like ORGANIZATION of files by type of work. (If you get a large file cabinet, do you just keep cramming from top to bottom and wonder how far down you have to look to get the file you want?)

> ## So, what are the disadvantages?

I have found that by organizing programs by type, DOS & basic computer operating files on C:, Windows & related files on D:, ACAD program files on E:, ACAD DWG files on F:, and leave G: for word processing programs, seems to be a good organization. Besides, it makes for faster tape backup for DWG files! Yes, you can hold path statements down and get efficiency as well as speed!

Just think of the faster access time of the HD when the data is closer together! That becomes faster load/save time too! Just think, if you are running windows, you can use an unused partition for the permanent swap file! When it is time to defrag the HD, it will be fast when you do not have to do it to sections where program files are that have not changed. YOU DO DEFRAG YOUR HD DON'T YOU?

So, what are the disadvantages? For one it means that you do need to know the DOS path and tree structure.

YOU DID LEARN THE DOS PATH AND TREE STRUCTURE PROCEDURES DIDN'T YOU? THEY APPLY TO ANY DOS, INCLUDING WINDOWS 95! WINDOWS 95 IS A DOS! (Disk Operating System). It means that when installing programs and/or data files or copying files (DOS or Windows) that you have to know where they are and how to use the FILE MANAGER or other utility programs! It also means that (for ACAD users) when you send a DWG on a disk that you need to note to the recipient that they will have to set pointers for font files, etc. when they first load the DWG.

I have found that when setting up a computer for a client (with 500 MB+ HD) that it only takes a short time for them to see the advantages far outweigh the disadvantages. I have had HD systems with 9 partitions and had no problem with file management across partitions, slow down due to partitions or load/copy/delete functions. (if I can do it, anyone can!) TRY IT, YOU WILL LIKE IT! (unless you like losing all that space on your HD!)