Drive Geometry

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Throughout the history of computers there have been several different ways to store data. Most commonly this started out in the form of HDDs (Hard Disk Drives). HDDs would use a spinning disk on the inside for the data to be written to and also read from. Nowadays we are seeing a migration to SSDs (Solid State Drives). The biggest way in which SSDs differ from HDDs is that SSDs have no moving parts. This makes them smaller, lighter, and faster than HDDs. But what drive geometry does an SSD use, and why?

There are two common forms of drive geometry that we see in use today. SSDs typically use LBA (Logical Block Addressing) drive geometry. Since they don’t have moving parts they will utilize this style. Data is typically written in the form of blocks of data on SSDs, as opposed to sectors that we would see with an HDD. Although LBA is the more traditional for of drive geometry for SSDs, in some cases it is important to utilize CHS (Cylinder Head Sector) drive geometry as well. Sometimes it utilizes this style when dealing with large amounts of data, or even when working in BIOS. But primarily these SSD drives use LBA drive geometry.

SSDs are much more stable than HDDs and tend to last longer as well. One of the issues with SSDs is how it handles data within the drive. These drives store data on fresh pages until they need more space, then it will overwrite “invalid” pages with new data. But until those invalid pages are needed they will remain on the drive just marked as invalid. But due to the high speed, lightweight design, and constantly lowering prices, SSDs seem like the way to go for most applications.

Personally, I use SSDs whenever possible, except for when I get a really good deal on a HDD. With my personal equipment at home right now I have a mix of both, but once my HDDs finally quit I think I’ll spend the money to upgrade to SSDs for everything.

References

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