

Selecting a new computer

Suggestions by
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Laptop decisions

- ▶ First you must decide on the screen size as this will have a major impact on almost everything else!
- ▶ A 12” will mean small, light, relatively low power CPU, no CD drive, no numeric keypad and very few ports.
- ▶ A 15” is a general use laptop with very many variations in memory, CPU performance, screen resolution and weighing about 2.2 to 2.6 kg
- ▶ A 17” will be bigger, heavier, most probably faster and dearer and will certainly have a numeric keyboard and more ports.
- ▶ Once you had decided on the size then the next step is to get best value for money.

What makes a computer fast?

- ▶ For numerically intensive work such as video rendering, ray tracing, large linked goal-seeking spreadsheets, a fast CPU (Central Processing Unit) is required.
- ▶ For normal work such as mail, browsing, word-processing, using a database copying or moving files and opening and closing numerous programs, then a SSD (Solid State Drive) will make a huge difference to the speed. Also the computer will start and shutdown very quickly.
- ▶ If you have numerous large programs open simultaneously and are flipping between them then more memory is the first consideration. An SSD will also help a lot.

Decisions ...

- ▶ In my opinion, the choice of having a SSD (Sold State Drive) is the next step.
- ▶ An SSD has a huge boost in normal performance but it will be smaller than a conventional drive and also dearer. However, for about \$80 you can purchase a small external USB3, 1 TB drive.
- ▶ Having decided if you need or want an SSD, the next step is what CPU to have. For most users, 4 GB of memory (RAM) is adequate
- ▶ Intel currently make better CPUs than AMD and you should decide between the i3 or i5 for most cases. For video rendering you should go for an i7 and a 17" screen and 8 GB or more of RAM.

More decisions ...

- ▶ Now search some retailer, say Centrecom or SaveOnIT, and filter the results. As well as the well-known brands that will be listed, consider Lenovo.
- ▶ You should consider the fifth or sixth generation of the i3 or preferably the i5 CPUs. The generation is determined by the first number after i?- . For example i5-5200U is a fifth generation CPU. The sixth generation are only about 10% faster which is not noticeable but these have a better graphic performance.
- ▶ If the generation is not mentioned, then it will be an old one.
- ▶ Do NOT pay for a laptop with a dedicated graphics processor as this is not required. The newer i3 and i5 chips have very good graphics.

Now for a quick live search

Prior decisions

- ▶ If you often run an important program that uses many resources, such as video rendering, then you should optimise your proposed computer for that software.
- ▶ This is done by observing the Task Manager when your software programs are running.
- ▶ Then open the Resource Manager and delve down further to find the components that are limiting the performance.
- ▶ Having found out more details, then you can have a desktop computer built to your specs or select the most appropriate laptop.

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