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Computer Hardware - Laptops vs. Desktops

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Overview

In the workplace environment, as well as the home office, using portable computers as semi-permanent workstations has several benefits.

Below are lists of advantages and disadvantages of purchasing and utilizing laptops instead of desktops:

Advantages

Ergonomics – Although keyboard design has improved, smaller-sized computers are going to have smaller-sized keyboards. These are not as comfortable for adults especially those who are “touch typists”. External devices can be used including a monitor, mouse and keyboard. To save money, use the internal display, but add a wireless mouse and keyboard for simple, tangle-free connection. (Wired devices are even less expensive.)

Space – Portable computers require minimal storage and operating space. They can even be stacked when used with external keyboards, mouses and displays.

Energy – Portable computers generally use less power because they are designed to run from batteries. LCD displays, TFT screens, and portables in general give off less heat which can be a problem in confined spaces or in rooms with several computers (and several users) nearby. Without batteries, even less power is consumed and less heat emitted. (Also, batteries will degrade rapidly if constantly being charged but never drained by use.)

Disaster – Not only can portable computers be removed from premises quickly in the event of a pending disaster, but consider the built-in battery with a life of 2 hours exceeds 2-to-8 times the expected duration of an average Uninterruptable Power Supply (UPS). These “battery backups” are very costly and the inexpensive ones have short durations and life-spans.

Loss Prevention – Batteries can be removed to lessen the desirability of theft. There are also many inexpensive security items available to prevent unauthorized removal of laptops.

Repair – Purchasing one or two additional laptops provides a comfortable, on-site support plan where a disabled computer can easily be replaced without the need of tools or spare parts.



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Communications – Most portables come with built-in networking capabilities and most modern operating systems allow peer-to-peer network without the need of a network server. However, using one or two desktop computers with 2-4 large capacity hard disks (fixed disks) as “file servers” provides several advantages:

- 1) All laptop workstations can be configured the same (same applications, same connectivity)
- 2) Each user has a dedicated file area (folder, directory) for creating and maintaining documents, etc. This file area would then be accessible no matter from where the user logs in or on which computer (regular or temporary replacement) used.
- 3) System wide backups can take place irregardless of local desktop (laptop) activity. That means, if you want to ensure your files are safe, you put them into your common folder(s).
- 4) Printers can be shared as the file server can also act as a simple printer server.
- 5) Documents can be shared.

Applications – Most office applications do not need to run a power server and can function adequately on the slightly slower, somewhat-less-powerful notebook or laptop processor with no visible degradation.



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Disadvantages

Cost – Portable computers are generally more expensive than comparable desktops.

Maintenance – Repairs usually cost more and are more difficult (to the point of being non-user serviceable). Parts (such as memory replacements or upgrades) have higher prices than equivalent components in desktops and many – if not most – are proprietary so that purchases must be made through the manufacturer. Third-party replacements often violate warranties as well.

Damage – If portables are moved around often or carried about as portables, they are subject to mishandling, shocks, abuse, theft, accidents, etc.

Applications – In specialized businesses and organizations, some programs are extremely “resource intensive” and require all of the power available in the non-mobile processors found in higher end desktops.