

## Laptop

A laptop (also known as a notebook) is a personal computer designed for mobile use small enough to sit on one's lap. A laptop includes most of the typical components of a typical desktop computer, including a display, a keyboard, a pointing device (a touchpad) as well as a battery, into a single small and light unit. As the personal computer became feasible in the early 1970s, the idea of a portable personal computer followed. In particular, a "personal, portable information manipulator" was imagined by Alan Kay at Xerox PARC in 1968 and described in his 1972 paper as the "Dynabook".



startech@thethedailystar.net

## TECH SPOTLIGHT

# Laptop vs desktop: an austerity look

FAROOQUE HOSSAIN KAMRUL

**N**AGGING power crisis has become a major concern for the government of any country, especially for the developing ones. Due to increasing use of electricity in all aspects of life, saving of energy has turned out to be an issue that needs to be dealt with.

For instance, we can say about computer that is undoubtedly the most used electronic device and runs on electricity. It is true that the use of computer is not only a mere necessity any longer. Its use has rather become a demand of time.

As a result, various government, semi-government, autonomous, nongovernmental, multinational and international organisations are exploiting the use of computer hugely for their daily requirements.

Computer consumes a certain amount of power to keep running. But, how much amount of power or

Each computer consumes about  $450 \times 9 \text{ hours} \times 30 \text{ days} = 121.5 \text{ kw-hr}$  a month or simply  $1478.25 \text{ kw-hr}$  per year. So, a hundred PC will consume  $121.5 \times 100 \text{ kw-hr}$  a month or  $1478.25 \times 100 \text{ kw-hr}$  a year.

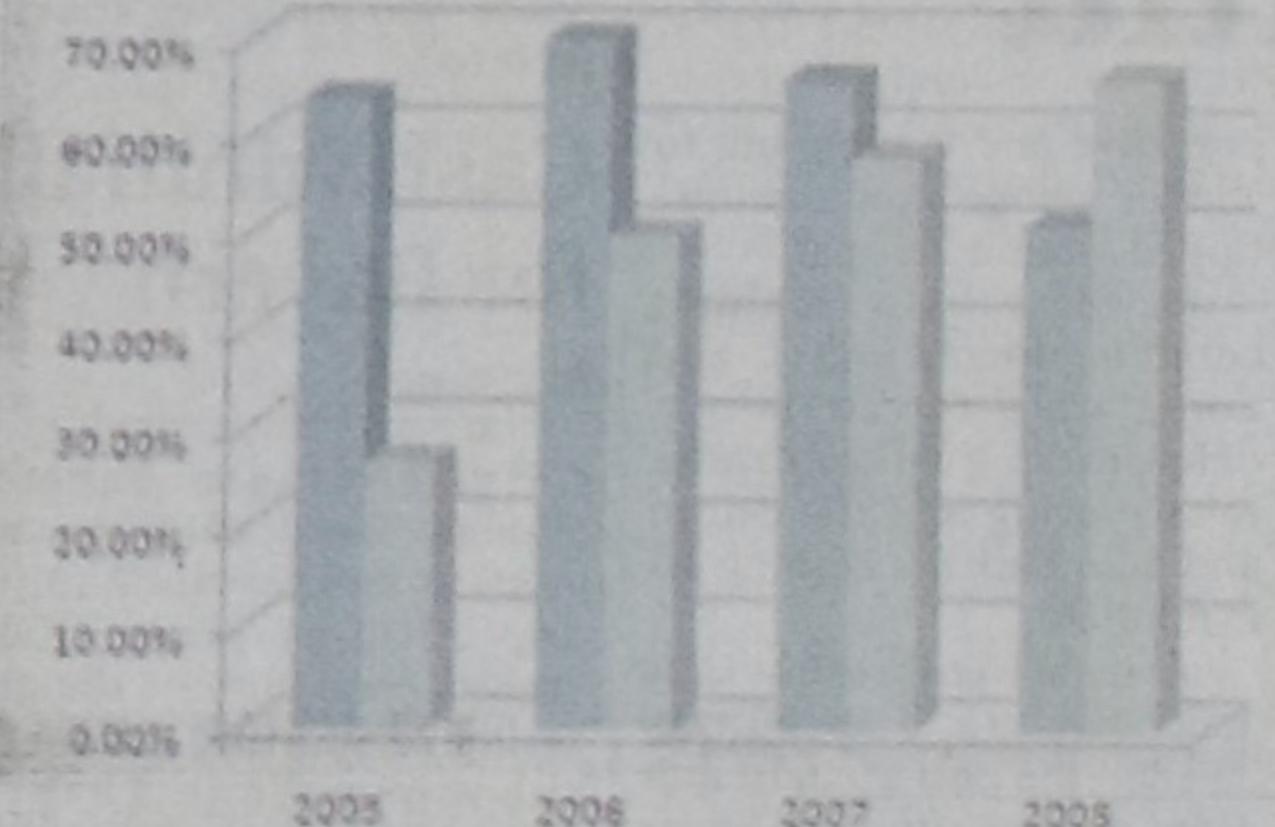
In contrast, about  $65 \times 9 \text{ hours} \times 30 \text{ days} = 17.55 \text{ kw-hr}$  is consumed by a laptop monthly or  $210.6 \text{ kw-hr}$  yearly, only 14 percent of the power consumed by a desktop PC.

If the company pays Tk 7 for per kwh, it has to pay Tk 85,050 a month or Tk 1,020,600 in electricity bill a year for 100 PCs. Likewise, if the company shifts its focus on using the same number of laptop PC in place of desktop PC, it has to pay only Tk 11,900 a month or Tk 142,800 a year for electricity.

Now that we have got an idea of PC power consuming and its expenditures, let's consider the price of a laptop PC. Off late, the average price of a standard laptop PC is not more



Students owning personal desktops vs laptops



electricity a desktop or laptop PC consumes? How much a company or an organisation has to bear to run these devices?

Why and which one is economically viable in terms of power or cost saving, using Laptop or Desktop? Well, in this article I will explore these issues. I will also show why using Laptop PC is more cost-effective in terms of power saving issue and other beneficial aspects of it than its counterpart Desktop PC.

A typical desktop computer with its full-equipped stage uses about 450 watts. On the other hand, a laptop computer generally uses about 65 watts. That means a typical desktop PC consumes nearly seven times electricity that of a laptop PC does.

Say, how much money is needed to be paid in electricity bill for 100 desktop computers? Well, let's have a look at it. Assume that, a company runs these 100 PCs 9 hours a day,

than Tk 50,000 and that of for a desktop PC is Tk 35,000. That is, the company has to spend an extra Tk 15,000 for each PC if it intends to use Laptop instead of Desktop. From this, it is seen that the company requires spending about extra 30 percent money for each PC if it wants to shift to using Laptop PC from Desktop one. But at the same time it can save nearly 76 percent of electricity, which eventually make sense saving of 76 percent money from electricity bill if it uses Laptop PCs. Isn't it beneficial using Laptop PC? Of course it is, as far as power saving is concerned.

In addition, Laptop is portable. It can be carried everywhere one wants. Moreover, Laptop can be used indoor or outdoor while Desktop can't do like this because Desktop is too heavy. What is more, Laptop has battery so when electricity has problem, one can continue

doing work and save the file. While Desktop, if one does not have uninterrupted power supply (UPS) and electricity has problem, one may lose his/her work. Besides, Laptop has good design and looks modern, while desktop is conventional and looks old fashioned. For example Desktop has large dimensions and requires large area for operation.

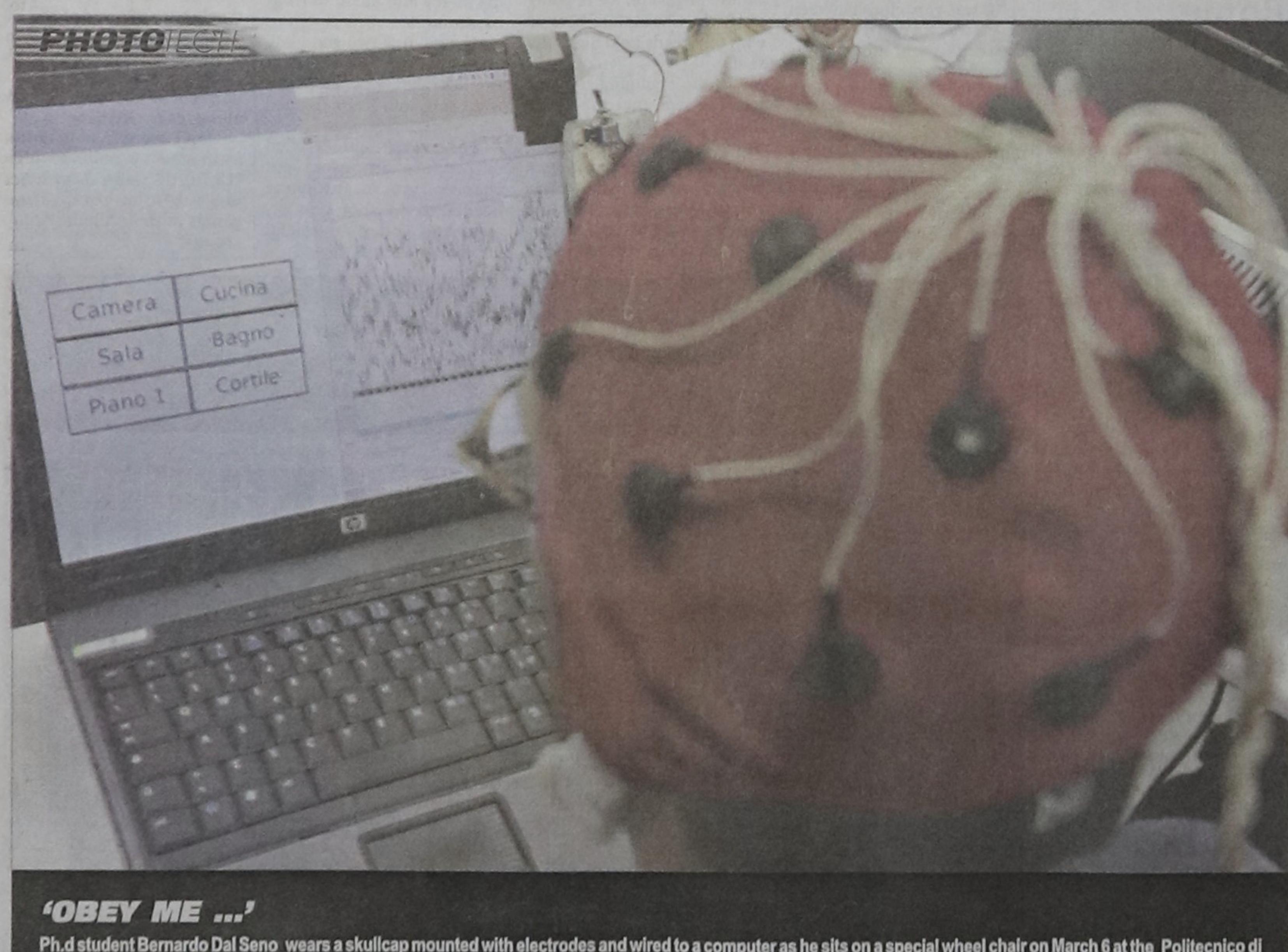
From the above discussion we see that Laptop PC is superior to its counterpart Desktop one nearly in

all aspects. Of course Desktop also has some advantages but that do not surpass the beneficial aspects of Laptop as far as power saving issue is concerned. Above all, Laptop is environment friendly too. Therefore, from my point of view it's high time especially for corporate organisations to replace the Desktop PCs with Laptop PCs.

The author is an executive of technical services at Thakral Information Systems Pvt Ltd.



"We've made significant improvements since you bought your last computer. We switched from beige plastic to dark gray."



'OBEY ME ...'

Ph.D student Bernardo Dal Seno wears a skullcap mounted with electrodes and wired to a computer as he sits on a special wheelchair on March 6 at the Politecnico di Milan department in Milan. Italian researchers have developed a wheelchair that obeys mental signals sent to a computer, they said. The user is connected to a computer with electrodes on his or her scalp, and sends a signal by concentrating for a few seconds on the name of the desired destination - kitchen, bedroom, bathroom - displayed on a screen.

## TECH NEWS

## Apple's small new 4-gigabyte iPod shuffle can talk

AP, Seattle

APPLE INC. unveiled a minuscule new iPod Shuffle on Wednesday that takes it's "smaller is better" mantra to a whole new level.

The third-generation Shuffle, a slim aluminum rectangle less than 2 inches long, takes up about half as much space as the previous version even as it doubles music storage space to 4 gigabytes. To achieve such a tiny form, Apple had to remove most of the buttons from the body of the \$79 device and build them into the headphones instead.

"Smaller has tended to work very well for us," said Greg Joswiak, a marketing vice president at Apple.

The trade-off for a sub-\$100 Shuffle always has been the lack of a screen to visually navigate the music stored on the device. The first-generation Shuffle, which launched in 2005, could hold about 240 songs, arguably not enough to warrant a screen.

Now that the device can carry 1,000 songs, Apple has come up with a way for people to identify the music they're listening to or find songs they want. A new feature called VoiceOver can, at the push of a button, speak the song and artist name or rattle off the list of custom mixes called playlists that the owner has loaded onto the device.

Here's how it works: As you synchronize a new Shuffle using an updated version of iTunes, your PC or Mac looks at each track and playlist and creates a small file of a computerized voice speaking the title, artist or playlist name.

When you tap a button on the headphones, the voice speaks the title and artist as the music plays. (If a song is in Spanish, Chinese or any one of 12 other languages, the software figures this out and speaks in the appropriate language.) When you hold down the headphone button, the device reads a list of your playlists, and you can pick one by tapping again.

It's not possible to scroll through all of the songs on the device to jump right to one favorite, unless you know it's at the start of a certain playlist.

The new Shuffle, which comes in silver or black aluminum with a shiny stainless steel clip, is set to go on sale Thursday. Joswiak said Apple's own earphones will be the only option for early buyers, but that other companies plan to make compatible headphones as well as adapters for regular headphones.

Ross Rubin, an analyst for market researcher NPD Group, said there's no such thing as "too small" for gadget-happy consumers as long as Apple stays focused on ergonomics and provides a way to secure the device and keep it from getting lost.

But people who do buy a new Shuffle will be paying a premium for Apple's design, he added, noting less-expensive mini-models like SanDisk Corp.'s Sansa Clip (\$60 for a 4-gigabyte model) and Creative Technology Ltd.'s Zen Stone (less than \$50 for a 2-gigabyte version on Amazon.com).

Shares of Cupertino, Calif.-based Apple jumped \$4.05, or 4.6 percent, to \$92.68.