

Can IT Contribute to saving the environment?

As we enter the coming decade there seems to be a nagging question, a question that I have to say I frequently answer without any concrete proof. The question is simple, yet profound in its implications as a global citizen: 'Is IT part of the problem or part of the solution to Climate Change?'

First, I will admit, I am among the group of IT advocates who claim that IT is overall green; I say this based on simple numbers, primarily from the US, in the growth of such things as telecommuting. For example, 15 years ago there were an estimated five million telecommuters in the US, and they really were just that - using the phone to conduct their business from home one or more days a week, rather than in an office. That figure is now 25 million, and growing, and they are no longer just on the phone, but connected via high speed broadband to their company data centres. This has led to an estimated 30 billion litres of gasoline saved in commuting alone and the consequential decrease in CO2 output. Green IT is as much about cash as it is about carbon and pollution reduction.

Another recent concept is related to reducing air travel using TelePresence, whereby large LCD screens duplicate one side of a conference table and, using high resolution cameras all connected by high speed broadband, there is an illusion of being in a meeting room with your colleagues or customers. The system really is great - as long as you have more than a 30mbps connection, or preferably a 100mbps, to get over the latency inherent in the Internet.

A major innovation is next generation computing, often described as 'cloud computing', which appears to be more environmentally friendly compared to traditional data centre operational/deployment models due to greater utilisation. Industry consensus says that reducing the number of hardware components and replacing them with remote cloud computing systems reduces energy costs for running hardware and cooling as well, thus reducing your carbon foot print, while higher data centre consolidation/optimisation will save energy, reducing costs. An issue that needs to be addressed, however, is to ensure access and portability of data (interoperability) and check that information may be accessible using disparate hardware to avoid lock in.



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Simply put, reducing energy consumption in your use of IT not only makes you green, it saves you money.

The International Organisation for Standardisation (ISO) considers the label 'environmentally friendly' to be too vague to be meaningful because there is no single international standard for this concept. However, there are a few emerging data centre energy efficiency initiatives, notably by the EPA in the United States through their Energy Star programme. The EPA programmes are working to identify ways in which energy efficiency can be measured, documented, and implemented in data centres and the equipment they house, especially servers.

Practical Solutions

So what can small companies in Thailand do to be green with their IT? As described previously, being green is basically the same as saving money through good management leading to energy reduction. For most SMEs this means ensuring that IT assets are only used when actually being productive. The first thing to do is switch off screensavers - they use energy when no one is at the computer. ANZ bank in Australia saved an estimated AUD 100,000 per annum when they removed them.

Most desktop PC software has power settings that may be activated under 'settings>control panel>power options'. Simply select the type of device the

software is running on, typically a netbook/notebook or desktop PC, and then set the options to power down when inactivity is expected. Usually this would be after a period of the system being idle; 15 minutes to turn the screen/monitor off; 30 minutes to stop the hard disk; and one hour to 'hibernate', which suspends the system but still allows a relatively fast start up. This will have the added advantage of extending the life of moving components such as the hard disk. This will also ensure that PCs power down overnight.

In addition, any device that has a transformer connected should be unplugged or switched off at source when it is not in use. Printers should have their standby mode enabled and be switched off at the close of day.

These tips not only reduce direct device power consumption, but will enable air-conditioning to work less as there is less heat to be removed. Savings in monthly electricity bills of 5-20% are to be expected and cost nothing to implement. A more comprehensive programme would include installing sensors in rooms to turn on lights and air conditioning only when there is movement in the room; however this involves an additional investment.

The bottom line is that through existing and developing technologies the IT industry is making a positive contribution to alleviating climate change, and savings in cash can be made, and that can't be bad!