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Green Computing "Eco-Friendly Technology"

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Abstract:

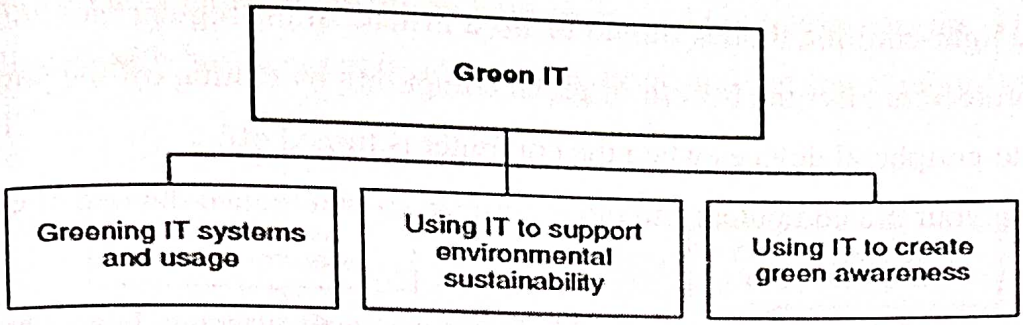
Green computing is also called as green IT describes the study of computer resources in an efficient way. The government has also recently proposed new regulations that would work towards certifying data centers as green. It is introduce the way of green IT. Green computing, the study and identifies the eco-friendly computing resources is under the attention of organizations, and businesses from other industries. In recent years, IT companies in the computer industry have come to realize that going green is in their best interest, both in terms of public relations and reduced costs. discusses method to reduce energy consumption The main purpose of this paper is how to used green computing in Eco-friendly system and Three Rs i.e Reuse, Recycle, Refurbish of Green IT.

Keywords: Green Computing, Eco-friendly Recycle etc.

Introduction

Green computing, also called green technology, is the environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption and proper disposal of electronic waste (e-waste). Green computing is eco-friendly use of computers and their resources, the implementation of energy-efficient central processing units (CPUs), servers and peripherals reduced resource Consumption The reasons for going green are manifold: increasing energy consumption and energy prices, growing consumer interest in environmentally friendly goods and services, higher expectations by the public on enterprises' environmental responsibilities and emerging stricter regulatory and compliance requirements. Green IT is not just about creating energy-efficient IT systems (hardware, software and applications), though this is an important component, especially as

the use of IT proliferates. Green IT is also about the application of IT to create energy-efficient, environmentally sustainable business processes and practices, transportation and buildings.



Green IT Dimension

Problems Being Faced Without Green Computing

The problems are being faced by the increase in technology to our environment are:

- Pollution - Air, water, heat and noise pollution can all be caused by producing and using technology
- Consuming resources - Non-renewable resources such as coal, are used to generate the electricity for technology contaminate the food chain can greatly affect the environment's natural cycles.
- Health hazards - Using toxic materials that can harm our health can cause cancer and technology addiction can lead to other health problems like obesity and carpal tunnel syndrome.
- Carbon emissions: carbon dioxide and carbon monoxide are greenhouse gasses that are produced by people. These greenhouse gasses trap in the atmosphere and reflect heat and radiation back to the

Why Green Computing?

In a world where business is transacted 24/7 across every possible channel available, companies need to collect, store, track and analysis enormous volumes of data—everything from click stream data and event logs to mobile call records and more. But this all comes with a cost to both businesses and the environment. Data warehouses and the sprawling data centers that house them use up a huge amount of power, both to run legions of servers and to cool them. Just how much?

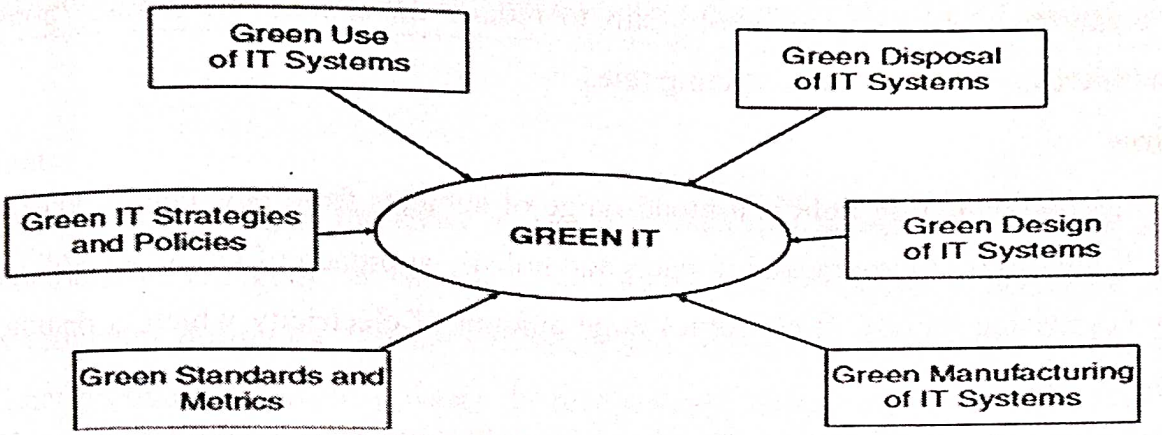
1) Using ENERGY STAR qualified products help in energy conservation.
2) The Climate Savers Computing Initiative (CSCI) catalogue can be used for choosing green products.
3) Organic light-emitting diodes should be used instead of the regular monitors
4) Surge protectors offer the benefit of green computing by cutting off the power supply to peripheral devices when the computer is turned off.
5) Donating your old computers and other peripherals can reduce the rate of e-waste creation
6) It was expected that computers would help reduce paper wastage. However, even today wastage of paper is a serious issue in industries
7) Use the device only if it is necessary.
8) The manufacturing of disks and boxes needed for video games takes up a lot of resources. Video game manufacturers can offer their games online for download, leading to reduction in e-waste. This move can cut down on the transportation/ shipping cost.
9) Use of 'Local Cooling' software can help in monitoring and thereby, bringing down the energy consumed by computer. This 'Windows' program makes adjustments to the power options of computer and helps in minimizing energy consumption.

Holistic Approach to Greening IT:

To comprehensively and effectively address the environmental impacts of IT, we must adopt a holistic approach that addresses the problems along these six complementary directions

1. Green design. Design energy-efficient and environmentally sound components, computers, servers and cooling equipment.
2. Green manufacturing. Manufacture electronic components, computers and other associated subsystems with minimal or no impact on the environment.
3. Green use. Reduce the energy consumption of computers and other information systems, and use them in an environmentally sound manner.
4. Green disposal. Refurbish and reuse old computers, and properly recycle unwanted computers and other electronic equipment.

5. Green standards and metrics. These are required for promoting, comparing and benchmarking sustainability initiatives, products, services and practices.
6. Green IT strategies and policies. These effective and actionable strategies and policies add value and focus on both short- and long-term benefits. These are aligned with business strategies and practices, and are key components of greening IT.



Holistic , multipronged approach to greening IT.

The Three Rs of Green IT :

• Reuse. Many organizations and individuals buy new computers for each project or once every 2–3 years. Instead, we should make use of an older computer if it meets our requirements. Otherwise, we should give it to someone who could use it in another project or unit. By using hardware for a longer period of time, we can reduce the total environmental footprint caused by computer manufacturing and disposal.

• Refurbish. We can refurbish and upgrade old computers and servers to meet our new requirements. We can make an old computer and other IT hardware almost new again by reconditioning and replacing some parts. Rather than buying a new computer to our specifications, we can also buy refurbished IT hardware in the market. More enterprises are now open to purchasing refurbished IT hardware, and the market for refurbished equipment is growing. If these options are unsuitable, we can donate the equipment to charities, schools or someone in need, or we can trade in our computers.

• Recycle. When we cannot refurbish or otherwise reuse computers, we must dispose of them in environmentally friendly ways by depositing them with recognized electronic

recyclers or electronic waste (e-waste) collectors. E-waste – discarded computers and electronic goods – is one of the fastest-growing waste types and poses serious environmental problems. IT hardware contains toxic materials like lead, chromium, cadmium and mercury. If we bury IT hardware in landfills, toxic materials can leach harmful chemicals into waterways and the environment. If burned, they release toxic gases into the air we breathe. So if e-waste is not discarded properly, it can harm the environment and us. Waste electrical and electronic equipment (WEEE) regulations aim to reduce the amount of e-waste going to landfills and increase recovery and recycling rates.

Conclusion

This green computing field is a broad range of subjects from new energy-generation techniques. It identifies environmental impacts and holistic approach of IT. As a result of this technology is growing rapidly. It consumes huge amount of electricity which is responsible for greenhouse gas.

The main purpose of green computing is transitioning from wishful thinking into a strategic engineering. Some criteria include using low-emission building materials, recycling, using alternative energy technologies and other green technologies. **Green IT Recycling** provide a totally managed solution for the safe disposal of your redundant IT equipment.

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