Introduction

Definition

Green ICT is the name of the movement towards designing environmentally friendly and resource efficient ICT products over the entire life cycle from system design and component manufacturing to usage and recycling of the equipment (Deutsche Telekom, 2010).

Some of the goals of the movement include the reduction of hazardous materials in ICT products, reduce energy consumption of products during the products lifetime and promote recycling and proper disposal of electronic waste.

Developments

The origins of Green ICT can be traced to the U.S Environmental Protection Agency launch of the Energy Star in 1992, which labeled energy efficient computing products. There have been many developments approaches in this field since then

Approaches

One of most effective approach is product longevity. This involves the prolonged use of electronic products by proper maintenance and upgrading when necessary as opposed to buying new products. The manufacturing process of a PC uses 70% of the natural resources in the life cycle of a PC.

The second approach is the use of software. This encompasses more approaches such as improving algorithmic efficiency in order to reduce the amount of computer resources a program uses.

The use of virtualization which involves the combination of virtual systems on one computer in order to reduce the use of energy consumption on multiple machines.

Furthermore, the use of terminal servers is helpful. It involves the use of a central server that performs all the computing while the users still gets the necessary output at their own terminals.

The third approach is recycling. Recycling is highly beneficial because it prevents harmful chemicals in electronics from being improperly disposed. In addition, it allows some of the recovered electronic parts to be reused in the manufacture of new products thereby reducing the toll on natural resources.

There are many more approaches but these are some of the most widely used and efficient methods of implementing green ICT in a workplace.

Legislation

There are many legal issues affecting Green ICT globally. Legislative actions have been put in place in order to ensure proper disposal of electronic products. For example, the European Union passed the Restriction of Hazardous Substance Directive. This directive ensures that the amount of hazardous materials in products is kept at an acceptable limit. It is closely linked to the Waste Electrical Equipment Directive which assigns the responsibility of electronic waste disposal on the manufacturers of such goods.

There are many other issues related to green ICT .Companies are held accountable for the disposal of electronic waste and the hazardous materials some may contain and there is legislation to ensure that their operations are energy efficient.

Zeplar Case Study

I am here at the computer lab in the Zepler building at Southampton University. The lab is filled with hundreds of computers, used by thousands of students every day.

As you enter the lab, you are hit with a wall of heat. The lab requires heavy ventilation and air control to keep it from getting too hot.

 Obviously, the lab uses a lot of energy. Between the computers, dual monitors, the printers, and the ventilation, the lab consumes a lot of energy.

Recycling is another important factor; thousands of pages are recycled every day. But still, hundreds of pages are left around the lab, left there by inconsiderate students with no regard for the environment.

When the life of these machines is over, they must be recycled. Imagine the piles of old monitors and towers strewn around outside Zepler. Recycling is vital; otherwise they would sit in a landfill for thousands of years.

Leaking chemicals, such as mercury, will seep into the ground, ruining groundwater wells, and poisoning people.

However, green ICT does not need to end with corporations and the government you can make a difference.

- Upgrade computers instead of purchasing new products
- Use rechargeable batteries
- Switch off electronics when not in use.