Green Computing:
The Importance of Sustaining the Peopleware

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ABSTRACT

Green Computing has attracted concerns in the past few decades, with the sole concern for the procedures involve in the designing, manufacturing, usage and disposal of information and communication technology (ICT) basically for environmental sustainability. The importance of human factor in green computing has not received the deserved attention. The social, moral and ethical decadence resulting from the use of ICT has reduced the quality of human in modern time. This study advocates the importance of peopleware as essential aspect of green computing which equalling demands concern. Thus the adoption of peopleware in green computing practices will invariably improve sustainability of the physical and spiritual environment.

Keywords: *Environment, Green Computing, Heartware, Peopleware*

INTRODUCTION

Green Computing is one of the buzz words that have gained prominence in the world of the information technology (IT). Various researchers prefer the use of 'Green IT' to 'Green Computing', though with same meaning, in order to connect the green computing to the IT world (Sheikh and Lanjewar, 2010). 'Green Computing' is often described as the study and procedure involve in the designing, manufacturing, using, and disposing of information and communication technology (ICT) in such a manner that will reduce its adverse impacts on the environment. The study and practices wholesomely covers the computing lifecycle from birth to death (Soomro and Sarwar, 2012). Besides the impact of the IT dimensions on the environmental sustainability, the concept of Green Computing has been extended to economics of energy efficiency, as well as the total cost of ownership, which includes the cost of recycling and disposal (Green Grid, 2010). Green computing is usually associated with saving energy in data centres, minimizing paper consumption and adopting environmentally friendly technologies such as liquid-crystal-display (LCD monitors) rather than cathode- ray-tube (CRT monitors) (Noordin, 2009).

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A Brief History of Green Computing

Green computing became known in the early years of the last two decades when the U.S. Environmental Protection Agency (USEPA) launched Energy Star, which is a cataloging program designed to promote and recognize energy-efficiency in monitors, climate control equipment, and other technologies. Consequently, most consumer electronics adopted the use of 'sleep mode' in the use of their appliances (Noordin, 2003). Thereafter, 'Green Computing' attracted the interests of the environmentalists and their concerns span the environmental impacts of the use and the components of the computer systems. In essence, green computing is all about the efficient use of computers and computing, however the social responsibility, economic viability and the impact on the environment have been integrated in order to make the concept encompassing. In other words, green computing is aim at making the whole practices relating to computers to be environmental, economical, and society-wise friendly (Lakshmi et al., 2012). As an example, users buying hardware that has been approved by Electronic Product Environmental Assessment Tool (EPEAT), which means maintenance computer is reduced, the hardware's life is more lasting and enhances recycling computer is easier once it is no longer needed (Saranya and Ponnusamy, 2013).

Trends in Current in Green Computing

Green technology is applied to various fields of study and products in order to address the environmental sustainability of these products, since this is one of the challenges of our modern world. The current drift of 'Green Computing' is basically towards efficient utilization of resources with strong emphasis on the reduction of energy utilization and carbon footprints s well increasing the performance of Computing (Soomro and Sarwar, 2012). Various works have indicated enormous contributions of researchers on 'Green Computing' and much attention have focused on energy consumption, e-waste recycling, data center consolidation and optimization, virtualization, IT products and eco-labelling, among others (Harmon and Demirkan, 2011; Hub, 2011; Kurp, 2008; Kusnetzky, 2007; Sato, 2011; Wang, 2007). Current applications of Green Computing mainly include computing sectors such as Equipment design, Equipment recycling, Data Center optimization and consolidation, Virtualization, Paper free environment, Application Architecture and· Power Management (Soomro and Sarwar, 2012). However new challenges, resulting from growing computing needs, energy cost and global warming, now include IT and IT environments. Thus, more attentions focus on challenges such the cooling system, power and data center space (Kurp, 2008; Wang, 2007; Soomro and Sarwar, 2010). Moreover these challenges have not deterred the researchers from charting future trends to the concept and scope of 'Green Computing'. It has been noted that future of Green Computing will be more concerned with efficiency, rather than reduction in consumption (Soomro and Sarwar, 2010). However, the future trends do not neglect the fundamental of Green Computing that is currently receiving attention, yet the future trend is to attend to emerging challenges resulting from increase in the users and general advancement in science and technology. Few areas to consider in the future trend of IT computing include certifications, cloud computing, product longevity power management tools, leveraging unused computer resource, data compression among others, and applications (http://www.authorstream.com/Presentation/piratebhai-727374-greencomputing) (Soomro and Sarwar, 2010).

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