

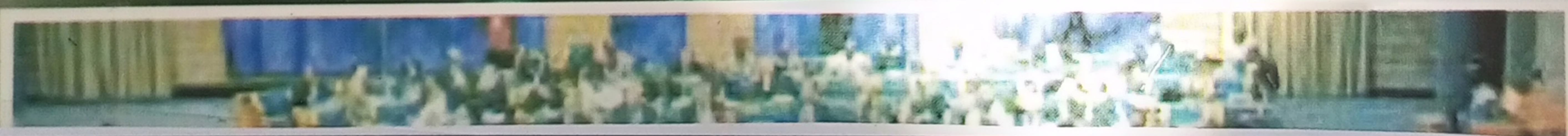
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# TEAMS Research Nexus 2013

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Theme: Beyond the Sparks-Reshaping Research & Human Development in Africa through Digital Innovations

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## Towards The Adoption of Green Computing Techniques In Nigeria It Industries

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### Abstract

Over the years, there has been a lot of academic and industrial interest on green computing and providing green solution to all aspects of computing through Green computing. Green computing provides a system with better performance and processing capabilities with lesser amount of energy consumption. Researches have shown that energy cost constitutes the highest percentage of the overall costs of managing Information Technology (IT) industries. In this paper, emphasis is made on the need, importance of green computing and its techniques in Nigerian Information Technology industries. Green computing promises better services, sustainable IT growth, environmental safety and reduced Overhead cost of running IT centers.

**Keywords:** Green Computing, Nigeria, Energy Conservation, Environmental Protection, ICT

### 1.0 INTRODUCTION

Green computing is the effective and efficient use of computer resources for reduction of overall energy consumption in order to minimize the cost running IT centers [1]. Major aims of green computing are to protect the environment and save power along with operational cost in increasingly competitive world. Nowadays, consumers and non-governmental organization are paying more serious attention to their electricity consumption. The amount spent on running IT centers has doubled over the last decade [2]. Today everyone is concerned and aware of green computing approaches and beginning to request and accept environmentally friendly systems in their various places of endeavors. This approach has also led to vehicular market; where automakers have experimented customers' feedback and produce cars with better fuel economy in addition to lowering emissions and including natural materials. The objectives of green computing are similar to that of "green chemistry" which is to minimize the use of hazardous materials and increase power efficiency during the system life cycle [1]. In this paper, we emphasize the need, importance of green computing and its techniques in Nigerian Information Technology industries.

### 2.0 NEED FOR GREEN COMPUTING IN NIGERIAN IT INDUSTRIES

The use of computer systems and information technology equipment has made life easy. The demand for this equipment is on the high, leading to large energy consumption in Nigeria. Large energy consumption means large emission of greenhouse gases like carbon dioxide. Most of the time, computer energy is wasted. This is because computer systems are left ON when not in use. The computer's central processing unit (CPU) and fan consume power and the screen saver consumes power when not in use as well. Most IT centers do not have enough cooling capacities and this has led to environmental pollution. This could also be as a result of defects in manufacturing techniques, packaging, disposal of computer systems which can enter in to food and water line[5] [3].

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