

Islamization, Ethics and Values in Science and Technology

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By

*Islamic Values and Ethics in Engineering Sciences Research Group
(IVEES-RG)*

International Islamic University Malaysia (IIUM)

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E-WASTE; PROBLEMS, ISLAMIC PERSPECTIVE AND SOLUTIONS

Waleed F. Faris, Othman O. Khalifa and Muaz Hawari

Introduction

Although electronic waste (e-waste) seems to have only recently become a problem, this issue has been building since the electronic products and computers were first manufactured. Electronic waste includes broken or obsolete televisions, computer monitors, central processing units, phones, videocassette recorders, copiers and printers, stereos and speakers, microwaves, and other electronic equipment. As a general category, e-waste may contain significant amounts of heavy metals and other hazardous materials. Consumer electronics devices contain many toxic materials that can have detrimental impact on public health and the environment, if improperly disposed. The life span of computers used to be decades, then years, and now often months. Millions of computers, screens, and peripherals are being rendered obsolete after little more than a year of active use. Just a small percentage of these are reaching the solid waste stream. Most are stored in attics, garages, and warehouses, their owners unwilling to throw away something they perceive to have so much value. Most consumers are unaware of the toxic materials in the products they rely on for word processing, data management, and access to the internet, as well as for electronic games. In general, computer equipment is a complicated assembly of more than 1,000 materials, many of which are highly toxic, such as chlorinated and brominated substances, toxic gases, toxic metals, biologically active materials, acids, plastics and plastic additives.

There are two root computer and electronic waste (hereafter, e-waste) problems:

- The volume of computers and related e-waste improperly disposed of in landfills.
- The toxicity of both the computer chip manufacturing process and the computer or cathode ray tube monitor (CRT) itself as a waste product.

The problem with Electronic and Computer waste

Computers and electronic devices have greatly improved our quality of life. However, they have also created a new type of waste. Although electronic waste (e-waste) seems to have only recently become a problem, this issue has been building since the electronic products and computers were first manufactured. The average computer platform has a lifespan of less than two years, and hardware and software companies – especially Intel and Microsoft -- constantly generate new programs that fuel the demand for more speed, memory and power.

Today, it is frequently cheaper and more convenient to buy a new machine to accommodate the newer generations of technology than it is to upgrade the old. This trend has rapidly escalated