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E-parisar : A Smartphone Based Approach for E-waste Management & Recycling

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Abstract:-Electronic waste or E-waste is relatively a novel addition to the ever-growing hazardous waste stream. It includes discarded electronic and electrical equipment. There is a lack of consensus as to whether the term should apply to resale, reuse, and refurbishing industries, or only to product that cannot be used for its intended purpose. Informal processing of electronic waste in developing countries may cause serious health and pollution problems, though these countries are also most likely to reuse and repair electronic; India is no exception to it. However, the existing management practices related to E-waste in India are reasonably poor and have the potential to risk both human health and the environment. The hazardous content of these materials pose a threat to human health and environment. Discarded computers, televisions, VCRs, stereos, copiers, fax machines, electric lamps, cell phones, audio equipment and batteries if improperly disposed can leach lead and other substances into soil and groundwater. Many of these products can be reused, refurbished, or recycled in an environmentally sound manner so that they are less harmful to the ecosystem. Moreover, the policy level initiatives are not being implemented in an appropriate way During the course of the study it has been found that there is an urgent need to address the issues related to E-waste in India in order to avoid its detrimental future consequences. This project highlights the hazards of e-wastes, the need for its appropriate management and options that can be implemented. Keywords:

Key Words: E-waste, hazardous waste, risk, management*, environment*

1.INTRODUCTION

Electronic Waste" may be defined as discarded computers, office electronic equipment, entertainment device electronics, mobile phones, television sets and refrigerators. This definition includes used electronics which are destined for reuse, resale, salvage, recycling, or disposal. "E-Parisar:a Smartphone Based Approach for Ewaste Management and Recycling" is used for the collection of the electronic waste material from the customer, local collector, so on. The customer can define the details about which type of waste is having. The customer can get the money by giving the waste material. "E-Parisar: a Smartphone Based Approach for E-waste Management and Recycling" is for deplorers and recycling it in the company. The main purpose of online e-waste collection system is to provide another way for the customer to giving the e-waste material. These days computer has become most common and widely used gadget in all kinds of activities ranging from schools, residences, offices to manufacturing industries. E-toxic components in computers could be summarized as circuit boards containing heavy metals like lead & cadmium; batteries containing cadmium; cathode ray tubes with lead oxide & barium; brominated flameretardants used on printed circuit boards, cables and plastic casing; poly vinyl chloride (PVe) coated copper cables and plastic computer; casings that release highly toxic dioxins & furans when burnt to recover valuable metals; mercury switches; mercury in flat screens; poly chlorinated biphenyl's (PCB's) present in older capacitors; transformers; etc. With the rapid development of electronic industry, the continuous upgrading of electronic products lead to the elimination of more and more waste electronic products and electrical equipment around the world which would result in the formation of a large amount of electronic waste**.**

2. BACKGROUND

The waste collection system is now on online waste collection website. The public get the information about the e-waste material and aware about the waste. We will collect the household electronic and electric equipment form the public and which will recycle or deploy waste.

The recycling waste will be used in the other equipment's, and industries can use the recycling equipment's for new material, etc. The goals of the system are

1. To provide anytime anyplace service for the customer.
2. To reuse electronic waste material by recycling or deploy.
3. To decrease the electronic waste material from household.
4. To obtain statistic information about the problems effect by the e-waste material

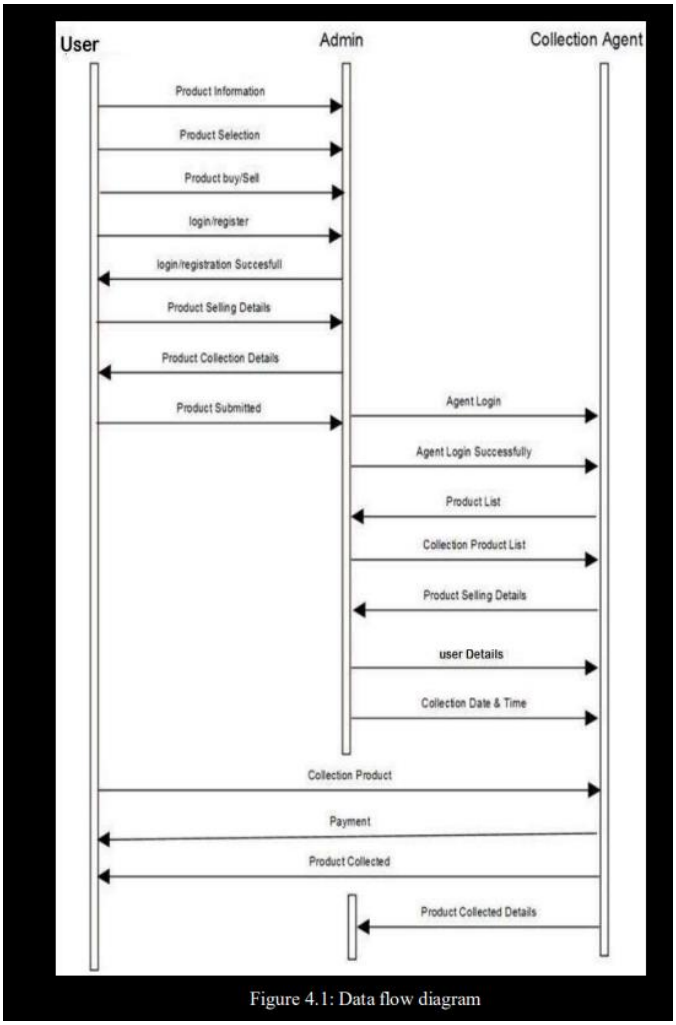

Figure 4.1: Data flow diagram

3. LITERATURE SURVEY

Waste materials are recoverable, which allows for the extraction of virgin materials, and they usually have positive market values. Recoverable materials generally include all types of metals, plastics and glass. In contrast, other materials have high potential for toxicity and other environmental impacts, and these materials are regarded as hazardous if they are improperly disposed (Sepúlveda et al., 2010). The concentrations of these recyclable and potentially toxic materials vary greatly from product to product (Matsuto et al., 2004; Oguchi et al., 2011; Oguchi et al., 2012). This situation demands that e-waste treatment accomplish two tasks: recover materials and control the potential for toxicity and emissions. There is a natural difference between the methods used to process products in "bulk waste streams" for general material recycling and the specialized processes used to recover specific materials and components and/or capture hazardous materials. The methods used to accomplish these two goals will vary from product to product. It is therefore useful to classify ewaste items by their "treatment priorities," according to their specific characteristics**.**

4.ADVANTAGES

- Conserves natural resources- Recycling recovers valuable materials from old electronics that can be used to make new products.
- As a result, we save energy, reduce pollution, reduce greenhouse gas emissions and save natural resources by extracting fewer raw materials from the earth.
- Protects Environment- E-waste recycling provides proper handling and management of toxic chemical substances like mercury, lead and cadmium contained in the e-waste stream.
- Creates Jobs- E-waste recycling creates new jobs for professional recyclers and creates a second market for the recycled materials.

5.PROPOSED WORK

The Key Players in e-waste are 1) Consumers as in (a) Office and (b) Domestic, 2) Scrap Dealers and 3) Recyclers Existing Laws are: • Tran's boundary movement of e-waste covered under the Basel convention. • India ratified the convention in 1992. • Waste importers exploit such gaps as listed in the convention. • Allowed to import against a license. • Covered under the "Hazardous Waste Amended Rules, 2003" in List A and B of Schedule 3. [6] • The Rule is inadequate to handle generation, transportation and disposal of this complex waste • Regulators unable to monitor and regulate the informal sector.

6.AIM & OBJECTIVE

- The aim of e-waste management is the disposal of unwanted electronic gadgets.
- The major everyday electronic products are television, computer, air conditioners, fax machines, mobile phones, etc.

- Compared to the olden days the e-waste products have increased abundantly nowadays
- And a proper methodology should be followed to control the pollution caused by e-waste products.
- The major objective of e-waste management is to reduce, reuse, and recycle.
- Some of the e-waste consists of valuable covering or materials inside which can be reused or recycled.
- Whereas some of the e-waste may contain hazardous chemical materials which should be disposed of carefully without causing harm to nature.
- "Extended Producer Responsibility"(EPR) is one of the concepts introduced in e-waste management.
- In this policy the producers are given an important responsibility for the disposal and treatment of the products.

7. FUTURE SCOPE

• Could the sustainable cities of the future prominently feature e-waste collection? E-waste Collection System is future to reduce the electronic waste and reusability of the electronic material in future.
• The E-waste Collection System that develop the information and awareness about the recycling and problem affect by them collection. Decrease the Electronic & Electric Waste from the World and Less Development of Electronic and more recycling of the material.

• The waste management model can be replicated further to meet objectives of waste disposal in different places. Places with similar waste disposal issues can adopt the model developed without fundamental changes in the design. The simplicity and affordability of the model enables it to be designed and fabricated locally.
• Waste disposal is a burning issue and there is ample potential in future development for various aspects of this project. The receptacle designed for segregation at source can be further developed in terms of materials and design for use in different waste situations and characteristics. Cost and portability aspects can be 237 taken up for further development through which would enable its use for a larger and varied audience.

8. CONCLUSIONS

E-waste is a popular informal name for electronic products nearing the end of their useful life. Anything that runs on electricity/battery or has wire and completed its life is e-waste. Electronic waste may be defined as discarded computers, office electronic equipment, entertainment device electronics, mobile phones, television sets and refrigerators. E-wastes are considered dangerous, as certain components of some electronic products contain materials that are hazardous, depending on their condition and density. The hazardous content of these materials pose a threat to human health and environment. According to European Union (EU 2002), e-waste is, "Electrical or electronic equipment, which is waste, including all components, subassemblies and consumables, which are part of the product at the time of discarding." Electronic and electrical equipment's cannot be avoided in today's world. So also is the case of waste electronic and electrical equipment. As long as this is a necessary evil, it has to be best managed to minimize its adverse impacts on environment. Electronic waste piles are growing, as is their pollution potential. Most of these problems have their source in the development and design of the products concerned. Using this type of system we can conclude that using the methodology of Reduce, Reuse and Recycle (3R) decrease the piles of electronic and electrical equipment, and make environment to be cleaned and healthy. In a nutshell, we can conclude e-waste Collection System is future to reduce the electronic waste and reusability of the electronic material

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