

Computer Myths: The Story of Scrap

Ravi Agarwal

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"Are you as the customer ready to foot the extra bill? why should the manufacturing sector alone be made the scapegoat for all the evils that emanate from e-waste? If computers and all other electronic items are so bad, why don't you stop using the same altogether?" asks Vinnie Mehta, executive director, Manufacturers Association for Information and Technology.

The computers we use on our desktops are truly 'global' devices. Built using cutting edge technologies in their displays, chips, memories, storage devices, and multilayered circuit boards, these represent the art and science of the 'possible' in today's world. Mobile phones, IPODs, music sticks are similar. But these technologies of the future also contain toxics of the past. A single computer can contain over 50 highly toxic metals and compounds, in the over 1000 materials it uses. All these get released soon as the computer is disposed and lands up in the hands of a recycler in a country like India.

Computers are technologies of the 'moment' for another reason. They are part of a global production mechanism. Hence the hard disk could be made in Taiwan, the keyboard in Mexico, the circuit board in China, the memory device in Malaysia, and all of this assembled in India, Europe or the US. Globally known companies assemble, test and brand them and sell them to their international markets. Globally of the 1.3 billion computers, which will be present on the planet by the year 2010, over 50% will populate the South. Over 1 billion mobile phones, 10 million IPODS and huge numbers of similar devices have already been sold. Truly, a global production, marketing and consumption system, now at a scale, which has been unseen ever before in human history.

But where do used computers, junk, second hand ones, land up? Unfortunately in Africa, India and China as recent research shows, egged on by new legislation in Europe and the US. Consumers in the US and Europe throw out a computer in less than two years, and India is fast catching up. Previously we used to use a computer for seven years, but this has now decreased from three to five years. Over 350 million computers have become waste in the US alone by 2004 and there will be 3 billion by 2010. Over 62 million in Europe in 2003 and in India over 2 million old PCs are ready for disposal with the graph rising. The South is fast becoming the waste bin of the planet. Global markets, but only Southern waste!

In India, computers are now synonymous with modernity and 'education.' The IT industry here grew to 12.7bUSD in 2002- 2003 with exports of 10bUSD and a 26% rate of growth. Village level computerization and connectivity are the buzzwords and farmers and rural schoolchildren are being taught to participate in the possibilities of the emerging nation. Till 1991 we had about 1 computer per 1000 people, but in 2004 this had risen to 11 per thousand and is slated to go to 20 per thousand by 2010 amounting to about 20 million computers. Or 20 million devices with many kilos of toxics in each. We are also actively seeking donations for computers, which are upto ten years old (and junk by definition) but have no plans or systems in place to ensure that these are safely disposed off.

A computer, which is thrown out, lands up in one of the many recycling localities in mostly the larger cities such as Chennai, Mumbai or Delhi. Here, those which cannot be made reusable, are broken by hand. The plastic casing of the monitor is opened, the glass of the display (CRT) smashed, the plastic coated copper wires burnt to reclaim copper or the circuit boards melted in very strong acid to extract the tiny amounts of gold and copper. While doing so, many toxic compounds are released. For example, burning PVC plastic coated copper wires releases very high amounts of dioxins and furans, some of the most toxic compounds known to man, and now slated for global reduction under the UNEP 'Stockholm Treaty.' Breaking glass releases high amount of lead, a neuro toxic slated for worldwide removal. Inside the computer can be mercury in switches and cadmium, besides PCBs in old capacitors, all highly toxic. The plastics shell uses anti flammants, Brominated Flame Retardants (BFRs), nasty substances which causes cancer and endocrinal system disruptions. The contamination soaks into the soil, groundwater and also lands up in landfills where it leaches down. It is like a toxic brew, the highest exposures being to the most vulnerable urban poor, many women and children who work in these recycling units. In Delhi alone over 10,000 people are directly employed in recycling activities, not counting those who collect the waste.

These are exactly the reasons why it is very expensive to dispose off old computer in countries in Europe and in the US. Disposed computers are labeled hazardous waste there. The recently enforced (August 2005) WEEE legislation (Waste from Electrical and Electrical Equipment) legislation in the EU mandates that all such used equipment must be collected and safely recycled/ disposed off by the manufacturer under the EPR (Extended Producer Responsibility) regime. A minimum of 4 kg per person of EE waste is to be collected by December 2006 and export is not allowed. Similarly over 26 States in the US have proposed Bills for WEEE, though they leave the export route open. The question of enough capacity in those countries to dispose/ recycle such waste has to be answered in the negative. In May 2005, the British Environment Protection Agency (BEA) released a report admitting at least 23000 mt of WEEE being exported illegally from the UK alone, and that this figure was only indicative. The US alone however considers such exports as 'legal.' Internationally it is not a Party to the UNEP Basel Convention which regulates such movement in hazardous waste, unlike India, China and the EU, and all such trade is illegal for them.

The logic for such export is economic, though at a very high human and environmental health. Disposing a computer in the US can cost upto USD 20, while an Indian trader can buy it for USD 10 to 15, a net gain of 30 to 35 USD for the exporter in the US. The computer will then be auctioned off in India, as part of large consignment, and after being rerouted through an address in the Middle East, to hide the country of origin. While the recycling worker will make a pittance of less than a dollar or two a day, the traders make a killing. A PC of 32 Kg can yield gold upto 0.0016kg, copper upto 6.93 kg, plastics upto 23kg and glass (silica) upto 24.9 kg, along with the toxics. The goods are not declared as 'waste' at Indian Customs since imports of WEEE are not permitted in India but come in illegally as 'second hand computers,' 'metal scrap' (legally allowed) etc. Toxics Link's research has documented over 40 Bills of Entry showing such imports, and these are just the tip of the iceberg. A recent report by the Basel Action Network (BAN October 2005) shows second hand computers being widely imported into Africa, while an earlier BAN report (February 2004) graphically revealed this problem in China.

NGO pressure has caused the Indian Government to act, although slowly. The formation of a multistakeholder National Working Group to consider a new legislation was set up in 2004, after a national workshop was held. Subsequently the German agency GTZ and the Swiss Agency EMPA have collaborated to help an entrepreneur in Bangalore to set up a recycling unit, which is now about to start operations. Further assessments are under way, but the Industry is not keen to take any responsibility. Despite the fact that the same internationally known brands are carrying out collection and disposal of e-wasting many countries, like Sweden, Switzerland, Germany etc. they have been avoiding the problem in India. It is clearly a case of double standards and makes the issue of Corporate Social Responsibility (CSR) a lie.

Solutions are there, but need to be implemented. Clearly imports of e waste are illegal and cannot be allowed. The locally generated waste, which is rising rapidly, needs proper collection and disposal means, and this can only be done with manufacturer responsibility under EPR. The informal sector, which is currently involved, must be incorporated as an actor in the whole scheme through a system of incentives and capacity building. A new legislation is needed which outlines the responsibilities of each sector clearly. Our challenges in India are huge, and we need to implement solutions, which interlink environment and livelihood concerns. The Industry often brings in the red herring of costs, but in countries like Sweden, the annual cost per person is less than 4 USD for collection of e-waste. Also computers need to be redesigned for longevity and with clean materials and processes. In fact the ROSH directive of the EU has mandated this as well.

If we are to have sustainable futures, we cannot do this on old ways of doing things being followed even in areas which are cutting edge in terms of human knowledge and processes. Computerization and a modern society have to be built not only on technologies but also through integrating issues of equity, responsibility and justice.

Resources:

2002: "Exporting Harm: The Hi- tech trashing of Asia" with BAN.

2003: "Scrapping the Hi-tech Myth: Computer Waste in India" Toxics Link

2004: "E-waste in Chennai: Time is running out" Toxics Link

2005: "The Digital Dump: Exporting High-Tech Re-use and Abuse to Africa," BAN

Web:

www.toxicslink.org

www.ban.org

www.unep.ch/basel

www.empa.sw