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## Wall of Waste

Waste ends up in unexpected places in devastating ways

### Introduction – Objective and Theme

#### *Research and Process*

At the beginning we were given a very broad concept, which was to create a wireless network that appropriates environmental data collected via sensor inside and outside of the exhibition. To properly address this matter, we began researching separately to come up with an array of different issues we would like to approach. During this process, we came across a variety of issues such as e-waste, the Great Pacific Garbage Patch, acid in the oceans, and mining waste, among others. After compiling this information, we noticed a pattern in our findings and a theme for what we wanted to achieve — waste ending up in unexpected places in devastating ways and how we can get people interested in reversing that.

From these issues, and based on our research, we decided to focus on e-waste. **What exactly is electronic waste?** According to our research, “the term includes all old electrical appliances either in the state of repair or simply obsolete. This is everything from house appliances to mobile phones and computers”<sup>1</sup>.

After watching *Ghana: Digital Dumping Ground*, a documentary on the subject, our decision was made. This video was the decisive source that helped us maintain our interest in e-waste. The video not only shows us the unknown reality of e-waste, but also a more humane side of the story, where people’s lives are being affected directly, some of whom are children. Many people are exposed to a cocktail of toxic chemicals and poisons, giving this environmental issue an even bigger social connotation.

Not only were our research results shocking, but also the fact that when it comes to e-waste, most people are clueless. Trash utilities and recycling companies tell us our e-waste is being recycled and that there are recently passed laws banning the inappropriate dispose of e-waste. Still, there is no easily accessible information about where our electronic disposal actually ends up.

This issue goes hand in hand with our current technological lifestyles. Everyday new technology arises and new generations are better and faster, but what about the so-called “first generations”? What happened to them? Everyone wanted the first iPod in 2001, and now in 2010 everyone still wants the latest generation to come out, disposing of, in one way or another, the old one. This pace cycles continuously. How are we disposing these “old” items? How are we coping with the planned obsolescence of products? Recent research from the US Environmental Protection Agency (EPA) shows just how rapidly and alarmingly this issue is evolving. In a few words, since it is very expensive to dispose of e-waste responsibly at home, out of over 300 million units of e-waste ready for “end-of-life” (EOL), only about an 18% is actually recycled. The rest is left to be dumped in developing countries such as China, India and Ghana.

Based on all our research, e-waste is a reality that can no longer be ignored. We will only be able to create a sustainable future if we take action before it is too late.

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<sup>1</sup> Adelaide e-waste & computer recycling (article), <http://www.ewaste.com.au/adelaide-ewaste-computer-recycling/>

## *Precedent*

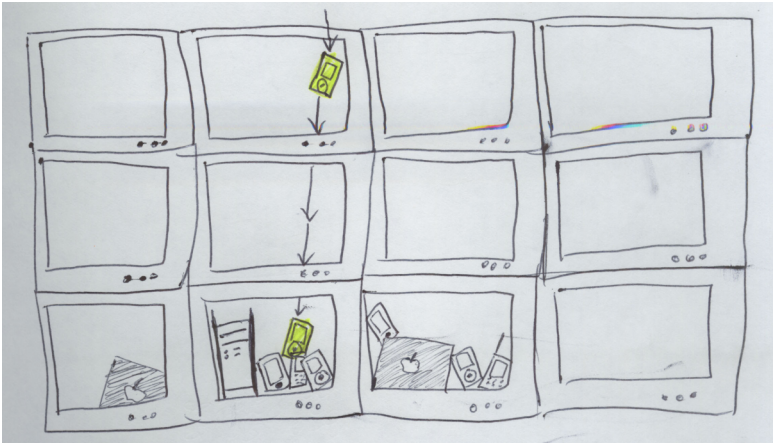
A few projects have used various tracking techniques to follow waste on the trail it takes from the moment it is thrown away to its final resting place. The Trash Track project by the SENSEable City Laboratory at MIT has used cell phone receptors to track waste, as it leaves consumers in Seattle and New York City. Green Peace conducted a similar project, but instead used Global Positioning System (GPS) triangulation to track electronic waste as it leaves consumers in Europe of the US. Both projects found that waste ended up in places consumers probably never imagined. Much of the electronic waste generated by developed countries ends up in rural areas of developing countries, causing harm to the environment and people of those areas.

Our goal is to raise awareness about the devastating effects of electronic waste that often occur in locations extremely far removed from the original consumer. Waste does not disappear once a consumer disposes of it, yet the general thought of “out of sight, out of mind” prevails. Behavioral change is needed in order to begin to solve the problems of the electronic waste trail. The Fun Theory creates fun projects that encourage people to change their behavior for the better. We hope to create a thoughtful and positive experience for viewers that will encourage them to change their behavior toward electronic waste. Through various data visualization techniques, we will express the magnitude of waste created by few people over time.

## Project Description

A wall of electronic waste, including television screens, computer monitors, iPods and other portable music players, and cellular phones will be assembled. A projection screen set up across from the wall will project images and live data visualization onto the wall of waste.

Data will be collected using an online survey, conducted both before and during the exhibition. Preliminary data will be used to generate the main visualizations. Data collected during the exhibition will be used to update the visualizations.



## Materials

### Interface Device

Refurbished Eee PC 900A Atom N270 1.6GHz 1GB 4GB SSD

\$149.98 from [unclevic.com](http://www.unclevic.com)

<http://www.unclevic.com/ASUS-WFBB01-Eee-PC-900A-Atom-N270-16GHz-1GB-4GB-SSD>

### Projector

Nec NP110 DLP Projector

\$319.90 from [powersellernyc.com](http://powersellernyc.com)

<http://powersellernyc.com/product/view/NEC-NP110-DLP-Projector--25513.html>

### Extension Cord

Mountain 5850EC 50' Heavy Duty 16/3 SJTW Extension Cord

\$24.95 from [sjdiscounttools.com](http://www.sjdiscounttools.com)

<http://www.sjdiscounttools.com/mtn5850ec.html>

### VGA Cord

BELKIN 20 ft. OmniView ExpandView HD-15 Male to HD-15 Female Cable Model F1D9003-20

\$30.99 from [newegg.com](http://www.newegg.com)

<http://www.newegg.com/Product/Product.aspx?Item=N82E16812107499>

### Projection Paint

Goo Systems CRT White Basecoat Acrylic Paint - 1000ml

\$54.95 from [bhphotovideo.com](http://www.bhphotovideo.com)

[http://www.bhphotovideo.com/c/product/337537-](http://www.bhphotovideo.com/c/product/337537-REG/Goo_Systems_4193_CRT_White_Basecoat_Acrylic.html)

[REG/Goo\\_Systems\\_4193\\_CRT\\_White\\_Basecoat\\_Acrylic.html](http://www.bhphotovideo.com/c/product/337537-REG/Goo_Systems_4193_CRT_White_Basecoat_Acrylic.html)

### 4-16 Broken Monitors

Make, model, and specs not important just all need to be roughly the same size

\$0, free from garbage.

Electronic waste will be collected from Electronic Waste Management services and assembled on site by our team.

## Potential Extension

We would like to create smaller exhibitions of this piece to place in public areas in large cities, in order to build awareness of the issues as well as our project. For example, we would like to place a pile of e-waste in the middle of Central Park. Visitors to the park would not expect to see such a sight. We would utilize this shock value to educate visitors that piles like these exist in developing countries, defacing and damaging the environments that they are carelessly dumped into.

