

Materiality and recyclability of digital signs

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Life Span

Light Emitting Diodes have a lifespan of 100,000 hours. According to Bryant, this equates to roughly eleven years for LED billboards, compared to the fifteen years for traditional static billboards. At that point, the diodes will be operating at 50% of their prime brightness. Of course, considering the return on investment that the sign owner has received by that time, he or she will likely not hesitate to replace the sign quickly (Bryant, 2008). As these large digital displays and their associated digital players increase in popularity, will we soon face an abundance of difficult to recycle, discarded technology?

Techno-Waste

Obsolete technology is a valuable source for secondary raw materials, if treated properly; if not treated properly, it can be a source of toxins and carcinogens. Rapid industrial advancement, decreasing initial cost, and even planned obsolescence could result in a fast-growing surplus of “techno-waste” (Morgan, 2006). LED’s, plasma and LCD screens, and digital players and extenders *are* recyclable, but their de-manufacturing and reuse is not always mandated or monitored.

In the US, the main federal law governing solid waste is the Resource Conservation and Recovery Act of 1976; as far as electronics are concerned, it covers only cathode ray tubes (televisions and computer monitors popular before LCDs, plasma and LEDs), though state regulations may differ, according to the U.S. Environmental Protection Agency. Volumetrically, digital signage does generate more waste to be recycled than the paper, vinyl sheets, and plywood or canvas facing of static billboards, but lacks the potentially toxic adhesives.

