

The Afterlife of a Television

Electronics Recycling Primer

Broadcasters Clinic 2008
October 15, 2008



So you want to get rid of that old TV...

All digital TV signals in February 2009—many people are looking to upgrade TVs and video equipment.



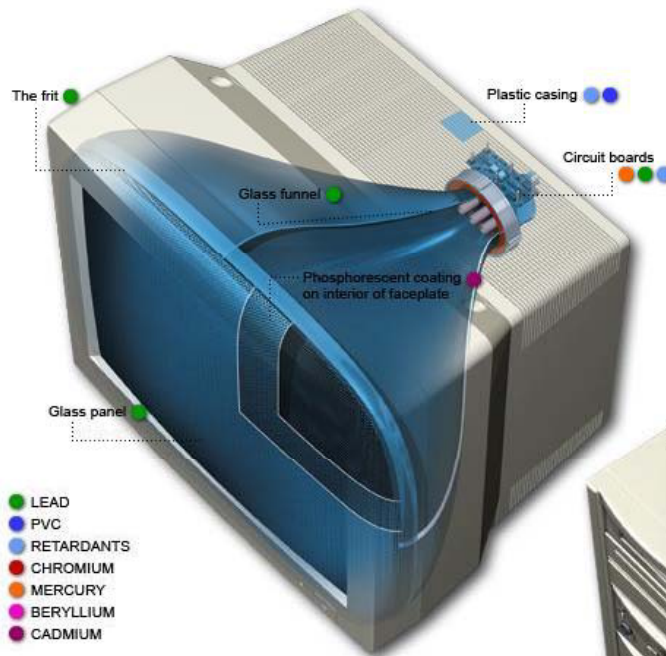
This will add to a growing volume of e-scrap—EPA estimates that in 2005 alone, 250 to 350 million TVs, computers and accessories became obsolete.



You've just bought a new digital TV...what are you going to do with your old one?



Why is this an issue?

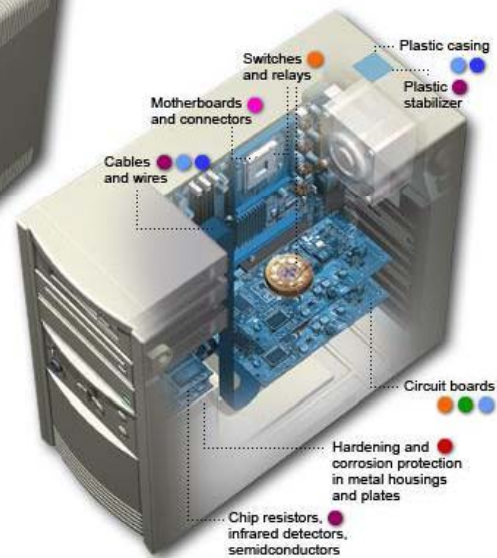


Cathode-ray tube (CRT) monitor

CRT in computers-monitors and TVs hold 4 to 12 pounds of deadly toxins including lead, cadmium, beryllium, and barium. The Federal Government classifies broken monitors as hazardous waste and regulates their transport. Flat-panel LCD monitors rapidly replacing CRTs, have less toxic material overall but contain mercury in lamps that backlight the screens.

Central Processing Unit (CPU)

Personal computers contain toxic substances such as lead, beryllium, and hexavalent chromium. Dioxins are released if PVC-coated wires are burned to extract copper. But new recycling technologies – especially in Europe, where recycling is mandatory – make it increasingly economical to safely recycle the valuable materials in PCs.



Courtesy: National Geographic 2008



Why is this an issue - continued

- Most of these materials are also valuable
- Many electronics are reusable (e.g., cell phones, provided information is permanently deleted)
- Reducing need for new electronics (through reuse) and new raw materials (through recycling) helps the environment and reduces greenhouse gas emissions
- The e-waste stream will continue to grow—electronics are designed for obsolescence



Regulations



- Businesses, agencies and institutions are **required** to recycle electronics or manage them as hazardous waste.
- Individuals don't have to recycle electronics under state law, but we highly encourage everyone to recycle because of the economic and environmental benefits.



Resources

- DNR Web site: <http://dnr.wi.gov/org/aw/wm/ewaste/>
 - Questions to ask recyclers (especially businesses/agencies with large volumes)
 - Links to resources for finding recyclers
- Community sites/events (contact your local municipality)
- Earth 911: <http://earth911.org/electronics/>
- myGreenElectronics: <http://www.mygreenelectronics.org/>
- EPA's Plug-In to eCycling: <http://www.epa.gov/epaoswer/osw/consERVE/plugin/index.htm>
- Electronics TakeBack Coalition: <http://www.computertakeback.com/>
- EPEAT tool for green purchasing: <http://www.epeat.net/>



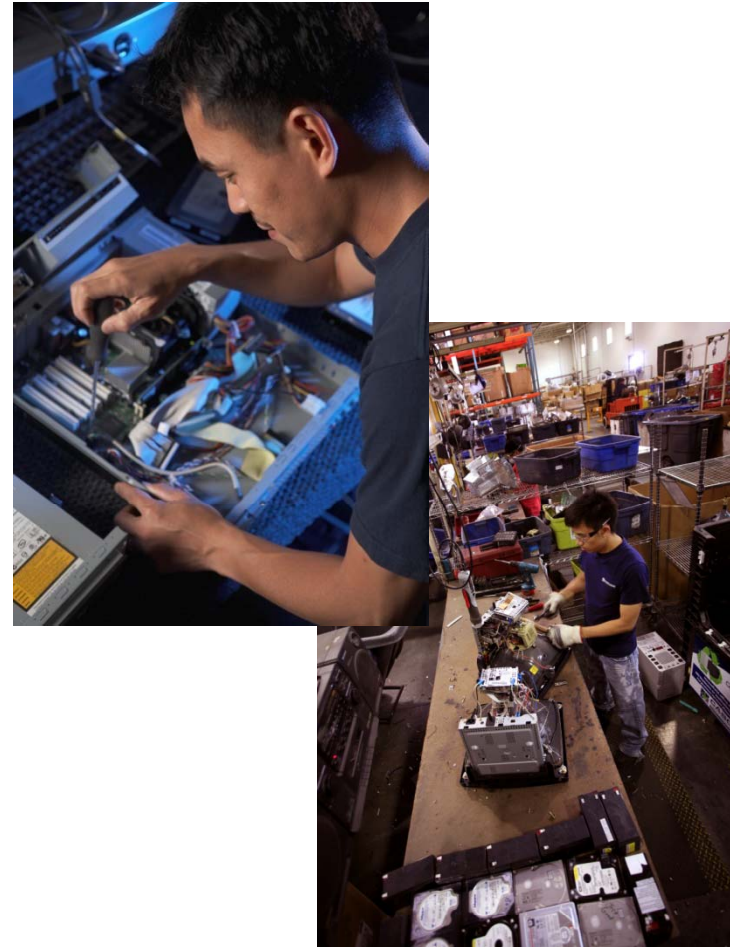
Responsible Recyclers

- Downstream process
- Worker safety
- Data destruction
- Documentation for recycling and destruction
- EMS/industry certification
- Ask questions!



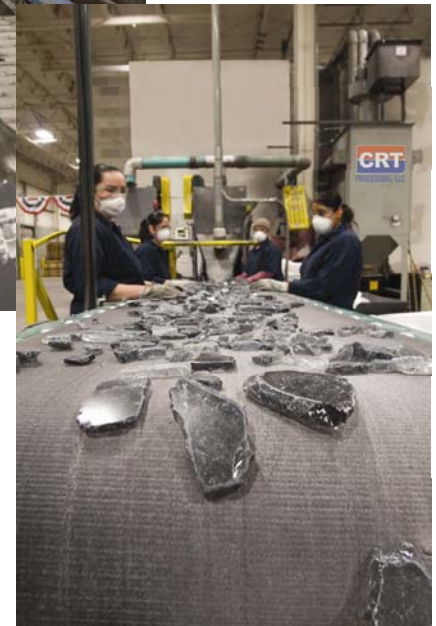
Responsible Recycling: Cascade

- Serve enterprises and local govt throughout US
 - ISO 14001 Certified, E-Steward
 - Secure facilities and shipment of assets
 - Asset Recovery
 - Equipment Refurbishment
 - Off-site and on-site data wiping
 - Qualified third party buyers
 - Disassembly
 - Hand-sort into 55 different material streams (Results in higher yield of material recovery downstream)
- Audited downstream processors



Responsible Recycling: CRT

- Product meets EPA's definition of "CRT glass-to-glass processing as furnace ready cullet."
- Proprietary process is one of just a few in North America
- Materials are no longer considered hazardous waste, as it becomes a clean commodity for reuse.
- 95% recycled into remanufactured commodities or reused through asset management
- Six U.S. facilities will exceed 60 million pounds in 2008



Long-term solutions

- WI Legislation (based on Midwest Region solution – already implemented by MN)
 - Manufacturer responsibility
 - Remove taxpayer burden
 - Landfill bans
 - Increased recycling infrastructure for businesses/agencies
 - Heightens standards for recyclers
- Heightened Federal Regulations and Legislation
- Heightened Best Management Practices/ Certification



What's happening now?

- Community collection events and permanent drop-off sites
- Manufacturers sponsoring national collection programs (Samsung, Sony, LG, Toshiba)
- Retailers sponsoring recycling programs (Best Buy, Staples)



What can broadcasters do?

- Include recycling messages in DTV publicity
- Find out about local collections and publicize them
- Sponsor collection events
 - Plan carefully!
 - Make sure you plan to cover costs
 - Work with reputable recyclers—ask questions



The message

- Viewers can still use older equipment after the digital switch in February 2009—receive signals with cable, satellite or digital converter box
- Electronic equipment contains both valuable and toxic materials
- If getting rid of old equipment, recycle—ask your retailer or contact your community to find out about recycling options in your area
- Find more information and resources at:
<http://dnr.wi.gov/org/aw/wm/ewaste/dtv.htm>



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