

Electronic Stewardship for Small and Handheld Electronics

Federal Electronics Challenge

Partner Call

March 5, 2009



Agenda

- What is a small or handheld device
- Purchasing
- Data security
- Recycling/End-of-life

Small and Handheld Devices

What is a small or handheld electronic device?

- Personal Digital Assistants (PDA's)
- Cell Phones
- Digital cameras
- Global Positioning Systems (GPS)
- Portable media players
- Analytic devices

They can be devices for many markets:

- Consumer
- Commercial
- Industrial
- Military
- Laboratory
- It seems like all most anything is getting a handheld version today

Small and Handheld Devices

- For the purposes of this call they are generally:
 - Battery operated
 - Can operate independently of other devices
 - Self contained
 - May have some accessories

What's the difference?

- What makes small devices different than the larger devices they supplant?
 - Fewer serviceable parts
 - They are moving with the user
 - Shorter time between generations
 - Easier to damage
 - Harder to upgrade
 - Potentially shorter life span

What's the difference?

- What makes small devices different than the larger devices they supplant?
 - Different operating systems /software means each type of device may need different knowledge to maintain
 - Input and output devices aren't always there to support the device
 - How does data come off?
 - How are data security processes done if there isn't a drive to boot a program from?

Purchasing

- ENERGY STAR

- Battery Chargers

- 230 million battery chargers are used in the US
- More energy efficient battery chargers have the potential to save Americans more than 1 billion kilowatt hours (kWh) of energy per year, saving Americans more than \$100 million annually
- Conventional battery chargers — even when not actively charging a product — can draw as much as 5 to 20 times more energy than is actually stored in the battery!
- Advanced energy-saving designs are now available that, on average, use 35 percent less energy.

Purchasing

- ENERGY STAR

- External Power Adapters

- As many as 1.5 billion are in use in the U.S.

- 300 billion kWh/year, and

- 11% of the national electric bill

- Used in:

- MP3 players, Personal Digital Assistants (PDAs), camcorders, digital cameras, laptops, and cordless and mobile phones.

- Savings

- On average, 30% more efficient than conventional models.

- Are often lighter and smaller in size, which makes it easier for consumers to transport products like laptops.



Purchasing

- Ecolabels:
 - EPEAT
 - IEEE/EPEAT standard will be considered in 2011/12
 - TCO and Blue Angle have some listed products in this class
 - These are European programs
 - Few products in the US market have these labels
- Look at key environmental attributes similar to what is available for other electronics
 - Reduced toxins
 - Recyclability
 - Upgradability/Reuseability

Purchasing

- Look at FEC tools
 - Product environmental assessment tools
 - Total cost of ownership tool
 - www.federalelectronicschallenge.net/resources/docs/topenv.pdf
- Manufacturer's product environmental information sheet

Purchasing

- Other things to consider
 - Compatibility with existing equipment
 - Memory
 - Software
 - Cables
 - Supplies and consumables
 - Compatibility with networks
 - Wi-Fi
 - Cellular telephone
 - Others?

Data Security

- Understand how end-of-life data security effects these devices
 - Clearing – Resistant to keyboard attacks
 - Purging – Resistant to laboratory attacks
- Know the difference between resets
 - Soft – may just restart the device
 - Hard/factory – may return it to the factory settings
- Different devices may use different methods to clear memory

Data Security

- Equipment may contain information that should not get out. To find out how to reset see:
 - Owners manual
 - Websites
- Remember data security when
 - Transferring equipment to a new user
 - Sending equipment for repair
- Some devices may not have a way to clear data
 - Is this important based on the device and use?
- Work with you IT department to determine the best way to remove data

End-of-Life Management

- Following the regular property process:
 - Reuse, donation, recycling before disposal
- Remember:
 - Cables and documentation
 - Memory cards and SIM chips
 - Will any outside services be needed?
- Consumables:
 - Rechargeable batteries are recyclable
 - If the battery is not removable, can it be replaced?
 - Some accessories can also be recycled



End-of-Life Management

- Use the FEC end-of-life tools to evaluate recyclers
- Because of the small size, many retailers and manufactures may offer recycling programs
 - EPA's Plug-in to eCycling program has links to manufacture and retailer environmental sites: www.epa.gov/epawaste/partnerships/plugin/partners.htm
 - The Rechargeable Battery Recycling Corporation, RBRC, offers collection programs for batteries and small devices. www.rbrc.org

Reusability

- Network compatibility
- Connection to servers
- Compatible features
- Equipment
 - Cables and documentation
 - Memory cards
 - Remove them or include them?
 - Evaluate on a case by case basis

Discussion

- Has any one tried to buy a 'greener' small device?
- How have people recycled these devices?
- Has old equipment been suitable for reuse or donation?
- How has data security been handled?

Contact Information

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