A New Life for Laptops

Is a laptop computer useless without a hard drive? A group of University of Illinois students decided to find out. With funding provided by Dell and a grant from the Sustainable Electronics Initiative (SEI) at the Illinois Sustainable Technology Center (ISTC), a division of the Prairie Research Institute on the University of Illinois – Urbana-Champaign (UIUC) campus, the students worked in conjunction with university researchers and explored reuse options for such devices destined for recycling.

Laptops used by government agencies and various industries typically have their hard drives removed or destroyed before recycling. This removal is done out of concern for data of a sensitive or personal nature falling into the wrong hands.

The goal of the class directed by William C. Bullock, Professor of Industrial Design, was to extend the useful life of these used laptops and their components prior to recycling. The project utilized cross-disciplinary teams of students (graduate and undergraduate) and research faculty from engineering, marketing, computer science, business, and industrial design at UIUC and staff from ISTC. (Project Advisors: Hong Yuan, Assistant Professor, Department of Business Administration; Brian Lilly, Adjunct Associate Professor, Engineering; and Cliff Shin, Associate Professor, Industrial Design; Joy Scrogum, ISTC; Nancy Holm, ISTC; Mike Watson, Dell; John Pflueger, Dell)

Vintage Tech Recyclers in Romeoville, Illinois, donated 20 recycled Dell laptops to the students for experimentation. Any unused computer parts were returned for recycling. Final class projects were presented in May 2012 and results are posted on the SEI website http://www.sustainelectronics.illinois.edu/.

The four ideas developed from this project include (as shown):
- LCD Screen Lights: Egg Production
- Auto Drip Irrigation & Sea of Sensors
- Laptop Express
- Education & Training

Education & Training

What is it?
The Farm Education Initiative is a one-stop education laptop with how-to videos and additional information.

Who’s it for?
- Farm workers
- Agriculture groups
- School field trips

Where?
- Personal laptops for off-site learning
- Communal learning stations on the farm

Laptop Express

Laptop Express would be a subscription service offering recycled laptops that can easily be replaced if broken or damaged. This service would give farmers the ability to use technology in the field where they need it, but not have to worry about ruining expensive equipment.