Sustainable Electronics Campus Consortium
Education Meeting Summary
August 5, 2015 at ISTC in Champaign, IL

Meeting attendees: William Bullock (Art + Design), Jim Keys (INHS), Joy Scrogum (ISTC), Andrew Wadsworth (Tech Services), Martin Wolske (GSLIS)

The main purpose of this meeting was for consortium members to learn about more about and discuss the Illini Gadget Garage project. The project team (Joy, William, and Martin) described the project and progress to date. Essentially, the Illini Gadget Garage is a collaborative repair center for student and staff owned electronic devices, where student staff and volunteers will work together with clients to troubleshoot and address problems. Depending upon the situation, activities may range from guidance on how to make your computer/device run faster to actual repair and replacement of components.

Beyond the avoidance of waste by extending the useful life of products, desired outcomes for students, staff, and the community include:

- Hands on experiences for UI students, not only in terms of performing repairs, but also in process documentation and fostering sustainable behavior on a larger scale through the iFixit Technical Writing Project; marketing and business operations; lessons in industrial design for repair and recyclability; and in environmental education and communication.
- Increased awareness of electronics laws and recycling options.
- Increased awareness of sustainability issues surrounding electronic products throughout their lifecycles.
- Decreased misconceptions regarding the disposability of devices and prohibitive complexity of electronics repair and maintenance.
- Contribution to the overall efforts to make ours a more sustainable campus with a reduced carbon footprint.

This project is funded by the Student Sustainability Committee (SSC). The Sustainable Electronics Campus Consortium will serve as an advisory group for the project, providing feedback and suggestions at regular meetings.

The project team explained that a space has been secured within the Prairie Research Institute's footprint (ISTC is a division of the Institute). The IL Natural History Survey's Storage Building #3 will house the Garage. Project team members were coordinating with a retired researcher who was in the process of moving materials out. They described the space and it's somewhat ideal features for the purpose at hand. There is a large central work space with workbenches, a sink, and fume hood, surrounded by smaller offices. Initially, since things are in the process of being sorted and moved out from the space's previous use, the Garage will focus on the main work space and one to two of the satellite rooms, with movement into remaining satellite rooms possible over time.

William and Martin will both be teaching courses in association with the Gadget Garage. William described the type of multidisciplinary courses he teaches through his Product Interaction Research Lab (PIRL), in which teams of students work with a corporate client on various aspects of product research and/or improvement—market analysis, industrial design, etc. He will be teaching a "PIRL-like" class in which the Gadget Garage is essentially the client, with students not only having the opportunity to learn and discuss e-waste and other aspects of electronic product impacts, plus participation in the iFixit technical writing program for a class project, but also considering a business plan and suggestions for the long-term self-sustainability of the Gadget Garage, beyond SSC funding. Martin teaches an introduction to network systems course, and actually plans to have the class meet in the Gadget Garage space rather than at GSLIS. He currently had 18 students enrolled, all of which were grad students. He also is teaching a course on

informal learning spaces and pedagogies, and the students in that course may become involved with the Gadget Garage for service learning aspects of their work. Enrollment for that course will be capped at 20. Joy noted she could help market the courses, if desired, via the SEI and ISTC social networks and blogs. Martin generally described the "Demystifying technology" workshops which he and his students have conducted, at Kenwood Elementary among other places. Martin's students learn to disassemble computers and put them back together, and they assist workshop participants in doing that as well, as a means to empower these individuals so they not only understand the technology available to them, but believe that they CAN understand it. He and his students have worked in various locations to design and establish community learning spaces, computer labs in libraries, etc., and so he has experience in working with groups to create inclusive, efficient spaces that meet the needs of patrons—experience which will be well applied to the Gadget Garage.

Martin reported that he had interviews scheduled with grad students who will be assisting with operations and planning. Once these students are on board, operating hours for the fall for the Gadget Garage can be established. Joy described the iFixit technical project a bit, explaining she had used it in a sustainable technology course (ENG 498) taught in the spring of 2014. Students work on creating a step-by-step repair guide for a device, complete with photos, which ultimately becomes part of the collection of such manuals on the iFixit web site. This gives the students hands on experience both with repair and technical writing, plus a useful, finished product for their resumes. She further explained that iFixit has donated some tools for use at the Gadget Garage, and showed the list of these tools to William and Martin, encouraging them to think about other necessary supplies for the space so she could take care of ordering those. Martin noted that having 4-5 tent signs to direct people to the building would be helpful. William requested a copy of the syllabus from Joy's previous course.

Plans were discussed to coordinate regarding the cleaning and transitioning of the space prior to the beginning of the semester, taking into account planned vacations for various people.

Other issues discussed included the need for a web presence of some sort for the Garage; Joy said she would be adding a page to the SEI web site to at least serve as a temporary means to provide information on the project to the public. It was generally noted that having the narrative for the proposal submitted to the SSC available for review would be good; Joy said she would post that on the web page. The idea of a "logo," or rather, an "identifying mark" for the Garage was discussed. Joy suggested it might be interesting to have a student competition to develop the logo. William suggested that it might be good to have a design student work on such images to have a consistent "brand" of sorts. Joy noted that there might be money in the budget for that; William said he would look into the possibility.

The idea of liability was discussed—what if someone brings something in to work on and something goes wrong with it. Joy explained that we would need to make patrons aware of the fact that they're proceeding at the their own risk; she will inquire with the campus bike repair center and perhaps Makerspace Urbana's computer help desk to see if they have a waiver or something similar that people sign before starting repairs.

Clarifications were made about who could use the Garage. Since student fees are providing seed funding, students will be allowed to use the Garage and its services for free throughout its entire first year of operation. Staff will also be able to use the Garage, initially for free, but the intent is for there to ultimately be an annual membership fee structure in place similar to what is employed at the bike repair center. The details of that have yet to be worked out. Services may be opened to the non-campus community in the future, with a fee; that will all be part of considerations related to how to make this endeavor financially self-sustaining moving forward. Joy noted that interest has already been expressed by someone in the non-campus community to set up a "spin-off" Gadget Garage, which is great, but of course discussions of those ideas will have to come later, after the on-campus center has been established!

Information on electronics recycling in the community and other repair centers (for jobs that can't be handled at the Garage) will be available for patrons.

Update: Since this meeting was conducted, a web page has been created at http://www.sustainelectronics.illinois.edu/research/gadgetgarage.cfm. It includes a link to the proposal narrative, information on courses that will interact with the Garage, the Fall 2015 hours (Mondays, Tuesdays, Thursdays, and Fridays from 2 to 6 p.m. beginning September 14, 2015), and a map of the location. This page will be updated continuously, so check back regularly for updates between campus consortium meetings. Joy will likely try to schedule another meeting to discuss the project either in late September or early October (likely the latter, as that will allow for a few weeks of operations open to the public for discussion). Information on that will be distributed via the campus consortium email list. If you wish to be added to the list, email Joy at jscrogum@illinois.edu.