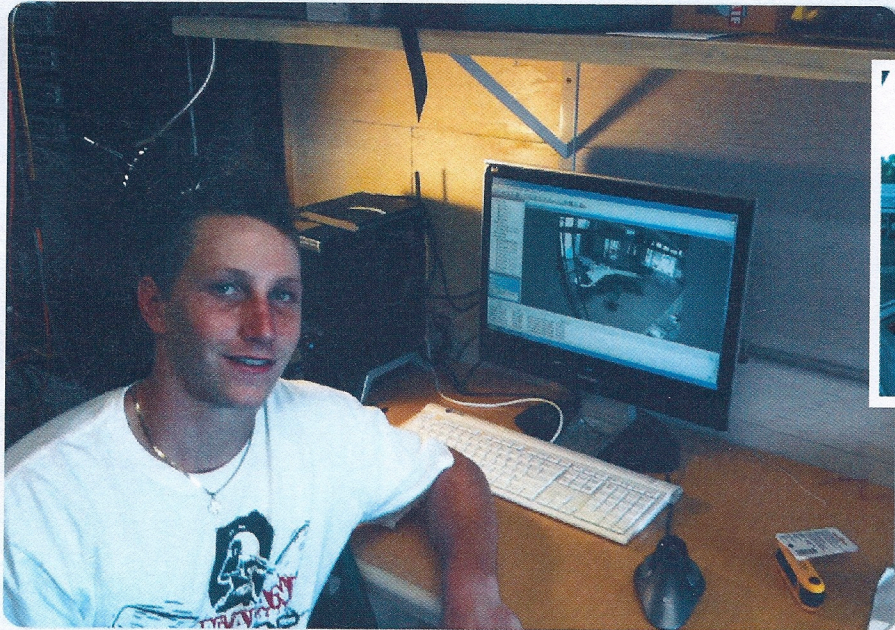


DANNY COOK

GREENTECH 2009-10



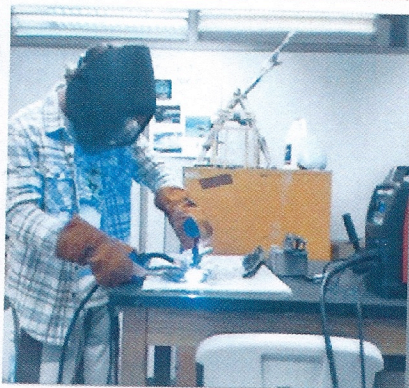
MY PORTRAIT(TOP RIGHT). A PICTURE OF ME IN FRONT OF THE AXIS CAMERA SERVER SYSTEM.

It's been a busy year in the Green Tech class

My name is Danny Cook and I attended Green Tech in my junior year, the first year it was offered. During the first semester of Green Tech our class spent most of the time learning the skills we need to start independent projects. Every day our class would split into groups and we would learn and teach skills such as; copper pipe soldering, wire soldering, wood and metal cutting, security camera programming, and welding. We also spent time working with technology, such as; root and terminal commands for mac, widgets, GPS system, and TED systems that monitor energy consumption of a whole building and graph it over a secured site on the internet. All of the skills that we learned we made videos of and put them on the physics server weblog so other peers can watch these videos and learn from us. Each skill we learned in the first semester gave us a good foundation of knowledge to put forth in our projects for the second semester. Applied Skills



TED UNIT



ME WELDING



AXIS CAMERA INSTALLATION

Second Semester Project: Axis Camera Security System In The Energy Lab

In the second semester we each used our skills that we learned from the first semester and started our independent project. The brand new HPA Energy Lab was the perfect place to start and finish our projects, to leave our mark.

The project that I started to work on was to plan and install a complete IP camera security system in the Energy Lab. This security system is all network based and is completely motion activated. The cameras that I used were motion activated Axis 207mw IP security cameras.

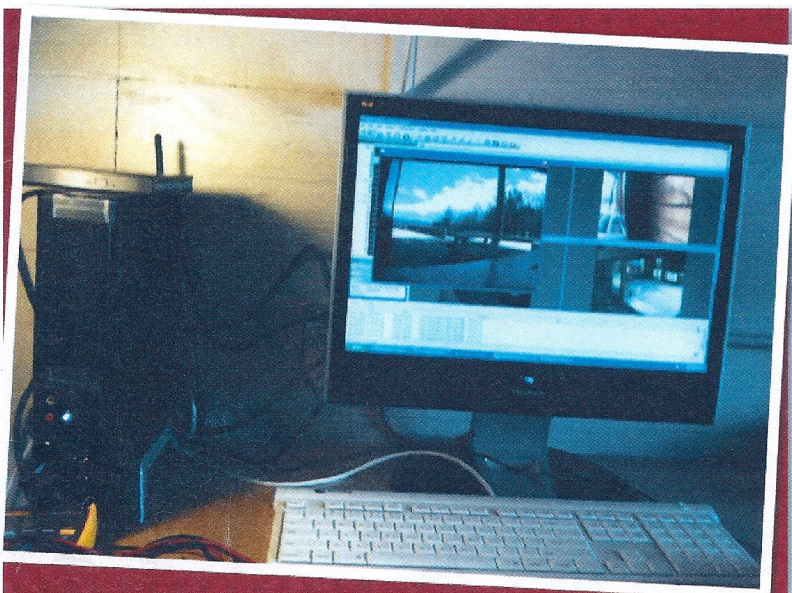
The first thing that I had to do was to make a lay out of the key locations around the building to install each camera. I went around the building taking pictures and even looked at blue prints. The next step was to install each camera in the proper locations, then program their motion activation feature and assign

them IP addresses. After installing each camera I set up a camera server and monitoring system. This allows the user to control and monitor each camera on one screen. It also gives a location for the cameras to save their motion activated recordings to. This feature eliminates the use of hours of video tape recordings.

The next phase was to manipulate the motion activation feature to control things in the building such as alarms, light, air-conditioning, ect.. In our case we had the camera activate the lights in the building on motion activation at night, this allowed for the security guards to be able to see in the building when they drive up. To do this I used the positive and negative wires of the cat 5 cable, spliced it and plugged them in the camera. These wires were, in turn, connected to the lights at the other end. There is a lot you can do with these cameras.

The next phase is to propose this to the school and set them up around campus. This will save the school a lot of man power in the future.

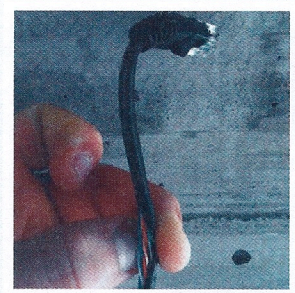
THE ENERGY LAB SECURITY SYSTEM SERVER AND MONITOR (BELOW)



MY PROJECT



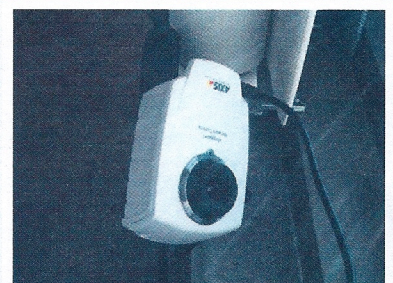
HPA ENERGY LAB



SPLICING THE CAT-5 WIRE



THE CONNECTING WIRES



AXIS 207MW