Work Completed:

Work was completed this week in a few areas. First of all ATI IA were contacted regarding the calibration of the sensor, a major concern for our sponsor. An engineer informed me that it is impossible to calibrate the sensor before each run. Calibration of the sensor is a delicate process that is done at the company, and often takes days to complete. He did however ensure me that these sensors are calibrated to be accurate for years and years, however they do suggest by ISO standards annual calibrations. He suggested that we have a known load that we can add to the sensor, and view the reading. By knowing the known load, and viewing the reading of the sensor, one can determine if the sensor is off by more than their standards, and therefore can re-calibrate the sensor.

Also, I looked into the ability of labVIEW to operate standalone. Aka, can an exe program created by labview operate on a computer that has never seen labview before? The answer is yes. This is essential to our purpose because they will not have labview at the health center.

I also did work on the labview program itself. I made the program define two working coordinate systems, an user coordinate system and a hard coordinate system. The user coordinate system will be a relative coordinate system, and the user had the ability to create the origin at their desired location. The hard coordinate system will be a calibrated coordinate system that they user has no ability to control. The hard coordinate system will simply be used so that the distance between the two brackets will be know and can be displayed.

Finally, I added some more functionality to the data display. In the exported data, the run parameters will be saved. IE, the user will be able to see exactly what run conditions resulted in the data they received. This was a functionality that was suggested by mike.
Future Work:

I need to finish working on the hard coordinate system. While it is defined in the program, it is essential that the slides return to this location after labview is closed so that the axes remain calibrated. I have been having more trouble with this than I had anticipated.

We are meeting with the health center again on Monday. I plan on bringing my laptop and an exe version of the labview program so that we can review what is accomplished in the programming and what else needs to be done.

Project Review:

A this point in time, it definitely is possible that we finish the project in time. The main thing holding us back I believe is not the work that we are putting in, but the hold up with other people. Parts are taking forever to get ordered, we are having trouble getting in touch with people who have agreed to help us, and because of this it is hard to make progress. Hopefully a smooth couple of weeks will allow us to complete this project in a timely and adequate manner.

Hours Worked:

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