

Team Name: “Bed, Back and Beyond”

Project Title: Accessible Power-Assist Hospital Bed Back Angle Controller

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Current Status:

- We have run into a major problem with our project. From the beginning of this semester we knew that we would not have the money to buy an actuator that would operate at variable speeds due to cost. The programming required for the clinometer, servo motors and joystick took more time than expected due to unforeseeable problems with code and lack of experience in computer programming, and now that we are nearing the end of this semester we have realized that in addition to money, we do not have enough time to program a computer-based, variable speed actuator as well. We have spent the last two weeks researching how to vary the speed of the bed besides using a Variac and have been unsuccessful. Today, we tested the bed to see if it would move at variable speeds with the Variac and it proved unsuccessful. Measuring the time it took for the bed back to move from horizontal to the max angle of 60 degrees we obtained 36.XX seconds for each of the three different voltages applied (70V, 100V and 130V).

Work Completed:

- Made sure the website created in Dreamweaver can be linked to the remote server on pages.slu.edu
- Assembled bed back together and tested for variable speed with the Variac
 - Found out the bed does not move at variable voltages
- Assembled servo motor/joystick module
- Programming for the servo motors

Current Work:

- Chris is continuing to work out the last few bugs with programming for the clinometer
- Website construction
- Trying to find a source to vary the speed of our hospital bed. This is the main problem with our project right now and we are definitely at a clear roadblock.
- Testing each individual component and recording results
- Trying to integrate all the components together

Future Work:

- Need to obtain a bed mattress and maybe a mannequin to simulate patient model
- Complete website
- Determine variable speed for actuator
- Begin work on Final Design Report
- Begin work on Poster