Project Identity

Accessible Medical Dispensing Device
Week #8
March 20, 2006
Kevin Villani

Work Completed

The cutter was reworked to again reduce the overall size and the tilted plate length. An offset was included into the tilting plate to allow the pill to be trapped until movement. The mover of the piston assembly is a channel type device. This new cutter is based heavily on the previous design however completely reconstructed. The amount of work is similar to a total restart. The cutter is pictured to the right.

A sequence of operation for the servo motor was developed and tested. This program now works after changing the sampling rate to 50000. A problem was encountered while operating the servo and the vacuum pump. The pump is inducing a voltage in the servo motor rendering them useless. This is a noise problem and should be resolved quickly.

Another problem was discovered with the servo travel range. It was limited to 170 degrees. We are requiring at least 270 degrees. The solution is in the form of a HS-75BB servo with 340 degrees of rotation.
Future Work

Efforts will continue in development of the LABView control programs the level of control is beginning to be of high concern due to the implementation of our design controls. As the cutter assembly continues under construction the completion of this work as well as the testing for this untested and unproven system will precede. While the storage assembly remains uncompleted this construction and testing will progress through the next week. With the cutter, storage assembly and arm complete the combined functions can be tested to ensure proper clearances between items and relative locations on the mounting plate.

Aside from construction efforts further effort is placed on component interaction. That is that all components will properly connect to one another. This will help to remove problems later in construction.

Project Review

Group brainstorming has produced several issues with actual implementation of control functions. In overview the project is proceeding at a pace consistent with completion by the required deadline.

Hours Worked

Kevin Villani ~ 12 hours