Work Completed

In the most general sense the signal generation VI and lines to be used has been resolved. In essence the CTR0 line is used to generate the signal, a square-wave pulse with duty cycle. The selection of servos to be run off this control signal is determined through the digital lines. The digital lines are used to energize or de-energize the relays (one relay for each motor). Testing of these lines is complete. The testing shows individual control of each servo. The testing is limited to four of the six relays due to not having the other two relays. Currently finding those control relays. Lab view program for testing has been completed and used during testing.

Secondly the cutter assembly is complete. The dropout funnel and servo are under construction with a working drop out servo and swing arm. Construction revolves around modifying the current configuration. The piston servo has changed orientation and the tilting plate have been scribed to allow better centering.

Circuit noise reduction is underway with significant reduction in noise with the introduction of a 0.1uf capacitor across the motor leads. This will be supplemented with a low pass filter on the servo power lines.

The Air sync PDA is very problematic with no customer support from the manufacturer. No installation CD available and can not down load the required drivers. This is still under review.
Future Work

The cutter temporary funnel and drop out servo mounted and complete. The additional relays purchased and tested. The main support plate cut and mounted. With the main support cut the corresponding holes for connecting the top and bottom together. Hopefully the servos with 340 degree rotation will arrive. Resolve PDA problems.

Project Review

Considering the complexity of the problem, the progress while problematic is still making forward progress with confidence in completing on time.

Hours Worked

Kevin Villani ~16 hours