WORK COMPLETED

The Viewsonic Airpanel 100 display has yet to arrive, causing some concern since it should have been received in a couple days. Additional vendors were researched in case another order needs to be placed.

Further detail was added to the map of the program constructed during the class period last Friday. Designing the program before actually beginning to develop it in LabVIEW is essential to divide the program into VI’s that can be programmed by different team members and also verify that the functions being called in our design actually exist in LabVIEW. By attending the seminar this past Thursday, more ideas on how to go about the program were developed, including the use of a timed loop to control the sequence of events.

For the majority of the time a problem existed with the ability to move the elements of the cutter assembly while still remaining manageably small and allowing room for the cutting blade. A possible solution this problem was attempted with a screw drive mover. This was constructed from a servo motor and case salvaged from a blow control circuit of a HS-402X servo unit. Testing of this unit failed to meet design speeds due to inadequate information about the servo motor. Assumed values were greatly overestimated resulting in a unit that moves at ½ the desired speed. In order to provide adequate speed a linkage system was developed to move the components. This linkage system is composed of an abs plastic arc cut from an abs pipe to a thickness of 0.16 inches. Approximately ¼ of the circle is used to produce the arc (90 degree arc.) This arc is attached to the servo through a servo saver head with built in spring. This assembly is linked to the moving stages through a 2-20 threaded rod (1.5 inches) and two easy clip spring metal connectors with shrink plastic retainer. The base assembly is constant with the exception of the servo saver as it is not needed. This linkage was chosen due to the limited space available for the footprint. Additional modifications to the cutter assembly include reduction in the moving stage and base stages for operation in limited area. Mover servos are mounted and linked. Work has continued on the cutting blade. The linkage for the blade is the same as above to allow mounted low and in front of the unit. The blade is secured at the stationary arc. I have researched and programmed a servo control loop; I am currently trying to resolve DAQ problems in order to test the program with the servo. The program provides a fully adjustable square wave modulation.

Sensidyne model 40 vacuum pump have been tested at they 6 volt requirement. Without the use of the reservoir assemblies the tubing was tested to pick up a pill. However if the seal on the pill is at all compromised the pill will fall.
In an attempt to correct this two strategies will be employed. First the second pump will be connected in parallel to the first with a tee fitting and then if possible a conforming seal cup will be obtained.
FUTURE WORK

Work will continue on the program which is divided between Jackie and I. Jackie will focus on the control of the motors while I focus on the flow of inputs and output to the user. With the major flow diagram developed Friday, each of our portions can be created as VI’s since we know the inputs and outputs that needed for each VI. To help us with the programming both Jackie and I will be meeting with Bharat, a LabVIEW sales representative to provide additional guidance next week.

Kevin will continue to work on the mechanical portions of the project, specifically the vacuum pump and coupling the movement of the cutter with the robotic arm.
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<thead>
<tr>
<th>Task Name</th>
<th>Start Date</th>
<th>End Date</th>
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<tr>
<td>DA-M1 1200 Cooler</td>
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**Project Summary**

- Task: DA-M1 1200 Cooler
- Duration: 10 days

**Details**

- Description: DA-M1 1200 Cooler assembly
- Responsible: Kevin White

**Timeline**

- Week 1: Jan 10 - Jan 17
- Week 2: Jan 17 - Jan 23
- Week 3: Jan 23 - Jan 30
- Week 4: Jan 30 - Feb 6

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**Note:** The timeline and details are placeholders for demonstration purposes. The actual content should be replaced with the appropriate task names, dates, and descriptions.
PROJECT REVIEW

The programming of the device has been set back due to the issues of the hardware. Now that we have the Viewsonic Airpanel on order, focus again can be shifted to the programming portion of the project. The seminar provided suggestions oh how to set up the various loops and commands in the program to reduce the amount of errors and make the program as automated as possible. Bharat's additional guidance should help speed up the programming process.

HOURS

Jackie: 10 hours
Kevin: 12 hours
Eva Marie: 12 hours