Progress Report
March 29, 2007

Project Title: Animal Ventilator

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Problem Statement:
Redesign a MRI-compatible small animal ventilator to deliver a variable volume of hyperpolarized helium and oxygen gas at user-specified frequencies. The device should be compatible with the current system in place.

Restatement of team goals:
1. Calibration and testing of second prototype
   a. Volume output
   b. Timing
   c. Gas mixture

Summary of Team Accomplishments:
1. Tying up lose ends with design construction (small syringes)

Summary of Individual Accomplishment:
1. Chris and Ashley drew up block diagram with input and outputs of four new VIs to be written next week.
2. Chris sent in request for pressure gage to be used to monitor output pressure.
3. Matt drew up small syringe clips and syringe blocks.
4. Micah finished building small syringe clips.
5. Matt and Ashley installed LabView 8.2 on Dr. Fain’s computer.

**Statement of Team Goals:**
1. Get software to usable configuration for calibration both with large and small syringes.
2. Finish small syringe blocks.
3. Receive pressure gage.
5. MRI testing.
6. Animal testing.

**Project Schedule:**
- 1/26-2/16 Finish construction of second generation device.
- 2/17-2/23 Software testing and modifications made
- 2/24-3/16 Written development of test procedures and securing test equipment and sites
- 3/17-4/6 Non-animal testing of device
- 4/7-4/27 Write-up of results, final paper, and poster
- 5/4 Deliver

**Difficulties:**
The machine shop has been booked solid for the last week. We were not allowed to go in to finish up our syringe blocks. Also, progress on the software needed to be interrupted because the program needs to be written on a computer that has the data acquisition devices installed. With the new version of LabView on the lab computer, things should go quickly in the program writing phase.

    Calibration data should be ready for acquisition the Friday after spring break.

**Activities:**
*(Since device delivery)*
- Chris: 2.0 hrs – Software development, progress report, gage research and purchase
- Ashley: 2.0 hrs – Software development, LabView installation
- Matt: 2.0 hrs – Solidworks development, LabView installation
- Micah: 2.0 hrs - Machining

**Team Total Hours for this week: 8.0 hrs**