

Testing System for Pressure Sensitive Cardiovascular Catheter

Client: Colette Wagner
Nancy Sweitzer, M.D., Ph.D.

Team Members: Marty Grasse, Co-Team Leader
Anthony Wampole, Co-Team Leader
Erik Yusko, BWIG
Danielle Ebben, BSAC
Anita Zarebi, Communications

Date: *Friday, Jan. 26th, to Thursday, Feb. 1st*

Problem Statement:

In order to accurately measure internal blood pressures, a properly calibrated pressure sensitive cardiovascular catheter may be used. The current techniques for calibrating the catheter are unreliable, which causes concern about the validity of the test results. The goal of the project is to devise a testing system which more reliably calibrates and verifies the accuracy of the catheter in both atmospheric tests and tests which simulate internal bodily conditions.

Last Week's Team Goals:

- Select team roles
- Orient Marty with the project
- Decide weekly advisor meeting time

Individual Goals:

Marty: Become familiar with project specifications
Tony: Establish contact for outreach program
Erik: Research micro controllers
Anita: Establish contact with client
Danielle: Assist in familiarizing Marty.

Summary of Accomplishments:

- Marty has been brought up to speed
- Outreach contact has been reached
- Developed ideas to solve last semester's problems

This Week's Goals:

- Finalize solution for leakage and structural integrity problems
- Brainstorm ideas for computer control and saline heating
- Learn more about microcontrollers
- Update PDS

Project Difficulties: We have not encountered any problems at this time.

Activities:

Team: Several meetings to discuss roles and ways to proceed	2 hours
Marty: Reviewed final paper, created progress report	3 hours
Tony: Brainstorming, notebook, outreach setup	3 hours
Erik: Notebook, microcontroller research	2.5 hours
Anita: Brainstorming, notebook	2.5 hours
Danielle: Put together team schedule, notebook	2.5 hours

Project Timeline:

<i>Week starting:</i>	<i>Accomplishment/Goal</i>	<i>Completed</i>
Jan. 26, 2007	Assemble team, establish roles	✓
	Familiarize Marty with project	✓
	Brainstorm ideas to solve previous design problems	✓
Feb. 2, 2007	Finalize solution for leakage and structural integrity	
	Brainstorm ideas for computer control and saline heating	
Feb. 9, 2007	Work on prototype	
Feb. 16, 2007	Work on prototype	
Feb. 23, 2007	Work on prototype	
March 2, 2007	Outreach to LaFollette High School	
March 9, 2007	Midsemester Presentation	
March 16, 2007	Work on prototype	
March 23, 2007	Work on prototype	
March 30, 2007	Work on prototype	
April 6, 2007	Spring Break	
April 13, 2007	Work on prototype	
April 20, 2007	Work on prototype	
April 27, 2007	Work on prototype	
May 4, 2007	Final Poster Presentation	
May 9, 2007	Final Report Due	

Expenses:

Last Semester (Fall 2006):

Part	Manufacturer	Part number	Distributor	price	Quantity
Plastic Sheet	McMaster	8560K603	McMaster	\$33.60	1
Latches	McMaster	6082A12	McMaster	\$4.00	6
Plastic tube	McMaster	8532K12	McMaster	\$3.75	1

Total: 71.35

Donations:

Last Semester (Fall 2006):

Part	Supplier	Estimated Price
Pump	Kurt Saupe	\$585.00
Pressure Sensor	Kurt Saupe	\$3000.00

