

## **Olfactory Conditioning Apparatus for Fruit Flies**

**Week 2** – February 12 to February 18, 2009

**Team Members:** Rob Bjerregaard – Team Leader  
Graham Bousley – Communicator  
Chuck Donaldson – BSAC  
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### **Problem Statement:**

The aim of this project is to improve or completely re-design a device that is currently used to test fruit flies' olfactory sense, memory, and ability to learn. The current device is producing some inaccurate results because the fruit flies experience changes in air pressure and airflow. Airflow and pressure change need to be kept at a minimum while odors are introduced and cleared from the device.

### **Restatement of Last Week's Goals:**

The team's goals from last week were to begin finalizing design dimensions and to meet with Eric – the person who designed the current design.

### **Summary of Accomplishments:**

- The team met with the client; he said device should test multiple (~100) flies at a time
- The team met to refine design ideas and improve Solidworks sketch

### **Team Goals:**

- Meet with Eric
- Come up with multiple ways to improve current design
- Design a way to measure pressure in the testing tubes in real time

**Activities:**

Rob	2.12.2009	Meeting with Client	1hr 10 min	3hr 55 min
	2.16.2009	Team Meeting	2hr	
	2.18.2009	Updated Solidworks Model	45 min	
Graham	2.12.2009	Meeting with Client	1hr 10 min	3hr 10 min
	2.16.2009	Team Meeting	2hr	
Chuck	2.12.2009	Meeting with Client	1hr 10 min	3hr 10 min
	2.16.2009	Team Meeting	2hr	
Scott	2.12.2009	Meeting with Client	1hr 10 min	3hr 10 min
	2.16.2009	Team Meeting	2hr	

**Difficulties:**

Incorporating an electric shocking mechanism into our current design is the greatest roadblock.

**Project Timeline:**

	February				March				April				
Tasks	4	11	18	25	4	11	18	25	1	8	15	22	29
Project research	█	█	█	█	█	█	█	█					
Brainstorming	█	█	█	█	█	█	█	█					
PDS		█	█	█	█	█	█	█					
Prototype design				█	█	█	█	█					
Prototype building						█	█	█	█				
Actual device design						█	█	█	█	█			
Ordering							█	█	█	█	█		
Expected shipping							█	█	█	█	█		
Device manufacturing										█	█	█	█
Testing											█	█	█
Re-designing											█	█	█
Re-testing												█	█
Presentation					█								█
Progress report	█	█	█	█	█	█	█	█	█	█	█	█	█
Website	█	█	█	█	█	█	█	█	█	█	█	█	█

**Expenses:**

Currently there are no expenses.