**Inspiratory and expiratory flow meter**

Client: Christopher Green, M.D.

Team Members: Andrew Eley (Leader)
Sarah Offutt (Communicator)
Darshan Patel (BSAC)
Eric Bader (BWIG)

December 02, 2005 – December 08, 2005

**Problem Statement**

Our client desires a peak inspiratory and peak expiratory flow meter in a single device to monitor for symptoms of asthma and vocal cord dysfunction. It should measure flows up to about 700 liters per second for adults, be cheap, durable, and easy to use with clear measurement readings.

**Last Week’s Goals**

- Finish construction of flow meter
- Test flow meter with a rota meter

**Summary of Accomplishments**

- Sarah and I met to finish up the construction of our prototype (slits, indicators, attaching all of the components).
- Our team met to work on our final written report for our project and to practice our final presentation.

**This Weeks Goals**

- Give presentations at ECB for the project fair
- Hand in final written report, notebooks and conclude the project.

**Difficulties**

Slight disappointed with the results of our prototype. The relationship between flow and distance traveled was exponential while ideally we would have liked a linear relationship.

**Activities**

<table>
<thead>
<tr>
<th>Team</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team</td>
<td>7.0</td>
<td>Team Meeting on Friday, plus extra work during the week.</td>
</tr>
<tr>
<td>Sarah Offutt</td>
<td>9.0</td>
<td>Testing, notebook, presentation, written report.</td>
</tr>
<tr>
<td>Andrew Eley</td>
<td>10.0</td>
<td>Presentation, notebook, progress report, written report.</td>
</tr>
<tr>
<td>Darshan Patel</td>
<td>9.0</td>
<td>Testing, notebook, attended BSAC, written report.</td>
</tr>
<tr>
<td>Eric Bader</td>
<td>11.0</td>
<td>Testing, notebook, update website, written report.</td>
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## Project Timeline

<table>
<thead>
<tr>
<th>ask</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>9</td>
<td>16</td>
<td>23</td>
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</tbody>
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### Preliminary Designs
- Meeting with client
- Design brainstorming
- Presentation preparation
- Mid semester Paper preparation
- Final Paper preparation
- Friday Team meetings

### Deliverables
- Progress Report
- Mid semester Paper Presentation
- Mid semester paper
- End Semester Presentation
- End Semester Paper
- Web site
- Semester Wrap-up with Advisor

### Prototyping
- accounting/budgeting
- final design developments
- rapid prototyping
- analysis/testing
- final prototype manufacturing
- final Testing

### Expenses:
- Clear Plastic Tube $1.97
- End Caps-Plunger $1.96
- Solid Metal Rod $0.82
- Connecting Rod $0.30
- Springs Free

**Total Expenses** $5.05