TEAM 6 WEEKLY PRESENTATION

ALTERNATIVE MOUSE INPUT SYSTEM
HEAD MOUNTED ART INSTRUMENT
GAME FOR IMPROVING NAME RECALL

Andrew McLean, Derek Kulakowski, Matthew Zywiak
Project Overview
Alternative Mouse Input System

- Above is the completed drawing of the foot mouse setup, with the track ball mouse setup pictured below.
- In addition there will be two games to test the alternative mouse input devices.
Project Overview
Head Mounted Art Instrument

- Picture of the two tracks in the frame
- Single track pictured below

30 inches
23 1/2 in
4 1/2 in
Work Completed
Alternative Mouse Input System

- Both test games for the alternative mouse input system have been completed.
- Foot mouse is mostly complete, lacks painting and foot strap.
- Have painted trackball for better optical sensing. Tests have shown that it will be effective.
Work Completed
Mounted Art Instrument

- Talked with Dr. Hallowell. She has allowed us to continue with the planned track system, which will be used for a different client.
- Fabricated parts for complete track system.
Work Completed
Mounted Art Instrument

- Assembled parts to create complete track system.
- Purchased accelerometers for movement tracking.
Work Completed
Game for Improving Name Recall

- Game is complete.
- Integrated voice recognition into game, and in process of testing.
Future Work

Alternative Mouse Input System

- Foot mouse – Paint foot mouse, attach foot strap and secure foot pedals to plastic backing.
- Track ball – Fit and wire buttons, complete housing.
- Test with games.
Future Work
Head Mounted Art Instrument

- Attach motors to drive track system.
- Wire motors to pic Microcontroller.
- Wire and test accelerometers to pic Microcontroller.
- Attach Accelerometers to hand and head mounted device.
Future Work
Game for Improving Name Recall

- Finish testing voice recognition with software.
- Make game aesthetically pleasing.
- If time allows, add additional components to game (relationships)
Project Review

- (Alternative Mouse) Foot mouse and trackball are nearly completed. Both games are ready for testing. Alternative Input design project is near completion.
- (Art Instrument) Construction of track has been completed. Main work will be focused on pic programming.
- (Name Game) Computer game is finished. Speech engine is being tested. Project is near completion.
# Timeline

<table>
<thead>
<tr>
<th></th>
<th>Task Description</th>
<th>Duration</th>
<th>Start Date</th>
<th>End Date</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Paint and Mount Foot mouse</td>
<td>5 days</td>
<td>Mon 3/17/08</td>
<td>Fri 3/21/08</td>
<td>All</td>
</tr>
<tr>
<td>2</td>
<td>Finish Trackball housing</td>
<td>3 days</td>
<td>Mon 3/17/08</td>
<td>Wed 3/19/08</td>
<td>Derek</td>
</tr>
<tr>
<td>3</td>
<td>Wire buttons to internal circuitry</td>
<td>4 days</td>
<td>Wed 3/19/08</td>
<td>Mon 3/24/08</td>
<td>Derek</td>
</tr>
<tr>
<td>4</td>
<td>Test foot mouse system with games</td>
<td>5 days</td>
<td>Mon 3/24/08</td>
<td>Fri 3/28/08</td>
<td>Andrew</td>
</tr>
<tr>
<td>5</td>
<td>Test trackball system with games</td>
<td>3 days</td>
<td>Mon 3/24/08</td>
<td>Wed 3/26/08</td>
<td>Andrew</td>
</tr>
<tr>
<td>6</td>
<td>Test Voice Recognition with Computer game</td>
<td>9 days</td>
<td>Thu 3/13/08</td>
<td>Tue 3/25/08</td>
<td>Matt</td>
</tr>
<tr>
<td>7</td>
<td>Test voice recognition game</td>
<td>4 days</td>
<td>Wed 3/26/08</td>
<td>Mon 3/31/08</td>
<td>Matt</td>
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<tr>
<td>8</td>
<td>Link the two motors to the tracks</td>
<td>12 days</td>
<td>Mon 3/10/08</td>
<td>Tue 3/25/08</td>
<td>All</td>
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<tr>
<td>9</td>
<td>Attach tracks to plexiglass base</td>
<td>2 days</td>
<td>Tue 4/1/08</td>
<td>Wed 4/2/08</td>
<td>Derek</td>
</tr>
<tr>
<td>10</td>
<td>Begin programming of PIC16F877A</td>
<td>14 days</td>
<td>Thu 2/28/08</td>
<td>Tue 3/18/08</td>
<td>All</td>
</tr>
<tr>
<td>11</td>
<td>Wire accelerometers to PIC</td>
<td>3 days</td>
<td>Fri 3/21/08</td>
<td>Tue 3/25/08</td>
<td>Andrew</td>
</tr>
</tbody>
</table>
Hours Worked

- Derek – 14 hours
- Matt – 14 hours
- Andrew – 12 hours