Head-Mounted
&
Arm-Mounted
Art Design System

Week 4 Group Presentation

Team 1:
Nemi Kotadiya
Becky Lussier
Sirisha Muppidi
Current Budget

- $775 used
- $725 balance remaining
- Total budget allocated for 2 projects
  - $1500
Work Done
This past week
Brainstorming Alternative to Gooseneck

- **Metal Spring**
  - Inadequate support

- **Copper Tubing**
  - Will harden in place limit movement

- **Architect Lamp**
  - Can’t put speedometer cable through
Gooseneck to Arm Attachment

- We cut off the end of speedometer cable
- Removed rubber tubing from gooseneck
  - Direct contact of the slinky
  - Goes through smaller ID of a gooseneck
- Speedometer fits in arm gooseneck (DynaTran)
- Tested where to attach the arm mounted gooseneck
Wrist Element – Neoprene

- Researched and ordered Neoprene fabric
Reversible Motor

- Researched how to build the reversible motor activated by pushing Tash soft switch

- To reverse motor:
  - 2 changeover relay
  - Microcontroller
  - Full bridge circuit
    - Good for high current
  - Double pole double throw changeover switch
    - Good for low currents
• We can build a separate compartment for reversing the motor
• Discussed different options with Rich from machine shop

• 2 set screws for speedometer

• 1 set screw for motor
Contacted

- Called Storr's Automotive
  - Longer speedometer no longer available

- Called Jameco
  - Ask about relay switch

- Called Gooseneck companies
  - To find lightest gooseneck
  - So far lightest 36” can only withstand a load of 1.5 oz on the end.
Future Work

To be completed by week 5
Future Work

- Get smaller mounting clamps for the helmet
- Find new gooseneck
  - & attach to helmet
- Continue investigating options for speedometer movements
- Reversible motor circuit
- Machine shop
  - For arm gooseneck
    - Trim metal plate in wrist cuff
  - Create the part to attach inner speedometer cable to motor head
Project Review

Project analysis
Progress Analysis

- Our team is slightly behind due to:
  - Eye blink switch delay
  - Replacing head mounted gooseneck

- Currently working on the arm mounted system so time will be balanced in the future

- We plan on working during early spring break
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<th>Member</th>
<th>In Lab</th>
<th>Outside Lab</th>
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Thank You!

Any Questions?