Backpack Lever Arm System &
Shampoo/Conditioner Identification Device
Week 3 Report

Team 4:
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Backpack Lever Arm System
Work Completed

- Finalized the dimensions of the segments based on feedback from the client:
  - Segment 1: 22”
  - Segment 2: 20”
  - Segment 3: 10”

- 80/20 raw material:
  - Contacted the company about the material for limbs and potential of 270° rotation.
  - Obtained and cut raw stock for Segment 1, 2 and 3:

- Acquired the sliding bracket to attach the backpack to the Lever Arm
Work Completed

• 270 degrees hinges:
  • Maximum rotation of 180 degrees from 80/20 Inc.
  • Experimented with the 270° overlay hinges.
  • Consulted with Team 1 regarding other options.

• Microcontroller:
  • Obtained sample code in C.
  • Learned about Pulse with Modulation.
    • Insert duty cycle
  • Investigated the logic behind the C code.
Future Work

• Check on the Servo Motors.
• Continue to program the Microcontroller to control the Servo Motors.
• Connect the 3 segments with proper rotational device.
• Finish modifying the sliding bracket.
• Decide on the attachment mechanism.
Shampoo-Conditioner Identification System

Speaker

Circuit
Work Completed

- Finalized attaching mechanism:
  - iPod case
  - iPod arm strap
- Amplification Circuit:
  - Tested various speakers
  - Ordered Soft touch buttons
  - Different battery setups:
    - AAA
    - Watch batteries
Future Work

• Determine ideal batteries.
• Building the amplification circuit if necessary.
• Insulation.
• Attach the buttons
QUESTIONS??