Week 3 Progress Report

Freely Adjustable and Accessible Keyboard for Client with Cerebral Palsy

Team # 6
Nolan Skop
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Work Completed

- Visited Miriam Kurland, client contact
- Changes to design
  - No 80/20 industrial erector set
  - Replace barbell/suction model
  - Keyboard must be portable, yet immobile on desk
  - Tilting capability, but not verticle
Client’s Current Setup
Work Completed (cont’d)

- Finalized keyboard layout
- Incorporated mouse-like buttons
  - Left click, right click, double click capabilities
  - Navigation up, down, left and right
  - Eliminates the need for a mouse
Key Layout
Work Completed (cont’d)

- Researched mounting options
  - PanaVice, vacuum stand
    - Very strong suction
    - Mountable
    - Easily adjustable lever
    - $33.99

- Replaces barbell/suction combination
Vacuum Stand

- Side view
- Front View
Work Completed (cont’d)

- Vacuum stand will be connected to PVC
- PVC will be connected to keyboard via hinges
  - Hinges will allow for specific tiliting of the keyboard
  - Locking mechanism to prevent keyboard from falling
Work Completed (cont’d)

- Began research on PCB Express
- Area of PCB required ~ 55in²
- Approximately $105
Future Work

- Finish PCB design and order
- Test switches on protoboard
- Program switches on protoboard for testing
- On approval of Sam’s team, order parts for keyboard stand
Project Review

- Client contact alterations
  - Slowed progress, but simpler design
- Programming capabilities allows for mouse replacement
- Electrical components most difficult, therefore most important