Title: Mouth stick to facilitate quadriplegics' use of computer keyboard

Team Members:
Liz Thottakara (Team Leader)
Dan Hartman (BWIG)
Yim (Cindy) Chan (Communications)
Emily Putzer (BSAC)

Client:

Prof. John Doyle
Dept. of Surgery
University of Wisconsin
(608) 263-4807
Doyle@surgery.wisc.edu

Steve Christianson
251-5731
stvchris@charter.net

Reporting Period:
Mar. 6 - Mar. 12

Problem Statement:

To design a device that will allow quadriplegics to more easily depress keys on a computer keyboard without causing the wearing or chipping of the teeth caused by the current mouth stick design.

Restatement of Team Goals:

- Meet on 3/6/02 to work on outline for group presentation and work on design
- Decide on final design
- Obtain samples of plastics that could possibly be used for the mouthpiece

Summary of Accomplishments:

- Met with Mr. Christianson and received input about our design ideas and his preferences. He indicated that the fluid pressure design was a good concept because it involved simply biting down to extend the stick, however, he also felt it would be less dependable and heavier than a simple sliding mechanism.
- Decided on final design
- Completed presentation slide show and divided responsibilities for presentation/report

Statement of Team Goals:

- Put together sections of report written by each team member into one paper
- Create more detailed sketches of design to include in presentation
- Talk to materials science engineering professor/researcher about plastics for mouthpiece.
- Make appointment to meet with Dr. Doyle to discuss progress of project thus far

Project Schedule:

Week	Date	Activities
1	25 January	form teams, select project, contact client
2	1 February	literature search
3	8 February	Meet with client; develop understanding of project; develop PDS
4	15 February	Brainstorm, revise PDS
5	22 February	brainstorm; evaluate designs; meet with Steve Christianson at his home
6	1 March	Revise PDS, evaluate designs, decide on final design
7	8 March	work on design, work on presentation
8	15 March	Mid-semester presentation hand in written report; advisor review of design notebooks
9	22 March	work on design
10	29 March	SPRING BREAK
11	5 April	work on design
12	12 April	work on design
13	19 April	work on design
14	26 April	work on design
15	3 May	prepare poster
16	10 May	Final Poster Presentation Hand in final report and notebook to advisor
17	13-17 May	final meetings with advisors

Difficulties:

Scheduling time for all group members to meet to go over presentation
We still need to obtain sample plastics for the mouthpiece

Activities:

Meeting at CAE (outline for presentation): 1 hour
In class group meeting (3/8/02): 2.5 hours
Meeting at Wendt Library (revising presentation) (3/9/02): 2 hours
Meeting with Mr. Christianson (3/11/02): 30 min
Liz :

- Emails & progress report (45 min.)
- Writing evaluation/future goals for mid-semester report (2 hours)

Cindy:

- Research the slide mechanism (1 hour)
  -http://www.hongde.com.cn/rollere.html
  -http://www.cornerhardware.com
- Do brainstorm of slide mechansim (3/06) (30 mins)
- Call Steve to make an appointment on Monday, 3/11
- Do the background information of written report (1.5 hour)
- Simply research of background (30 mins)

Dan:

- Drawing sketches (1 hr)
- Working on web page (1.5 hrs)
- Writing report (1.5 hrs)

Emily:

- working on paper portion of mid-semester presentation (45 min)
- drawing mouthpiece w/ dimensions (45 min)
- working on the report and researching specific FDA regulations on choking hazards as well as other similar products on the Market (1.5 hrs)

results:

- A good start on the PDS portion of the paper to review w/ team members on Tuesday
- Picture to scan into power point presentation
- Rough draft of the PDS portion of the report
- 3 similar products to go over with the group tomorrow at our meeting
- Reasearch on FDA did not yield much new information - did discover rules were much tighter when children were involved, but i suppose that's fairly intuitive.

Running Time: 22.25 hours