Pilot Study for CS294-4 project

**Handout for Adam:**

The project in which we are participating is part of a graduate course in UC Berkeley that studies assistive technology for disabled people. We have broken into project groups to study how a particular new technology may prove useful. Our group, made up of Andy (a Ph.D. candidate, Computer Science) and Safi (undergraduate, Public Policy and Disability), is collecting data and experimenting with new software for improving navigation in word processor.  
 It is important for us, the authors of this project, to hide the nature of the proposed modifications from the participants until the time of the actual experiments. Additionally, we would like to collect some biographical background—which will remain absolutely confidential—in order to compare and contrast it with the results of these experiments.  
 This project has nine similar, yet not identical, parts and could take between 2-3 minutes and up to 10 minutes each, after and initial voice recognition training period of up to thirty minutes (if necessary). It is not a contest; we are anticipating significant variations between different volunteers, as well as differences within the individual’s own various tasks. We would like to emphasize that this experiment should be approached at as a fun activity and a contributing effort.  
 The following are some clarifications for the biographical questionnaire:  
Each question might broken into smaller different categories. Please answer each category to the best of your knowledge. If you have no information for some of these categories please indicate it with N/A (= not applicable). In addition to these direct and specific questions, please feel free to voice your opinion about related aspects of the specific question, as well as the more general idea. If you refer to a specific question please indicate it with the assigned number of the appropriate section next to your answer.

Thank you and good luck.

**Pre-interview:**

1. Age/Sex/Job/Major
2. Functional impairment history
3. Experience with assistive technologies (and history)
4. Experience with speech recognition

I) Length.  
 II) Proficiency.  
 III) Attitude toward voice recognition.  
 IV) Initial training time/length.

1. ExpectationsI) Speed.  
    II) Errors.  
    III) Other difficulties.
2. Level of satisfaction/dissatisfaction with current tools in editing documents

**Post-interview:**

1. During the task, did you feel anxious or pressured?
2. Which was the easiest to use/hardest to use and why?
3. If you were designing this, how would you change it? What would you keep the same?
4. Compare and contrast to existing assistive devices/equipment you usually use.  
    I) Ease of learning.  
    II) Usage.  
    III) Difficulties:   
    \* Space.  
    \* Light and noise.  
    \* Upgrading and maintenance ideas.
5. Did you like it/hate it? How much satisfaction?
6. Was the task solvable?
7. Is this task typical?I) What other means you currently use for these specific tasks?  
    II) Are you aware of other solutions?  
    III) Did you try them?
8. Might this be easier to use with more training?
9. Might there be another population of people who would benefit from these technologies?

10. Can you guess/predict the advantages or disadvantages these modifications might give you in school? Future work?

**The experiments:**

Four people

Nine experiments each  *On the same computer? With their original voice recognition file? Retraining?*

First Experiment: A document the person wrote(Perhaps few weeks earlier to avoid perfect memory situation?

Second: A document we wrote, but they read before the experiment starts. They should read it once (without time limitation).Third: A document we wrote that they don’t get a chance to look at

Round:

1. Dragon/viavoice navigation commands
2. Keyboard + mouse commands
3. Wizard of oz for our stuff.

Documents are max 3-4 pages. Discuss formatting.

Tasks:

1. Find a sentence/paragraph about “something”. Be vague, no exact words.  
   I) Within one page.  
   II) From one page to the next (forward scrolling).  
   III) From one page to the next (backward scrolling).
2. Select a phrase/sentence or multiple contiguous sentences near the target site.A sentence which is written over partial of two different lines.

Metrics for each task:

1. Time to completion.  
   Number of errors:
   1. Finding:
      1. Overshoot
      2. misses completely
      3. saying faster instead of slower, vice versa
   2. Selection:
      1. Start position incorrect (#chars, words, sentences)
      2. End position incorrect (#chars, words, sentences)
   3. Recognition error in command
   4. Navigational estimation error
2. Number of commands spoken
3. Number of words spoken
4. Subjective approval
5. Training time.

This document was created by voice with DragonDictate for windows.