Interview Questionnaire

Based on UIUC IRB Application for Exemption
http://irb.illinois.edu/files/ExemptFormv1_01.dot

**Project Title:** Pin Thing Renderer

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**Research Summary:**
One of the greatest benefits of the internet has been its potential to increase social inclusion for marginalized and disenfranchised populations. However for the visually impaired, interaction with the web has been limited due to the visual nature of the web. There have been many advances in the way of screen readers and Braille translators which automatically interpret the text on the screen for the user. However, in the case of images there is still a long way to go. Alternative text for images is one option, but there is evidence in the literature that suggests that it is not used often and is inadequate when it is used. Therefore it has become our objective to find a way to covert images on the web to a tactile graphic generation experience.

Our project is going to be a way to convert a 2 dimensional image on a computer screen to a 3 dimensional representation of the image. A computer program will analyze a given image and use edge detection to form a new image. This image that depicts the edges will be output to the device. The device will use electromagnetism to raise and lower pins to display a relief map of the edges.

This research project is to inform how the interface between the user, the screen reader, our software, and the device should operate. In the current project phase, when the screen reader detects an image, the reader is paused and prompt is offered to the user to ask if the user would like to render the image. After the image is rendered the user can push a key to un-pause the screen reader, the screen reader will also become un-paused if the user selects not to render the image. The objective of this project is to (1) determine the ease of use of the interface, (2) user preference of the interface, and (3) user suggestions on how to improve the interface. This is a necessary step in order to insure the most useful tool for our user as possible.

**Participants:**
The participants for the project are individuals whom are blind. Individuals will be recruited through advertisements on the Illinois Radio Reader (a radio station targeted toward blind individuals and those with visual impairments).
**Research Procedures:** Participants will meet for approximately one hour in a lab setting. The first five minutes will explain what the project is and if they assent, sign a consent form. The user study plans to use the Morae Usability software which includes visual and audio recordings. Participants must consent for the use of visual and/or audio recording prior to their use. Users have the option of participating in the study without the use of visual and/or audio recordings. Users then will be given 5 minutes to fill out the pre-questionnaire to gather demographic information (see attached). Users will then be given 30 minutes to interact with the system browsing the internet. The final 20 minutes is an post-test interview (see attached).
Appendix A: Pre-Questionnaire

Subject Id____

**DEMOGRAPHIC INFORMATION**

Please answer the following questions:

Date of Birth: _______ / (Month) _______ / (Day) _______ (Year)

Gender: _____ Male, _____ Female

How many years of education did you complete? □ Less than 8 years: ______ (Yrs)
□ 8 years
□ Some high school
□ Graduated high school
□ Some college
□ Graduated college
□ Advanced degree

Please check one of the following ethnic or racial categories that best describes you.

□ Hispanic or Latino
□ Native American/Alaska Native
□ Asian
□ Native Hawaiian or Other Pacific Islander
□ Black or African American
□ White or Caucasian

How many years did you suffer from the visual impaired? ______ Yrs
And what is it? __________________

How many years did you have the healthy eyes? ______ Yrs

How often do you read Braille materials? ________ hrs/day

Did you have experience with the screen reader? _____(Y/N)
How many years did you use the screen reader? ______ Yrs
How often do you use the screen reader? ______ hours/week
How would you rate your overall experience with the computer?

1  2  3  4  5  6  7

Very few  Average  much  Very much

Do you have any other important health problems? (If yes, what are they?)

[Blank lines for answers]
Appendix B: Post-Test Interview Script
Thank you for participating in our test. We would like to ask you a few questions about how you felt about interacting with the interface.

**Specific Interaction Points**
- What did you think about the voice of the software?
- Did you usually know what button to push?
- Did the Pin Thing interfere while you were trying to browse the internet?
- When do you think you would use this interface? Everyday browsing? Just for specific known images?

**General Preference:**
- What would you say the most challenging thing was with interacting with the Pin Thing?
- What did you like about the interface?
- What would you like to see improved?