**Project Description for Comparison of Touchscreen Interface Methods for Hierarchical Tree Menu Navigation**

**Research Goal:**

The purpose of this research is to compare the preferences and performances of the visually impaired users on two different types of hierarchical tree menu navigation for touch-screen interfaces. The first interface will be non-tactile feedback and gestured-based interaction; the second interface will be with tactile feedback and direct manipulation interaction. In general, visually impaired/blind users prefer menus with tactile feedback. We hope to learn if these users would have higher preferences for tactile feedback over gesture-based interaction when they are doing menu navigation tasks.

**Participants:**

The participants of this research should be at least 18 years old and should have visually impairment or blindness.

**Recruitment Process:**

Recruitment will be done with the visually impaired population at the Center for Visually Impaired in Atlanta, Georgia. Recruitment will be done through emailing list at the Center for Visually Impaired and coordination with staffs at the Center for Visually Impaired. Sample email is submitted with this protocol. Research will also work with staff at CVI to recruit participants at special events such as the monthly CVI Brown bag series. The participants should be able to learn about the research experiment either through reading emails using assistive technology or by word of mouth from the staffs/researcher at Center for Visually Impaired.

**Consent Form Process:**

The researcher will read the informed consent form to the participants. When the participants understand the informed consent form, then they could sign their signature with signature guidance and with witness presence.

**Research Experiment:**

The purpose of this experiment is to compare two methods of hierarchical tree menu navigation on a touch-screen device in terms of performance, learning rate, and preference.

We will try to recruit 5 participants from CVI with help from the staffs who are working there.

The researcher will work with each participant one on one to read the consent form, instruction, questionnaire, and debriefing materials to the participant. The researcher will also be present for the participant during the experiment.

For details about the experiment, please refer to document called instruction.docx attached in IRB. This document will be presented to the participant.

**Research Questionnaire:**

The duration of subject participation should be less than an hour. They will be asked to perform three blocks for 10 trails. Afterward, they will be asked to fill out a post-experiment questionnaire. The researcher will read out the questionnaire to the participant. The research will record participant answers on the questionnaire.

**Research Debriefing:**

The debriefing will be presented after the participants are done with the research experiment and questionnaire. They will also be able to receive debriefing if they decided to stop anytime during the research experiment. The researcher will read out the debriefing for the participant and will be able to answer any questions the participant would like to ask.

The debriefing document, debriefing.docx, is attached in the IRB.