

Visual Impairment Write Up - Liam and Jordan

Liam and I were invited to a visual impairment services evening by Dr Mary Butler. The event was held by 3rd year OT students in conjunction with VICTA (Visual Impairment Community Trust Association) and Retina NZ. The aim of the evening was to highlight the lack of funding from the government and the advances made when students and educational institutions work together to provide services to those in need.

We were provided a booth to show the application to a range of people, from occupational therapists, to those in the healthcare sector looking at possible tools to aid in the diagnosis of visual impairment following a neurological event.

Feedback:

We were able to test the application on about 4 people who have a visual impairment to receive feedback on usability.

The general consensus was that the application was well designed. The use of larger fonts and visual aids to allow users to easily navigate around the app without any unnecessary strain to their vision were well received. The tools were described as easy to use and easy to understand without being condescending. We based the colour scheme and font size on the knowledge we had gained from the last visual impairment evening where there was a conversation about technology and design principles for those with visual impairments.

The attendee from Retina NZ who had impaired peripheral vision tested out the peripheral tool and it was apparent that this tool was useful when testing peripheral vision when the user has a focal point. He was really interested in what we were doing.

The peripheral test and Directional test were found to be the easiest tools to understand without any input from myself or Liam, these tests have more explicitly apparent user controls on start up. This is something we will be looking into implementing on the other tools.

The health professionals in attendance also had many positive things to say about the application. There were many questions about the usefulness of the application and where it would be useful. A lot of these professionals had concerns about the variance in testing environments when using technology in medical assessment, for example, distance from the tablet. These queries raised some very interesting questions in regards to standardizing the testing environment and attaining valid data following the tests in order for the medical professional to make a correct assessment of visual impairment.

We told the healthcare professionals that this app is not supposed to be a replacement for an optometrist but more as a quick tool to be used by OT's in order to make an informed decision on whether there is a need for further examination by a trained professional.

There was one constructive criticism in regards to the size of the “Would you like to save” dialog, this being the default dialog for android. We will be able to address this issue by creating a custom dialog to make this a more easily accessible dialog in future versions.

The geriatrician from the hospital tested the application and had positive feedback for us. She tested the application using the glasses provided by the OT’s to simulate visual impairment as she wasn’t visually impaired herself, and the results were very different between glasses on and glasses off, verifying that the application do indeed produce different results based on vision.

One interesting thing that was found was that the contrast test was far too easy, 100% of those tested with visual impairment could easily see all of the strings in different contrast, and this is something that we will endeavour to look into as it didn’t seem like it was testing as it should.

The last thing that we have decided needs to be updated, is the addition of a back button of both the Results activity page and the Select tool list page, as a more intuitive option for returning to the previous activity compared to the physical back button on the device.

Graphs:

Users commented that the reporting system of plotting the test results was intuitive for them to understand. It was simple for users to distinguish between the red and white points plotted on the graph and they had an immediate understanding that red signified failed trials.

The process of plotting a graph in the application was overly manual and complex, there is a lot of room for user error. We would like to look into automation of this process as an option for users who do not require such a level of control and allow less chance of random data by the user.