
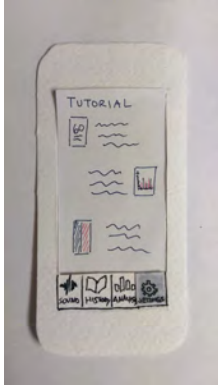

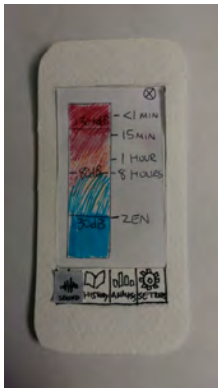
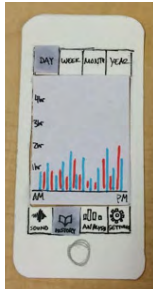




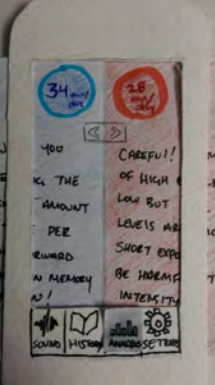





Prototype Image	Identified Issue	Heuristic & Severity	Revised Image	Revised Explanation
	<p>Current design lacks information regarding application purpose, a noise overview, and explanation of basic metrics. Include an information page.</p>	<p>H.10 S.2</p> <p>Would be useful given the nature of the problem, but not critical.</p>		<p>Having a tutorial/ information page in the settings will allow the user to find out how to use the app without forcing them to view it (i.e. intro tutorial).</p>
	<p>Help screen of decibel levels uses multiple colors but should be only blue and red to maintain consistency.</p>	<p>H.4 S.1</p> <p>Minor complaint, but an easy fix.</p>		<p>Using a blue/red gradient gives the design a more consistent look as well as giving more direct feedback to the type of noise levels.</p>
	<p>Charts of data need to include a legend.</p>	<p>H.2 S.2</p> <p>Bar graphs that include a legend is a real-world convention. A relatively easy fix.</p>		<p>Users were confused on the onset about what the red and blue bars meant. With a legend, this distinction is clear.</p>

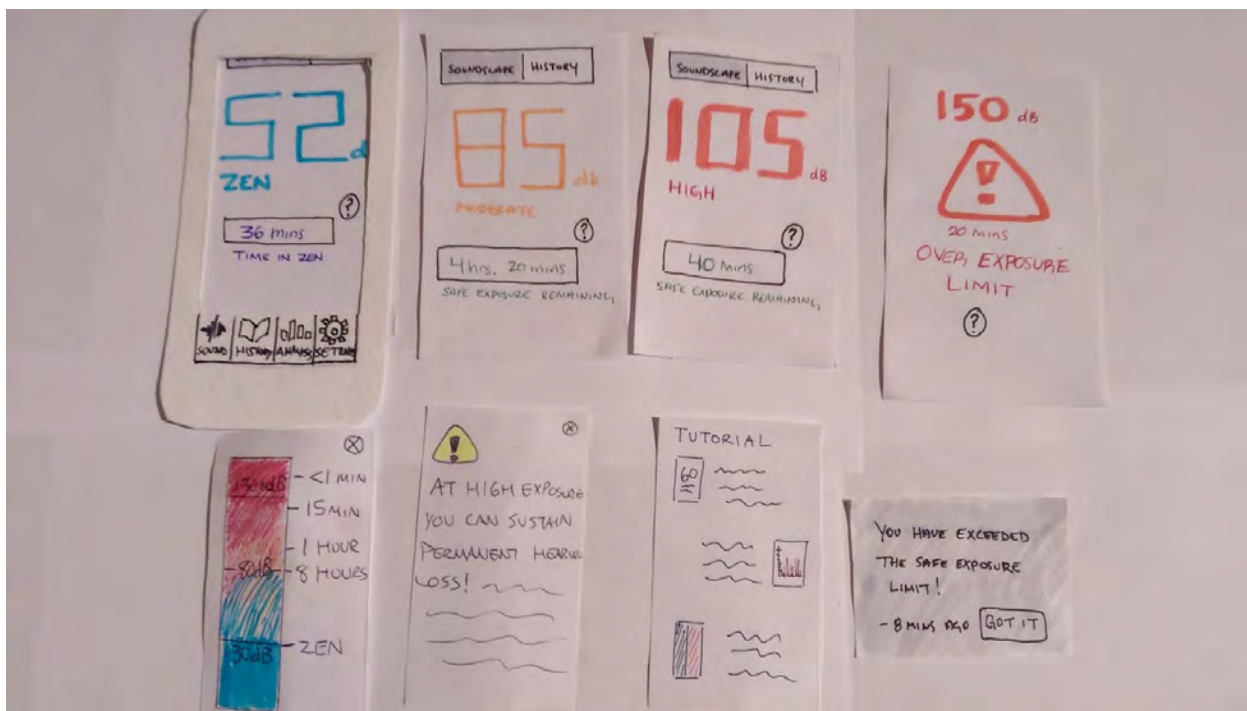
	<p>Charts of week/month/year data should not have same scale</p>	<p>H.4 S.1</p> <p>This is essentially a typo. The final design will not have this issue.</p>		<p>The units need to scale when different time views are selected. Day view data is scaled to minutes instead of hours.</p>
	<p>The swipe mechanic to move between zen and noise on analysis page needs to be clearer.</p>	<p>H.6 S.1</p> <p>Actions available to the user must be clear. Easy fix.</p>		<p>The arrows in the middle are used to show that the screen is swipeable.</p>

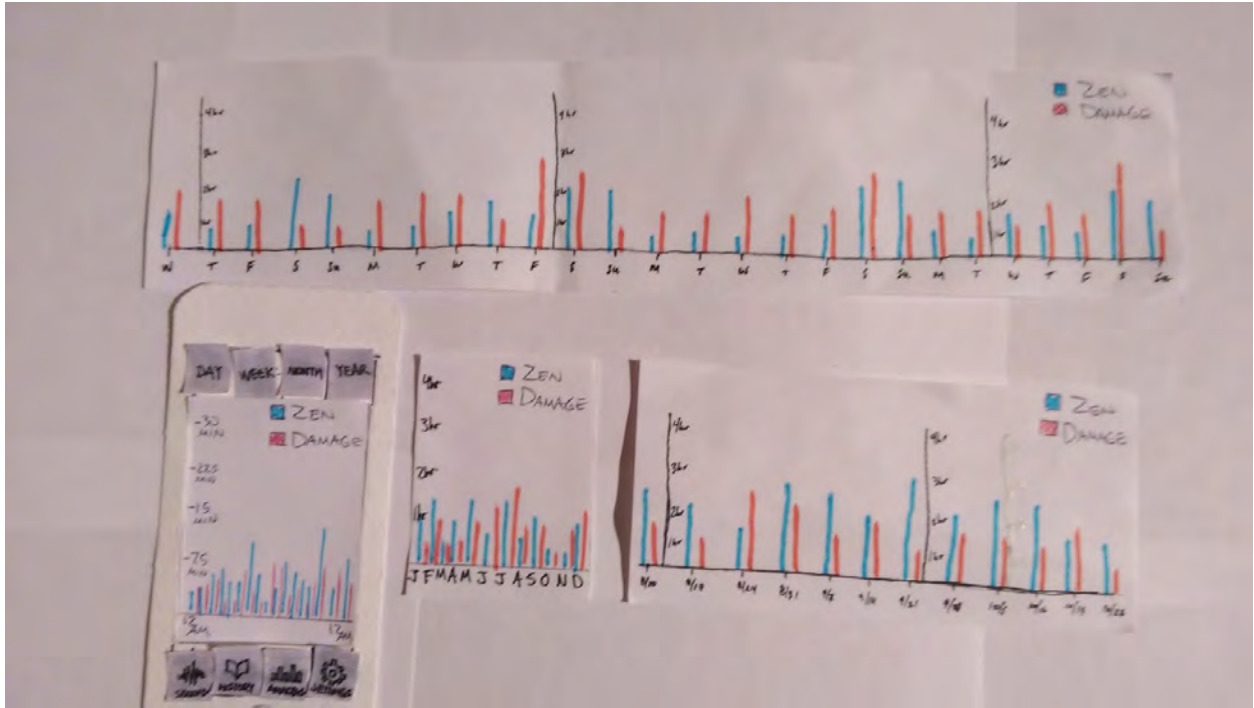
## Usability Test:

Our first usability test was done with Glenn, a UW student, and took place in the HUB cafeteria. We chose Glenn as a participant because we wanted a student who frequents loud environments on a daily basis. The HUB cafeteria was chosen as the location because it is a loud environment visited daily by Glenn and many other students. The test protocol was a cognitive walkthrough in which the test subject was told to accomplish several tasks while Garrick acted as a facilitator and Luyi as the prototype “computer”. For the first task the subject was told to analyze the soundscape of the current environment and make a decision based on the presented information. For the second task the subject was told to review past data recorded by the app and view the detailed analysis. For our next usability test ideally we will have at least three group members participating (scheduling for this first one made it so only two were available). That way one person can facilitate, one person can be the computer, one person can take overall notes, and a fourth can either take specific notes or record the test itself. It would also be interesting to perform tests in a variety of different environments, as this will help us simulate how and when the app will be used.

Prototype Image	Incident Description	Issue Severity (Negative only)	Revised Image (Negative only)	Revised Explanation (Negative only)
	<p>User tried to click on the bars in the graphs</p>			
	<p>User wanted more (different?) information in Analysis screen.</p>	<p>S:0</p>		<p>It is an interesting idea, it would depend on how the screen is worded as to not give a "nagging" connotation.</p>

**Paper Prototype:**





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 AND ATTE

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 28 min/day

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 OF HIGH  
 LOW BUT  
 LEVELS AB  
 SHORT EXPO  
 BE HIGH INTENSITY

MINUTES  
 SEEMS  
 NOISE  
 HIGH.  
 CAN STILL  
 HIGH

SOUND HISTORY ANALYSIS SETTINGS

## **Plan for the Remainder of Usability Tests**

### **Target Population:**

We want to perform our remaining usability tests on our prior contextual inquiry participants, adults who are not experts in using smartphones, people with Android phones and people with a medical background. By performing tests on our contextual inquiry participants, we can find out if our design prototype can satisfy different groups of people and their needs based on the various levels of control over noise exposure levels and diverse noise level of their work/social environments. In addition, performing tests on people in a wide age range would help us make sure we have an intuitive design since smartphone use varies across people of different ages. Usability tests with Android users would also be helpful to our design in providing different perspectives of visual and interactive design aesthetics. We would love to see what changes we could make for future cross-platform support. Finally, having people with medical backgrounds can help and enrich our analysis, which would be helpful in providing future improvements in the form of better medical knowledge as well as additional health information.

### **Goals For Additional Tests:**

The goals for our additional tests are very straight forward, we want to see if the users can use the revised prototype to complete tasks without any confusion. We also want to make sure that we do not leave out important information or analysis that could be useful to the user. Other than this primary goal, we would like to different perspectives from users with varying levels of concern over hearing loss as it would be beneficial to see how this design functions with a user who is indifferent about hearing loss.

### **Planned Roles For Each Team Member:**

- Grant - Facilitator. Grant should act as intermediary between test subject and prototype. He encourages subject to constantly “talk loud” and provide answers only if the subject is truly stuck.
- Chris - Computer. Chris should be familiar and fluid with the mechanisms of the paper prototype. He has to minimize “latency issues” as much as possible.
- Garrick - Observer. Garrick makes notes, look for patterns, etc.

The changes in the roles are facilitated to give each member a chance to participate in each role.

### **New Approaches:**

In addition to the normal method, our group is also thinking about having new approaches to our remaining usability testing. We could see how fast users can complete

some tasks. If we add some time stress we could see what they “default to” in their operations. Or if they complete the tasks without issue it would be a good vote of confidence for our design. Also we could perform tests in a variety of different environments or create scenarios to simulate when and where the app will be used, which will give us more information on how people will use the app in different situations and how helpful our current prototype is. The last thing is that we could take away the prototype after user completion of the tasks and quiz them about a few of the key features or facts regarding noise exposure. This process would be interesting because we can see how we achieve our education purpose for the noise and also what are the highlights in the design to the user.