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Overall Problem

A lack of awareness of the health implications of noise exposure
Initial Paper Prototype
Task 1

Perform Soundscape analysis on the current environment
105 dB
HIGH

40 Mins
SAFE EXPOSURE REMAINING

150 dB

20 Mins
OVER EXPOSURE LIMIT

You have exceeded the safe exposure limit!
- 8 mins ago
GOT IT

At high exposure you can sustain permanent hearing loss!
Task 2

View past noise exposure & analysis
GREAT JOB!

YOU ARE EXCELLENT.

RECOMMENDED AMOUNT PER DAY.

LOOK FORWARD TO INCREASED MEMORY AND ATTENTION.

34 min/day

28 min/day

CAREFUL! SHORT EXPOSURES TO HIGH NOISE LEVELS ARE HARMFUL.

LOW BUT HINT CAN STILL BE HARMFUL.

HINT: HIGH INTENSITY
Testing Process
Usability Tests

- **UW Student**
  - Frequents loud environments

- **Middle-aged User**
  - Lacks technological expertise

- **Doctor (Radiologist)**
  - Provides a medical background
Results
Syntax
Recognition Rather than Recall
Visibility of System Status

36 mins
Time in ZEN

4 hrs 20 mins.
Safe exposure remaining

40 mins
Safe exposure remaining

30 dB
Zen

50 dB
Safe

90 dB
Caution

110 dB
Risk
Affordances
Flexibility and Efficiency of Use
User Control and Freedom

Great job! You are exceeding the recommended amount of Zen time per day. Look forward to increases in memory and attention!

Careful! 28 minutes of high exposure seems low but your noise levels are high. Short exposures can still be harmful at high intensity.
Features
Aesthetic and Minimalist Design

- Soundscapes: 52 dB
- ZEN: 36 mins
- Time in ZEN
- 150 dBs: SAFE
Visibility of System Status

**SoundScape**

**HISTORY**

52 dB

Zen

36 mins

Time in Zen

Left:

Right:

Z

R

dBs

SAFE

?
Final Paper Prototype
Great job! You are exceeding the recommended amount of ZEN time per day. Look forward to increases in memory and attention!

Careful! 28 minutes of high exposure seems low but your noise levels are high. Short exposures can still be harmful at high intensity.
Great job! You are exercising to increase your levels of zip. Look for the recommended amount of zip per day. Low levels of zip can still be harmful if done over a long period. Be aware.

28 minutes

34 minutes

Careful!
Digital Mockups
Tutorial

Soundscapes helps you monitor the noise around you and minimize the health risks related to noise exposure.

Your goal is to maximize the “Zen” (quiet) bar and minimize the time spent in “Risk” (loud) environments everyday!

By increasing your “Zen time” (<35 dBs), will help decrease your stress level while improving working memory and cognitive function.

When the noise around you exceeds 85 dBs, a time reading appears to let you know how long it is safe to stay without risking long-term damage.

In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!
Soundscape helps you monitor the noise around you and minimize the health risks related to noise exposure.
Your goal is to maximize the "Zen" (quiet) bar and minimize the time spent in "Risk" (loud) environments everyday!
By increasing your "Zen time" (<35 dBs), will help decrease your stress level while improving working memory and cognitive function!
DANGER:
1 min safe exposure

110 dBs

When the noise around you exceeds 85 dBs, a time reading appears to let you know how long it is safe to stay without risking long-term damage.
In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!
Task 1: Soundscape Analysis
Task 2: History & Analysis

![Bar Chart]

- **Week:**
  - **Risk:** Avg/Day: 1 hr 20 mins
  - **Zen:** Avg/Day: 2 hrs

- **Day:**
  - **Mon:** 1 hr
  - **Tue:** 2 hrs
  - **Wed:** 1 hr
  - **Thur:** 2 hrs
  - **Fri:** 2 hrs
  - **Sat:** 2 hrs
  - **Sun:** 4 hrs

- **Buttons:**
  - Soundscape
  - History
  - Analysis
  - Settings
Task 2: History & Analysis
Task 2: History & Analysis

Great job incorporating more Zen time into your schedule (avg. 0:48 in the past month)!

Try to reach one hour of Zen time daily and you will start to notice improvements in your working memory, attention, and mood! Recently, you have met this goal, keep it up!

Swipe right

Careful - while an hour and 20 minutes of risky exposure might not seem significant, it looks like your noise exposure is fairly intense. A loud concert every once in a while is OK, but try to limit your time in loud environments to under an hour per day.

Swipe left
Summary
Questions?