



SoundPrints

High-Fidelity Midway Milestone

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Value Proposition

Audio spaces that
connect and inspire.

Problem and Solution

Problem: People often encounter daunting obstacles as they try to achieve their goals and lack the community they need to help motivate them and celebrate their achievements.

Solution: SoundPrints is a location-based audio journaling app that enables its users to connect with and inspire one another to achieve their goals. We hope users will be inspired by listening to the motivational recordings left by others at the places they visit and will make their own recordings to inspire and support others.

Overview of Talk

- Key heuristic evaluation results and corresponding design revisions
- Prototype implementation status
- High-fidelity demo
 - Add your own recording to the set of recordings made near your location.
- Questions and Summary

Heuristic Evaluations Overview

- **27** total severity 3-4 violations
 - 22 addressed with appropriate changes
 - 5 are low priority or not being changed
- **40** severity 1-2 violations
- **Most violated heuristics:**
 - H8: Minimalist Design
 - H4: Consistency and Standards
 - H1: Visibility of Status

Sev 3 and Sev 4 Violations

Share Recording from Chat tab:

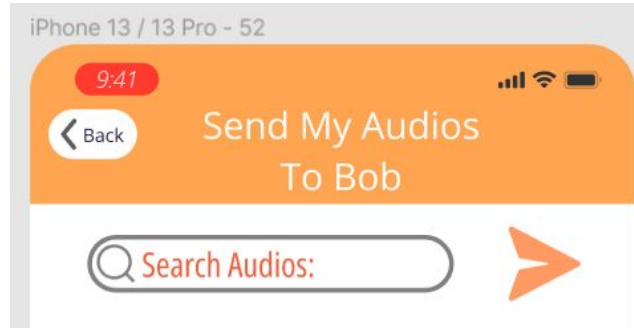
- Violation: Cluttered UI creates confusion on purpose of search bar on My Audios screen
- Violations: Inconsistencies with other messaging apps
 - Selecting more friends with the plus button when Bob already selected
 - Don't return to chat page with the person you just sent a recording to

Fix

BEFORE



AFTER



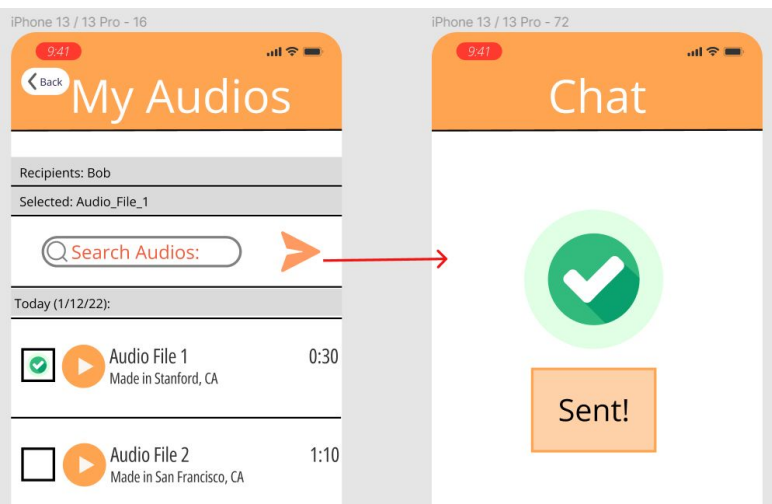
Less clutter → Less confusion

Once Bob is selected, can't select more friends.

Fix

When you share a recording from the Chat tab, now directed back to chat screen after recording shared.

BEFORE



AFTER



Sev 3 and Sev 4 Violations

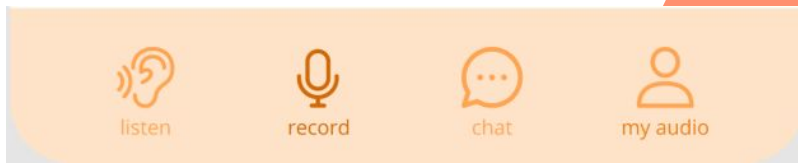
Navigation Bar:

- **Violation:** Navigation bar buttons do not include any text so inaccessible for visually impaired.
- **Fix:** Added text under each navigation bar icon.
- NOTE: Not all Figma frames have the new nav bar but all will have in high-fi prototype.

BEFORE



AFTER



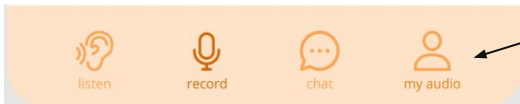
Sev 3 and Sev 4 Violations

My Audios:

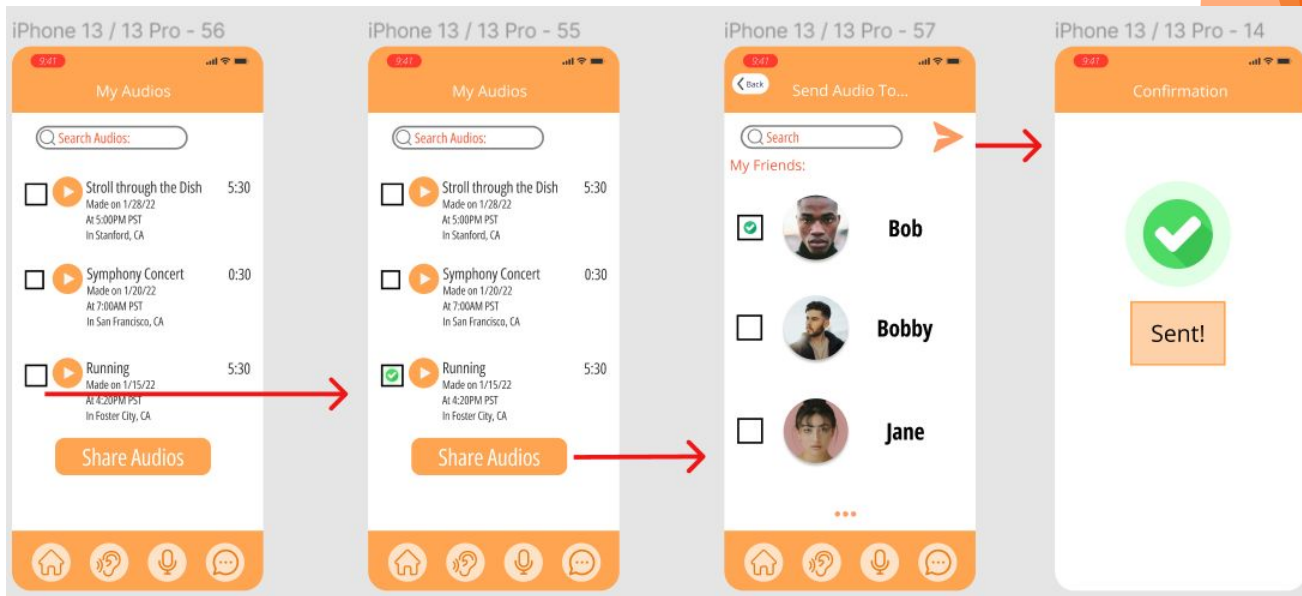
- **Violation:** Users can only see “My Audios” when they are in a Chat with someone, which provides low flexibility.
- **Fix:**
 - Fix 1: Add a “My Audios” page to navigation bar to enable easy access.
 - Fix 2: Enable users to send audios to friends starting from the My Audios page *in addition to* sending audios starting from Chat page.
 - Rationale: Consistent with existing chat apps like Messenger, Whatsapp, etc.

Fix

Added icon to nav bar



Added second way to accomplish task of Sharing my audio with a friend



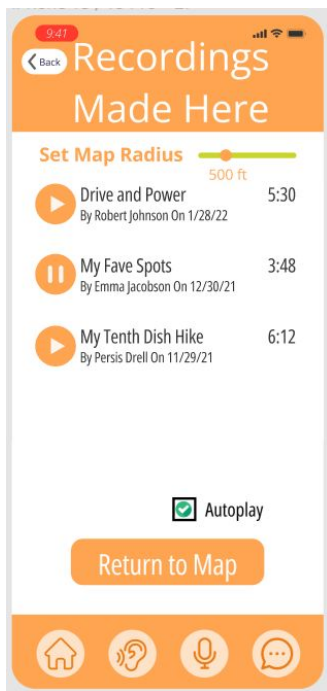
Sev 3 and Sev 4 Violations

Playing recordings:

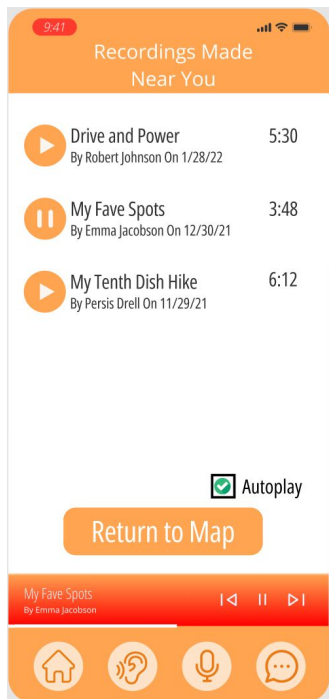
- **Violation:** No progress bar while playing recording on “My Audios” and “Recordings Made Near You” pages
- **Violation:** No recording transcript → inaccessibility for low hearing.

Fix

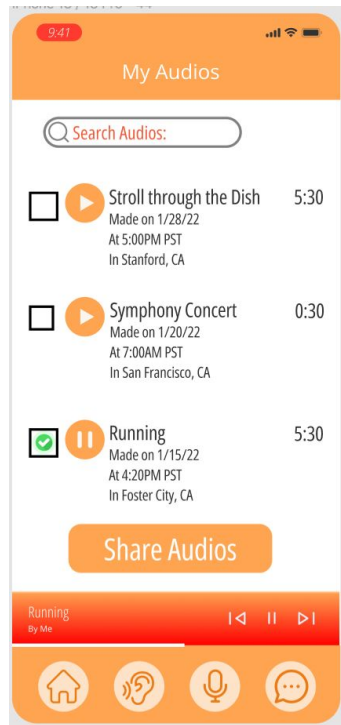
BEFORE



AFTER



AFTER

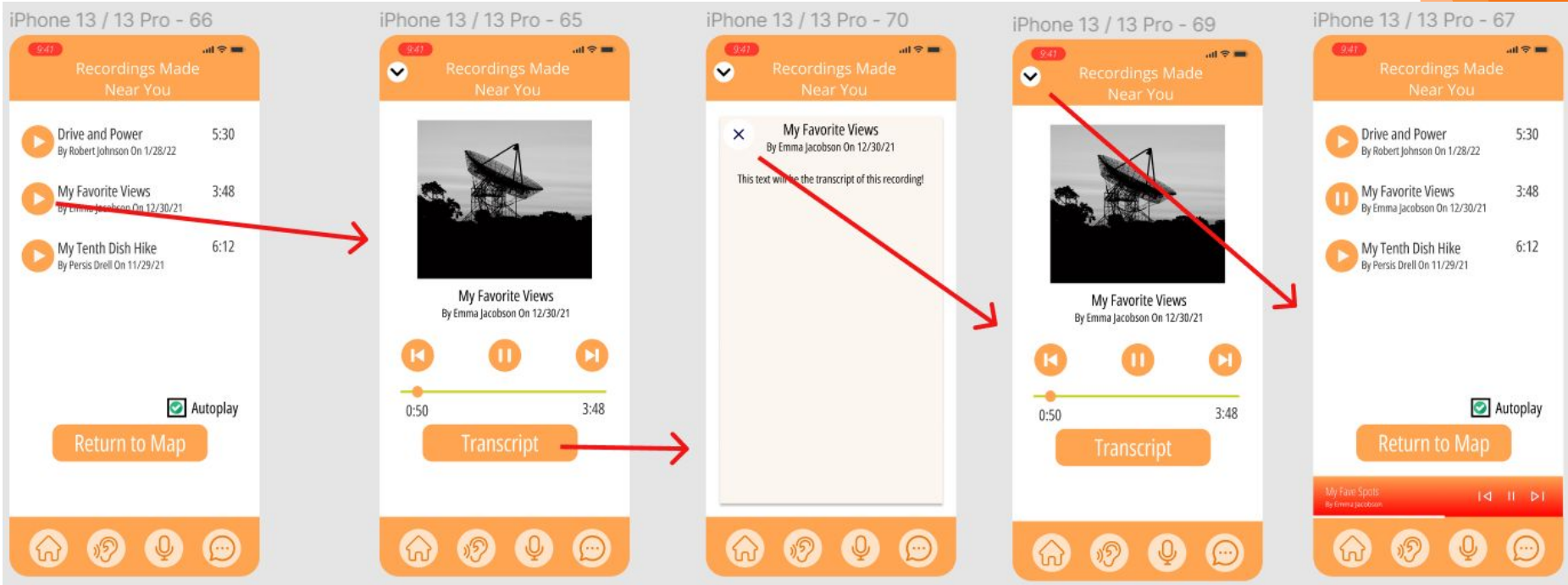


ZOOMED IN PROGRESS BAR



Fix

Novel to see such a detailed view + transcript of people's recordings. Generally only seen in music/podcast streaming apps.



Sev 3 and Sev 4 Violations

Violation: Slider bar to set the map radius prone to error

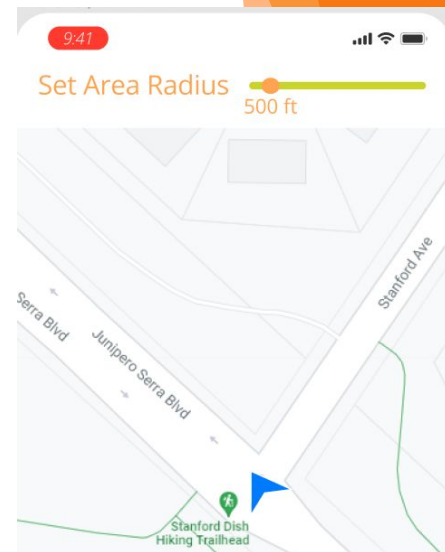
Not fixing:

Still keeping slider bar because

- 1) In map-based apps users don't generally try to get the exact radius of a map correct. It's OK if users can't set a precise radius.
- 2) Slider bar better matches the patterns of existing apps than a numeric entry box would.

However:

In high-fidelity prototype we may allow users to pinch and drag the map to zoom in and out, in addition to having a slider bar, for even better consistency with other map apps.



Sev 3 and Sev 4 Violations

Repetitive features:

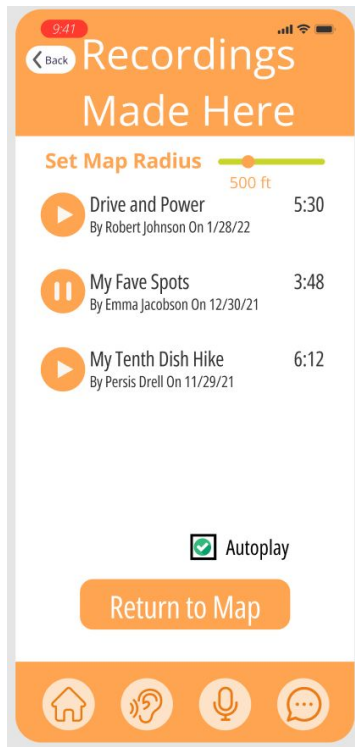
- **Violations:** Repetitive and confusing to...
 - Include slider bar on both map page and “Recordings Made Near You” page
 - Have both the back button and Return to Map button (same functionality)

Fix

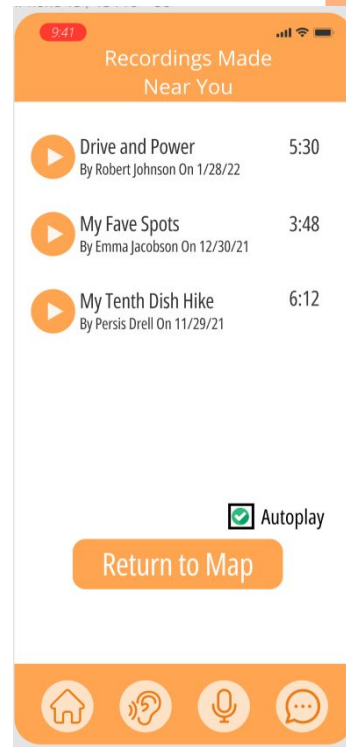
Fix: Remove slider bar from “Recordings Made Near You.”

Fix: Keep Return to Map and remove Back button.

BEFORE



AFTER



Sev 3 and Sev 4 Violations

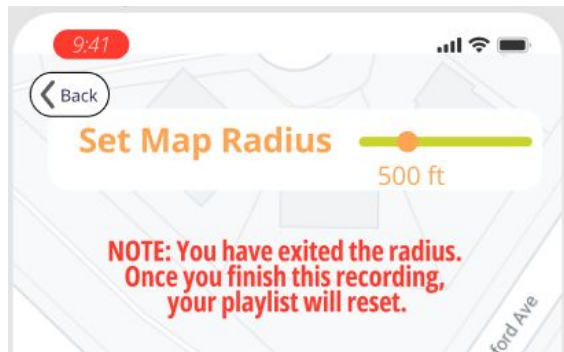
User's playlist re-setting:

- **Violation:** Message about playlist re-setting appears for too short a time.
- **Violation:** Playlist auto-resetting when user has left the map location is too punishing.

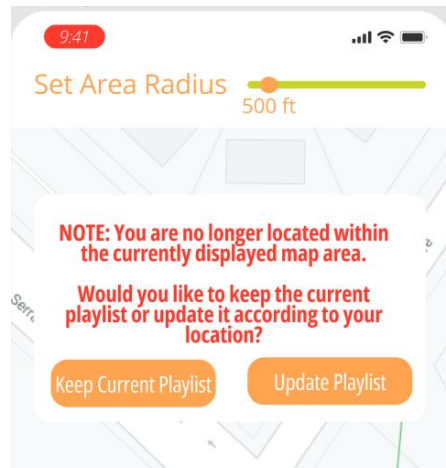
Fix

- Add Update Playlist button. Until user presses it, the playlist will not change
 - Note: Plan to implement “Update Playlist” button. Not planning to implement functionality for “Keep Current Playlist” button due to time constraints. Task is to listen to recordings made near your location, so keeping current playlist is low priority.

BEFORE



AFTER



Sev 3 and Sev 4 Violations

- 3 Violations: Not all buttons functioning on all frames when they should be (creates confusion)
- Fix:
 - Already planned to implement in high-fi prototype
 - Did not have capacity to make all buttons functional at all times with Figma

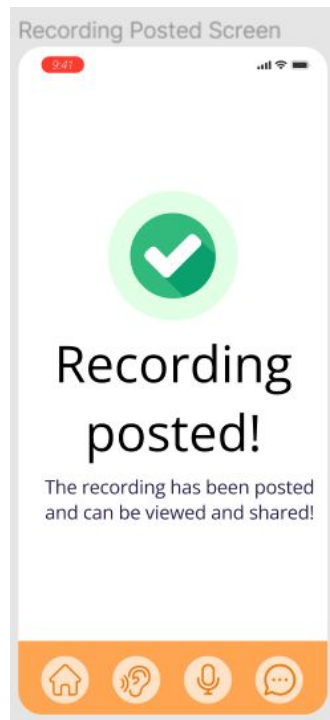
Sev 3 and Sev 4 Violations

Error Prevention – Posting

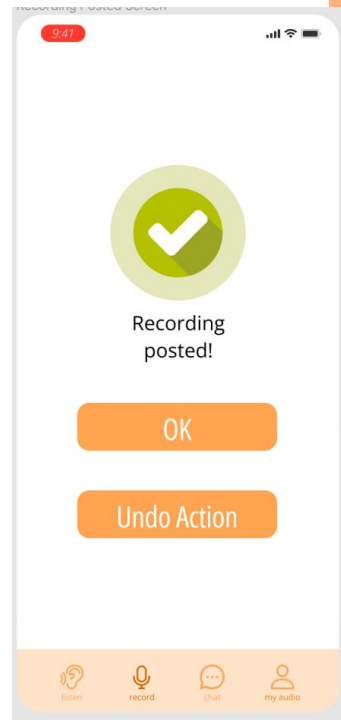
Recording:

- Violation: Users cannot undo action of posting recording
- Fix: After recording posted, add an undo action button.

BEFORE

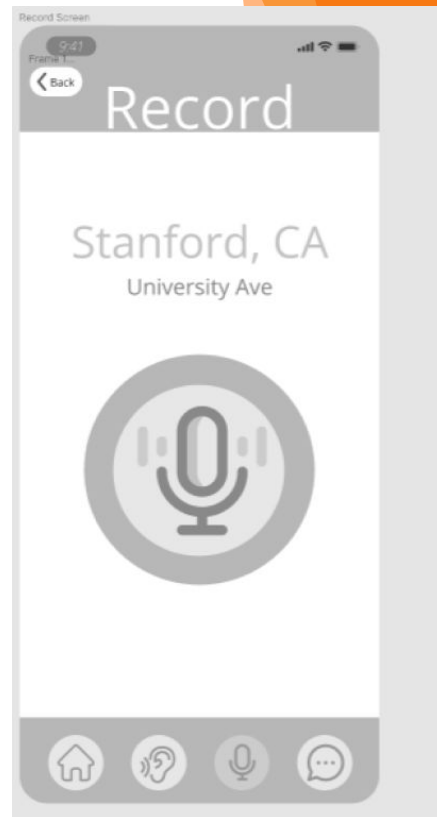


AFTER



Sev 3 and Sev 4 Violations

- **Violation:** Color scheme on Record screen inaccessible to red-green colorblind.
- **Not fixing:** Converted screen to greyscale to determine accessibility and we were satisfied with outcome.



Progress Towards Usability Goals

- **Usability Goals:**
 - **Robust:** Reducing errors/confusion
 - Measured by: How often does the user complete the task without going down the wrong path?
 - **Pleasant:** Creating an enjoyable experience for users
 - Measured by: moments during prototype test when users find something enjoyable or confusing
 - User follow-up feedback

Progress Towards Usability Goals

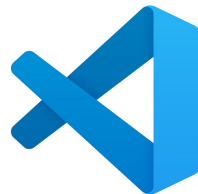
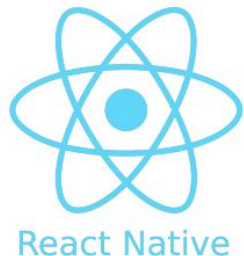
- **Robustness increased by addressing confusions expressed in heuristic violations, including**
 - Improving consistency of design with existing apps
 - Removing/replacing buttons with unclear purpose
 - Buttons will all function in hi-fi
- **Pleasantness increased by changes including**
 - New frame with detailed info + recording progress for an individual recording
 - Ability to navigate to My Audios more easily and re-live your highlights
 - Improved accessibility (transcript, nav bar text)

Novelty

- Tying recordings to locations
- Immersive motivational experience of listening to recordings made near your current location
- Detailed view with photo + metadata of recordings
 - Normally, such detail is only seen in streaming platforms like Spotify for music and podcasts

Tools Used

- React Native (application framework) -
- Expo (building and simulation)
- Visual Studio Code (IDE)
- Figma (for design components)



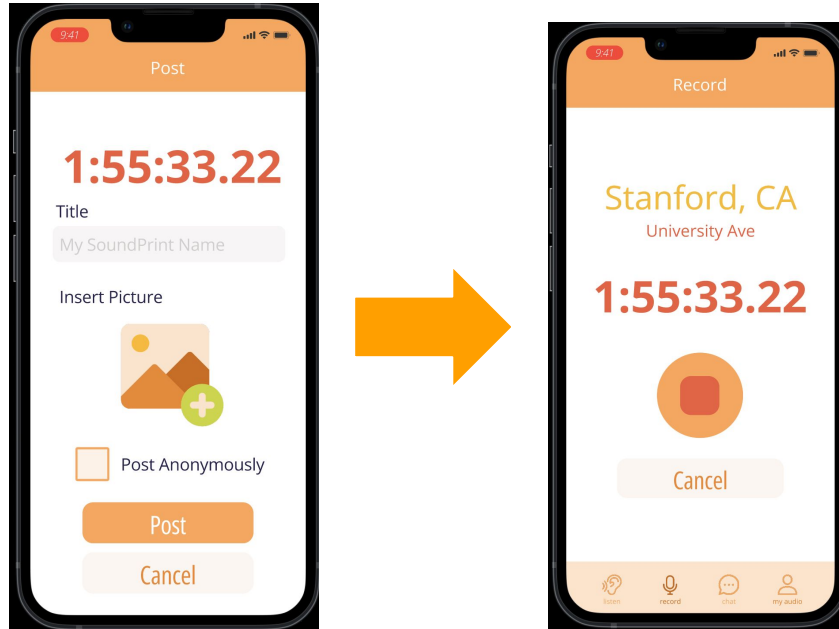
Implemented Features

Simple Task: Recording



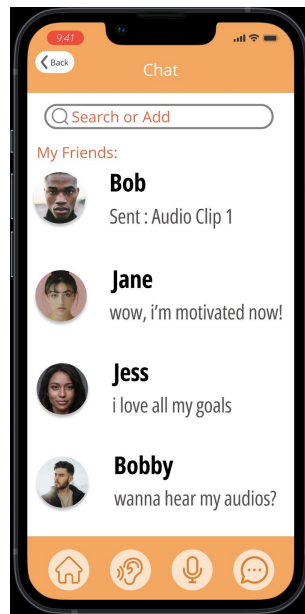
Implemented Features

Playback functionality



Implemented Features

Bottom navigation + Stack navigator



Unimplemented Features

- Listen and Share task flows:
 - Map view
 - Share recording task flow starting from My Audios
 - Chat messaging functionality
- Investigated libraries and in progress

Our plan to finish

- **Step 1:** Implement the map view, share recording task flow starting from My Audios, and the Chat messaging functionality
- **Step 2:** Make slight alterations to My Audios task flow to convert into Recordings Made Here and “Send Audios to Person” screens
- **Step 3:** Touch ups and testing

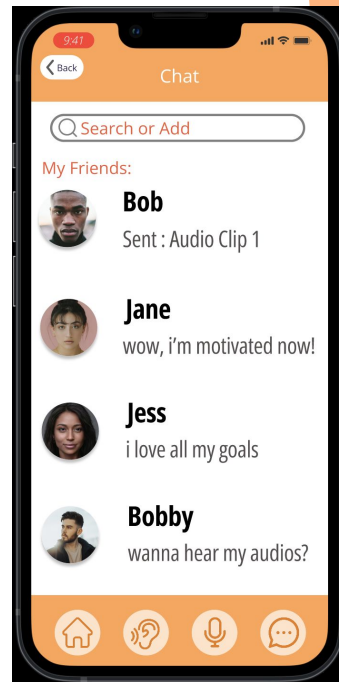
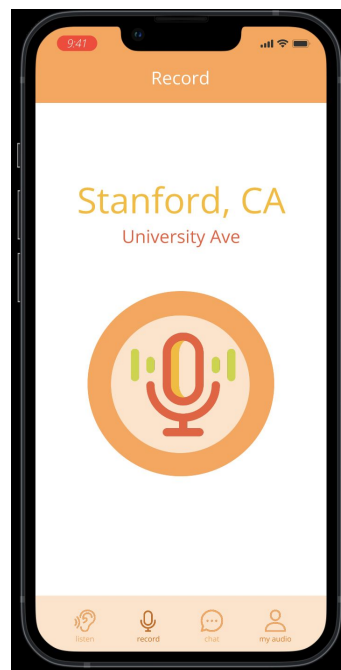
Wizard of Oz

- The user has to imagine that they are at the dish and walking around as the audio plays



Hardcoded Portions

- All the recordings when the user opens the app
- All the people in the chat and the pre-existing messages
- User's current location for Dish scenario



Prototype Demo

The background features a series of overlapping, wavy, semi-transparent shapes in shades of orange and red, creating a dynamic, flowing effect. The colors transition from a bright orange on the left to a deep red on the right.

Issues and Questions

Implementation: Feasible to restrict the area of recordings that are shown on the map with Expo map libraries?

Are the icons in record task intuitive?

- Originally, had buttons with text labels



Summary

- Made significant changes based on heuristic evaluation
- Major progress— record task completed
- Need to implement: listen and share task flows
- Plan in place to finish app by deadline!

APPENDIX

The background of the slide features a series of overlapping, wavy bands in shades of orange and red, creating a dynamic, abstract design. The colors transition from a bright orange on the left to a deep red on the right, with lighter, semi-transparent layers in between.

Sev 3 and Sev 4 Violations

Help and Documentation:

- **Violations:** ReadMe does not include
 - Our 3 tasks
 - Note that View Individual Recordings button does not work on all frames
- **Low Priority to Fix:** Prioritizing design changes over Med-Fi README.
- **Violation:** No help/privacy policies/FAQ in the app.
- **Low Priority to Fix:** Not part of our tasks. Important for something being pushed to app store, not prototype.

Sev 3 & 4

My Audios:

- **Violation:** Insufficient metadata about each recording (time taken, more specific location).
- **Fix:** Added time taken but not a more specific location, so as to not overwhelm the user.

BEFORE

Today (1/12/22):	
 	Audio File 1 Made in Stanford, CA
	0:30

AFTER

 	Stroll through the Dish Made on 1/28/22 At 5:00PM PST In Stanford, CA	5:30
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Sev 3 & 4

Set Radius Slider Bar:

- **Violation:** Limiting the radius to 1 mile is inaccessible for people living in unpopulated areas
- **Fix:** In high-fi prototype plan to allow a wider radius range in areas with few recordings.

Sev 3 & 4

- **Bugs/Violations:** Nav bar icons not always in same order across frames and not always functional. These were both accidental bugs.
- **Fix:** Fixing in high-fi prototype to have consistent nav bar across all screens, except color change for currently selected screen, and having all nav bar icons working.
- **Violation:** On Bob's chat page where you individually message Bob, the light orange text against the white background is very difficult to read.
Fix: Made the background of the text bubble a darker orange.
- **Violation:** Too many steps to hit Record button and then Start button to record
 - **Not fixing:** Apple Voice Memos, a popular existing recording app, does not immediately take you to record screen. Current interface is more inviting.
 - **However,** we did remove the record button and make the icon clickable instead to reduce confusion.

Sev 3 & 4

- 3 Violations: Not all buttons functioning on all frames when they should be (creates confusion)
 - Not all recordings can be paused once started playing
 - In My Audios, users cannot un-select audio files once selected
 - Cannot click on “View List of Recordings Made Here” until after user has played all recordings in radius

Fix:

- Already planned to implement in high-fi prototype
- Did not have capacity to make all buttons functional at all times with Figma

Sev 3 & 4

One heuristic violation was that “users cannot tell which recording they have posted.”

This was not exactly true. The author of all non-anonymous recordings was already shown in the “Recordings Made Near You” page. In addition, the My Audios page could previously be accessed via Chat.

However, we have already addressed the suggested fix to add tab for recordings a user has posted.

In the high-fi prototype, we plan to implement the functionality for a user’s recording to appear in the Recordings Made Here page and My Audios pages.