

ARTIST

Reimagining audio for everyone



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PROBLEM

Deaf and hard of hearing people are often left out of key nuanced information that is conveyed through audio in digital spaces

SOLUTION

ALTiO is a social media platform that encourages and provides visual interpretations of audio—providing *alternative* options for everyone to experience content

Outline

Prototype Changes
Testing Methodology
Results
Discussion





Prototype Changes

Prototype Changes

MAJOR CHANGE 1 - Interpretation Methods

Previous design:

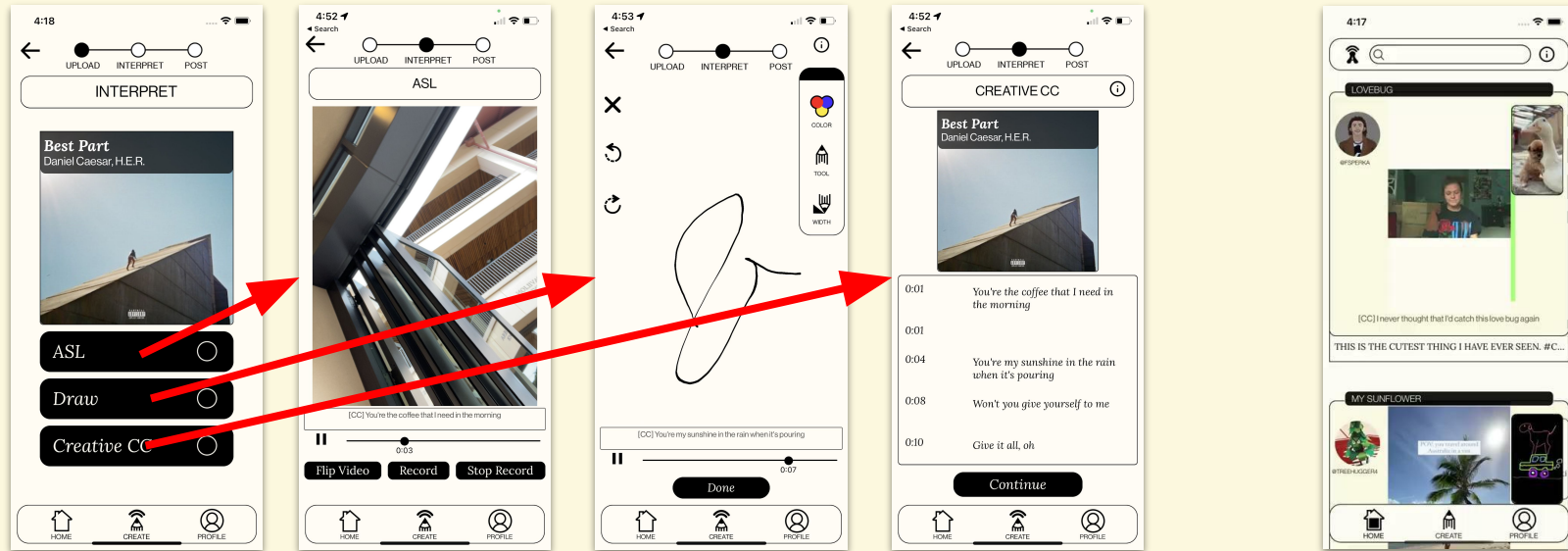


SOLUTION: Rethink how audio is interpreted and how the posting process can be condensed.

Prototype Changes

MAJOR CHANGE 1 - Interpretation Methods

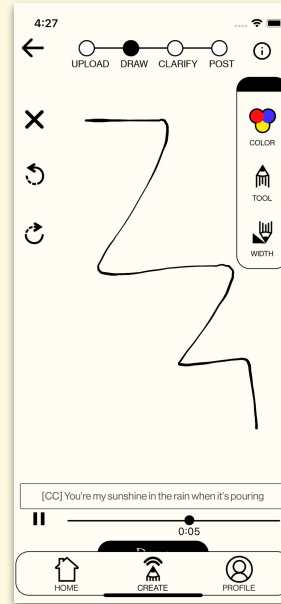
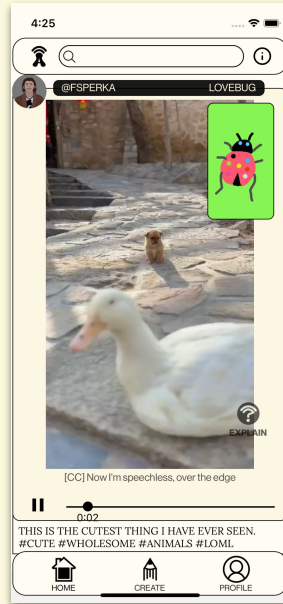
Updated design:



Prototype Changes

MAJOR CHANGE 2 - Resizing for Different Devices

Previous design:

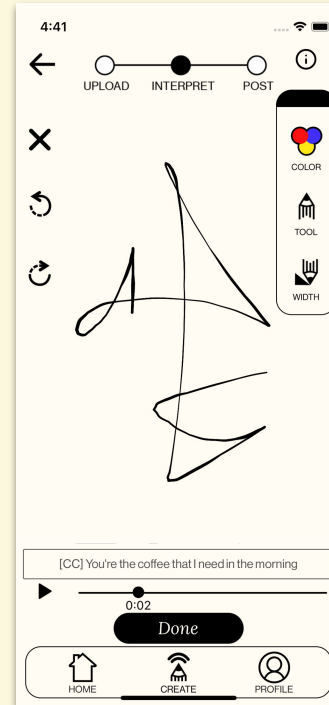
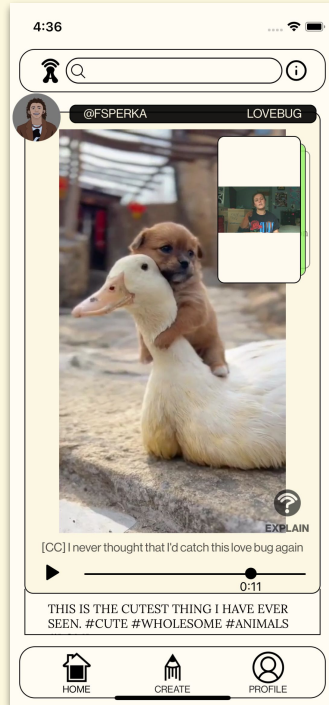


SOLUTION: Scale elements based on screen sizes, rather than constants.

Prototype Changes

MAJOR CHANGE 2 - Resizing for Different Devices

Updated design:





Testing Methodology

Participants

PARTICIPANT 002

Hard of hearing woman
(>60 years old)

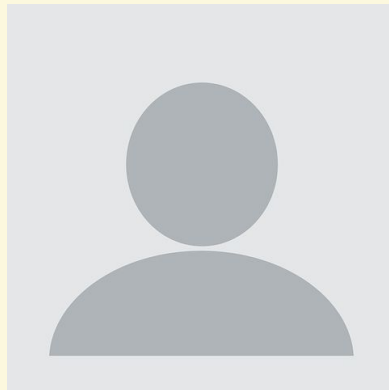
Compensated with \$10
coffee shop gift card



PARTICIPANT 003

Hard of hearing woman in
her 30s

Declined compensation



PARTICIPANT 004

Deaf woman in her mid-20s,
fluent in ASL and Korean

Compensated with \$10
coffee shop gift card



Apparatus

**INTERVIEWS
CONDUCTED**



**APP
ACCESS**



**SCREEN
RECORDINGS**

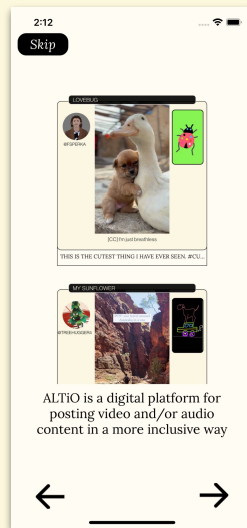
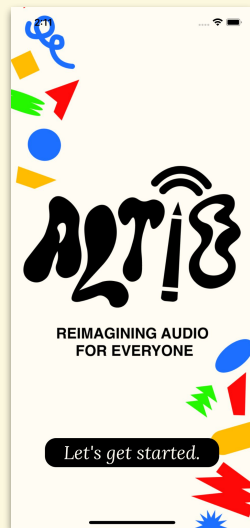


Tasks

TASK 1 - Onboarding

We had the user click through and read through the onboarding flow.

GOAL: For users to be able to understand the purpose of the app and what an “ALTiO” is.



Tasks

TASK 2 - View Content

We had the user navigate to an “ALTiO” interpretation for a post and view its annotations.

GOAL: A user can successfully navigate to an interpretation relatively easily, and that it is an enjoyable process.

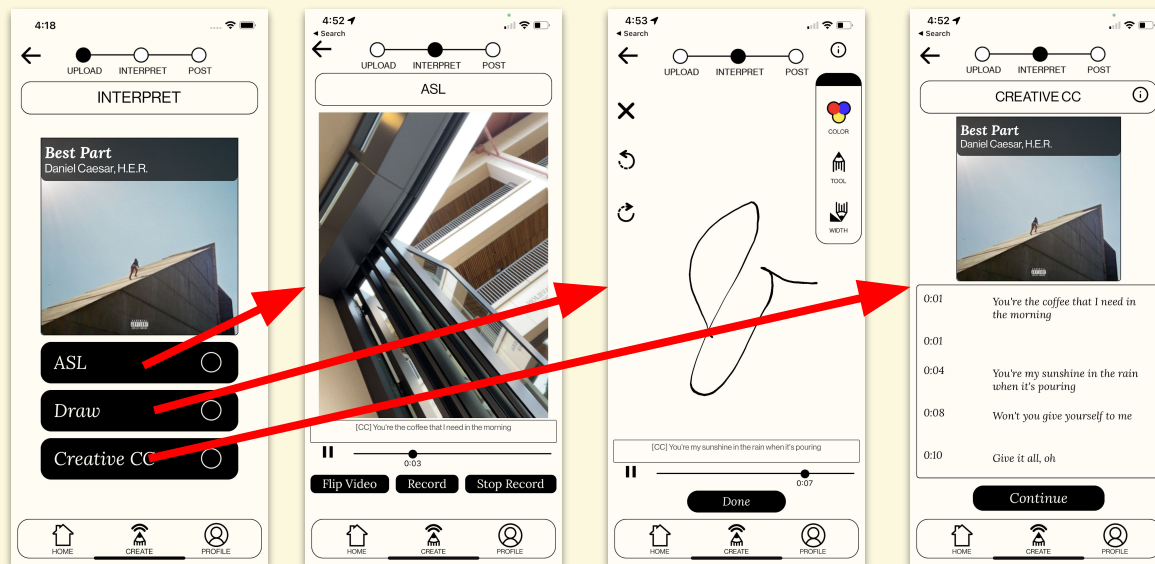


Tasks

TASK 3 - Interpret ALTiO

We had the user create a post with an ALTiO interpretation.

GOAL: A user can successfully create a post with ease and enjoyment.

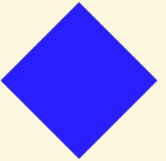


Tasks

TASK 4 - Engage with Community

We had the user navigate to find more interpretations of Funky audio.

GOAL: A user can find other interpretations of audio with ease, and the user is curious about other areas of the app.



Procedure

1. We interviewed each participant on Zoom, and started off with introductions.
2. We instructed participants to download Expo Go on their device, then log in with provided credentials to access our app by scanning a QR code.
3. We vaguely introduced our app and purpose, as well as how the testing procedure would look. At this point we began recording.
4. We asked users to complete the first task that we introduced. After completion, we asked a few questions about their experience and feelings.
5. We repeated this with each task, and finally concluded the interview.



Test Measures

1. ONBOARDING QUIZ SCORE

- *Does the user understand the basic goals and functions of the app from the onboarding screens?*

2. COMPLETION OF EACH TASK

- *Can the user achieve the app's goals?*

3. LENGTH TO COMPLETION FOR EACH TASK

- *Is it easy for them to do?*

4. INSTANCES OF VISIBLE ENJOYMENT

- *Do they enjoy using the app?*

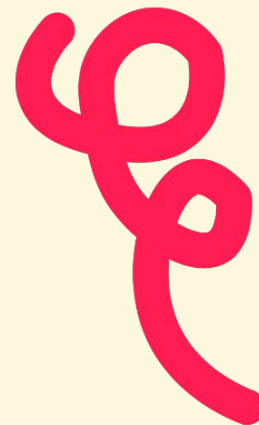


Results



Onboarding Quiz Score

1. *Based on what you saw in the onboarding, what can you do in this app?*
2. *What is the purpose of this app?*
3. *What is an altio?*



PARTICIPANT 002

1.5/3

- Unsure about what they are able to do in the app.
- Correctly identified “alternative” as a part of “altio”, but not the other part.
- “It doesn’t tell me what my audience can expect to see”

PARTICIPANT 003

3/3

- Confused on first read, but after rereading participant understood
- Suggested seeing the definition of altio earlier
- Problem / solution framework

PARTICIPANT 004

1.5/3

- For the first question: weren’t sure what the altios were for or how to create them
- Guessed both that the app’s purpose was to “make sound into art or was some sort of game.”

Successful Task Completion



PARTICIPANT 002

Tasks Completed: 2/3

- One screen was not formatted correctly on her device, and as a result was unable to complete this task

PARTICIPANT 003

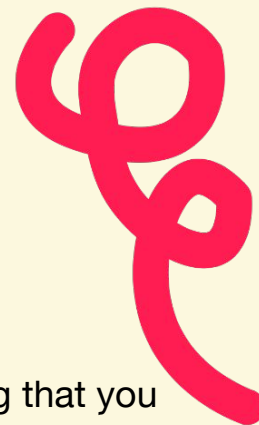
Tasks Completed: 2/3

- Drawing screen was not formatted correctly and prevented drawing screen completion

PARTICIPANT 004

Tasks Completed: 3/3

Instances of Visible Enjoyment



PARTICIPANT 002

Instances: 5

- “That’s nice! There’s signing in the top right and captions, I like that.”
- [in reference to annotations]: “Nice! Like a little more detail!”

PARTICIPANT 003

Instances: 2

- The participant more so approached the demo analytically.
- “At first the yellow explainers where just about the picture... but then the explainers were clearly talking about [something] only in the audio.”

PARTICIPANT 004

Instances: 3

- “It’s interesting that you can switch back and forth between images and videos.”
- “I like the idea of having different categories of music!”
- “This is like a bridge forward for Deaf people.”

Length to Completion Across Tasks



	PARTICIPANT 002	PARTICIPANT 003	PARTICIPANT 004	AVERAGE
Onboarding	1:15	4:00	0:30	1:55
View content	5:11	2:36	1:51	3:12
Create Interpretation	8:42*	2:00*	0:40	3:47
Engage with Community	2:14	0:55	0:18	1:09



*time to stop, not completion

Critical Incidents

Scale from 0-4, 0 being least severe

PARTICIPANT 002

Confused about what ALTiO's were from onboarding screen	2
Comments it would be nice to see multiple sentences of the captioning at once, so they don't lose their place	2
Unable to find explain button due to low contrast	4
Not used to having to exit out of the expanded view in order to continue scrolling	3
Stuck on a screen due to improper formatting	4
Expects audio cards to be clickable	3

PARTICIPANT 003

Confused about order for onboarding screen	4
After seeing first altio, user was unsure about the goal of the app – it was too related to the video	4
Concerned about having personal videos and photos pulled up on the app	2
Expected hashtags to be clickable	3
Unable to complete creation process due to formatting	4

PARTICIPANT 004

During the onboarding, wasn't sure what the image/drawing on the side was, and how it correlates with the video.	2
Some drawings block part of the video, which is not visually friendly for people who are deaf	2
Completely overlooked the explain function	3
Didn't find it interesting to read text explanations of drawings	3
Was confused on "no audio, own audio, choose audio" options when creating own altio, and how they would know what music to choose if they cannot hear it.	3
Wasn't sure what to do with art itself, or what to draw	4

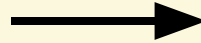


Discussion

What we learned



Users needed guidance to understand the purpose of our app



ONBOARDING NEEDS IMPROVEMENT

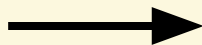
As shown by our onboarding quiz results and confusions



What we learned



During testing, some users were unable to, or had difficulty completing tasks due to different phone sizes



IMPROVE SCALABILITY THROUGHOUT PHONE SIZES

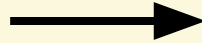
There is significant sizing differences between phone versions, so not all formatting is consistent.



What we learned



Users took longer than we had hoped to complete certain tasks, and were often confused



NEED MORE GUIDANCE THROUGHOUT THE APP

Enjoyment and efficiency may be increased by mitigating confusion throughout the app using multiple tours / guides throughout the app



What we plan to change



ACCOUNT CREATION / USER PREFERENCES

Avoid feelings of exclusion for Deaf and HoH users by asking for preferences of content type and audio preferences early on

ONBOARDING FLOW

Introduce our app as a solution to an existing problem, also including additional “onboardings” throughout the app (feed, create, etc.)

EXPLAIN FUNCTION

Improve explain button visibility, and make clear what numbers do

IMPROVED ASL / CREATIVE CC SUPPORT

Introduce captions



Next steps



IMPLEMENTING CHANGES FROM LEARNINGS

ALLOW FOR CLICKSTREAM LOGGING

IMPROVE STOCK ALTIOS / ASL / CREATIVE CAPTIONING CONTENT

KEEP WORKING WITH DEAF / HOH COMMUNITY



Thank you!

