

LET'S
DANCE

Med-Fi Prototype Presentation

OVERVIEW

1. MISSION
2. GOALS
3. REVAMPED DESIGN
4. PROTOTYPE WALKTHROUGH



BUT FIRST...

... **WHY?**

“VISUALIZING FORMATION

CHANGES while blocking
choreography is

PARTICULARLY DIFFICULT.”

- *Leilani Tian*
Professional Ballerina



OUR MISSION

Help choreographers to *create, visualize,* and *share* dance formations.

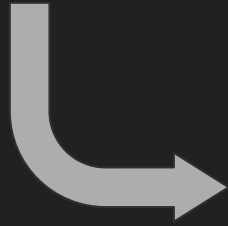


PROBLEM

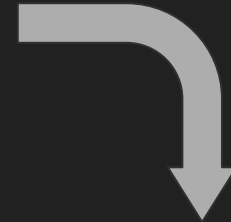
“VISUALIZING FORMATION

CHANGES while blocking
choreography is

PARTICULARLY DIFFICULT.”



MISSION



SOLUTION



An application that enables choreographers to create, record, and share formations, as well as see their creation in physical space through AR



TASKS

TASK 1 :: CREATE 3 DIFFERENT FORMATIONS (SIMPLE)

TASK 1A :: MODIFY THESE FORMATIONS

TASK 1B :: REMOVE A DANCER FROM THE FORMATION

TASK 2 :: SYNC FORMATIONS TO MUSIC (MODERATE)

TASK 2A :: REARRANGE FORMATION ORDER

TASK 3 :: CREATE A TRANSITION FOR 2 FORMATIONS (COMPLEX)

TASK 3A :: CHANGE PATH OF ONE OF THE DANCERS

TASK 3B :: GO BACK INTO FORMATION 1 TO EDIT

TASK 4 :: USE AR TO SEE A FORMATION IN REAL WORLD (COMPLEX)

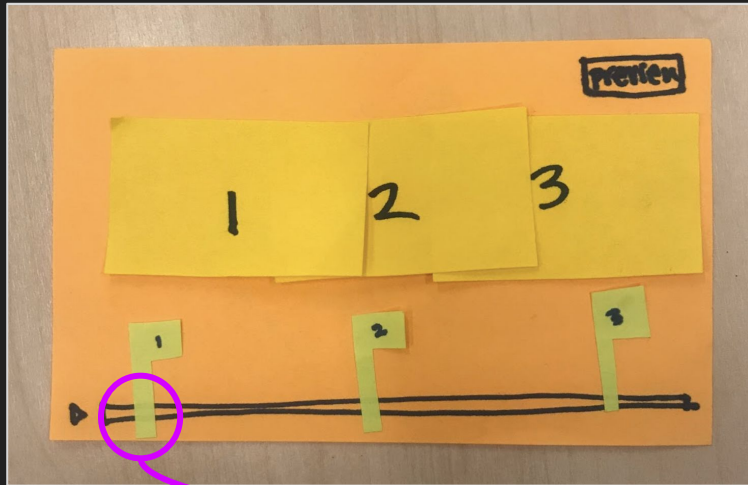


Major Design Changes

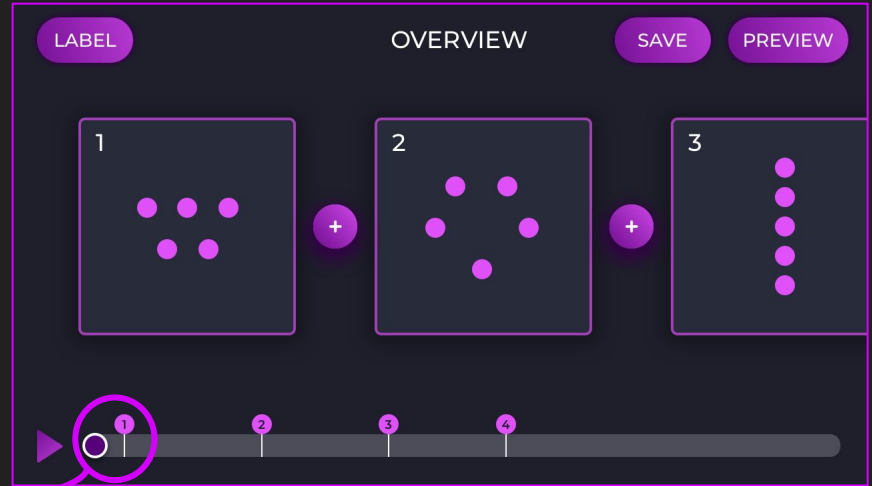


CHANGE #1 | Clarifying transition durations

BEFORE



AFTER



Added separate formation and transition flags

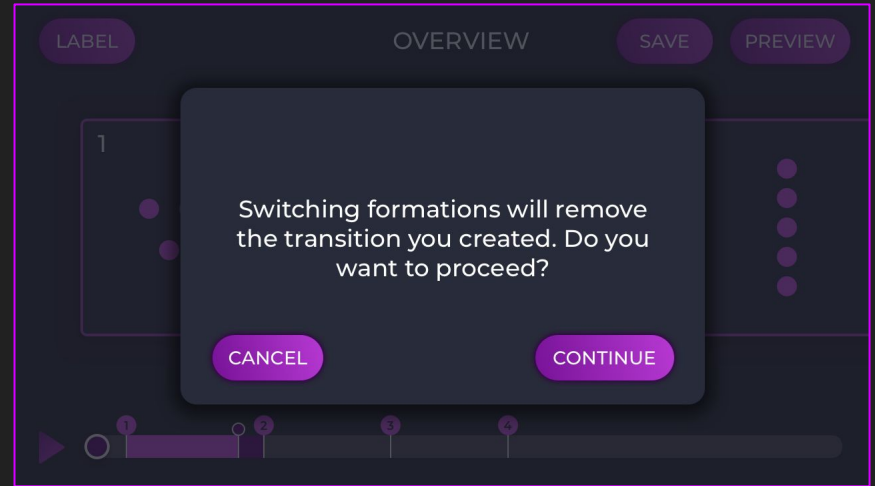


CHANGE #1 | Clarifying transition durations

AFTER



Ask for transition duration within transition creation flow



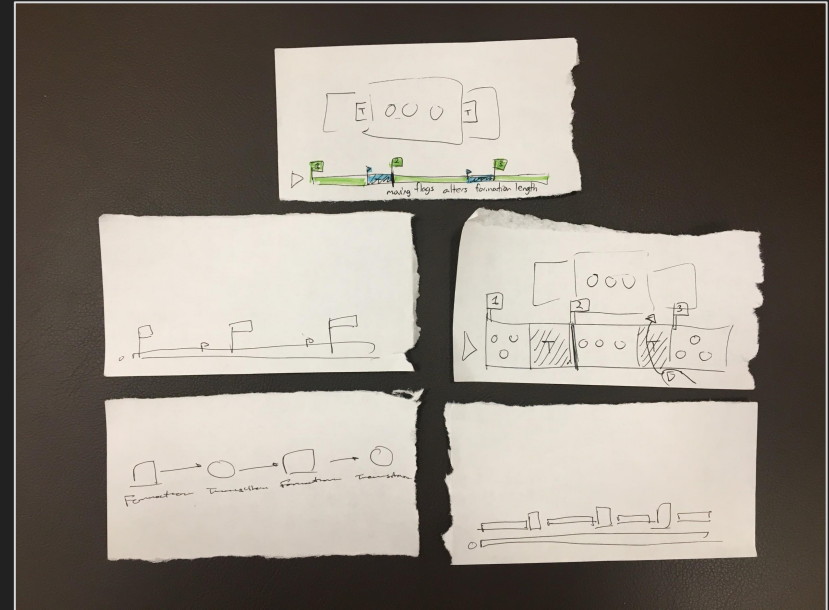
Error message for deleting transitions



CHANGE #1 | Clarifying transition durations

REASONING

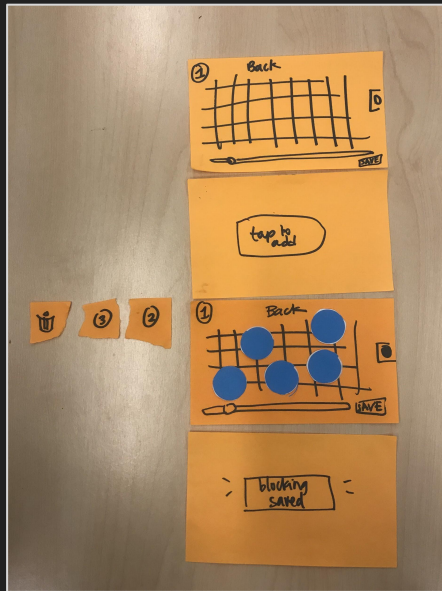
- During prototype testing, users asked about transition duration
 - Added smaller transition flags
- Unclear whether formation flags signified the beginning or end of the formation
 - Added colored blocks along the timeline to show the duration of all formations and transitions
- User concern with deleting transitions due to swapping formations
 - Added error messaging when users were about to delete transitions



New interface sketches

CHANGE #2 | Introducing dancer labelling

BEFORE



No way to label dancers

AFTER



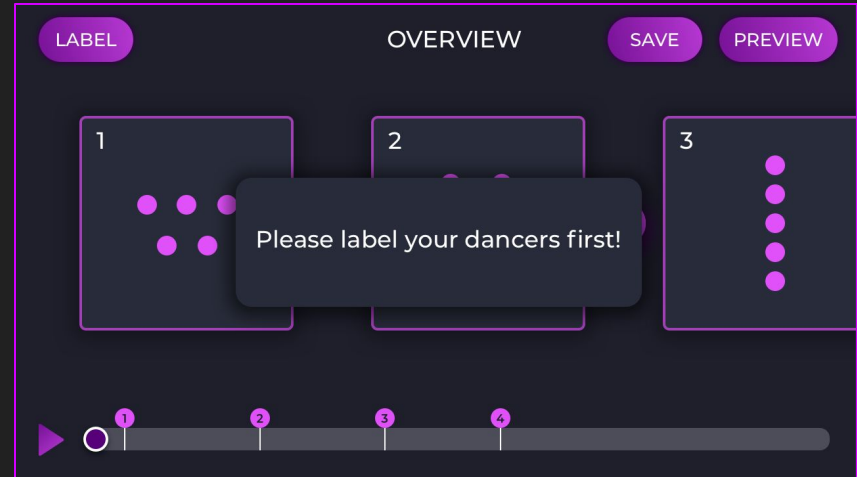
Dancer labelling screen



CHANGE #2 | Introducing dancer labelling

REASONING

- Sharing formations with teams and denoting who is placed where within each formation is a main function of our application.
- We originally didn't have an idea of where to add dancer names, but users mentioned it as a feature they would like
 - We decided to add the flow to the transition/overview screen. After labelling dancers, users can decide where each person moves within the transition.

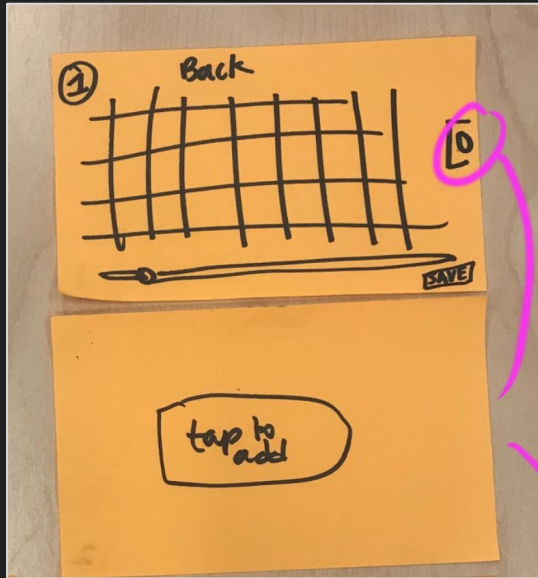


Error message when dancers not labelled before adding a transition



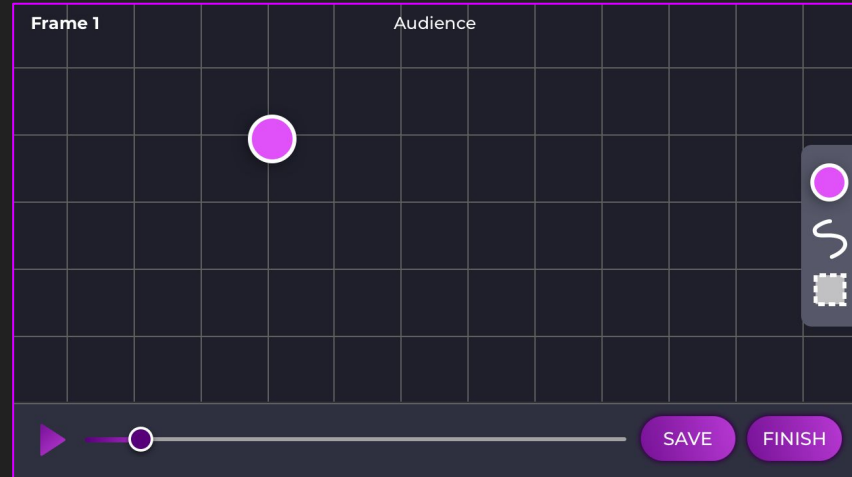
CHANGE #3 | Streamlining dancer addition

BEFORE



Users must first press the highlighted button before adding dancers

AFTER



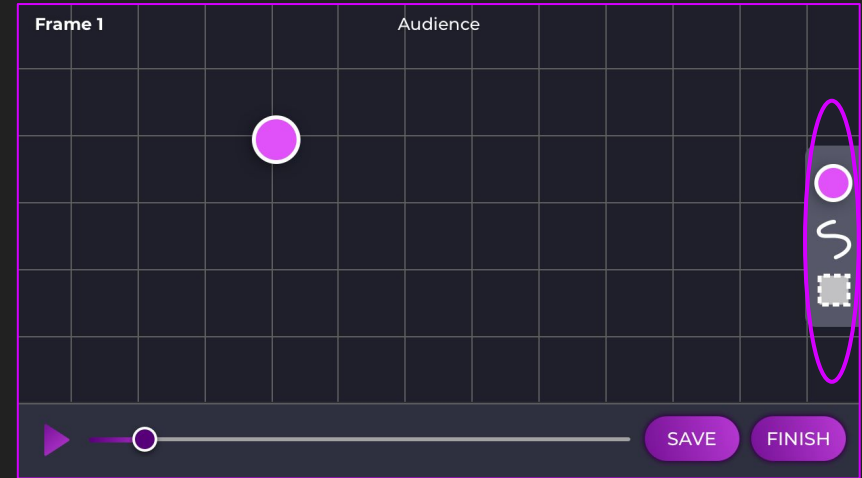
Creation screen automatically opens with tap to add tool activated



CHANGE #3 | Streamlining dancer addition

REASONING

- Through user tests where users immediately tried to tap the screen to add, we realized that adding people to a formation would likely be the first mode of interaction with the formation screen.
- We decided to make adding people to a formation the default selected mode.
 - Alternate tools like multiple select and quick draw are left for power users to explore.



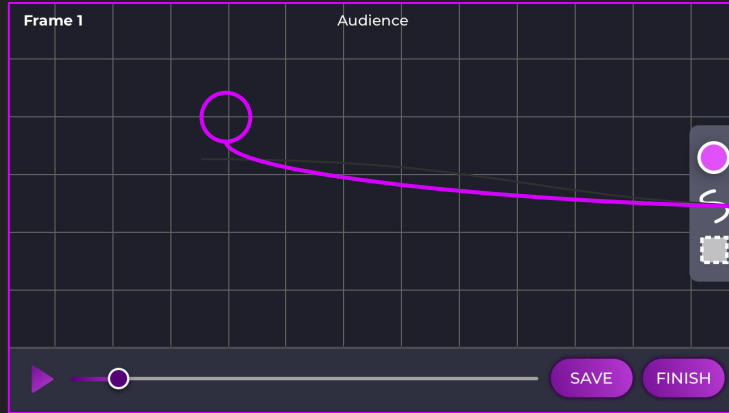
Default mode: add dancers



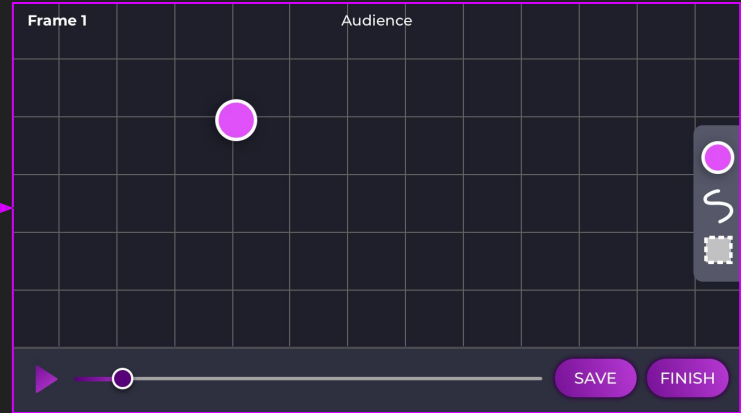
Task Flows



Task 1: Create 3 formations with 5 people



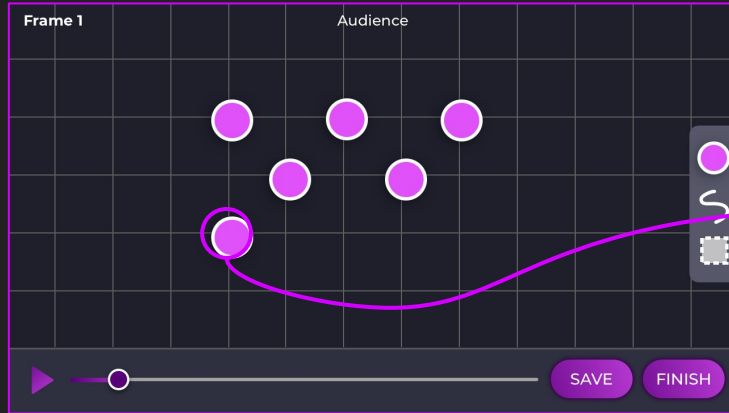
Tap anywhere on the grid to add dancers



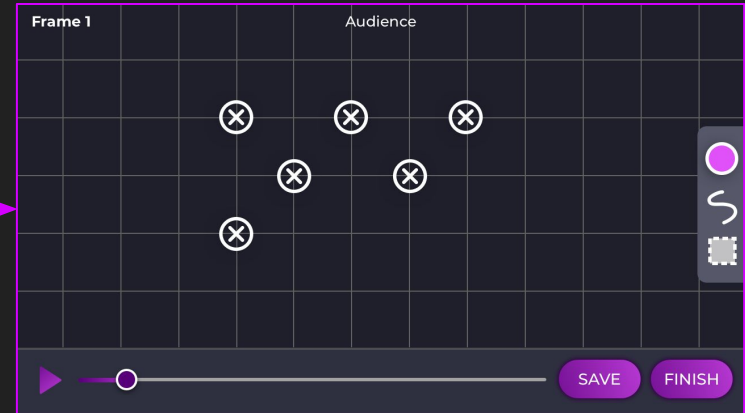
A dot will appear to represent the dancer



Task 1: Create 3 formations with 5 people



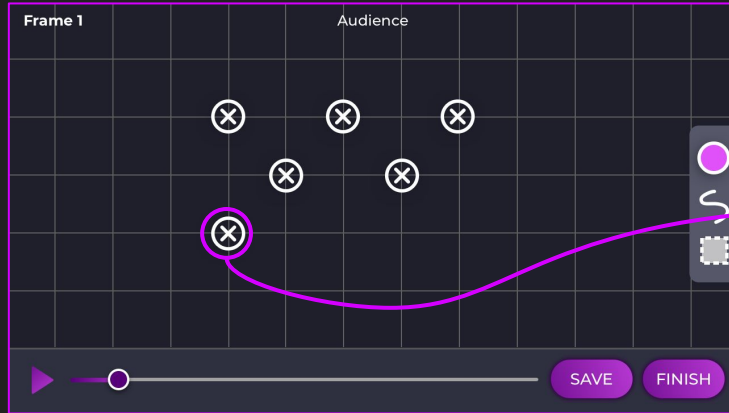
Tap a delete to enter delete mode



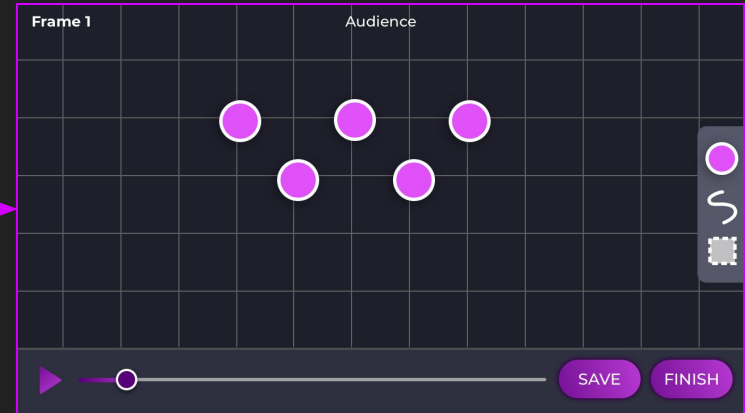
Added dancers can now be deleted



Task 1: Create 3 formations with 5 people



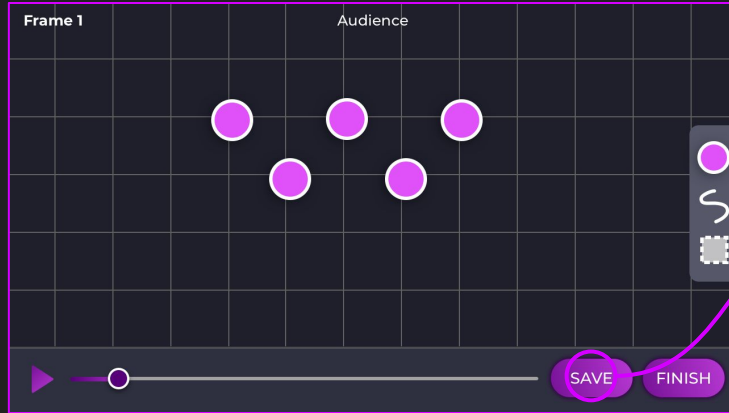
Tap a dancer again to delete dancer



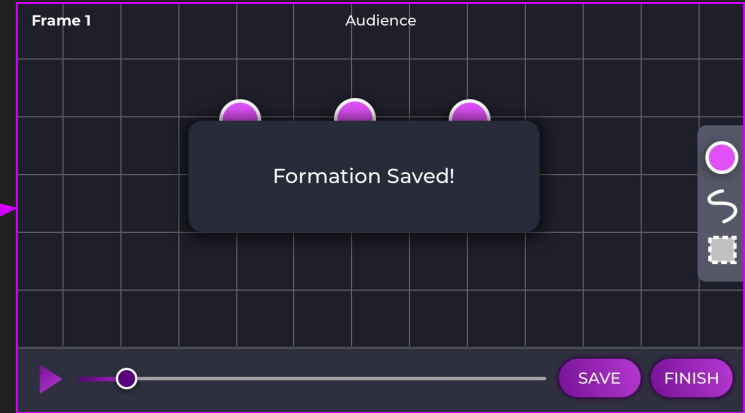
Dancer now deleted



Task 1: Create 3 formations with 5 people



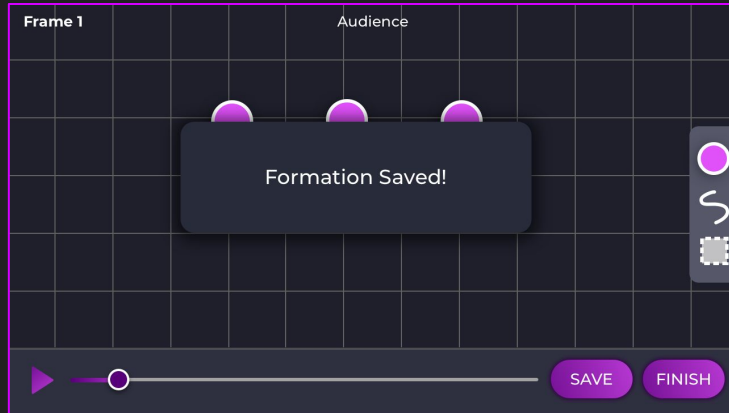
Tap 'SAVE' to save formation



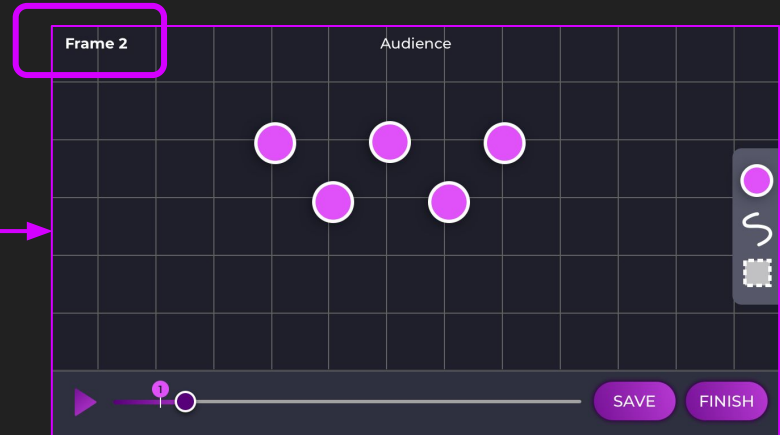
Confirmation



Task 1: Create 3 formations with 5 people



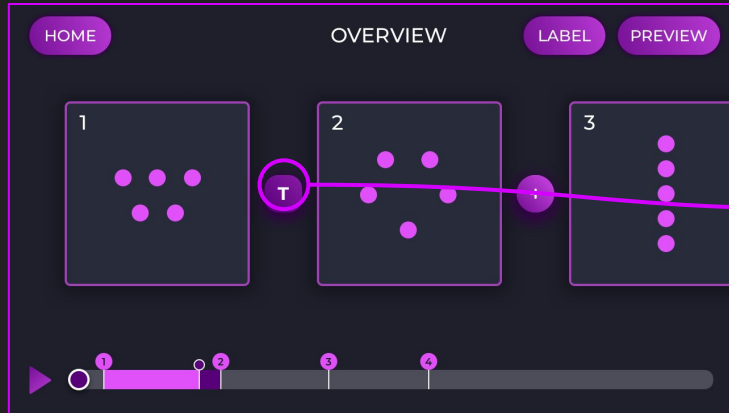
Confirmation



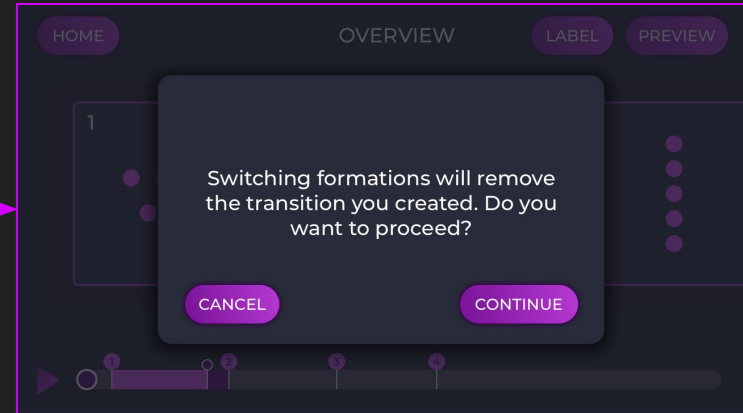
Create next formation in new frame



Task 2: Sync formations to music



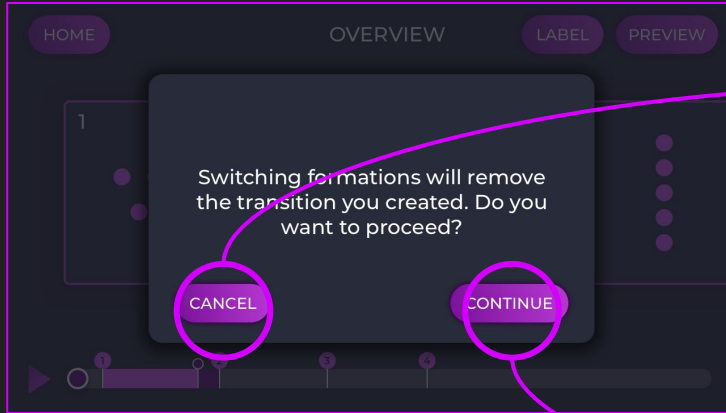
**Given that a transition is present, tap flag '1', flag '2' or transition flag to swap formations*



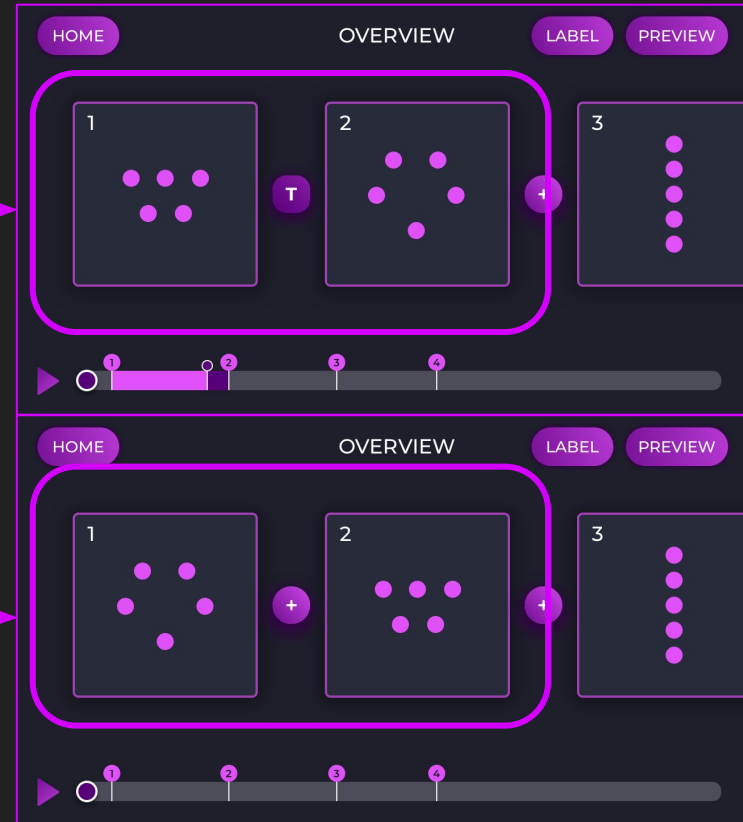
Confirmation of transition deletion



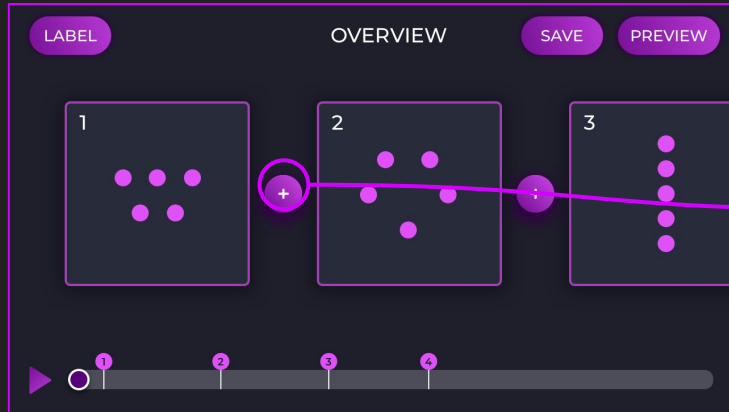
Task 2: Sync formations to music



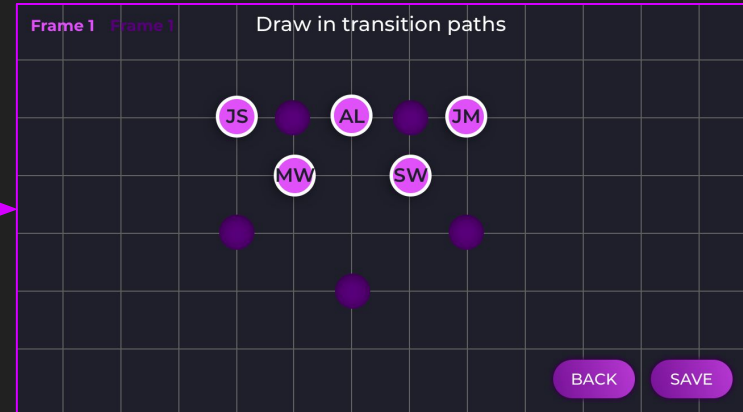
Cancel or confirm formation swap



Task 3: Add a transition between 2 formations



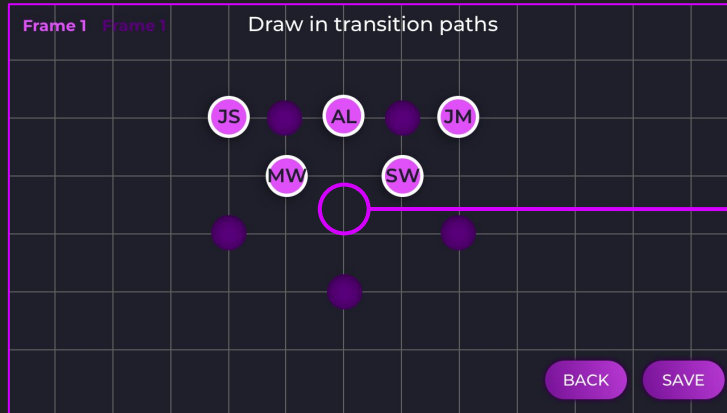
Tap '+' to add transition between formations 1 and 2



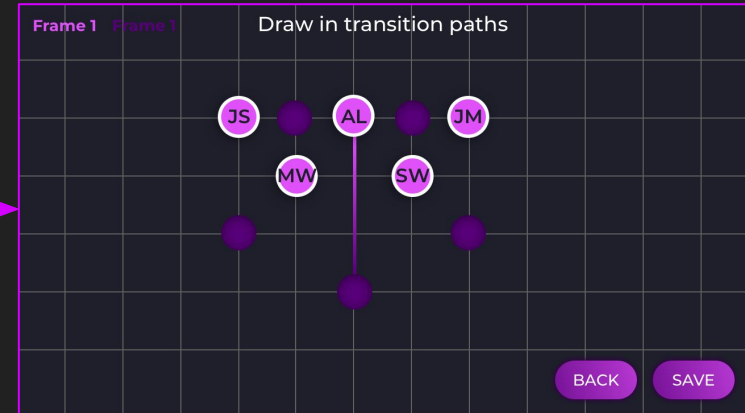
Transition creation screen



Task 3: Add a transition between 2 formations



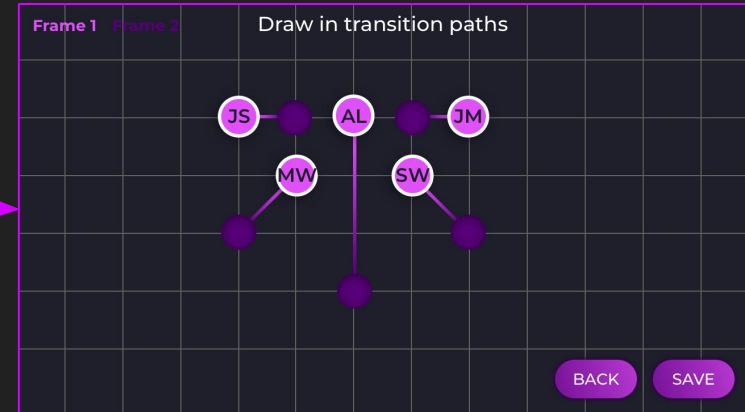
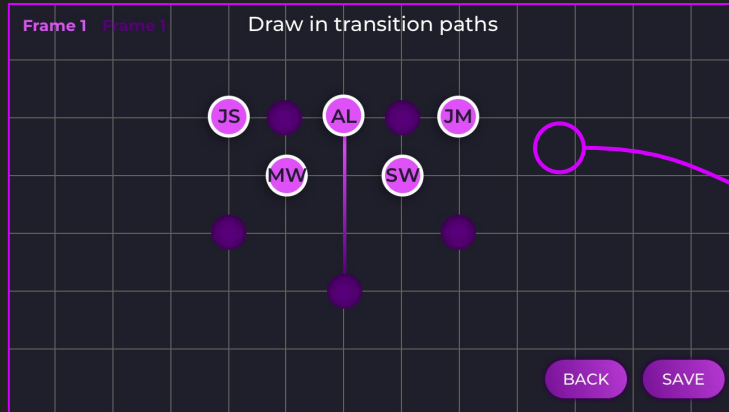
Tap space between 'AL' and lowest dot to add transition



AL's transition path from Frame 1 to Frame 2 appears



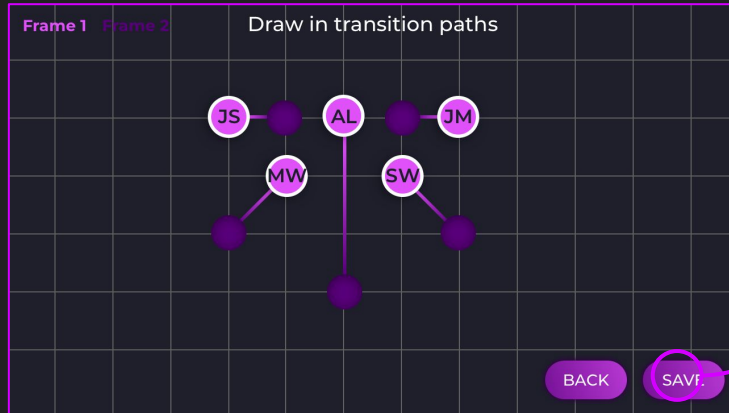
Task 3: Add a transition between 2 formations



Tap anyone on grid to WIZARD OF OZ the remaining transitions



Task 3: Add a transition between 2 formations



Tap 'SAVE' to save the transition

SET TRANSITION LENGTH

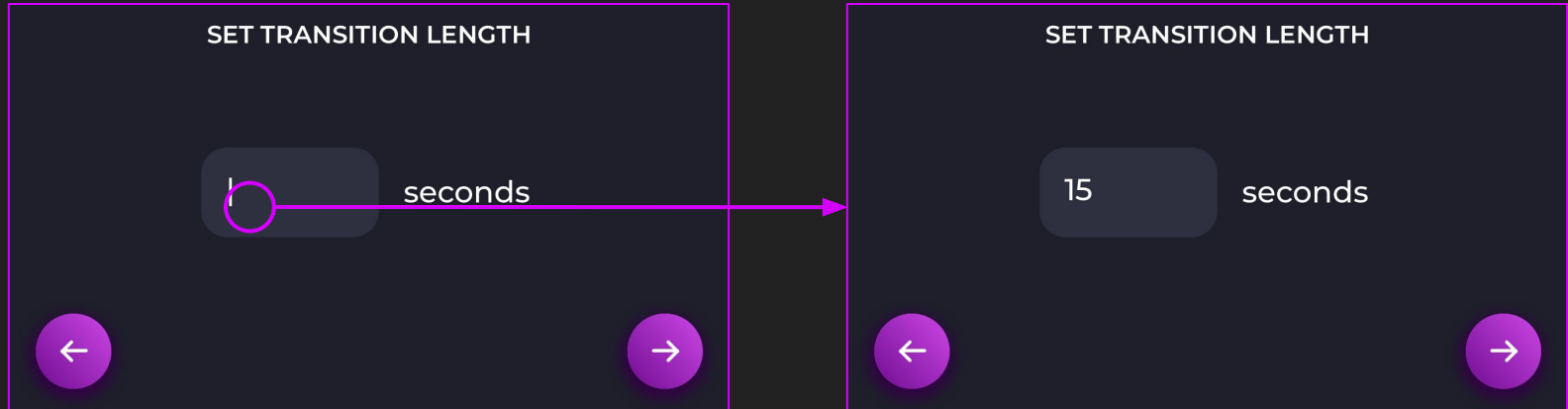
| seconds

← →

Enter transition length



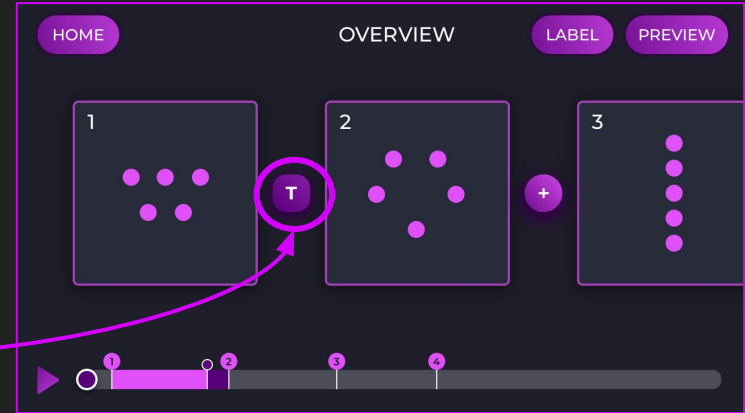
Task 3: Add a transition between 2 formations



Tap to enter transition length (default 15)



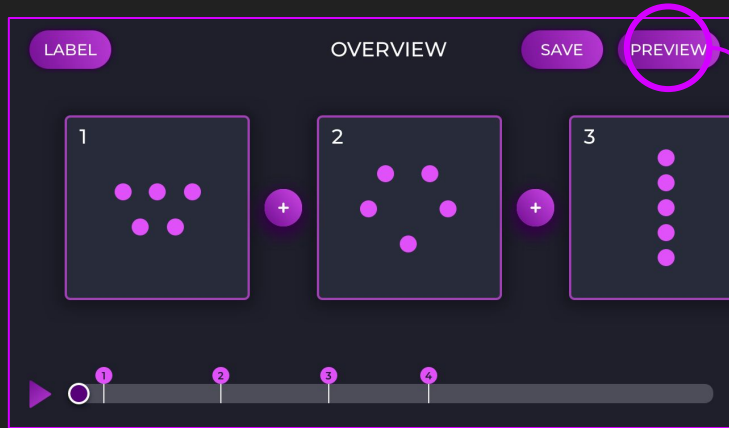
Task 3: Add a transition between 2 formations



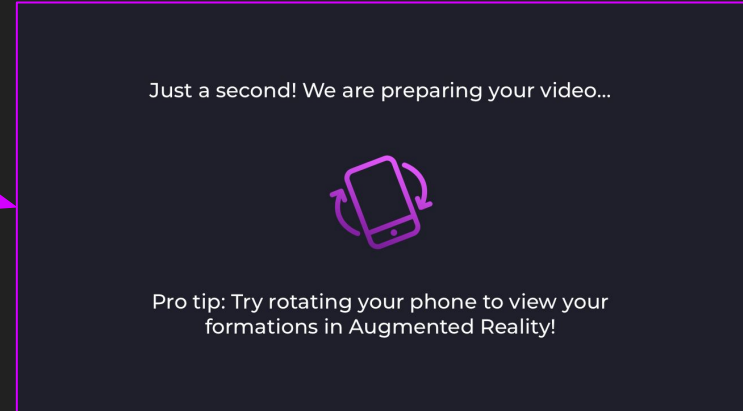
*Tap right arrow to return to Overview screen
with new transition*



Task 4: Use AR to see formation in real world



Tap 'PREVIEW' to launch a preview video of the choreography



Launches the following sequence...



Task 4: Use AR to see formation in real world



*Back button
returns to
Overview*



Prototyping Overview



PROTOTYPING TOOLS

WE USED: Sketch + InVision

BENEFITS

- 👍 Easy to create flows with artboards and symbols
- 👍 Nice way to view simple interactions on mobile

BARRIERS

- ✗ Limited touch interaction choices
- ✗ Limits user choice (hard coding values)



LIMITATIONS OF CURRENT PROTOTYPE

- ☹ Since InVision does not support long press, we reduced all touch interactions into click or swipe interactions
- ☹ Screen orientation isn't reactive in InVision, so the full AR functionality of becoming AR on orientation change wasn't shown
- ☹ Share, upload, and play interactions are non-interactive due to time and animation constraints, but we wish to make interactive in the future



WIZARD OF OZ



When clicking on an old formation, the app redirects you to a pre-loaded formation setup



The AR in the prototype is emulated through a series of still shots instead of moving the phone around to view surroundings




Remaining dancer names are filled out automatically after going through the interface to label one dancer




Remaining transitions after the first are filled out automatically



HARDCODED FEATURES

 Pre-populated dancer, choreography, transitions, and music names

 Task flows for formation creation, labeling dancers, and creating transitions is limited to show the processes in full

- Ideally, the user would be able to exit and re-enter the process at any point

Why?

Once again, point and click prewired prototypes and time constraints do not allow for full user choice.



Thank You



Alex Lee



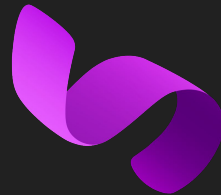
Jeremy Marcelo



Melinda Wang



Sarina Wu



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