

# **TACIT**

## Halves Presentation

Yufei Chen, Jack Chou, Jing Chung, Alex Hall, Winnie Tsai, Michael Wong

### Instructors

Heather Kelley, Vivian Shen



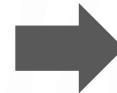
### Consultant

Drew Davidson

# GOAL

A coherent VR experience with emotional moments shaped by haptic glove sensations and audio visual contexts, explored and discovered through rapid prototyping and playtesting.

# Exploration to Demonstration

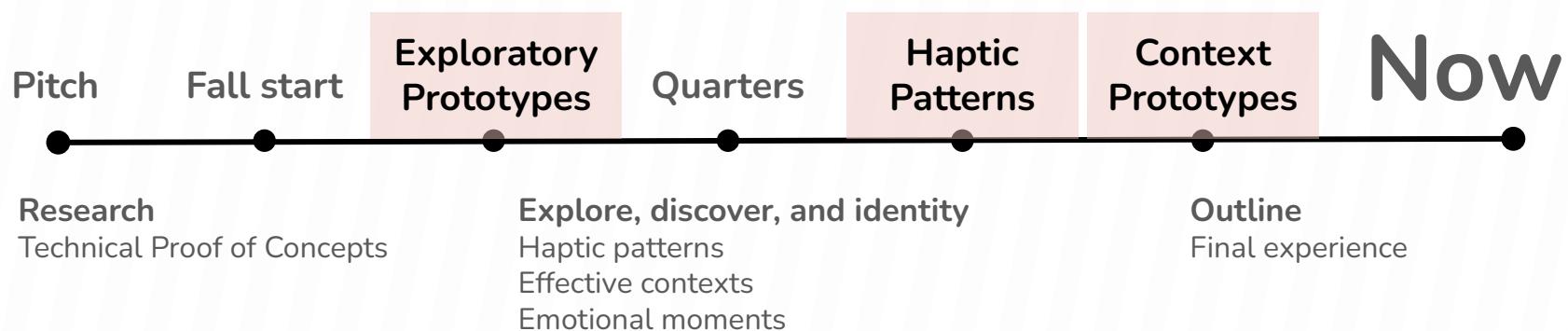


Haptic Pattern

Context Design  
(Visual + Audio)

Meaningful / Emotional Experience

# Timeline



# Research

## Psychology



## HCI



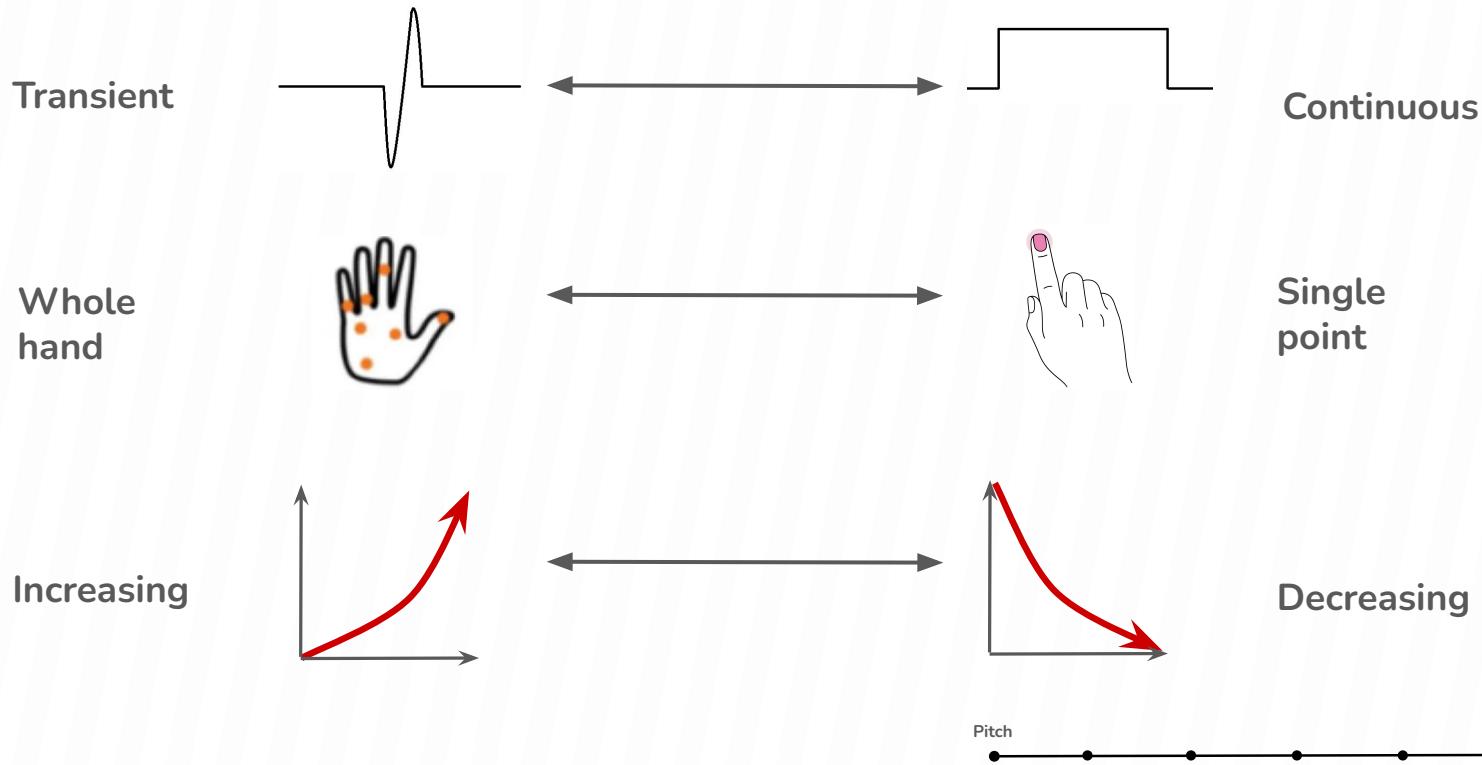
## Experience design



Pitch



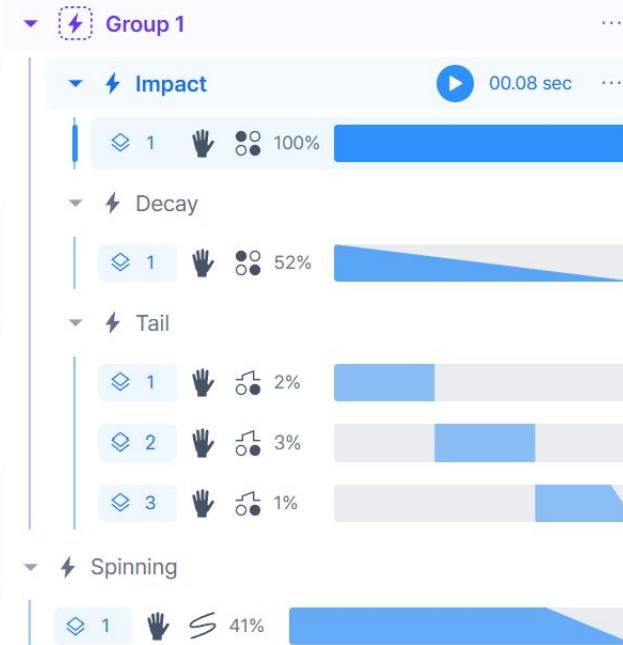
# Haptic Pattern Parameters



# bHaptics TactGlove



6 Vibrotactile Feedback Points

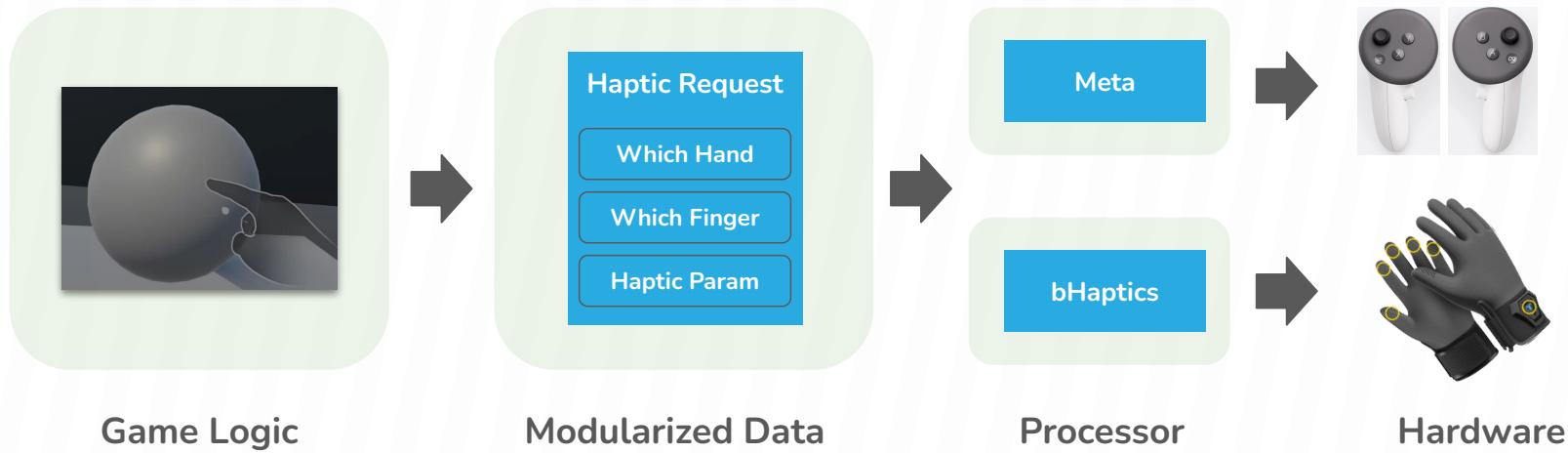


bHaptics Designer Interface

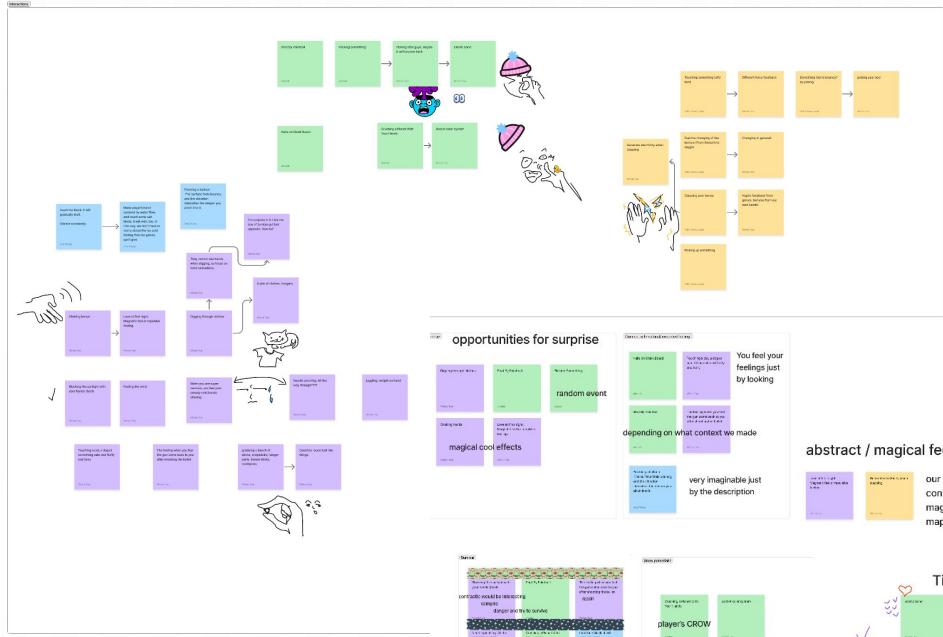
Pitch



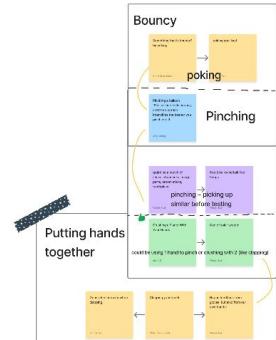
# Code Architecture



# Brainstorming



## Fall star





**We can do  
anything, but we  
can't do  
everything.**

TACIT

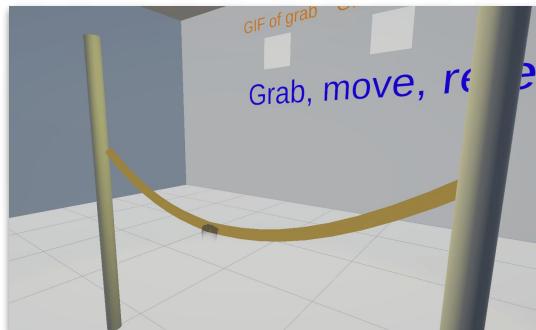


Fall start



# Exploratory Prototypes

Elastic Band



Rain



Telekinesis



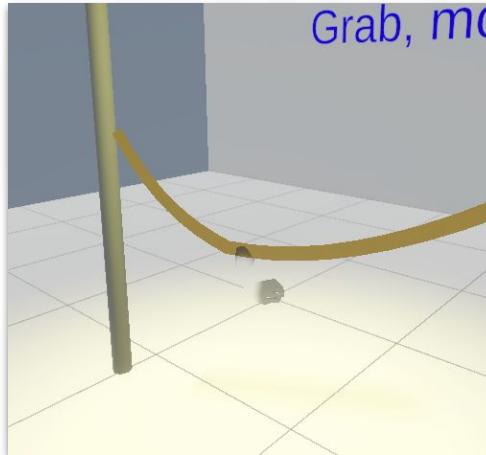
Resistance

A/B Testing  
(with/ without context)

Abstract Interaction

# Playtesting Round 1

## Exploratory Prototypes

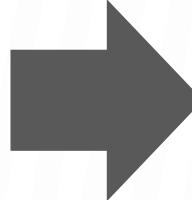
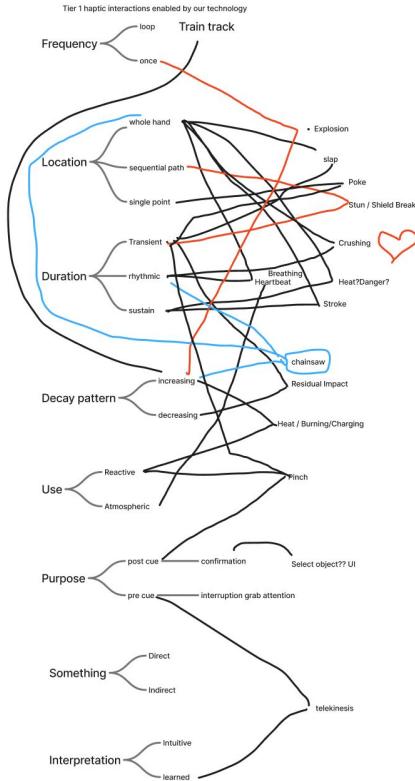


Interactivity must  
match haptic patterns



Spatial positioning  
matters

# Patterns from Parameters



## Patterns

Poke	Tension
Explosion	Slap
Breathing	Residual Impact
Crushing	Pinch
Heartbeat	Train track
Stun	Chainsaw
Heat	Stroke
Select	

# Haptic Pattern Testing



Explosion



Stroke



Tension



Heat



Poke



Chainsaw



Slap



Train Track



Breathing



Crushing



Fireflies



Heartbeat



Stun



Hand Dissolving



Releasing Power



Haptic Patterns

# Playtesting Round 2

## Haptic Pattern Testing



Mean only one thing



Mean multiple things



Gesturing enhances  
understanding

# Haptic Patterns to Prototypes

Explosion Pinch  
Crushing Shield Break  
Select Stun  
Breathing Slap Heat  
Haptic Patterns Residual Impact  
Poke  
Heart beat  
Stroke Chainsaw

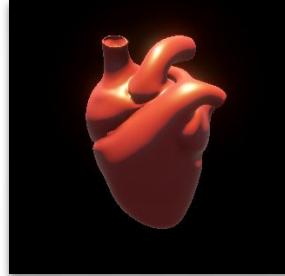
# Selected Prototypes



Slap



Pinch



Heart beat



Breathing



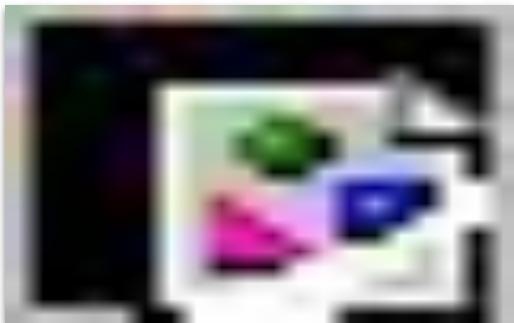
Stroke



Crushing

# Context Prototypes

Slap



Audio Difference

Pinch



Text Difference

Heartbeat



Pattern Difference

# Playtesting Round 3

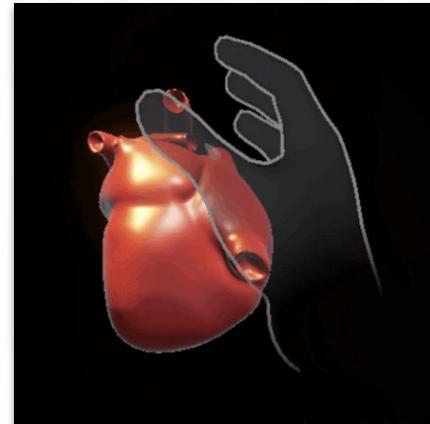
## Context Prototypes



Context amplifies  
haptics



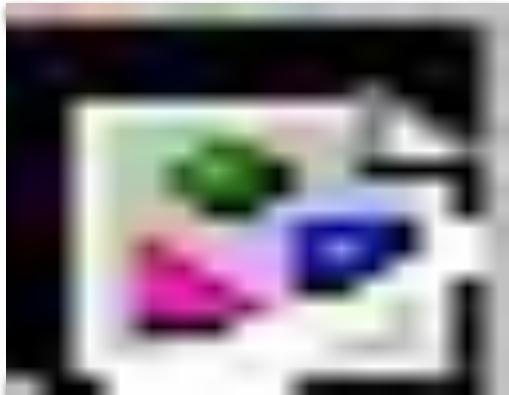
Tough haptic  
interactions make tough



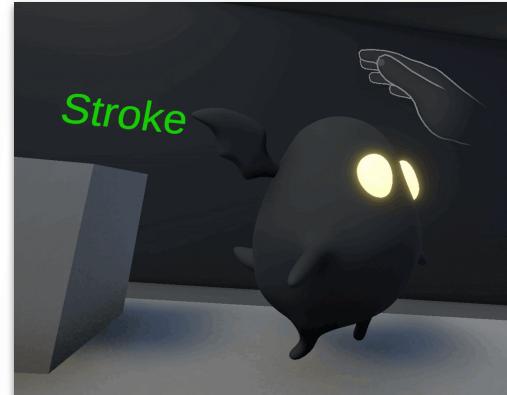
Changing patterns  
changes emotions

# Continued playtest

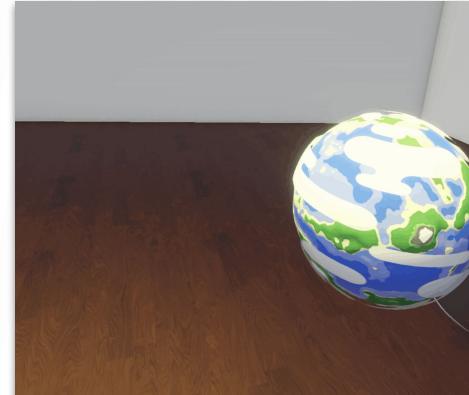
Energy



Stroke



Crushing



Haptic Difference

Object Difference

User Interaction



# Experimentation into design

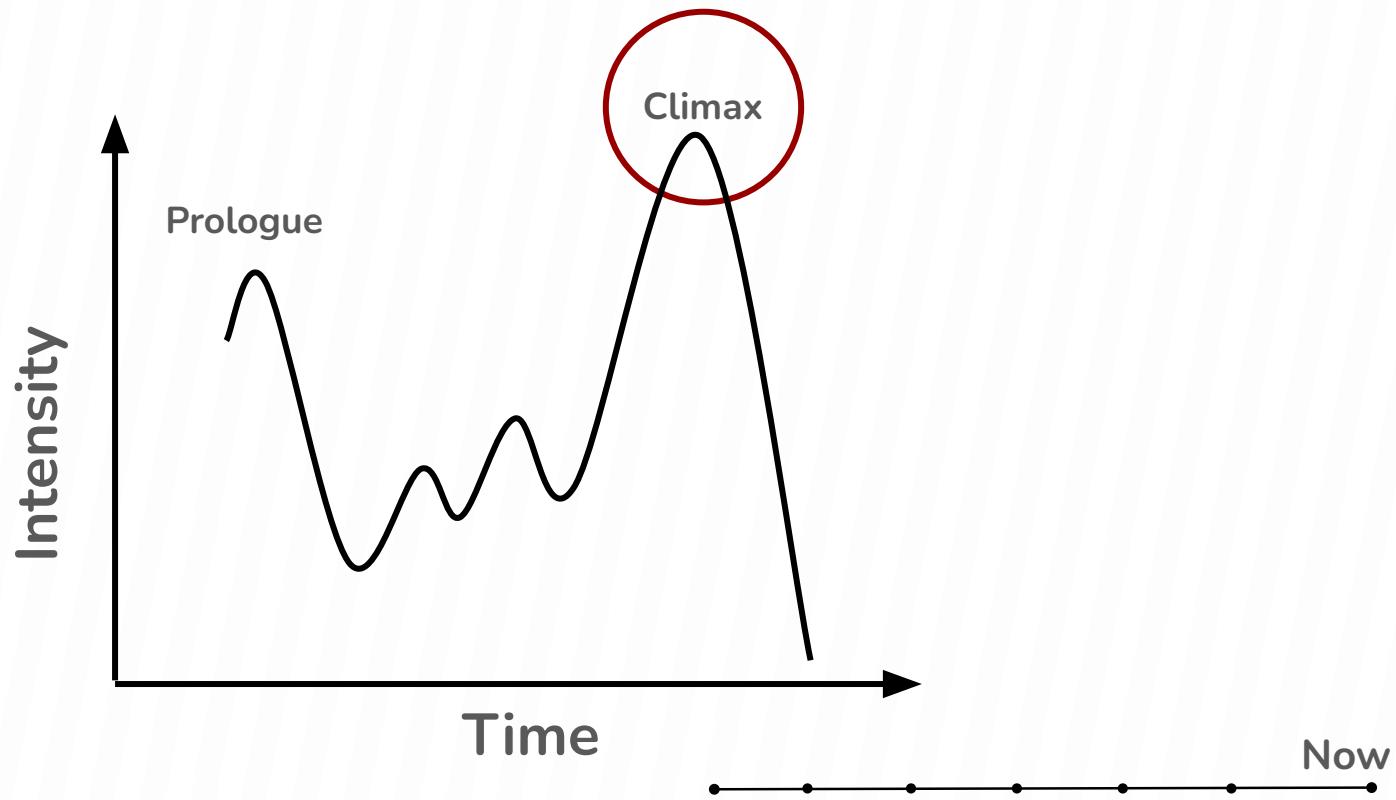
# Guiding questions

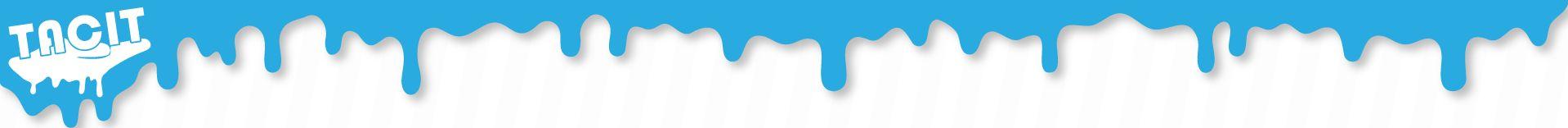
Pattern	Emotion
Climax	Theme

Now



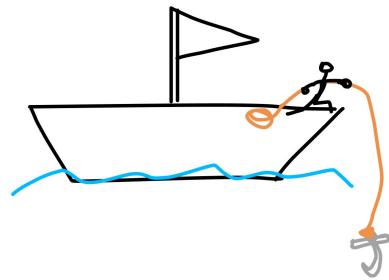
# Final Experience





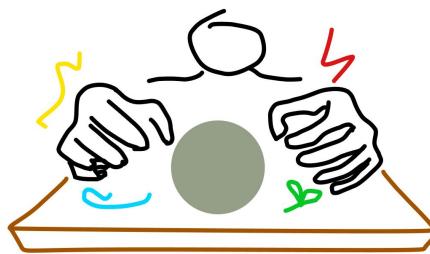
# Ideas

## Powerlessness



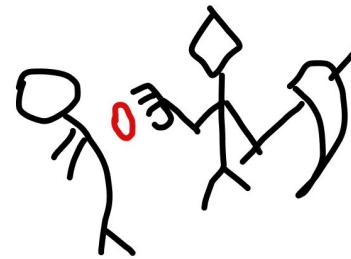
A shipwreck salvager pulling ropes

## Powerful



A deity creating a new world

## Mourning



A reaper bringing people to the other side

Now

## Looking Forward

# Halves

Playtest Day

Softs

Finals



Design

Alpha test

Beta test

# Documentation

## Research Notes

Because we are working with novel technology, we always make sure insights came from sufficient research in the fields of Human-Computer Interaction, Psychology, and more. We also created a one-page summary of the playtesting insights we gained.

**RESEARCH**

**INSIGHTS**

TACIT

# Experience

**bHaptics**

Search for Supported Games

Platform: TactGlove, Support Type: , Genre:

9 items

Most Played



**bHaptics Player**  
Native  
Meta Quest  
TactSuit Pro & Air  
TactSleeve  
TactVisor  
Tactosy for Feet  
Tactosy for Hands



**Synth Riders**  
Native  
Meta Quest  
Steam VR  
PS VR2  
TactSuit Pro & Air  
TactSleeve  
TactVisor  
Tactosy for Hands



**bHaptics TactGlove Demo**  
Native  
Meta Quest  
TactSuit Pro & Air  
TactSleeve  
TactVisor  
Tactosy for Hands



**Galactic Repair**  
Native  
Meta Quest  
TactSuit Pro & Air  
TactVisor  
TactGlove



**Touchly Volumetric VR Video...**  
Native  
Meta Quest  
TactGlove



**PathCraft**  
Native  
Meta Quest  
TactSuit Pro & Air  
TactSleeve  
TactVisor  
TactGlove



# Thank you

TACIT - haptic gloves exploration to create emotional VR experience

Deliverable - exploration documentation + demonstration experience



# Questions?

**TACIT** - haptic gloves exploration to create emotional VR experience

**Deliverable** - exploration documentation + demonstration experience