

NEXUS

INFO-H564 - Spring 2018 - Final Project

Team Dunkaroo: Klutzke / Mishra / Odioko / Strater

Problem Space

We wanted to design a game that was fun to play, but also beneficial for its players.



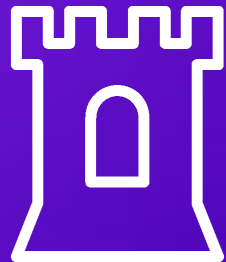
Location-based



Active



Cooperative



Tower Defense Style

The Game: Nexus

Nexus is a location-based team tower defense game, played on your smartphone.

- Select a real-world location as your nexus to defend.
- Lines branch out from the nexus, drawing evil spirits who want to corrupt it.
- Run around and gather resources (scraps).
- Use the resources to build defenses (traps) to stop the spirits.
- Use Augmented Reality (AR) view to show lines and spirits.

It's like a Ghostbusters tower-defense game you play in a park.



Concept Exploration

Demand needs of
 leglines from spirits
 who want to corrupt it.
 Bump planes to transfer scraps
 Build gadgets from scraps

⑥ Place trap
 ⑤ Gather resource
 ④ Start play
 ③ Establish Team
 ② Chase settings = difficulty
 ① Establish nexus

Carl - GDP
 Evi - slots to hijack
 Alec - 10-15 probe
 Avi - 10/10

Explore Area
 Transfer resources
 Nonans
 Pops

scrap
 ②③
 ④
 ⑤
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KEY LINE
 A SPIRIT TRAVELING ON KEY LINE
 GADGET ZAPPING A SPIRIT TO DRAIN IT.
 NEXUS
 OSCRAP LOCATION
 PLAY RADIUS, CENTERED ON NEXUS

② Play Phase TIMED!
 - establish the area
 - already built or built size
 - create special team zone
 - equipment status and share
 - create team

Explore phase core team
 - local resources
 - unknown "toilet"
 - local allies
 - local bad squares
 - this zone
 - find resources
 - find schematics
 - our allies
 - special abilities
 - locked zone

- gather resources
 - based on difficulty
 - "LANDMARKS" "Power hub"
 - set up defenses
 - use "sensors"
 - move them to physical point
 - use of defense
 - play!
 - use of team is essential
 - use of survive

Explore
 Play
 explore
 - health
 - resource points
 - scrap points
 - found loot
 - special

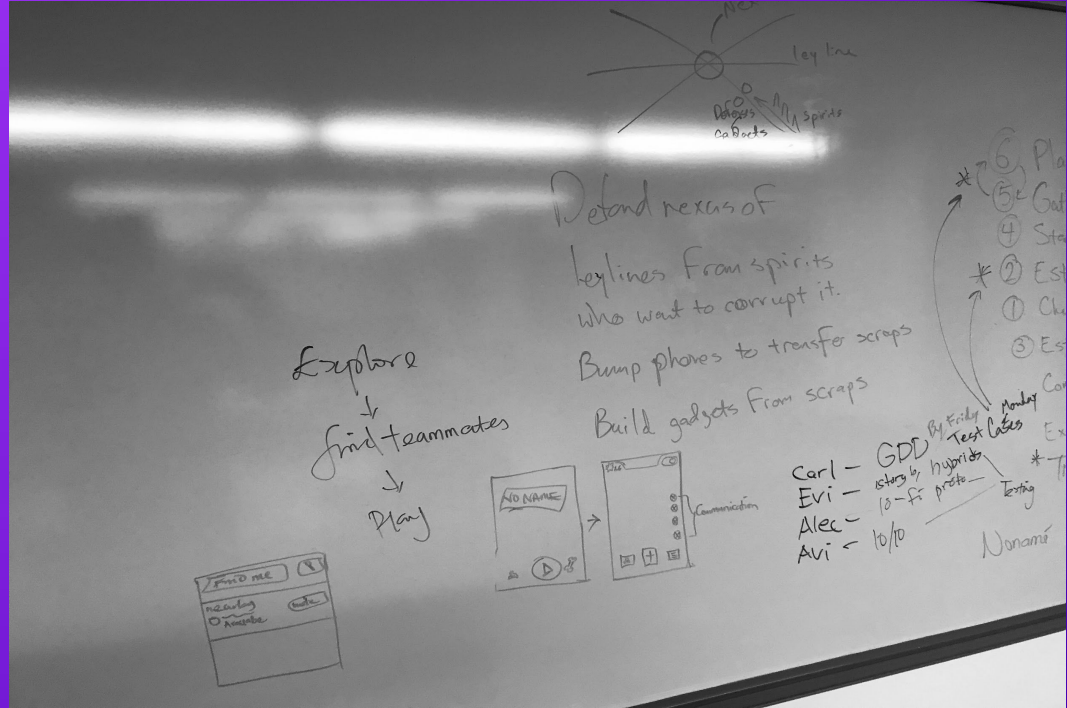
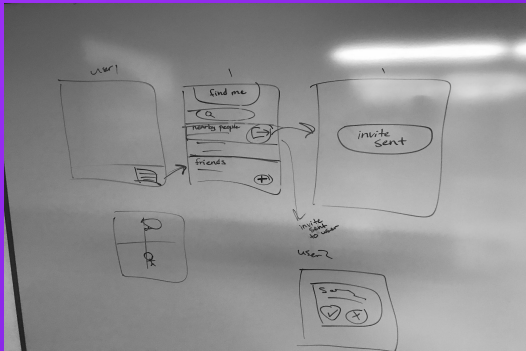
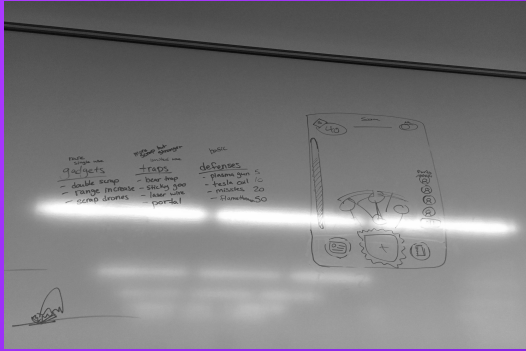
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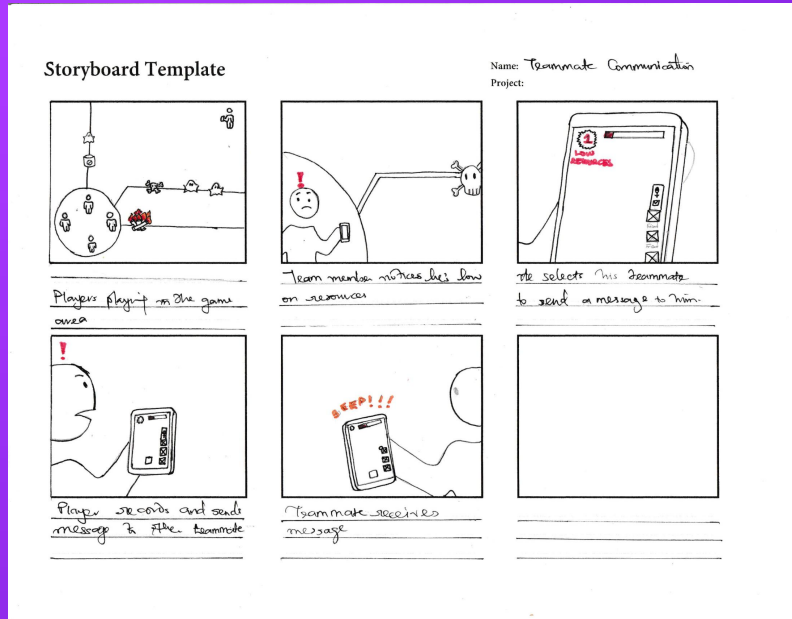
Concept Exploration Continued



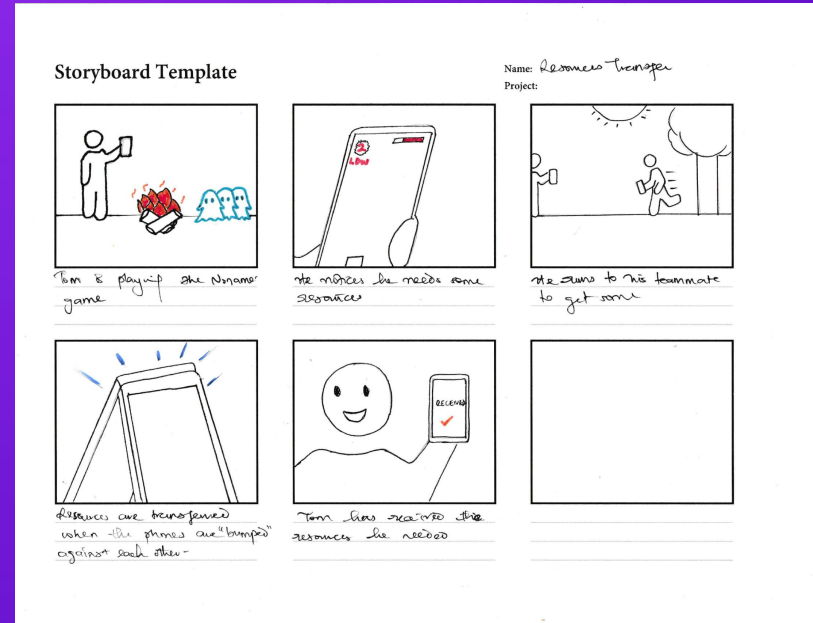
Gameplay Mechanisms

- We concentrated on creating interactions that will make gameplay more fun and out of the norm for mobile gamers.
- We looked at 3 basic tasks to convey the idea of our game.
 - Communicating with other players
 - Gathering scraps
 - Building traps

Storyboards



Scenario 1: Communicating with teammates



Scenario 2: Sharing Scrap (Resources)

Storyboards Continued

Storyboard Template

Name: _____
Project: _____

The storyboard consists of six panels arranged in a 2x3 grid. Each panel contains a hand-drawn sketch of a user interface or scene, with a corresponding handwritten caption below it. The panels are as follows:

- Panel 1 (Top Left):** A person is sitting at a desk with a computer monitor and a small board on the wall. The caption reads: "Paul is sitting at home... a little bored".
- Panel 2 (Top Middle):** A hand is holding a tablet with the word "Adventure" on the screen and a "PLAY" button at the bottom. The caption reads: "He opens the game".
- Panel 3 (Top Right):** The tablet screen displays "NEAREST PLAY AREA:" followed by a list: "Whisk River Park", "O'Monument", and "Erick". A "NEXT" button is at the bottom. The caption reads: "The game displays nearby public areas we can play".
- Panel 4 (Bottom Left):** The tablet screen shows a menu titled "Select number of team members:" with a "+" and "-" button. Below it, it says "Nearby Friends" and lists three friends with checkboxes and "invite" buttons. The caption reads: "He creates his team and".
- Panel 5 (Bottom Middle):** A group of people are gathered around a table, playing a board game. The caption reads: "They begin game play!".
- Panel 6 (Bottom Right):** An empty rectangular frame, intended for a final scene or image.

Scenario 3: Creating a Team

LoFi Prototype

Limitations of Balsamiq:

- Not location based - couldn't simulate moving on the map
- Can't bump to exchange scrap
- Not well suited to simulate AR

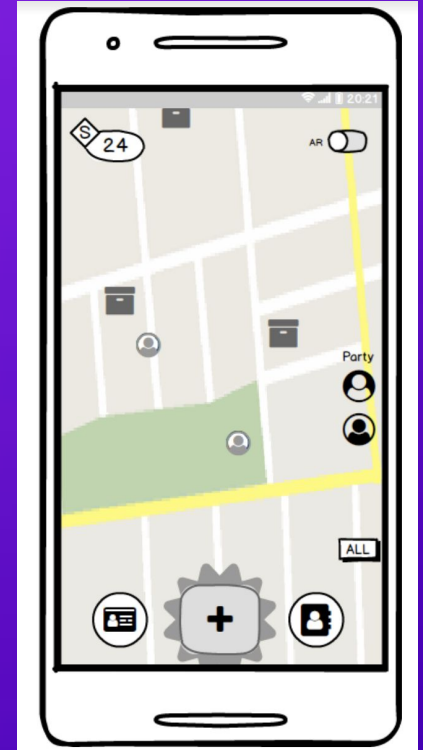
Limitations of Prototype:

- Had to focus on prototype design instead of game design

balsamiq®

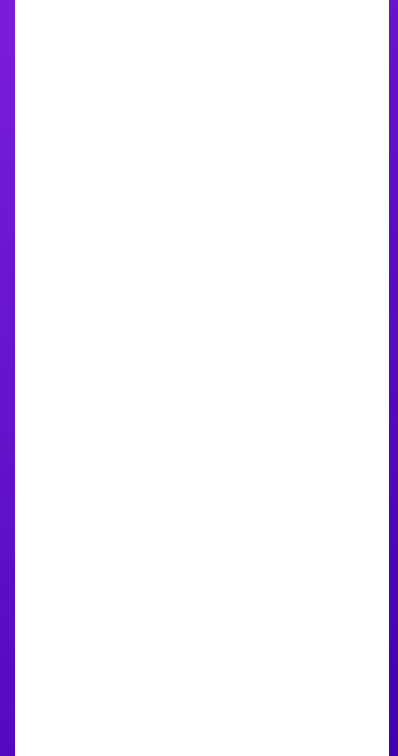
Begin!

- Location of your friends, and choosing a 'Nexus' Location
- Use the [+] symbol to access your resources



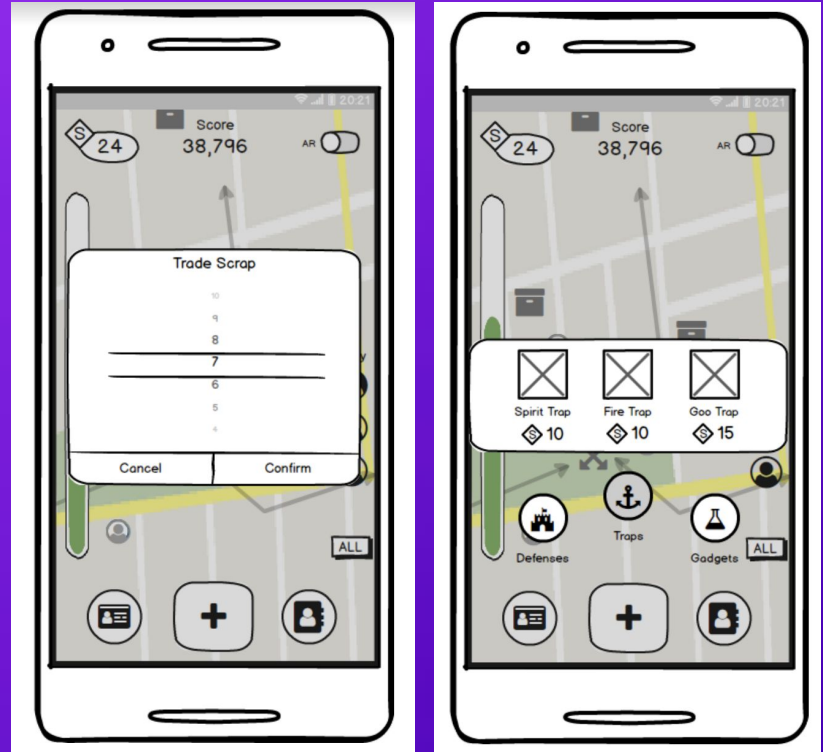
Communication

- Locate other individuals
- Send message through text or voice message.
- Ability to send a message to full team or individual.
- Reduce amount of clicking through voice interaction.



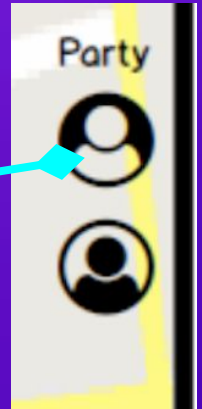
Resource Development

- Collaboration with teammates to trade scrap and help each other build efficiently.
- When enough scrap has been collected, one can use the scrap to place traps on lines and prevent spirits from destroying Nexus.



Usability Studies : CW/HE - Key Insights

- A tutorial would be important
- We overloaded the plus button: used to start the game AND place traps
- Lacked differentiation between player icons, not allowing one to know who they are speaking with



LoFi User Testing - Challenges

- Icon that we used for scrap was an S-diamond, players didn't know what it was for
- AR would be important to the experience but we didn't have time
- Testers weren't sure they'd feel comfortable running around in public
- Desire for competitive mode

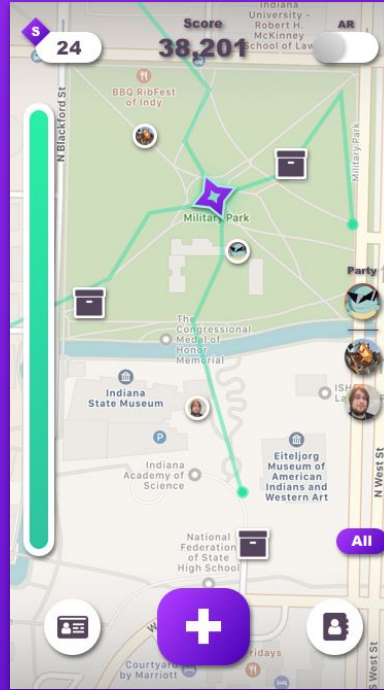


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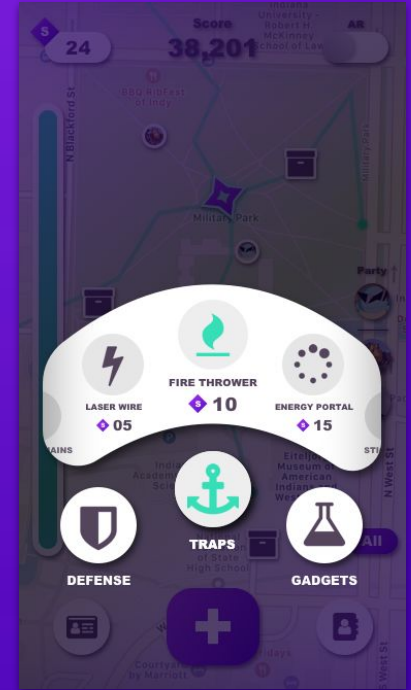
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Final High Fidelity Prototype

- Screens were designed in Sketch using feedback from the testing.
- We went with a cool color palette with neon colors to match the spirits theme
- The prototype is not interactive yet, but we have plans to make it interactive for further testing.

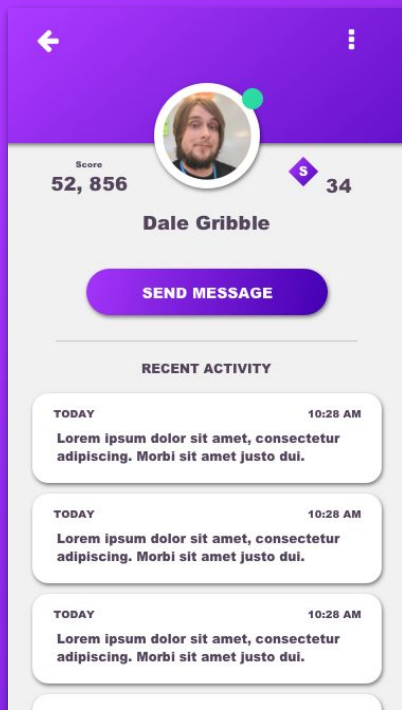


Play Screen

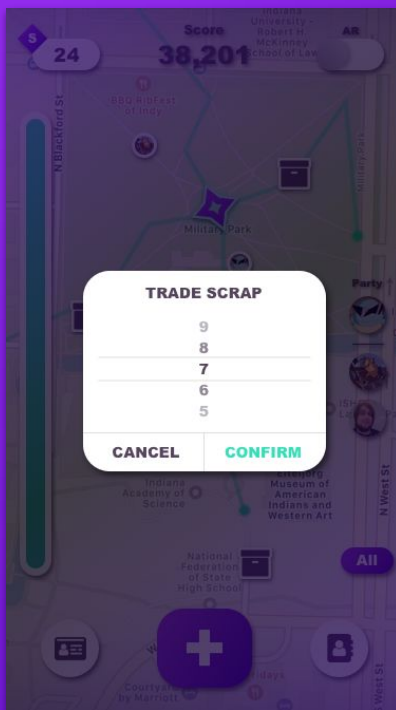


Placement Screen

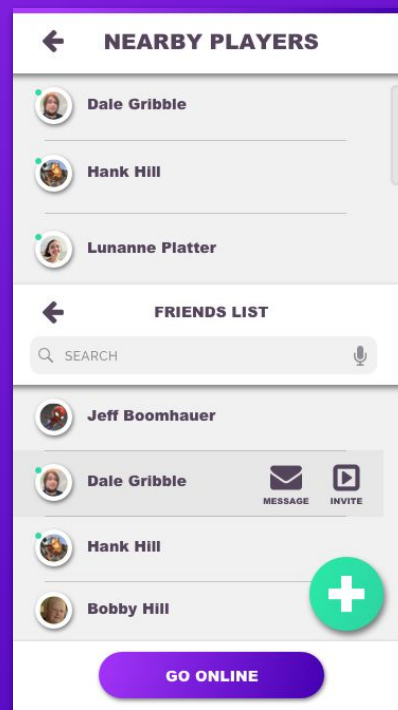
Final High Fidelity Prototype



Profile Screen

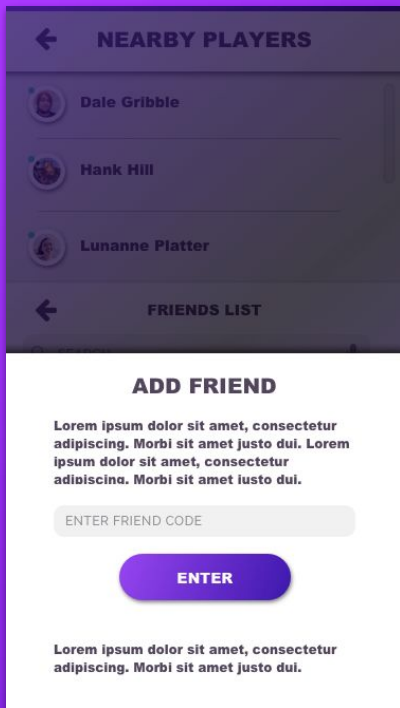


Trade Screen

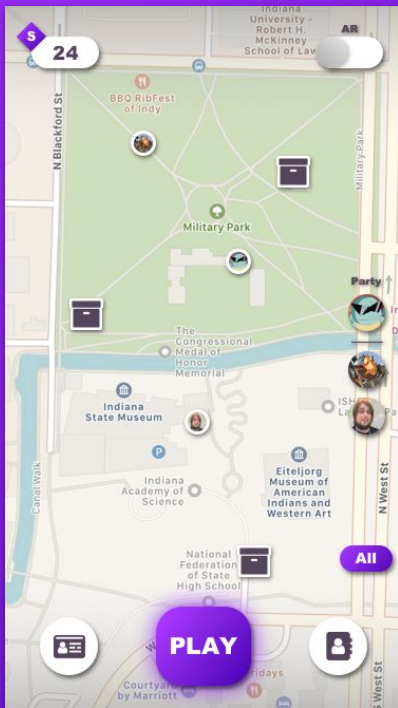


Friend List Screen

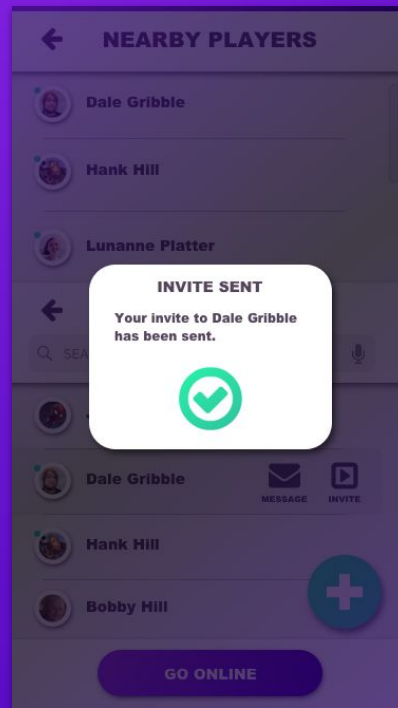
Final High Fidelity Prototype



Add Friend Screen

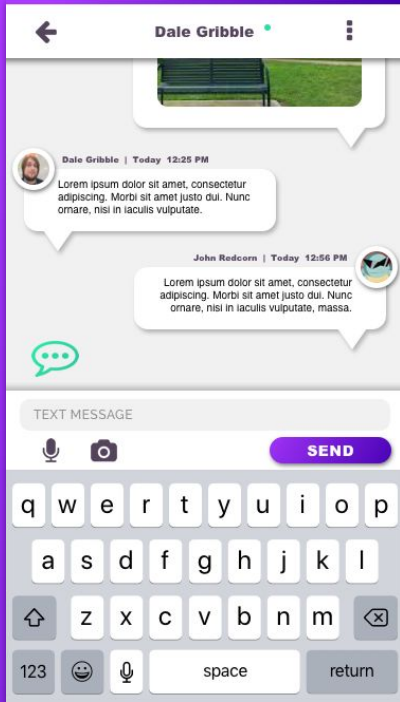


Explore Screen

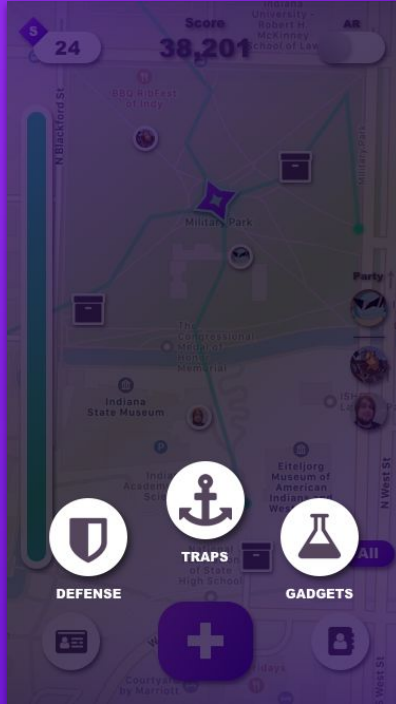


Invite Screen

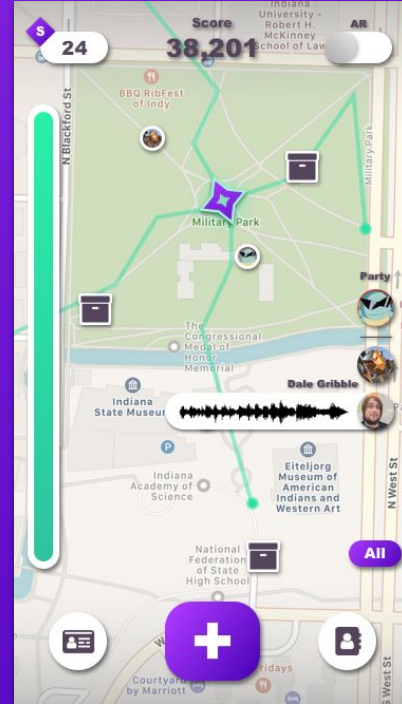
Final High Fidelity Prototype



Add Friend Screen



Action Screen



Walkie Talkie Screen

Next Steps and Future Plans

- We want to test the AR component using a second set of tasks.
- Experience and game testing with randomly sampled people.
- Make the Sketch screens interactive by using InVision.
- We also want to finish the game design document and flesh out the game.



NEXUS app icon



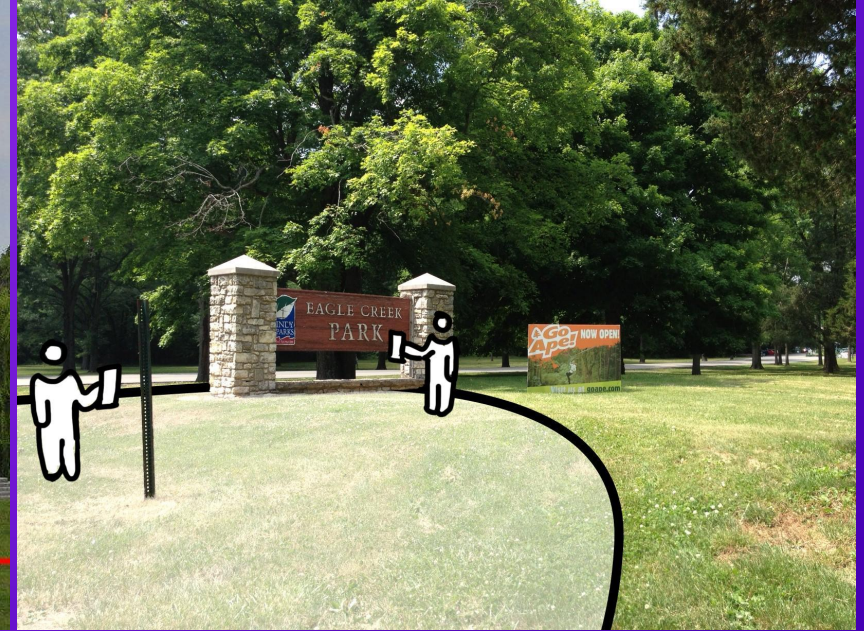
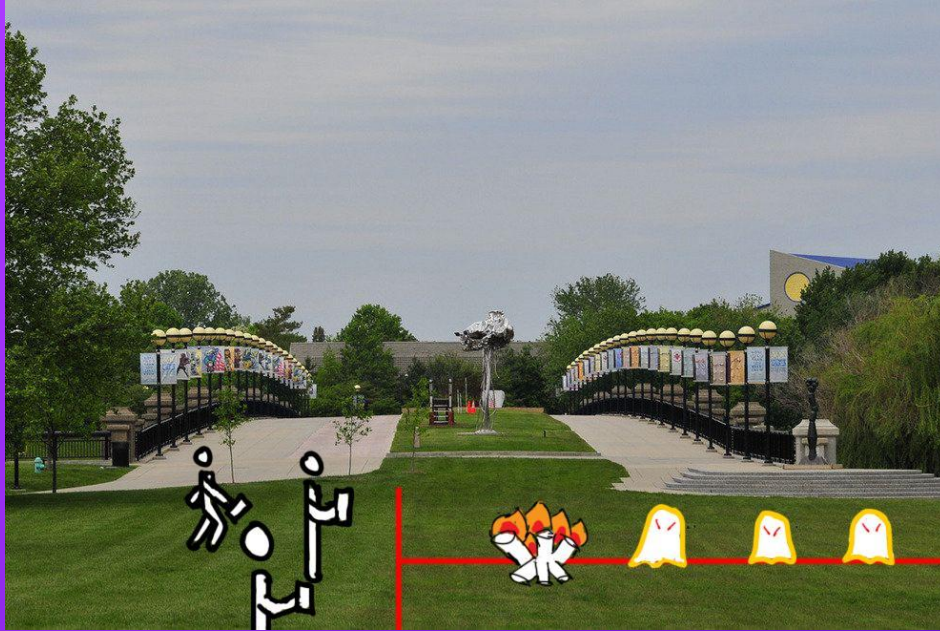
Experience Video

This is the experience that we're hoping the final product will create.

[View Experience Video](#)



Appendix 1 - Hybrid Sketches



Appendix 2 - Test Script / Task Sheet

For these tasks, imagine you are playing a hypothetical smartphone game called Nexus. Nexus is a location-based team tower defense game, played on your smartphone. Your team selects a real-world location as a nexus to defend. You run around the nexus to gather resources (scraps), and use those resources to build defenses (traps). You need the defenses to stop evil spirits that are traveling along lines on the ground toward your nexus. If too many spirits reach the nexus they corrupt it, and your team loses.

TASK NO.	TASK DESCRIPTION
1	<p>You and a friend want to play Nexus. You have started the app on your smartphones and you are both logged in to your accounts. You are in a good physical location to play: a local park. Now you want to add your friend Dale to the game before you start.</p> <p>This task is complete when both of the following are true:</p> <ul style="list-style-type: none">You have three players on your team.You have started the game. <p>When you feel you have completed this task, please say so.</p>
2	<p>You are playing Nexus and you see spirits approaching your nexus from the east. You want to quickly send a voice message both of your teammates.</p> <p>This task is complete when you have messaged your teammates. When you feel you have completed this task, please say so.</p>
3	<p>You are playing Nexus and you want to gather scraps. You can see a scrap source on your screen.</p> <p>This task is complete when you have gathered 5 points worth of scraps. When you feel you have completed this task, please say so.</p>
4	<p>You are playing Nexus. You are standing next to a line, and you have a good supply of scraps. You want to build a fire trap here to stop spirits from reaching the nexus.</p> <p>This task is complete when you have built a fire trap. When you feel you have completed this task, please say so.</p>