PROTOTYPE PRESENTATION

TMPMPP PP

WATH-P

RECAP

Interactive spaces in conjunction with supporting interactive technologies have been attributed as a tool to 'orchestrate' teamwork (Anslow et al., 2016). - WATH-P Design Proposal

OUR PROJECT

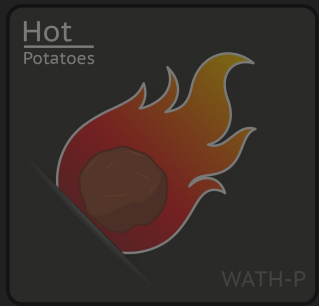
Tricky Multi-Player Multi-Planar Puzzle (TMPMPP)

THE CONTEXT

- Interactive Spaces
- Early Learning *[Teamwork & Communication]*

TARGET AUDIENCE

- *Primary User* : School students
- *Secondary User* : Demonstrators



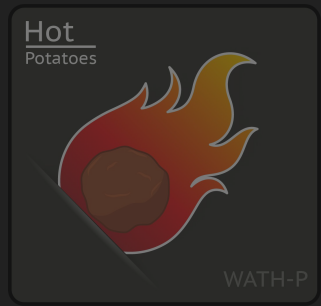
RECAP

THE EXPERIENCE

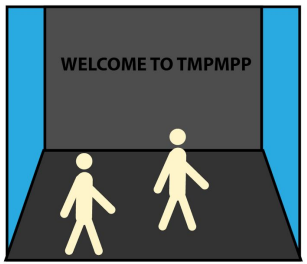
To deliver an engaging team-building experience through providing meaningful challenges to be solved within an interactive space. - WATH-P Design Proposal

INSPIRATIONS

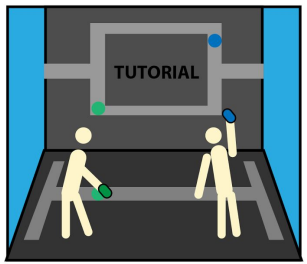
- Portal 2
  - Forced Cooperation. Cannot complete levels without working together.
- Keep Talking Nobody Explodes (Co-Op VR Experience)
  - All about verbal communication skills.
- Room Escape Activities (Team-building)
  - Does not force cooperation. One person can solve it all.



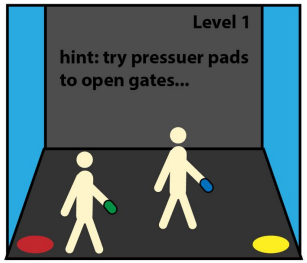
INTERACTION PLAN (OVERALL) (IP(O))



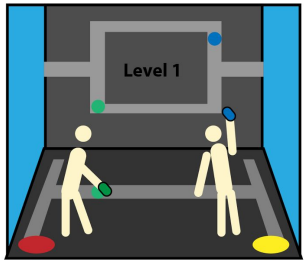
Users walk into interactive space (for the first time)



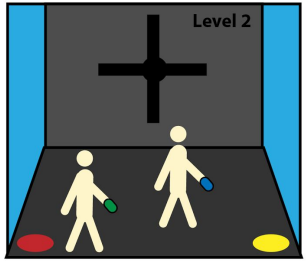
Users play tutorial level (introduces core concept of moving through the puzzle)



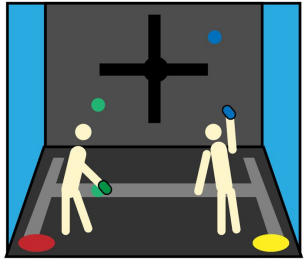
Users walk to next level starting area



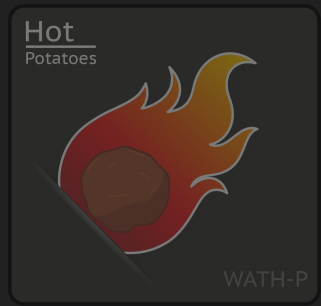
Users play level 1 (pressure pads added to learnt stuff)



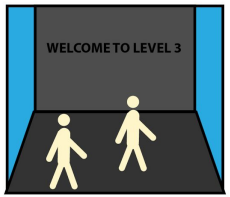
Users walk into level two and spinning obsticles are added



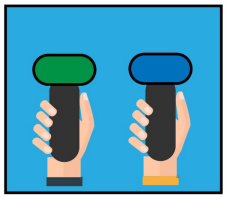
Users play level 2 and walk to next starting area...



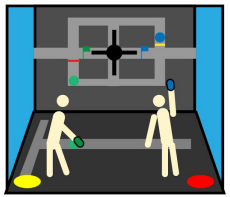
INTERACTION PLAN (LEVEL SPECIFIC) (IP(LS))



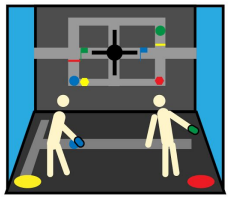
Player A and B walk into interactive room



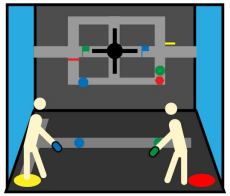
Users pick up cubes and hold them in correct direction



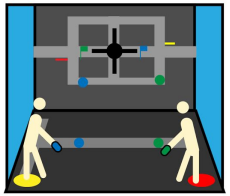
User B is trying to move through the red gate, but the cube deactivates when it hits the gate



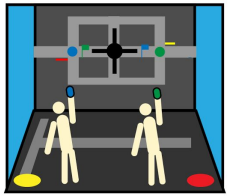
User B returns to the starting position to reactivate the cube



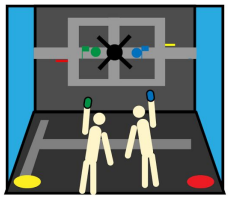
Player A moves the blue cube into the yellow trigger zone to open yellow gate



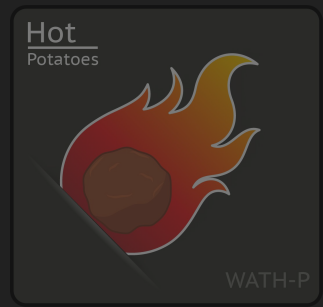
Player B moves the green cube through the now opened yellow gate and moves the green cube into the red trigger zone to open the red gate



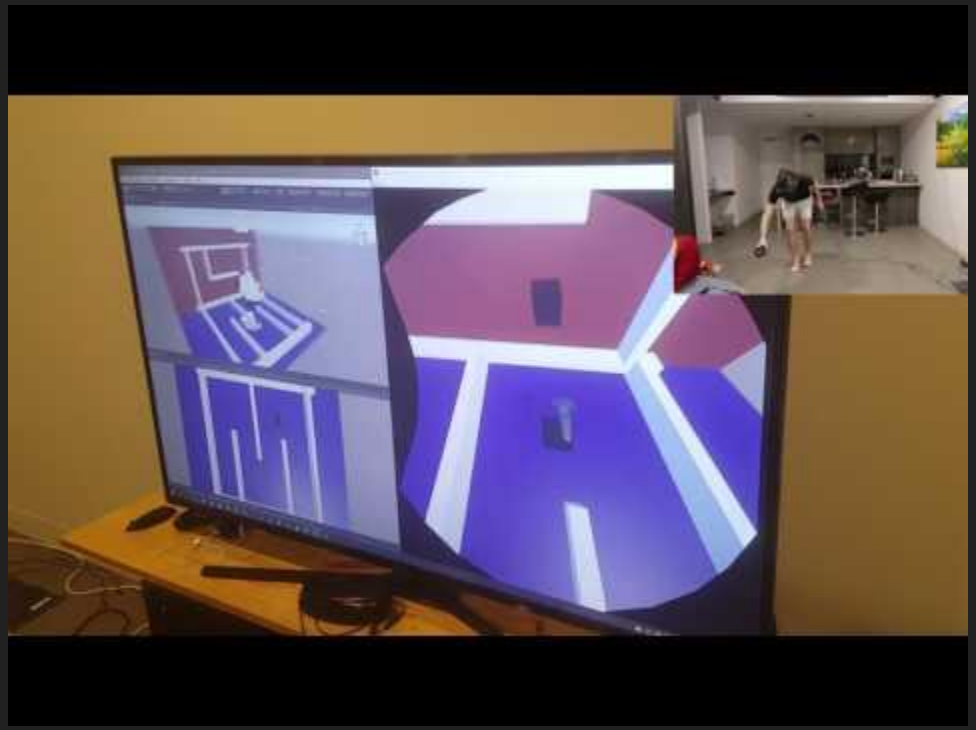
Both players synchronize moving past the rotating obstacle while avoiding touching each other or the walls



Both players navigate to their respective flags (goal points) (cubes must be activated)



PROTOTYPE

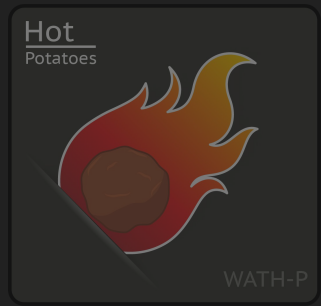


Hot Potatoes

WATH-P

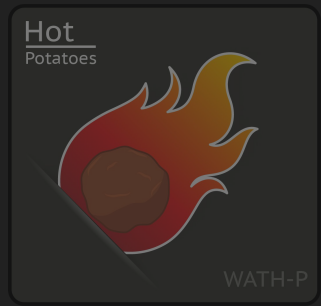
OBJECTIVES: POTENTIAL CO-OP COMPONENTS

- Pressure Pads (MVP)
  - Trigger a gate to open for other player
  - Stand on to hold a gate open for another player (more advanced)
- Build Cubes (MVP)
  - Tracking
  - Vibration
  - lighting
- Rotating Walls (MVP)
  - Players synchronise moving through space without colliding
- Cube Throw
  - Forces a player to throw a cube to the other player



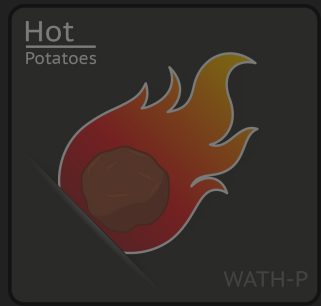
OBJECTIVES: POTENTIAL CO-OP COMPONENTS

- Changing Gate Shape
  - Players will be required to enter a gate depending on its shape (i.e. player only can access squared or rounded gates)
- Plank Raise
  - Players must hold either side of the plank and navigate through the puzzle (like moving a couch through a hallway)
- Chain
  - Players cubes are digitally ‘chained’ together. If players move a distance apart the chain will break
- Torch Light
  - Player uses cube as a directional light to show the way for the other player
- Tutorial Levels (MVP)



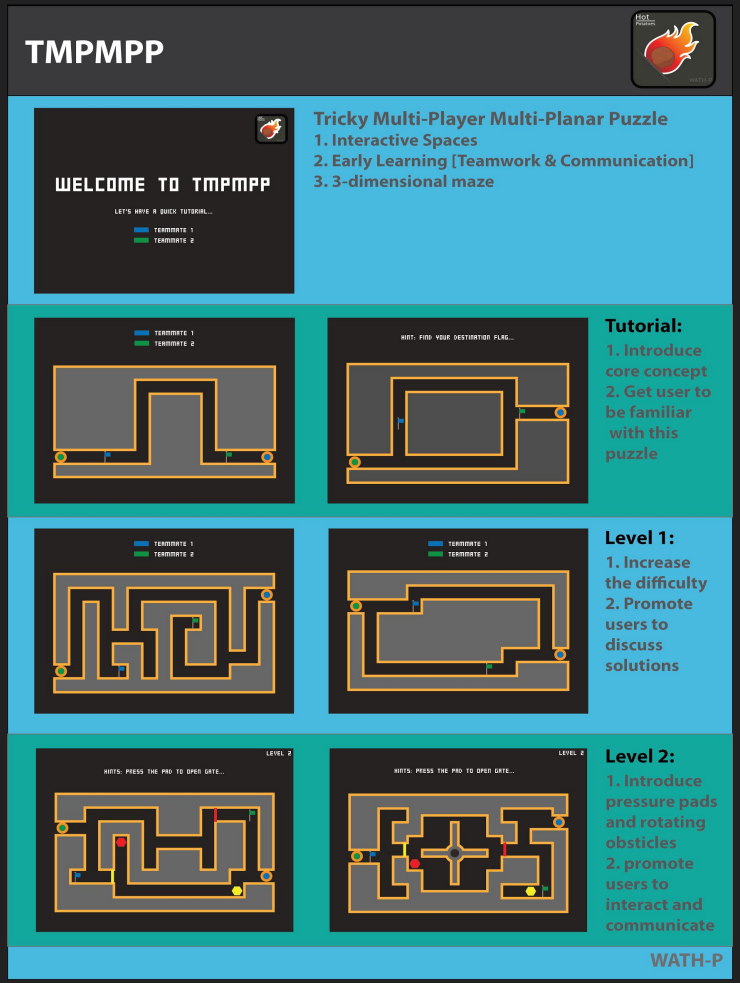
OBJECTIVES: POTENTIAL ISSUES/PLANS (PI/P)

- Lack of Resources: less than two projectors
  - Transform it into a Cooperative VR experience.
    - Eg: one person wears the headset and one person carries a cube. They communicate with each other to solve the puzzle
- Impossible Learning Curve
  - Perform extensive user testing pre-showcase night
- Limited Available Space
  - Try to limit the interactive space while not decreasing interactive quality
    - Alternate puzzle level designs Eg: shorter width puzzles with more challenge aspects
- Encounter software defects
  - Document bugs found through user testing.



PIN-UP MATERIALS (P-UM)

- Poster to explain TMPMPP
  - Explain what it is for/where it fits (i.e. early learning/team-building)
  - Pictures of the floor and wall projections (for clarity of what our project looks like)
  - Clear level layout to show puzzle progressions



Draft Poster

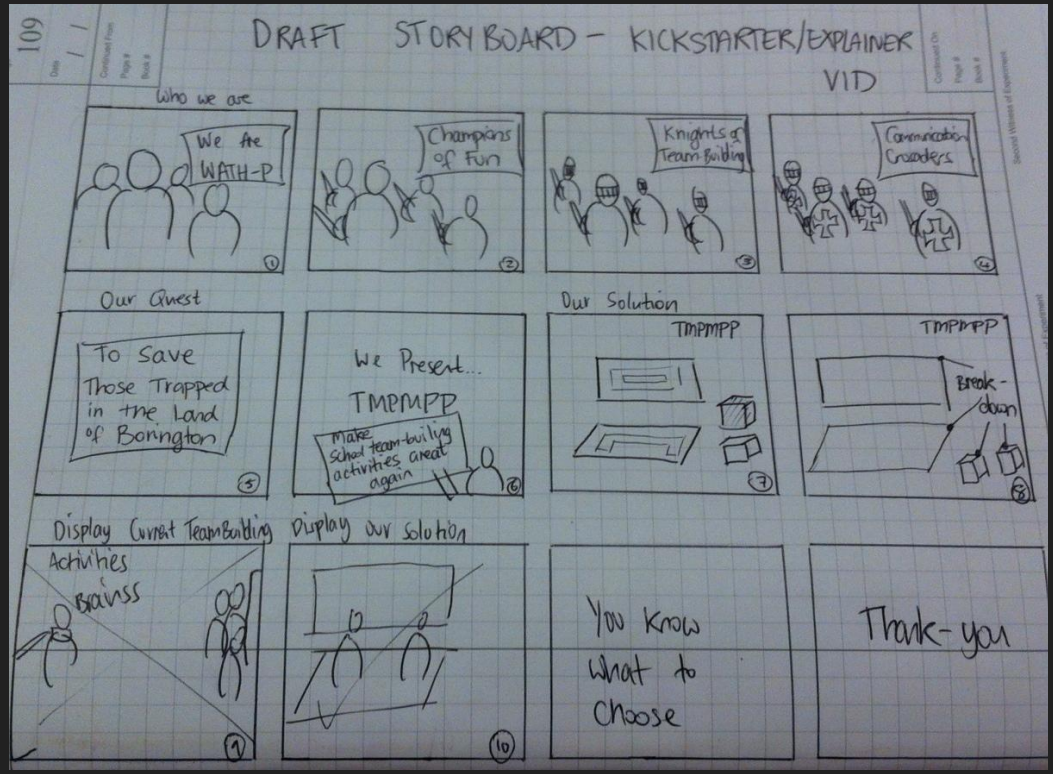
STORYBOARD - KICKSTARTER/EXPLAINER VIDEO

Basic Outline

- Introduce our team (Who we are)
- Discuss the issue (Our Quest)
- Discuss our project (Our Solution)
- Reaffirm our project is the best choice

Considered Filming Styles

- Animated (Kids are hard to come by)
- Filmed
- Documentary/Mockumentary



Draft Storyboard

SUCCESS CRITERIA (SC)

OUR CRITERIA

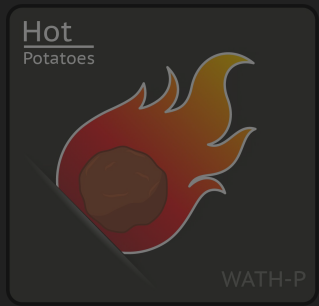
- **Team Communication:** Promote communication, cooperation and discussion between members.

HOW TO ACHIEVE IT?

- Physical objects will be provided to each user to interact with each other and encourage communication. (i.e. one person has vive helmet on, and can see the puzzle, the other can see the pressure pads but not the puzzle).
- Maze levels include obstacles designed to be solved by all the users as a group.
- Each user has to contribute equally, considering that users can have different roles in each activity.

WE WILL TEST THIS BY

- Observe communication between participants
- Challenge testers to complete puzzles without communicating (shouldn't be possible)



SUCCESS CRITERIA (SC)

OUR CRITERIA

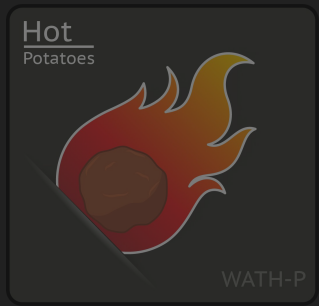
- **Problem Solving:** Encourage users to work as a team and help each other to complete the activities.

HOW TO ACHIEVE IT?

- Each maze will be designed to be solved as a team so equal amount of actions will be required to be performed by every user.
- Objects provided to the users were used properly to pass the obstacles and reach the goal.

WE WILL TEST THIS BY

- Record time taken to complete puzzles. This should increase for more difficult levels
- Note if participants could solve the puzzle with no help



SUCCESS CRITERIA (SC)

OUR CRITERIA

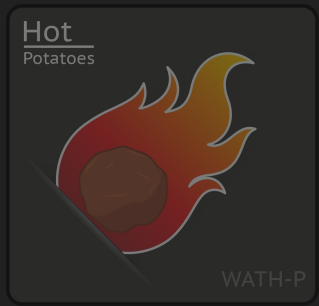
- **Gameplay:** Provide clear instructions to the users to be able to solve the maze.
- All levels and features of each level should be clearly labelled and be self-explanatory.

HOW TO ACHIEVE IT?

- Useful hints displayed on screen so the user can perform each activity correctly.
- Instructions window will be added and available for users to access any time.
- Each feature in the game is clearly labelled.

WE WILL TEST THIS BY

- Buttons and objects used in the activities (i.e open gates) are visible and correctly labelled.
- Progressively fix bugs found.
- Modify current features depending on user feedback.



THANK-YOU (TY)

Questions?

REFERENCES

1. Anslow, C., Campos, P. & Jorge, J. (2016). Collaboration Meets Interactive Spaces. Springer.