Non-Digital Prototype

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Rules

Goal

Navigate the obstacles in the Prism and use non-player characters (NPC) to help Roy reach the jewel at the end of the labyrinth.

Movement

When we first planned the non-digital prototype, the movement was discretized to a turn-based system giving the player a choice of moving their avatar either sideways zero, one, or two grid squares or jumping up one square. At the end of each turn, every NPC moves forward one space.

After initial non-digital playtesting with individuals in Upson Hall, we determined that it was better to discretize the movement differently. In each turn, the players can move an avatar (either Roy or an NPC), any amount of tiles sideways or they can move Roy one tile diagonal as a jump (jumps come back down the following turn).

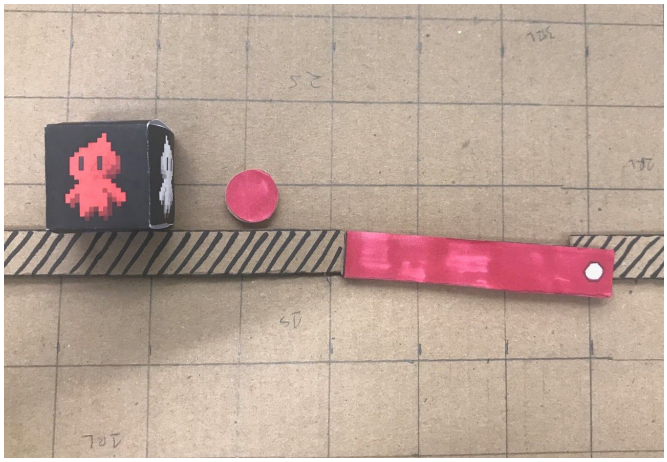
A horizontal movement into a different avatar causes the colors of those avatars to swap. Each avatar is represented with a die where each side has an image of the character with a different color. This way, a change in a character's color can easily be represented by rolling the die to the appropriate color.

Obstacles

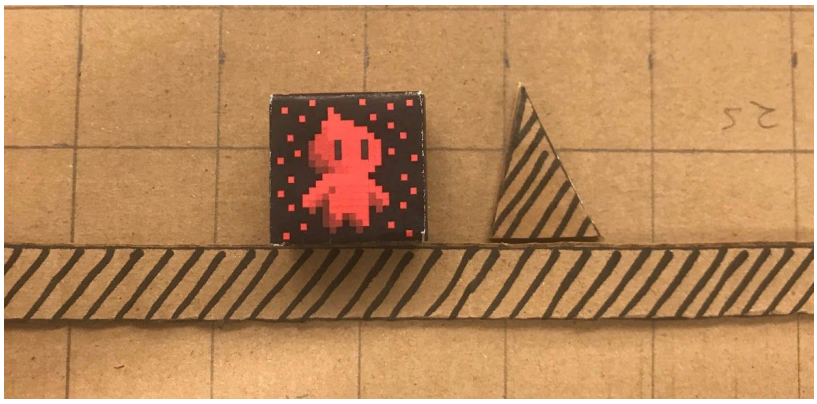
The game derives its meaningful choice from the obstacles. At every turn, choosing to bump or avoid an NPC determines what obstacles the player can move through. In certain cases, colliding is required to progress through obstacles. In some instances, colliding may make it impossible to proceed successfully. The challenge of the game includes determining what color Roy and the NPCs need to be at any given instance to progress.

Lasers: Only characters of the same color as a laser can walk through it

Buttons and Latches: Latches are doors too thick to phase through. In order to open a latch, a character of the same color must step on the button connected to the latch.



Spikes: Spikes are solid objects that are one grid space high. Only Roy possess the ability to jump over them, NPCs are immediately turned around.



Level Progression

We created three levels, each more difficult than the last. Each level was designed to show off a mechanic that made the game progressively more challenging.

Level one explains the most important mechanic of the game — characters in the game have the ability to swap colors with a single touch. Level one also helped the player get a feel of the left, right and jump movements that Roy is capable of. The solution to level one involves left, right, jump, and collision with one NPC to swap colors. It also shows the interaction between characters and lasers.

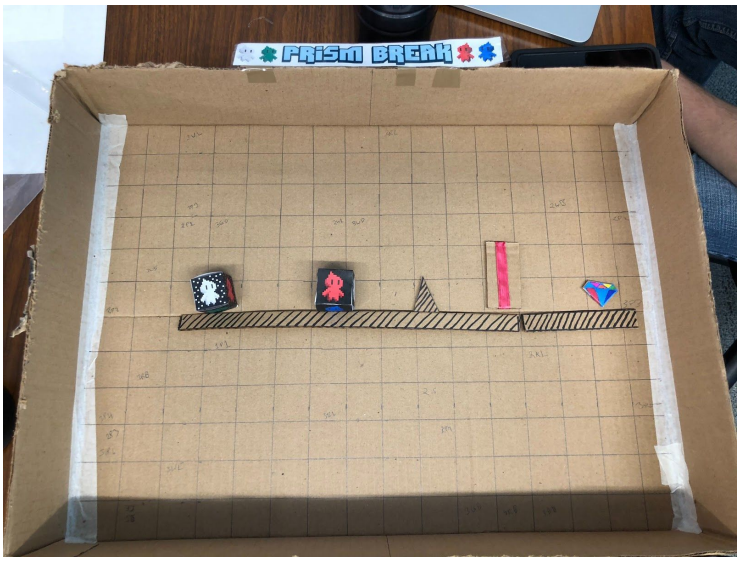


Figure 1: Easy Level
The simplest level playtesters completed in our non-digital prototype. Showcases swapping and laser mechanics.

Level two adds latches in addition to the challenges of level one. Now, the player is required to make an NPC the right color to press a button and open a latch. This brings in the element of thinking ahead to make the NPCs help Roy progress toward the goal.

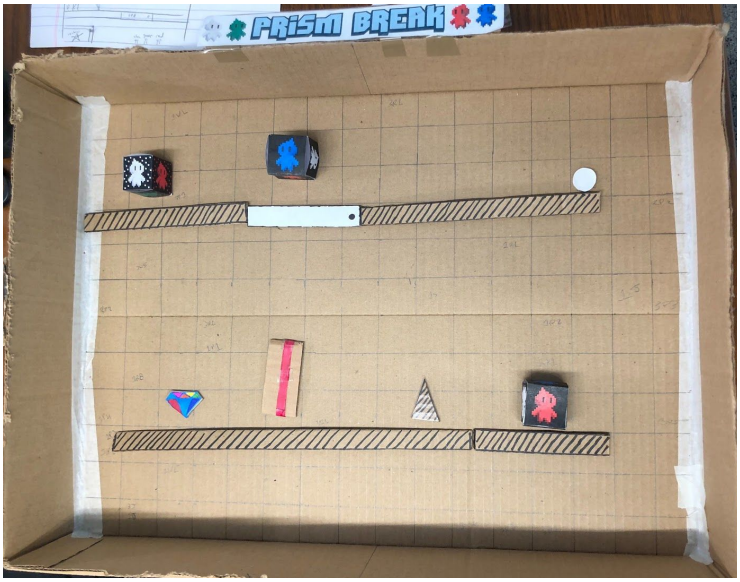


Figure 2: Medium Level
The medium difficulty level of the non-digital prototype. Adds button and latch mechanics over the easy level.

Level three adds dilemma to the game. It has a blue NPC that does not help Roy get to his goal. Here, the player needs to decide if they want to switch colors with an NPC because unnecessarily doing so could affect them later in the level. There are also extra buttons to throw off the player. This level also has more parts where the NPCs have to be a certain color in a certain area for Roy to be able to advance in the level.

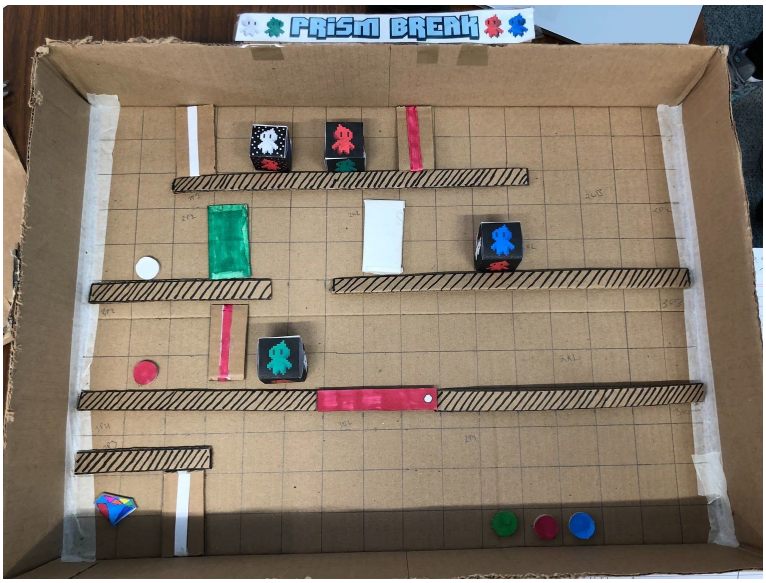


Figure 3: Hard Level
The most difficult level of the non-digital prototype. Unclear decision and multiple options add difficulty over other levels.

Playtesting Results

Unforeseen Solutions: When designing the third level specifically, all six team members contributed to the level. Together, the group created a level that we believed required ample thought and accurately expressed our design goal of empowerment. That is, Roy progresses through the level only by working with the NPCs and manipulating their movements. However, in the gameplay test, two out of four groups found a simpler solution. The movement of the NPCs caused the level to eventually solve itself with minimal player interaction.

Greedy Decisions: Our team noticed many playtesters took a greedy approach. At each decision, they chose to make Roy the color of the nearest obstacle and traverse through it. The players would move Roy back if that action failed to yield a solution and then take a different path. This will be an important consideration for future level design.

Subchallenges: For the complex level, players broke the challenge into multiple subchallenges, based on the physical spacing of obstacles. When designing levels, our team will need to make sure physical areas of the level have implications on areas that are distant from each other. Levels should not be solvable as individual modules.