

## **The Long and Tedious Path to Making a Game About Making Long and Tedious Paths**

### Roles-us

To tackle this assignment, we divided ourselves into five distinct roles. As Concept Builder, Alexander Wilkins primarily worked on the write-up as well as outlining the presentation, looking over and giving feedback on the concept of the project as it progressed. Assuming the role of affect architect, Camille Atere-Roberts focused on graphics by designing potential obstacles and suggesting effective visuals to make a pleasing project. In the role of Game Mechanic, Jordan Eggleston helped develop the initial concept based on previous experience, while also giving feedback to improve game play. Finally, as Craft Engineer, Antonia Deliyianni lead the team, organized the overall code of the game (and eventually starting from scratch by building a new build for the game), charted out our progress step-by-step, and decided on the platform and structure to efficiently and effectively build our game.

### Concept

For Project 5, our group created *Footprints*, a game where two players chart a path through obstacles to reach their destination. This interpretation of the silent game was driven by two main metaphors: ‘cooperation is design’ and ‘navigation is design’. We wanted to create a game that would visualize cooperation between two parties as well as frame their progress as navigation through physical movement. In the end, the path the two players make by finishing the game shows how their journey and cooperation progressed visually. The paths allows the players to see all their successes, failures, and compromises, revealing an agency in representing their own understandings of the world they traverse. As one player focuses on the big picture, allocating resources, the second player experiences only portions of the map through his own interpretations of his limitations. The game represents a situation akin to a king sending out various subjects. The king might have overall control of how he manages his subjects to accomplish his goals, but once the subjects are in the field, they have complete autonomy to choose how they want to handle their restrictions. The hazardous environment itself is a product of a third party (a random generator), as in reality, people do not have full control of their environment and must work together to overcome them. *Footprints* presents a restrictive cooperative hierarchy rather than an unlimited cooperative partnership, which we felt better reflected the principles of the silent game as well as reality.

### Execution

This project underwent many changes during the course of its development. We started with developing a grid that allowed for zooming in and out (our original concept, titled *Anopsia*,

featured a more equal partnership between the two players where both of their views would be restricted initially to one square). From there, drawing was added allowing for flexible and varying paths to be implemented. Afterwards, obstacles were put in place as well as the ability to move among the grid square by square once a path was drawn. The design was abstract featuring glowing, colorful orbs as obstacles and windy, disconnect lines as the path. That was all scrapped. With feedback, we realized we needed to simplify the game and refine the concept, bringing us to *Footprints*. First, we focused on the getting a less complex version of our previous concept up and running. It started with the grid again, without worrying about zooming in and out. Then, the starting and endpoints were implemented. A player class was then created to contain the player's abilities, and two player modes were developed. Later movement was programmed to allow the players to traverse the grid. Once that worked, obstacles were put in place that would change visibility depending on the player that was active. If a player hit an obstacle, his most recent path would be marked with exclamation points, otherwise, they would see their footsteps. Here, the music and visual design was finalized, giving the feel of adventure (with the music) as well as planning and preparation (with the overhead view of a map that the grid sits on). Then, we altered the concept. To align more closely with the silent game, as well as offer a closer representation of real world cooperation, we allowed only player 2 to control movement. Player 1 would only be able to control the environment and movement type of player 2 via toggling switches; then player 2 would have to work within those boundaries. Next, we decided to change player 1's involvement to be resource allocation as opposed to difficulty setting, placing in sliders for steps to be given, and allowing player 1 to select the obstacles player 2 can see. We changed player 1's control of the environment to visibility of the environment, allowing them to communicate their understanding of the map through limited resources.

## Instructions

The goal of the game is to reach the red X. Only Player 2 can move towards the X; Player 1 is not present on the map and can only guide Player 2 through their interpretation of the map. At the start of each turn, Player 1 can choose up to five obstacles to make visible to Player 2 by clicking on them, fundamentally redesigning the map in a way for Player 2. The selected obstacles will be highlighted with a green border. Player 1 can also choose how many steps to give Player 2 on the slider. A maximum of 60 steps is there to be distributed; steps are not replenished, so each turn will start Player 1 with a deduction of current steps given. To switch to Player 2, click the button 'Walk Path'. Player 2 clicks on the grid spaces in front of them to move forward. Once Player 2 leaves the square they were recently occupying, a footprint is stamped; however, they can take back a step by clicking on the sprite itself, backtracking their path. Player 2 keeps moving around until either they run out of steps to take or they hit an obstacle. If Player 2 hits an obstacle, that character dies, Player 2 is sent back to the start with a new character to control for the next turn, and the game switches back to Player 1. If Player 2

runs out of steps, they retain their progress, and the game switches back to Player 1. This cycle continues until either Player 2 safely makes it to the X or Player 1 runs out of steps to distribute. At the end of the game, the map will be fully revealed and all the paths taken and obstacles will be visible.

## Sample Game

As the players attempt to reach the X, their interpretations of the map and what they see play a significant role in the development of their journey. The positions of the obstacles are determined randomly on the map, and as Player 1 is the only player who sees the full picture, it is up to them to help depict what is significant to the other player through restricted methods. When the game starts and a map is created, Player 1 has the ability to reveal obstacles to player 2, as well as to allocate “moves” throughout the game. As seen in figure 1, Player 1 must determine through their own understanding of the map what information to give to player 2. Player 1’s decisions must represent the direction they think Player 2 should go, as well as how far they want them to traverse. Giving Player 2 too many “moves” will limit Player 1’s ability in later turns; however, too few moves limits Player 2’s ability to move. Player 1’s interpretation, however, is reinterpreted by Player 2. From the obstacles chosen in figure 1, Player 1 may have intended to communicate to Player 2 to move right between the obstacles. Yet in figure 2, Player 2 attempts to go around the obstacles. This progression reveals how the player’s understanding of the intentions of the other affects the final overall journey. If Player 2 crosses an obstacle, their progress is restarted, and Player 1 must review the current map containing all the obstacles and the player’s failed path (fig. 3). From this information Player 1 must adapt their strategy to accommodate Player 2’s understanding of the map with what they see. The new path taken is represented in a different set of footprints to distinguish each attempt (fig. 4). The final map is then revealed to the players at the end of the game, as seen in figure 5, where the players successfully cross the map. The resulting journey is depicted through the combination of obstacles and paths, a unique design generated through a shared agency in traversing the map (fig. 6). The game gives both players autonomy in developing the final journey, allowing them to experience and create the design through their relationship.

## Surprises and Further Development

For further development we would wish to implement more resources that Player 1 could utilize to communicate with Player 2 through their design of the map. Also by adding different obstacles that limit the players in unique ways, forcing them to react differently. Another feature we had wanted to implement, but could not do so in time was the creation of different pawns. At the moment the footprints change to distinguish different attempts at traversing the map. We had, however, planned to add functionality by having different footprints also associate to different “pawns” Player 2 could move. Each pawn would have had a unique characteristic that would affect how Player 2 would move, and either Player 1 would select this from a limited number, or

this would be chosen randomly. Finally, we would have added difficulty settings, which would increase the size of the map, decrease the resources, and increase the number of obstacles.

## Figures

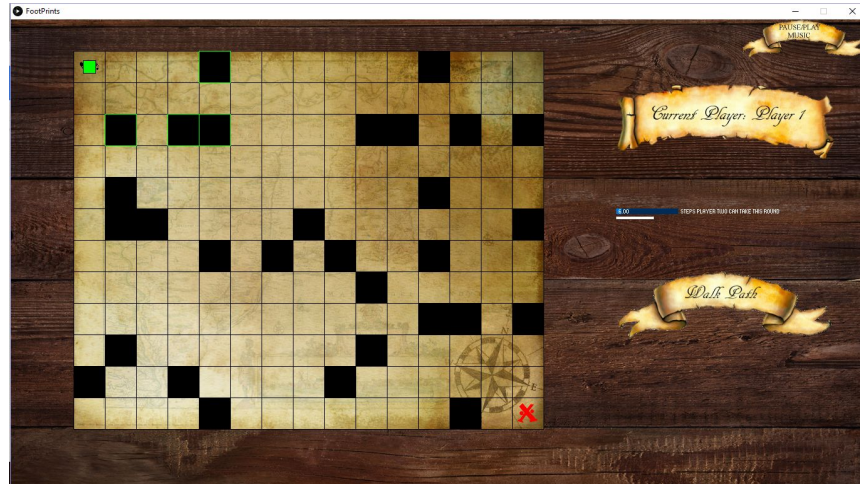


Figure 1

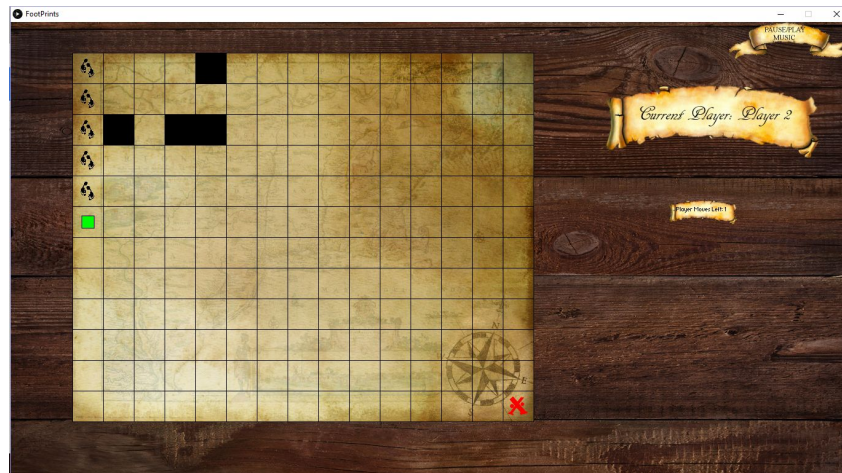


Figure 2



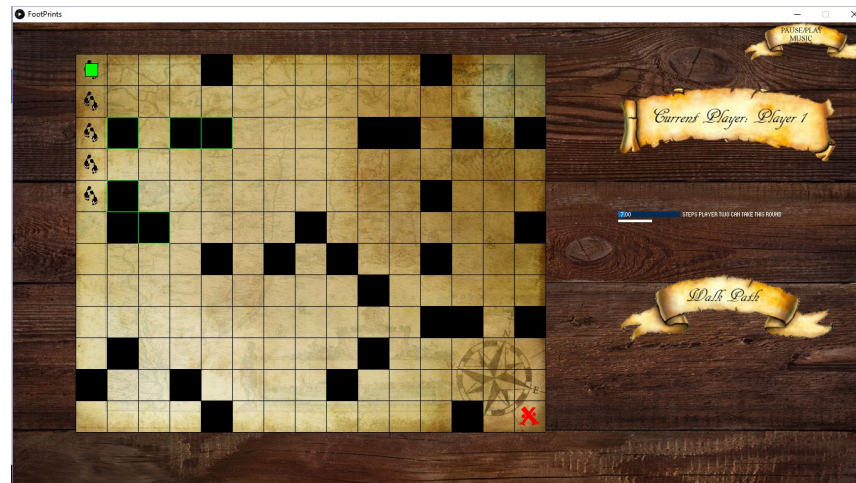


Figure 3

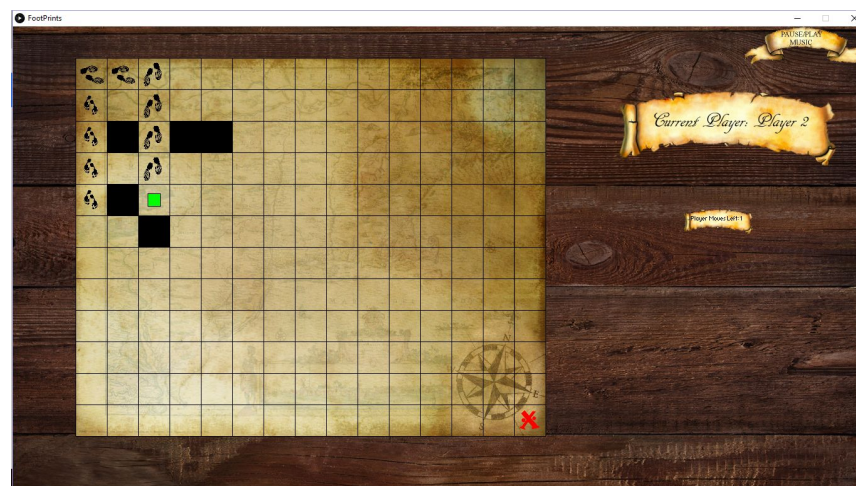


Figure 4



Figure 5



Figure 6

## Resources

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