

Interactive Scene Description and Insights

Interactive Scene Repo: <https://github.com/RoyWales/SoundGameHardware>

The link above will take you to the repo for our interactive scene. Our interactive scene utilizes our member Trey's sound game that he created last year for the visually impaired. The game has the player traverse through different mazes moving in four directions using audio cues at hints. Audio will play in the same order: up, right, down, and left. If a buzzer sound is made then that direction is blocked. If a ding sound is made then that direction will allow the player to move that way. The game is fairly simple but it does open the door for visually impaired accessibility.

We wanted to further optimize the experience of his game and other similar games by developing a controller more suitable for the visually impaired. Our controller utilizes rotation capture to allow the user to point in the direction they want to move and then follow up with a press of our confirm movement button. It's a simple design yet so effective by avoiding the press of 4 buttons we simplified the process to an action and a button press. The controller also utilizes vibration motors to give vibration feedback to the player. When you confirm a movement, the corresponding direction vibration motor will vibrate. This helps to further provide feedback that the player has moved in that direction. We also have two additional buttons on the controller. One button restarts the current level for any reason. We thought this would be helpful if the player gets stuck and just needs a reset. The other button takes you to the next level. When you reach the final level the game will loop over itself.

Our future goal is for our controller to be able to be used with other games that have a similar playstyle. We want more accessibility options for visually impaired gamers. Overall, we believe that our controller design worked out and we feel that it provides that extra feedback and accessibility to the sound game that we wanted to capture.