

G54GAM – Laserz

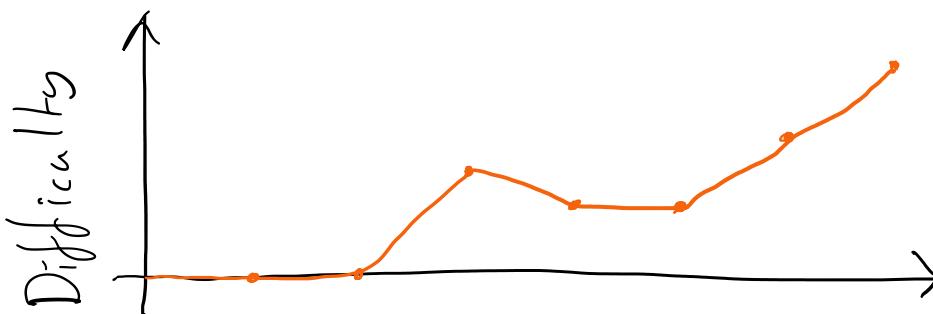
Prototype Design and Specification

Core Game Play

- First Person 3D game
- Puzzle game solving locked door puzzles
 - Doors can start open or closed
 - Doors can be used in puzzles not just as the exit
- Lasers change doors state when they are interrupted
 - Lasers are connected to specific doors
 - Can be blocked by the player, doors, blocks or other physics objects
- Blocks can be pushed along set grooves in the ground
 - Pushing blocks makes up the bulk of the puzzles

Game Flow

- Skill Gates
 - Each room has to be completed to progress
 - Almost impossible to complete a room without learning the solution
 - Have to complete previous solutions before they are reused as parts of other solutions
- Difficulty curve



- Trivial initial levels
- Ramps with introduction of mechanics
- Dips to make sure player is comfortable with key mechanic
- Ramps with challenge of the final puzzles

Characters

- Single player character
- Player has simple movement controls

- via Standard Assets RigidBody First Person Character
- Jump and Sprint kept although not needed to solve puzzles

Physics and Parameters

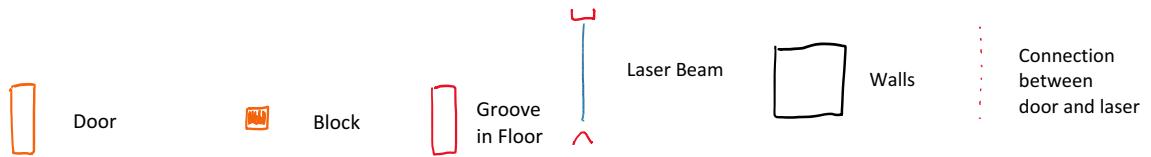
- Blocks
 - Interact via simple physics
 - Can't be rotated
 - Can't be moved in Y direction

Level requirements

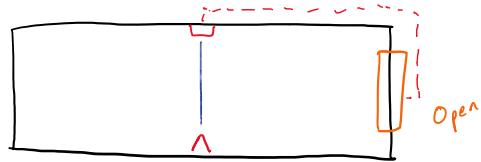
- Levels laid out on a 1m grid
- Level relationships
 - Rooms with a locked door style exit as individual levels.
 - Each room leads to corridor going up a floor to the next room
 - Have to solve 1 room's puzzle before accessing the next
- Target difficulty
 - Rooms start with trivial solutions
 - These are twisted and built upon for subsequent rooms to increase difficulty
 - Increase the difficulty as players become more knowledgeable of the mechanics
- Feature revelation
 - Use feature revelation to slowly introduce puzzle mechanics
 - Mechanically there are no additions to the play
 - Theoretically the player could complete the final puzzle at the start
 - Room 1, 2 – Lasers and Doors
 - Room 3,4 – Blocks and Opening Doors
 - Room 5 – Blocks turning corners
 - Room 6 – Multiple Lasers and hidden rooms
 - Room 7 – Multiple Blocks
 - Room 6 and 7 are more combinations of seen mechanics in unseen ways

Puzzle Designs

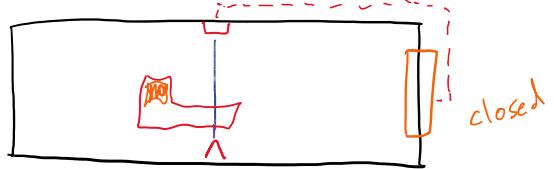
Key



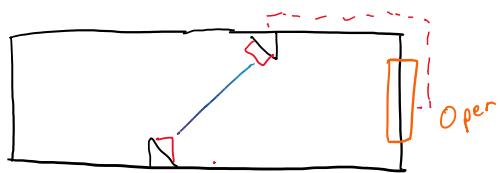
Room 1



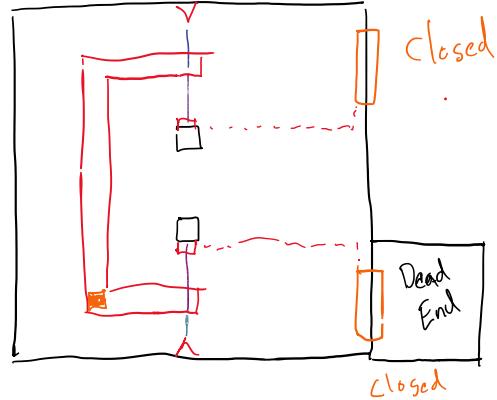
Room 5



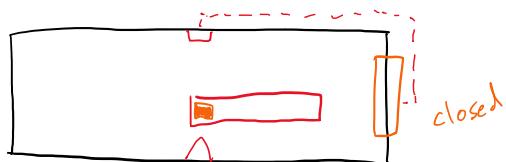
Room 2



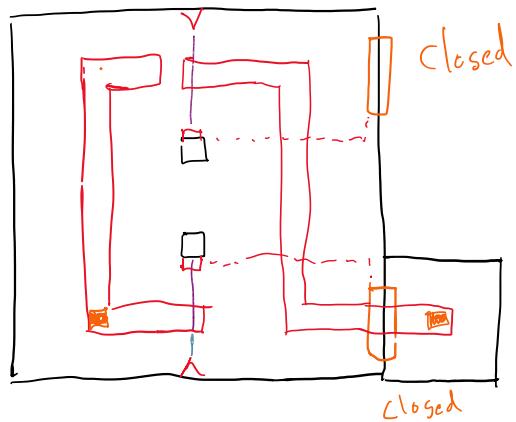
Room 6



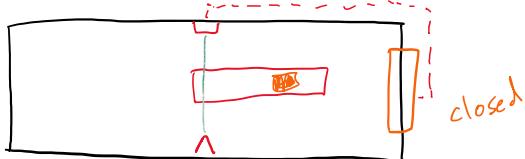
Room 3



Room 7



Room 4



Prototype Instructions

Controls

WASD – Movement, Shift – Sprint, Space – Jump

Walkthrough

The game is a prototype of a physics-based puzzle game. The puzzles revolve around blocking lasers to open doors, by pushing blocks along grooves in the floor. It contains 7 rooms which gradually introduce the mechanics to the player and create a tower of puzzles to complete.

Room 1 – Intro to Lasers

The game begins with the player in a room with a laser and an open door, the key mechanics of the game. The player has to cross the laser light to reach the exit door, while doing so they may notice that interrupting the laser causes the door to close and the exit light to turn red. This is clearer if they stop on the laser but isn't required. The player can then move onwards to the next room.

Room 2 – Player can Block Lasers

This room is functionally identical to the first room, but the laser is at 45° so the player can see it turn off when its interrupted. This helps reinforce the idea that lasers turn off when blocked and activate doors.

Room 3 – Blocks can Block Lasers and Move

This room introduces blocks and their movement. As with previous rooms, because something is blocking the laser the door is closed. The player can push the block along the groove along the floor to reactivate the laser and open the door.

Room 4 – Off Lasers can Open Doors Too

This room is identical to the previous room but with a twist, this time block isn't blocking the laser and the door is shut. The solution is found by pushing the block to block the laser. This introduces the player to the idea that lasers can shut and open doors.

Room 5 – 2 Axis Pushing

This room is functionally identical to the previous room and has the same solution. The twist is that it introduces players to the idea that blocks can be pushed around corners so long as the grooves allow it.

Room 6 – Dual Lasers and Trick Door

This is the first of the 2 main puzzles in this prototype, featuring a combination of previously shown off mechanics in larger rooms. On entry there appears to be 2 exit doors, with 2 accompanying laser switches but there is only 1 block. The block is closer to the far door and laser, so the player may instinctively push it towards that switch. This will open the corresponding door revealing an empty room. The solution is to move the block to intersect with the other laser and open the true exit door.

Room 7 – Dual Blocks

On first glance this room appears to be identical to the previous room, with the same 2 laser and door set up. The player may have learnt their lesson from the previous false door and proceed to push the block towards the left-hand laser. Upon attempting this the player will find out that groove doesn't go far enough to block the laser. On closer inspection the player may notice another groove that would intersect the laser coming from the false exit. Once the player has opened this room up, they find a second block which can be used to open up the true exit. Now move along to the final room to receive the end game message!