

## Project Description:

*Deck 15* is a first-person puzzle game built in Unreal Engine 4 by the GolfGame team consisting of Andrew Sales, Katherine Bozhinov, Kaylene Petrin, and Max Iniguez for Cyan Worlds Inc.

## In-game Functionality:

The ability to inhabit an in-game character to move about a damaged starship and solve puzzles.

The ability to pick up, drop, and throw a power core (ball).

Two types opening doors – the first opens automatically for the player, the second must be unlocked by placing the power core in a goal first.

A goal where the power core must be placed in each level in order to continue on.

Various trigger boxes that either play audio immediately or load audio into a component for later use.

Switches that can be contact by the power core that will toggle functionality in several types of actors, including moving platforms, wind, elevators, and audio cues.

A wind mechanic that can affect the flight and trajectory of the power core when thrown.

A shifting gravity mechanic that increases or decreases the gravity of the map when coming in contact with the power core.

Various moving platforms and elevators that often have to be activated by a switch.

Main menu and in-game menus that allow the player to view information about the developers, the game controls, restart a level, or exit the game.

## Short Comings:

A player can escape from maps by placing the core against specific walls and teleporting through them, similar issues are common amongst video games. Similarly, a player can become stuck inside of a wall when teleporting to it depending on the location of the ball. More tests to make sure that a location can be teleported safely would be helpful, but such implementation would take much more time than we had for the project.

There is a slight chance that an actor associated with a switch may fall out of sync with it. For instance, the material of the switch may change from green to red, indicated in is off, but the actor associated with will remain active, such as wind or a moving platform.

Several actors that could be making sound during gameplay do not, such as moving platforms, elevators, footsteps, and a few doors.

Dialogue that is currently playing can be cut off when entering another trigger box to play new dialogue.

#### Future Improvements:

Pause menu will pause everything, including audio. Not just movement.

A que for dialogue so that dialogue cues will not be cut off. The next will simply play when the current one has finished.

Making levels break-proof. They are currently not complicated to escape from. Quite a bit of testing, time and creativity would be required to achieve this.

Addition of all audio not currently present, including footsteps, areas without ambient, some door sounds, and more correct attenuation for wind and hums.

Code reorganization to take advantage of the game mode class.

Consolidation of related trigger boxes, such as all audio triggers.

Longer levels with more complicated puzzles.

#### Please note:

Our team used the Unreal Engine coding standard for this project. These are not the same as traditional coding standards and may appear slightly different.