

Status Update

February 4th, 2022

Game Design and Animation II

Current Progress

One of the issues we had originally run into was that the tiles weren't generating with the correct adjacency rules. At first, we thought it was an issue with the script logic, but later on we realized that we simply defined the rules incorrectly when we set HashSet adjacency rules for each tile.

As of now, the WFC script correctly generates a full grid of tiles. All tiles seem to follow the rules, and in addition the user can click on/select any tile and pull up a window with all the information about the tile. We can also switch between the tiles generating with a Coroutine and clicking on a button to update generation.

- Clicking on the button to generate tiles is mainly used to debug, since the coroutine is faster and more visual (organic generation)

Improvements for the Alpha

For the alpha, there are 3 main improvements that will be made:

Updated Tiles

We need to make a new tile set to make the generation rules more readable to a human eye. This will be helpful when catching errors with more complex generation rules.

Inspection Window Upgrades

The window will see improvements such as more information about the tiles, making sure all the information is actually correct, and visual upgrades to make sure the window is easily readable.

Bug Fixes

Currently there are some smaller glitches with the tile inspector window, but this glitch will be fixed in the alpha release.

Improvements for Beyond

Beyond the alpha, the main goal is to increase the complexity of the generation rules. Some examples of these new rules are:

- Making sure tiles on the edge are either ground or wall tiles
- Making sure all the ground tiles connect
- Making sure there is a critical path through the level
- Adding weights to each tile that will impact how often that tile is chosen over another tile

Another goal beyond the alpha is to make it so that the user can provide information to the generator such as exact dimensions and generate levels on the fly.