Race Tracks with Wave Function Collapse

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Our idea for the Blender Conference 2022 was to modify the Wave Function Collapse to design and generate race tracks in Blender that we could use in video games, allowing us to have an unlimited supply of maps. We wanted to use this algorithm specifically because if we succeeded . We started by searching for existing implementations of the WFC that could yield the results we are looking for. We didn’t find any resources about race tracks specifically which means we could be creating something entirely new. The first step was to implement the Wave Function Collapse and fortunately we found a lot of resources, we specifically used this article <https://robertheaton.com/2018/12/17/wavefunction-collapse-algorithm/> to understand the basics behind the WFC, and then we used <https://github.com/benkl/wfc_2D_B3D> and <https://blenderartists.org/t/wave-function-collapse-in-blender/1203779> among others, to help with the implementation of the algorithm. Once the implementation was done and working we needed to add rules and constraints to obtain convincing race tracks. Unfortunately we didn’t succeed in doing that, the Wave Function Collapse needed a lot of modification to produce clean race tracks. However we successfully implemented the WFC and some rules that can produce parts of a track.