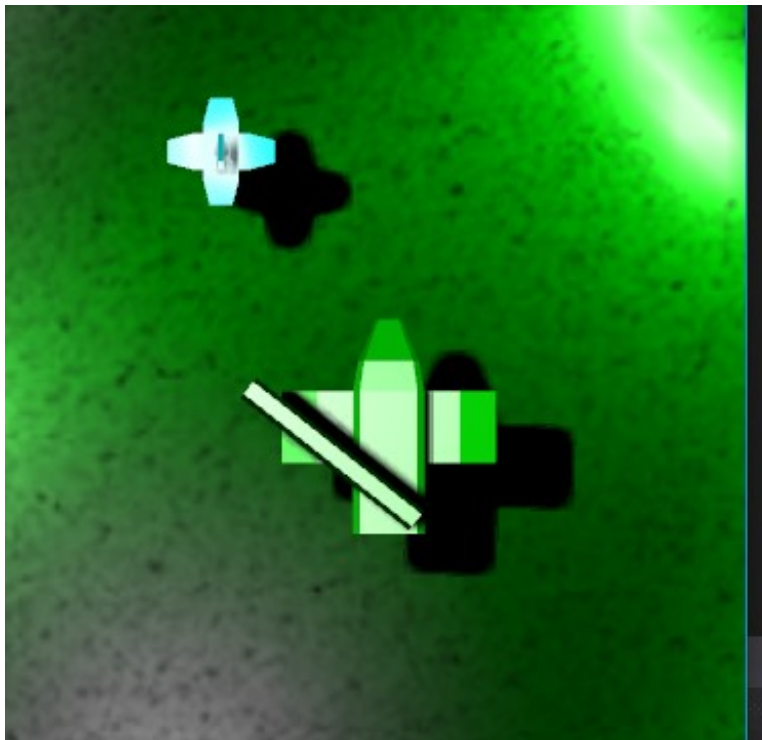


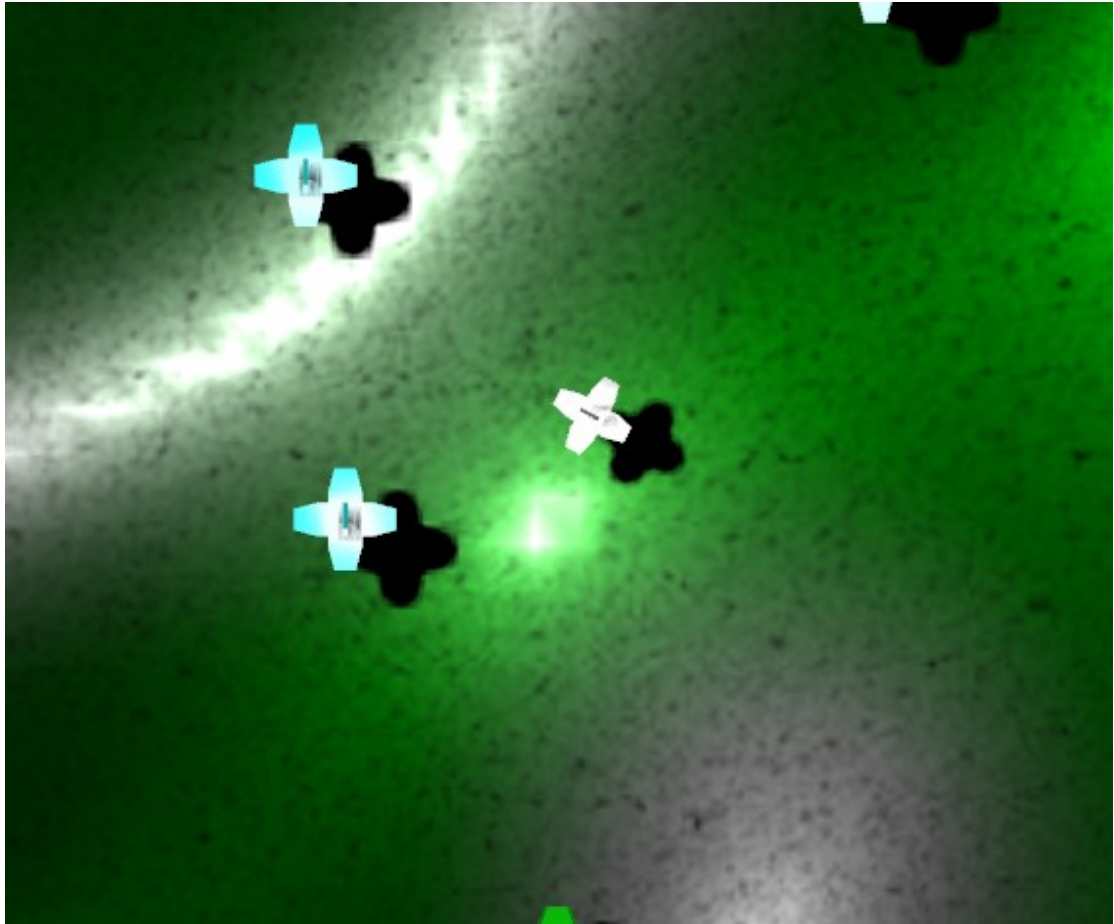
Project Description (Berend Baas 4723201, Jens Langerak 4317327)

Shadows are computed using shadow maps, using an infinitely far away light source, and reflect the distance to the generated infinite terrain. We use percentage closer filtering to create soft shadows. For the projection matrix we have used an orthogonal instead of a perspective projection matrix.

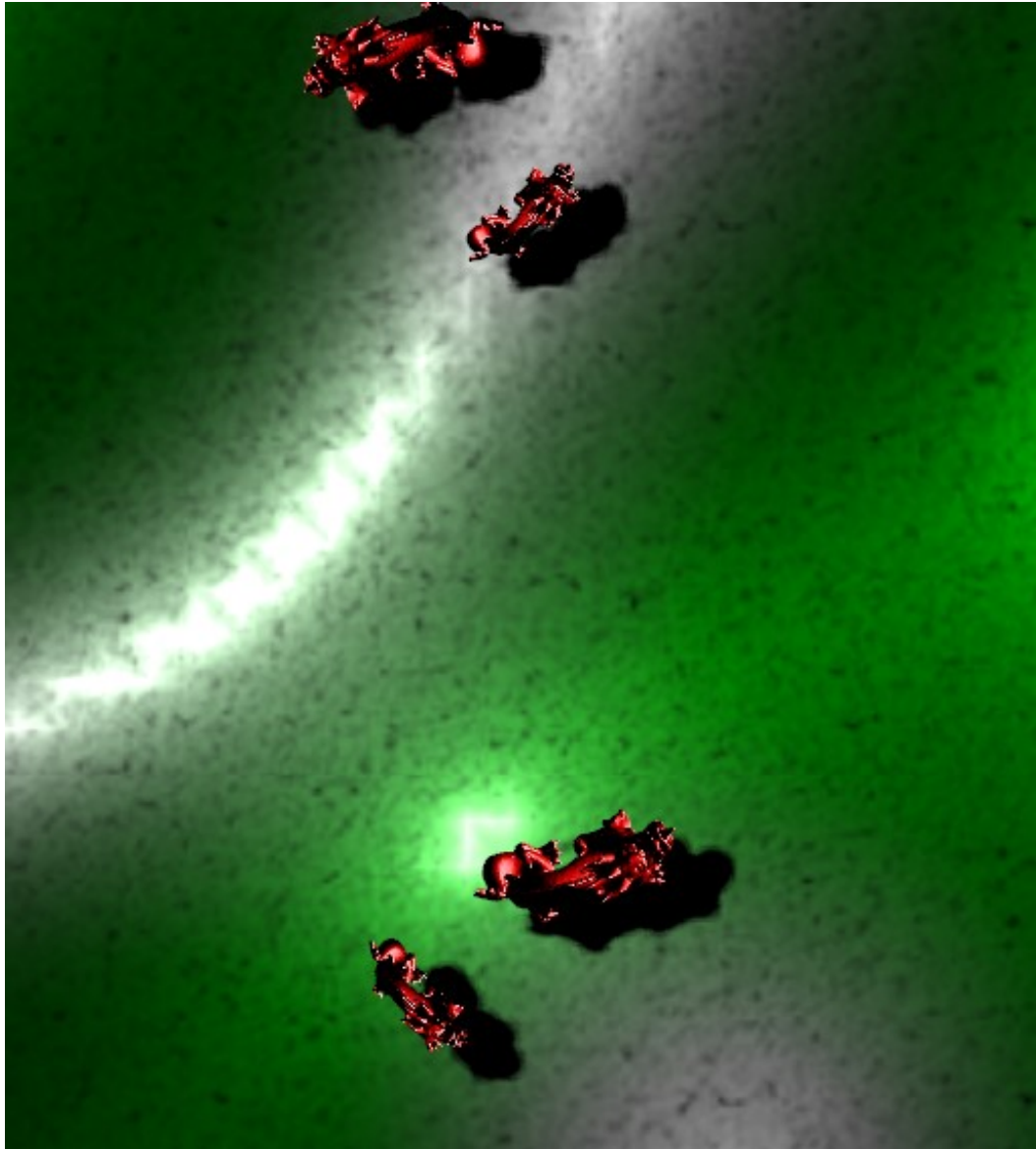
The height of the terrain is calculated by summing a couple of sinus functions. The height influences the vertex color. Furthermore we have added a texture to the terrain. We make use of chunks. New chunks are generated while the game is running and they will replace the chunks that were gone out of view.



Bullets shot by player are rendered as textured rectangles. When an enemy dies, a death animation triggers. This is done by increasing the rotation around the y axis every timestep. Likewise the height is decreased to simulate the enemy "crashing to the ground"



The boss consists of 2 circular heads orbiting a central point, each of which has two "moons". This is implemented using stacked transformation matrices, chaining global transformations, planetary transformations (rotation and translation) and moon transformations (again rotation and translation) when appropriate.



On hitting one of the boss' "moons" or "planets" results in an erosion effect achieved using voxel simplification

