

# Dirty Derby: Game Prototype - Game Programming Lab 2009

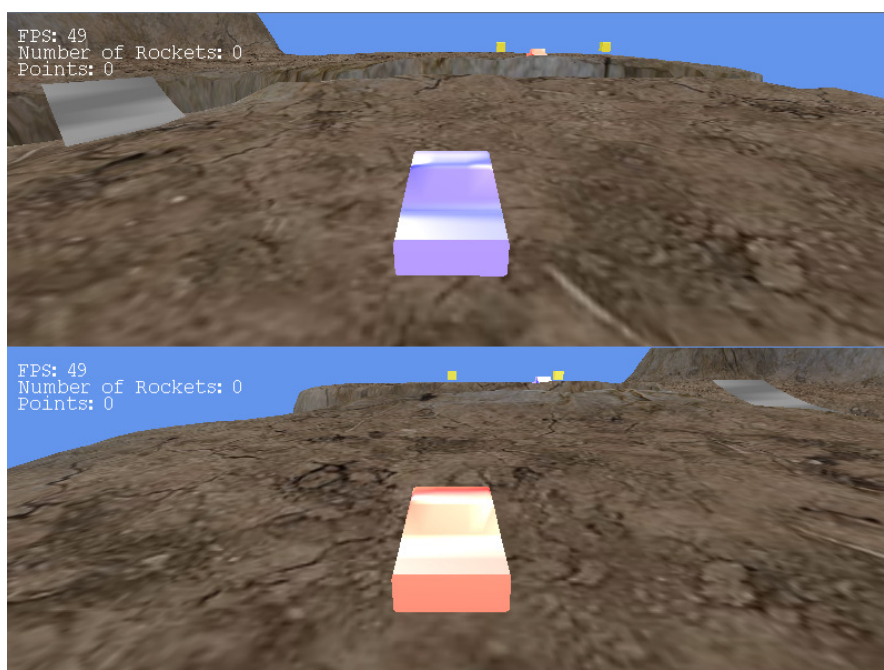
Lukas Beyeler, Lukas Stuker, Christian Regg

This document describes the development of the game prototype. It can be partitioned into three parts.

## 1. Gameplay

To test the game play, we inserted the most elementary concepts of our game into a simple environment. The following features are implemented in the game prototype:

- Two players play against each other by using split screens.
- We implemented a very simple death match mode. The two players start with zero points. There are items you can collect (yellow cubes on the screenshot below) to get points; if you fall from the platform you lose points. The winner of the game is the player that reaches a specific number of points.
- You can push the other player off of the platform by driving against his car.
- Each player can shoot missiles. If you hit the other player, you can push him off the platform.
- There is the possibility to place mines with an effect similar to the missiles.



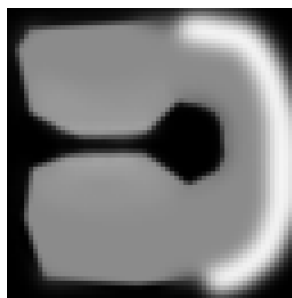
## 2. Car Physics

For the physics, we use the BulletX physics engine. At this step, the cars interact with cubic collision boxes with the terrain.

## 3. Environment

At this development step, the environment consists only of a terrain built from a height map. We load the height values from a (gray scale) bitmap and set the height values of the terrain accordingly.

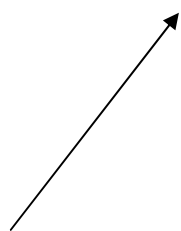
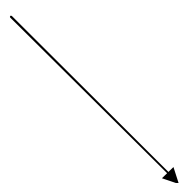
It is also possible to load a texture and attach it to the terrain.



height map



texture image



textured terrain