

Formal Game Proposal

Draft A

Jens Puwein

Pascal Rota

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Game Description

We are planning to do a high-speed racing game with hovercraft-like vehicles in a Cel-Shading look. As an exemplary game you might think of the WipeOut series, but only in the wide sense.

Detail:

We intend to have two different vehicles, each with different properties as you know it from other racing games (e.g. Acceleration, handling etc.). Those two vehicles should behave physically correct in the sense of Rigid Body motion and have typical features like nitro boosts, rocket launchers and/or machine guns, mines etc., each one allowing you to either drive faster than your opponents or to slow your opponents down. Of course there is only a limited amount of each special feature but you may collect power ups during the race to refill ammo and nitro.

There will be collision detection between the different vehicles and between the vehicles and the obstacles on the track and the track itself. Collisions may result in damage to the vehicle or in a slow down.

A good Rigid Body engine should also allow us to place movable obstacles and jumps along the track, where hitting an obstacle may slow you down and not making a jump results in a reset on the other side of the jump which also takes time.

Sound effects are supposed to add to the experience, they demonstrate the power of a rocket or a nitro boost. Background music is used for more entertainment.

The goal of the game is to finish the track as fast as possible or crossing the finish line in first place. We may also include a scoring system which allows you to reduce your time by doing damage during the race. To keep the player busy, he may earn money during the races, allowing him to upgrade the vehicles in terms of the features mentioned before. There should also be a split screen mode for two players.

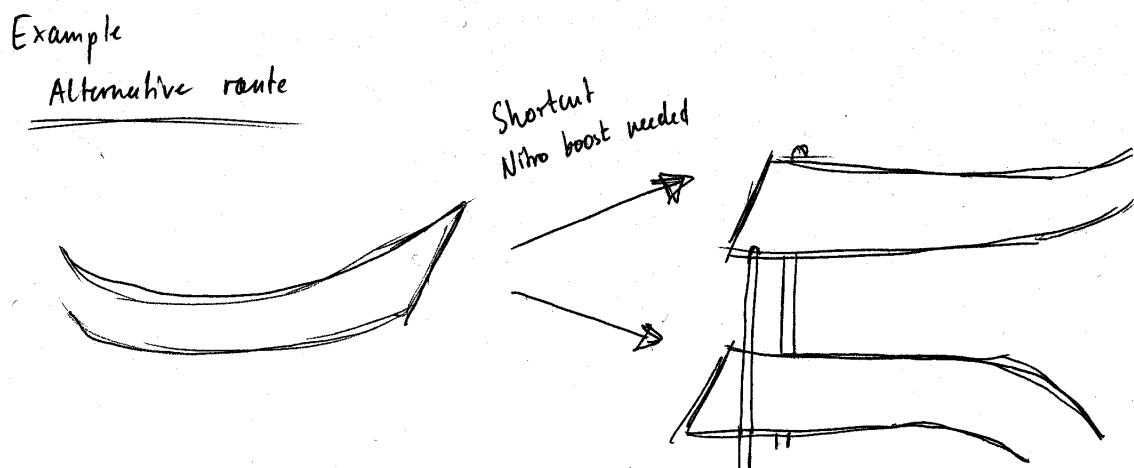
We intend to make one track with curves, jumps and possibly movable obstacle. The track should be a challenge, including shortcuts and alternative ways, where shortcuts are harder to make than the normal route or may only be reached by using a nitro boost. The power ups are placed regularly and sometimes there will be power ups which are hard to reach but worth the effort.

Mock-Ups

Wipeout picture: our game should look similar but with Cel-Shading and less visual effects.



Shortcut illustration:



Development Schedule

Layered Development Description

Functional Minimum:

Basic physics including collision detection. The user can drive a vehicle on something that looks like a racing track. Cel-shading is implemented.

Low Target:

Weapons and explosion effects are included. Weapons include rockets as well as a nitro boost. The explosion effects should be implemented as a shader. The track and vehicle models look acceptable; the track is not too simple.

Desirable Target:

Split screen support for two players, (dumb) AI allowing for computer controlled enemies. Sound effects and background music.

High target:

Really cool, detailed and witty tracks, good AI.

Extras:

“Excellent” AI, particle effects like smoke, additional track/vehicles, background details for the track.

Detailed Schedule

	hours	
XNA (getting started)	10	
Physics	30	
Track	15	
Vehicle	10	
Cel-Shading	30	
Weapon/Explosion	15	
AI	?	
Sound	20	
Split Screen	5	
Small Effects	15	

	3.4	10.4	17.4	24.4	8.5	15.5	22.5	29.5	5.6
						α		β	
Physics	P	P	P						
Track			J/P	J/P					
Vehicle			J/P	J/P					
Cel-Shading	J	J	J						
Weapon/Explosion				J/P					
Play Test					J/P	J/P	J/P	J/P	J/P
AI					J/P	J/P	J/P		
Sound					J/P	J/P			
Split Screen					J/P				
Small Effects								J/P	

Assessments

The game should give the player the feeling of speed. Everyone who likes high-speed racing games or arcade racing games in general should like the game. Besides that it should look cool, of course. If the movable obstacles are included, it should also be fun to destroy and to hit other vehicles and obstacles.

We will consider our game a success if it is fun to play and keeps the player coming back, entertaining him for more than just a minute or two.