

# DuoDrive

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## Abstract

In this paper we describe our game DuoDrive which is a racing game where two teams of two players each control one car and try to reach the finish. This document outlines a brief description about the features of this game, the target audience we chose and the technological and game play innovations. DuoDrive was developed for Android.

## Author Keywords

Mobile game; race; multiplayer;

## Introduction

We wanted a game that would force interaction, real communication between players which involved a lot of humor and entertainment. We therefore developed DuoDrive, a game that can be classified as a race game which ensures a lot of communication and interaction. The main idea behind the game is to divide a classical car driver into two parts: a driver and a throttler. In real life these two parts are controlled by one person, by splitting these, a lot of cooperation needs to be done. Not only to reach the finish, but to make sure you're going to win.

## Game overview

In this game people have to play against each other in pairs, sort of like tag-teams. The race consists of two cars, each car having two players, for a total of four players. Both players controlling a car have to cooperate to reach the finish. As the driver: the player that controls the steering, cannot see beyond his own headlights. As for the throttler: the player can only see an overview of the track but cannot see obstacles on the track.

By having these two functions, both players in a team have to cooperate both physically and virtually. In order to take turns

on time, the throttler has to physically inform the steerer to turn left or to turn right. In addition, the steerer will have to physically inform the throttler that he sees a slowdown warning as there is mud incoming or that he has to throttle backwards once the steerer collided in a turn.

These features are there to spice up a classical race game, our game is significantly more difficult than any other classical race game. However, this comes with an asset, amusement.

## Target audience

We did not implicitly target an audience, however we did keep in mind that it is mostly males that will take initiative to create a game. We also noted that 40+ people often have difficulty's with the game's controls, especially women. We therefore said that our main audience would be males aging between 14 - 30 years.

This audience mostly contains experienced gamers, it doesn't matter what genre they like, just playing games in general make players more experienced and thus will more appreciate our game.

## Technological and game play innovations

Technically, we did not innovate at all. We used low-budget technology as Wi-Fi to let players virtually cooperate. We score our points on the game concept.

Our gameplay innovates in that there has never been a game before where driving a car has been split into two separate handlings. And it innovates in the fact that our game enforces physical cooperation. Merely virtual cooperation will not get you anywhere near the lead.

## Game design

We decided on creating a mobile game for Android using the Unity framework because of it's widely accepted image, which in turn ensured a lot of tutorials on which we could work on.

The software architecture of the system consists of three different subsystems: the server, the system for the steering player and the system for the player who controls the throttle.

- **Server**

The server is a subsystem that maintains the data flow. For

example, it will send the data of the positions of the cars to all players, so that every player has a near real-time experience, where they can see other players' positions. All data sent by a player will first be sent to the server, which distributes it to the other players. There is no player-to-player data flow at this moment.

- **Steering player system**

The system for the steering player will only contain the view that the steering player sees. This will be a limited view, as the steering player will only see a small area in front of his car. The steering player will also not be able to throttle. For a detailed picture of the interface of the steering player, see Figure 1

- **Throttler system**

In the throttler system the ability to perform certain actions is also limited. The player will only be able to control the throttle, i.e. accelerating forward or backward and hitting the brake. By limiting the view and the possible actions, communication between the throttling player and steering player will be enforced.

We visually designed our game to be simple and clear. The interface contains limited possibility's to ensure that the players will quickly understand the use of each button.

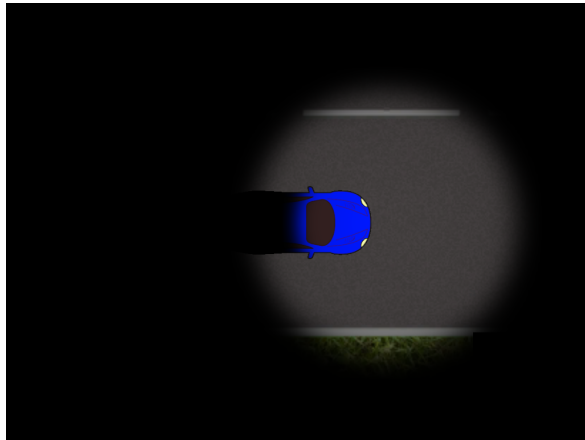


Figure 1. The interface of the steering player.

### Game trailer

We created a video showing the gameplay of DuoDrive. Showing the most important aspects of the game and creating a feeling of the game. It can be viewed here:

### Acknowledgements

We would like to thank....

### References and Citations

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