1

The industrial partner ASN (which roughly translates to "never [drink] behind the wheel”) provides information in regard to the influence of alcohol and other drugs on humans. To make adolescents aware of the impact of alcohol on the human brain, they use a variety of tools such as (drunk) driving simulators and glasses, which come with impairments, to provide the visual experience of being drunk. Due to the desire to appeal to their young target audience, ASN sees a lot of value in using leading edge technologies to communicate their message. In case of this project the goal was to experiment with Google Cardboards and to investigate their current capabilities with regards of being able to simulate some of the visual disturbances caused by alcohol.

2

As a first step, we decided on using the Vuforia SDK for the game engine Unity. The first because it’s a known Android platform used for the augmented reality development, and the second because it provides with several image effects and filters useful for our goal.

After developing a first prototype of an AR app, which simply used the ‘blur’ component provided by Unity on the running smartphone camera, and thereby proofing the plausibility of the project idea, we went on to attempt implementing the other visual effects described by ASN.Based on the research nature of this project, the whole development process as well as the information gathered on the topic of both Unity and AR capabilities is supposed to be documented in a manner to not just give a good insight on the project itself, but the topic and used tools as well. It is aimed at both potential future contributors to this project as well as developers interested in testing the water of augmented reality with the tools used here.

3

This project resulted in a functional app which can be used by the attendees of the ASN projects to simulate the visual experience of being drunk, and serves as a proof of concept for the initially uncertain idea to simulate the visual effects caused by alcohol.

The app also identified the currently still severe limitations of the processing power of smartphones regarding the used technologies. The documentation serves as introduction to the world of AR and Unity while also giving insight on the project itself, the encountered limitations and possible extensions or future projects this could lead to.