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# Game Ideas

## Categories

Inspired in the last conversation with Prof. Augenstein.

### Virtual Buzz extensions with Virtual Objects

This game ideas are based on the extension of the Virtual Buzz application using different virtual objects from Unity and the object recognition feature from Vuforia. All are "in app" games and can only played in single mode.

#### 1. Traficc Sign recognition

The application shows the user traficc signs as virtual objects. When the user recognizes the sign it presses a button in the controller and becomes points. Different signs have different points quantity, and special signs like the Stop sign give extra points.

The application increases the difficulty and the velocity based on the points quantity and the alcohol levels. More points, more difficult.

#### 2. Avoid Objects

The user wear the glasses with the application. The application, based on the current alcohol level, creates and throws different objects with different forms and colors to the user. The user must avoid this objects and receives points fort it. If hit, points will be subtracted. After a time period and points quantity, the objetc's velocity increases.

#### 3. Search for Objects

The application shows shortly an object to the user. The user has to look for the object. If he finds it, he receives points and a new object will be shown. A timer counts down, and the user looses if he doesn't find the object in the given time.

The difficulty increases based on the points and alcohol level. The alcohol level increases automatically when the user looks at certain objects and the application recognises them (object recognition feature from Vuforia).

Each time the time is shorter.

### Virtual Reality Games

This game ideas combine a complete virtual reality world with the image effects simulating the alcohol.

#### 1. Virtual Reality Car Simulator

The application shows a virtual world from the point of view of a car driver under the effects of alcohol. The user can drive by steering a virtual wheel with both hands. A solution for the velocity must be found.

Same as in the ASN physical devices, the driver must drive under different weather situations and avoid different obstacles or challenges. The reaction times are mesured, and after the session the player can see its reaction times compared to a sober person. Each session increases in difficulty and alcohol levels.

**Pros**: No infrastructure needed (physical car simulators, big rooms), several players can play simultaneously in single or multiplayer mode.

**Contras**: High production costs

**Effort**: A car simulation in a virtual reality application could need many resources

#### 2. Find the way home and arrive alive

Inspired in the last Report from ASN.

The player must go home under the alcohol effects in a virtual world in a given time. The game shows the way home with different virtual object as arrows, pointing fingers, etc.

The player must walk in the right direction, maintain its walking direction, avoid obstacles, go upstairs and downstairs, recognize different traffic signals (f.e. in order to cross the street), avoid running cars, even take the bus/train and get off at the right place.

The game is built in different difficulty levels. The alcohol levels and duration of the way increases with each level.

**Pros**: Total flexibility in the creation of the environment, challenges or obstacles. Multiplayer possible.

**Contras**: A big physical area without any obstacle is needed. Interaction with no playing persons not possible. The mobile phones capacity of generating convincing graphics is still not enough. High production costs.

**Effort**: The creation of a detailed and interactive environment would need great ressources.