User Manual for Distracted Drivers

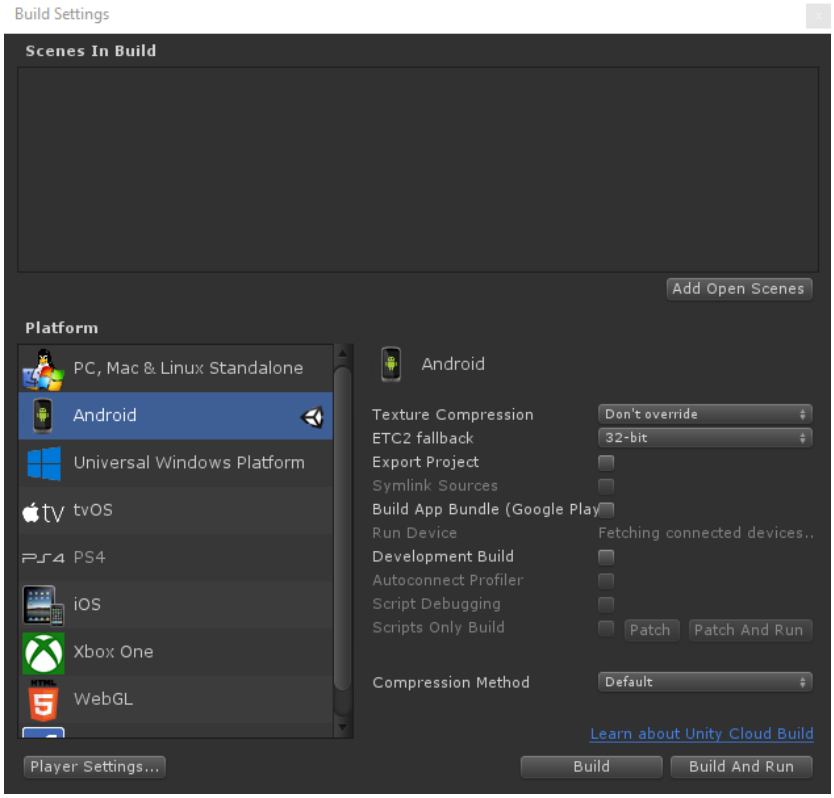
Pico Neo 2 VR prototype

Quick start guide using Unity:

Step 1: Turn on your Pico device and calibrate sitting position and eye tracking.

Step 2: Add the project to Unity Hub and open it.
Preferred Unity version for this project is *2019.2.x*

Step 3: Select Android as the target platform.
Open the Build Settings window and make sure you have switched and selected *Android* as the target platform.



Step 4: Build the application
Build the application by pressing *File -> Build and Run* and deploy it to your Pico Neo 2 headset.

Quick start guide using .apk file:

Step 1: Turn on your Pico device and collibrate sitting position and eye tracking.

Step 2: Once the project is built in Unity - > Move the .apk file to your Pico file directory. The .apk file can be found in a folder called *PicoPrototype*

Step 3: Start the .apk file directly in Pico

Key bindings and Controls:

The controllers used for this version of prototype are native Pico Neo 2 controllers. To accelerate the car a player has to press the right controller's trigger (see Figure 1). Similarly once the player wants to slow down they need to press the left controller's trigger. To steer the car a player needs to use the left controller's joystick

Figure 1: trigger

Figure 2: joystick

Alternatively if the controls scheme doesn't suit a player's taste or doesn't work, he/she can use Pico buttons to control the car. To accelerate press *B*, to slow down press *A*, to steer left press *X*, and to steer right press *Y*.

Tobii eye tracking 4C prototype

Quick start guide:

Step 1: Download and Install Tobii's add on to your PC
Installation can be found on this website: https://gaming.tobii.com/getstarted/
Choose the tobii eye tracking device to install. Once installed create your profile and collibrate eye tracking.

Step 2: Before starting the application make sure tobii eye tracking 4C is turned on.

Step 3: Start the .exe file called *TobiiTest*.
The file can be found in the folder called *TobiiTest - > Builds.*

Key bindings and Controls:

This prototype uses cross platform input. As a result the game can be experienced on a keyboard or PS4/Xbox controller. To control the car using keyboard a player has to use *WASD* buttons:
W - to accelerate
S - to slow down
A - to steer left
D - to steer right

If a player chooses to use a console controller then the controls are mapped similarly to those of Pico. For PS 4 controller (see Figure 3): R2 - to accelerate the car, L2 to slow down, and left joystick to steer the car.

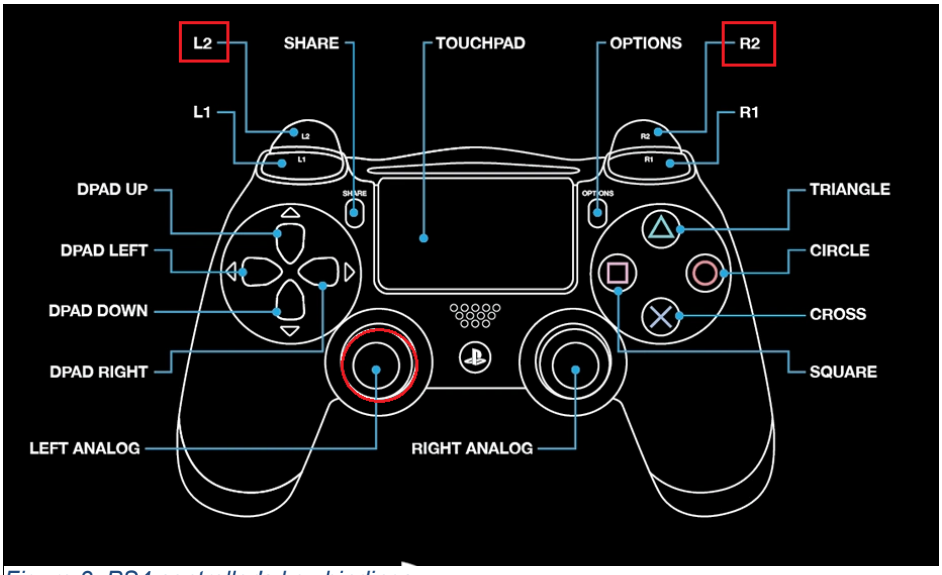


Figure 3: PS4 controller's key bindings

For Xbox controller (see Figure 4): RT - to accelerate the car, LT to slow down, and left joystick to steer the car.

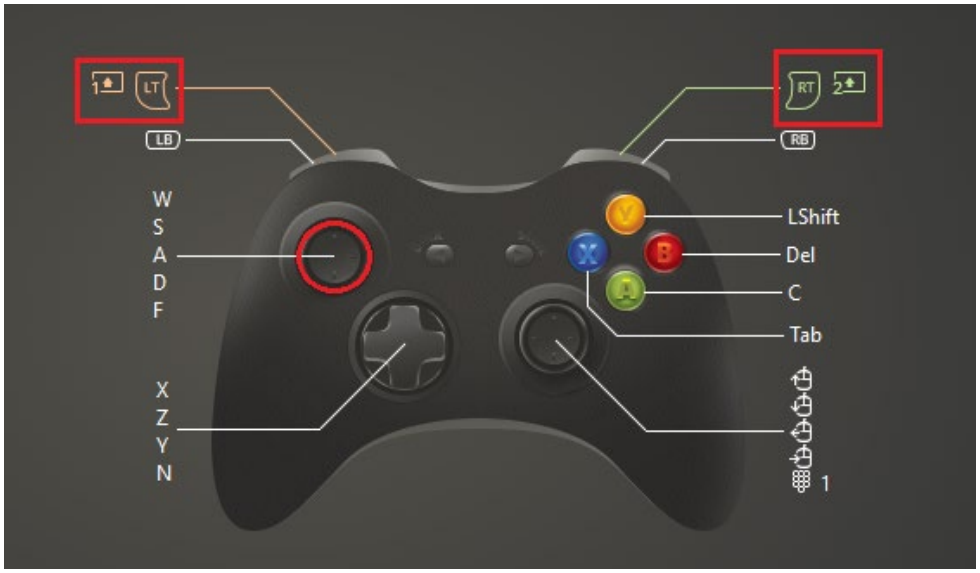


Figure 4: Xbox controller's key bindings

Scenario

To get the best educational results in this game a player has to follow a predetermined scenario. A player starts at the intersection of Taunton Road and Simcoe Street North, besides Mary Brown's Chicken & Taters. As a player sees the cars pass by, they are asked to follow the last car (see Figure 5). Then a player starts driving through Simcoe Street North. While they drive they are asked to pay attention to their environment

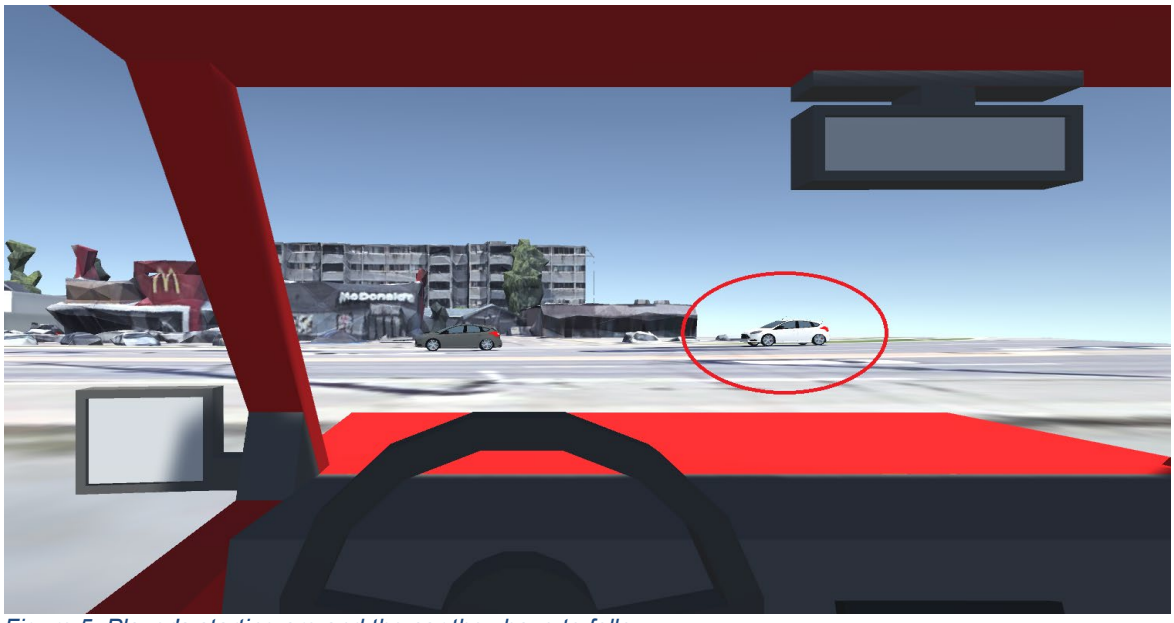


Figure 5: Player's starting are and the car they have to follow

(objects such as regulatory signs and commercial signs). Once a player reaches Simcoe Street intersection with Commencement Circle, they will see stop signs signaling that a player should stop and end the simulation here (see Figure 6). When the car stops two UI display screens appear with time statistics showing the amount of time a player focused on each object.

Figure 6: Player's end area and UI display with time statistics