VR Application as an Educational Tool for Level Crossing Users
NATIONAL ROAD TRAFFIC SAFETY PROGRAMME OF REPUBLIC OF CROATIA 2011 - 2020

Project
IMPLEMENTATION OF MEASURES TO INCREASE SAFETY OF THE MOST VULNERABLE ROAD USERS AT LEVEL CROSSINGS

Coordinator: University of Zagreb, Faculty of Transport and Traffic Sciences
Partner: HŽ Infrastruktura (Croatian Railways), preventive-educational action „Train is always faster”
RAILWAYS NETWORK (2017):
2,605 km of railway tracks
1,512 LCs: 37% Active, 63% Passive
71 Pedestrian crossings

BLACK STATISTIC (2017)
7 fatalities (2.1% of total road traffic fatalities
6 fatalities happened on LC’s with active protection
524 damaged or broken barriers
VR APPLICATION DEVELOPMENT

• VR application was developed as a one of the measures within the project

• Two main scenarios were developed:

1. Legal crossing

2. Illegal crossing (with train hitting the observer)

• Both scenarios were filmed from the driver car seat to ad realism

• Filming was conducted on level crossing „Trnava” in the city of Zagreb
VR SCENARIO LOCATION - LC TRNAVA

• Level crossing „Trnava” is located on the main international railway line M102
• Two parallel railway tracks
VR SCENARIO LOCATION - LC TRNAVA

- Close vicinity of Trnava railway station
- Secured with half-barriers and light & sound system
VR SCENARIO LOCATION - LC TRNAVA

- 8 fatalities in the last 10 years
- Level crossing users behaviour main reason for accidents
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VR APPLICATION AS AN EDUCATIONAL TOOL

- Primary target audience were driving school students
- Implementation was expended to elementary and high schools and various educational events
VR APPLICATION AS AN EDUCATIONAL TOOL

• 11 driving schools visited in the cities of Zagreb, Osijek and Zaprešić
• Project presentation and VR application testing
VR APPLICATION AS AN EDUCATIONAL TOOL

• Educational event „Respect our traffic signs” for elementary schools
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• Please, visit us at Safety Village and try the virtual reality for yourself!
THANK YOU FOR YOUR ATTENTION!

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