Research and training in railway at the University of Valenciennes

Frédéric VANDERHAEGEN

Professor at the University of Valenciennes and Hainaut-Cambrésis (UVHC)
Polytechnical Unniversity of Hauts-de-France (Since 2017)

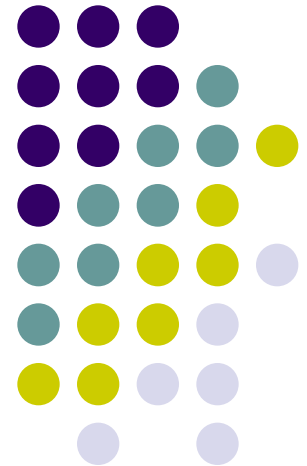**Salvatore LA DELFA**

Research Engineer
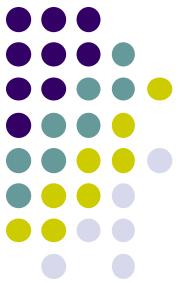
Quentin GUERIAU

Engineer

Contact:
Frédéric Vanderhaegen
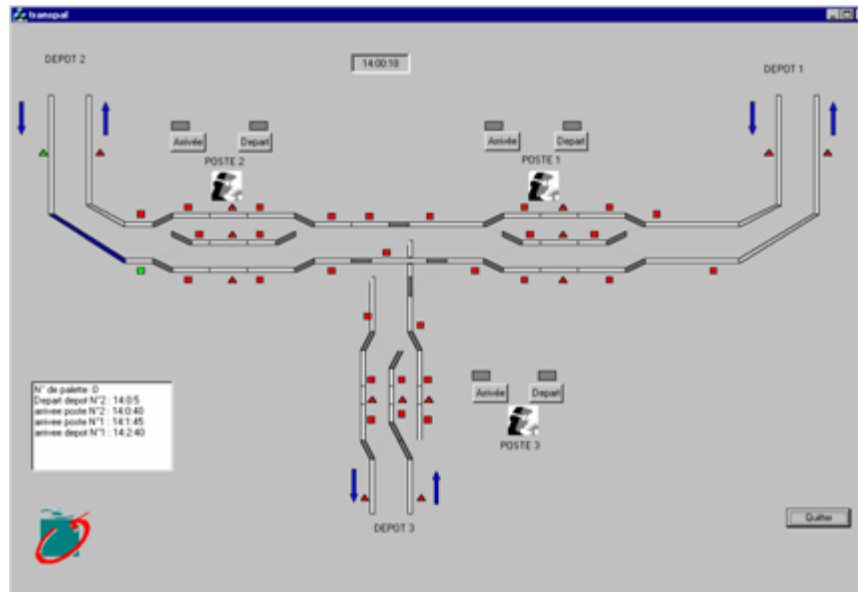UVHC – LAMIH UMR CNRS 8201
Le Mont Houy
59313 Valenciennes Cedex 9 – FRANCE
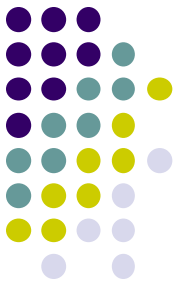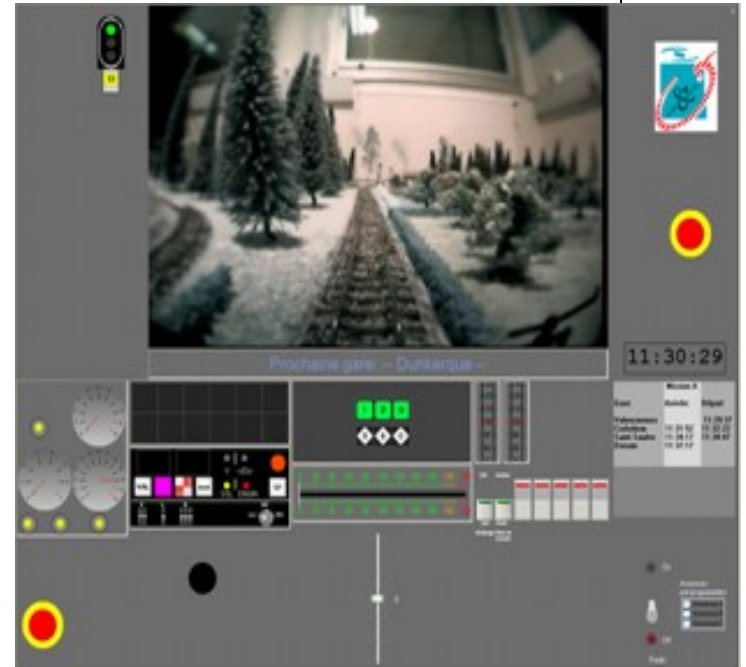Email: frederic.vanderhaegen@univ-valenciennes.fr - Mob: +33 (0)6 58 72 18 96
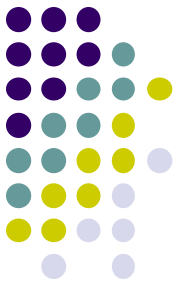
A success story of simulators

2001-2009: TRANSPAL, simulation of train flow control

A success story of simulators

2007-2018: COR&GEST, simulation of train drivong and train flow control

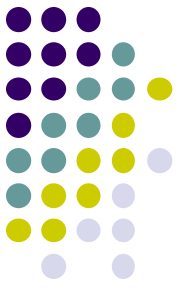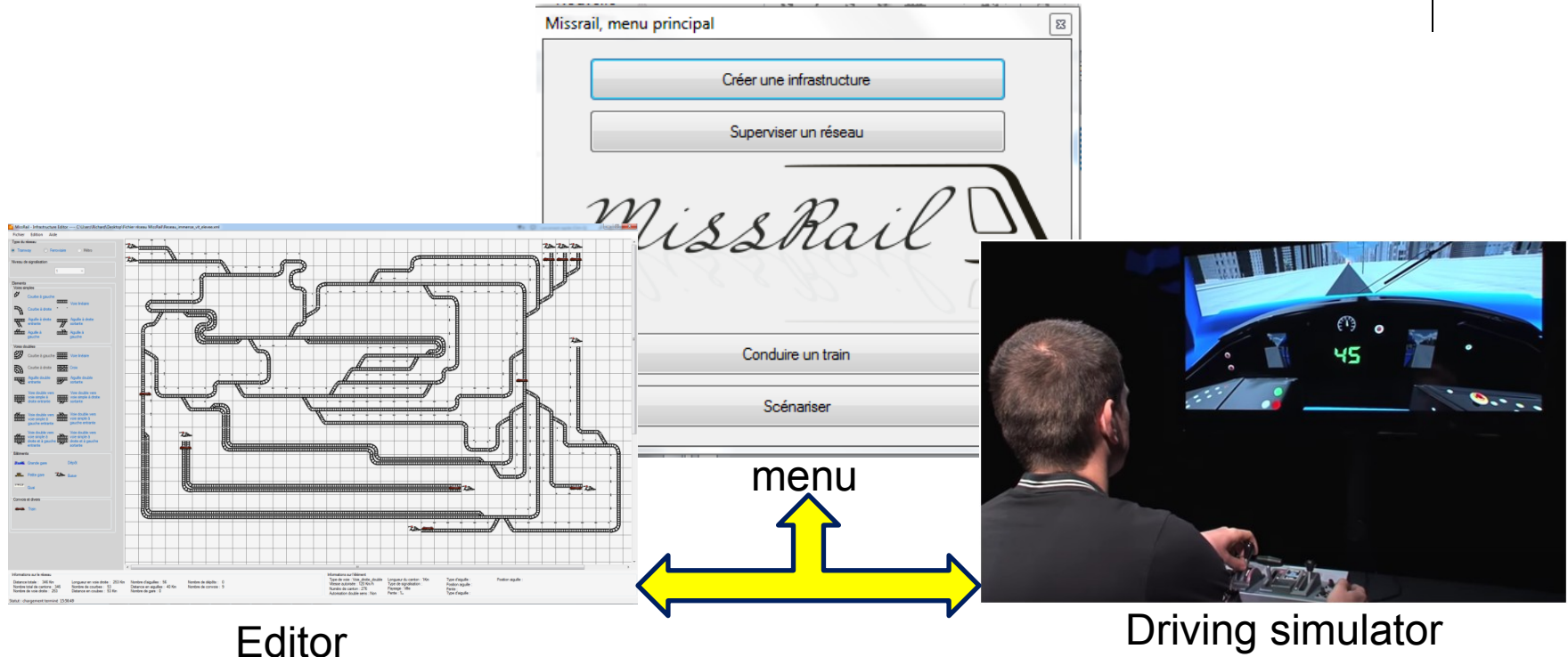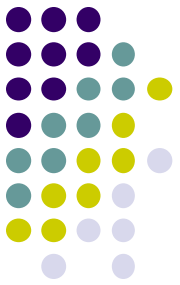# A success story of simulators

ILLUSIO

PSCHITT-Rail

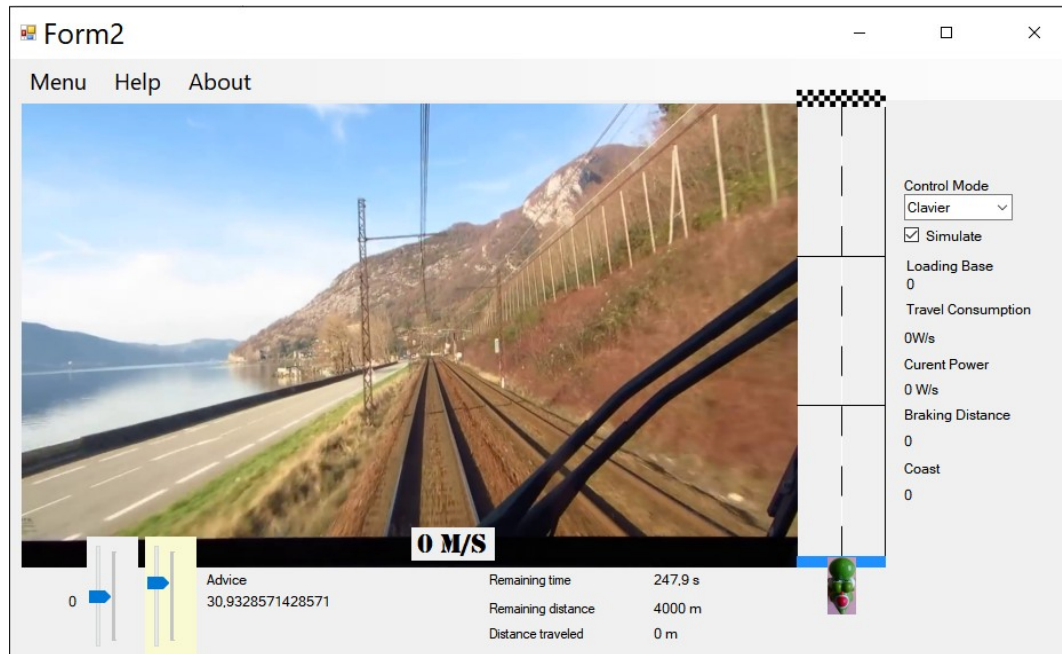2015-2018: ILLUSIO and PSCHITT-Rail, train driving simulation

A success story of simulators

Editor

menu

Driving simulator

2012-2018: MissRail, 2D simulation of infrastructure design, itinerary design, train driving and train flow control
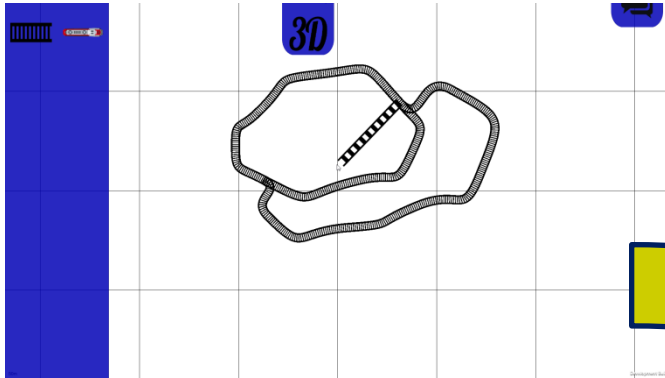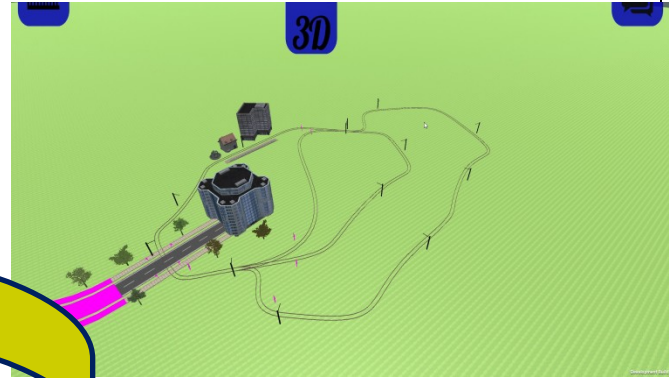
A success story of simulators

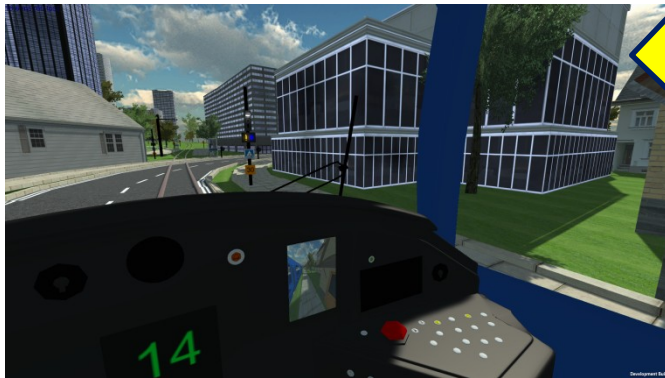2016-2018: Serious game for train driving

A success story of simulators

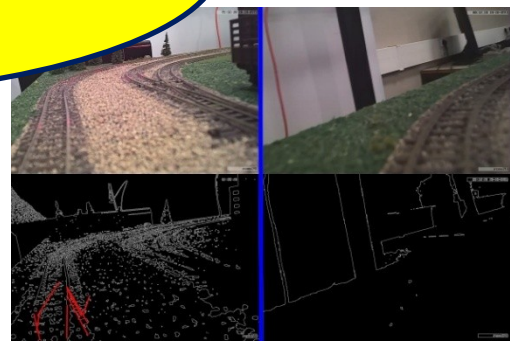

Railway editor

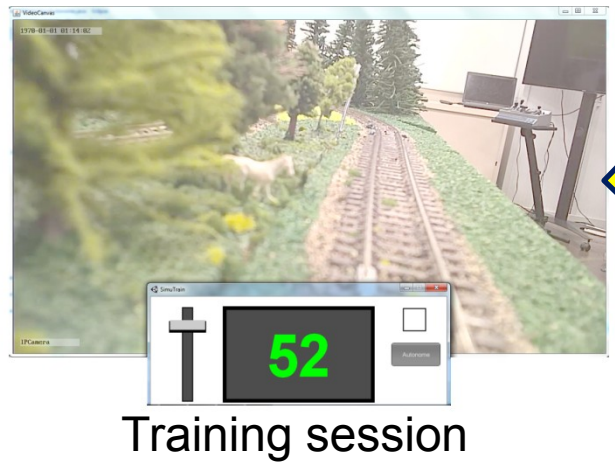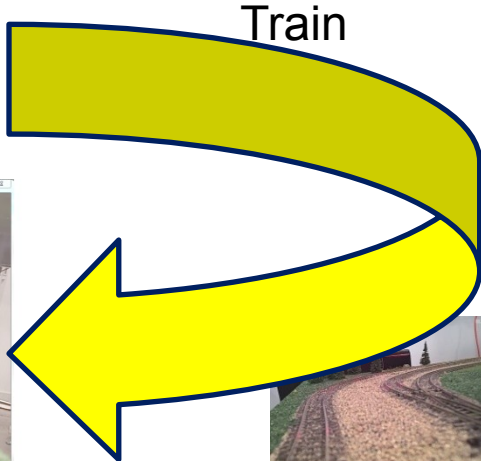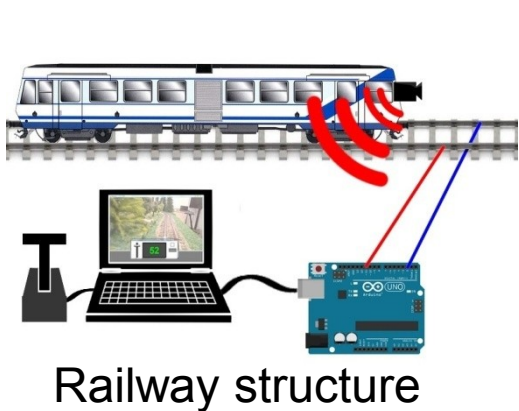Environment editor

Training session

Driving simulator

2017-2018: InnoRail1, extended 3D MissRail functions

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Railway structure

Train

Environment
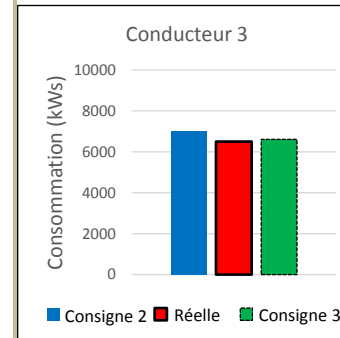

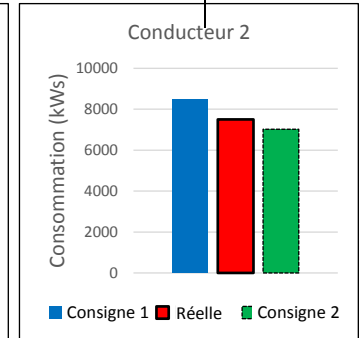Training session

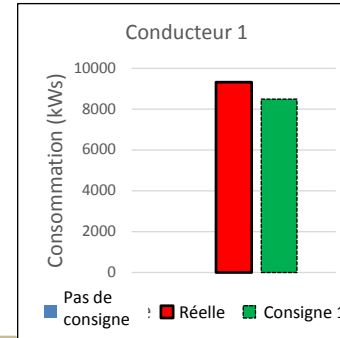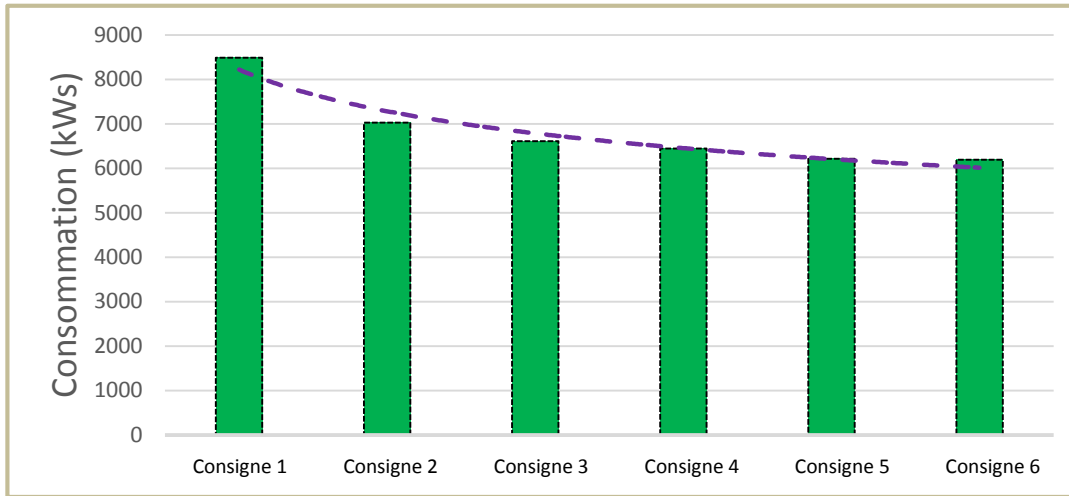Image Processing for autopilot

2017-2018: Innorail2, reality and physical add-on
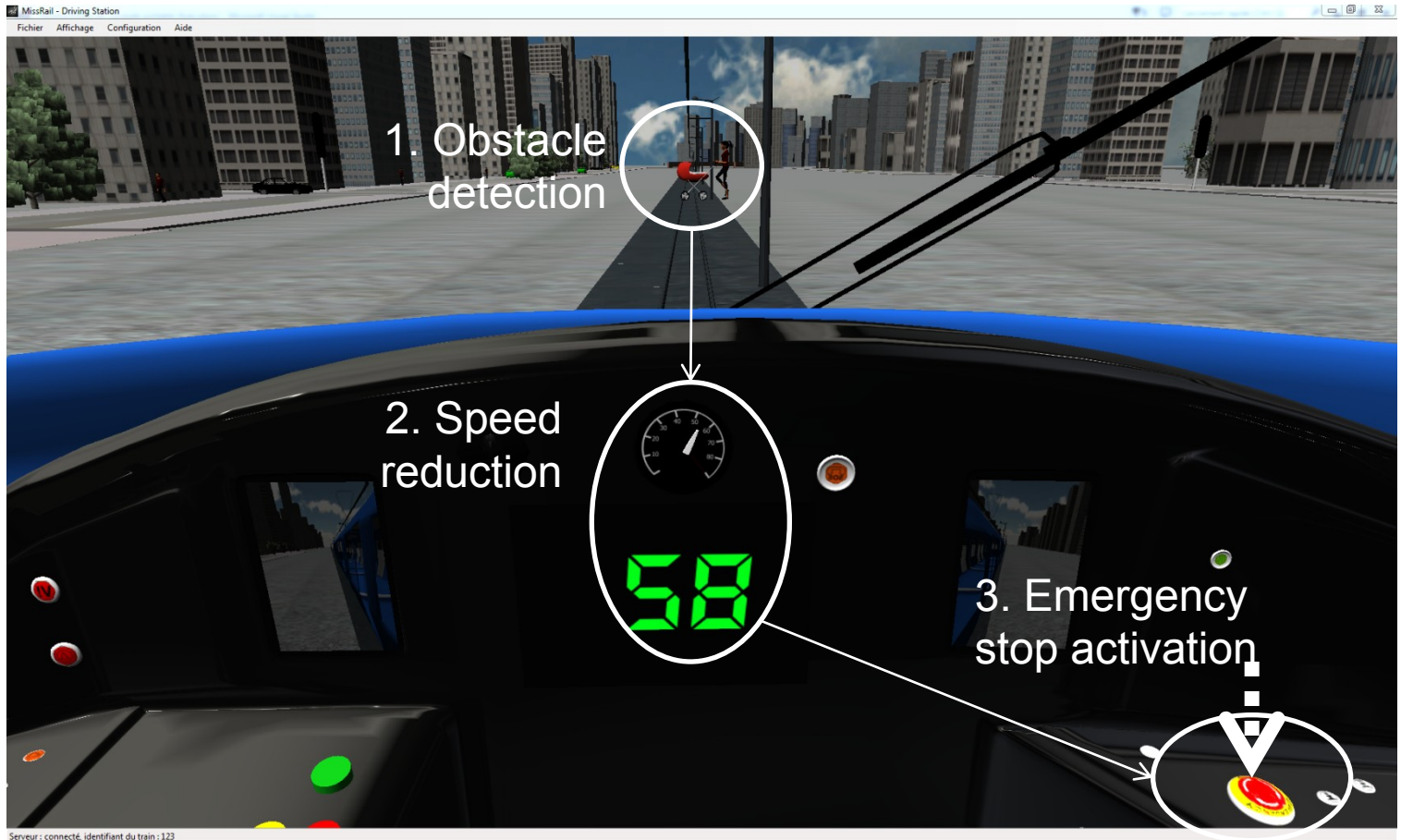
A success story of applications
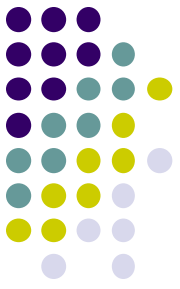
Example of research: Eco-driving supports
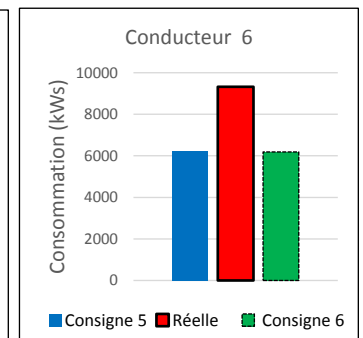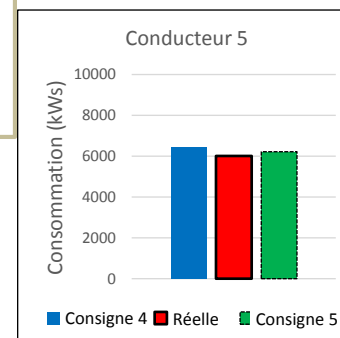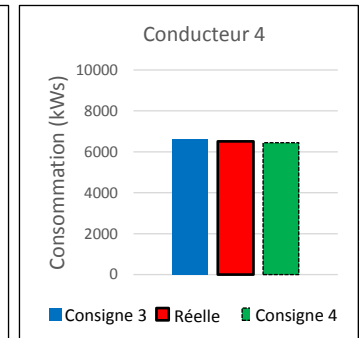
A success story of applications

Example of training: operations for avoiding obstacle

1. Obstacle detection

2. Speed reduction

3. Emergency stop activation

A success story of applications

Example of training: risk analysis process

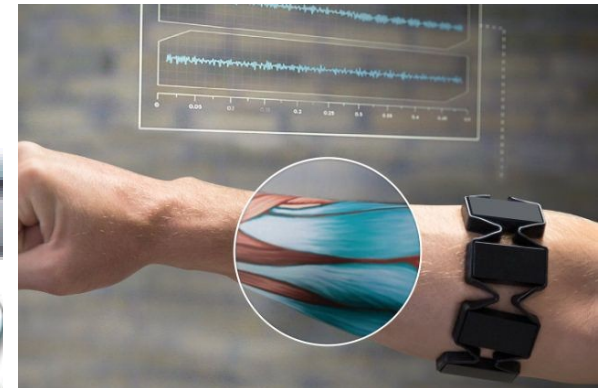Photo: F. Vanderhaegen

A success story of applications

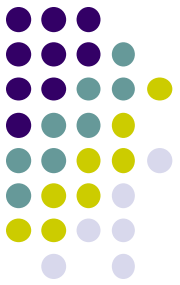Example of training: risk analysis process

A success story of applications

For research and training: study of multimodalities of interaction

The content of the presentation

1. MissRail demonstration

2. InnoRail demonstration