project: syntropy (Germany/Sweden/Shanghai-Singapore-Taiwan) creates technologies and solutions for professional simulation- and training environments, interactive immersive media based attractions, xD theatres, planetariums and multimedia experiences.

Project

Toronto Institute for Rehabilitation KITE - CEAL iDAPT DriverLab Driving Simulator

Customer

Toronto Rehabilitation Institute, KITE Institute for Rehabilitation Research, CEAL iDAPT DriverLab, Toronto/CDN on behalf of International Development of Technology b.v.

Project

Design, delivery and integration of a stereoscopic projection system for DriverLab's 360° dome projection screen consisting of a 12-channel WUXGA/120hz LED projection, a warp&blend solution and a patented domeprojection.com ProjectionTools autocalibration.

Project Details

CEAL (Challenging Environment Assessment Labs) is a huge subterranean research lab located beneath Toronto Rehab's University Centre, being the Centrepiece of the KITE Institute for Rehabilitation Research. CEAL features a large 6 degree-of-freedom motion base upon which iDAPT DriverLab can be mounted. CEAL iDAPT DriverLab is a one-of-kind-driving simulator focussing on effects of human conditions on driving safety and performance, not the vehicle development. The DriverLab features a 360° dome projection system, a full-sized passenger vehicle, mounted on a turntable and sophisticated measurement tools like an eye-tracking system.

After a successful co-operation on Toronto Rehab's CEAL StreetLab we were approached by IDT International Development of Technology b.v. to design, deliver and integrate the stereoscopic projection system for DriverLab consisting of a 12-channel WUXGA/120hz LED projection, a warp&blend solution and the patented autocalibration ProjectionTools by domeprojection.com.
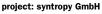
About Toronto Rehabilitation Institute

The Toronto Rehabilitation Institute, part of the University Health Network (UHN), operates a $36-million-dollar research centre called KITE Institute for Rehabilitation Research. It is one of the world's most technologically advanced reha-

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project:syntropy

bilitation research facilities. Interdisciplinary scientists and research students from a broad range of engineering and clinical disciplines develop new methods, technologies and treatments for rehabilitation.

The $4-million dollar 360° iDAPT DriverLab is the most advanced driving simulator in Canada, comparable to the top in the world, with unique features to create the most realistic driving experience globally.

DriverLab examines several key human interactions with driving.

- Support independent aging through customized licensing - testing people for driving in different circumstances.
- Study the effects of medication and drugs on driving performance - what safe dosages there may be.
- Research the implications of drowsy driving - and whether vehicles can detect it or warn you of it and keep you awake.
- Determine the full effects of automated and semi-autonomous driving systems.
- Reduce driving simulator sickness.

Our contractor, IDT International Development of Technology b.v. has been developing the DriverLab together with the Toronto Rehabilitation Institute for five years. DriverLab has been officially opened by the end of 2017.

**Videolinks: https://youtu.be/ddy9-gdlcpM
https://youtu.be/1giR7Pi7vdU
https://youtu.be/zeAOasWZsPM**

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- **FFS FULL-FLIGHT-SIMULATORS**
- **CT COCKPIT SIMULATORS**
- **HELICOPTER SIMULATORS**
- **TARGET SIMULATION**
- **JFST ACTION TRAINERS**
- **JTAC TRAINERS**
- **ATM TOWER SIMULATORS**
- **DRIVING SIMULATORS**
- **SHIPS BRIDGE SIMULATORS**
- **INDUSTRIAL SIMULATORS**
- **RESEARCH SIMULATORS**

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- **TURNKEY DIGITAL CINEMA**
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  - maintenance and support
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  - spareparts supply

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