



## D-BOX Motion Interface

### Introduction

FORUM8 in conjunction with its partner BMIA of Bordeaux, France is pleased to announce the new D-BOX driving simulator software interface. This is another innovative addition to the company's award winning real-time interactive 3D VR driving simulation & modelling software VR-Design Studio.

D-BOX Motion Systems are designed to transfer true-to-life motion and vibrations from the driving simulator to the driver. This is achieved by actuators that reproduce, in real time, the movement and driving sensations of a vehicle in its virtual environment. Vehicle motion: including acceleration, deceleration, road vibrations, pitch or roll, are all faithfully reproduced.



This development of the D-BOX software interface opens up a whole new range of driving simulators that can benefit from the unique features of VR-Design Studio.



A FORUM8 Premier Partner, Bordeaux, FRANCE [www.bmia.fr](http://www.bmia.fr)

### FORUM8 Driving Simulation Principles

The company's first design objective is to enable the simulation of the real world as accurately as technically possible. This includes being able to reproduce and control every conceivable environmental effect including: time of day, geographic location, shadows, street lighting, car headlights, puddles, rain, snow etc...

- Road traffic can be set and controlled including: vehicle speed, volume and direction, with the scenario editor enabling multiple 'what-if' events
- The sound of the engine, horn, tires (on different road surfaces), tunnel wind and vehicle crashes can all be simulated as well as environmental sounds, such as rain, wind, thunder & lightening



The second design objective of the FORUM8 development team is to enable VR-Design Studio to add value, via plug-ins, to 3<sup>rd</sup> party industry standard software like CarSim and CarMaker - as well as to many other data sources.

The result is that VR-Design Studio can now import data from a wide range of 3D engineering software products, as well as from terrestrial and air-born laser scanners, pilot-less micro drones, flood and tsunami modelling software and micro-simulation traffic and pedestrian systems.



## VR-Design Studio Driving Simulation

### Enables Transport Research

- Human Factors / Cognitive Responses & HILS
- Advanced Vehicle Safety Systems & ITS Developments
- Physical Impairment & Distracted Driving

### Facilitates Driver Training

- Advanced Professional Driving Courses
- Teen Driver Programs in all weathers
- 4 x 4, Bus & Heavy Vehicle on & off road Driving

### Interactive 3D VR Environments

- Build / use Hypothetical or Real road networks
- Develop Multiple Driving Scenarios / events – REM GUI editor
- Total control of all Environmental factors
- Monitor and Report on Driver behaviour

### Vehicle Dynamics

- Control in-car Vehicle Dynamics
- Import data from specialist 3<sup>rd</sup> party software (CarSim / CarMaker)

### Driving Simulation Customisation

- Eye Tracking, Digital Dashboard, HILS, ADAS, Autonomous Driving etc.
- Oculus Rift Immersive 3D Driving
- Bicycle Sim, Rail Sim, 6DOF hexapod systems
- Multiple Driver Training with Cluster system



## VR-Design Studio (Real-time interactive 3D VR simulation software)

VR-Design Studio is used in a range of urban & transport simulation & modelling applications worldwide, including urban, traffic and pedestrian planning & design and is often used for consensus building through stakeholder consultation.

Users can manipulate 3D space dynamically, import and edit CAD data, build and texture models, automatically build roads, tunnels & bridges, view multiple design alternatives in real-time, both offline and online, as well as being able to visualize and edit intelligent traffic in ways previously not possible.



## FORUM8 the Company

Established in 1987 the company's HQ is in Tokyo, with five other development and support facilities in Japan as well as a Super Computer Cloud Research Lab in Kobe. Overseas offices based in UK, China, Taiwan, Viet Nam, Korea, Australia and Canada with remote facilities in San Francisco and Paris.

FORUM8 also benefits from a network of Partners worldwide.

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