VR-Drive
Virtual Reality Driver Training / Research Option

Product Overview

The VR-Drive option is a packaged product that combines a range of VR-Drive driving scenarios and an appropriate Driving Simulator hardware platform – subject to user requirements and budget.

Driving Simulator System Example Configuration

- Navigation monitor
- Ignition key module
- Acceleration, brake and Clutch pedals
- Push button for manual operation
- Safety seat belt
- Change shift lever (automatic)
- Seat and seat vibrator

Related optional software
- ECO Drive (plug-in option)
- VR-Design Studio Micro Simulation Player (plug-in option)
- SDK (development kit)

Hardware

In addition to this standard configuration it is also possible to cluster a number of DS hardware platforms and PCs together to enable the drivers to experience the same driving environment by means of our Multi-user cluster system. The Log export plug-in enables the trainer / researcher to record, monitor and report on all aspects of the drivers’ behavior.
Safer Driving Educational Material

1. Based on the certification standards for driving simulators

   1) Lesson on hazard perception (5.5 km road with 13 hazards)
   2) Lesson on night-time driving (5.5 km city road with 9 hazards)
   3) Lesson on sudden braking (Braking distance on dry, wet and frozen surfaces)
   4) Lesson on driving on the highway (over 15 km highway or freeway with 8 hazards)
   5) Lesson on location-specific conditions (over 8 km with specific location-specific conditions including climate and geographical features.)
   6) Lesson on driving in bad condition (over 5 km road featuring 5 sections with bad driving conditions.

2. Optional scenarios

   7) Lesson on identifying violations
   8) Lesson night-time visibility

Diagnosis/Data collection program

Diagnosis is carried out using the data collected during the above driving lessons. Data from all the participants is collected for calculation of aggregates and statistics.

Based on the standard of driving simulator: Standard scenario

1. Lesson on Hazard Perception

Hazardous events on the 5.5 km road (13 in total) are simulated within the 3D environment and users can experience these by driving in the simulator.

Pedestrians

- Collision with a pedestrian
- Turning corners
- Collision with pedestrians on a busy road
2. Lesson on night-time driving

To acquire the knowledge and the skills for night-time driving, users can experience driving on a 5.5 km city road with 9 hazards included.
3. Lesson on sudden braking

Braking distance on dry surface, wet surface and frozen surface based on certification standards

<table>
<thead>
<tr>
<th>Driving speed on wet surface and the braking distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>100km -&gt; 0km (kph)</td>
</tr>
<tr>
<td>80km -&gt; 0km (kph)</td>
</tr>
<tr>
<td>60km -&gt; 0km (kph)</td>
</tr>
<tr>
<td>40km -&gt; 0km (kph)</td>
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<tr>
<td>20km -&gt; 0km (kph)</td>
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</tbody>
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4. Lesson on driving on the highway

Users can acquire driving skills by experiencing driving on a 15 km highway with more than 8 hazards.

ECT (Toll gate)
### Main line
- Collision with a stopping vehicle
- Low visibility (fog etc.)
- Slipping on snow or rain
- Falling object ahead

### Main line (confluence and branch part etc.)
- Merging Traffic
- Speeding at a corner
- Congestion at a ramp
- Vehicle travelling the wrong way

### Filling Station (Service Station)
- Collision with a pedestrian
- Collision with other vehicles
- "Smart IC" Lane
5. Lesson on location-specific conditions

Users can drive along 8 km of road to learn about location-specific conditions including different climate and geographical features.

- Overtaking a bicycle
- Speeding at a corner
- Collision with the car ahead
- Intersection without traffic lights
- Animals crossing

6. Lesson on driving in bad condition

Users can experience the driving knowledge and skills by driving over 5 km length road featuring 5 sections with bad driving conditions.

- Accident on road (cause of distraction)
- Snowy condition
- Blizzard condition
- Rainy condition
- Foggy condition
- Dense fog
### Optional Scenarios

#### 7. Lesson on identifying violations

Examines the responses to cyclists rushing out, pedestrians and stopping vehicles at an intersection.

- **Collision with a bicycle**
- **Collision with a stopping vehicle**
- **Collision with a pedestrian**

#### 8. Lesson on night-time visibility

Experience night-time driving using headlights.

- **Pedestrian in light-colored clothing (low beam)**
- **Pedestrian in dark-colored clothing (low beam)**
- **Road works**
- **Pedestrian in light-colored clothing (high beam)**
- **Pedestrian in dark-colored clothing (high beam)**
- **Red vehicle**
Alternative VR-Drive System Configuration

For more details please contact office@forum8.com

Forum8 the Company

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