



CASE STUDY

April 2016

UET Taxila choose FORUM8 Interactive Driving Simulation software

Background

University of Engineering & Technology Taxila is one of the foremost technological Universities in Pakistan. The University campus is located on the outskirts of Taxila and 35 km from the twin cities of Islamabad and Rawalpindi.

Taxila is an ancient city and World Heritage site, the ruins of which can still be visited. Its prosperity in ancient times resulted from its position at the junction of three great trade routes, described by the Greek writer Megasthenes as the "Royal Highway."

Taxila, besides being a provincial seat, was also a centre of learning. There was a University in Taxila that flourished from 600 BC to 500 AD. At one stage, it had 10,500 students including those from Babylon, Greece, Syria, and China. Experienced masters taught a wide range of subjects including: languages, grammar, philosophy, medicine, surgery and engineering.

The Project & UET Taxila Today

The current University College of Engineering Taxila was established in 1975. It has teaching and research facilities for all engineering and science subjects.

Dr. Awais Yasin of the Department of Mechanical Engineering approached FORUM8 to see if we could solve his problem. They wanted to build a state of the art Driving Simulator system based on a 6-DOF Stewart Motion Platform and hence required the very best and most comprehensive real-time interactive 3D software with which to work.



As Dr Yasin said, *“Before starting our project, we did a detailed survey of the drive simulator market and visited a large number of universities and private companies in China.*

“The places we visited include: Tsinghua University, Beijing; Tongji University, Shanghai; Wuhan University of Technology, Wuhan; dSPACE, Shanghai; Beijing Mejicode Science & Technology Co. Ltd; Jilin University, Changchun; Nanjing Doron Technology Co. Ltd.

“All these universities and private companies were using different software tools of different origins, but one thing was common in that they were all using different software for different modules of their driving simulator. We did not want to replicate this and hence continued looking.

“In the light of our survey, we studied different options for our project involving the use of Carsim / Trucksim, Labview, SimCreator, Multigen Creator, dSPACE Hardware & Software, open source Graphics Libraries and Game Engines... Mersive, Matlab/ Simulink and many more...

“Our final selection of UC-Win/Road (VR-Design Studio) was based on the fact that no other software had the overall comprehensive functionality (‘All in One’) as UC-Win/Road, with both ease of use and cost effectiveness.

“I am delighted to report that the FORUM8 software is proving to just as functional as we had predicted. It is early days but we are confident that we have chosen wisely and look forward to working with FORUM 8 for many years to come.”

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Editor’s Note:

FORUM8 produces state-of-the-art interactive 3D VR simulation software. Established in 1987 this award winning Japanese company has offices and partners on every continent and is a member of the ITE and an associate of the TRB visualization group.

VR-Design Studio (formerly UC-win/Road) is the company’s premier 3D product leading the way in interactive high resolution 3D transport, urban and emergency simulation markets, worldwide.

FORUM8 has two design goals. The first is to enable VR-Design Studio users to accurately replicate the real world within 3D space. The second is to provide added value to other industry standard 3rd party software products through the production of appropriate software interfaces (plug-ins).

VR-Design Studio enables users to not only build, but also dynamically manipulate 3D space in real-time. They can import and edit CAD data, build and texture block models, automatically build roads, tunnels & bridges, view multiple design alternatives in real-time, control the weather / environment, as well as being able to simulate, visualize and edit intelligent traffic in ways previously not possible & much more...

VR-Design Studio is therefore an ideal tool [for urban, traffic and pedestrian design](#) / [planning](#) as well as consensus building through stakeholder consultation.

In addition there are many software plug-ins available which enable users to add value to data from 3rd party software products. These include plug-ins for design and engineering products along with driving simulation systems.

Other plug-ins provide users with the ability to generate real-time 3D simulation environments from 2D data whether that's flood models, debris & avalanche calculations, traffic micro-simulations, evacuation data, or point-clouds produced from Lidar and laser scanners.

A software development kit (SDK) is also available as is a web interface and cloud system that allows for online viewing and manipulation of the 3D environments.

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