FORUM 8

Case Study

I-80 Integrated Corridor Project, Contra Costa County, California

Project Outline

The project involved the production of an accurate, photo-realistic 3D interactive model of the I-80 corridor travelling Westbound in the Contra Costa County from University Avenue to the Bay Bridge using FORUM8's award winning 3D Visual Interactive Simulation technology **UC-win/Road**.

Forum8 produced an accurate virtual-reality model of the I-80 corridor, its street furniture, its existing signage, its surrounding infrastructure and the built environment. In addition it constructed and added into the virtual environment 3D CAD models of the 12 new overhead sign gantries and other project details as detailed in the engineering consultancy's preliminary design drawings.

Once built Forum8 activated the virtual 3D environment and populated it with appropriate vehicles. Scripts were set up so that users could drive in both directions on the I-80, either as driver or passengers – by means of a low cost Logitec Steering Rack - and thereby assess the visual impact of the proposed gantry signs along the corridor. Furthermore, the gantry signs included "live" changeable message signs that could be programmed by the user of the interactive 3D model.

The project also included the on-site training of the ICM consultants' staff in how to activate the model and how to alter vehicle volumes, speed, type and overall environmental conditions.

Technical support was provided by the Forum8 Technical Support Centre in Phoenix Arizona.

Project Detail

The project involved:

* The integration of an accurate 20km x 20km Digital Terrain Map into UC-win/Road
* Overlaying accurate aerial photography onto this terrain
* The modeling of the 16.1 km (10 miles) segment of highway I-80
* Including all road intersections, overpasses etc.
* Construction and positioning of all associated buildings using Google Building maker
* Production and customization of all existing road signage
(Note: *The additional research and photography of existing signage was conducted by the consultants*)
* Addition of appropriate vegetation, pedestrians and any additional infrastructure

* Production and positioning of the 12 new gantry signs and other project details as shown in the preliminary design drawings
* Production of the appropriate scripts, movies and screenshots as requested.
* Assistance of ICM and its consultants in the web posting of the above movies and screenshots as required

Project Schedule

The finished project as specified was completed within 4 weeks of receiving a "Notice to Proceed".

Utility

In addition to fulfilling the requirements of the client's brief, this virtual 3D highway environment for the I-80 corridor was also able to form the basis of an extended corridor model, as and when required by the client.

If the highway model was extended it would allow the client to evaluate other projects along the corridor such as HOV-lane options and potential expansion of the ICM Project adjoining routes.

In addition, once this initial simulation model was completed, the partners would be able to make use of the many associated third-party software plug-ins to maximize the utility of the UC-win/Road software. These plug-ins include: Civil3D, InRoads, Vissim etc. (see www.forum8.com)

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