Formerly called UC-win/Road

S-Paramics Plug-in

The S-PARAMICS Plug-in Option enables data exchange between VR-Design Studio and S-PARAMICS to provide a great combination of traffic analysis and 3D virtual reality by linking one of the leading traffic micro-simulation solutions with Forum8's state-of-art software.

Program functions and features

S-PARAMICS and VR-Design Studio can share the same road network information by exchanging geometric data of the road. S-PARAMICS/OpenMicroSim Conversion Tool enables you to visualize the simulation result of S-PARAMICS, and the S-PARAMICS plug-in can then be used to maintain the positions of the vehicles and the roads.

The Virtual reality environment of VR-Design Studio can be used to visualize landscapes, road designs and traffic as well as to check road conditions from the driver's viewpoint on our state-of-the-art Drive Simulator. In addition, this plug-in option can be used for high quality traffic simulation.

The amount of work can be greatly reduced by converting the road network data created in VR-Design Studio and using it in S-PARAMICS for simulation. We envisage that the reciprocal data exchange between VR and traffic analysis will create an ideal combination between the comprehensive visualization and the state-of-the-art technology to help improve the road conditions and the traffic.
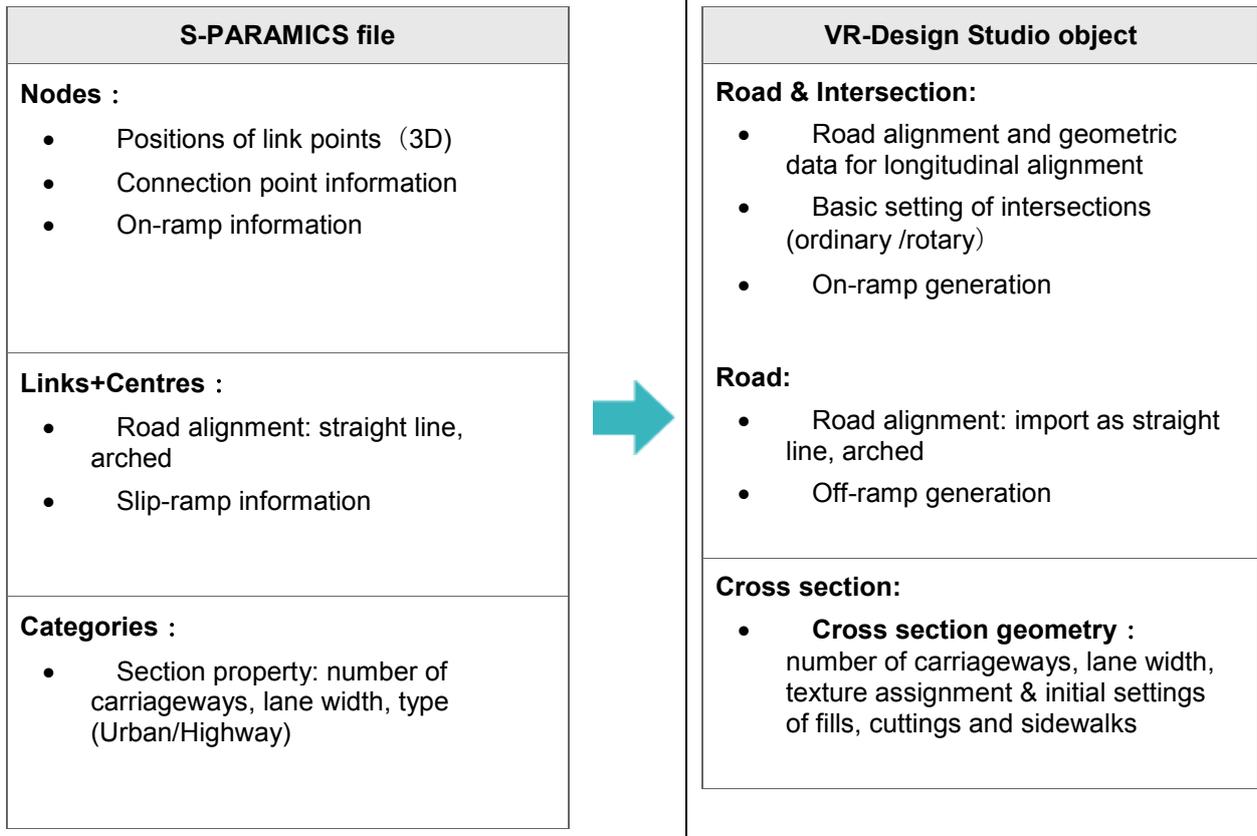
Data exchange function

Due to the difference in data formats for road networks in traffic simulations and in Virtual Reality, a data conversion is required. S-PARAMICS does not require as much information about roads for simulating traffic as VR-Design Studio does. Therefore, it is more practical to carry out detailed settings on the road after the data is imported into VR-design Studio from S-PARAMICS.
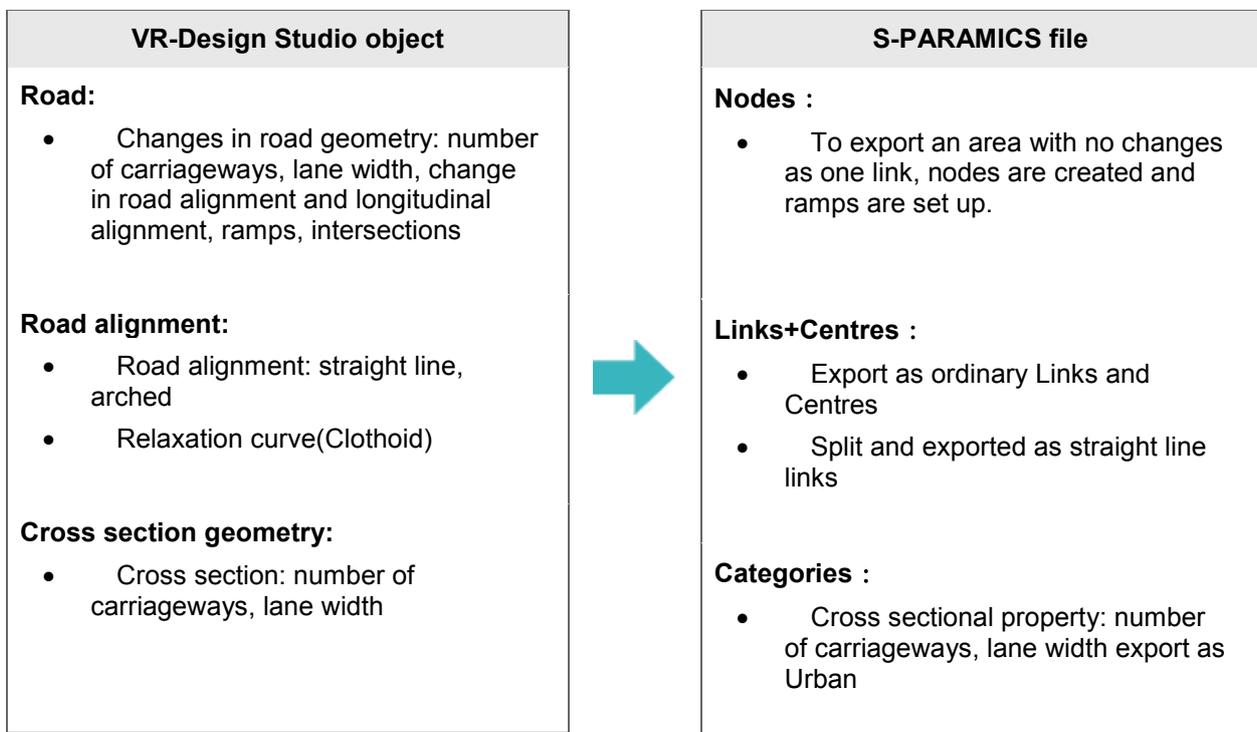
On the other hand, detailed traffic settings, including connection points, must be carried out after importing data from VR-design Studio to S-PARAMICS.

The plug-in option is designed to minimize the work load by exchanging data. Details of data exchange are described below.
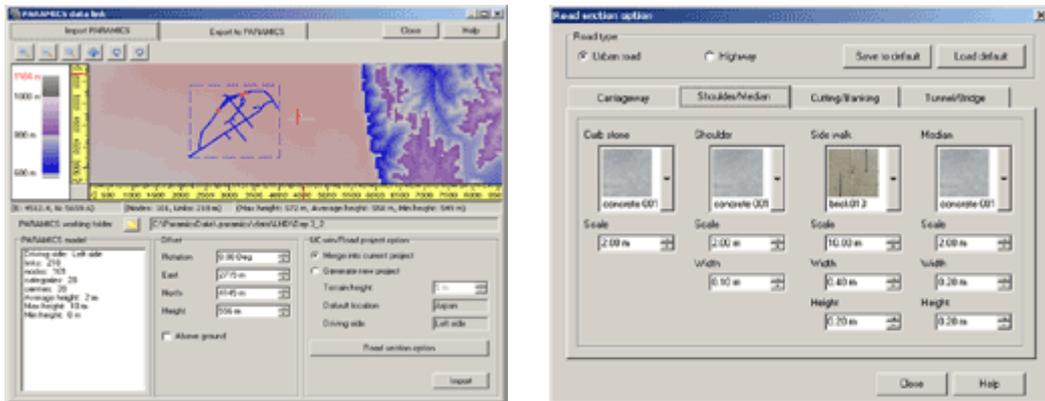
▼S-PARAMICS data import and export specifications

S-PARAMICS file	VR-Design Studio object
Nodes： • Positions of link points（3D) • Connection point information • On-ramp information	**Road & Intersection:** • Road alignment and geometric data for longitudinal alignment • Basic setting of intersections (ordinary /rotary） • On-ramp generation
Links+Centres： • Road alignment: straight line, arched • Slip-ramp information	**Road:** • Road alignment: import as straight line, arched • Off-ramp generation
Categories： • Section property: number of carriageways, lane width, type (Urban/Highway)	**Cross section:** • **Cross section geometry：** number of carriageways, lane width, texture assignment & initial settings of fills, cuttings and sidewalks

▼S-PARAMICS data export specifications

VR-Design Studio object	S-PARAMICS file
Road: • Changes in road geometry: number of carriageways, lane width, change in road alignment and longitudinal alignment, ramps, intersections	**Nodes：** • To export an area with no changes as one link, nodes are created and ramps are set up.
Road alignment: • Road alignment: straight line, arched • Relaxation curve(Clothoid)	**Links+Centres：** • Export as ordinary Links and Centres • Split and exported as straight line links
Cross section geometry: • Cross section: number of carriageways, lane width	**Categories：** • Cross sectional property: number of carriageways, lane width export as Urban

■User interface

The data to be imported can be viewed easily. The parameters for the import and the textures of the cross section can also be chosen.

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…for improved urban, transport, pedestrian, emergency & security design & planning, driving simulation, public consultation and human factors research

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