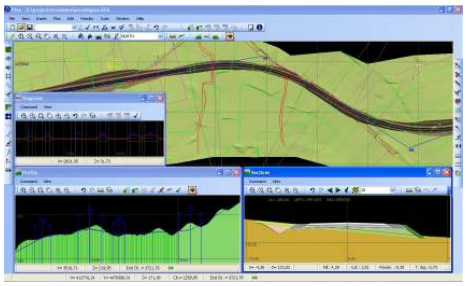
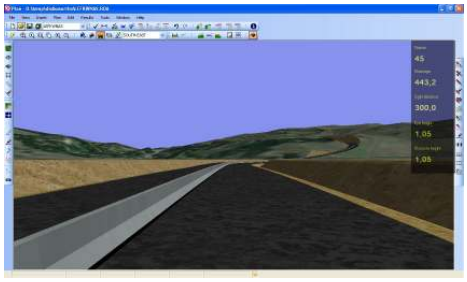
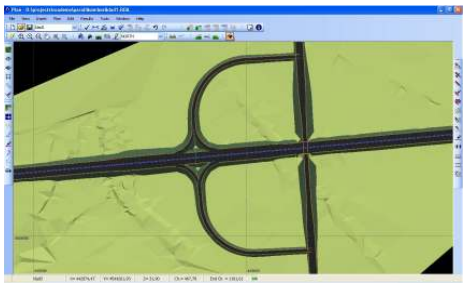
www.diolkos3d.com

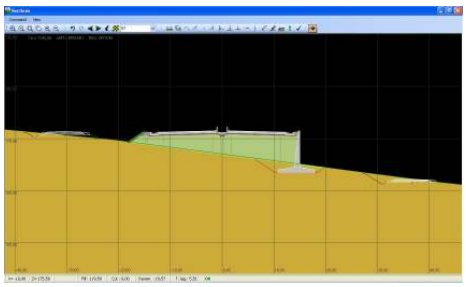
3D Road Design & Construction Software

- Complete and robust solution for designing all types of road projects in a visual multifunctional 3D environment.
- Slightly integrated with Direct3D and OpenGL.
- Separate application able to create, edit and project in 3D space digital terrain models (DTMs). Involves very fast constrained delaunay triangulation and contour calculation algorithms. Breaklines and holes insertion. Filters for points, breaklines and 3d faces. Insertion / Exportation from/to text XYZ or DXF files. Image projection on the terrain mesh.
- RAS, AASHTO and OMOE guidelines. Design for plan, profile, diagrams, cross sections, earthwork volumes, quantities measurement.
- Design diagrams for superelevation rate, pavement widenings, drainage layer, visibility and V85 speed.
- Quick and easy insertion and modification of project's geometry. Real time 3d presentation of the project (for simple or multiple road projects). Real time 3d animation along the road axis. Checks for the final stopping sight distance along the road axis.
- Survey terrain from set of 3d faces (TIN) or 3d lines (e.g contour lines). Incidentally shape definition for fills and cuts side slopes. Upgrading design adjacently to existing road pavement. Calculation for drainage layers, capping layer, regulating course layer, benching, soil replacement cuts, walls, culverts and guardrails.
- Visual typical cross section definition, material assigning. Extensive build-in typical cross section library.
- Quick calculation for all cross sections at every plan modification. Automatically stations insertion and reconstruction of the Road-Terrain 3d model when plan geometry changes.
- Multiple road projects (service roads, intersections). Modification of each road independently from its direction. Road axis editing regardless stations projection between parallel roads.
- Swept paths calculation in order to study vehicle turning maneuvers in sharp curves.
- Design of hydraulic channels of random shape cross sections. Study of existing riverbed, water supply scaling, calculation of water cover areas. Drawing production according to the hydraulic project requirements.
- Quantities measurements during the construction stage (Import/Export via text files). Free insertion or modification (via mouse or keyboard) of cross sections lines. Utilities for automatically layer creation based on quantities measurements during the construction stage.
- On line CAD drawings production with Microsoft ActiveX automation technology or with DXF files. Simply project manipulation. All the design data are stored in a single file.









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