

CADICS

Road and Railway Design

CADICS Roads

CADICS-ROADS is a complete system for road or railway design.:

- Horizontal situation (straights, arcs of circle, transition curves).
- Long sections (straights, circles, parabolae).
- Cross-sections.
- Superelevation and extra widths.
- Complex junctions, roundabouts.
- Interfaces to most popular products.
- Setting out and point export.
- Cut and fill calculation.
- Photorealistic pictures and animation.

Alignment design

A large quantity of geometric elements (straights, circles, transition curves) allow any project to be defined. A dynamic mode option allows objects such as points, radii or distances to be modified progressively and to watch the effect on the whole alignment on the screen.

Multiple windows allow different options to be viewed simultaneously, and to see the effects of a change of one aspect of the project on all others.

Cross-sections

CADICS builds a complete three-dimensional model of the project. This allows cross-sections, perspective views or quantities to be obtained whatever the complexity of the project (complex junctions, roundabouts).

Templates (carriageway, slope, formation) stored in a library or created specifically for a project define the structure of the road segment by segment. Changes between templates can be immediate or gradual.

Superelevations can be calculated automatically or modified by hand. They are treated separately from cross-section templates, as are extra widths.

Ground Model

A digital ground model is used to ensure that the road is correctly integrated in its environment. It can be generated by a point coordinate file or by other means such as 3D DXF or aerial survey.

It is used to create long sections, cross-sections and the three dimensional model of the project.

Quantities

Volumes, surfaces and lengths of the elements of the road are calculated automatically and serve as the basis for estimates.

Setting Out

All detail points of a project can be exported with their coordinates and types in ASCII files.

Setting out tables (polar or orthogonal) can also be produced.

Plans and Documents

A complete set of plans as well as various lists can be produced at any one time.

Graphical parameters of the output can be defined by the user (size of characters, colours, distances, etc...). They can be reused for new projects.

Important documents

- List of geometric elements (horizontal and vertical).
- List of axis points.
- List of profile points.
- Surfaces and volumes: detail and totals.
- Top view.
- Long sections.
- Multi-axis cross sections.
- Perspective views.
- Transport diagrams.

Interfaces

CADICS contains many interfaces to normalised data formats:

- DXF : Input and output.
- Intergraph : Input and output.
- DA21 / DA40 : Input and output (axis alignment).
- DA55/DA66 : Output.
- GENIO : Input and output.

Standards

Numerous national and international standards have been integrated into CADICS which has been used for projects in Switzerland, France, Germany, Great-Britain, Croatia.

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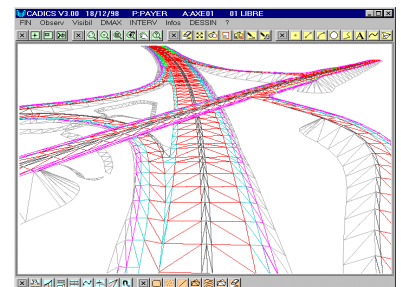
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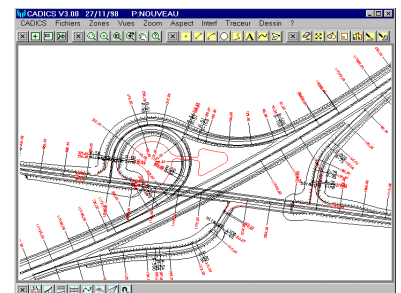
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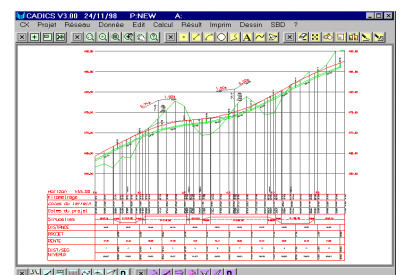
3-D photo-realistic perspective obtained from a road model.



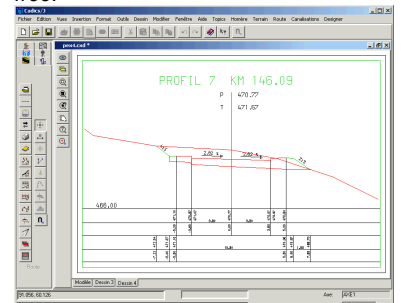
Perspective views, with or without the ground allow the visual impact of a project to be controlled.



Plans can integrate cadastral data and be completed with titles and other external indications.



The choice of indications which complete long sections is completely free.



Cross sections can be positioned automatically on large pages.