Extensions



Carmenta Engine 5.7 Extensions



3D EXTENSION 3

- Enables interactive 3D fly-throughs with dynamic loading of data.
- On the fly generation of 3D worlds straight from 2D/3D GIS data in any format supported by the Engine no 3D modeling is needed.
- Nearly all 2D visualisations can also be used in 3D, including Tactical Extension military symbology.
- 3D ground is generated on the fly from elevation raster data or 3D point clouds.
- Any combination of 2D map layers can be draped over the 3D ground.
- Support for VRML and 3D Studio (.3ds) 3D models.
- 3D parameters such as camera and sun position, camera angles and visibility can be dynamically set.
- Automatic generation of fences and buildings from 2D lines and polygons.
- Can be integrated with SilverLining[™] from Sundog Software for realistic weather effects.



VERTICAL PROFILE EXTENSION

- Extension for generating vertical profiles along routes.
- Profiles can be generated from both raster and vector data.
- Fits perfectly into the Carmenta Engine model. Generated profiles are visualised using the normal visualisation model, and input can be other analysis operations such as a 3D view shed from a line of sight calculation.
- Makes it possible to add multiple layered vertical profiles in the same view. A second profile can e.g. show vegetation features such as trees.

CATALOG EXTENSION

- Gives Carmenta Engine based applications a structured way to handle background maps. A Catalog can be instantiated either from a local folder or from an OGC CSW service.
- The Carmenta Map Builder application (sold separately) gives end users an easy way to add new maps to the catalog.



VERTICAL CLEARANCE EXTENSION

- Extension for efficient calculation of the vertical clearance in a corridor around routes.
- Can take both terrain and vector obstacles into account.



TACTICAL EXTENSION

- Extension for creating, managing and visualising tactical symbols according to the DOD MIL-STD-2525 and NATO App-6 standards.
- For more information please refer to the separate Carmenta Engine Tactical Extension product sheet.



NAUTICAL CHART EXTENSION

- Extension for reading and rendering Nautical Charts according to the IHO S-57, S-63 and S-52 standards.
- For more information please refer to the separate Carmenta Engine Nautical Extension product sheet.



VISIBILITY ANALYSIS EXTENSION

- Extension for performing high-performance visibility calculations.
- Uses elevation data to compute the regions that have a free line of sight to the position of a geographical object.
- Extremely rapid designed to be computed on-the-fly for moving objects.
- Can use multi resolution data sources.
- The line of sight result consists of raster values that specify how tall an object has to be to be seen at a specified position. This can be used for a colourcoded visualization as in the picture above.
- The result can also be visualised as a surface in 3D or intersected and visualised in a vertical profile.
- Many configurable sensor parameters, such as lobe size, maximum range and refraction means that the calculation can also be used for determining the line of sight from regular or phased array radar systems.
- Also provides high-performance calculation of intravisibility between multiple moving objects, useful for target tracking.
- Can determine the optimal positions for surveying a specific area.
- Also contains functionality for computing the shadows cast by terrain features such as mountains on a specific time and day.

PRINTING EXTENSION 1, 3

- Extension for handling scale-correct printing of maps and other Carmenta Engine 2D Views on printers.
- Support for printing directly on printer with printer's resolution or indirectly by first rendering to an internal bitmap.
- Support for tiled printing for large paper sizes such as A0.

MILITARY GEODATA FORMATS EXTENSION

 Adds functionality for reading military geographic data in CMRG (PCMap), DFAD and RPF (CADRG and CIB) formats.

TERRAIN VEHICLE ANALYSIS EXTENSION

• Extension for calculation of terrain vehicle accessibility and speed in terrain.



ARINC 424 EXTENSION

 Reads aeronautical navigation database files on the ARINC SPECIFICATION 424-16, 424-17 and 424-18 formats.

MAP PACKAGE EXTENSION

- Makes it possible to package a mix of map images, raster data and vector data in a single, optimized package.
- Especially useful for mobile devices where it is essential to minimize the amount of processing necessary to read and display data.
- Supports the OGC GeoPackage standard to ensure interoperability with other systems.

C-MAP CM93 EXTENSION 1, 2, 3

 Functionality for reading Jeppesen C-Map CM93 nautical chart data.

C-MAP CM93 S52 PRESENTATION EXTENSION ^{1, 2, 3}

• Adds support for visualizing CM93 data according to IHO S-52.

DWG AND DXF EXTENSION 3

• Extension for reading CAD databases in DWG and DXF, the AutoCad file formats.

SPATIAL DATABASE EXTENSIONS 3

Extensions for reading geospatial data from different kinds of database systems:

- Microsoft SQL Server Extension
- MySQL Extension
- Oracle Spatial Extension
- PostgreSQL/PostGIS Extension

RADAR PLOT EXTENSION

- Extension for efficient rendering of radar plots and other extremely dynamic information.
- Easily handles millions of continuously updating plots.
- For more information refer to the separate Carmenta
- Engine Radar Plot Extension product sheet.

¹ Not available on Carmenta Engine Linux.
² Not available on Carmenta Engine 64-bit.
³ Not available on Carmenta Engine for Android.



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