



## Carmenta Engine 5.8 Extensions

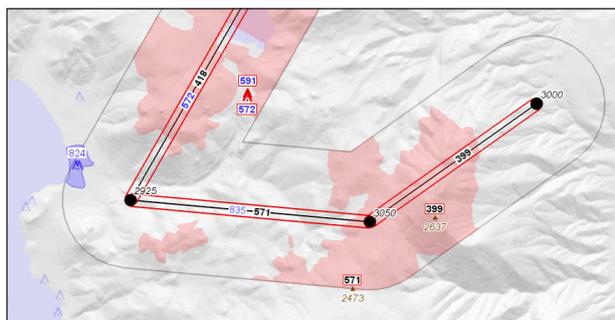


### 3D EXTENSION <sup>3</sup>

- 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.
- For more information, refer to the separate Carmenta Engine 3D Extension product sheet.

### EXTENSIONS FOR TERRAIN ANALYSIS

- Vertical Profile Extension: Generates a vertical profile along routes, cutting through both terrain and vector data sources such as airspaces.
- Vertical Clearance Extension: Calculates the terrain and obstacle clearance in a corridor around routes.
- Terrain Warning Extension: Dynamic terrain colouring in 2D and 3D to indicate the distance to the aircraft.
- For more information, refer to the separate product sheet Carmenta Engine Extensions for Terrain Analysis.



### 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.

### GEOREFERENCED VIDEO EXTENSION

- Makes it possible to georeference full motion video streams on the fly in order to display the video overlaid on the map.
- For more information, refer to the separate Carmenta Engine Georeferenced Video Extension product sheet.



### TACTICAL EXTENSION

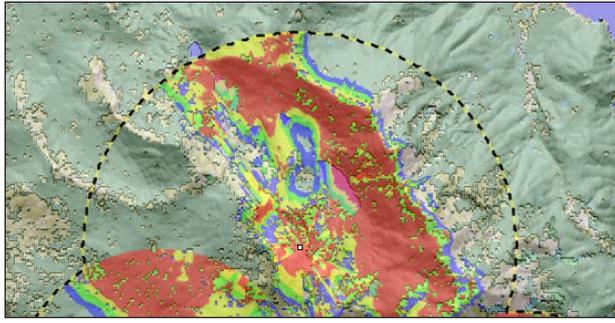
- Extension for creating, managing and visualising tactical symbols according to the DOD MIL-STD-2525 and NATO App-6 standards.
- For more information please refer to the separate Carmenta Engine Tactical Extension product sheet.



### 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 colour-coded 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<sup>1, 3</sup>

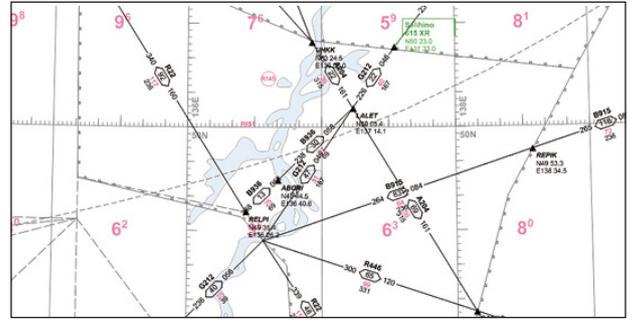
- Extension for handling scale-correct printing of maps and other Carmenta Engine 2D Views on printers.
- Support for printing directly on printer with printer's resolution or indirectly by first rendering to an internal bitmap.
- Support for tiled printing for large paper sizes such as A0.

## 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<sup>1, 2, 3</sup>

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

## C-MAP CM93 S52 PRESENTATION EXTENSION<sup>1, 2, 3</sup>

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

## DWG AND DXF EXTENSION<sup>3</sup>

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

## SPATIAL DATABASE EXTENSIONS<sup>3</sup>

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.

<sup>1</sup> Not available on Carmenta Engine Linux.

<sup>2</sup> Not available on Carmenta Engine 64-bit.

<sup>3</sup> Not available on Carmenta Engine for Android.



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