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What's New in Carmenta Engine 5.2

64-bit Version

Carmenta Engine 5.2 introduces support for developing native 64-bit applications on 64-bit Windows versions. This means that Carmenta Engine now can operate with other 64-bit components (such as 64-bit databases) in applications.

Another advantage is that 64-bit applications can allocate more than 3 GB of internal memory. This can lead to significant performance improvements, since the application can store larger quantities of data in the fast internal memory.

The 64-bit version of the Carmenta Engine SDK is available as a separate installation package and can co-exist on the same machine as the 32-bit Carmenta Engine SDK, thus enabling development of 32-bit and 64-bit applications simultaneously.

Real-Time Label and Symbol Deconfliction

There has been a significant improvement in the automatic placement of texts and symbols to prevent overlapping: The LabelOrganizingLayer can now organize texts and symbols that are cached inside a TileLayer. This greatly improves the speed of organizing the labels and also makes it possible to use the Carmenta Engine's sophisticated text and symbol placement algorithms in real-time and in 'moving map' systems.

App-6B and App-6C Tactical Symbology Support

The Tactical Extension now has support for drawing point symbols according to the NATO Allied Procedural Publication 6B (App-6B) standard, and partial support for symbols from the App-6C Draft 1 standard. This complements the existing comprehensive support for the US MIL-STD-2525B standard.

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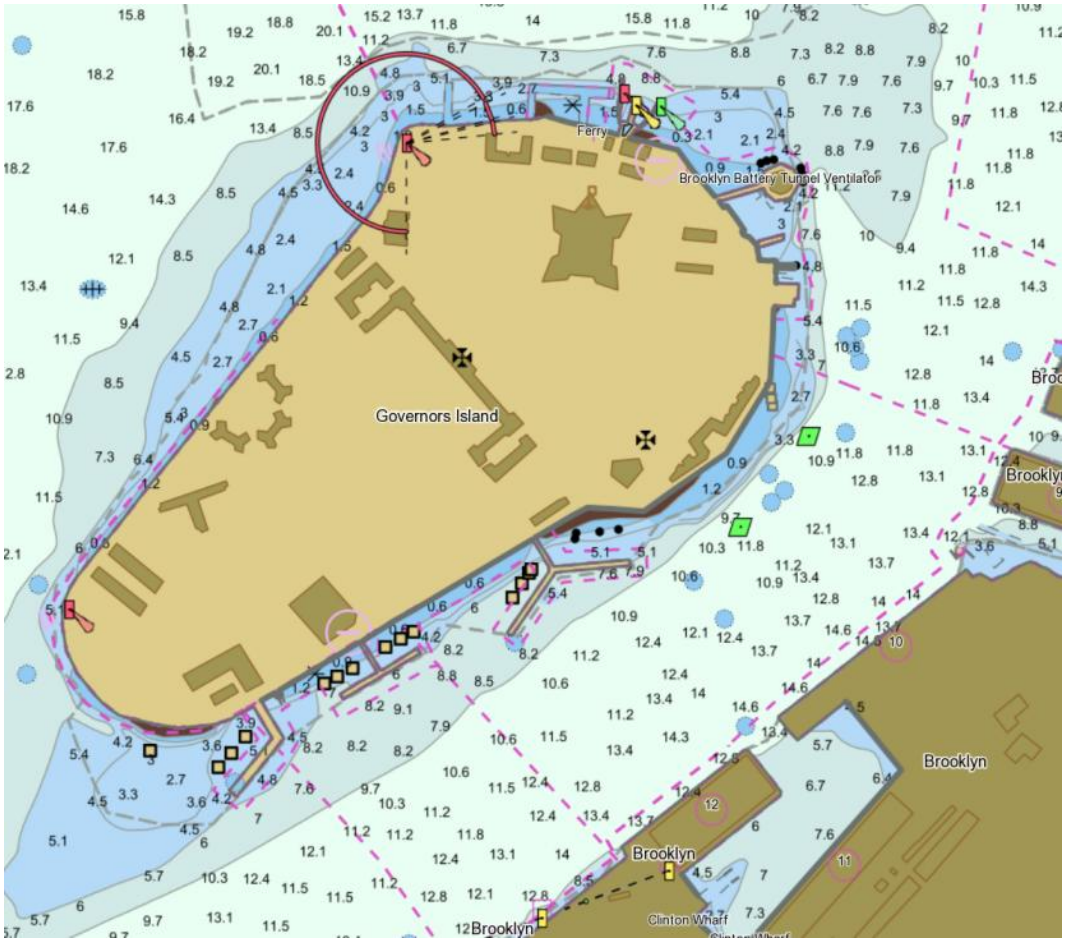
Nautical Charts according to IHO S57 and S52 Standards

The Nautical Chart Extension is a new Carmenta Engine extension that enables reading and rendering of nautical charts according to the International Hydrographic Organization's S57 and S52 standards.

This new extension provides a number of benefits for applications that want to display maritime data with Carmenta Engine:

- It reduces the cost of handling data
  - Connect directly with the original data files from Nautical Chart suppliers.
  - The feature data is read as is, no conversion is needed.
- It reduces map presentation development costs
  - Complete S52 presentation is built-in.
  - Easy to set up and use: Connect three built-in objects and you're done.
- High performance data reading and rendering
  - Can be used for real-time and 'moving map' presentations



A screenshot from a real time demonstration where a nautical chart in S57 format is read and rendered by the Carmenta Engine according to the S52 standard.

Coordinate Formatting and Parsing Utilities

The Crs class has been extended with methods for formatting and parsing coordinate strings of various formats, including numerical longitude/latitude values, degrees/minutes/seconds (DMS) notation and MGRS (Military Grid Reference System).

JPEG 2000 Support

The new Jpeg2000DataSet makes reading geographic data in the multi-resolution JPEG 2000 format easier and faster.

OGC WCS Support

The new OgcWcsDataSet makes it possible to read OGC coverage data (i.e. raster data) directly from map servers that implement the Open Geospatial Consortium Web Coverage Service (WCS) standard.

Improved TileLayer

There have been several important improvements to the TileLayer (the Carmenta Engine component that reads and renders the map in background threads and then caches it in raster or vector tiles on the graphics card):

- Several visual problems that could result from introducing a TileLayer to a configuration have been eliminated. This means that configurations no longer have to be specially adapted to work well with TileLayers - they will just work.
- A new property of TextVisualizer and SymbolVisualizer enables you to specify that texts and symbols should be placed relative to the visible part of a feature (as opposed to relative to the entire feature).
- All 'picking' operations, querying for information using the mouse or the API about the features in the map, are now performed on the cached features in TileLayer, greatly improving performance in many cases.

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