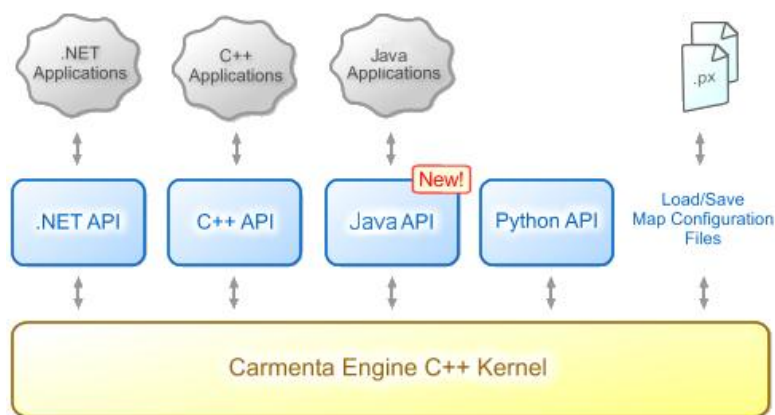


What's New in Carmenta Engine 5.1

The New Java API

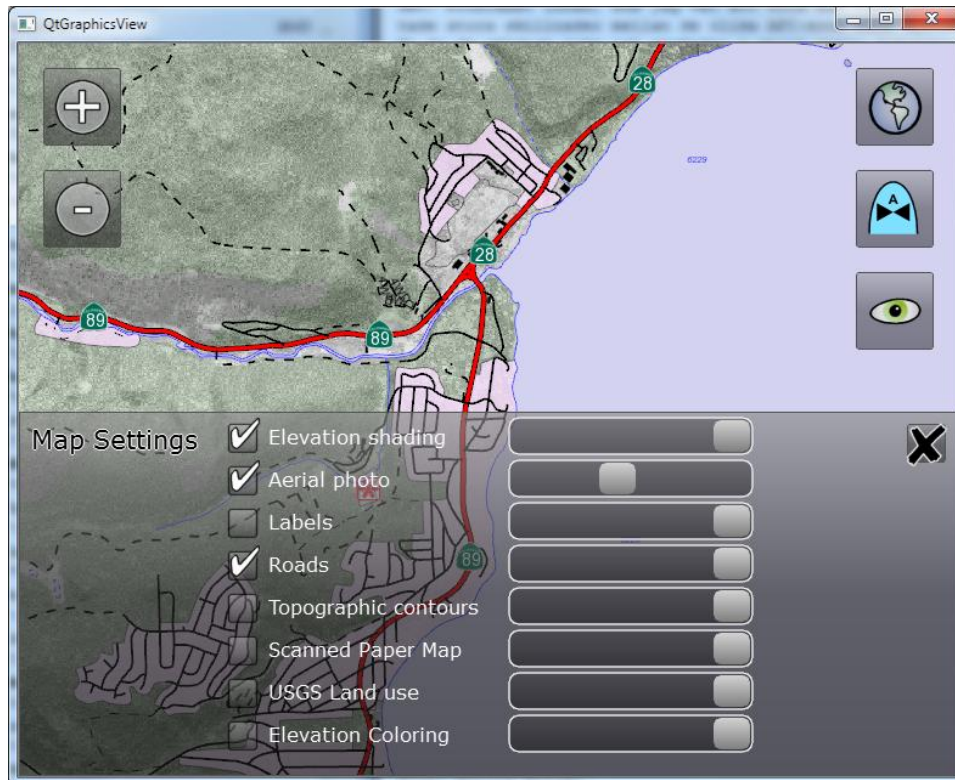
Carmenta Engine now includes a complete Java API. This API is on the same level and has the same powerful properties and possibilities as the other APIs; for instance it has the same type of MapControl that enables easy integration of map windows into Java user interfaces and interaction tools for interacting with the map or objects in the map.



The new Java API in the Carmenta Engine API.

Support for touch-screen user interfaces on PCs or tablets

Added support for hardware-accelerated Qt and QML UI elements on top of hardware-accelerated Carmenta Engine maps. With this new support, Carmenta Engine is ready for use with touch-screen animated user interfaces on Windows or Linux PCs or tablets.



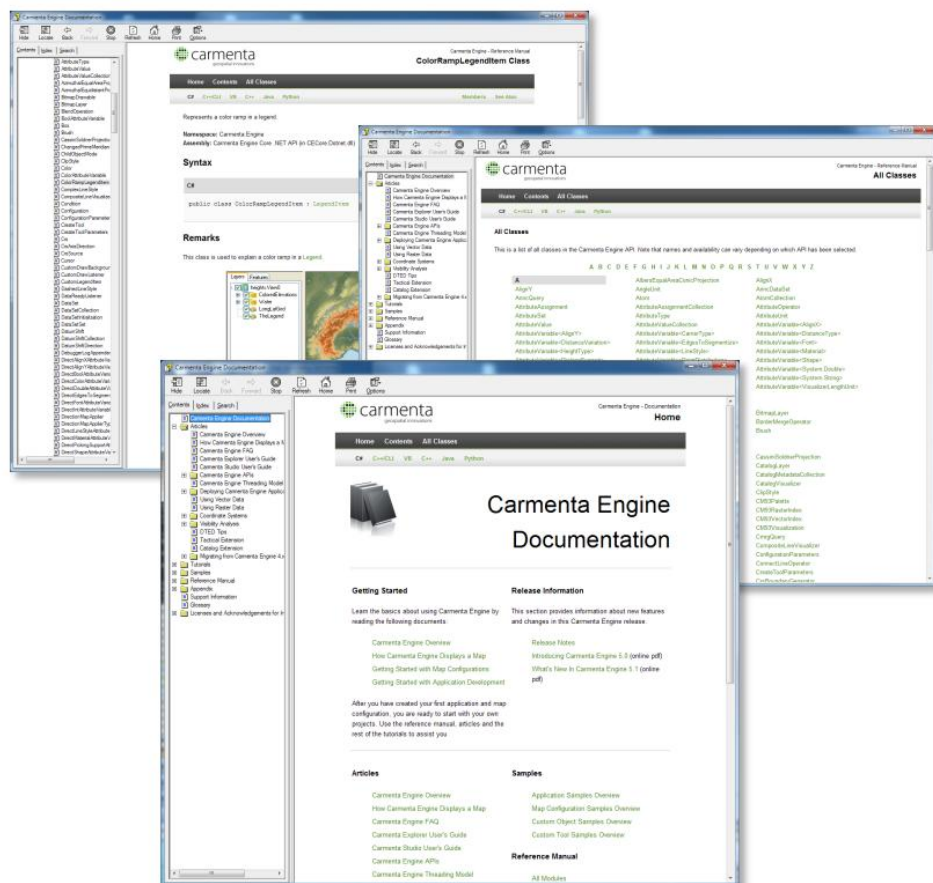
A screenshot from an application demonstrating Carmenta Engine together with a touch screen user interface made with Qt QML.

Now also bringing the power of Carmenta Engine 5 to Linux

With this release, Carmenta Engine Linux developers are getting access to all the new features that were introduced in the previous Carmenta Engine 5.0 release for Windows. This includes, for example, the very much awaited MIL-STD-2525B tactical graphics display and multi-core CPU optimizations. For Linux users that want to know more about the features that were new with Carmenta Engine 5.0, but were not available on Linux until now, we suggest reading the [Introducing Carmenta Engine 5.0](#) document available on the Carmenta website. Further more, starting with Carmenta Engine 5.1, the Linux and Windows versions of Carmenta Engine will use the same code base and release schedule.

Improved Documentation

Documentation has been improved, with new a layout and new indices of classes and other content, making it easier to navigate. It also includes several new topics, extended information, more samples and a new Carmenta Engine Frequently Asked Questions section.



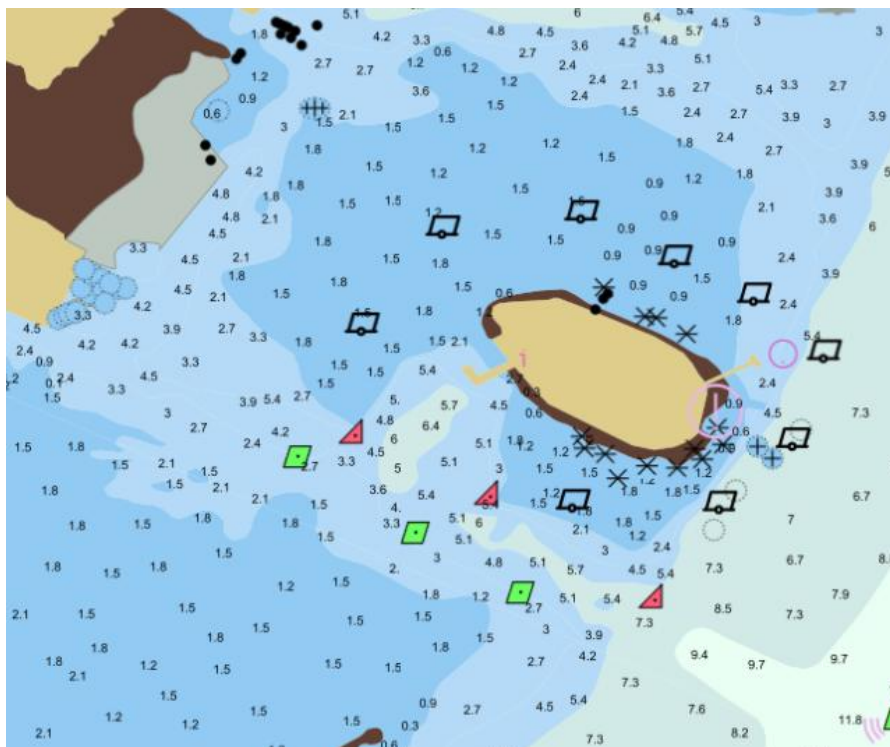
The improved documentation. New layout, indices and samples.

Full control over OpenGL contexts

The ExternalDrawable is a new type of Drawable that enables rendering to OpenGL Contexts that are created and set up outside Carmenta Engine, typically by the application or any another OpenGL-based module the application uses. This function can be used to implement 'render to texture' and post processing effects using OpenGL Frame Buffer Objects or to integrate Carmenta Engine map views at a lower hardware-accelerated level inside other frameworks, such as Qt and QML.

S57 Nautical Charts

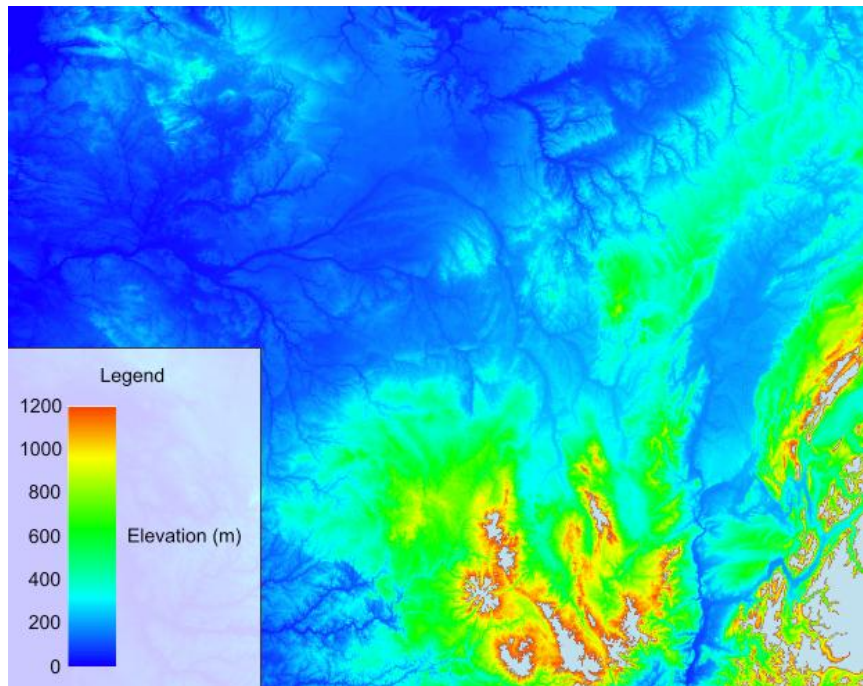
Added support for reading Nautical Chart data in S57 format via the multi format OGRDataSet.



Screenshot from map configuration that uses the OGRDataSet for reading nautical chart data in S57 format.

Color Ramp Legend Item

The `ColorRampLegendItem` is a new `LegendItem` that is able to present the map layers' color ramps and their corresponding values in map legends.



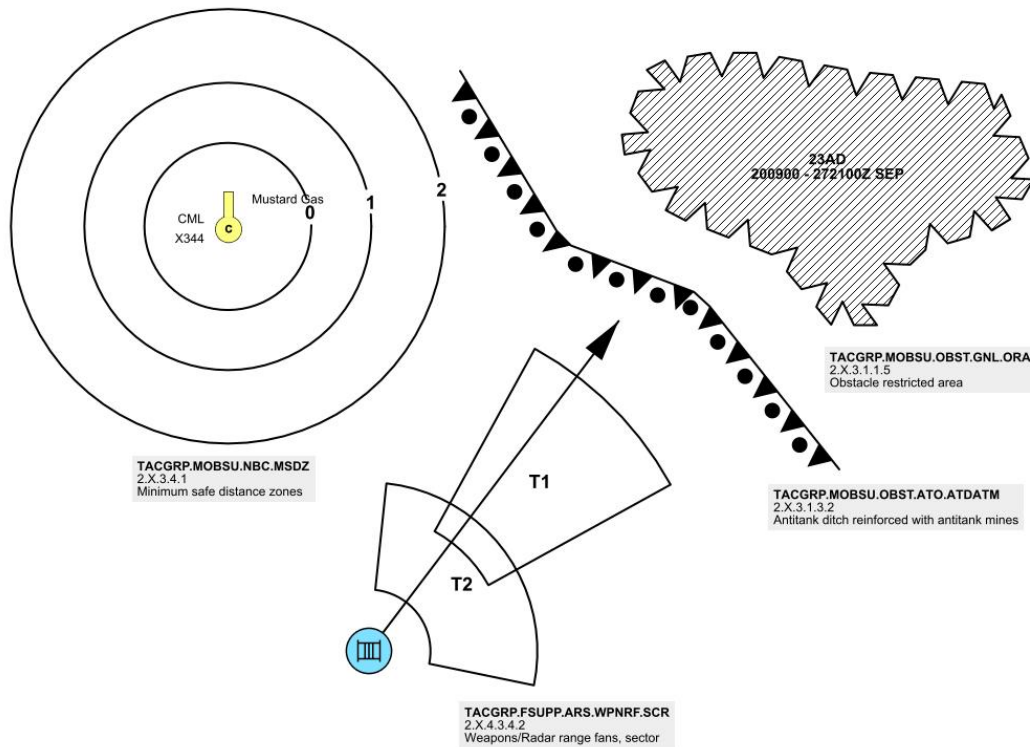
Screenshot from map configuration that uses the new `ColorRampLegendItem` to present a legend for an elevation visualization of Europe.

What's New in Carmenta Explorer

Carmenta Explorer is now a cross-platform Windows / Linux application using Qt. Other improvements include display of the current camera coordinates for 3D Views and a color adjustment tool for changing the amount of transparency on layers.

What's New in Tactical Extension

Carmenta Engine 5.1 adds 113 new tactical symbols to Tactical Extension. The support for Appendix B of the MIL-STD-2525B standard is now complete. Below is an image showing four of the 113 new tactical symbols.



A screenshot from a live demonstration where four of the 113 new 2525B tactical symbols are displayed.

It is now also possible to extend the 2525B tactical library with custom tactical symbols with metadata that is consistent with the 2525B standard.