



carmenta
superior situational awareness



Carmenta Engine

A high-performance, reliable solution for maps in mission critical systems

Carmenta Engine provides the components and tools that enable software developers to rapidly add dynamic map displays and other advanced map functions to a range of different applications. Carmenta Engine offers excellent map performance and has a proven record of round-the-clock reliability, after several years of continuous service in mission critical defence and security systems.

- Efficient development tools
- Excellent map performance
- Proven record of reliability
- Great looking maps
- Designed for mission critical use

Carmenta Engine has been designed from the ground up to meet the demanding requirements of mission critical applications. It provides systems with a scalable and easily managed solution that handles everything relating to maps, sensor data and other types of geospatial information.

Carmenta is committed to openness and open standards. Carmenta Engine makes it easy to connect to map servers using interfaces standardised by OGC, the Open Geospatial Consortium.

Carmenta Engine can also connect directly to many different file based data sources, as well as geospatial databases. Since the data can be read in its original format, time consuming and expensive offline work to prepare the data is greatly reduced or eliminated altogether.

Carmenta Engine excels at rendering all sorts of application data layers. It can for example handle millions of radar plots which update their positions several times per second.



With the Carmenta Engine Software Development Kit (SDK), developers are getting efficient, easy to use, modern development tools that enable them to develop more in less time. Carmenta Engine runs on Windows, Linux and Android, and the SDK supports the use of popular development platforms, such as .NET, Java and C++.

KEY FEATURES

HARDWARE ACCELERATED RENDERING

Carmenta Engine has top-of-the-line 2D hardware accelerated rendering capabilities. Features such as anti-aliased drawing of vector objects, semi-transparency and smoothing of raster data make it possible to create stunning maps in no time. Thanks to sophisticated buffering techniques, a large number of moving objects can be drawn smoothly without any flickering.

3D VIEWS ON THE FLY

Carmenta Engine can generate realistic or abstract 3D views on the fly. No manual 3D editing is required – the landscape is rendered solely based on the properties of the geographical data. The rendering of 3D views follows the same principles as the drawing of 2D maps, since Carmenta Engine uses a common object and data model for all visualised data.

FULL MOTION VIDEO OVERLAYS

The high performance Carmenta Engine architecture makes it possible to georeference full motion video streams on the fly in order to display the video overlaid on the map.

EFFICIENT MAP PRESENTATION

Carmenta Engine has unlimited support for combining different types of data. This makes it easy to retrieve and present data from large and heterogeneous geographical databases completely seamlessly. Thanks to a highly efficient geographic transformation engine, both raster and vector data can be re-projected on the fly between any projection or reference system, avoiding cumbersome pre-processing steps.

TECHNICAL BENEFITS

- Enables efficient application development using native .NET, Java and C++ APIs.
 - » Develop more in less time.
- Has top-of-the-line 2D and 3D rendering capabilities.
 - » Create great looking maps suitable for real time systems.
- Reads geographic data directly from more than 70 formats.
 - » Use data in original formats, no conversion of data is needed.
- Uses hardware (GPU) accelerated graphics.
 - » With low CPU load, the application is free to do more time critical tasks.
- Benefits from multi core processors.
 - » Sophisticated threading unleashes the full potential of the latest generation of CPUs.
- Parallel and asynchronous processing of data.
 - » Keeps the user interface responsive.

ABOUT CARMENTA

Carmenta has been supplying world-class software for mission-critical systems for more than 30 years – systems in which superior situational awareness is the key to success. We provide high performance software products, develop client-specific solutions and offer a wide range of services that help some of the world's most technologically-advanced customers optimise their operations using real-time geospatial information.

Whether you run an emergency response centre, plan and lead military operations or manage a traffic control centre – Carmenta is your trusted global partner.

For more information please visit carmenta.com



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