carmenta
geospatial innovations

Carmenta Engine 5
Geospatial platform for Mission Critical Systems

The ultimate choice for interactive geographic applications used in operational environments. Carmenta Engine combines state-of-the-art 2D and 3D GIS features with outstanding support for Rapid Application Development.

Carmenta Engine offers excellent performance when visualizing and processing large and complex geospatial data. The platform has a proven record of 24/7/365 reliability after several years of continuous service in mission critical defense and security systems, such as applications for mission planning and ambulance dispatch.

With Carmenta Engine it is easy to integrate map functionality seamlessly into applications. Applications can be built using popular programming platforms such as the .Net or C++ based environments such as QT. The native .Net API follows the .Net guidelines and has fast direct access to the Carmenta Engine kernel.

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 makes it possible to create stunning maps in no time. Thanks to sophisticated buffering techniques, a large numbers of moving objects can be smoothly drawn without any flickering.

Carmenta Engine can generate realistic or abstract 3D views on the fly. No manual 3D editing is needed – 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 visualized data.

Carmenta Engine reads geographical data natively from major GIS data formats. Since data can be used in its original format, time-consuming and expensive off-line work to prepare the data can be greatly reduced or eliminated altogether.

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.

Advanced tactical symbols and graphics that are compliant with the MIL-STD-2525B standard can easily be added to the Carmenta Engine visualization.
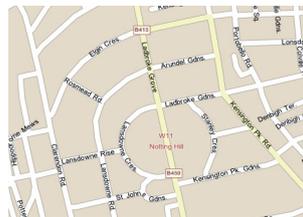
Several terrain analysis functions are part of the Carmenta Engine platform. The ready-to-use modules include functions for real-time line-of-sight analysis and vertical ground profile calculations.

For further information, please contact Carmenta.