

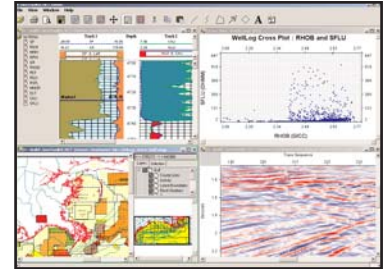


# GeoToolkit

Graphics Components for  
Geoscience Applications

GeoToolkit delivers high performance graphics capabilities for Oil and Gas E&P applications being developed in C++/Qt, Java, or C#.NET languages.

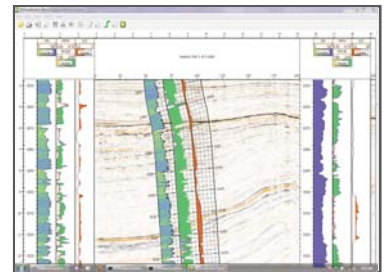
A bundled component suite consisting of Carnac, CGMOutput, and a combination of Seismic, WellLog, Contour, and WellSchematic components, GeoToolkit allows developers to take advantage of high-level tools to rapidly deploy sophisticated data visualization and analysis applications. Many of the industry's major oil companies, service providers, and software vendors rely on GeoToolkit for their graphical geoscience solutions.



## Unique Advantages

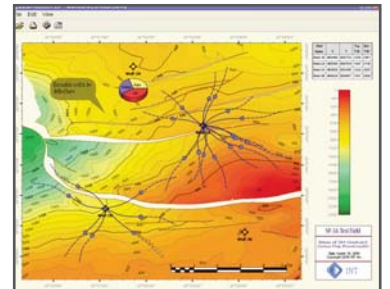
### Reduce Development Time and Effort

GeoToolkit reduces development costs and delivery times because it provides many key functions such as common data displays and good hardcopy support with print preview. Applications built with GeoToolkit inherit these functions automatically, allowing developers to build sophisticated applications faster than ever.



### High Performance

GeoToolkit's enhanced architecture and low overhead translate into increased performance. Its layered viewing architecture coupled with efficient spatial indexing methods and algorithms for storing and caching data contribute to an optimized use of the graphics pipeline.



### Extensible Architecture

GeoToolkit is highly extensible and data handling is interface-based, allowing application developers to plug in their own data formats. With unique support for dynamic interfaces, programmers do not need to create their own plot types. The set of graphics primitives can be extended easily beyond those already supported.

## FEATURES

- Targeted for E&P visualization requirements; Lets developer focus on core technologies
- Includes a comprehensive selection of common data displays
- Virtual scrolling mode offers fast display of large sections with unlimited zooming on a dataset
- Powerful data handling with support for standard formats such as SEG-Y, LAS, and SVG files
- Extensible API for adding custom data formats
- Promotes reusability and consistency across applications which reduces development and maintenance costs
- Access to a large library of primitive shapes and attributes
- Hardcopy with print preview, EPS and CGM outputs
- C++ version supports Qt4

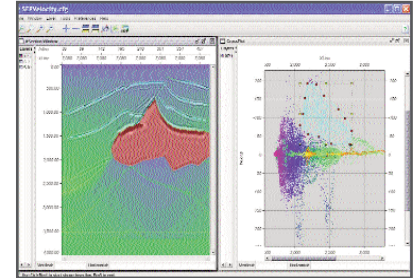
# GeoToolkit

## COMPONENTS

### Carnac

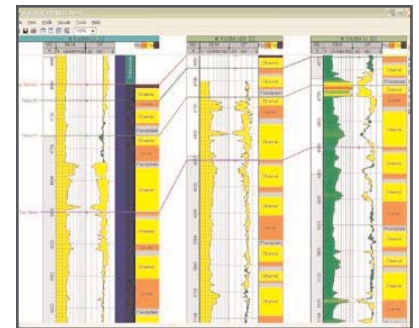
The underlying 2D graphics framework supporting GeoToolkit, Carnac provides access to a large variety of primitive shapes and attributes. It allows selecting and editing, and provides an advanced layered view management system that enables the overlay of any plots, such as seismic data sets, well logs, maps, and contours.

Carnac includes a chart library and components that support effortless creation of scientific plots such as line plots, histograms, and cross plots. Carnac also offers facilities for scrollbars, toolbars, and log plots plus components providing automatic axis support (both linear and logarithmic) and zooming of plot views and axes.



### Seismic

Seismic provides libraries to view, interpret, edit, and manipulate seismic data. Seismic accesses its data through a seismic data reader, and developers can customize INT's SEG-Y file reader or implement their own reader via the published data interface. The Seismic components also provide trace handling and support all standard display types such as wiggle, trace, variable area, variable density, interpolated density, color-filled modes, or combinations.

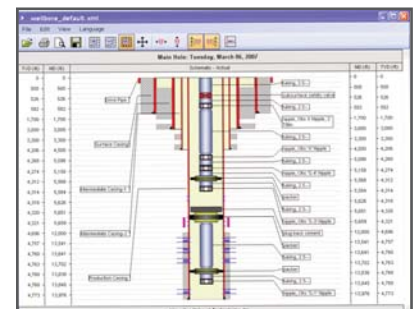


### WellLog

WellLog provides classes to display and manipulate well data, including deviated wells. WellLog includes shapes to display log data as curves, fill-betweens, and lithologies. Shapes without log data are also provided, including markers, labels, depth axis, and grids. Additional shapes can be created effortlessly, and graphic attributes of shapes are editable. WellLog organizes shapes into tracks with each track containing any number of visuals

### WellSchematic

WellSchematic provides visualization components and data object models for visualizing down-hole equipment found in a well throughout its lifecycle, including drilling, completion, production and workover operations. The WellSchematic components are designed to provide a flexible and high-quality graphic engine to accommodate the needs of a variety of applications such as well design, BHA displays for monitoring drilling operations, or detailed wellbore schematic and well intervention visualization.



### Contour

The Contour tool takes a surface represented as a uniform spatial grid and visualizes it as a set of contours. Contour is well-tailored to applications in the geoscience industry and features full support for faults and discontinuous surfaces. The user has full control of the frequency and appearance of the contours. Contour lines can be displayed in monochrome or color and with or without annotation. Contours can also be filled with colors.

