

INTViewer™ 5.1

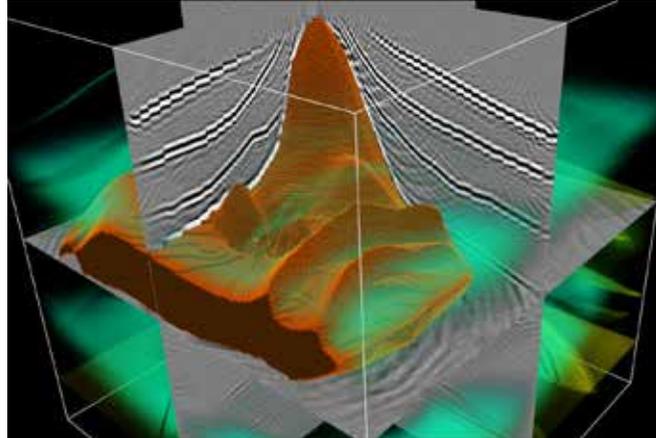
A visualization application and development platform for seismic analysis and QC

INTViewer Product Highlights:

- Simple-to-Use Interface with Sophisticated Controls requires minimal user training
- Visualize seismic data, logs, contoured surfaces and grids, and reservoir data. Log curves and markers from LAS and DLIS files can also be displayed in 2D tracks or in 3D view
- Display multiple data sets and file types on the same screen for convenient comparisons
- Use synchronized displays and cursor tracking to navigate through 2D, 3D, pre-Stack, and Time-Lapse data easily and quickly
- Display heterogeneous data in a map view. The map views are fully GIGS compliant and support on-the-fly transformation, including NADCON and NTV2 conversion
- Load and rapidly QC large seismic data sets without reformatting - no limit to their size
- Evaluate data using a rich array of interactive crossplots, histograms, power spectrum, F-T analysis, FK display with picking and filtering
- Share your analysis workflow and results - great for presentations and prospect reviews
- Enhance the viewer via an extensible plugin framework for adding custom utilities, data formats, and proprietary R&D

Ideal Solution for Data Analysis and QC

INTViewer is designed for data visualization – anytime, anywhere. You can take INTViewer wherever you and your team goes. The application runs on virtually any Windows or Linux operating system. So, whether you are in the field, at your desk, visualization team room, or conference room . . . INTViewer can be there too.



Visualize Any Data Format

INTViewer reads most seismic data formats including SEG-Y, SEG2, ProMAX, SU, SEP, JavaSeis, and SEG-D. There is no limit to the size of the seismic datasets you can view. Log data can be imported from LAS or DLIS files. Culture or other geospatial information can be imported from AutoCAD DXF and ESRI Shapefile formats. INTViewer displays GIS, horizons, faults, Microseismic, GOCAD and Reservoir data.

Earth Models and Reservoir data can be visualized in 3D. Energetics RESQML and CMG model formats are supported, along with interpreted features such as horizons, faults, grid surfaces, point sets, and GOCAD triangulated surfaces.

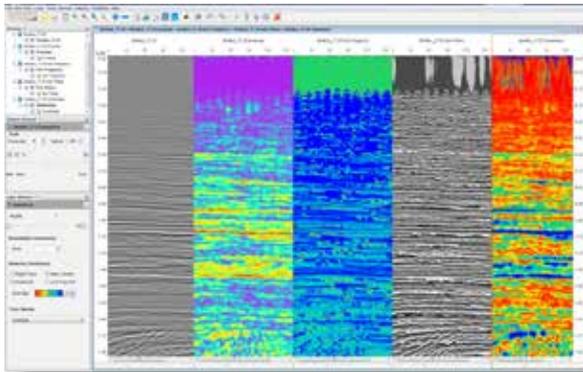
Navigate Easily Through Your Data

Visualize 2D and 3D seismic sections, pre-stack data, gathers, and time or depth slices with ease. Synchronization and cursor tracking between all views keeps your focus on the data. Roam sections interactively or view arbitrary lines from a 3D volume. As you move your cursor over the data in any view, cursor tracking shows the location and value in all associated windows.

Compare Your Data

Show sections side-by-side or overlay them to make discrete value comparisons. Use peel/reveal functionality to assess subtle changes in multiple layers or generate a difference display. Use a formula to visually explore trends between seismic and well log data.

Overlays allow quick comparisons between datasets, through animation or peel/reveal. You can use a calculated formula to derive attributes on the fly for visualization.



Map Your Data

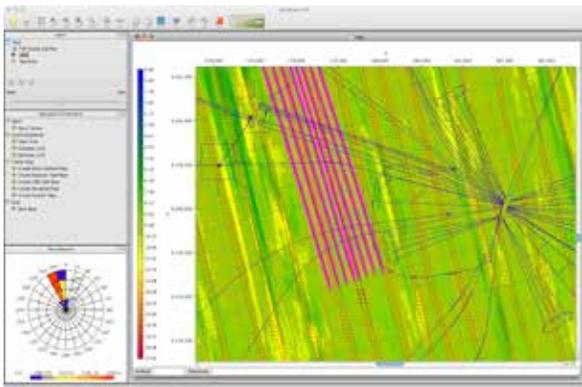
Confirm geospatial integrity by mapping interpreted data with overlays of culture and satellite imagery, as well as local geographic data files. The outline of a seismic dataset can be exported to KML and visualized in Google Earth. Entire map windows can also be exported to Google Earth and shared as one stand-alone file.

INTViewer is GIGS compliant and supports the full EPSG coordinate reference system database; allowing dynamic coordinate transformation. In appropriate geographic areas, the NADCON and NTV2 shift grids are automatically used for improved accuracy.

Perform a Quick Analysis

INTViewer provides a rich array of interactive analysis tools: crossplot, histogram, FK display, spectrum and FT analyses. Trace processors allow immediate visualization of processing algorithms. Leverage up to 40 built-in processors, or create a custom trace processor with just a few lines of Python or through Matlab.

Create crossplots of seismic datasets, logs, horizons, or point sets. Other analysis tools include velocity measurement, F-T analysis, and 4D attribute calculation.

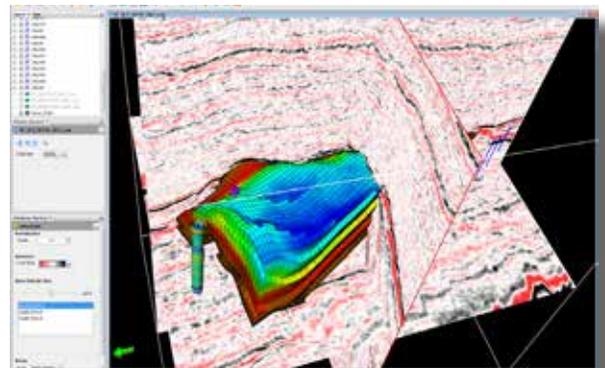


Process Your Data

INTViewer provides many tools to process and convert data. Automate data conversions with the Seismic Workbench, or use your own Python scripts. Use a wizard to modify headers for a SEG Y file and save the mapping for subsequent reuse. Create a complex workflow using a simple user interface. If you have CWP Seismic Unix installed, you can leverage the SU utility to integrate Seismic Unix as part of your processing workflow.

Showcase Your Data

INTViewer is a cross-platform application that is fully functional on a range of hardware from laptops to high-end workstations. Easily review data with colleagues and potential clients. Session files remember the exact layout of your INTViewer virtual desktop. Built in decimation and subset capabilities allow the creation of portable data sets. Capture screen snapshots for Powerpoint presentations or print full scaled hardcopy.



Add Plugins

Plugins are a powerful way to customize the user experience and to add your own workflows, proprietary file formats, science and tools. Some plugins are community developed, and can be downloaded from within the application.

INT also provides optional plugins to implement specific workflows, which are separately licensed:

- Navigation QC - QC workflow for marine acquisition
- Velocity Scanning - a velocity model updating workflow
- Mineral Rights - manage exclusion zones in seismic data

Using plugins, many companies have customized INTViewer to read their proprietary data format, or connect to an external database like Landmark Decision Space.

Just Because Your Data is Complex, Doesn't Mean Your Software Has to Be



Python and Java Extensions

INTViewer is well known for the capabilities it provides out of the box, but it doesn't stop at a defined set of features. INTViewer can be enhanced through Python and Java, making it a platform suited for geoscientists and software development teams.

Python Scripting

INTViewer has built-in support for Python scripting which allows for many automation options. This Python interface is a quick and easy way to facilitate repeatable QA/QC activities.

Most features can be scripted. Here are some examples of features that can be accessed through Python scripting:

- Load a dataset and visualize it in 2D or 3D
- Customize data selection and set display parameters
- Run analyses such as spectra, histograms, FT, FK, Cross-plots
- Capture screenshots and save them to image files
- Create Microsoft Office documents from these screenshots

You can also use the Python capabilities to take remote control of INTViewer by sending a few lines of text. Oil and gas companies link their processing system to INTViewer to visualize each processing step without any user interaction: the processing system tells INTViewer which files to load and how to display them.

As documentation is built-in to the Python terminal, customers will experience a quick learning curve when automating their own processes or linking to their systems. There is an entire website dedicated to Python scripting with INTViewer:

<https://sites.google.com/a/geotoolkit.net/intviewerpython/home>

Java Programming

INTViewer is written in Java, and it comes with its own development environment. Java being a well known programming language, programmers and geoscientists alike will easily find information on how things can be done.

INTViewer is built on top of an industry standard, the open source NetBeans platform, which allows for easy extension of INTViewer to meet your business and technical goals. It also means that you can leverage the many powerful features of NetBeans to build good, modern software.

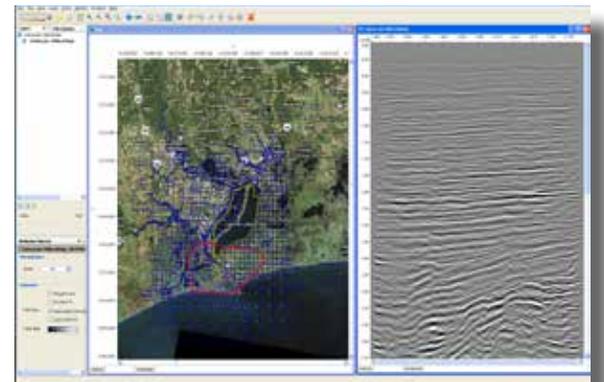
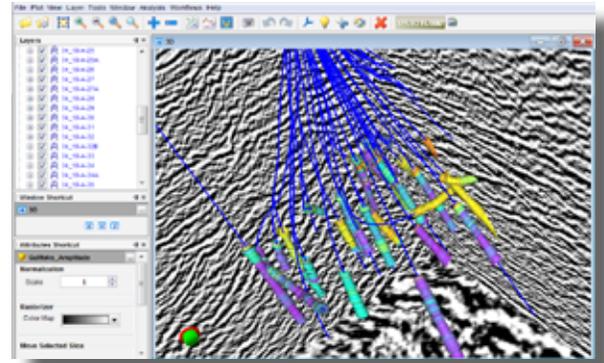
Customers have customized INTViewer to:

- Quickly add support for their own proprietary data formats
- Port legacy Fortran command line tools for use inside INTViewer
- Customize the user interface
- Convert INTViewer into their own commercial software
- Create a comprehensive software solution, interacting with other programs like DecisionSpace or MATLAB

The modular architecture of INTViewer makes it simple to add, replace, or even remove specific aspects of the software. There are a large range of options for customizing the user interface, from adding a new menu items to completely revamping the user experience.

Training is available to get programmers started. There is a web site dedicated to plugin development with INTViewer:

<https://sites.google.com/a/geotoolkit.net/intviewer/>



Data courtesy Geophysical Pursuit, Inc.

System Requirements:

- Software Requirements: *Java v7 or newer, 64-bit installed*
- Hardware Requirements: Desktop, laptop, or workstation with a *minimum 4GB memory, 200MB free disk space, 3D graphics card and driver that supports OpenGL 3.1*
- Operating System(s): Runs on virtually any Windows, Linux, or Unix operating system

True Innovation: Seeing is Believing. Schedule a Demo Today.

The power and simplicity of INTViewer is realized when demonstrated using live data sets. Schedule a live product demo of INTViewer today by calling your sales representative at 713-975-7434. A 30-day free trial of INTViewer is available.

About INT:

INT specializes in efficient solutions for data display. Utilizing the latest software technologies, our products include HTML5 web-based viewers for seismic, logs and real-time data monitoring, INTViewer platform for seismic analysis and QC, and GeoToolkit graphics libraries for software developers. For more information about INT, visit www.int.com or e-mail intinfo@int.com.

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Contact Us:

INT, Inc.
2901 Wilcrest, Suite 300
Houston, Texas 77042 USA

Toll Free: 1(877) 4-CARNAC (422-7622)
Telephone: 1(713) 975-7434
Fax: 1(713) 975-1120
E-mail: intinfo@int.com

For more information visit www.int.com