

# OPENSPIRIT

## **Enabling Innovative, User-Defined Workflows**

Helping your geoscientists and technicians manage complex geotechnical workflows, integrate the best technology, and streamline tedious data management tasks is OpenSpirit's mission.

OpenSpirit is your solution for multi-vendor application and data interoperability. By providing the connectivity that drives cross-discipline collaboration, OpenSpirit lets you build the workflows you need to get the job done, right from the start.



**Enabling Cross-Discipline Collaboration Right from the Start**

Increasing reservoir complexity demands comprehensive analysis coupled with excellence in science. Multi-vendor environments allow you to bring together the best tools to view the subsurface, making collaborative workflows and cross-discipline decisions a business imperative.

However, fundamental integration challenges still exist in our industry.

Data locked away in diverse data stores, multiple legacy projects and inherited IT environments are a barrier to realization of this Digital Oilfield vision.

At OpenSpirit, our sole focus is integration:

- SOA
- Standards Based
- Platform Independent
- Vendor Neutral
- Event Driven

As the industry's undisputed open-integration standard, OpenSpirit is the key to achieving true workflow transparency.

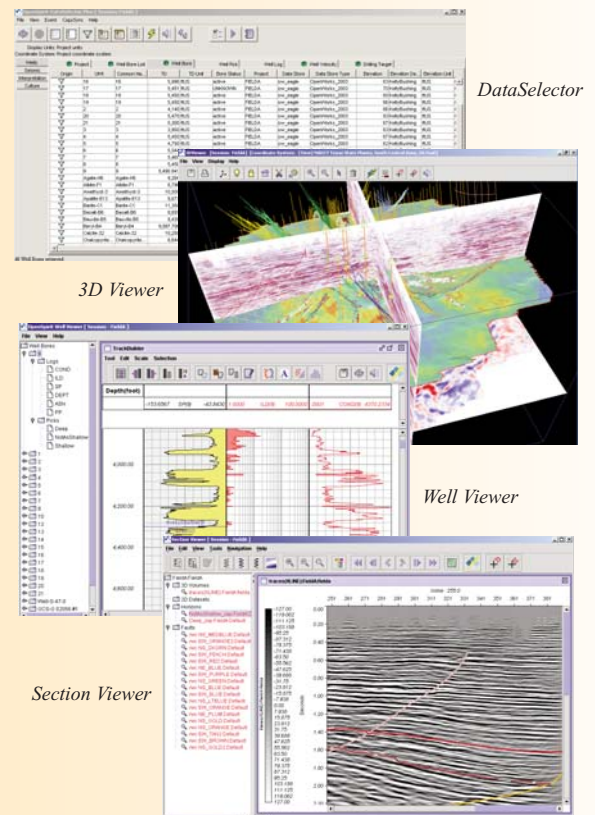
# Build Multi-Vendor, Integrated Workflows



## OpenSpirit Runtime

The OpenSpirit Runtime environment consists of a base framework and the specific subsurface Application and Data Store Connectors for your databases and data formats. All applications connected to the framework gain access to a rich set of services, including management of virtual project sets, user sessions, conversion of units and geographic coordinate transformations.

- **DataSelector** – generic tool to select data
- **3D Viewer** – simple 3D viewer of all data types
- **Well Viewer** – well track view of logs and picks
- **Section Viewer** – 2D/3D seismic display along with horizons and faults



# Geoscientists & data managers want to be more productive

## Oil companies are saving time, money and increasing the value of their technology investment

- Norsk Hydro selected OpenSpirit as cornerstone in integration strategy – used as “fast-move” button for massive data migration project impacting 28TB of data across multiple data stores and applications.
- A Canadian Independent is using OpenSpirit to turn a virtual 24/7 operation to update Petrel and SeisWorks projects into streamlined **5-minute** actions, saving valuable QC time for data managers and contributing to an estimated overall annual savings of **\$300K**.
- By including OpenSpirit as part of their data management solution, Seismic Micro-Technology slashed project conversion time by **200%** and saved their client **\$300K**.
- After spending 8 months loading 16,000 deviation surveys into a modeling application, another independent oil company used OpenSpirit to load the same data into Petrel® in only **7 minutes**.

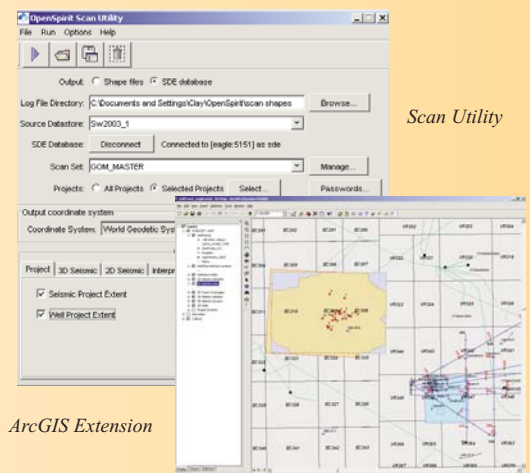
## OpenSpirit has demonstrated an average import/export efficiency improvement of 89%

- Improved import time for 2D seismic data by **97%** and 3D seismic by **98%**.
- Recorded **75%** overall time savings when importing multiple data items for analysis and interpretation and reduced overall import time for well data by **99%**.

## OpenSpirit data management and GIS solutions

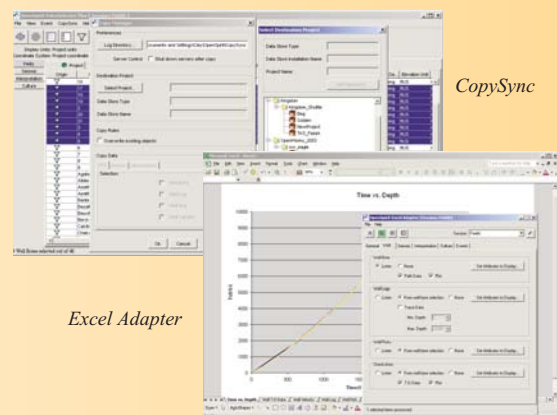
OpenSpirit offers several data management applications that make use of the runtime environment. They form a comprehensive toolkit that may be used in a variety of innovative data management workflows and include fast and scalable copy engines and powerful solutions for the streamlined management and integration of sub-surface data with GIS systems.

- **Scan Utility** – Build shape files or write to an SDE-enabled database to create GIS spatial information to represent well, seismic and interpretation data from all of your projects in any OpenSpirit-enabled data store.
- **ArcGIS Extension** – Use ArcGIS as a spatial selection tool for OpenSpirit data viewers and third-party OpenSpirit-enabled applications. ArcGIS Extension offers intuitive selection attributes and allows ArcMAP to receive and display automatically created shape files of many well, seismic interpretation, and culture data types.
- **Excel Adapter** – Use Excel to view and analyze data from any OpenSpirit-enabled data store via the OpenSpirit connectors. Recent data types include fault polylines, horizon-fault boundaries, and pointsets.
- **CopySync Utility** – Transfer data between OpenSpirit-enabled data stores in a single step using OpenSpirit data selections based on GIS and attribute queries.



Scan Utility

ArcGIS Extension



CopySync

Excel Adapter

## OpenSpirit Software Developer's Kit

Using a robust set of distributed objects and services, the OpenSpirit Software Developer's Kit will help you speed the development of your application's connectivity to OpenSpirit. An application that uses the OpenSpirit dev kit may access data from any OpenSpirit-enabled data store on your network.

You can easily develop custom apps in C++, Java, VB, C#, VB.NET and Delphi using a variety of operating systems, including Windows®, Solaris™ and Linux®.

## Vendor-specific data store connectors

OpenSpirit enables your applications to create, read, update and delete data from anywhere within your network using data servers for your specific databases.

- OpenWorks®/SeisWorks®
- GeoFrame®/IESX/Charisma
- Finder®
- geOLOGIC Data Center (gDC)
- KINGDOM
- ArcSDE
- Petra
- PPDM
- Managed SEG Y
- Recall
- Epos3



## OpenSpirit Digital Integration Partners

Partners are a key element of the OpenSpirit integration solution. Through these relationships, OpenSpirit leverages the expertise of third-party developers to complement our position as the upstream open integration company.

We provide the connectivity environment that drives cross-discipline collaboration and unparalleled data access, enabling our partners to focus on the critical, ever-evolving science that supports their applications.

Through the use of a collaborative environment we will all have the opportunity to grow our business and better meet the needs of our mutual customers.

The **OpenSpirit Business Partner Program** delivers a comprehensive set of tools and support to ensure the success of our partners. Working collaboratively, we can accomplish better results – faster – to bring the right integration solutions to the market at the right time.

[www.openspirit.com/partners](http://www.openspirit.com/partners)

## Do it Right from the Start with OpenSpirit

Your geoscientists and technicians know that success means melding together the *best* technology from multiple vendors so they can leverage the functionality they need to make the best decisions possible. But your multidisciplinary team doesn't have to be slowed down by incompatible file formats and applications. OpenSpirit is your integration solution to make your applications and data stores work together, increasing their productivity and maximizing your entire IT investment.

Whether focused on complex geotechnical workflows or tedious data management activities, your team will be more efficient when they connect their technology using OpenSpirit.

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