



OpenSpirit Business Partner Update



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OpenSpirit Technical Symposium

Houston – September 2010



Celebrating a Decade of Interoperability

- ★ Installed at 450+ sites and 300+ companies
- ★ 1000+ users across 65+ countries
- ★ 4800+ licenses in use daily
- ★ 55+ partners and growing
- ★ 40+ OpenSpirit-enabled applications – 10 more in 2010

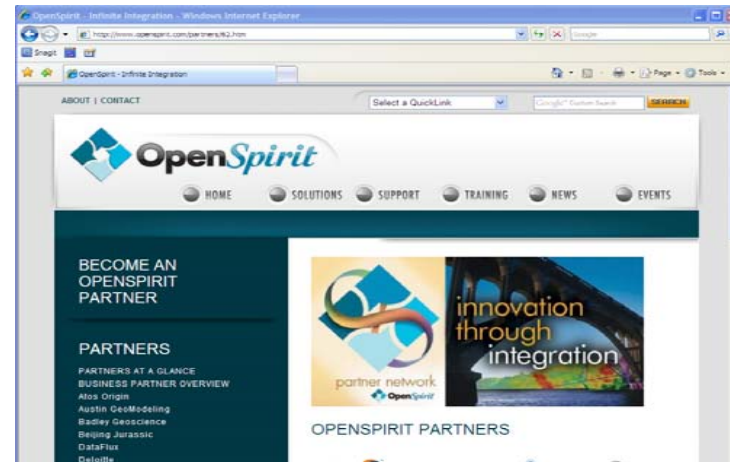


Business Partner Program

- Partner Webpage

- www.openspirit.com/partners

- Partner activities
 - Collateral
 - Contacts
 - Workflow demos



- Application Matrix

- <http://www.openspirit.com/solutionsu/b/44/48.htm>

- Commercial connectivity
 - Functionality details
 - Platform Support

OpenSpirit Application Adapter Matrix (2 pages)

September 15, 2009

OpenSpirit Utilities/Tools	Application Adapters																							
	OpenSpirit	MapInfo	Microsoft Excel	Viewers	ESRI ArcView	Web Server	Google Earth	ESRI ArcGIS Enterprise	ESRI ArcGIS Desktop	ESRI ArcGIS Server	ESRI ArcGIS Online	ESRI ArcGIS Flex	ESRI ArcGIS Mobile	ESRI ArcGIS Desktop	ESRI ArcGIS Server	ESRI ArcGIS Online	ESRI ArcGIS Flex	ESRI ArcGIS Mobile	ESRI ArcGIS Desktop	ESRI ArcGIS Server	ESRI ArcGIS Online	ESRI ArcGIS Flex	ESRI ArcGIS Mobile	
Well	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
WellBore	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
WellBoreList	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
WellLogTrace	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
WellPick	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
WellVelocity	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
LoggingPass	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Seismic 3D Survey	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Seismic 3D Dataset	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Seismic 2D Survey	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Seismic 2D Line	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Seismic 2D Dataset	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Horizon Grid 2d (3D seismic)	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Horizon Grid 2d (non-seismic)	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Horizon Fault Boundaries	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Horizon PointSet	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Horizon 2D (2D seismic)	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Fault Polyline Set (3D)	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Fault Polyline Set (2D)	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Fault PointSet	rw	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Culture - Point Feature	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Culture - Polyline Feature	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
Culture - Polygon Feature	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r

Solutions Available Today



TrapTester - The TrapTester OpenSpirit link allows the import of 3D surveys, 2D lines, fault and horizon interpretation, well bore, well log and well pick data from OpenSpirit Data Connectors

EnergyIQ has released **EIQLoader 2.0** which can consume the IHS Enerdeq web services and write them to any OpenSpirit-enabled data store – this can be done in batch mode or as unassisted nightly “changes only” updates. EnergyIQ has plans to add additional web services and data sources over time.



Tigress TIES - support a variety of Well data types via OpenSpirit as well as Horizon Grids

*OpenSpirit Product



Solutions Available Today



OpenSpirit supports a variety of GIS integration workflows with an **ArcGIS Desktop*** extension, a free **ArcGIS Explorer*** add-in, an **SDE Data Connector***, and **ArcGIS Server*** integration (Silverlight, Javascript, and WebADF)

OpenSpirit was named **2010 ESRI Partner of the Year** – for the Energy Domain

Excel* - OpenSpirit develops an **Excel** Adapter that supports receiving data events related to most of the OpenSpirit Data types

SharePoint – Several OpenSpirit integrator partners have integrated OpenSpirit Web Server with Microsoft **SharePoint** to provide robust portal environments

The Microsoft logo, consisting of the word "Microsoft" in a bold, black, sans-serif font, with a registered trademark symbol (®) to the upper right.

*OpenSpirit Product



Solutions Available Today



JOA's **JewelSuite** application supports well and interpretation data from 3rd-party applications quickly via OpenSpirit enabling users to continue the workflow with modeling and simulation

ffA (Foster Findlay Associates) have released **SVI Pro** on Windows® and **SEA 3D Pro** on Red Hat Linux with OpenSpirit support in 2010 – they include support for Wells and 3D Seismic



Fugro Jason has had **FastTracker** adapter for several years and have just completed updating it to the 3.x environment in 2010 – they are now looking at **PowerLog** and **WorkBench** opportunities

*OpenSpirit Product



Solutions Available Today



IRAP RMS has had a robust plugin to OpenSpirit supporting read of most OpenSpirit data types including culture data (GIS) – moving forward Roxar is planning to integrate OpenSpirit directly into the application interface and extend functionality with read/write and extended data types

Jurassic has teamed with OpenSpirit as both an agent in China as well as an integration partner. Jurassic is currently working to enable their **GeoMap** application with an OpenSpirit Application Adapter as well as deliver **JuraSEGY** – a commercial solution for loading SEGY data to the OpenSpirit **Managed SEGY Data Connector***. JuraSEGY is in testing now.



*OpenSpirit Product

Solutions Available Today



The **RokDoc** OpenSpirit link facilitates the consistent transfer of well and related data, regardless of which database the information is coming from. The data can be imported into RokDoc and exported to any OpenSpirit-enabled data source. The RokDoc OpenSpirit link supports well, log, marker and time-depth data.

The TGS **Prima** OpenSpirit connector enables read of well related data and read/write of 2D and 3D Seismic data from any OpenSpirit-enabled data store.



Hampson-Russell supports well data in **GeoView** and seismic data across **STRATA, AVO, eLog, EMERGE, ISMAP, PRO4D, PROMC**. More enhancements are planned for 2011. p.s. This plug-in is included free with your H-R Software!



*OpenSpirit Product

Solutions Available Today



SMT & OpenSpirit collaboration has exploded in support of their coexistence strategy. Multi-vendor workflows are supported with the new **Kingdom Connect Application Adapter** (replacing TunnelO), the new **Kingdom Data Management** suite, and improvements in the OpenSpirit **Kingdom Data Connector***. This complete portfolio of tools enable robust capabilities in support of your workflows.

PointCross has enabled OpenSpirit integration with their **Orchestra** platform enabling enterprises to manage data, information, and knowledge in a unified way - streamlining their workflows through logical business networks within and across enterprise boundaries in a highly secured fashion.



*OpenSpirit Product



Solutions Available Today



OpenSpirit provides the **Ocean-Petrel Application Adapter (OPAA)*** which supports all of the OpenSpirit data types and events. In addition to this Schlumberger also provides OpenSpirit adapters for **Innerlogix** and **Techlog** (formerly Techsia).

Schlumberger also embeds OpenSpirit technology in the **ProSource** and **DecisionPoint** tools – the latest plans include updating to the new Copy and Scan utilities from OpenSpirit as part of these solutions.

OpenSpirit is also working on a **Seabed Data Connector*** - this is in beta now and covers the well data domain

SeisWare has support for OpenSpirit integration to support their commitment to an open environment, allowing geoscientists to better manage their multi-vendor environment



*OpenSpirit Product

Solutions Available Today



IP (Interactive Petrophysics) and **ODM3** support a variety of well data types via OpenSpirit

Landmark has current OpenSpirit integration for **DrillWorks** and **Predict** (formerly KSI), **OpenWire**, and the latest release, **PowerHub OpenSpirit Connect** which enables **PowerHub** client applications access to OpenSpirit integration including **PowerExplorer** and **Team WorkSpace**



OpenSpirit also provides the **OpenWorks Data Connector*** on R2003 and R5000 which will be one of our first data connectors to support the new OpenSpirit data types at release 3.3 (production, well test/engineering, and zone models)

Most recently the GeoGraphix team has been working on an OpenSpirit Application Adapter for **GeoGraphix Discovery** (due out in early 2011)



*OpenSpirit Product

Solutions Available Today



The Petra team has started on an **Petra OpenSpirit Application Adapter** complement the existing **OpenSpirit Petra Data Connector*** – a whole new set of workflows will be possible from within the Petra application including sending/receiving well data and sending grid events!

We are updating the OpenSpirit PPDM Data Connector to work with **the IHS Canadian Data Hub**

Neuralog's **NeuraDB** application leverages the industry standard PPDM 3.7 Database model which makes it available to all OpenSpirit enabled applications by using the **OpenSpirit PPDM Data Connector***.



Neuralog is also enabling **NeuraSection** with an OpenSpirit Application Adapter which should be available by year end – See your Neuralog account manager.



*OpenSpirit Product

Solutions Available Today



Idea Integration is one of our integrator partners and have OpenSpirit enabled **Constellation** which is a **SharePoint** framework for enabling E&P workflow portals. The integration includes embedding the **OpenSpirit Web Server*** as well as some direct access to OpenSpirit API along with the ESRI **ArcGIS Server** platform.

Infosys is another integrator partner with expertise in **SharePoint** and have OpenSpirit-enabled their portal framework. They also leverage the **OpenSpirit Web Server*** along with their own internally developed E&P web parts and several other web parts from industry partners



Transform has OpenSpirit enabled their software suite, (**TerraView™**, **TerraFusion™**, and **TerraMorph™**) which integrates, automates and simplifies unconventional interpretation of micro-seismic, tilt-meter, well log, VSP, seismic and many other E&P data types.



*OpenSpirit Product

Solutions Available Today



Paradigm enables direct integration and interoperability with OpenSpirit plug-ins for **GoCAD**, **SKUA**, and **StratEarth** with improvements this year including GIS events and additional data types. OpenSpirit also provides the **Epos Data Connector*** allowing other OpenSpirit-enabled applications access to the Epos well data.

Paradigm also builds the **Epos OpenSpirit Link** which is an adapter from the Epos side that allows users to push/pull data to OpenSpirit-enabled data sources.

Perigon has enabled **iPoint** with OpenSpirit supporting both data selection events as well as collaborative interaction events, enabling seamless integration of robust well bore visualization with other G&G and GIS workflows



*OpenSpirit Product

Solutions Available Today

 **OpenSpirit** also builds utilities on top of the OpenSpirit services that add value across vendor solutions...

The OpenSpirit **Managed SEGY Data Connector** will make SEGY data stored on disk to appear as a relational data model – allowing OpenSpirit-enabled applications to read/write this data

Copy Manager 2010 allows you to copy data between OpenSpirit data connectors in manual or automated jobs to keep different vendor solution in sync with one another

The **Scan Utility** can scan all OpenSpirit data connectors and generate spatial data representing the information along with the OpenSpirit data key to keep the spatial information “connected” to the source

LoadIT WITSML gives users monitoring well drilling live an additional option to write that WITSML stream straight back to an OpenSpirit enabled database to keep your G&G staff in sync with your drilling staff

The **OpenSpirit Web Server** exposes a subset of OpenSpirit services as REST style web services allowing each integration with portals and online mapping applications



Integration Partners

Companies that develop, implement, and/or use OpenSpirit software and development environment as part of their consulting and project services business

Integration Partners have:

- integrated OpenSpirit into Portals
- enabled Enterprise Search
- delivered custom tools
- developed OpenSpirit Application Adapters for other partners
- supported OpenSpirit on development efforts
- supported customers on strategy, deployment and support exercises



Infosys & ETL are ready to take on Data Connector work

In Discussions....



Alliance Partners

Companies and/or Organizations that we work with in the Industry...



The Business Driven Standard



Integration on the Horizon

Petrosys has built an initial prototype and is seeking customer feedback – contact Scott Tidemann



Primary focus has been additional data access and user interaction events to enable seamless workflows for users across multiple applications – Multi-platform access has also been important allowing users to run Petrosys on Linux while interacting with other Windows-based solutions.



Fugro Data Solutions is now testing their OpenSpirit Application Adapter for **Trango Wells** and is currently integrating **Trango Seismic...** System is in beta now at a large customer in Houston.

The **Trango Well** Database works as an **OpenSpirit PPDM Data Connector** data source out of the box – as Trango well is PPDM 3.7 compliant



Integration on the Horizon



SAFE Software has joined the OpenSpirit Partner Program to OpenSpirit enable **FME Workbench**. This will enable the OpenSpirit model as both a reader and writer in the FME framework.

Prototype was demonstrated at PUG in Feb 2010 in Houston – Beta Program started in May 2010

The OpenSpirit Reader/Writer will be supported with the current **FME 2010** release.

WhereOil Enterprise allows customers to find and manage all their data, structured or unstructured, wherever they are, from one, easy-to-use interface.

Working with OpenSpirit WhereOil will now have access to even more data sources as well as leverage OpenSpirit interoperability events to gives users streamlined access to data directly from their search results



K A D M E



Integration on the Horizon

The logo for PETRIS, featuring the word "PETRIS" in a bold, green, sans-serif font. The letter "P" is stylized with horizontal lines to its left.The logo for DataVera, featuring the word "Data" in blue, a stylized blue checkmark with an orange dot above it, and the word "era" in blue.

Petris is building an OpenSpirit application adapter for **DataVera** to enable their QA/QC workflows to work across any OpenSpirit enabled database.

Petris is OpenSpirit enabling the **Petris Winds Enterprise Platform** – this will add more data sources – and access to interoperability events from the search results

OpenSpirit also has the OpenSpirit **Recall Data Connector***

Siemens has announced OpenSpirit integration with their **XHQ Operations Intelligence** Solution. The XHQ platform aggregates, relates and presents operational and business data in real-time to improve enterprise performance.

The logo for SIEMENS, featuring the word "SIEMENS" in a bold, teal, sans-serif font.

End users will now have a single coherent view of this information along with all of their G&G information via **OpenSpirit Web Server** web services.

The logo for OpenSpirit, featuring a blue diamond shape composed of four smaller diamonds, followed by the word "OpenSpirit" in a blue, italicized, sans-serif font.

Integration on the Horizon



The ISSGroup have started OpenSpirit enabling the **BabelFish Portal** – a Web-based 'real-time' data visualisation and integration suite – Adding OpenSpirit integration will add access to G&G data and application

Midland Valley Exploration (MVE) has joined the OpenSpirit partner program to enable future versions of **2D, 3D, and 4D Move** to leverage the OpenSpirit integration and interoperability framework.



Blue Marble is planning to OpenSpirit enable their applications to allow shared clients to view, extract, and manipulate external OpenSpirit datasources with the tools available through the Blue Marble Desktop's **Geographic Calculator** interface and **GeoCalc** coordinate library logic.



Integration on the Horizon



DataFlux, A SAS Company, is leveraging the OpenSpirit Framework to extend their market leading data management solution to Oil & Gas industry and G&G data stores

They are looking for a sponsor company to help guide the development

Austin GeoModeling (AGM) has joined the OpenSpirit partner program to enable **RECON** as part of the Recon 4.0 release

This will enable access to all OpenSpirit enabled data sources as well as enable interoperability events.



Integration on the Horizon



DownUnder GeoSolutions has joined the OpenSpirit partner program to enable **DUG Well**, which is used for log visualization and manipulation, format conversion, Gassmann substitution and deterministic AVO modeling; and **DUG Insight**, a the 2D and 3D package for seismic interpretation to enable connectivity and ensure DUG software is immediately intergratable and accessible for their user's workflows.

OpenSpirit and Kongsberg have an alliance that provides complete end to end WITSML solution via OpenSpirit **LoadIT WITSML** tool and **SiteCom** to provide Real-Time data from the rig site back to G&G Asset teams



KONGSBERG

Kongsberg and **SIM** (Systems in Motion) have also completed some utilities on top of OpenSpirit for internal customer use



Integration on the Horizon



Fusion Technology completed their initial prototype connection to OpenSpirit in 2009/2010 and plan to finish a commercial release in 2011.

XStreamline is a web based collaborative work and data management system for Exploration and Production.

XStreamline is integrated with OpenSpirit and provides orchestration and governance of OpenSpirit transactions capturing relevant transactional metadata to improve the efficiency, quality and auditing of data management business processes.



Kelman Technologies has joined the OpenSpirit Partner Program and has identified five integration projects to kick off in 2010. Initial focus will be delivering data in an OpenSpirit ready structure leveraging the OpenSpirit **Managed SEGY Data Connector** specifications.



Integration on the Horizon



Pason has completed initial development of an OpenSpirit application Adapter to enable them to bring horizon data from any OpenSpirit enabled database into their **real-time drilling** visualization suite

Geoleader is currently implementing a prototype leveraging the OpenSpirit **Managed SEGY Data Connector** specifications to deliver their data to more users regardless of application or data management strategy in Russia and beyond.



Divestco is currently testing the OpenSpirit **PPDM Data Connector** and **OpenSpirit Web Server** as a means for delivering vendor data over the web in a ready to use format. Next steps include testing the OpenSpirit **Managed SEGY Data Connector**



Integration on the Horizon

Microsoft®

*Upstream
Reference
Architecture
Initiative*

OpenSpirit joins Microsoft Corp. and other solution providers as part of the newly announced Microsoft **Upstream Reference Architecture Initiative**.

Microsoft launched this initiative in an ongoing effort to enable collaborative workflows and multi-vendor data accessibility across the full E&P business.

The project leverages technologies from several partners to bring together data, systems, and workflows from geoscience, production, operations, finance, and other critical business areas.

OpenSpirit has been asked to lead the Data Services and Integration working group.



Integration in Discussion

- ALT (Advanced Logic Technology)
 - Discussing OpenSpirit connectivity for their log tools (WellCAD)
- NOV/MD Totco & Petrolink
 - LoadIT Partnership Opportunities (WITSML)
- Horizontal Drilling
 - Discussing integration – design of prototype underway
- RichFit
 - Discussing integration for Chinese market specific applications and databases
- Enigma Data Solutions
 - Discussing collaboration opportunities around data archive workflows
- IStore
 - Discussing collaboration opportunities across several visualization and presentation layers
- Performix
 - Initial discussions started with reference from customer – **OpenSpirit LoadIT WITSML** supports the Performix WITSML compliant data stream

Thank you Partners!



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OpenSpirit **right**
from the **start**