

# NeuraDB

Timely Access to Trusted Data



*NeuraDB* is an E&P focused Master Data Management solution which can serve as your Well Data Master, Well Log Repository, and Well File Management System. Manage data and documents associated with wells, fields, stratigraphic units and seismic data.

*NeuraDB* is a solution fit for both small and large organizations. Structured data such as well records and unstructured data such as rasters and physical logs are supported. This PPDM [Professional Petroleum Data Management] Data Model based solution, uses Oracle or SQL Server for its database engine and ESRI ArcMap for its interactive map interface. It integrates with proprietary and industry standard databases, as well as middle-ware applications. *NeuraDB* helps today's E&P professionals gain timely access to corporate data.

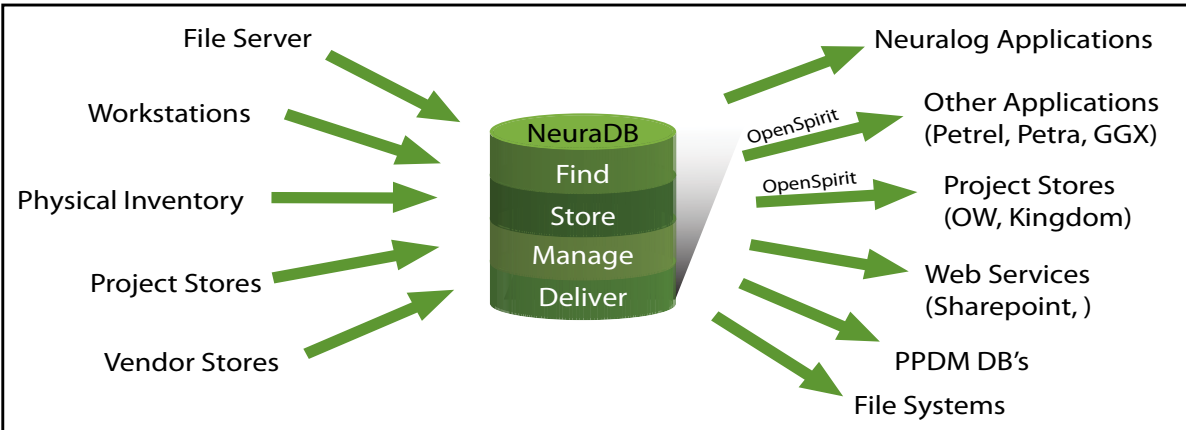
Reconciliation of data from many sources ensures users are getting the best blend of available data. Links to documents can be setup online or in other document management systems such as LiveLink, SharePoint or Documentum. The Physical Inventory module in *NeuraDB* enables you to manage volumes of paper and film documents that can be easily bar-coded and indexed. Work orders, well data and document certifications can be used to implement your organization's data quality improvement programs.

Storage of well data, log curves and well files in a single location allows users to quickly find and load data into their projects. Users have easy access to all their data through map or explorer-like interfaces with easy to use queries. Data can be exported to the client workstation or accessed within any G&G application. *NeuraDB* has the ability to deliver data in any Coordinate Reference System (CRS) as well as rotate directional surveys.

Most organizations waste significant resources searching for poorly organized data. *NeuraDB* provides an immediate and direct path to the data you need. Implementation is quick and cost-effective, providing you and your organization with a secure full-featured system that improves efficiency, promotes technical collaboration and good decision making.

**Neuralog**

*Turning Paper Into Petroleum*



NeuraDB facilitates finding, storing and managing data in a centralized repository, and seamless delivery to industry standard applications.

### Find and Reconcile Data from Multiple Sources

*NeuraDB* provides the ability to manage well headers, formation tops, deviation surveys, monthly production, logs, curves, well reports, etc. *NeuraDB* can help find, stage and prepare data for automated loading from corporate networks, public data vendors or web-based vendors.

- Crawl and search for data on a local or network file system or FTP server.
- Extract data from proprietary and industry standard databases such as Finder or OpenWorks.
- Import data from IHS using Enerdeq web services or flat files.
- Reconcile data with rules and priorities to eliminate duplicates, create versions and track sources.

### Index, Organize, Load and Manage Data

*NeuraDB* uses automated, batch and interactive indexing to set up relationships between documents and corresponding entities (wells, fields, etc.) in order to organize and prepare data for loading.

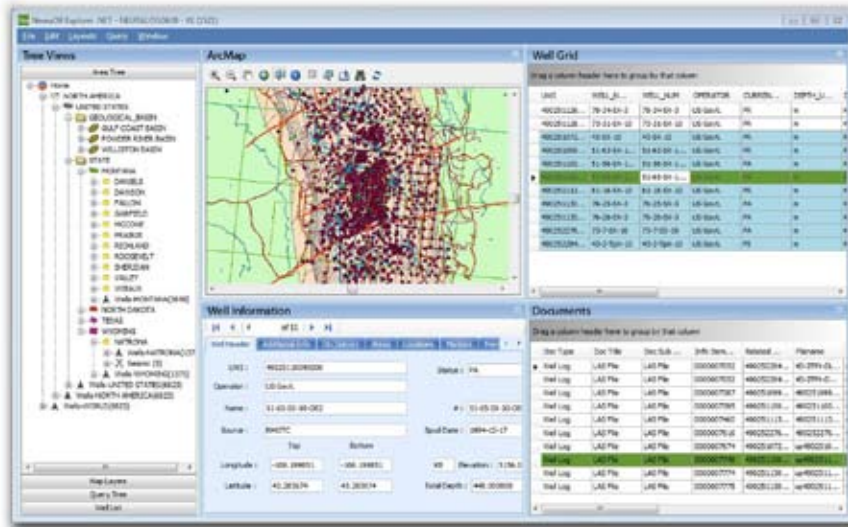
- Documents are analyzed using a number of domain-specific criteria for automated indexing.
- Templates and spreadsheet loaders are used for batch indexing from proprietary databases and physical inventory catalogues.
- Interactive indexing, if required, involves assigning relationships by simply dragging and dropping your files onto relevant wells.

*NeuraDB* employs standardized naming and synchronization mechanisms to organize data both as it is loaded and after loading is complete.

- Sophisticated reference value management helps standardize taxonomies [dictionaries and nomenclature].
- Interactive and scheduled data loading enables data managers to streamline routine updates.
- Automated routines synchronize multiple *NeuraDB* servers for distributed architecture. For example, a corporate master repository can be updated weekly with data from operational servers.

Go beyond data management and improve data quality.

- The Work Order module provides complete work order management for the data stored in *NeuraDB*.
- The Certification module in *NeuraDB* provides for data quality monitoring along with managing the certification process followed within the organization
- Create new work-flows to process data and qualify information to move you organization closer to true knowledge management.



NeuraDB Desktop; this client application gives the User easy access to all available data.

## Store Data

*NeuraDB* serves as your corporate data store for both your structured and unstructured well data and documents.

- Replace shared network drives and projects with a single, definitive source of quality data.
- Find and manage duplicates and multiple versions of logs and documents with ease.
- Increase access and sharing throughout the organization.
- Connect to other non-G&G systems such as SharePoint, SAP, etc.

*NeuraDB* serves as a portal for all the well data and documents in a hybrid environment.

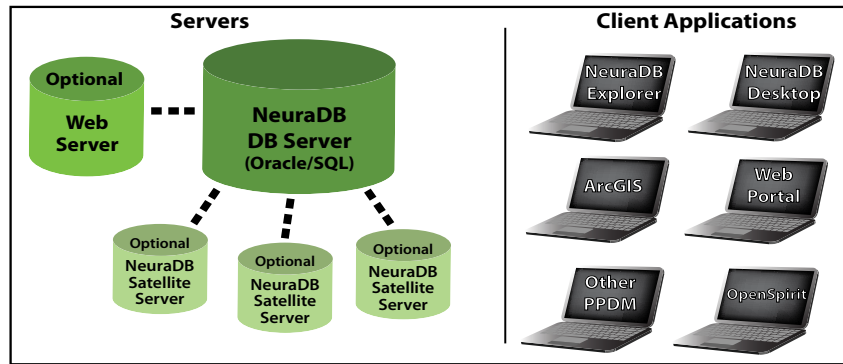
- Store data in *NeuraDB*, while also storing documents in external document systems such as LiveLink, SharePoint or Documentum.
- Access data through *NeuraDB*, without having to learn multiple applications for multiple document types and systems, advanced security can help to concentrate projects.
- Access data from different offices through the use of WAN, keeping local data stores in synchronization with other off-site offices within the organization.
- Also access data through Citrix or other terminal servers.

## Deliver Data

*NeuraDB* makes it easy to query, display, and retrieve data for use in your commonly used G&G applications.

- Access data from four familiar interfaces:
  - *NeuraDB* Explorer: Familiar Windows Explorer style data browser.
  - *NeuraDB* Desktop: Customizable Windows application with a map interface.
  - GIS: *NeuraDB* includes an ArcMap extension that brings your data to your map.
  - Web services: Build your own client application utilizing SOAP compliant web services.
- An interactive, easy-to-use query builder helps find what you need when you need it.
- Spatial tools in ArcMap can be used to query and retrieve data directly from *NeuraDB*.
- Data is then delivered to G&G applications in any of the following ways:
  - Well logs can be sent directly to your favorite application (*NeuraLog*, Petra, Landmark, etc.).
  - Export data in standard formats as well as in the proper Coordinate Reference System.
  - Data can be delivered from *NeuraDB* using Web Services into a portal, middleware or web-services compliant application.
  - Data can be delivered with OpenSpirit's PPDM connector from *NeuraDB* to any OpenSpirit-compliant application.

**Neuralog**



NeuraDB is a PPDM database in a server environment with client applications and web services (SOAP) access.

## Data Input

- Schlumberger Finder 8.5 - 9.2
- IHS Energy Enerdeq
- IHS Energy Well Fixed 297 and 298
- Petra LIC and well data
- MMS
- Excel
- User Defined Database
- Manual Input within *NeuraDB*
- Landmark OpenWorks 98.5 – 2003, R5000
- GeoGraphix WellBase V2, V3 and V4
- PI/Dwights Fixed 187
- TGS (A2D) SilverWire
- MJ Systems
- UKOOA
- Other *NeuraDB* database
- *NeuraSection*, *NeuraLog* and *NeuraScanner*

## Data Output

- GeoGraphix WellBase V2, V3 and V4
- Petra LIC and well data
- Original file formats
- Custom LAS
- GeoGraphix DRA
- *NeuraLog* and *NeuraSection*
- Flat files
- Any OpenSpirit compliant application

## NeuraDB System Requirements

Servers	Operating System	Memory	Disk Space	Software
NeuraDB Server	Windows 2000/2003/2008 Server, Unix, RHEL	Min: 8GB Recommended: 16GB+	As determined by user	Oracle (9.2+, 10G, 11G 32/64-bit) or SQL Server (2005 or 2008 32/64-bit)
NeuraDB Web Server (Optional for deploying SOAP Services)	Windows 2003/2008 Server	Min: 8GB Recommended: 16GB+	500MB	IIS 6.0 / 7.0, Recommended 7.0, NeuraDB Explorer
Client Machines	Operating System	Memory	Disk Space	Software
NeuraDB Explorer and ArcMap Extension	Windows 2000/XP/ Vista/Windows 7 32/64-bit	Recommended: 2GB for data browsing, 4-8 GB for data loaders	350MB	a. NeuraView (included) b. ArcGIS 9.x - ArcView license (optional, for using the NeuraDB-ArcMap extension)
NeuraDB Desktop	Windows 2000/XP/ Vista/Windows 7 32/64-bit	Recommended: 2-4 GB	200MB	a. NeuraView (included) b. ArcGIS - ArcEngine 10 runtime license (optional, for using the built in Map in NeuraDB Desktop)

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