OptaSense® DxS Browser Software Suite

Integrating distributed data can be challenging.

When you're managing terabytes of data for quality control, analysis and interpretation, many petrophysical and production workflows can't cope—eliminating critical data sets from analysis. This means decisions are being made without all the right information.

Integrating 3D data that spans depth, time and measurement can present another obstacle, with many of today's conventional tools being capable of handling only two of these data sets.

And, with such a broad range of applications and challenges that distributed data illuminates solutions for, deriving results can be a cumbersome process. Data processing and visualization tools shouldn't require that production engineers, petrophysicists and research groups become programming wizards as well.

Optimizing Distributed Data Set Integration and Analysis

The OptaSense DxS Browser software suite allows users to easily integrate large distributed data sets into workflows, including 3D depth, time and measurement data, while managing quality control, analysis and interpretation. So you can focus more on results, the suite down-samples larger data sets from terabytes to megabytes by allowing users to generate and extract filtered waterfall information.

With the DxS Browser, operators reduce the requirement for specialist data handlers and programmers. This software puts quality control in the hand of the operators, including verifying depth calibration, visualising and qualifying generated results, and re-working data sets.
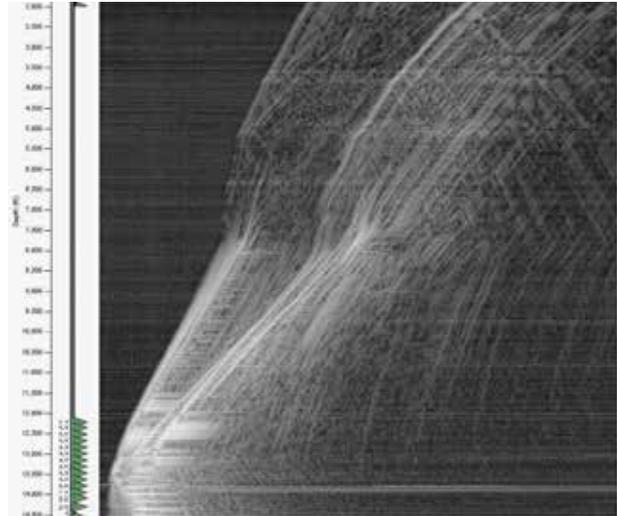
High resolution, full well imagery of distributed data sets

When it comes to integrating multiple distributed data sets with conventional logging and point sensor data, the DxS Browser improves the interpretation process by allowing users to easily present and configure visuals for reports and analysis.

The software suite also provides a toolkit that optimizes the import and conversion of distributed acoustic sensing (DAS) and distributed temperature sensing (DTS) data, allowing rewriting of data sets to industry standard formats for comparison and analysis. It also provides a Platform for DAS and DTS data processing methods, from Fast Fourier Transforms to Infinite Impulse Response filtering, including advanced workflows for hydraulic fracture profiling and production flow profiling.
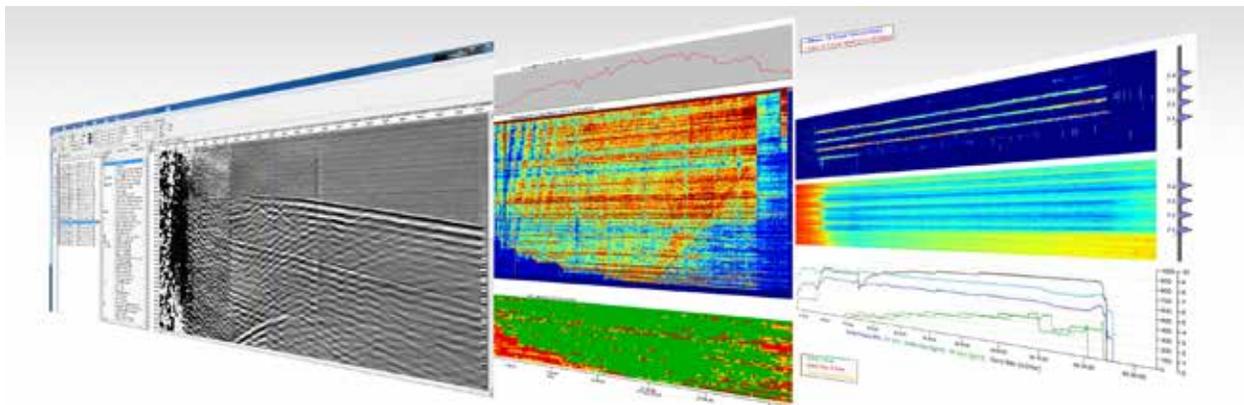

Fully configurable screens and plots to present data in the best possible manner

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Software Functionality

The DxS Browser software suite is designed to handle industry standard distributed data sets, including:

· Distributed acoustic data

· Distributed temperature data

The software will also allow reprocessing and handling of large data sets, by running proprietary algorithms and producing key metrics in industry standard data formats.
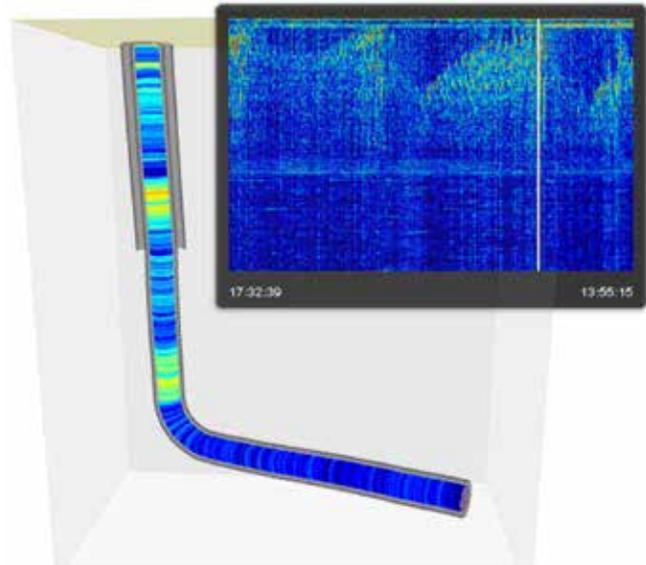
Real-time visualization of in-well flow regimes using DAS

DxS Viewer Data Management Tools	
Data Visualization Tools	
Dynamic, multi-resolution waterfalls	Access and visualize DAS and DTS data faster
Time Series Plotting	Integrate and visualize individual DAS and DTS channels, alongside time indexed data from other sensors, such as pump rates, concentrations and pressures
Depth Plotting	Easily plot and calibrate DAS and DTS data against depth to verify depth calibration, as well as visualize all data against the well diagram. Normal depth indexed data can also be plotted and handled, from formation evaluation data to production logging analysis.
4D Well View	Create a video of DAS data presented along the well trajectory. Rotate, zoom and view the well in 3D space to easily see the effects of well geometry on DAS signatures.
Data Management Tools	
Frequency Band Extraction	Create power spectral density waterfall plots for all or selected parts of a data set. This tool provides the ability to easily create, re-create, manage and visualize data.
Decimation	Select data decimation factors and core filter parameters to easily down-sample all, or part of a DAS dataset
External Data Sources	Add and access local or remote data sources for analysis
Frequency Band Management	Manage Frequency Band Extraction (FBE) data for homogenizing data sets, band addition and subtraction. This tool creates a single array of FBE data from multiple, smaller sets, improving analysis of micro-seismic and cross-well events
Data Import and Export	
CSV Handling	Manage datasets from CSV sources, and export them back into a CSV format
HDF5 Handling	Export raw and decimated DAS data into HDF5 formats
DTS Export	Export depth calibrated DTS data into industry standard WITSML format, CSV or HDF5 formats

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