Emerson and Total co-present OpenDB at EAGE

RESQML-based database solves multi-disciplinary, multi-vendor reservoir studies challenges with a standards-based solution spanning the subsurface value chain.

Speaking at the 2019 London EAGE (more in our next issue), a joint presentation by Total and Emerson/Paradigm provided an update on the OpenDB project, a database for reservoir engineering applications that leverages Energistics' RESQML data standard. OpenDB has been used in several multi-vendor proofs of concept involving either file-based data exchange with RESQML or streaming data between tools with ETP, the Energistics transfer protocol. OpenDB, whose development is steered by a consortium of operators, focuses on capturing the results of multidisciplinary reservoir studies. Total uses the tool to 'encourage' the organized storage of validated study results, to promote collaboration, smooth handoff of relevant data and results between disciplines and to enable interoperability in a heterogeneous multi-vendor application environment (OpenDB is even designed to be self-contained and 'independent from Emerson applications').

Flagship trials include the ongoing RESQML SEG Kepler field pilot* which leverages file-based data transfer and cloud data synchronization (Google, Amazon). Another trial involves microservices leveraging the ETP Websocket asynchronous communication with an Azure data lake. Total concluded that the efficient exchange of data and results is a key factor in determining a successful outcome in a reservoir study. OpenDB solves multi-disciplinary, multi-vendor reservoir studies challenges by providing a data management based on open standards that covers the whole subsurface value chain including reservoir modeling and simulation while avoiding vendor 'lock in'. OpenDB is also said to be an integral part of Emerson's digital transformation strategy.

After the EAGE Oil IT Journal interviewed OpenDB product manager, Emerson's Alice Chanvin.

Oil ITJ - Is the source code for OpenDB available and if so, in what language/database technology?

Chanvin - The source code could be made available to a consortium member under some conditions, but it is not open source. OpenDB is available on Oracle and PostgreSQL.

Oil ITJ - Will it be available to consortium members and non-members?

Chanvin - Today, OpenDB is only available to consortium members. When it goes officially commercial it will be available to any customer.

Oil ITJ - Does OpenDB resemble in any way (coverage/style/inspiration) the PPDM database**?

Chanvin - No, it is based on Energistics's standards and really wants to focus on domains that are traditionally not, or poorly covered by traditional data management systems principally reservoir modeling and reservoir engineering (in addition to seismic interpretation).

Oil ITJ - What exactly is the relationship between OpenDB and the OSDU? Or what might it be?

Chanvin - Today, there is no official relationship between OpenDB and OSDU. Emerson is active in OSDU. We feel it is important for OSDU to adopt Energistics standards and believe OpenDB can play a role in the OSDU Data Platform. We will provide more information as both OSDU and OpenDB consortium evolve.

* More information on this presentation is available from Energistics.

** Back in 2014 the first version of OpenDB was described as 'blending' PPDM and RESQML.