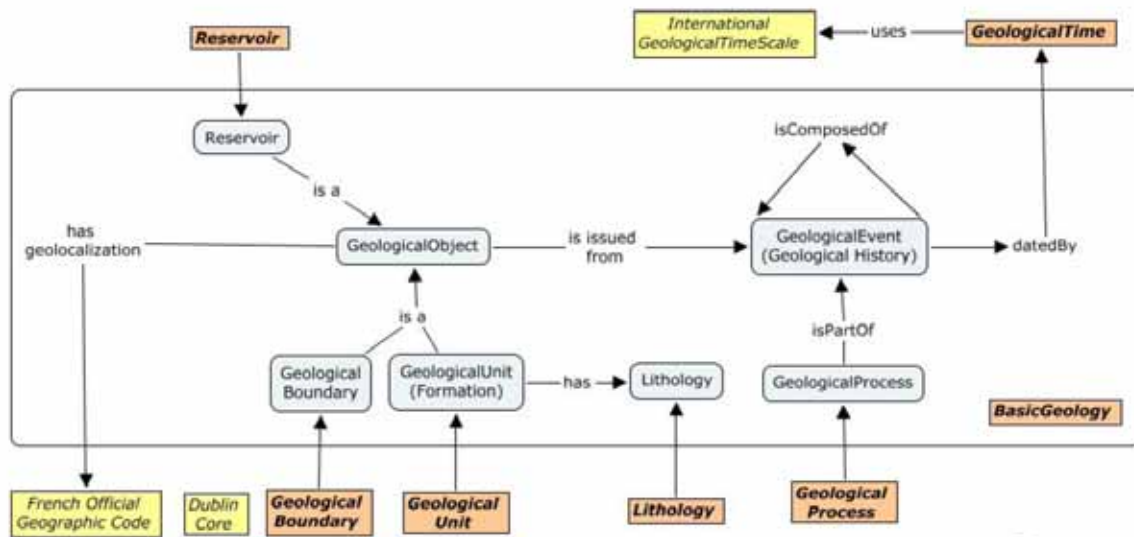


**World Wide Web Consortium (W3C)
Workshop on the Semantic Web in Oil and Gas¹
December 2008 – Houston, Texas**



Example of geological ontologies².

The World Wide Web Consortium's (W3C) Workshop on the Semantic Web in Oil and Gas was held in Chevron's Houston offices with attendance from a good cross section of industry decision makers and semantic practitioners. Attendees hailed from BP, Oxy, Shell, Total, Halliburton, Schlumberger and Energistics *inter alia*. On the oil company side, Chevron is the most enthusiastic proponent of the semantic web although the technology still hovers between academic proof of concepts and enterprise deployment.

The presence of CEO Steve Bratt was an indication of the importance that the W3C gave to the event. Bratt described the semantic web as 'Web 3.0,' and RDF's simple 'subject, property, value' triples as set to turn the world wide web into a 'big global relational database.' Presentations from Chevron, USC, Bentley Systems, Fluor Corp. made more prosaic claims for the technology. These fall broadly into two categories; 'top down' (proper) database applications leveraging an upper ontology and 'bottom up' text-based tagging systems. The flagship oil and gas development of the ISO 15926 reference data library (RDL) falls into the first category. The above image from the E-WOK project is an example of the tagging approach. The interaction between the oil and gas domain specialists and the W3C's semantic luminaries led to some enlightening debates particularly in the context of the RDL's 'template' approach to extending RDF into a science and engineering context.

Our favorite paper was the presentation on the E-WOK project which showed how semantic tagging of an existing document library enables queries such as 'What diagenesis has affected the Bathonian of the Paris Basin?' The system 'understands' that the Bathonian is part of the Jurassic and that the Paris Basin includes the Ile de France area. Other enlightening presentations came from Fluor Corp., Bentley Systems and several more by or on behalf of Chevron. As Chevron's Frank Chum put it, RDF, the technology that underpins the semantic web has proved 'extremely useful to us in bringing together 'factoids' of unrelated information. In this context RDF is solid.' Also of note were the lively panel sessions and Q&As which we have tried capture here.

Semantic technology is a hard subject, not the least because of the tendency amongst its advocates to presuppose familiarity with concepts like 'serialization,' 'upper ontologies,' 'URIs' and a host of more abstruse jargon. While there is a hope that this technology will solve a lot of interoperability problems, exactly how this is going to come about remains unclear. Notwithstanding this, the semantic web is the most interesting thing that is happening in information management and this report has been exciting to write. The aim of the workshop was to ascertain interest in a joint industry effort to further the use of semantic technology in oil and gas under the auspices of the W3C. At the time of writing, the jury is out on this.

¹ The official W3C report of the meeting is available at <http://www.w3.org/2008/12/ogws-report.html>.

² Image courtesy French Petroleum Institute and E-WOK Project - <http://www-sop.inria.fr/edelweiss/projects/ewok/captureCO2/slide4.html>.

Highlights

[Keynote – Jim Crompton, Chevron](#)

[Semantic technology for reservoir management](#)

[ISO 15926 in RDF/OWL](#)

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