Why is the Semantic Web Different?

**Designed for World Wide Web requirements:**

- “Infinitely” Scalable
- Open World Assumption
Open and Closed Worlds

**Closed World**
- System has control of information
- Familiar Technology
  - Procedural Programming
  - Databases

**Open World**
- System does NOT have control of information
- Web Technology
  - Semantic Web
  - Social Computing
Oil & Gas Info Closed or Open?

Within a Domain and Company: *Closed*

Across Domains, within Company: *Open*
- e.g., Drilling – Production – Reservoir Management

Across Companies: *Open*
- e.g., Equipment Information for Joint Ventures

Source of many of our most difficult Information Management Problems.
Data Silos
Semantic Web Integration

- Data remains organized differently within domain silos
- Ontologies describe relationships between domains
- Information accessed across linked Data “cloud”
The Linked Data Cloud (and HCLS)

Source: http://www4.wiwiss.fu-berlin.de/bizer/pub/lod-datasets_2009-03-05_colored.png
Chevron Semantic Web Activity

- IAM – iFields Integrated Asset Management
  - Reservoir and Well Models
  - Metadata management, organic growth
- MCPIM – Major Capital Projects Information Mgt
  - Leverage and Validate IAM architecture
  - USC/Chevron SR collaboration
  - Replacing equipment metadata store
- Ontology Management and Integration
  - Enterprise “stitching together”
- Large RDF Stores
  - Scale to Enterprise
- Excel Spreadsheet Linkage
- Excel Import
- Search Enhancement
Semantic Web Integration Architecture (CiSoft Research Proposal)