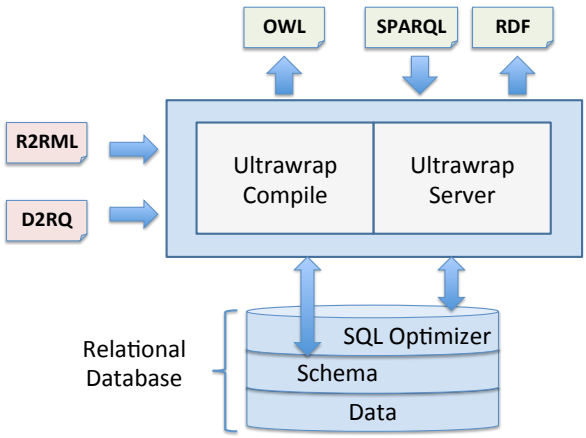
Ultrawrap by Capsenta

Bridging Relational Databases and the Semantic Web

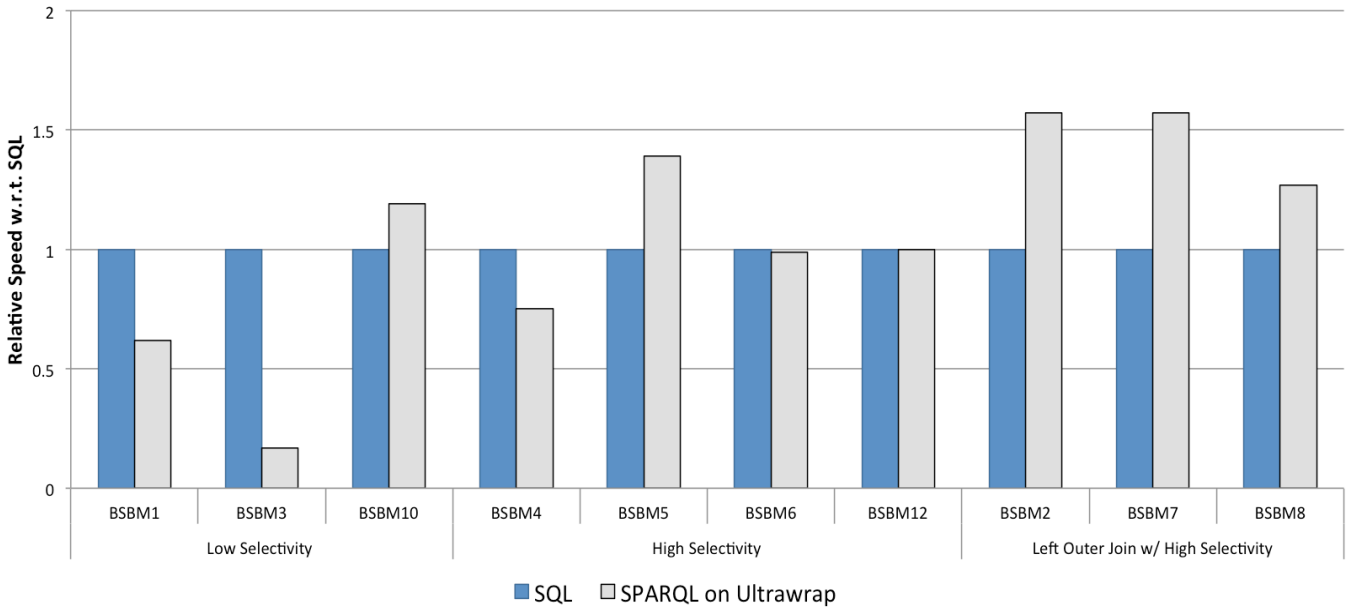
Ultrawrap consists of two parts: Compile and Server.

Ultrawrap Compile processes the mapping and generates RDF and OWL. Ultrawrap Server executes SPARQL queries by pushing all optimizations to the SQL engine.

- ✓ SPARQL execution as fast as SQL
- ✓ Customizable mapping through a GUI and SQL
- ✓ W3C RDB2RDF Standard Compliant
- ✓ Publication of the SQL Schema as OWL



FEATURE	BENEFITS
Uses SQL View to define RDF The relational data is logically modeled as RDF and need not be extracted and loaded into a triple-store.	No data replication means • Real-time consistency between RDBMS and RDF representation is built in • Reduced storage costs • Reduced security overhead • Existing applications remain unchanged and may be extended to interoperate with Semantic Applications without changing development
SPARQL is Executed by the RDBMS Ultrawrap does not implement SPARQL to SQL optimizations. A simple translation is used. Thus, optimization is performed by existing, SQL optimizers.	Most challenging aspect of the implementation are executed by well established codebase with large market. • Benchmark results demonstrate speeds nearly equal of semantically equivalent SQL queries • Robust, scalable and easily optimized query plans • The result is an easily maintained and robust product
Supports W3C Standards and more Standard Direct Mapping and R2RML support. Mapping of SQL Schema and meta-data to OWL. GUI-based mapping refinement.	No need to learn a new mapping language • Users can choose which tables and attributes to direct map through a GUI • Customization can be done from the database side through SQL Views • Integrates with automatic ontology mappers and ontology-based data integration
Downward Compatible with D2R Legacy D2R users may use their existing D2RQ mappings.	Transparent Migration Path From D2R Server Means • Faster execution • Scalability



Berlin SPARQL Benchmark results on 100 million triples (~10 GB), demonstrate that execution speed of SPARQL queries on Ultrawrap is comparable to the execution speed of independently written but semantically equivalent SQL queries.

Ultrawrap has been crafted to make maximal use of existing SQL infrastructure, particularly the databases own metadata and its SQL optimizer.

Across benchmarks and relational database platforms, the scalability of Ultrawrap consistently matches the scalability of the underlying relational database system.

System Requirements

- JDK 6
- Runs on all major JDBC enabled databases: Oracle, SQL Server, DB2, PostgreSQL, MySQL
- Optional: Amazon EC2

Capsenta
Austin, Texas
ultrawrap@capsenta.com
www.capsenta.com