As a result of the Linked Data initiative, many institutions expose RDF data on the Web and provide a SPARQL endpoint that allows clients to execute structured queries against a data source. It, however, a client needs to access several autonomous data sources with a single query, it must first deal with the heterogeneities caused by the different vocabularies/ontologies/schemes in use.

The MediaSpaces Mapping Framework allows the declaration of mapping relationships between incompatible vocabularies on the Web. It includes an extensible function framework to bridge heterogeneous vocabularies on the Web.

The MediaSpaces Mapping API allows for the declaration of mapping relationship between incompatible vocabularies on the Web.

For the discovery of mapping relationships we rely on third-party schema/ontology matching algorithms. They can be integrated into the MediaSpaces Mapping Framework via plug-in connectors.

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The MediaSpaces Mapping Framework follows the Linked Data principles.

Mapping elements
* use URIs as identifiers
* are exposed as de-referencable HTTP resources
* are presented in a human- and machine-readable way
* contain links to the schema elements they map

The Mapping API is an extension of the Jena Semantic Web Framework and freely available. For demonstration purposes we have implemented a mediator component that uses the Mapping API and provides uniform query access to a set of distributed, heterogeneous data sources via a single query interface.

Mapping Maintenance

Mapping Discovery

Mapping Representation

Mapping Execution

Further Information:
All software components are documented and available at http://www.mediaspaces.info/tools/mapping