Linked Data Mapper –
A Browser-based Semantic Mapping Tool for Linked Data in Semantic Web

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1. Introduction
Why need Linked Data Mapper?

1. **Linked Data** (database, XML, RDF triples) on the web are often isolated and heterogeneous with each other.

2. Ontology-based **Data Integration** needs semantic mappings from data schema to ontology schema.

3. Defining semantic mapping manually is a burdensome and error-prone work.
Goals of our Mapper?

- To provide **easy-to-use functionalities** to help users to define mappings from relational databases to ontology schema. **(Now)**
- To provide functionalities of converting relational data to RDF data automatically based on the mappings or not. **(Now)**
- To serve as a universal mapping space, in which semantic mappings can be shared, reused, and exchanged. **(Future)**
Linked Data Mapper

Architecture & Features
DartGrid

Architecture

- **Browser-based Mapping Tool for Linked Data**
  - Data Resource Registry
  - Ontology Resource Viewer
  - File Management
  - Other Resource Management

- **Visualized mapping tool**: provides functionalities to define semantic mappings by drag-and-drop

- **Resource interaction server**: is in charge of interaction with databases and ontology schemas.

- **Physical resource**: relational databases and ontology schemas (RDFS, .n3, XML……)
Functional components

- Display databases and ontology schema (supporting RDF graph)
- Define semantic mappings from databases to shared ontology
- Transform graphical mappings to Mata schema language executed to convert relational data to RDF data

Linked Data Mapper
Technical Features

Linked Data Mapper

- Drag-and-drop mapping
- Web browser-based tool
- Visualization mapping
- Data source annotation
- Data Transformation SQL to RDF
Thank You!

Demo Video