**Linked Open Data for Current Research Information Systems (CRIS)**  
Florian K. Gantner, Steffen Illig, Philipp H. Rumpf

**Motivation & Problem Presentation**

- At the University of Bamberg a Research Information System (FIS) on the basis of the open-source software DSpace-CRIS has recently been introduced: [https://fis.uni-bamberg.de](https://fis.uni-bamberg.de)
- To increase the visibility of the research results, we aim at providing the RDF-Triple through a full-fledged SPARQL-Endpoint (Linked Open Data, LOD).
  - A DSpace-Module for LOD already exists, but is currently limited to publications only. Entities like awards, researcher profiles and projects or their relations are currently not supported. (Becker 2014)

**Evaluation of Existing Approaches**

**A1: Direct Mapping (W3C Recommendation)**
Conversion on the basis of existing relational database structures
(-) not possible by structuring of metadata in DSpace

**A2: R2RML parser** (Konstantinou, Spanos, Houssos, Mitrou 2014)
Mapping of database structure on RDF-Triple through R2RML (W3C Recommendation)
(-) detailed knowledge of database structure necessary
(-) extensive Mapping (only for DSpace already 1800 lines)
(-) only complete RDF-Dump possible

**A3: D2RQ Framework** (Latif, Borst, Tochtermann 2014)
Retrieval of virtual graphs by mapping of SPARQL-Queries to database queries (SQL)
(-) Permanent database access through Real-Time-Generation
(-) Process is less efficient than R2RML (Konstantinou, Spanos, Mitrou 2013)

**A4: DSpace-Module for LOD** (Becker 2014)
(-) currently no support for CRIS entities

**Conclusion:** As a plugin it can be integrated in the workflow of repositories and, therefore, extending the current DSpace-Module (A4) is preferred. For example, when an article is published after peer review, LOD are provided immediately as well. This approach is performant, because Apache Jena Fuseki is used as a separate server and, thus, queries do not affect the resources of the repository.

**List of references**