

8th International Workshop on Science Gateways (IWSG 2016), 8-10 June 2016

# Towards a Metadata-driven Multi-community Research Data Management Service

Richard Grunzke\*, Volker Hartmann†, Thomas Jejkal†, Ajinkya Prabhune†, Hendrik Herold‡, Aline Deicke§, Alexander Hoffmann¶, Torsten Schrade§, Gotthard Meinel‡, Sonja Herres-Pawlis¶, Rainer Stotzka†, Wolfgang E. Nagel\*

\*Center for Information Services and High Performance Computing, Technische Universität Dresden, Germany, richard.grunzke@tu-dresden.de

†Institute for Data Processing and Electronics, Karlsruhe Institute of Technology, Germany

‡Monitoring of Settlement and Open Space Development, Institute of Ecological and Regional Development, Germany

§Digitale Akademie, Akademie der Wissenschaften und Literatur Mainz, Germany

¶Institut für Anorganische Chemie, Rheinisch-Westfälische Technische Hochschule Aachen, Germany

**Abstract**—Nowadays, the daily work of many research communities is characterized by an increasing amount and complexity of data. This makes it increasingly difficult to manage, access and utilize to ultimately gain scientific insights based on it. At the same time, domain scientists want to focus on their science instead of IT. The solution is research data management in order to store data in a structured way to enable easy discovery for future reference. An integral part is the use of metadata. With it, data becomes accessible by its content instead of only its name and location. The use of metadata shall be as automatic and seamless as possible in order to foster a high usability.

Here we present the architecture and initial steps of the MASi project with its aim to build a comprehensive research data management service. First, it extends the existing KIT Data Manager framework by a generic programming interface and by a generic graphical web interface. Advanced additional features includes the integration of provenance metadata and persistent identifiers. The MASi service aims at being easily adaptable for arbitrary communities with limited effort. The requirements for the initial use cases within geography, chemistry and digital humanities are elucidated. The MASi research data management service is currently being built up to satisfy these complex and varying requirements in an efficient way.

**Keywords**—Metadata, Communities, Research Data Management

## ACKNOWLEDGMENT

This work was supported by the German Research Foundation (MASi), the German Federal Ministry of Education and Research (ScaDS Dresden/Leipzig) and the Helmholtz Association of German Research Centres (LSDMA).