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

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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

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