

Graduiertenkolloquium Angewandte Informatik

Validation Framework for RDF-based Constraint Languages

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Abstract:

The formulation of constraints and the validation of RDF data against these constraints is a common requirement and a much sought-after feature, particularly as this is taken for granted in the XML world. Recently, RDF validation as a research field gained speed due to shared needs of data practitioners from a variety of domains. For constraint formulation and RDF data validation, several languages exist or are currently developed. Yet, none of the languages is able to meet all requirements raised by data professionals.

We have published a set of constraint types that are required by diverse stakeholders for data applications. We use these constraint types to gain a better understanding of the expressiveness of solutions, investigate the role that reasoning plays in practical data validation, and give directions for the further development of constraint languages.

We introduce a validation framework that enables to consistently execute RDF-based constraint languages on RDF data and to formulate constraints of any type in a way that mappings from high-level constraint languages to an intermediate generic representation can be created straight-forwardly. The framework reduces the representation of constraints to the absolute minimum, is based on formal logics, and consists of a very simple conceptual model with a small lightweight vocabulary. We demonstrate that using another layer on top of SPARQL ensures consistency regarding validation results and enables constraint transformations for each constraint type across RDF-based constraint languages.

Termin: Mittwoch, 11. Mai 2016, 14:00 Uhr
Ort: Englerstraße 11, 76131 Karlsruhe
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Veranstalter: Institut AIFB, Forschungsgruppe Web Science und Wissensmanagement

Zu diesem Vortrag lädt das Institut für Angewandte Informatik und Formale Beschreibungsverfahren alle Interessierten herzlich ein.

A. Oberweis, H. Schmeck, R. Studer, Y. Sure-Vetter (Org.)