

Publishing Linked Data with reusable declarative templates

Session proposal for the Share-PSI 2.0 Berlin Workshop:
Maximising interoperability — core vocabularies, location-aware data
and more

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Focus

This session will address the declarative approach to define “blueprints” for Linked Data: a vocabulary for Linked Data templates that can be shared and interpreted by different software systems and increase interoperability by doing so.

The vocabulary has been developed as part of [Graphity](#), a declarative platform for data-driven Web application development. Whereas RDF and Linked Data solve interoperability at the data layer, Graphity extends the [declarative approach](#) into software development. It delivers cost-efficiency and software interoperability for data publishers and software developers alike.

We will start the session with a short case presentation. Open data from the [Copenhagen municipality](#) (geo data in CSV format) will be imported, converted to RDF, published as Linked Data, and analyzed. The only tool used will be the Graphity Platform, to illustrate the viability and flexibility of Linked Data templates in real-world data management tasks.

Rationale

Linked Data is standards-based framework for publishing and linking RDF data on the Web. There are many domain-specific vocabularies that can be used and combined to describe documents, entities and concepts in structured data.

However, there was no lower-level vocabulary that can be used to describe the shape of the published Linked Data: the URI patterns, RDF description patterns, templates for new resource instances etc. This logic is hard-coded in publishing software, which makes it hard to share and reuse.

Such vocabulary has been developed as part of the work on [Graphity platform](#). It builds on standard W3C technologies and maps HTTP requests to SPARQL queries. The vocabulary can be used to define templates or “blueprints” for Linked Data and greatly increase interoperability between Linked Data software systems.

Issues for discussion

- conceptual model of Linked Data templates
- vocabulary for Linked Data templates (Graphity Processor vocabulary)
- protocol for sharing templates between software agents
- benefits of the declarative approach
- generic (domain-independent) software architecture
- [standardizing Linked Data templates](#) as a W3C specification