

Easing Access to Linked Data Resources for Digital Humanities Scholars

Albert Meroño-Peñuela¹ and Rinke Hoekstra^{1,2}

¹ Computer Science Department, Vrije Universiteit Amsterdam, NL
{albert.merono,rinke.hoekstra}@vu.nl

² Faculty of Law, University of Amsterdam, NL

Abstract. Semantic Web technology comprises a variety of languages, standards and practices that, over the last two decades, has facilitated the emergence of the Linked Open Data (LOD) Cloud – a global Web graph of more than 100 billion interconnected statements [1]. Datasets in this LOD cloud cover a variety of domains, including geography, government, life sciences, linguistic, media, publications and social networking. Despite this success integrating data on the Web, Semantic Web technology is still very present at every level of the LOD cloud. This includes the early layer of *accessing* Linked Data; this is, the mechanism by which users select and grab the data they consider for their applications or analyses. Accessing Linked Data requires certain technical skills –mostly involving understanding of the Resource Description Framework (RDF) [6] and the SPARQL [7] query language, but also others such as SQUIN [3] or Linked Data Fragments [8]– that very often exclude potential users. In the digital humanities, many scholars lack this technical knowledge, and consequently miss a great deal of LOD sources of their interest. This includes, but is not limited to, multiple linked datasets on historical statistics (e.g. CEDAR [2], CLARIAH [4]), museum collections (e.g. Amsterdam, British Museum, Smithsonian), linguistic resources (e.g. lexinfo, BabelNet), and media (e.g. MusicBrainz, BBC, New York Times, Linked Movie Database)). Although these scholars are becoming more and more tech savvy, deep knowledge of technology should not be a strict requirement for *accessing* Linked Data. In order to address this issue, we propose *grlc* [5], an Linked Data accessing server that uses SPARQL queries stored anywhere on the Web to generate comprehensive, well documented, neatly organized, and provenance-trusted API specifications. Such APIs make any Linked Data actionable, making access to Linked Data sources easy, repeatable and shareable with one single URI entry point. *grlc* relies on the Swagger UI³, an OpenAPI⁴ frontend, to present these APIs to the user as an intuitive user interface. In this demo, we will show how *grlc* can help on easing the traditionally high technical requirements to access Linked Data. We will illustrate this with several running use cases in CLARIAH⁵, a Dutch national project to build digital infrastructure for the humanities.

³See <http://swagger.io/swagger-ui/>

⁴See <https://www.openapis.org/>

⁵See <http://www.clariah.nl/en/>

Keywords: Linked Data, API, REST, SPARQL, #LD, Web Data access, middleware, OpenAPI

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