NAISC: AN AUTHORITATIVE LINKED DATA INTERLINKING APPROACH FOR THE LIBRARY DOMAIN

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ABSTRACT

At SWIB 2018, we presented our early stage work on a Linked Data (LD) interlinking approach for the library domain called NAISC – Novel Authoritative Interlinking of Schema and Concepts. The aim of NAISC is to meet the unique interlinking requirements of the library domain and to improve LD accessibility for domain expert users. At SWIB 2019 we will present our progress in the development of NAISC including an improved graphical user-interface (GUI), user testing results, and a demonstration of NAISC's interlink provenance components.

NAISC consists of an Interlinking Framework, a Provenance Model and a GUI. The Framework describes the steps of entity selection, link-type selection, and RDF generation for the creation of interlinks between entities, such as people, places, or works, stored in a library dataset to related entities held in another institution. NAISC specifically targets librarians by providing access to commonly used datasets and ontologies. NAISC incudes interlink provenance to allow data users to assess the authoritativeness of each link generated. Our provenance model adopts PROV-O as the underlying ontology which we extended to provide interlink specific data. An instantiation of NAISC is provided through a GUI which reduces the need for expert LD knowledge by guiding users in choosing suitable link-types.

We will present NAISC and demonstrate the use of our GUI as a means of interlinking LD entities across libraries and other authoritative datasets. We will also discuss our user-evaluation processes and results, including a NAISC usability test, a field test/real-word application of NAISC, and a review of the interlink quality. Finally, we will demonstrate our provenance model and discuss how the provenance data could be modelled as LD develops over time.