

A Knowledge Organization Platform: Integrating SKOS and PROV for Ontogenic Analysis [Poster]

Thomas Johnson
Xiaoyu Qu
Joseph T. Tennis
University of Washington

Change in knowledge organization systems has important implications for maintainers, users, and theorists. Analysis of this change, termed ontogenic analysis, requires temporally bound representations of data about knowledge organization systems. To support of our research in this area, we designed a Knowledge Organization Platform with the goal of servicing large scale collection of data about knowledge organization systems and their revisions over time. This poster describes the Knowledge Organization Platform, its design goals, and its integration of the Simple Knowledge Organization System (SKOS) and PROV data models. We illustrate the client-server interactions for managing past and present revisions of schemes concepts, their relationships and provenance. The platform extends the Linked Data Platform standard and supports Memento for retrieval of past concept and scheme revisions. This work lays the groundwork for larger scale analysis of the evolution of concepts and their schemes.

Baker, T., et. al. 2014. Key Choices in the Design of Simple Knowledge Organization System (SKOS). CoRR abs/1302.1224

Klein, M and Fensel, Dieter. 2001. Scheme Versioning on the Semantic Web

Miles, A. and Bechhofer S. 2009. SKOS Simple Knowledge Organization System Reference. Tech. rep., World Wide Web Consortium

Moreau, L., et. al. 2012. PROV-DM: The PROV Data Model. Tech. rep., World Wide Web Consortium

Speicher, S., Arwe, J. and Malhotra, A. 2015. Linked Data Platform 1.0. Tech. rep., World Wide Web Consortium

Tennis, J. T. 2007. Scheme Versioning in the Semantic Web. *Cataloging and Classification Quarterly* 43, no. 3/4, 85-104

Tennis, J. T. 2015. The Memory of What Is. In *Ontology for Knowledge Organization*. Smiraglia, R., and Lee, H. eds

Van de Sompel, H., et. al. 2009. Memento: Time travel for the web. CoRR abs/0911.1112