Book Review

Linked Data and User Interaction: The Road Ahead. Edited by: Cervone, H. Frank, Svensson, Lars G. (Eds.). Berlin/Munich: De Gruyter Saur, 2015. Viii, 121pp. Euro 89, 95 / US$ 126.00* $179.00. ISBN 978-3-11-031692-6.

The book is an instructive and informative collection of case studies in seven chapters, focusing on "Linked Data" in the context of libraries and other cultural heritage institutions. It is the result of satellite meeting of the 2013 International Federation of Library Associations' (IFLA) World Library and Information Congress (WLIC) as the 162nd volume of IFLA publication. The book aims to introduce some successful linked data projects considering on their approaches against problems and challenges.

The chief editor "H. Frank Cervone" is the director of information technology and college information security officer for the School of public health at the University of Illinois at Chicago and he is also a visiting lecturer in the School of Information at San Jose State University. The second editor "Svensson, Lars G" is the chair of information technology of IFLA and is advisor for knowledge networking in German National Library.

Chapter 1 entitled "*Linked Data beyond Libraries: Towards Universal Interfaces and Knowledge Unification*". Linked data is discussed from the viewpoint of socio-technical systems including cultural environment, heterogeneous social norms and cognitive patterns. By refer to the complexity and multidimensionality of the web ecosystem, some definitions of linked data as degree of semantics is offered. Information fragmentation, heterogeneity and duplication are mentioned as challenges in all fields of human knowledge. It is also emphasized that data islands and knowledge fragmentation are not beneficial, so linked data supported by ontologies, taxonomies and categories can help to discover relations among data to escape from the cognitive limitations. Moreover, It is expressed that linked data approach is advantageous to explore creative reasoning as well as information retrieval in order to tackle issues such as cognitive – technical, socio-technical as well as philosophical. In addition, capabilities of linked data Interfaces are explained as a list in appendix to describe semantic web features in order to define the context more precisely and to obtain more customized answers via retrieving on open web. It is also reported that linked-data interfaces (by principles of universal design) should support cross-referencing of different datasets in various fields of knowledge, and likely facilitate creative reasoning.

Chapter 2 focuses on "*Virtual Pompidou Centre*" as a case study of linked data project in the context of art museum in the act of global platform for online digital content. The Pompidou

center adopted a semantic approach in the design of the new platform. It is addressed that semantic web technologies are used to overcome some challenges such as scattering various databases to be linked to aggregate data from all the databases into one interface to be searched and browsed. Linked data is able to increase interoperability between databases of heterogeneous structure. As a result, principles of "Linked Enterprise Data (LED)" are expressed, digital Pompidou data model is overviewed and depicted and steps of functions are explained. It is emphasized that as an innovation, a local ontology is transformed into a standard one to be used as local schema. On the rest, the features of the user interface are expressed and perspectives for future development are offered.

Chapter 3 entitled "*Customized OPACs on the Semantic Web*". It aims to investigate the case study of "The OpenCat Prototype". The project is developed by cooperation of the National Library of France, the public library of Fresnes and Logilab. As a result, the offered prototype as a local OPAC is recognized as semi-FRBRized linked open data on the data.bnf.fr web site in order to enrich the available content. In addition, CubicWeb as a technical platform is briefly introduced. Ultimately, a semantic web application for libraries with the capabilities of customizing and enriching is offered. Some examples as federated search on the platform are depicted and explained. Some end users are expressed their satisfaction after working with the local OPAC as experimental panelists. The explanations are vague in some parts and more details to realize the functional IT process is needed.

Chapter 4 investigates "*Using Linked Library Data in Working Research Notes*". A starting trial of incorporating linked data from libraries and other sources into Editors' Note is reported. Providing useful working tools for library and archives-based research and also integrating linked data are expressed. Additionally, some tools for organizing editorial research are introduced, and some problems with the mentioned tools such as duplication, loss of content, linking atomic notes, visualization as well as their flexible aggregations are expressed. Moreover, Editors' Notes are introduced as an open-source hosted service for organizing the research of documentary editing projects. On the other, the process of integrating linked data into Editors' Notes and also how editors control assertions about topics is explained and the interface is depicted. Finally, it is concluded that focusing on context, technical details of data formats and communication protocols are necessary to be considered in the field.

Chapter 5 aims to investigate *semantically guided, situation-aware literature research via an application*. The automatic guidance system supports users in their literature research with a stepwise refinement process. Linked Open Data (LOD) is used as valuable form and algorithms which are streamlined and indexed by a semantic extraction transform and load process (semantic ETL approach). The application of logical components of guiding agent approach for user interaction is introduced. In addition, DocuBurst is utilized as a method namely topic wheel (guiding agent's visualization looks like a wheel with the range of color) including hierarchy relationships to help user to choose the best term semantically to search. Moreover, architectural

overview of the Mediaplatform including "data store build-up" and "productional use" is explained and depicted and finally first user evaluations are expressed.

Chapter 6 entitled "*Building Interfaces on a Networked Graph*". It is mentioned that there is an immense need for decentralized and distributed linked data due to the islands of data. The chapter aims to report results of the workshops during 2013 by National Library of Sweden, along with the Swedish Cultural Heritage Board and the Swedish National Archive with the target of expose a local dataset as LOD, set up a SPARQL 1.1 server and implement a protocol for listening to changes within the dataset (e.g. Atom, RSS, and OAI-PMH). As a result, LIBRIS as a case study with the mentioned technologies is developed. In addition, some screenshots of the running application are depicted. Moreover, some challenges and network limitations and also an informative conclusion are explained.

Chapter 7 deals with "*Griffith Research Hub*" as a connecting an entire university's research enterprise. The project aims to make the research materials and interlinked productions more transparent and accessible through a public linked data interface. It is supported and shared by the National Library of Australia's Trove and the Australian National Data Service's Research Data Australia portal (ANDS). Steps of project such as harvest metadata, metadata exchange, metadata store programs are explained. In addition, data model for the research hub is depicted. On the other, technical architecture like usage of VIVO is explained. Features and advantages of using library linked data and OAI-PMH feeds are expressed too. Further, developing a new ontology called the ANDS-VITRO and the way of visualizing the linked data as well as challenges of aggregating data are discussed.

This is the first book that has attempted to present the most truly acceptable international projects in the field of library linked data. The 17 contributors are from Australia, Germany, Sweden, the USA, and France. The book is included an alphabetical index too. A list of references concludes each chapter. The structure of book is well edited, easy to read, and informative. So, it is highly recommended as an essential and fruitful reading to LIS and computer professionals, professors, librarians, students, and anyone who is interested in user interface design, linked data, linked open data, linked enterprise data, richer data environment, semantic web, information organization, user-oriented systems, semantic digital library, and ontology developing. Therefore, the book is a valuable resource for intersection of linked data and LIS context. The reviewer suggest to editors to add a chapter for next edition in order to cover and write about foundations and principles of linked data to cover theoretical dimension of the topic for amateur readers.

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