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## Abstract

This work is an attempt to describe the state of implementation of the new technologies of the Semantic Web and Open Linked Data in the library sector. It is an important handbook since it is the first approach to present the relationship of Open Linked Data with libraries and knowledge organizations in general. It is written in simple language and can provide a good basis for those interested in gaining general knowledge about these technologies. In the beginning, basic information and concepts about open-linked data are given so that the reader can understand these technologies on a theoretical level, followed by concrete examples of applications in German libraries and organizations. In this way, the reader gains the theoretical background necessary to understand these technologies and learns how they are applied in knowledge organizations. More specifically, the first chapter deals with the basic concepts and historical developments of linked data and open data, with a focus on the library community. This is followed by an explanation of the technical characteristics of linked data, and then the legal framework for open licensing (access) is described. The second chapter attempts to provide an overview of the vocabulary

currently available for describing bibliographic data as linked data and comparing them without going into excessive detail. The next chapter deals with the representation of journal publications using FRBRoo, thus solving problems that have been created by the lack of proper documentation and presentation of these collections. While the fourth chapter deals with another important issue concerning the provenance of linked data - a parameter that is very important regarding linked data. Chapter five discusses the research data. More specifically, open-linked data offers an infrastructure for uniformly describing research data, identifying it clearly, and making it available to as many users as possible. Within this context, the challenges, opportunities, and benefits of a LOD-based infrastructure for describing and linking research data are presented based on the experience gained in the InFoLiS project. Chapter six introduces the theoretical aspects that are important about catalog enrichment based on (open) linked data and gives an example of how to enrich bibliographic data based on other LOD sources via the LOD lobid.org service. In chapter seven, various projects and technologies are presented and their po



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