

Open Source KOS software

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This report gives an overview about Open Source software for Knowledge Organization Systems (KOS).

Motivation

Project [coli-conc](#) aims at concordances between Knowledge Organization Systems (KOS). To manage such concordances it first requires access to KOS and its concepts. The lack of a satisfying general data format and method of access to KOS, apart from SKOS and SPARQL, resulted in the (ongoing) specification of [JSKOS data format](#) and [JSKOS-API](#). To integrate existing KOS via these standards, there are three options:

1. Conversion of KOS to JSKOS import into a database with support of JSKOS-API
2. Creation of JSKOS-API wrappers to existing terminology services
3. Add support of JSKOS-API to existing KOS software

The first option is executed at VZG for the most needed systems such as Dewey Decimal Classification (DDC) and Regensburger Verbundklassifikation (RVK). First examples of the second option are given at <https://github.com/gbv/jskos-php-examples>. But only the third option will scale to larger number of KOS. Open source luckily allows to extend existing software. For this reason an overview of Open Source software for Knowledge Organization Systems (KOS) is needed.

Existing lists of KOS software (a metabibliography)

Project coli-conc does not include creation of software to manage KOS because such software already exists in form of thesaurus editors, vocabulary management systems and similar tools. The following lists of KOS software were used to find open source software (including commercial products with an open source version):

- The [coli-conc Zotero library](#) contains a [section on software](#) with almost 30 entries.
- The [ANDS appraisal of thesaurus software tools](#) is an Excel sheet created by members of the [Vocabulary Services Interest Group](#) of Research Data Alliance (RDA). It contains 39 software systems, some of

- The [TaxoBank Terminology Registry](#) has a list of [Software for building and editing thesauri](#) originally created by Leonard D. Will

Several more lists of taxonomy tools, ontology editors etc. exists so some tools may have been missed. Feedback is welcome!

Open Source KOS software

Name and Link	Language	License
Apelon Distributed Terminology System (DTS)	Java	Apache
ASKOSI	Java	GPL
Django Controlled Vocabularies	Python	BSD
FreeMind	Java	Apache
iQvoc	Ruby	Apache
OpenSKOS	PHP	GPL
Protégé	Java	BSD
Semantic MediaWiki	PHP	GPL
SISSVoc	Java & XSLT	Apache
SKOS API	Java	LGPL
Skosify	Python	MIT
SKOSjs	JavaScript	Apache
Skosmos	PHP	MIT
skosprovider	Python	MIT
TemaTres	PHP	GPL
VocBench	Java	?
Web Protégé	Java	BSD
XMind	Java	LGPL & EPL
VoCol	Java & JavaScript	MIT
Wandora	Java	GPL
Wikibase	PHP	GPL

Summary

The resulting list of software contains small and large projects, web applications and desktop applications, popular and less used software. Additional evaluation is needed to decide which products to focus on. Nevertheless the list shows that Java and PHP are the most used programming languages, so programming libraries for JSKOS(-API) should first be implemented in these languages (in addition to JavaScript which is needed for web clients). A first start has been made with a [JSKOS programming library in PHP](#).