# Software for management of knowledge organization systems https://doi.org/10.5281/zenodo.15672523

Jakob Voß<sup>1</sup>

<sup>1</sup>Verbundzentrale des GBV (VZG)

2025-07-18

This report is much more usable in HTML at https://bartoc.org/software!

The terminology registry **BARTOC** collects information about all kinds of **knowledge organization systems** (KOS) such as controlled vocabularies, classifications, ontologies, and other semantic artifacts. This report summarizes information about software for KOS management.

# Scope

This report is limited to specialized KOS software for editing, vizualizing and/or analyzing terminologies. The term "terminology" in this document is used as synonym for all kinds of KOS. Software is excluded if:

- it is not aimed at KOS management in particular but more generic software such as database management systems, content management systems and text editors.
- it is more specific software, restricted to a limited type of KOS, such software for linguistic terminology management and identifier systems,
- it cannot be used as stand-alone application, like programming libraries, and hosted services.

Software for **ontology alignment** is only included if it is more then a research prototype and if we managed to get it running. See Bergman (2018) for a comprehensive list of software in this category. The Ontology Alignment Evaluation Initiative (OAEI) motivates the creation of tools for automated ontology alignment.

# KOS software

This report includes **71** instances of KOS software so far. The list is managed in a JSON file as array of CodeMeta records with fields as described below. Applications without license or repository are closed source. Deprecated applications are included for historical reference.

Table 1

Web	name	system	$\operatorname{edit}$	api	languages	license	repository	update	category
PHP	Semantic MediaWiki	Web			PHP	GPL	github	2025	SoftwareImage, editor
Quee	Wikibase	Web			PHP	$\operatorname{GPL}$	wikimedia	2025	ServerApplication, database, editor
VecBench	TemaTres	Web			PHP	$\operatorname{GPL}$	$\operatorname{github}$	2025	ServerApplication, editor
Skosmos Web - PHIP MIT github 2025 WebApplication, viewer Cocoada Web - JavaScript MIT github 2025 WebApplication, mapping editor MSCR Web JavaScript MIT github 2025 WebApplication, MebAPI, mapping editor SkoClaver Web JavaScript MIT github 2025 WebApplication, SoftwareImage, viewer SkoHub Vocabs Web JavaScript Apache github 2025 ServerApplication, SoftwareImage, viewer Ontology Lookup Service (OLS) Web - JavaScript, Java Apache github 2025 ServerApplication, ServerApplication, SoftwareImage, VebApplication, ServerApplication, ServerApplicatio	iQvoc	Web			Ruby	Apache	$\operatorname{github}$	2025	SoftwareImage, WebApplication, editor
Second   Web   - JavaScript   MIT   github   2025   WebApplication, mapping editor	VocBench	Web			Java, JavaScript	BSD	bitbucket	2025	WebApplication, editor
MSCR Web Java MTT github 2025 WebApplication, WebAPI, mapping editor Strokes Web JavaScript MTT github 2025 ServerApplication, WebPI, database ShoHub Vocabs Web JavaScript Apache github 2025 ServerApplication, SoftwareImage, viewer Publication WebPI, WebApplication, SoftwareImage, Viewer Gordon Web JavaScript, Java Apache github 2025 ServerApplication, WebAPI, WebApplication, SoftwareImage, Viewer WebApplication, VebAPI, VebApplication, Veb	Skosmos	Web	-		PHP	MIT	github	2025	WebApplication, viewer
JavaScript   MIT github   2025   ServerApplication, WebAPI, database   Skolulub Vocabs   Web   JavaScript   Apache github   2025   WebApplication, SoftwareImage, viewer   OpenTheso   Web   JavaScript   Java   Apache github   2025   ServerApplication, WebApplication, ServerApplication, WebAppli	Cocoda	Web		-	JavaScript	MIT	github	2025	WebApplication, mapping editor
Skolfub Vocabs Web Java Script Apache github 2025 SoftwareImage, viewer Optology Lookup Service (OLS) Web Java Script Apache github 2025 SoftwareImage, WebApplication, SoftwareImage, viewer Optology Lookup Service (OLS) Web JavaScript BSD github 2025 ServerApplication, WebAPI, WebApplication, SoftwareImage, Viewer Optoloportal Alliance Web JavaScript BSD github 2025 ServerApplication, WebAPI, WebApplication, SoftwareImage, Viewer WebApplication, SoftwareImage, WebApplication, SoftwareImage, Viewer WebApplication, Converter WebAp	MSCR	Web			Java	MIT	$_{ m github}$	2025	WebApplication, WebAPI, mapping editor
Departhese   Web   Java   GPL   github   2025   SoftwareImage, WebApplication, Server Application, Web   JavaScript, Java   Apache   github   2025   Server Application, WebAPI, WebApplication, SoftwareImage, WebAPI, WebApplication, SoftwareImage   Web   JavaScript   BSD   github   2025   Server Application, WebAPI, WebApplication, SoftwareImage   WebAPI, WebApplication, SoftwareImage   WebAPI, WebApplication, SoftwareImage   WebAPI,	JSKOS Server	Web			JavaScript	MIT	github	2025	ServerApplication, WebAPI, database
OntoPortal Alliance  Web - JavaScript, Java Apache github 2025 ServerApplication, WebAPI, WebApplication, SoftwareIn 20thorVord Alliance Web - JavaScript BSD bitbucket 2025 ServerApplication, WebAPI, WebApplication, SoftwareIn 20thorVord WebAPI, WebApplication, SoftwareIn 20thorVord MebAPI, WebAPI, SoftwareIn 20thorVord MebAPI, We	SkoHub Vocabs	Web			JavaScript	Apache	github	2025	WebApplication, SoftwareImage, viewer
OntoPortal Alliance  Web - JavaScript BSD bitbucket 2025 ServerApplication, WebAPI, WebApplication, SoftwareIn SchowVoc  Web - JavaScript BSD bitbucket 2025 WebApplication, viewer  VocCxcel Excel, CLI - Python BSD github 2025 CommandLineApplication, converter  Protégé JVM - JavaScript BSD github 2025 CommandLineApplication, converter  Protégé JVM - JavaScript MIT github 2025 CommandLineApplication, converter  Protégé JVM - JavaScript MIT github 2025 CommandLineApplication, converter, validator  IS4NPDI API Gateway Web - JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter  Sissom-py CLI - Python MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 WebAPI, SoftwareImage, converter  Sissom-java CLI - Python GPL github 2025 WebAPI, SoftwareImage, Converter  Sissom-java MIT github 2025 WebApplication, WebAPI, SoftwareImage, Converter  Chowlk Web - Python BSD github 2025 CommandLineApplication, validator  Driology Development Kit CLI - Python BSD github 2025 WebAPI, SoftwareImage, Converter, val  Web - JavaScript, Java Apache github 2025 WebAPI, SoftwareImage, viewer  Web - JavaScript, Java Apache github 2025 WebAPI, SoftwareImage, viewer  WebAPI, Soft	OpenTheso	Web			Java	$\overline{\mathrm{GPL}}$	github	2025	SoftwareImage, WebApplication, ServerApplication, WebAP
OntoPortal Alliance  Web - JavaScript BSD bitbucket 2025 ServerApplication, WebAPI, WebApplication, SoftwareIn SchowVoc  Web - JavaScript BSD bitbucket 2025 WebApplication, viewer  VocCxcel Excel, CLI - Python BSD github 2025 CommandLineApplication, converter  Protégé JVM - JavaScript BSD github 2025 CommandLineApplication, converter  Protégé JVM - JavaScript MIT github 2025 CommandLineApplication, converter  Protégé JVM - JavaScript MIT github 2025 CommandLineApplication, converter, validator  IS4NPDI API Gateway Web - JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter  Sissom-py CLI - Python MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter  Sissom-java CLI - JavaScript MIT github 2025 WebAPI, SoftwareImage, converter  Sissom-java CLI - Python GPL github 2025 WebAPI, SoftwareImage, Converter  Sissom-java MIT github 2025 WebApplication, WebAPI, SoftwareImage, Converter  Chowlk Web - Python BSD github 2025 CommandLineApplication, validator  Driology Development Kit CLI - Python BSD github 2025 WebAPI, SoftwareImage, Converter, val  Web - JavaScript, Java Apache github 2025 WebAPI, SoftwareImage, viewer  Web - JavaScript, Java Apache github 2025 WebAPI, SoftwareImage, viewer  WebAPI, Soft	Ontology Lookup Service (OLS)	Web	-		JavaScript, Java	Apache	github	2025	ServerApplication, WebAPI, WebApplication, SoftwareImage
vocécat-tool  CLI, GitHub, Excel Python BSD github 2025 CommandLineApplication, converter  VocExcel Excel, CLI Python BSD github 2025 CommandLineApplication, converter  Protégé JVM - Java BSD github 2025 Application, editor  piskos-cli  CLI JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter, validator  TS4NFDI API Gateway Web - JavaScript MIT github 2025 WebAPI, SoftwareImage, viewer, converter  ssom-py CLI Python MIT github 2025 CommandLineApplication, converter  ssom-java CLI Java GPL github 2025 CommandLineApplication, converter  ssom-java CLI JavaScript MIT github 2025 CommandLineApplication, converter  Setwork of Terms Web - Typescript EUPL github 2025 WebAPI, SoftwareImage, converter  Retwork of Grems Web, git - Python GPL github 2025 WebAPI, SoftwareImage, converter  Chowlk Web Python BSD github 2025 WebApplication, webAPI, SoftwareImage, converter  Web Python BSD github 2025 WebApplication, SoftwareImage, converter  EVOKS Web Java MIT github 2025 WebApplication, SoftwareImage, converter, validator  EVOKS Web JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, validator  Web JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, viewer  Web JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, validator  SoftwareImage, CommandLineApplication, validator  FOOPS! Web JavaScript, Java Apache github 2025 WebApplication, SoftwareImage, viewer  Web JavaScript, Java Apache github 2025 WebApplication, SoftwareImage, viewer  Web JavaScript Apache github 2024 WebApplication, SoftwareImage, viewer  Web Application, Viewer  Web JavaScript Apache github 2024 WebApplication, viewer  Web Application, viewer  Web Application, viewer  Web Applica	OntoPortal Alliance	Web	-		Ruby		github	2025	ServerApplication, WebAPI, WebApplication, SoftwareImage
VocExcel Excel, CLI - Python BSD github 2025 CommandLineApplication, converter Protégé JVM - Java BSD github 2025 Application, editor CLI - JavaScript MIT github 2025 CommandLineApplication, converter, validator S4NFDI API Gateway Web - JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter with S8som-py CLI - Python MIT github 2025 WebAPI, ePackage, viewer, converter s8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java Web - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java Web, git - Python GPL gitlub 2025 WebAPI, SoftwareImage, converter with S8som-java Web - Python BSD github 2025 WebApplication, pplication, converter with S8som-java Web - Python BSD github 2025 WebApplication, with S8APP Web - Python BSD github 2025 WebApplication, with S8APP, pplication, S9APP WebApplication, WebAPI, pplication, validator with S8APP Web - Java MIT github 2025 WebApplication, WebAPI, pplication, validator with S8APP Web - JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, viewer WIDOCO JVM - JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, validator WebAPI Web - Java, JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, validator WebAPI Web - Java, JavaScript Apache github 2025 WebApplication, CommandLineApplication, validator WebAPI WebAPP Web - Java, Java Apache github 2024 WebAPP SoftwareImage, viewer WebAPP Web - Java, Java Apache github 2024 WebAPP SoftwareImage, viewer SoftwareImage, viewer WebAPP	ShowVoc	Web	-	-	JavaScript	BSD	bitbucket	2025	WebApplication, viewer
VocExcel Excel, CLI - Python BSD github 2025 CommandLineApplication, converter Protégé JVM - Java BSD github 2025 Application, editor CLI - JavaScript MIT github 2025 CommandLineApplication, converter, validator S4NFDI API Gateway Web - JavaScript MIT github 2025 WebAPI, ePackage, viewer, converter with S8som-py CLI - Python MIT github 2025 WebAPI, ePackage, viewer, converter s8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java CLI - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java Web - JavaScript MIT github 2025 CommandLineApplication, converter with S8som-java Web, git - Python GPL gitlub 2025 WebAPI, SoftwareImage, converter with S8som-java Web - Python BSD github 2025 WebApplication, pplication, converter with S8som-java Web - Python BSD github 2025 WebApplication, with S8APP Web - Python BSD github 2025 WebApplication, with S8APP, pplication, S9APP WebApplication, WebAPI, pplication, validator with S8APP Web - Java MIT github 2025 WebApplication, WebAPI, pplication, validator with S8APP Web - JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, viewer WIDOCO JVM - JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, validator WebAPI Web - Java, JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, validator WebAPI Web - Java, JavaScript Apache github 2025 WebApplication, CommandLineApplication, validator WebAPI WebAPP Web - Java, Java Apache github 2024 WebAPP SoftwareImage, viewer WebAPP Web - Java, Java Apache github 2024 WebAPP SoftwareImage, viewer SoftwareImage, viewer WebAPP	voc4cat-tool	CLI, GitHub, Excel	-	-	Python	BSD	github	2025	CommandLineApplication, converter
iskos-cli CLI SANFDI API Gateway Web Sikos-proxy Will Sithub Sikos Web Sikos-proxy Web Sikos Will Sithub Sikos Web Sikos Web Sikos Will Sithub Sixos Web Sikos Web Sikos Web Sikos Web Sikos Will Sithub Sikos Web Sikos	VocExcel	Excel, CLI	-	-	Python	BSD	github	2025	
TS4NFDI API Gateway Web Java, JavaScript MIT github 2025 WebAPI, Package, viewer, converter  WebAPI, SoftwareImage, viewer, converter  SSSOM-java CLI Java GPL github 2025 CommandLineApplication, converter  SSSOM-java CLI JavaScript MIT github 2025 CommandLineApplication, converter  WebAPI, SoftwareImage, converter  Typescript EUPL github 2025 CommandLineApplication, converter  WebAPI, SoftwareImage, converter  TerminoloGit Web, git Python GPL gitlab 2025 WebAPI, SoftwareImage, converter  WebAPI, SoftwareImage, viewer  WebAPI, Softwar	Protégé	JVM		-	Java	BSD	github	2025	Application, editor
iskos-proxy Web JavaScript MIT github 2025 WebAPI, SoftwareImage, viewer, converter Sesom-py CLI JavaScript MIT github 2025 CommandLineApplication, converter Sesom-java Sesom-java CLI JavaScript MIT github 2025 CommandLineApplication, converter Sesom-js CLI JavaScript MIT github 2025 CommandLineApplication, converter Sesom-js Network of Terms Web JavaScript MIT github 2025 WebAPI, SoftwareImage, converter SerminoloGit Web, git JavaScript MIT github 2025 WebApplication, pplication, converter SerminoloGit Web, git JavaScript MIT github 2025 WebApplication, pplication, converter SerminoloGit Chowlk Web JavaScript MIT github 2025 WebApplication, pplication, converter WebApplication, WebAPI, SoftwareImage, converter SerminoloGit Cli Java MIT github 2025 WebApplication, WebAPI, SoftwareImage, converter WebApplication, welldator Service WebApplication, WebAPI, SoftwareImage, viewer WebApplication, WebAPI, SoftwareImage, viewer WebApplication, welldator WebApplication, converter WebApplication, WebAPI, SoftwareImage, viewer WebApplication, WebAPI, SoftwareImage, viewer WebApplication, WebAPI, SoftwareImage, viewer WebApplication, welldator WebAppl	jskos-cli	CLI	-	-	JavaScript	MIT	github	2025	CommandLineApplication, converter, validator
CLI - Python MIT github 2025 CommandLineApplication, converter sssom-java CLI - Java GPL github 2025 CommandLineApplication, converter GPL github 2025 CommandLineApplication, converter Sssom-js CLI - JavaScript MIT github 2025 CommandLineApplication, converter Steward GPL github 2025 WebAPI, SoftwareImage, converter Typescript EUPL github 2025 WebAPI, SoftwareImage, converter Typescript EUPL github 2025 WebAPI, SoftwareImage, converter GPL github 2025 WebAPI, SoftwareImage, converter GPL github 2025 WebAPPI, SoftwareImage, CommandLineApplication, webAPI, SoftwareImage, CommandLineApplication, VebAPI, SoftwareImage, Velocome GPI, SoftwareImage, Velo	TS4NFDI API Gateway	Web	-		Java, JavaScript	MIT	github	2025	WebAPI, ePackage, viewer, converter
CLI - Python MIT github 2025 CommandLineApplication, converter sssom-java CLI - Java GPL github 2025 CommandLineApplication, converter GPL github 2025 CommandLineApplication, converter Sssom-js CLI - JavaScript MIT github 2025 CommandLineApplication, converter Steward GPL github 2025 WebAPI, SoftwareImage, converter Typescript EUPL github 2025 WebAPI, SoftwareImage, converter Typescript EUPL github 2025 WebAPI, SoftwareImage, converter GPL github 2025 WebAPI, SoftwareImage, converter GPL github 2025 WebAPPI, SoftwareImage, CommandLineApplication, webAPI, SoftwareImage, CommandLineApplication, VebAPI, SoftwareImage, Velocome GPI, SoftwareImage, Velo	jskos-proxy	Web	-		JavaScript	MIT	github	2025	WebAPI, SoftwareImage, viewer, converter
Sesom-js CLI JavaScript MIT github 2025 CommandLineApplication, converter Network of Terms Web - Typescript EUPL github 2025 WebAPI, SoftwareImage, converter TerminoloGit Web, git Python GPL gitlab 2025 WebApplication, pplication, converter Chowlk Web - Python Apache github 2025 WebApplication, pplication, converter Chowlk Web - Python BSD github 2025 CommandLineApplication, SoftwareImage, CommandLine Ontology Development Kit CLI - Python BSD github 2025 CommandLineApplication, VebAPI, pplication, validator EVOKS Web - Python MIT github 2025 WebApplication, WebAPI, pplication, validator EVOKS Web - Python MIT github 2025 SoftwareImage, CommandLineApplication, viewer OOPS! Web - Java ? github 2025 WebApplication, CommandLineApplication, viewer WIDOCO JVM - JavaScript, Java Apache github 2025 WebApplication, SoftwareImage, viewer FOOPS! Web - Java, JavaScript Apache github 2025 WebApplication, CommandLineApplication, validator Jekyll RDF Web - Ruby MIT github 2024 CommandLineApplication, SoftwareImage, viewer Atramhasis Web Python GPL github 2024 WebApplication, editor Snowstorm Web - Java Apache github 2024 WebApplication, editor OnToology Web, git - Python Apache github 2024 WebAPI, SoftwareImage, pplication, viewer SkoHub Shapes RDF - SHACL ? github 2024 SoftwareImage, validator	sssom-py	$\operatorname{CLI}$	-	-	Python	MIT	github	2025	
Network of Terms  Web, git  - Typescript  EUPL github  2025  WebAPI, SoftwareImage, converter  WebApplication, pplication, converter  WebApplication, pplication, converter  Python  Apache github  2025  WebApplication, pplication, converter  WebApplication, WebAPI, SoftwareImage, CommandLin  Ontology Development Kit  CLI  - Python  BSD  github  2025  CommandLineApplication, WebAPI, pplication, softwareImage, converter, val  O'FAIRe  Web  - Python  MIT github  2025  WebApplication, WebAPI, pplication, validator  WebAPI, SoftwareImage, CommandLine  WebAPI, SoftwareImage, CommandLine  CommandLineApplication, SoftwareImage, converter, val  O'FAIRe  Web  - Python  MIT github  2025  WebApplication, CommandLineApplication, viewer  WebApplication, CommandLineApplication, viewer  WebApplication, CommandLineApplication, validator  WebApplication, SoftwareImage, viewer  WebApplication, delitor  NebAPI, SoftwareImage, CommandLineApplication, viewer  WebApplication, viewer, validator  SkoHub Shapes  RDF  - SHACL  ? github  2024  SoftwareImage, validator	sssom-java	$\operatorname{CLI}$	-	-	Java	$\operatorname{GPL}$	github	2025	CommandLineApplication, converter
Network of Terms  Web, git  Python  GPL  gitlub  2025  WebAPI, SoftwareImage, converter  WebApplication, pplication, converter  WebApplication, pplication, converter  WebApplication, pplication, converter  WebApplication, webAPI, SoftwareImage, CommandLin  Ontology Development Kit  CLI  Python  BSD  github  2025  WebApplication, WebAPI, SoftwareImage, CommandLin  CommandLineApplication, SoftwareImage, converter, val  OPAIRe  Web  Python  MIT  github  2025  WebApplication, WebAPI, pplication, validator  WebApplication, webAPI, pplication, validator  WebApplication, validator  Python  MIT  github  2025  WebApplication, WebAPI, pplication, validator  WebApplication, VebAPI, pplication, validator  Python  MIT  github  2025  WebApplication, CommandLineApplication, viewer  WebApplication, CommandLineApplication, viewer  WebApplication, SoftwareImage, viewer  WebApplication, CommandLineApplication, validator  WebApplication, CommandLineApplication, validator  WebApplication, CommandLineApplication, validator  WebApplication, SoftwareImage, viewer  WebApplication, SoftwareImage, viewer  WebApplication, SoftwareImage, viewer  WebApplication, SoftwareImage, viewer  WebApplication, delitor  WebApplication, viewer  WebApplication, viewer, validator  Showstorm  Web  Python  Apache  github  2024  WebApplication, viewer, validator  WebAPI, SoftwareImage, converter  WebAPI, SoftwareImage, CommandLineApplication, viewer  WebApplication, viewer, validator  WebAPI, SoftwareImage, viewer  WebAPI, SoftwareImage, validator  SkoHub Shapes  RDF  SHACL  SHACL  SHACL  Sithub  2024  SoftwareImage, validator	sssom-js	$\operatorname{CLI}$	-	_	JavaScript	MIT	github	2025	CommandLineApplication, converter
TerminoloGit Web, git Python GPL gitlab 2025 WebApplication, pplication, converter Chowlk Web Python Apache github 2025 WebApplication, WebAPI, SoftwareImage, CommandLin Ontology Development Kit CLI Python BSD github 2025 CommandLineApplication, SoftwareImage, converter, val O'FAIRe Web - Java MIT github 2025 WebApplication, WebAPI, pplication, validator EVOKS Web Python MIT github 2025 SoftwareImage, CommandLineApplication, editor, converting COPS! Web Java Python MIT github 2025 WebApplication, CommandLineApplication, viewer WIDOCO JVM JavaScript, Java Apache github 2025 CommandLineApplication, SoftwareImage, viewer FOOPS! Web Java, JavaScript Apache github 2025 WebApplication, CommandLineApplication, validator Jekyll RDF Web - Ruby MIT github 2024 WebApplication, SoftwareImage, viewer Atramhasis Web - Python GPL github 2024 WebApplication, editor Showstorm Web, git Python Apache github 2024 WebAPI, SoftwareImage, pplication, viewer WebAPI, SoftwareImage, validator SkoHub Shapes RDF - SHACL ? github 2024 SoftwareImage, validator	Network of Terms	Web	-		Typescript	EUPL	github	2025	WebAPI, SoftwareImage, converter
Chowlk  Web  - Python  Apache github  2025  WebApplication, WebAPI, SoftwareImage, CommandLin  Ontology Development Kit  CLI  - Python  BSD  github  2025  CommandLineApplication, SoftwareImage, converter, val  O'FAIRe  Web  - Java  MIT github  2025  WebApplication, WebAPI, pplication, validator  WebAPPI, pplication, validator  Python  MIT github  2025  WebApplication, CommandLineApplication, viewer  WebApplication, SoftwareImage, viewer  WebApplication, CommandLineApplication, validator  WebAPPI, pplication, validator  WebAPPI, pplication, validator  WebApplication, commandLineApplication, validator  WebAPPI, SoftwareImage, viewer  Python  GPL github  2025  WebApplication, commandLineApplication, validator  WebAPPI, SoftwareImage, viewer  WebApplication, viewer, validator  WebAPPI, SoftwareImage, pplication, viewer  WebAPPI, SoftwareImage, pplication, viewer, validator  SkoHub Shapes  RDF  - SHACL  - SHACL  - SHACL  - SHACL  - Sithub  2025  WebAPPI, SoftwareImage, viewer  WebApplication, viewer, validator	TerminoloGit	Web, git	-	_		$\operatorname{GPL}$		2025	
O'FAIRe  Web  - Java MIT github 2025 WebApplication, WebAPI, pplication, validator  Python MIT github 2025 SoftwareImage, CommandLineApplication, editor, convergithub 2025 WebApplication, CommandLineApplication, viewer 2025 WebApplication, CommandLineApplication, viewer 2025 WebApplication, CommandLineApplication, viewer 2025 WebApplication, SoftwareImage, viewer 2025 WebApplication, SoftwareImage, viewer 2025 WebApplication, CommandLineApplication, validator 2025 WebApplication, SoftwareImage, viewer 2025 WebApplication, SoftwareImage, viewer 2024 WebApplication, editor 2024 WebApplication, editor 2024 WebApplication, viewer 2025 WebApplication, viewer 2024 WebApplication, viewer 2024 WebApplication, viewer 2024 WebApplication, viewer 2024 WebApplication, viewer 2025 WebApplicat	Chowlk		-	-	Python	Apache	github	2025	WebApplication, WebAPI, SoftwareImage, CommandLineApplication, WebAPI, WebAPI, SoftwareImage, CommandLineApplication, WebAPI, WebAP
O'FAIRe  Web  - Java MIT github 2025 WebApplication, WebAPI, pplication, validator  Python MIT github 2025 SoftwareImage, CommandLineApplication, editor, convergithub 2025 WebApplication, CommandLineApplication, viewer 2025 WebApplication, CommandLineApplication, viewer 2025 WebApplication, CommandLineApplication, viewer 2025 WebApplication, SoftwareImage, viewer 2025 WebApplication, SoftwareImage, viewer 2025 WebApplication, CommandLineApplication, validator 2025 WebApplication, SoftwareImage, viewer 2025 WebApplication, SoftwareImage, viewer 2024 WebApplication, editor 2024 WebApplication, editor 2024 WebApplication, viewer 2025 WebApplication, viewer 2024 WebApplication, viewer 2024 WebApplication, viewer 2024 WebApplication, viewer 2024 WebApplication, viewer 2025 WebApplicat	Ontology Development Kit	$\operatorname{CLI}$	-	_	Python	$\overline{\mathrm{BSD}}$	github	2025	CommandLineApplication, SoftwareImage, converter, validate
EVOKS Web - Python MIT github 2025 SoftwareImage, CommandLineApplication, editor, convert OOPS! Web - Java ? github 2025 WebApplication, CommandLineApplication, viewer with 2025 WebApplication, SoftwareImage, viewer github 2025 CommandLineApplication, SoftwareImage, viewer with 2025 WebApplication, SoftwareImage, viewer with 2025 WebApplication, CommandLineApplication, validator with 2025 WebApplication, CommandLineApplication, validator with 2025 WebApplication, CommandLineApplication, validator with 2024 WebApplication, SoftwareImage, viewer with 2024 WebApplication, editor with 2024 WebApplication, editor with 2024 WebApplication, editor with 2025 WebApplication, editor with 2025 WebApplication, editor with 2024 WebApplication, editor with 2025 W	O'FAIRe	Web	-		Java	MIT	github	2025	
OOPS! Web - Java ? github 2025 WebApplication, CommandLineApplication, viewer github 2025 CommandLineApplication, SoftwareImage, viewer JavaScript, Java Apache github 2025 WebApplication, CommandLineApplication, SoftwareImage, viewer Web - Java, JavaScript Apache github 2025 WebApplication, CommandLineApplication, validator Web - Ruby MIT github 2024 CommandLineApplication, SoftwareImage, viewer Python GPL github 2024 WebApplication, editor Web - Java Apache github 2024 WebApplication, editor WebApplication, viewer OnToology Web, git - Python Apache github 2024 WebApplication, viewer, validator SkoHub Shapes RDF - SHACL ? github 2024 SoftwareImage, validator	EVOKS	Web		_	Python	MIT		2025	SoftwareImage, CommandLineApplication, editor, converter
WIDOCO  JVM  JVM  JavaScript, Java  Apache  github  2025  CommandLineApplication, SoftwareImage, viewer  WebApplication, CommandLineApplication, validator  Ruby  MIT  github  2024  CommandLineApplication, CommandLineApplication, validator  Ruby  MIT  github  2024  WebApplication, SoftwareImage, viewer  Python  GPL  github  2024  WebApplication, editor  Python  GPL  github  2024  WebApplication, editor  Apache  github  2024  WebAPI, SoftwareImage, pplication, viewer  OnToology  Web, git  Python  Apache  github  2024  WebApplication, viewer, validator  SkoHub Shapes  RDF  SHACL  SHACL  Sigithub  2024  SoftwareImage, validator	OOPS!	Web	-	_			github	2025	
FOOPS! Web - Java, JavaScript Apache github 2025 WebApplication, CommandLineApplication, validator Jekyll RDF Web - Ruby MIT github 2024 CommandLineApplication, SoftwareImage, viewer Atramhasis Web - Python GPL github 2024 WebApplication, editor Snowstorm Web - Java Apache github 2024 WebAPI, SoftwareImage, pplication, viewer OnToology Web, git - Python Apache github 2024 WebApplication, viewer, validator SkoHub Shapes RDF - SHACL ? github 2024 SoftwareImage, validator	WIDOCO	JVM	-	-	JavaScript, Java	Apache	github	2025	
Jekyll RDFWeb-RubyMITgithub2024CommandLineApplication, SoftwareImage, viewerAtramhasisWeb-PythonGPLgithub2024WebApplication, editorSnowstormWeb-JavaApachegithub2024WebAPI, SoftwareImage, pplication, viewerOnToologyWeb, gitPythonApachegithub2024WebApplication, viewer, validatorSkoHub ShapesRDFSHACL?github2024SoftwareImage, validator	FOOPS!		-	-					
Atramhasis Web Python GPL github 2024 WebApplication, editor  Snowstorm Web, git - Python Apache github 2024 WebAPI, SoftwareImage, pplication, viewer  OnToology Web, git - Python Apache github 2024 WebApplication, viewer, validator  SkoHub Shapes RDF - SHACL ? github 2024 SoftwareImage, validator	Jekyll RDF	Web	_					2024	
Snowstorm Web - Java Apache github 2024 WebAPI, SoftwareImage, pplication, viewer OnToology Web, git Python Apache github 2024 WebApplication, viewer, validator SkoHub Shapes RDF - SHACL ? github 2024 SoftwareImage, validator	Atramhasis								
OnToology Web, git Python Apache github 2024 WebApplication, viewer, validator SkoHub Shapes RDF SHACL ? github 2024 SoftwareImage, validator	Snowstorm		-		·				
SkoHub Shapes RDF SHACL ? github 2024 SoftwareImage, validator	OnToology	Web, git	-	_	Python				
	SkoHub Shapes		-	_		_			
	OxO		-			Apache			WebApplication, WebAPI, SoftwareImage, pplication, viewer

Table 1

name	system	$\operatorname{edit}$	api	languages	license	repository	update	category
Onto4ALL Editor	Web		-	JavaScript, PHP	Apache	github	2024	WebApplication, pplication, editor
VocPrez	Web	-		Python	$\operatorname{GPL}$	$\operatorname{github}$	2024	WebApplication, WebAPI, SoftwareImage, viewer
qSKOS	CLI	-		Java	$\operatorname{GPL}$	$_{ m github}$	2024	CommandLineApplication, validator
VocPub Profile	RDF	-	-	SHACL	$\overline{CC}$	$_{ m github}$	2024	eLibrary, validator
Vocabseditor	Web			Python	MIT	github	2024	WebApplication, WebAPI, SoftwareImage, pplication, editor
ODM2 Controlled Vocabularies	Web			Python	BSD	github	2024	WebApplication, WebAPI, editor
Neologism	Web			JavaScript	MIT	$_{ m github}$	2023	WebApplication, WebAPI, SoftwareImage, pplication, editor
Django Controlled Vocabularies	Web			Python	BSD	$_{ m github}$	2023	eLibrary, CommandLineApplication, editor
Web Protégé	Web		-	Java	BSD	github	2023	WebApplication, WebAPI, SoftwareImage, pplication, editor
Alignment API and Alignment Server	CLI	-		Java	$\operatorname{GPL}$	inria	2023	CommandLineApplication, WebAPI, pplication, database
Amalgame	Web		-	prolog	BSD	github	2023	WebApplication, SoftwareImage, ePackage, mapping editor
Wandora	JVM		-	Java	$\operatorname{GPL}$	github	2023	WebApplication, editor
Ginco	Web			Java	$\operatorname{GPL}$	github	2022	WebApplication, WebAPI, pplication, editor
SKOSjs	Web		-	JavaScript	Apache	github	2022	WebApplication, editor
WebVOWL	Web	-	-	JavaScript	MIT	github	2022	WebApplication, SoftwareImage, viewer
VoCol	Web		-	JavaScript	MIT	github	2021	WebApplication, SoftwareImage, pplication, editor
mc2skos	CLI		-	Python	Unlicense	github	2021	CommandLineApplication, converter
Skosify	CLI	-		Python	MIT	github	2021	CommandLineApplication, converter, validator
Themis	Web	-		Java	Apache	github	2021	WebApplication, WebAPI, SoftwareImage, CommandLineAp
LODE	Web	-		Java	ISC	github	2020	SoftwareImage, pplication, viewer
OpenSKOS	Web	-		PHP	$\operatorname{GPL}$	$_{ m github}$	2020	WebApplication, WebAPI, SoftwareImage, pplication, viewer
SISSVoc	Web	-		XSLT	Apache	github	2019	WebApplication, WebAPI, SoftwareImage, viewer
OntoBee	Web	-		PHP, JavaScript	Apache	github	2018	WebApplication, WebAPI, pplication, viewer
SKOS Play	Web	-	-	Java	$\overline{CC}$	bitbucket	2018	WebApplication, CommandLineApplication, viewer, converted
SKOS Editor	Web			Java	$_{ m LGPL}$	$_{ m github}$	2016	WebApplication, WebAPI, pplication, editor
HIVE Vocabulary Server	Web		-	Java	BSD	github	2015	WebApplication, pplication, viewer
COMA	Web		-	Java	AGPL	source forge	2013	DesktopApplication, mapping editor, viewer
ASKOSI	Web	-	-	Java	$\operatorname{GPL}$	askosi	2011	WebApplication, WebAPI, pplication, viewer
THManager	JVM		-	Java	$_{ m LGPL}$	source forge	2006	Application, editor
OntoServer	Web				-	-		WebAPI, pplication, viewer
PoolParty Thesaurus Server	Web				_	-		WebApplication, WebAPI, pplication, editor
Lexasaurus	Web				_	-		WebApplication, WebAPI, ePackage, pplication, editor
Fiblio	Web		-		-	-		WebApplication, pplication, ePackage, editor

Please open an issue if some relevant software is missing or data seems invalid!

### Metadata

Machine-readable description of the software is based on CodeMeta plus custom fields api and edit.

Field	Purpose		
name	name of the software		
url	Homepage URL		
operatingSystem	operating system or similar dependency (Web, CLI)		
api	whether a web service or similar API is provided to connect to		
edit	whether vocabularies can be modified with the software		
programmingLanguage	programming language(s) from SPDX		
license	license of the software (if free software)		
codeRepository	source Code repository (if open source)		
dateModified	year of most recent update		
applicationCategory	generic type of software		
applicationSubCategory	type of KOS software		

The metadata is also made available in RDF.

# KOS software categories

- viewer: to display terminologies (23)
- editor: to create and modify terminologies (24)
- mapping editor: to create and modify mappings/alignments (3)
- converter: to convert from one format into another (15)
- validator: to check terminologies (10)
- database: to store terminologies (3)

# Related software

Knowledge organization systems can also be managed with other types software excluded from this report.

### More generic software

Simple terminologies can be managed in a **spreadsheet** (LibreOffice Calc, Excel, Google Sheets...). This software lacks most special functionality for terminology management but the usability and accessibility is very high. Some tools in the list above (VocExcel, voc4cat-tool) enhance standard spreadsheets with terminology management functionalities.

The same applies to database management systems (RDBMS, NoSQL, RDF triple stores, property graph databases...) with some additional features such as unique key constraints but less usability. An edge case might be systems for management of knowledge graphs (such as Wikibase), included above.

Tools for personal **knowledge management** (such as Obsidian and Notion) help to structure ideas and concepts. Similar tools exist for enterprises to support data integration, knowledge management and/or business intelligence of an organization (for instance PoolParty Semantic Suite).

Several **Content Management Systems** (CMS) allow to manage a list or hierarchy of topics or other entities for knowledge managements. If these lists can be exported, the CMS can be applied to manage terminologies. An example is Drupal, which was used for the first version of BARTOC terminology registry.

Terminologies can also directly be managed in **files** for instance in RDF/Turtle syntax. This only requires a **text editor** but the risk is high to introduce errors. A **version control system** such as git can be used on top to track changes.

#### More specific software

The term **terminology management** is also used for systems to organize the terms, definitions, and translations used in an organization. See Montoro (2018) for a list of terminology management systems. The focus of these systems is more on translation but there is some overlap with KOS management. Software aimed at simple lists of terms, definitions, glossaries and similar is also excluded from this report.

Several systems and applications exist to manage identifiers (Domain Name System, w3id...). These **identifier systems** are relevant to manage KOS but they are rarely enough for KOS management alone. See Bioregistry for a registry of identifier systems used with KOS.

Several tools, frameworks and programming languages exist for **data transformation** between different formats and/or models (XSLT, jq, Catmandu, DTL, LinkML-map, QVT...). These transformations often imply or make use of terminology mappings.

Some tools for data curation also make use of or require terminologies, for instance OpenRefine and mix'n'match. The latter comes close to a mapping editor but it is limited to mappings with Wikidata.

#### Limited use

Some organizations run **hosted services** for KOS management or related services. Examples include DANTE, xTree and Linked Open Vocabularies (LOV). More examples may be found in the BARTOC list of terminology registries.

**programming libraries** such as cocoda-sdk, TSS Widgets, jskos-vue, SeMRA, and ng-skos are used to build KOS software.

#### Other software

The following do not fit into the software categories above or there was not enough information:

- Scripts to analyze concept drift as part of a research project (Open Source)
- TopBraid EDG is a commercial knowledge graph editor
- Apelon DTS (Distributed Terminology System) and Apelon TermManager are commercial terminology editors. An earlier version from 2013 is available as Open Source.
- Grafo is a collaborative knowledge graph editor, available as commercial web application
- Vitro is a framework for semantic web applications, used in VIVO

# Related works

This report is based on two reports (Voß 2016a, 2016b) from the beginning of project coli-conc that led to a a wiki page managed between 2020 and 2024. See also Miles and Bechhofer (2009) for a report created during the specification of SKOS W3C Recommendation, the corresponding

wiki pages at https://www.w3.org/2001/sw/wiki/Category:Editor, and Bergman (2018) for a list of software for ontology alignment.

# Acknowledgements

Contributions to this report or to its predecessors have been provided by Adrian Pohl, Antoine Isaac, David Linke, Eugene Morozov, Koen Van Daele, Matthias Löbe, Monty Bitto, Roman Baum, Susanne Arndt, and possibly others.

# References

Bergman, Michael K. 2018. "30 Active Ontology Alignment Tools." https://www.mkbergman.com/2129/30-active-ontology-alignment-tools/.

Miles, Alistair, and Sean Bechhofer. 2009. "W3C SKOS Implementation Report," May. https://www.w3.org/2006/07/SWD/SKOS/reference/20090315/implementation.html.

Montoro, Maria Pia. 2018. "Terminology Management Systems." https://recremisi.blogspot.com/p/acrolinxterminology-lifecycle.html.

Voß, Jakob. 2016a. "Coli-Conc Technical Report 2: Open Source KOS Software," March. https://doi.org/10.5281/zenodo.48227.

———. 2016b. "Open Source Web Applications for Knowledge Organization Systems," August. https://doi.org/10.5281/zenodo.61262.