

Use case ACDH-CH Vocabulary Service: Workflows and editing options in Skosmos

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Overview

The presentation gives insights into ACDH-CH use of Skosmos as a vocabulary service.

1. Why and for what do we use a vocabulary service?
2. How did we evaluate and why did we choose Skosmos?
3. Setup of the Skosmos instance at ACDH-CH
4. Editing options/workflows that we implemented
5. Discussion

Vocabulary service at ACDH-CH #1

Two entry points for ACDH-CH vocabulary service (vocabs):

- <https://vocabs.acdh.oeaw.ac.at>
- <https://vocabs.dariah.eu>

We use vocabs for **our vocabularies** and it is also an in-kind service to the DARIAH community for **hosting all kinds of vocabularies** (with a focus on humanities).

DARIAH-EU and ACDH-CH are partner in SSHOC (involved in development of SSHOC Open Marketplace)

Vocabs services

In many areas of scholarly work, controlled vocabularies (gazetteers, thesauri, etc.) play a crucial role as a stable reference for resources and for ensuring interoperability between disparate projects and their data. The ACDH provides a suite of Vocabs services that allow for collaborative creation, maintenance and publication of vocabularies and taxonomies of any kind. [Read more](#)

from all ▾ English ▾ |

Skosmos Vocabulary Categories

GENERAL CONCEPTS

DHA Taxonomy
GEMET
ISO 639-1 Language Codes
ISO 639-3 Language Codes
ÖFOS 2012. Austrian Fields of Science and Technology Classification 2012
VICAV Taxonomy of Arabic Dialects

META THESAURUS

Backbone Thesaurus

HUMANITIES

DYAS HUMANITIES THESAURUS
PARTHENOS Vocabularies

CULTURAL HISTORY

Iconclass
travel!digital Thesaurus

ARCHAEOLOGY

DEFC Thesaurus
Iron-Age-Danube Thesaurus

MUSIC

Digital Hornbostel & Sachs Classification of Musical Instruments

ARCHE

ARCHE access restrictions
ARCHE Licenses
ARCHE life cycle status
ARCHE OAI Sets

Vocabulary service at ACDH-CH #2

Use cases for internal usage:

- Third-party funded projects creating vocabularies
 - Documentation of project settings in a data-driven way
- ACDH-CHs repository ARCHE uses it
 - Support preparation and documentation of long-term preservation of projects
- Experimental/internal projects settings use vocabularies especially those in linked data environments
 - Mapping of data between projects based on linked data
 - Enable interoperability between projects

Vocabulary service at ACDH-CH #3

Use cases for DARIAH community:

- Give opportunity to host a vocabulary
- Have a single-access point for vocabularies in the domain of DARIAH (arts and humanities)
- Share outcomes of DARIAH activities e.g. working groups, projects where DARIAH is involved
- Support the usage and documentation of vocabularies
- Contribution of DARIAH in European-wide projects

Vocabulary service at ACDH-CH #4

How is vocabulary service used:

- Part of documentation of projects
- Creation of structured data (SKOS instead of Spreadsheets)
- Point of reference during and after project lifetime
- Re-use of vocabularies
- Autocomplete functions implemented in project tools
- Generating statistics based on reproducible settings
- Vocabularies as cross-project connection points
- Make projects linked data compatible

Evaluation of vocabulary services #1

ACDH-CH uses Skosmos since end of 2017

- Motivation 1: Pushing use of vocabularies in projects
- Motivation 2: Integrate vocabulary service in ACDH-CH repository service ARCHE (<https://arche.acdh.oeaw.ac.at>)
 - ARCHE as a best-practice project
 - ARCHE has an ontology that connects to vocabularies

Evaluation of vocabulary services started begin of 2017

Evaluation of vocabulary services #1

Back in 2017 we evaluated different services:

- iQvoc (<http://iqvoc.net/>)
- TemaTres (<http://www.vocabularyserver.com/>)
- Skosmos (<http://skosmos.org/>)
- OpenSKOS (<http://openskos.org/>)
- VocBench (<http://vocbench.uniroma2.it/>)
- Themas
(<https://www.ics.forth.gr/themas-thesaurus-management-system>)

Evaluation of vocabulary services #2

Criteria for evaluation:

- Support of data models (SKOS, SKOS-XL, DC), Triple Stores, multiple concept schemes, collections, linking between vocabularies
- Presentation layer esp. for the public (browser, languages)
- Import/export possibilities
- API available and how simple to use?
- Integration of editor and user management
- Documentation and active development
- Deployment in a self-hosted environment + upgrade paths

Evaluation of vocabulary services #3

In the end we decided for Skosmos:

- + Well structured and adaptable presentation layer
- + Easily dockable to a triple store database
- + Clear separation between code and data
- + Full support of SKOS
- + Well maintained API + Swagger!
- + Good documented and readable source code (GitHub hosted, PHP/Twig/Composer based/Tests) + OpenSource
- - No integrated editor
- - No direct import/export

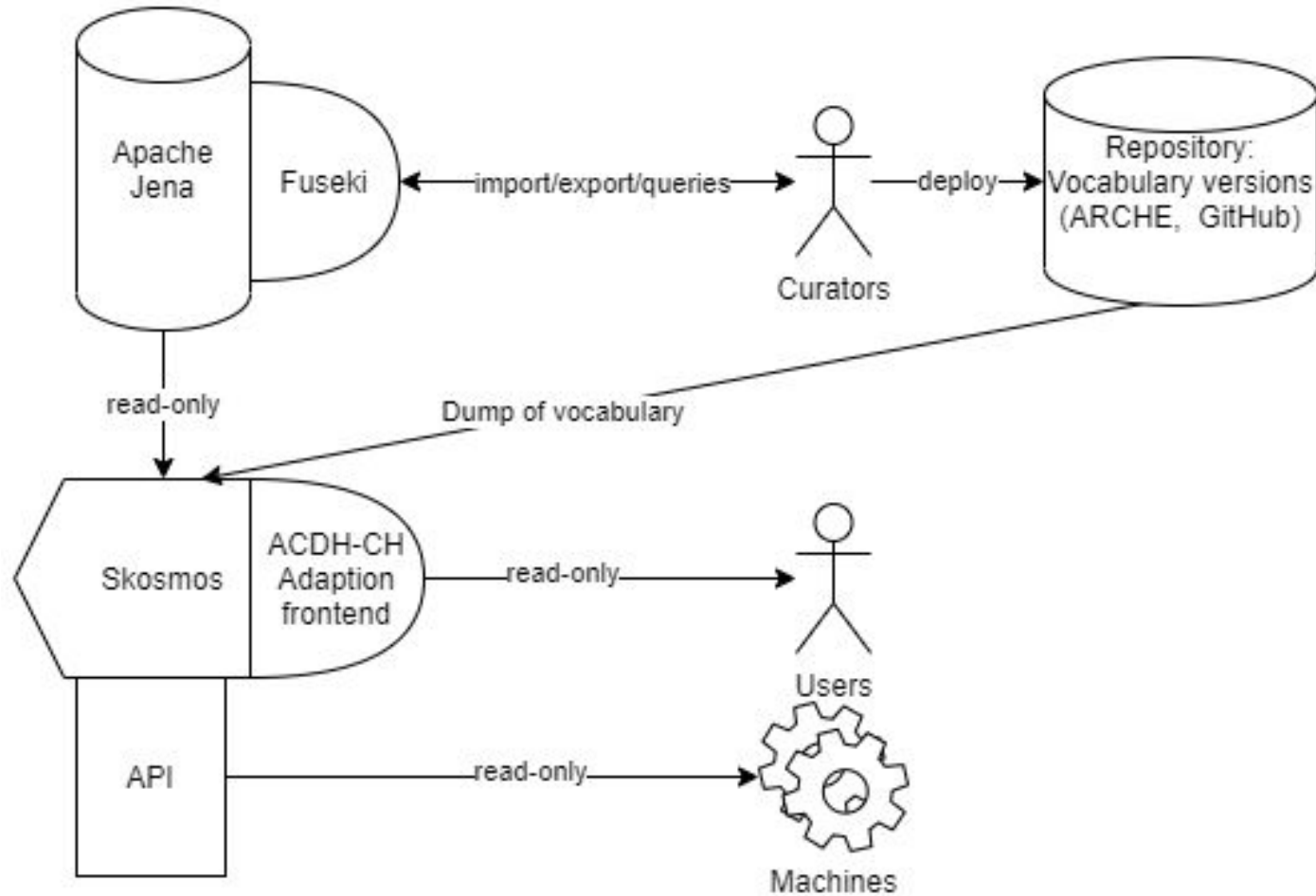
Evaluation of vocabulary services #4

Especially the strict separation of code and data is a great benefit of Skosmos: do not write configuration or other data into the Triple Store (we use Apache Jena + Fuseki: <https://jena.apache.org/>)

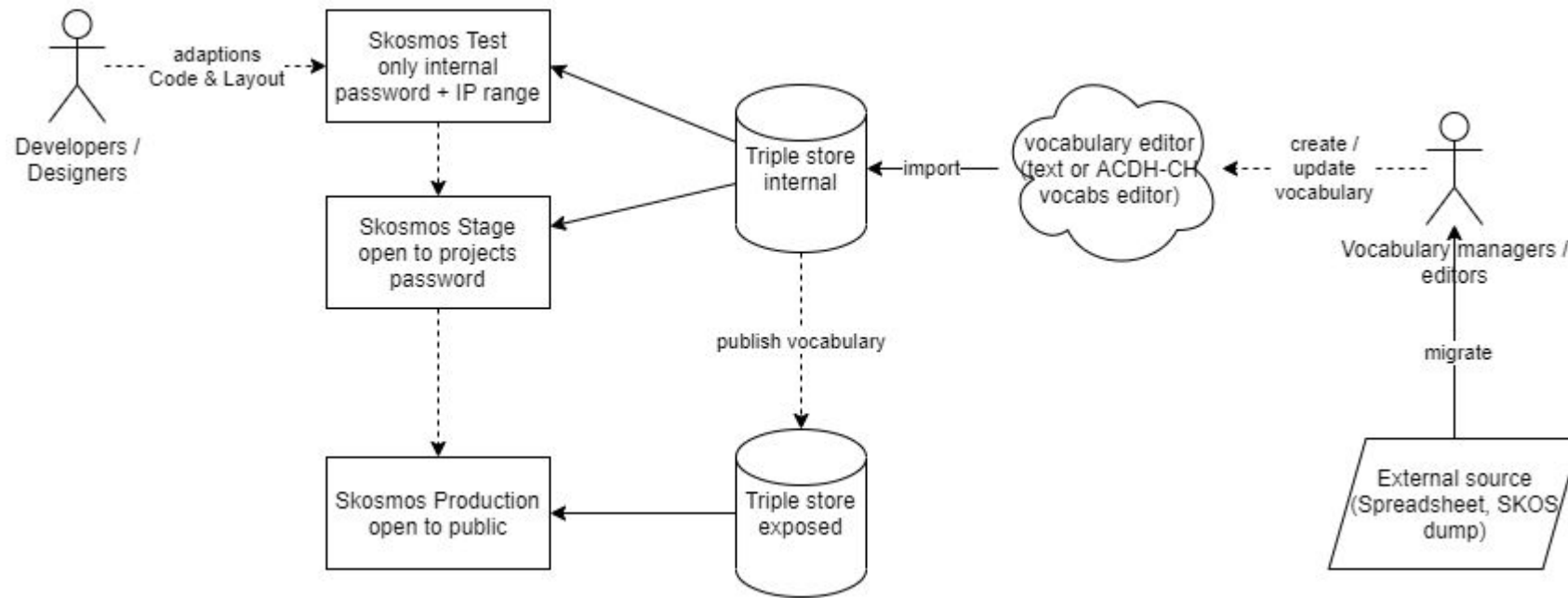
Import/export therefore no problem, we can do this directly at the Triple Store

Missing editor a problem but that is general a problem with vocabulary management tools (e.g. how to deal with multiple users, conflicts, versions, preservation): other services do have editors but not very convincing ones

Setup of Skosmos at ACDH-CH



Workflow of vocabs management at ACDH-CH



Editing options #1

Still a weak point in the current setting

- Projects deliver their vocabularies in different formats (often spreadsheets) therefore a vocabulary management (preparing, mapping to SKOS) is necessary anyway
- Questions regarding a dedicated editor are on the rise especially by new-started projects
 - But challenges are still the same: more than one editors working in worst case at the same time, versioning of vocabularies, handling of minor/major changes, stable identifiers (esp. when concepts are deleted), easy publishing (wish to press a button to have the new version available), quality issues and management

Editing options #2

Our conclusion: Without a dedicated vocabulary manager on our side it is not possible to guarantee quality

Therefore the current setting without a vocabulary editor in Skosmos is not a bad solution

Burden lays on vocabulary managers:

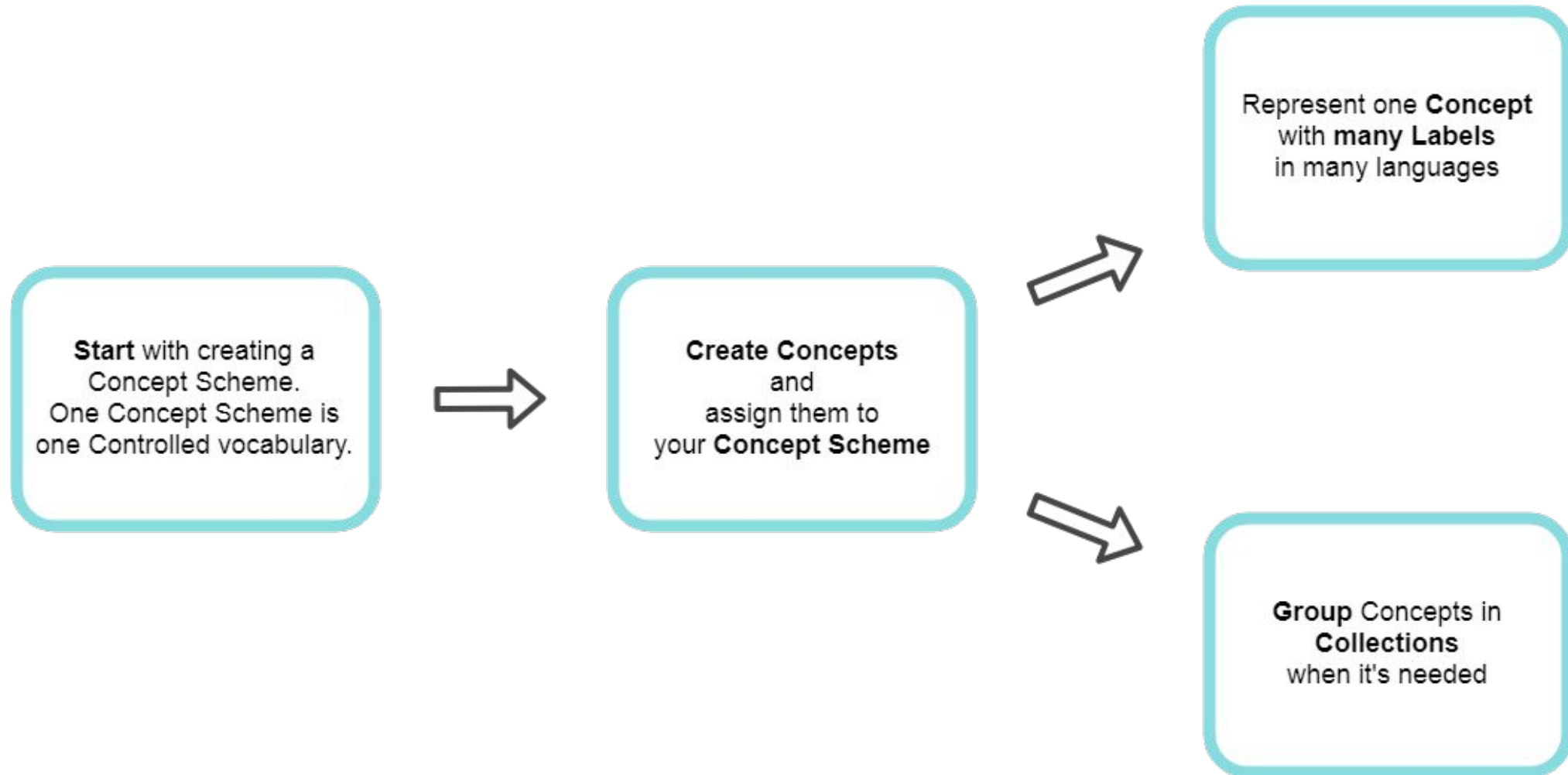
- Get in touch with project members on vocabulary tasks
- Convince to use SKOS otherwise create a mapping
- Keep the iteration cycle up to date
- Steadily monitor the quality of the vocabulary development

Editing options #3

Three ways to handle vocabulary development:

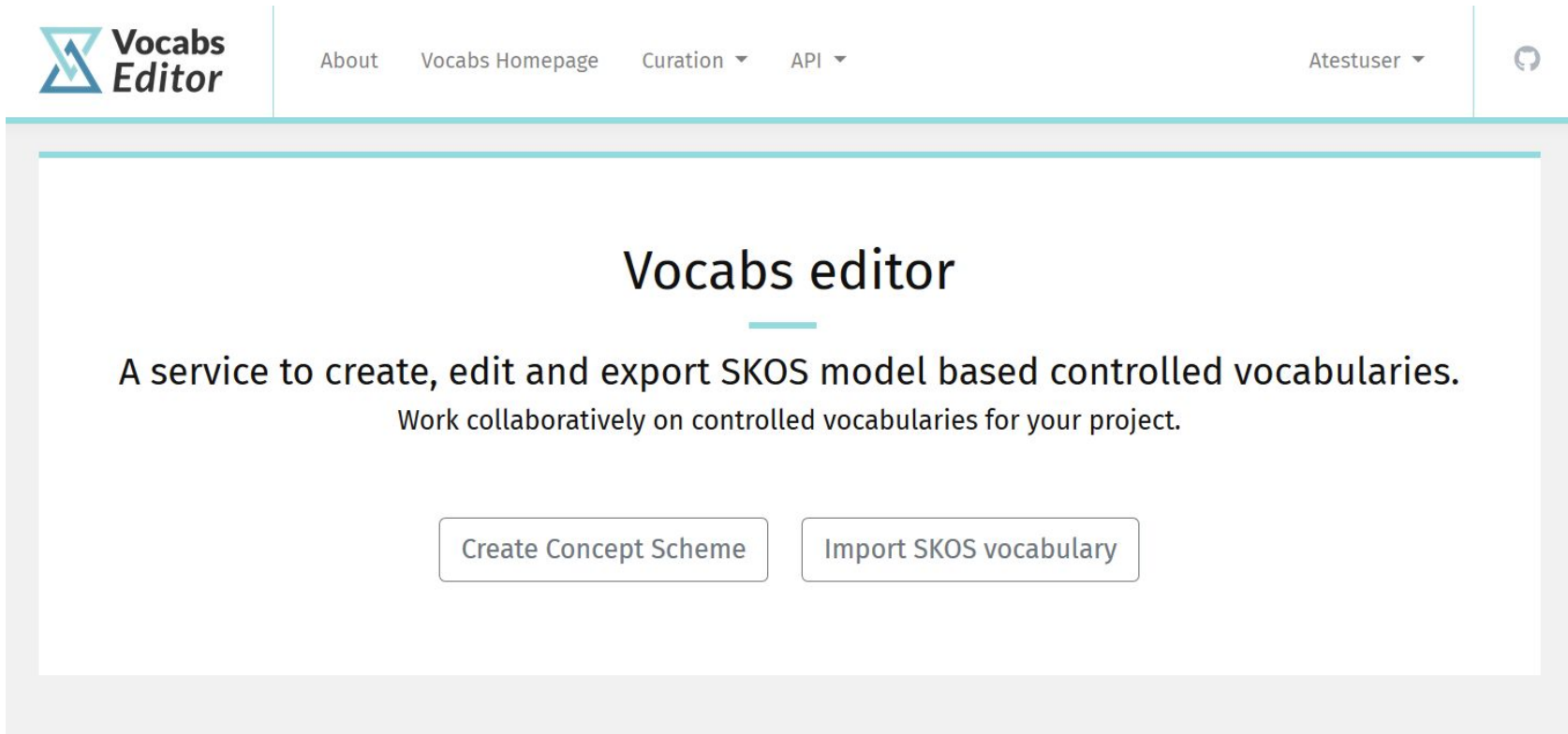
- Project members use **their tools** (e.g. spreadsheet) and based on the **mapping** we import regularly the SKOS vocabulary
- Project members can **handle SKOS** and write the SKOS vocabulary dump **by their own** (e.g. text editor) - **seldom!**
- Project members use our **Vocabs editor service** (a Python/Django based App that allows to create concepts) and we **export a SKOS dump** from there

ACDH-CH vocabs editor #1




ACDH-CH vocabs editor #2

To be found on: <https://vocabseditor.acdh.oeaw.ac.at> (but you need an user account)



The screenshot shows the web interface of the Vocabs Editor. At the top left is the logo for Vocabs Editor, which consists of a stylized blue and green icon followed by the text "Vocabs Editor". To the right of the logo is a navigation menu with the following items: "About", "Vocabs Homepage", "Curation" (with a dropdown arrow), "API" (with a dropdown arrow), "Atestuser" (with a dropdown arrow), and a circular icon on the far right. Below the navigation menu is a large white box with a light blue border. Inside this box, the title "Vocabs editor" is centered at the top. Below the title is a short description: "A service to create, edit and export SKOS model based controlled vocabularies. Work collaboratively on controlled vocabularies for your project." At the bottom of the white box are two buttons: "Create Concept Scheme" and "Import SKOS vocabulary".

ACDH-CH vocabs editor #3


About | Vocabs Homepage | Curation ▾ | API ▾
Atestuser ▾

DHA Taxonomy Add Concept Add Collection

- activities
- archaeology
- architecture
- copyright and licensing
- language resource
 - corpus
 - historical language
 - historical text
 - lexical resource
 - treebank
- NLP
 - entity linking
 - lemmatisation
 - NER
- semantic web vocabularies
 - CIDOC CRM !
 - FOAF !
 - RDF
 - SKOS
- text encoding
 - Folia
 - TEI

skos:ConceptScheme DHA Taxonomy [✎](#) | [🗑️](#)

dc:title @en	DHA Taxonomy
dc:title @de	DHA Taxonomie
identifier	https://vocabs.acdh.oew.ac.at/dha-taxonomy
dc:creator	• ACDH-OEAW Team
dc:contributor	• DHA consortium
dc:description @en	DHA taxonomy is a knowledge organization system designed to describe subjects, resources and tools within activities of Digital Humanities Austria.
dc:language	• English
dc:subject	• Computational methods in humanities • Cultural analytics • Text technologies
version	1.0
dc:publisher	ACDH-OEAW
dct:license	https://creativecommons.org/licenses/by/4.0/
owner	ACDH-OEAW
dc:relation	http://www.digital-humanities.at/en
collections (5)	• Formats, Protocols, Standards • Resources • Disciplines

ACDH-CH vocabs editor #4

Create Concept

skos:prefLabel*

Preferred label for concept

skos:prefLabel language

Language of preferred label given above

Add other labels

label

Other label for this concept

label type

Choose label type

language

Language of label given above

[remove](#)

[add another](#)

skos:inScheme*

Concept scheme to which this concept belongs

member of skos:Collection

Collection that this concept is a member of

skos:broader

Concept with a broader meaning that this concept inherits from

Add documentary note

[remove](#)

[add another](#)

Add semantic relationships

endpoint

Select a service to create links to external resources

You can also type a matching concept URI in the fields below if it is not provided by current endpoints
In that case please note that an external concept's URI should follow the format 'http[s]://example.org/...'

skos:related

An associative relationship between two concepts

skos:broadMatch

External concept with a broader meaning

skos:narrowMatch

External concept with a narrower meaning

skos:exactMatch

External concept that can be used interchangeably and has the exact same meaning

skos:relatedMatch

External concept that has an associative relationship with this concept

skos:closeMatch

External concept that has a similar meaning

Quality check

Needs review

Check if this concept needs to be reviewed

ACDH-CH vocabs editor #5

Features of vocabs editor:

- Import and export of SKOS dumps
- Creation of Concept schemes (vocabularies), concepts, collections in a content management way (user accounts, adaptable, communication via notes, etc.)
- Only primer knowledge on SKOS necessary (dedicated fields scaled by allowed data types)
- Table like overview on all created data (e.g. concepts of all concept schemes)
- Simple way to create multilingual descriptions/label

ACDH-CH vocabs editor #6

- Combines different (meta)data models: DC + SKOS
- History of changes + revert possibility
- API to visualize this data by other tools
- Not connected to Skosmos (+/-): export SKOS and import into Triple Store to show in Skosmos (does not operate native on the Triple Store)
- Open source: <https://github.com/acdh-oeaw/vocabseditor>
- Developed by Peter Andorfer and Ksenia Zaytseva

Discussion

Further reading:

Ksenia Zaytseva and Matej Ďurčo (2020). Controlled Vocabularies and SKOS. Version 1.0.0. Edited by Matej Ďurčo and Tanja Wissik. DARIAH-Campus. [Training module].

<https://campus.dariah.eu/resource/controlled-vocabularies-and-skos>

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