Uniform description and access to Knowledge Organization Systems with BARTOC and JSKOS

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BARTOC.org
Basel Register of Thesauri, Ontologies & Classifications

JSKOS Knowledge Organization Systems format

JSKOS format

- created as part of project coli-conc
  . . . to provide uniform access to KOS
- based on RDF (SKOS and other ontologies)
  . . . but more restrictive (unification)
- based on JSON-LD
  . . . extended by language ranges and closed world statements
- main goal:
  . . . *easy use of any KOS in web applications*

JSKOS example: GeoNames record

```json
{
  "uri": "http://sws.geonames.org/614540/",
  "prefLabel": {
    "en": "Georgia",
    "fr": "Géorgie",
    "de": "Georien", ...
  },
  "broader": [
    { "uri": "http://sws.geonames.org/6255147/" }
  ],
  "inScheme": [
    { "uri": "http://bartoc.org/en/node/15" }
  ], ...
}
```

BARTOC in JSKOS

. . . fehlt noch. . .

BARTOC JSKOS export:
https://github.com/gbv/bartoc-dumps/

JSKOS example: Eurovoc record

```
{
  "uri": "http://bartoc.org/en/node/15",
  "url": "http://eurovoc.europa.eu/",
  "identifier": [
      "http://www.wikidata.org/entity/Q1370467"
  ],
  "prefLabel": {
    "en": "Multilingual Thesaurus of the European Union"
  },
  "altLabel": { "en": "EuroVoc" },
  "languages": [ "bg", "ca", "cs", "da", "de", "el",
                 "en", "es", "et", "fi", "fr", ... ],
  ...
}
```

JSKOS-API

- ▶ specification of HTTP API to query KOS (in JSKOS)
- ▶ based on vocabulary services use cases
- ▶ work in progress (RDA Vocabulary Services Interest Group?)

JSKOS-API current state

- Entity Lookup Microservice API (ELMA)
  . . . most relevant subset of JSKOS-API
- public demo of terminology wrappers:
  https://jskos-php-examples.herokuapp.com/
  (BARTOC, Wikidata, GND, ORCID, GeoNames, VIAF. . .)

JSKOS-API example
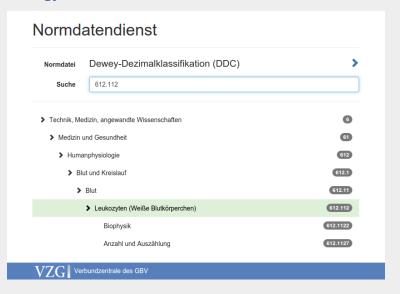
. . . fehlt noch. . .

Applications

Applications

- uniform access to terminologies
    - browsing in knowledge organization systems
    - semantic tagging
    - entity linking
    - . . .
- terminology services
- statistical analysis of terminologies
- management of mappings
- . . .

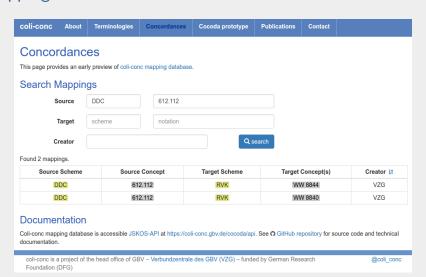*foster the visibility, availability and usefulness of KOS in general*

Terminology Service

Normdatendienst

Normdatei	Dewey-Dezimalklassifikation (DDC) ❯
Suche	612.112

> Technik, Medizin, angewandte Wissenschaften — 6
> > Medizin und Gesundheit — 61
> > > Humanphysiologie — 612
> > > > Blut und Kreislauf — 612.1
> > > > > Blut — 612.11
> > > > > > Leukozyten (Weiße Blutkörperchen) — 612.112
> > > > > > Biophysik — 612.1122
> > > > > > Anzahl und Auszählung — 612.1127

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Mapping Database

Thank you for attention

- ▶ Questions?
- ▶ Follow us on Twitter
  - ▶ @BARTOC_UBBasel
  - ▶ @coli_conc
- ▶ More information
  - ▶ http://bartoc.org/
  - ▶ https://coli-conc.gbv.de/
  - ▶ https://gbv.github.io/jskos/
  - ▶ http://gbv.github.io/elma/

Feedback and contribution is appreciated!