Unified access to entities with ELMA and JSKOS

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- problem
    - Find URIs of entities (e.g. Copenhagen)
    - Get labels (and some details) of known entities
- solution
    - **Entity Lookup Microservice API (ELMA)**
      https://gbv.github.io/elma/
    - **JSKOS data format for Knowledge Organization Systems**
      https://gbv.github.io/jskos/

ELMA entity search

- ▶ Find URIs of entities
  - ▶ http://example.org/?search=copenhagen
  - ▶ list of labels and URIs for typeahead
  - ▶ in OpenSearch Suggestions format

ELMA entity lookup

- ▶ Get labels (and some details) of known entities
  - ▶ http://example.org/?uri=http:
    //www.wikidata.org/entity/Q1748

```
[
  {

    "uri": "http://www.wikidata.org/entity/Q1748",
    "prefLabel": {
      "da": "København",
      "en": "Copenhagen",
      "fi": "Kööpenhamina"
    },
    ...optional details...
  }
]
```

JSKOS format for optional details

- SKOS (`prefLabel`, `broader`, `narrower`...)
- common properties from other ontologies
  (`url`, `next`, `previous`, `startDate`, `endDate`...)
- JSON-LD
- optional closed world statements
  (has-no-narrower, has-narrower)

Why a specification at all?

- It's so common that everyone implements *in his own ways*
- Easy to build wrappers (at least for entity lookup)
- https://github.com/gbv/jskos-php-examples
  (VIAF, Wikidata, ORCID, GND, Geonames...)