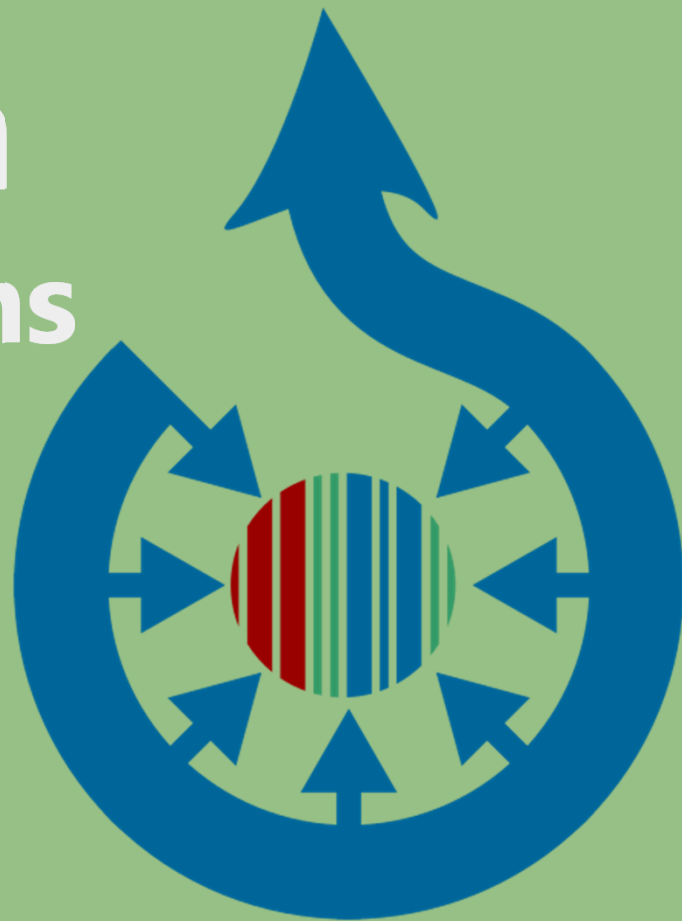


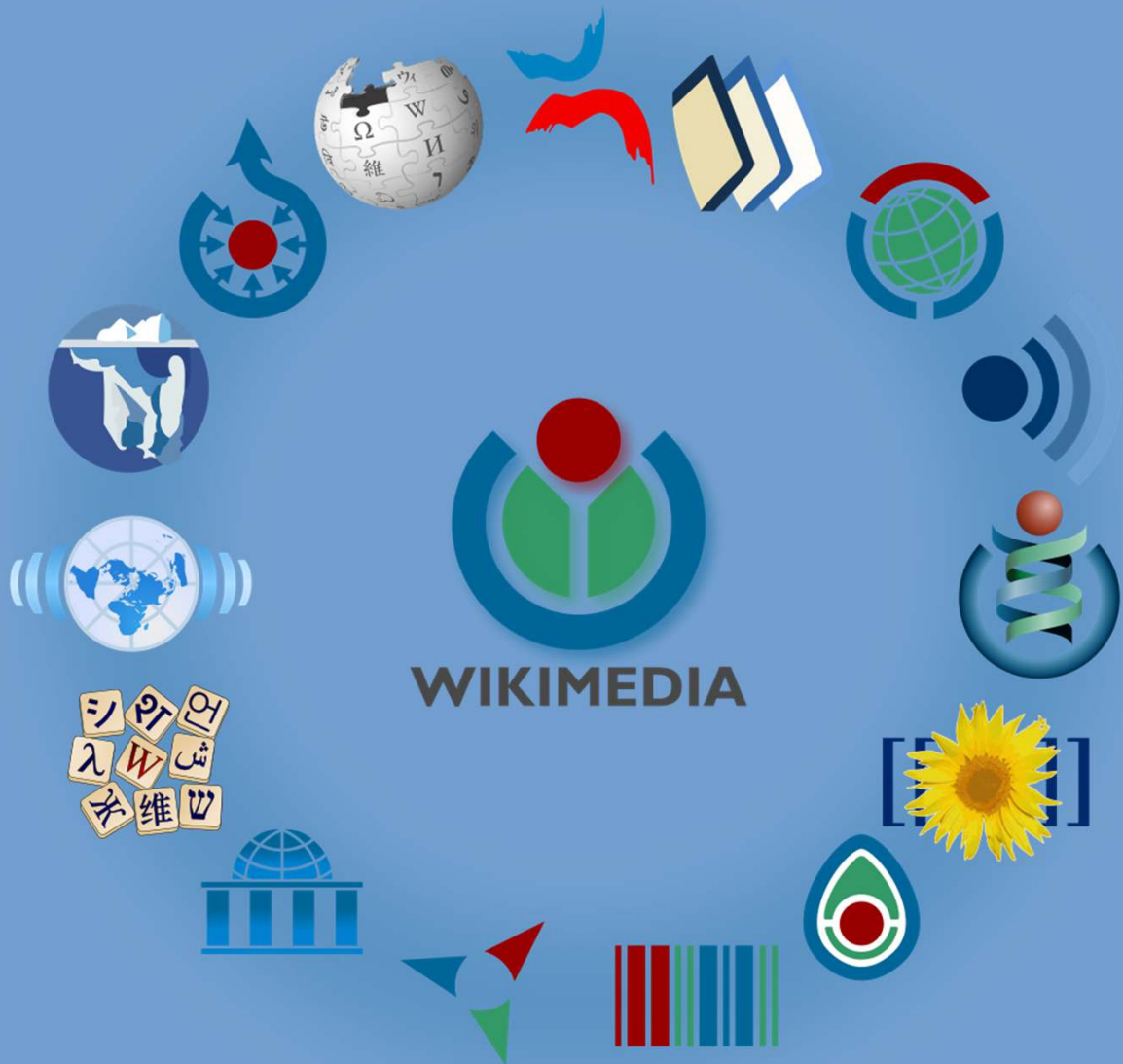
# Structured Data On Wikimedia Commons



# Wiki\*Verse

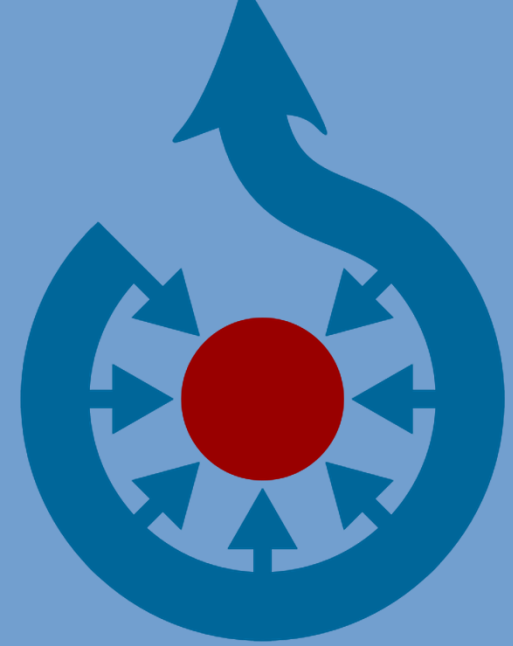
## Wiki\*Verse

the sum of all projects  
supported by WMF



# Wikimedia Commons

- central media repository
- images, videos, text and audio files
- open licensed content (creative commons), directly re-useable in all wikimedia projects and natively in any MediaWiki instance



# Wikidata

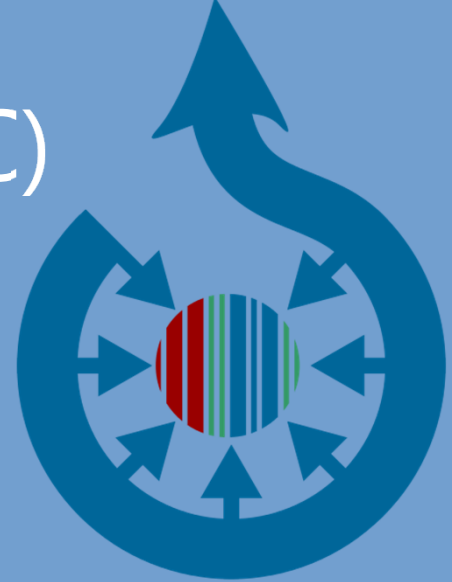


**Wikidata is a centralized, multilingual and open database for structured and linked data**

- Open Source and Open Data (CC 0)
- Open for edit (both data and structure) and reuse of data

# Structured Data on Commons (SDC)

- **Describe media files with data and structure from Wikidata**
- **Multilinguale file captions**  
(i.e. schema:description)
- **Structured data**  
machine readable file descriptions as RDF-triples with wikidata properties and wikidata-items as objects



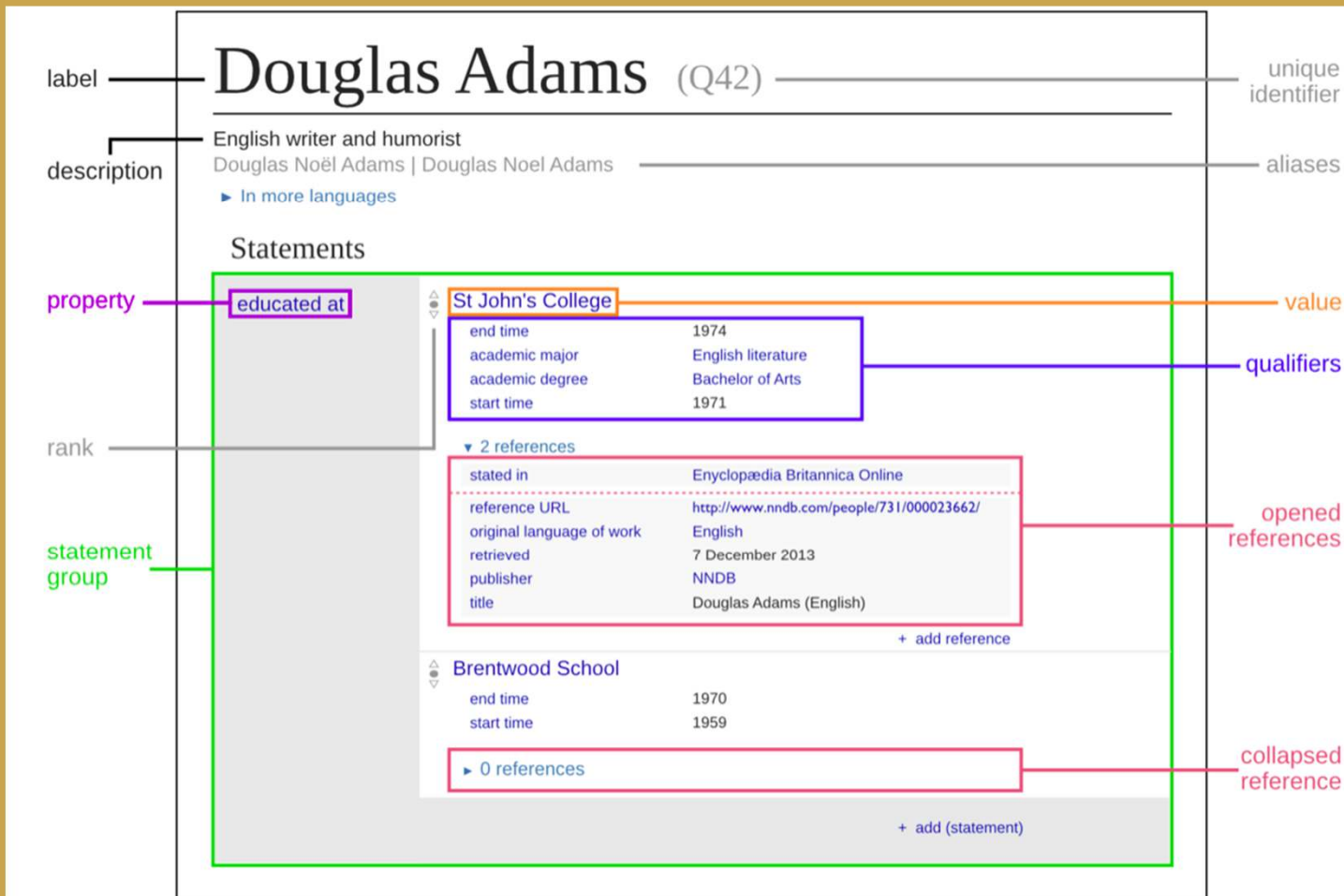
# Classical Wiki-Markup Description



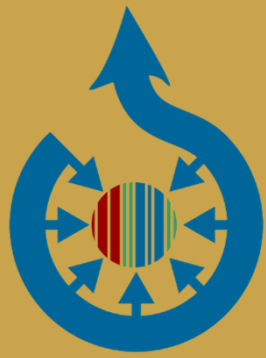
- Multilinguality by templates {{ }}
- Edit descriptions requires knowledge about Wiki-Markup and the huge amount of different templates in Commons.

```
== {{int:filedesc}} ==  
{{Information  
|Description={{de|Rückseite der Garnisonskirche Dresden}}  
{{en|South face of the Garrison Church, Dresden, Germany.}}  
|Source={{Own}}  
|Date=2008-11-09  
|Author=[[User:Kolossos]]  
|Permission=Own work, copyleft: Multi-license with GFDL and Creative Commons CC-BY-SA-  
2.5 and older versions (2.0 and 1.0)  
}}  
{{Location|51|4|27.2|N|13|45|32.3|E|heading:NE}}
```

# Wikidata Datamodel (Wikibase)



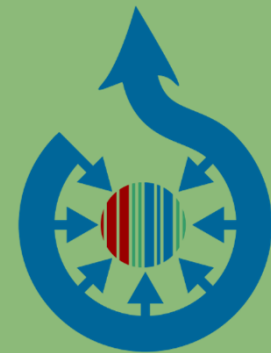
# Wikibase-Modell und SDC



- `schema:description` contains multilingual descriptions
- **RDF-triples** store file description
  - `?subject` → file
  - `?predicat` → chosen Wikidata property
  - `?object` → Wikidata:Item, string, integer, coordinates

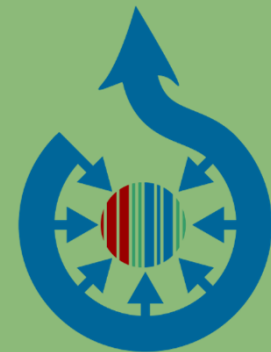


# Wikibase-Modell and SDC (born digital)



[Bad Schandau, pohled na Krippen.jpg](#) CC-BY-SA 4.0 (User:Aktron)

# Wikibase-Modell and SDC



Kurzbeschreibungen		Bearbeiten
Deutsch	Krippen südlich von Bad Schandau von der Elbe aus gesehen	
English	The village of Krippen seen from southern Bad Schandau, Germany	

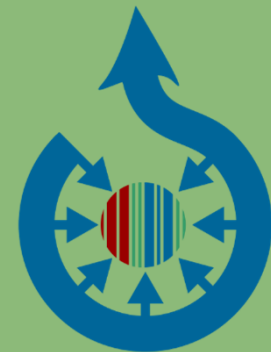
```
<schema:description lang="de">Krippen südlich von Bad Schandau von der Elbe aus gesehen</schema>  
<schema:description lang="en">The village of Krippen seen from southern Bad Schandau, Germany</schema>
```

## Beschreibung [ Bearbeiten ]

**Beschreibung** **Čeština:** Pohled na vesnici Krippen od Bad Schandau přes Labe, Německo  
**English:** The village of Krippen seen from southern Bad Schandau, Germany

```
=={{int:filedesc}}==  
{{Information  
|description = {{cs|Pohled na vesnici Krippen od Bad Schandau přes Labe, Německo}} {{en|The village  
of Krippen seen from southern Bad Schandau, Germany}}
```

# Structured Data – „depicts“ (de:Motiv)



**Dateiinformatioren**   **Strukturierte Daten**

**In dieser Datei abgebildete Objekte** **Bearbeiten**

*Motiv*

🔍 Zum Hinzufügen von Objekten suchen (Hauskatze, Berg, Taj Mahal etc.) von Wikidata   ⋮

**Elbe** ✓ **Prominent**

└ relative Position im Bild: pct:0,64.088,100,35.912

**Krippen** ✓ **Prominent**

└ relative Position im Bild: pct:0,43.538,100,19.0467

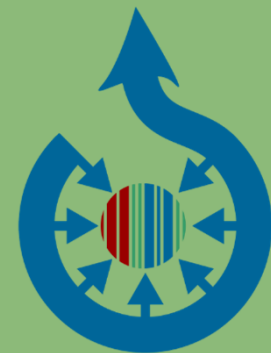
<wbstatement:P180><https://www.wikidata.org/wiki/Q1644>

<wbstatement:P2677>pct:0,64.088,100,35.912</wbstatement>

</wbstatement> <!-- Elbe -->

<wbstatement:P180><https://www.wikidata.org/wiki/Q1789042></wbstatement> <!-- Krippen -->

# Structured Data – license, coordinates



## Lizenz

Bearbeiten

🔍 Zum Hinzufügen von Objekten suchen (Hauskatze, Berg, Taj Mahal etc.) von Wikidata ...

[Creative Commons Namensnennung - Weitergabe unter gleichen Bedingungen 4.0 international](#) [Als prominent markieren](#)

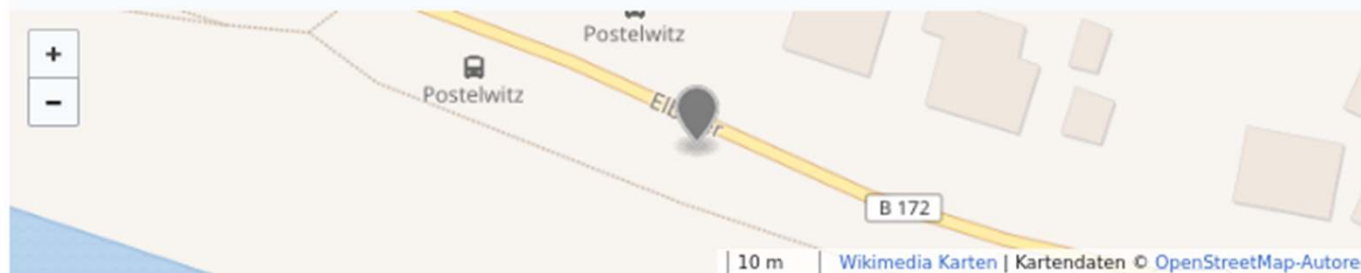
## Koordinaten des Standpunktes

Bearbeiten

📍 [Auf Karte auswählen](#) Breitengrad, Läng... auf 1/1000 einer Bogensekunde  [Hinzufügen](#)

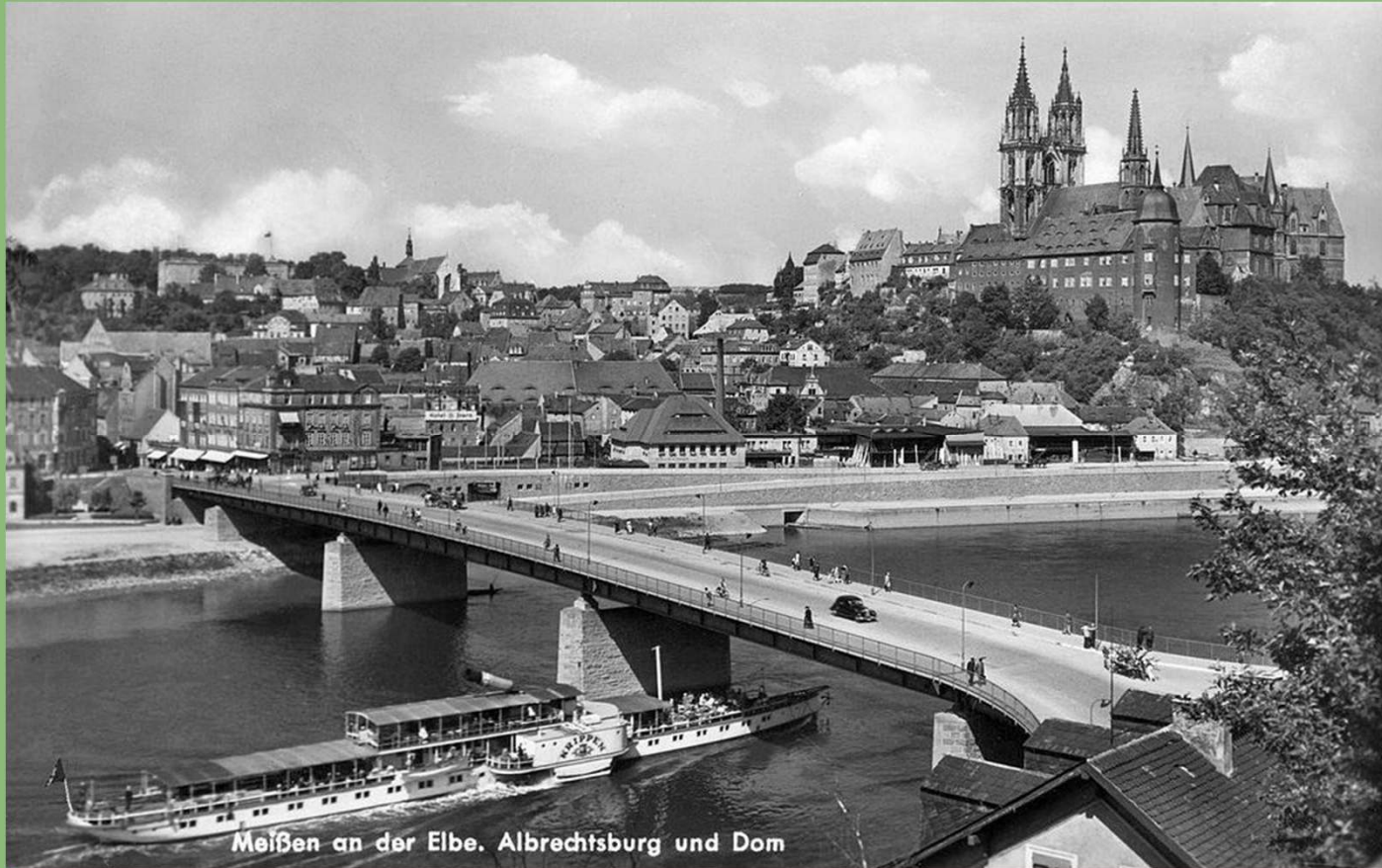
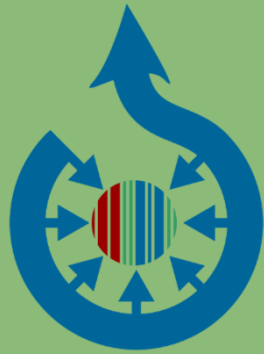
**50°54'47.470"N, 14°10'22.440"E**

[Als prominent markieren](#)



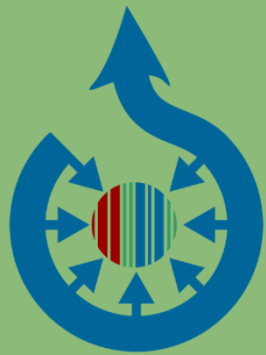
Blickrichtung: 225 Grad

# Wikibase data model and SDC (scan)





# Wikibase data model and SDC (scan)



**file (Scan)**  
(Wikimedia Commons)

**depicts:**  
.Albrechtsburg  
.Krippen (Raddampfer)  
.Meißen  
.Elbe  
.Brücke

**digital representation of:**  
.postcard by Brück & Sohn (Wikidata-Item)

**inception of scan:**  
. 2020

**Creator (scan)**  
.Brück & Sohn

**date of publication**  
.1940

**creator (postcard)**  
.Brück & Sohn

# Search - CirrusSearch

- Exact search of images by SDC statements:  
**haswbstatement:Wikidata-Property=Wikidata-ID**  
(search images depicting German village Krippen: [haswbstatement:P180=Q1789042](#))
- Search in frontend search bar
- Query the MediaWiki-API based on SDC statements in a machine-readable way.

# Search – SPARQL-Query

- SPARQL – allows more complex queries
- Commons endpoint is federated with Wikidata-SPARQL endpoint:  
Example: Images of Bridges
  - crosses the European river „Mur“
  - bridges are not situated in Austrian city „Graz“
  - <https://w.wiki/5jKj>

```
#Aktuell: Reine WD-Abfrage mit Bild
#defaultView:ImageGrid
SELECT * WHERE {
  ?ort wdt:P206 wd:Q1644;
  wdt:P7046 ?hovCode;
  wdt:P1082 ?einwohnerZahl;
  wdt:P18 ?image.
  FILTER (?einwohnerZahl < 500 )
}
https://w.wiki/QVj
```

```
# Show all files depicting bridges crossing the Mur not in Graz
#defaultView:ImageGrid
select distinct ?item ?itemLabel ?image ?lizenz with {
  select ?item ?itemLabel where {
    service <https://query.wikidata.org/sparql> {
      ?item wdt:P31/wdt:P279* wd:Q12280. # subclasses of bridges
      ?item wdt:P177 wd:Q204040.
      MINUS { ?item wdt:P131+ wd:Q13298. }
      service wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". ?item
    }
  }
} as %wikidataItems where {
  include %wikidataItems .
  ?file wdt:P180 ?item;
  schema:url ?image;
  wdt:P275 ?lizenz.
} limit 1000
```



# Structured Data for your own (institutions) collections

- MediaWiki as software to store files received through structured data a totally new technology for describing materials:
  - Allows to easier map and exchange metadata with other data formats
  - Make direct usage of Wikidata both for describing and search medias
- Allows semantic query of files
- Publish your own (open) licensed content to Wikimedia Commons
- Increase the visibility of your ressources and collections
- Increase the re-usability of your ressources
- Make usage of the Crow-Sourcing capabilities of the huge global Wikimediacommunity

# To Discuss

- Data Model – the engagement of metadata professionals in the SDC-discussion is necessary for further development
- Increase the acceptance of SDC in the Wikimedia Commons community

# References

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- Fauconnier, Sandra 2020a. *Connecting the work of three generations of decorative artists, with structured data*. Wikimedia Space. <https://discuss-space.wmflabs.org/t/connecting-the-work-of-three-generations-of-decorative-artists-with-structured-data/3226> [Stand 2020-05-11].
- Fauconnier, Sandra *How we helped a small art museum to increase the impact of its collections, with Wikimedia projects and structured data - Movement topics / GLAM - Wikimedia Space*. <https://discuss-space.wmflabs.org/t/how-we-helped-a-small-art-museum-to-increase-the-impact-of-its-collections-with-wikimedia-projects-and-structured-data/2507> [Stand 2020-a-05-14].
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- Peterzell, Keegan *Structured Data on Commons – A Blog Series – Wikimedia Space* Wikimedia Space. <https://space.wmflabs.org/2019/07/25/structured-data-on-commons-a-blog-series/> [Stand 2020-a-05-11].
- Peterzell, Keegan *Wrapping up version one: Structured Data on Commons - Technical - Wikimedia Space*. <https://discuss-space.wmflabs.org/t/wrapping-up-version-one-structured-data-on-commons/2828> [Stand 2020-b-05-14].