



# Reusing Wikidata on Wikivoyage

Intensive usage and its challenges

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# How much Wikidata is used on Wikivoyage?

- Up to 350 accesses per article
- 136 different properties are used on Wikivoyage

## Vienna

CPU time usage: 4.752 seconds

Real time usage: 6.035 seconds

Lua time usage: 3.327/10.000 seconds

Number of Wikibase entities loaded: 193/400

62.67%	3260.400	258	Template:VCard
21.45%	1116.194	63	Template:Marker
3.99%	207.493	1	Template:Quickbar_Ort
1.50%	78.256	1	Template:Mapshapes
0.89%	46.145	3	Template:Sitelinks
0.60%	31.089	2	Template:Mapframe



# Module:GetString

Multiple values can be stored in one or more values. Long lists of values can make infoboxes unreadable. Best example postal codes (P281)

**Sabah (one value):** 88000–91999

**Chiang Mai (multiple values):** 50000, 50110, 50120, 50130, 50140, 50150, 50160, 50170, 50180, 50190, 50210, 50220, 50230, 50240, 50250, 50260, 50270, 50280, 50310, 50320, 50350, 50360

Module GetString provides several features

- A range is created, if the number of values reaches a given limit
- A delimiter can be defined to separate the values
- The language qualifier of a value can be displayed
- one or all values can be displayed

	Sabah
Postleitzahl	88000–91999
Vorwahl	087-089
	Chiang Mai
Postleitzahl	50000...50360
Vorwahl	52, 53
	Wat Phra Singh
Name (lokal)	วัดพระสิงห์วรมหาวิหาร

# Module:GetNumber

Different Properties need different qualifiers

- Point in time
- Unit

Module **GetNumber** has got these features:


- Adding a time qualifier
- A delimiter can be defined to separate the values
- A unit can be added
- A conversion can be done if the requested unit is not available

Beispiele	
Höhe	76 m
Fläche	166 km <sup>2</sup>
Einwohnerzahl	20.136 (2021)
Passagierzahl	18.768.601 (2020)

# Module:GetItem

Module GetItem can ...

- ... just display the label text
- ... provide a link to an article in the following priority
  - German Wikivoyage
  - German Wikipedia
  - Local language Wikipedia (depending where the described object is situated)

South Africa	
<b>Hauptstadt</b>	Pretoria (Exekutive) Bloemfontein (Judikative)  Kapstadt (Legislative)

Thai Airways International	
<b>Bonusprogr.</b>	Royal Orchid Plus 
<b>Allianz</b>	Star Alliance 
<b>Hauptverwaltung</b>	Chatuchak 
<b>Tochtergesellschaften</b>	Thai Smile,  Nok Air

# Module:GetImage

Module GetImage is able to ...

- ... display flags, coat of arms, seals and logos. In infoboxes the user can influence the choice and order.

Parameter: |Hoheitszeichen=CF

- ... provide a specific collection of position maps. One parameter in Wikivoyage can change the location map style in all country articles.

```
Collections = { "Q21167586", "Q47008743", "Q43037778" }
```

- ... add image maps to the location maps



# Module: GetProvince

Module GetProvince determines ...

- ... the administrative region of a given place recursively.
- ... the suitable regional location map for a given place.
- ... uses the following properties
  - ... P131 (located in the administrative territorial entity)
  - ... P10229 (next level in hierarchy)
- ... creates maintaining categories if the search ...
  - ... ends at a country item
  - ... ends without finding a first level province
  - ...runs in circles





# Module:GetP856

Module **GetP856** provides the official website of a place or item in the following language

- ... language of the wiki
- ... English
- ... official language of the place where the article is about
- ... the first entry that is delivered by Wikidata

## Weblinks

- [www.pref.fukushima.lg.jp](http://www.pref.fukushima.lg.jp)  (ja)  – Offizielle Webseite von Fukushima (Präfektur)

# Comparing local values with Wikidata

The infobox modules compare local values with Wikidata values. Results are stored in ...

- ... tooltip
- ... css classes
- ... data attributes in html tags
- ... maintenance categories

Gadgets can...

- ... mark the results with colours
- ... add editing features (still to be developed)

```
<tr class="voy-qb-item voy-qb-item-area">
```

```
<th class="voy-qb-item-key">Fläche</th>
```











```
<td class="voy-qb-item-value1 voy-qb-item-value-wikidata-noequal "  
data-wikidata-id="Q179029" data-wikidata-value="76.115 km²" title="Daten  
unterschiedlich - Angabe auf Wikidata: 76.115 km²">77000</td>
```

The screenshot shows the infobox for Sabah. It includes the state flag, a coat of arms, a photograph of a mosque, and a table of key statistics. The 'Fläche' (Area) row shows a discrepancy: the local value is 77,000 km², while the Wikidata value is 76,115 km². A tooltip is displayed over the Wikidata value, stating 'Daten unterschiedlich - Angabe auf Wikidata: 76.115 km²'. To the right of the infobox, there are maintenance messages in German, such as 'Artikel mit identischer Postleitzahl auf Wikidata' and 'Seiten, die die Wikidata-Eigenschaft P281 benutzen'.

# Module:VCard

Module **VCard** is our most used and powerful module and template which provides entries about museums, airports, hotels, sights, villages – any geographical object. It ...

- ... provides the pin of the object on the map.
- ... formats phone number account numbers and links it to phone apps, skype etc.
- ... microformats in HTML for external tools
- ... providing an info box (taxi button) with local language
- ... retrieves all data from Wikidata
  - addresses
  - opening hours
  - features (pool, bar, gayfriendly, dress code, behaviour rules, restaurant and hotel stars, pets etc...

3 **Klosterkeller**  Klosterpl. 5, 03046 Cottbus  (nördlich der Klosterkirche am Durchgang zum Puschkinpark ).  
Tel.: +49 (0)355 79 33 72,  E-Mail: [info@klosterkeller.com](mailto:info@klosterkeller.com)    Der Klosterkeller bietet vorzügliche traditionelle deutsche sowie internationale Gerichte im neuen Outfit. Die Gerichte werden komplett frisch zubereitet. Aufgrund der kleinen Küche und möglicher Wartezeiten ist daher eine Reservierung (und damit zeitliche Einplanung) sehr angeraten. Das Restaurant bietet 7 Tische im Lokal und 5 auf einer gemütlichen Terrasse am Park. Merkmale: kein WLAN,    Terrasse, Tiere erlaubt.  Geöffnet: Di-So 12:00-15:00, 17:00-23:00; Okt-Apr. So: 12:00-15:00. Akzeptierte Zahlungsarten: EC-/Girocard, Maestro.  [info](#) |  [bearbeiten](#)



# Challenges 1

Changes to data model needs an ongoing development

- Introduction of qualifiers that are to be processed to find the wanted values:
  - Start and end date
  - P10229 (next hierarchy level)
- Properties can come, go or change, like OSM
  - 1: Only OSM-Relations where possible
  - 2: OSM-Entities where possible, but a prefix (way or node) was necessary
  - 3. New properties for ways and nodes

# Challenges 2

Finding the right value is difficult:

- The preferred rank failed. Normally:
  - “preferred” is the newest value
  - “normal” are the old values
  - “deprecated” is nonsense or not longer true values
- P7452 (reason for preferred rank) is hardly used and needs additional effort in external programming
- What to do, if a preferred rank value has and an end date?
  - interpret as nil? (what Wikivoyage is partly doing)
  - running a second query with all ranks and find something better? Something with no end date?

# Wishes 1

## More powerful Lua Functions:

- Special function that delivers data as a simplified table (with property as first index, sane for the qualifiers)
  - The permanently possible “got nil” error waits is around every corner due to the hierarchy depth in data structure and can be annoying
  - Deliver “nil” as value instead of leaving out “novalue”
- **getNewestValue** (by processing using qualifiers)
- **getLastEditDate** (available via API, but not Lua)
- built in conversion of units for numeric values

# Wishes 2: Transfer data to local wiki

**Problem:** Many information are permanently used which causes multiple data access to Wikidata. e.g.:

- country and province codes
  - calling codes
  - iso 3166
  - Exchange rates

**Possible solution:** Caching data as local Lua table.

- Currently done manually: running SPARQL query → formatting as Lua table in editor → saving manually in a local table
- An automated process is necessary (bot, tool)
  - running as cron job
  - spreading data around all local wikis





# Thanks for your attention!

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**Credits**

Stefan Fussen

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