



**WIKIMANIA
SINGAPORE**

Intensive use of Wikidata in the Wikivoyage project

Speaker: Stefan Fusan (DerFussi)

Speaker



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Stefan Fussen (User: DerFussi)

Birthday: 01.01.1970

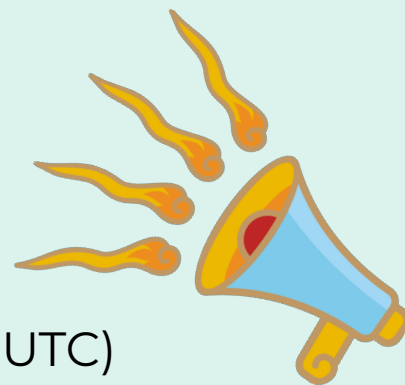
Profession: Land surveyor

- First wiki edit: March, 14th 2005 on Wikitravel
- 2006: Starting Wikivoyage with other German contributors
- 2008–2014: Chairman of Wikivoyage association

Contact about Wikidata on Wikivoyage:

- User: RolandUnger (VCard, Marker, Mapframe)
- User: DerFussi (GetXXX, Quickbars)

Tuesday, August 17 (07:30-07:50 UTC)



Wikivoyage + Wikidata

A look back



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- Started in 2006
- WMF family member since 2012
- Wikivoyage used an self developed location database for
 - Hierarchy
 - Interwiki
 - Coordinates



A screenshot of the Wikivoyage website showing the 'Ldb:de:Berlin/Museumsinsel' page. The page is titled 'Main' and features a navigation menu on the left with options like 'Main Page', 'About Wikivoyage', and 'Log out'. The main content area displays a hierarchy of locations: '[shared] World' > '[shared] Eurasia' > '[shared] Europe' > '[shared] Central Europe' > '[shared] Germany' > '[shared] Berlin' > 'BerlinMitte (Bezirk)' > '[shared] BerlinMitte' > '[shared] Berlin/Museumsinsel'. Below this, there are sections for 'Hierarchy', 'Aliases', and 'New alias', each with a 'create' button. The 'Aliases' section shows a table with columns for 'prefix', 'title', and 'article', with entries for 'de: Berlin/Museumsinsel de:Berlin/Museumsinsel' and 'shared: Berlin/Museumsinsel shared:Category:Berlin/Museumsinsel'. At the bottom, there is a 'Summary' field and a 'Save module' button.

Wikivoyage + Wikidata

Why Wikidata?



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- Many information on Wikivoyage are just short facts/values.
 - Addresses
 - Phone numbers
 - Coordinates
 - E-Mail addresses
 - Opening hours
 - Features of a place
 - climate data
 - exchange rates
- Sources are not mandatory.
- Wikivoyage has still small communities.
 - Easy maintenance of data
 - Value changes are visible everywhere
 - Even Non-Wikivoyagers can participate and improve Wikivoyage articles on the side
 - One edit can update all language versions

Wikivoyage + Wikidata

How much Wikidata?



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- Up to 350 accesses per article
- 136 different properties are needed on Wikivoyage
- Some articles had time outs when get parsed in the past

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 |

Halle (Saale)

CPU time usage: 3.895 seconds

Real time usage: 5.689 seconds

Lua time usage: 2.985/10.000 seconds

| | | | |
|--------|----------|-----|-----------------------|
| 76.73% | 3864.739 | 254 | Template:VCard |
| 9.14% | 460.387 | 18 | Template:Marker |
| 6.21% | 312.629 | 1 | Template:Quickbar_Ort |
| 3.33% | 167.578 | 1 | Template:Mapfram |
| 0.56% | 28.417 | 1 | Template:GeoData |

Wikivoyage + Wikidata

Challenges 1



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Using Wikidata can cause unexpected difficulties.

Changes of values:

- Spam and vandalism.
 - Deleting values or properties
- (New) user users may not know how to enter and tag values on Wikidata properly.
 - Wikivoyage articles once showed a huge list of population numbers in infoboxes instead of one value because somebody removed the best rank.

Changes to the data model. (A module that works today may not work tomorrow). Examples:

- 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
 - 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

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Challenges 2



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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?

Qualifier P642 (“of”):

- it can create a wilderness
- can replace any other property in a bizarre way
- fortunately it shouldn’t be used any longer

Wikivoyage + Wikidata

Module:GetString



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Different data types need different modules.

- All modules can be used in other modules or directly in articles.
- All modules can optionally create a infobox row

Strings:

- 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 |

Wikivoyage + Wikidata

Module:GetNumber
Module:GetItem



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Numbers:

- Different Properties need different qualifiers
 - Point in time
 - Unit
- Provided units may not be the wanted units. A conversion could be necessary

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 ² |
| Einwohnerzahl | 20.136 (2021) |
| Passagierzahl | 18.768.601 (2020) |

Module **GetItem** can ...

- ... just display the label text
- ... provide a link to an article in the following priority
 - German Wikivoyage
 - German Wikipedia
 - Local Wikipedia

| Thai Airways International | |
|----------------------------|------------------------|
| Bonusprogr. | Royal Orchid Plus |
| Allianz | Star Alliance |
| Hauptverwaltung | Chatuchak |
| Tochtergesellschaften | Thai Smile, Nok Air |

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Module:GetImage
Module:GetProvince



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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** determines ...

- ... the administrative region of a given place recursively.
- ... the suitable regional location map for a given place.



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Module:GetPXXX



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Some Modules are designed for a single property.

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 (ja) – Offizielle Webseite von Fukushima (Präfektur)

Module **GetP36** Delivers the capital of a country/region and works with special countries like South Africa

| | South Africa |
|-------------------|---|
| Hauptstadt | Pretoria (Exekutive) Bloemfontein (Judikative) Kapstadt (Legislative) |

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Comparing local values with Wikidata



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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



```
<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>
```

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Module:VCard



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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 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](#)

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Wishes: Editing 1



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Lowering the barrier to use Wikidata

- Better user interface
 - Coordinate picker is urgently needed
 - Date input difficulties
 - “Jan 2022” → “2022-01-01”
 - “Januar 2022” → “2022-01”
 - “January 2022” → “2022-01-01”
 - Local language output but not input → German “Okt 2022” is invalid
 - If you copy dates from other websites/articles they often contain non breaking spaces which are not interpreted as white spaces
 - Every type causes internet traffic, which can be annoying when having a bad connection
 - Inserting items by QID needs additional useless clicks
- Edit features on local wiki specific to the properties

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Wishes: Editing 2



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Lowering the barrier to use Wikidata

- Tools for editing Wikidata directly in local wiki specific to the properties
 - helping users with decision: new value or correcting existing values, new users possible do not know about it
 - example: user should be able to fix or add a phone number of a museum directly from the
- Mobile editing

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**Wishes: Transfer data to
local wiki**



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

- country and province codes
 - calling codes
 - iso 3166
 - phone
- ...

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

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Wishes: Functions



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More powerful Lua Functions or is Wikifunctions an option?

- Handling qualifiers needs much efforts
- The permanently possible “got nil” error waits is around every corner due to the hierarchy depth in data structure and can be annoying

Examples:

- get newest value (using qualifiers)
- get last edit date (available via API, but not Lua)
- built in conversion of units for numeric values
- special function that delivers data as a simplified table (with property as first index)

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Wishes:

- **Constraints**
- **More data**



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Constraints are important to avoid uncontrolled data structures and content

- it's too easy to input data that makes no sense
- information about constraints ...
 - appear late after typing and clicking info button
 - are sometimes regular expressions (which almost nobody understand)

More available data

- Climate data

Thank you

Stay healthy and always a safe travel.

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