OSM Usage in Wikivoyage

Bringing together: travel and maps

Wiki*Dienstag*, Wien, 3.12. – 4.12.2016
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What is Wikivoyage?

- Web-based travel guide telling you how to get to where you wish to go, how to survive once there or what to see

- An association: Wikivoyage e. V.

- Different to Wikipedia
  - Wikipedia is not/should not be a travel guide
  - In Wikivoyage (WV) more colorful language encouraged including telling stories
  - Original research allowed: own experiences useful, proposal of new routes, description of unknown or unpublished sites
  - Really contrary: a small friendly community

History of Wikivoyage

- Wikitravel started in July 2003, sold to Internet Brands in April 2006
- Wikivoyage association founded in September 2006
    - Hosting Wikivoyage from start to November 2012
    - Coordination collaboration between the language branches
    - Initiating local campaigns
    - Press relations work
    - Advertisement
- German fork in December 2006
    - Mediawiki software, PostgrSQL data base
- Location database October 2008 – precursor of Wikidata
- New collaboration with "old" Wikitravel and Wikimedia communities proposed in February 2012
- New sister project beta November 2012
- Official launching January 15, 2013

Wikivoyage now and later

- Now:
  - 15.500 German / 27.500 English articles
  - Special topics are cycling and hiking
  - 17 languages
  - Visual Editor
  - Mobile view, Kiwix archives
  - But popularity problems
- Maps are key feature
  - Dynamic map expedition
  - Collaboration with Open Street Map
- Maps showing subjects related to the articles
  - Places of interest
  - Hiking and cycling trails
- Future features
  - Adding travel blogs
  - Allowing reviews

OSM map use in Wikivoyage

- July 2, 2008: OSM map use with Slippymap extension: special page Special:Map sources
- Since November 2012: User Mey2008 started programming dynamic map services hosted at the WV association server
- November 2015: WMF announces an experimental map-tile server at https://maps.wikimedia.org/
- Reprogramming at Wikimedia Foundation (Yuri Astrakhan, Julien Girault)
- Since June 2016: Kartographer in Wikivoyage
- Begin of September 2016: Kartographer in the German Wikipedia (only Maplink tag)

Map sources

Karten- und Datenquellen

Diese Seite ermöglicht es Benutzern, in mehreren Ressourcen nach einem Standort (definiert durch seine Koordinaten) zu suchen.

Geografische Breite, Länge und weitere Parameter müssen mit Kommas getrennt werden. Parameter bestehen aus dem Kennwort, dem Gleichheitszeichen und dem Wert.

Beispiel: 52° 31′ N, 13° 24′ 30″ E, scale=50000

Daten und Karten in Ressourcen finden

Koordinaten: 52.51789_N_13.38873_E_scale:20000   Suche

In der nachfolgenden Auflistung finden Sie Links zu Daten und Karten zum angegebenen Ort.

Wikivoyage ist mit keinem der Anbieter geschäftlich verbunden, noch stellt die Nennung und Reihenfolge eine Wertung dar.

Koordinaten		
Ort	Berlin	
WGS84	52° 31′ 4.4″ N 13° 23′ 19.43″ E	🏴 English
	52° 31.0733′ N 13° 23.3238′ E	🇫🇷 Français
	52.51789° 13.38873°	🇮🇹 Italiano
UTM	33U 390670 5819862	[Projektseite]

Globale Anwendungen

- Umfangreiche Resourcenlistung⯑ bei *Wikipedia* (GeoHack von *Magnus Manske* und *Egil Kvaleberg*)
- Zeige diesen Ort⯑ bei *OpenStreetMap⯑*.
- Zeige diesen Ort⯑ (Satellit⯑, Hybrid⯑) bei *Google Maps*
  - mit deutschsprachigem Wikipedia-Layer⯑
  - GeoNames⯑ Geografische Namen auf *Google*-Karten
  - maps-for-free⯑ (Globale Reliefkarten als Google-Maps-Mashup, zum Download freigegeben)
  - Zeige diesen Ort⯑ bei WikiMapia⯑
- Zeige diesen Ort⯑ (Satellit⯑, Hybrid⯑) bei *Yahoo Maps* (benötigt Adobe Flash)
- Zeige diesen Ort⯑ (Luftbild⯑, Hybrid⯑) bei *Bing Maps*.
- Zeige diesen Ort⯑ mit *NASA World Wind*. Benötigt NASA World Wind⯑
- Zeige diesen Ort⯑ mit *Google Earth*. Benötigt Google Earth⯑
  Man kann sich zusätzlich zur Position auch einen deutschen Wikipedia-Layer⯑ (auch mit Bildern⯑) anzeigen lassen.
- Zeige diesen Ort⯑ bei *MSN⯑ (The Microsoft Network)* Welt-Atlas.
- Finde nahegelegene Orte⯑ auf *Flash Earth⯑*. Satelliten- und Luftbilder der Erde in Flash.
- Zeige diesen Ort⯑ bei *ACME Mapper⯑*.
- Zeige diesen Ort⯑ bei *MapQuest⯑*. Routenplanung.
- Zeige diesen Ort⯑ bei *Multimap⯑*. Straßenkarten.
- Zeige diesen Ort⯑ bei *GeaBios⯑*. Satellitenbilder und Karten. (benötigt Adobe Flash)

Dynamic maps since 2012

Wikimedia empire

- Wikimedia Foundation (WMF)
- Wikipedias – encyclopaedias
- Sisters
  - Wikivoyage – travel guides
  - Wikidata – storing data of general interest
  - Commons, Wikisource, Wikiquote, Wikiversity, Wiktionary, …
  - Map Services
- Partners
  - OSM – collecting geo data
  - Kiwix – offline reader expedition

Current map services

- Open Street Map: map data
- Map services developed at Wikivoyage (Mey2008)
- Services provided from the Wikimedia Foundation partially in a beta state
    - Tilerator: creates tiles from SQL queries
    - Kartotherian: provides tiles stored
    - Leaflet: JavaScript-script map-manipulation library
    - Kartographer: interactive, dynamic maps (Yuri Astrakhan, Julien Girault)
- Now both services are working in parallel

Map elements

- Zoom in/zoom out, zoom level
- Explore nearby articles
- Switch between full-screen view, inserted maps
- Layers – only Wikivoyage because of privacy rules
  - Wikimedia
  - Mapnik (openstreetmap.org)
  - Relief map (thunderforest.com)
- Groups – only Wikivoyage
- Additional features – only Wikivoyage because of privacy rules
  - Traffic line network (openptmap.org)
  - Boundaries (korona.geog.uni-heidelberg.de)
  - Hill shading (de: Schummerung, NASA, wmflabs.org)
  - Cycling trails (waymarkedtrails.org)
  - Hiking trails (waymarkedtrails.org)
  - Nearby articles (de: Umgebungskarte)

Example maps 1

Halle (Saale) – some places not known by OSM

Example maps 2

30°2'43"N 31°14'6"E
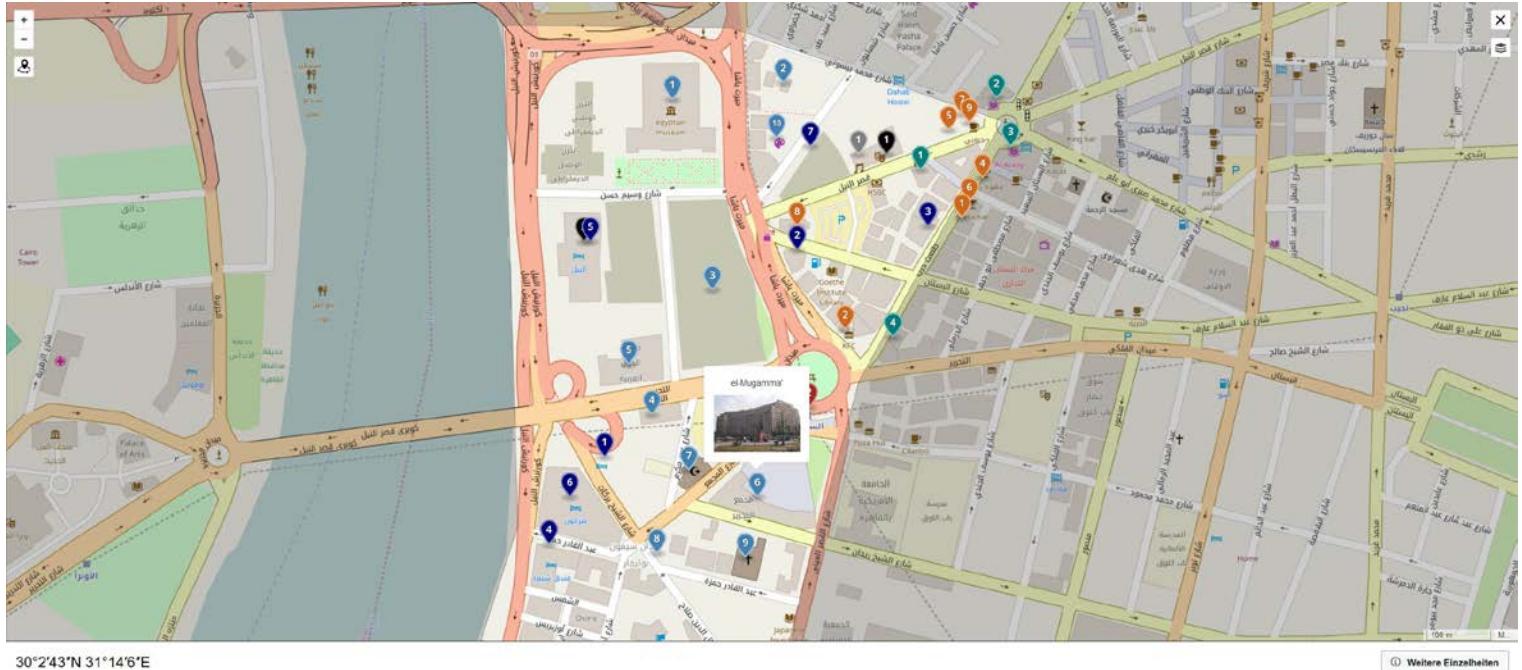
Cairo – Writing in Arabic

Example maps 3
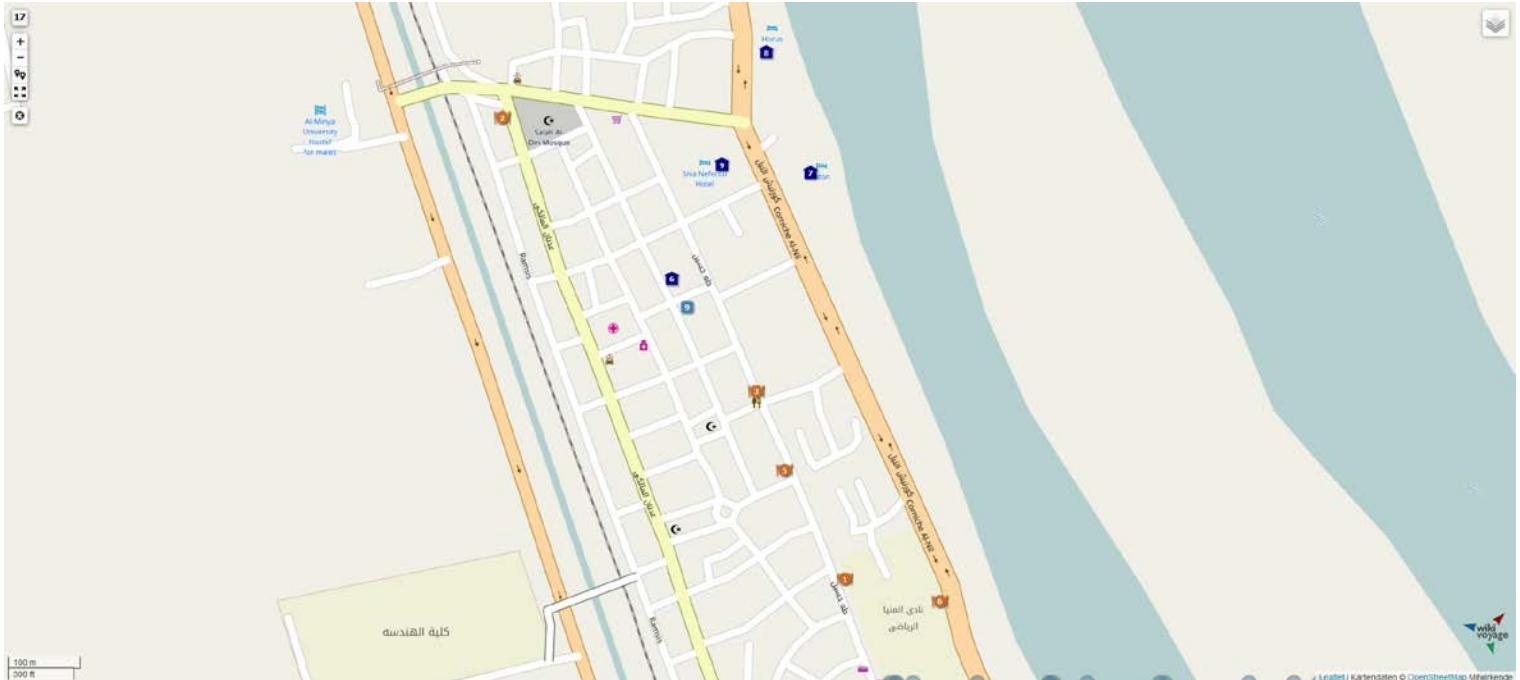
City of al-Minyā – places and street names not known to OSM

Example maps 4
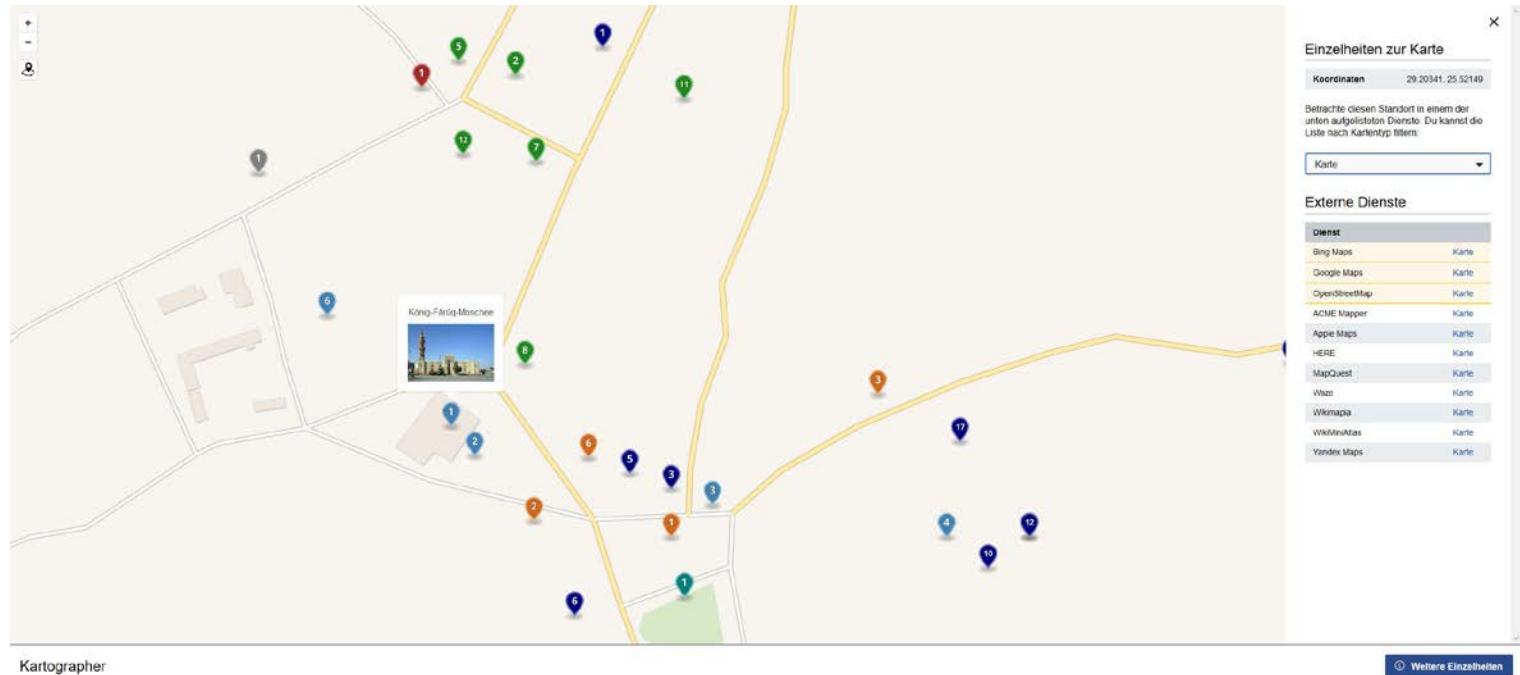
Zoomed-in map of the town of Sīwa with list of additional map services

Example maps 5
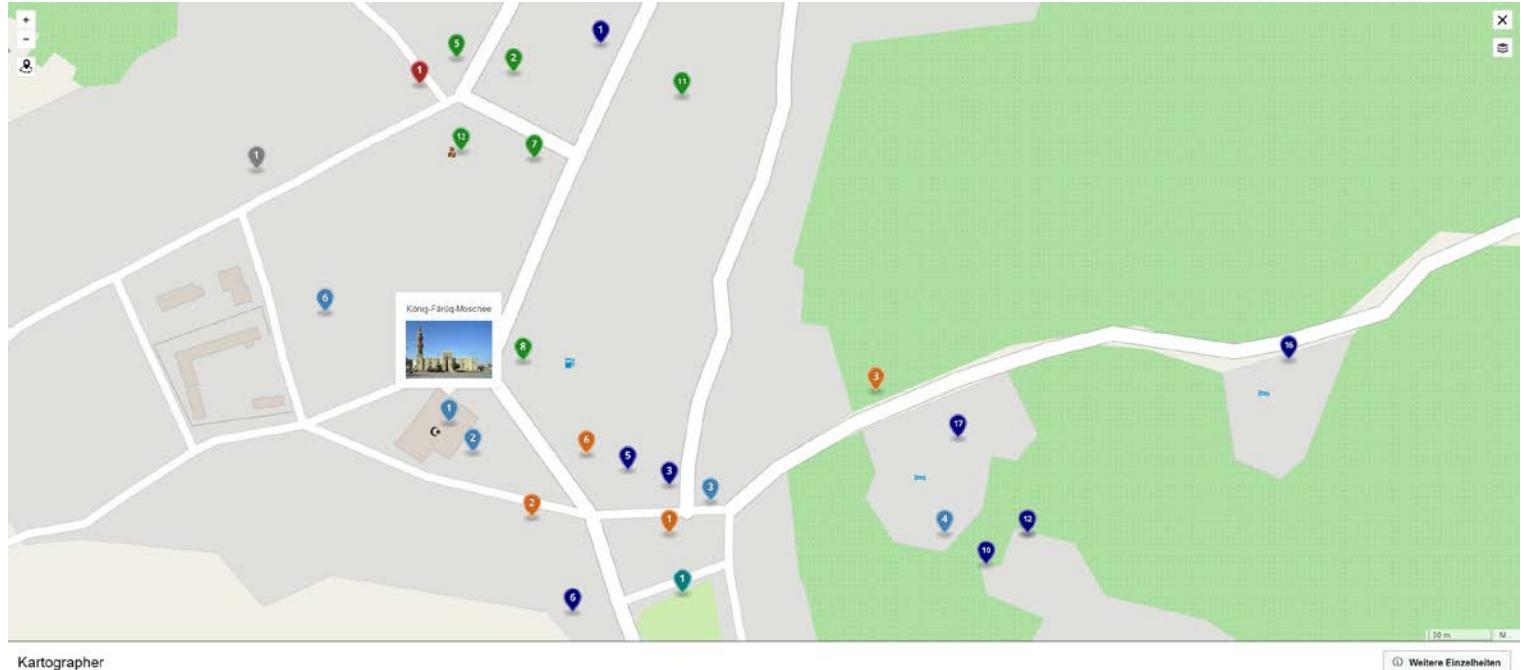
City of Sīwa – OSM Mapnik map

Example maps 6

Kuala Kubu Baharu – GPX trails stored on Wikvoyage

Maplink and Mapframe

Maplink links to a map in full-screen mode (with or without GeoJSON formatted statements)

- <maplink zoom="13" latitude="37.8103" longitude="-122.3995" text="Click me" />

- Without text -> coordinate linked: 37°48'37"N 122°23'58"W

Maplink and Mapframe

- Mapframe embeds a map into an article

- <mapframe text="San Francisco museums" width="350" height="350" zoom="13" latitude="37.8013" longitude="-122.3988" align="right|center|left">

- <mapframe frameless ...> without frame

- Now only at Wikivoyage and a few smaller Wikipedias

Example 1: really simple

```
<mapframe text="San Francisco museums" width="350" height="350" zoom="13"
latitude="37.8013" longitude="-122.3988">
{
  "type": "Feature",
  "geometry": { "type":"Point", "coordinates":[-122.3988, 37.8013] },
  "properties": {
    "title": "[[wikipedia:Exploratorium|Exploratorium]]",
    "description": "[[File:Giant_Mirror_at_the_Exploratorium.jpeg|200px]]",
    "marker-symbol": "museum",
    "marker-size": "large",
    "marker-color": "0050d0"
  }
}
</mapframe>
```

Source: https://www.mediawiki.org/wiki/Help:Extension:Kartographer, License: CC0

Example 1: really simple

San Francisco museums
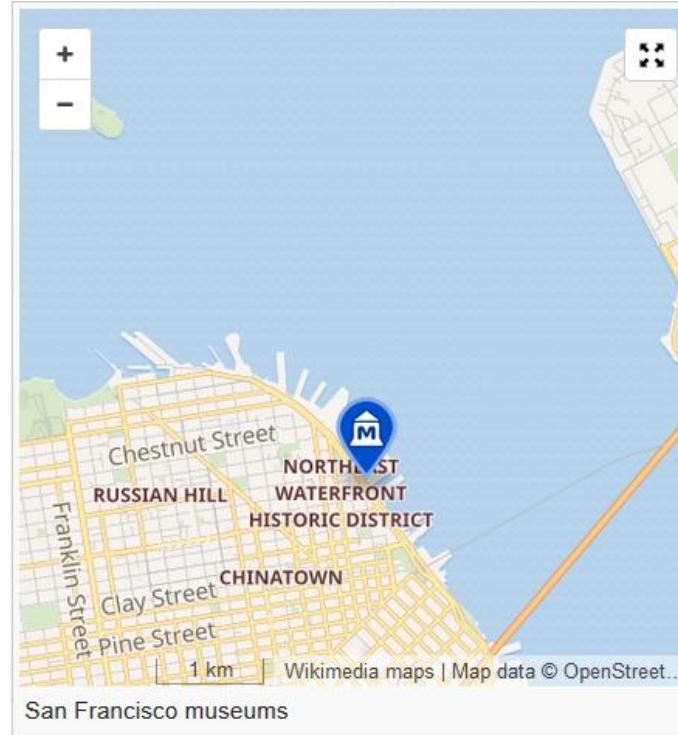
Source: https://www.mediawiki.org/wiki/Help:Extension:Kartographer, License: CC0

Example 2: Marker lettering

General features

- "marker-symbol": "museum"

Wikivoyage features

- "marker-symbol": "-number"

- "marker-symbol": "-number-see"

- "marker-symbol": "-letter"

Usable MAKI symbols

Source: https://www.mapbox.com/maki-icons/, License: CC0

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Hints

- Generating GeoJSON syntax by using templates

- Wikivoyage
  - Module:Maps written in Lua generating GeoJSON syntax
  - Template:Maplink, Template:Mapframe, Template:Mapmask calling Maps module
  - Template:Marker, Template:POI, de:Template:vCard (Template:Listing)

Example 3: Polygon

```
<mapframe width=300 height=300 zoom=15 longitude=31.234871 latitude=30.048 >
{
  "type": "Feature",
  "geometry": {
      "type": "Polygon",
      "coordinates": [[ [31.23326,30.04835], [31.23326,30.04753], [31.23303,30.04752], [31.23303,30.04723],
[31.23431,30.04724], [31.23432,30.04754], [31.23408,30.04753], [31.23408,30.04835], [31.23326,30.04835] ]]
  },
  "properties": {
    "title": "[[File:CairoEgyptianMuseum.jpg|115px|Egyptian Museum]]",
    "description": "[[Kairo/Ägyptisches Museum|Egyptian Museum]]",
    "marker-symbol": "",
    "stroke": "#55ff55",
    "stroke-opacity": 1.0,
    "stroke-width": 2,
    "fill": "#55ff55",
    "fill-opacity": 0.5
  }
}
</mapframe>
```

Example 3: Polygon
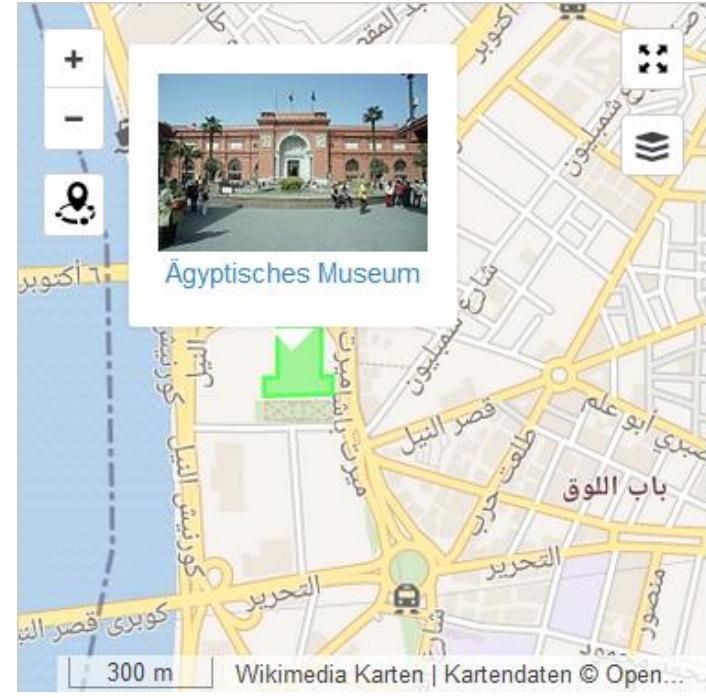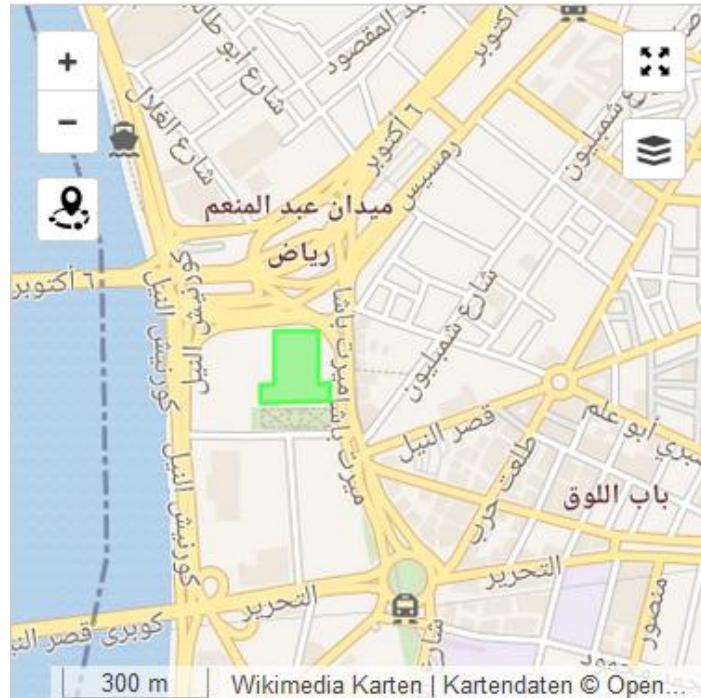
GeoJSON editor
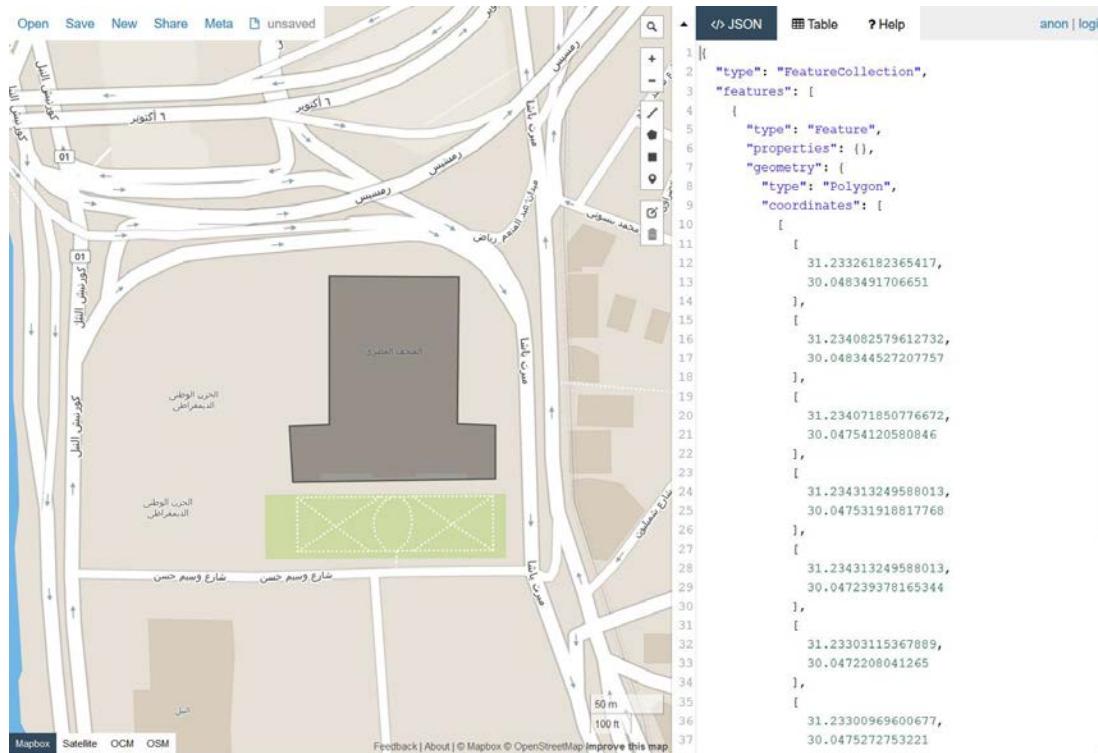
http://geojson.io/#map=18/30.04778/31.23333

Example 4: Auto numbering

```
<mapframe width=300 height=300 zoom=15 longitude=31.234871 latitude=30.045224 >
{
 "type": "FeatureCollection",
 "features": [
  {
   "type": "Feature",
   "properties": {
    "marker-symbol": "-number-sight",      ⬅
    "marker-size": "large",
    "marker-color": "302060"
   },
   "geometry": {
    "type": "Point",
    "coordinates": [31.23333, 30.04778]
   }
  },
…
 ]
}
</mapframe>
```

Example 4: Auto numbering
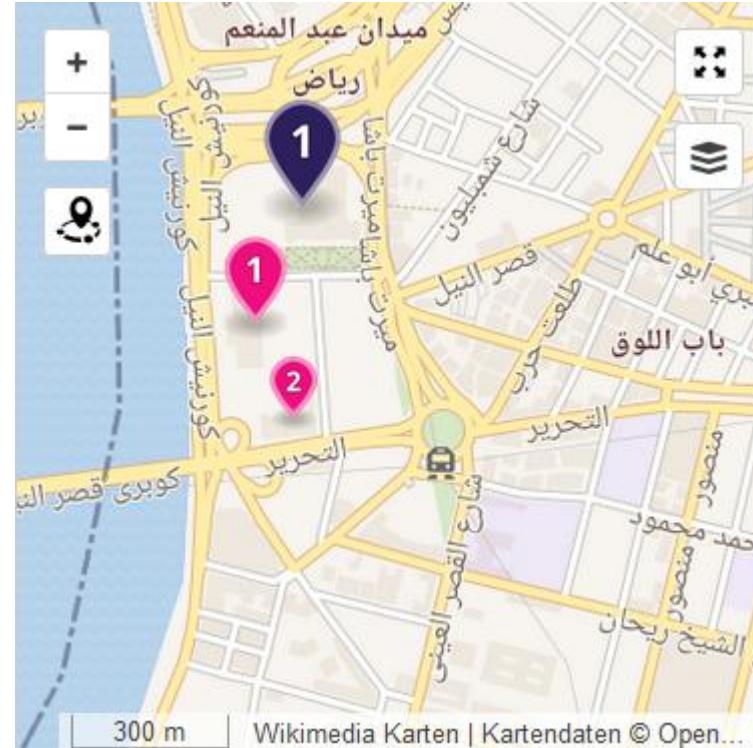
Example 5: Masking

{{mapframe|30.045224|31.234871|zoom=15|width=300|height=300|name=Stadtplan von Qaṣr en-Nīl}}

{{mapmask|30.047625,31.238487|30.048795,31.234539|30.048832,31.231234|30.042535,31.231449|30.041644,31.235547|30.044356,31.236405|30.047625,31.238487}}

{{marker|type=see|name=Ägyptisches Museum|lat=30.04778|long=31.23333|image=CairoEgyptianMuseum.jpg|url=http://www.emuseum.gov.eg/}}
{{marker|type=see|name=Ägyptisches Museum|lat=30.04778|long=31.23333|image=CairoEgyptianMuseum.jpg|url=http://www.emuseum.gov.eg/}}
{{marker|type=see|name=Tahrir-Platz|lat=30.0457|long=31.2342|symbol=letter}}
{{marker|type=see|name=Bolivar-Platz|lat=30.0422|long=31.2331|symbol=letter}}

{{marker|type=go|name=Metrohaltestelle Sadat|lat=30.044021|long=31.235676|symbol=rail-metro|text=[[Datei:25 railtransportation.svg|13px|Metrohaltestelle Sadat|link=]]}}

{{marker|type=sleep|name=The Nile Ritz-Carlton|lat=30.046027|long=31.232479}}
{{marker|type=sleep|name=Steigenberger Tahrir Square Hotel | lat = 30.047318 | long = 31.235665}}
{{marker|type=sleep|name=Sofitel El Gezirah Cairo| lat= 30.038895 | long= 31.224604 }}

Example 5: Masking

Mapframe und Mapmask   [Bearbeiten | Quelltext bearbeiten]

- **1** Ägyptisches Museum⧉
- **2** Ägyptisches Museum⧉
- **A** Tahrir-Platz
- **B** Bolivar-Platz
- 🚆 Metrohaltestelle Sadat
- **1** The Nile Ritz-Carlton
- **2** Steigenberger Tahrir Square Hotel
- **3** Sofitel El Gezirah Cairo
- Stadtteilplan Qasr en-Nil

Stadtplan von Qaṣr en-Nīl
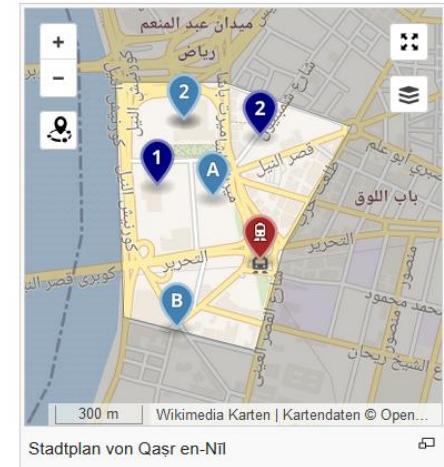
Feature: Several map layers

Cairo map with metro lines (Traffic line network, openptmap.org)
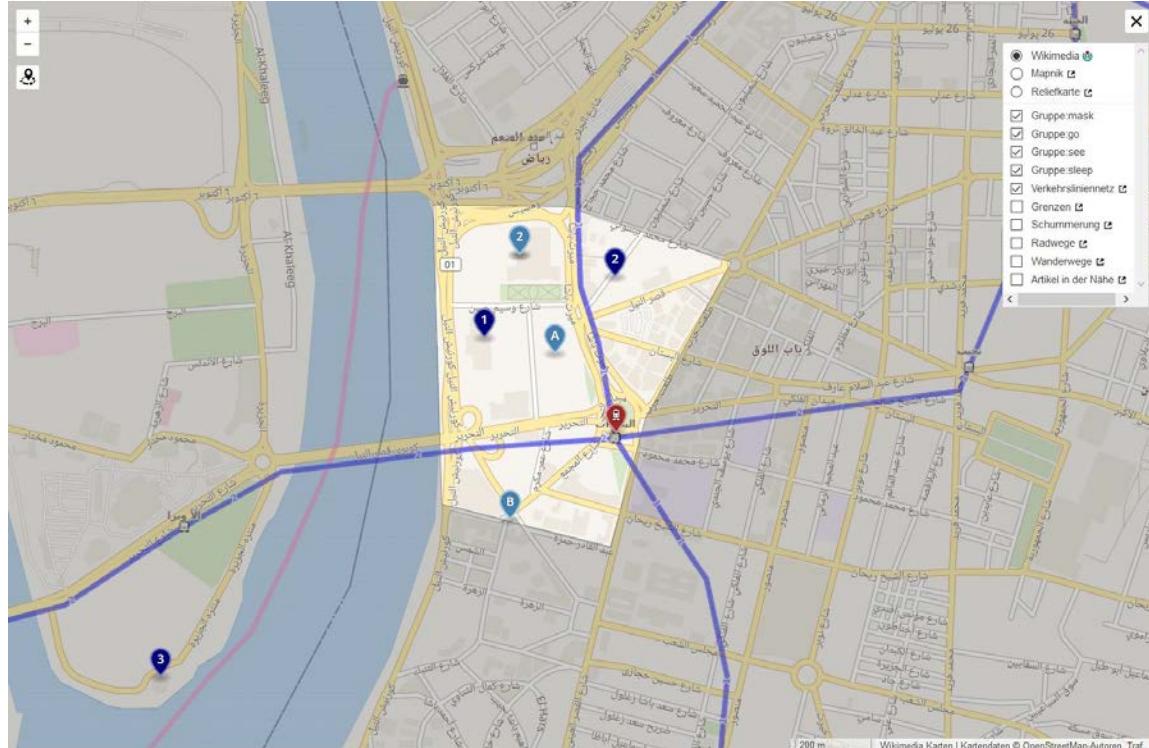
GeoShapes with WikiData and OSM

GeoShapes external data [edit]

In addition to drawing polygons using GeoJSON, you may also get outlines of the well known geographical objects by their Wikidata ID if they are marked as such in the Open Street Map database. For example, Wikidata item for Alaska is Q797, and we can draw it on the map by using "external data" reference. More than one ID may be specified separated by a comma.

Note: Wikidata IDs are relatively new to the OSM community. There are only about 40,000 polygons with IDs. To add more, visit http://www.openstreetmap.org/ and add Wikidata tag with the Q value.

```
<mapframe text="Alaska" width=250 height=250 zoom=3 longitude=-152.58 latitude=64.01>
{
  "type": "ExternalData",
  "href": "geoshape:///?ids=Q797"
}
</mapframe>
```

Alaska

- Via Wikidata id (Q797, Alaska)
- Via Open Street Map Relations Id

Source: https://www.mediawiki.org/wiki/Help:Extension:Kartographer, License: CC0

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GeoShapes with Wikidata query
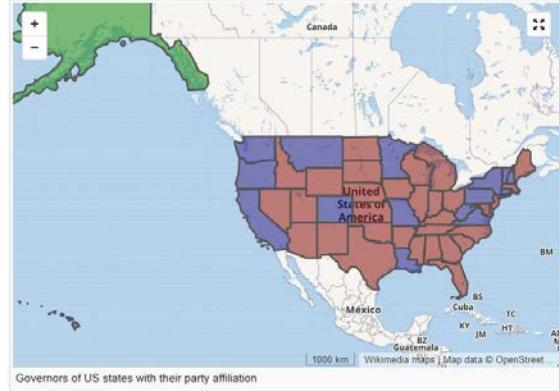
While this helps with the simple use cases when the Wikidata ID is well known, sometimes you may want to get a list of IDs as a result of a Wikidata query. A SPARQL query gets a list of all US states in the ID column of the result, and geoshapes service adds the geometrical outlines for each state. All other columns in the SPARQL query result become values in the "properties" object. The "fill" column changes the color of the state. The "title" column shows state governor's name, and "description" has wiki markup to show the state name and the governor's picture. To edit this query, copy the query parameter after the "#" symbol at http://query.wikidata.org/#....:

Governors of US states with their party affiliation

```
<mapframe latitude="52.16" longitude="-112.15" zoom="3" width="800" height="500" text="Governors of US states with their party affiliation">
{
"type":"ExternalData",
"href":"geoshape:///?query=SELECT%20%3Fid%20%3Fhead%0A%28SAMPLE%28%3Fimg%29%20as%20%3Fimg%29%20%0A%28SAMPLE%28%3Ffill
%29%20as%20%3Ffill%29%20%0A%28concat%28%22%5B%5BWikipedia%3A%22%2C%20substr%28str%28%3Flink%29%2C31%2C500%29%2C%20%20
%22%20%7C%20%22%2C%20%3FheadLabel%2C%20%22%5D%5D%22%29%20as%20%3Ftitle%29%0A%28concat%28%3FstateLabel%2C%20%22%5Cn%22%2C
%20%22%5B%5BFile%3A%22%2C%20substr%28str%28%3Fimg%29%2C%2052%2C%20500%29%2C%20%22%7C200px%5D%5D%22%29%20as%20
%3Fdescription%29%0AWHERE%20%7B%0A%20%20%0A%20%3Fid%20wdt%3AP31%20wd%3AQ35657%20.%0A%20%20%3Fid%20wdt%3AP6
%20%3Fhead%20.%0A%20%20%3Fhead%20wdt%3AP102%20%3Fparty%20.%0A%20%20BIND%28if%28%3Fparty%20%3D%20wd%3AQ29468%2C%20
%22%23800000%22%2C%20if%28%3Fparty%20%3D%20wd%3AQ29552%2C%20%22%23000080%22%2C%20%22%23008000%22%29%29%29%20as%20%3Ffill
%29%20%0A%20%20SERVICE%20wikibase%3Alabel%20%7B%0A%20%20%20%20bd%3AserviceParam%20wikibase%3Alanguage%20%22en%22%20.%0A%20
%20%20%20%3Fhead%20rdfs%3Alabel%20%3FheadLabel%20.%0A%20%20%20%20%3Fid%20rdfs%3Alabel%20%3FstateLabel%20.%0A%20%20%7D
%0A%20%20OPTIONAL%20%7B%0A%20%20%20%20%3Fhead%20wdt%3AP18%20%3Fimg%20.%0A%20%20%7D%0A%20%20%3Flink%20schema%3Aabout
%20%3Fhead%20.%0A%20%20%3Flink%20schema%3AisPartOf%20%3Chttps%3A%2F%2Fen.wikipedia.org%2F%3E%20.%0A%7D%20GROUP%20BY
%20%3Fid%20%3Fhead%20%3FheadLabel%20%3Flink%20%3FstateLabel%0A"
}
</mapframe>
```

Source: https://www.mediawiki.org/wiki/Help:Extension:Kartographer, License: CC0

GeoShapes with Wikidata query

```
SELECT ?id ?head
(SAMPLE(?img) as ?img)
(SAMPLE(?fill) as ?fill)
(concat("[[wikipedia:", substr(str(?link),31,500),  " | ", ?headLabel, "]]") as ?title)
(concat(?stateLabel, "\n", "[[File:", substr(str(?img), 52, 500), "|200px]]") as ?description)
WHERE {

  ?id wdt:P31 wd:Q35657 .
  ?id wdt:P6 ?head .
  ?head wdt:P102 ?party .
  BIND(if(?party = wd:Q29468, "#800000", if(?party = wd:Q29552, "#000080", "#008000")) as ?fill)
  SERVICE wikibase:label {
    bd:serviceParam wikibase:language "en" .
    ?head rdfs:label ?headLabel .
    ?id rdfs:label ?stateLabel .
  }
  OPTIONAL {
    ?head wdt:P18 ?img .
  }
  ?link schema:about ?head .
  ?link schema:isPartOf <https://en.wikipedia.org/> .
} GROUP BY ?id ?head ?headLabel ?link ?stateLabel
```

Source: https://www.mediawiki.org/wiki/Help:Extension:Kartographer, License: CC0

Wikivoyage: Map embedding

Wikivoyage: City map

Points of interest stored in document header JavaScript. Placed on the map by JavaSript, too

Wikivoyage: Nearby articles map

Map showing articles of sites and site clusters
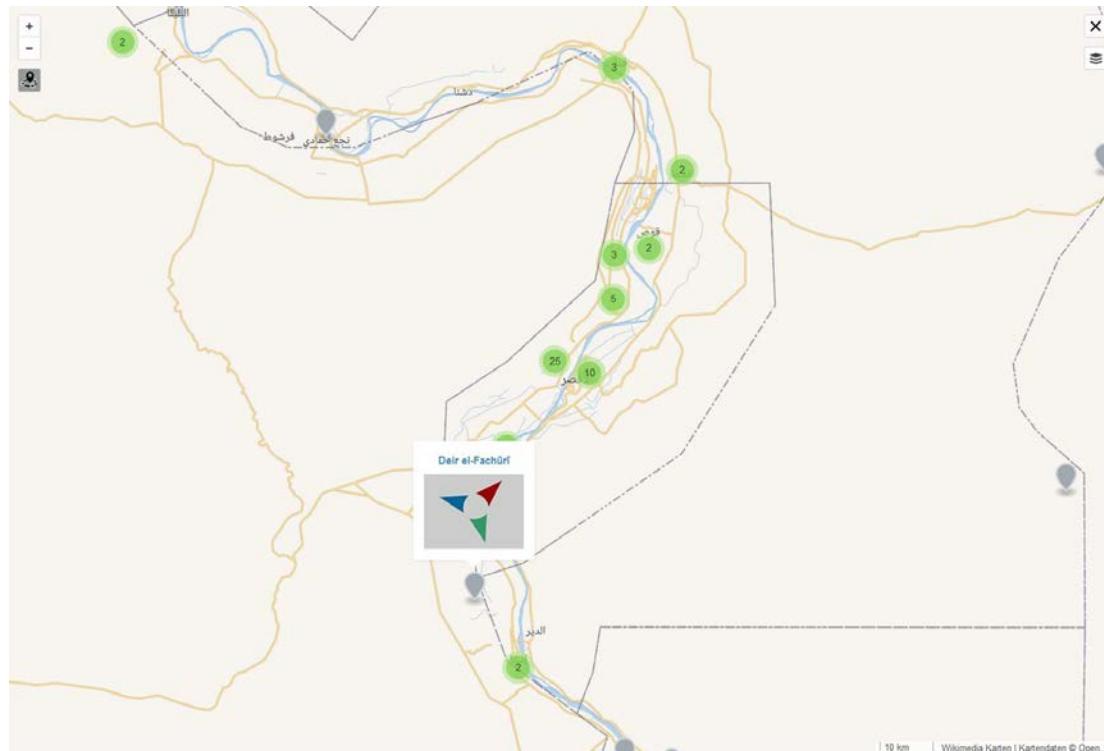
Adding more features

- MediaWiki:Kartographer.js
- MediaWiki:Kartographer.css

Wishes

- Standardization of terms (for instance bicycle parking), list of synonymous terms

- uniform syntax like for opening hours

- two-way database links by ids: OSM - WikiData, id redirection

- Simple import and export of Wikivoyage/Wikidata data from and to OSM

- To solve: How and where to store trails?

- New Wikivoyage branches like a Czech branch

Conclusions

- Wikivoyage encouraged Wikimedia Foundation to add map service for all sister projects

- Development started at Wikivoyage by its own community

- With the Kartographer dynamic maps can be created both as embedded and full-screen maps

- Adding markers, lines and polygons

- Kartographer is partly in a beta state

Invitation

- December 10, 2016 – 10th birthday of Wikivoyage
- Community meeting and party at:
- Wikimedia Deutschland e. V.
  Tempelhofer Ufer 23/24
  10963 Berlin
- Start: 10 o'clock

Appendix 1: Links

- https://www.mediawiki.org/wiki/Extension:Kartographer
- https://www.mediawiki.org/wiki/Help:Extension:Kartographer (nicht vollständig)
- https://www.mediawiki.org/wiki/Talk:Maps (Diskussion Karten)
- https://www.mapbox.com/maki-icons/ Kartensymbole

- http://geojson.org/geojson-spec.html The GeoJSON Format Specification
- https://github.com/mapbox/simplestyle-spec/tree/master/1.1.0 Simplestyle specification
- http://geojson.io/#map=18/30.04778/31.23333 GeoJSON-Editor

Appendix 2: Mediawiki Settings

```
'wgKartographerWikivoyageMode' => [
                'default' => false,
                'mediawikiwiki' => true,
                'wikivoyage' => true,
],

'wgKartographerUseMarkerStyle' => [
                'default' => false,
                'mediawikiwiki' => true,
                'wikivoyage' => true,
],

'wgKartographerEnableMapFrame' => [
                'default' => true,
                'wikipedia' => false,
                'cawiki' => true,
                'hewiki' => true,
                'mkwiki' => true,
                'testwiki' => true,
                'test2wiki' => true,
],
```

As of October 2016

Appendix 3: MAKI symbols

aerialway.svg
airfield.svg
airport.svg
alcohol-shop.svg
america-football.svg
art-gallery.svg
bakery.svg
bank.svg
bar.svg
baseball.svg
basketball.svg
beer.svg
bicycle.svg
building.svg
bus.svg
cafe.svg
camera.svg
campsite.svg
car.svg
cemetery.svg
chemist.svg
cinema.svg
circle.svg
circle-stroked.svg

city.svg
clothing-store.svg
college.svg
commercial.svg
cricket.svg
cross.svg
dam.svg
danger.svg
dentist.svg
disability.svg
dog-park.svg
embassy.svg
emergency-telephone.svg
entrance.svg
farm.svg
fast-food.svg
ferry.svg
fire-station.svg
fuel.svg
garden.svg
gift.svg
golf.svg
grocery.svg
hairdresser.svg

harbor.svg
heart.svg
heliport.svg
hospital.svg
ice-cream.svg
industrial.svg
land-use.svg
laundry.svg
library.svg
lighthouse.svg
lodging.svg
logging.svg
london-underground.svg
marker.svg
marker-stroked.svg
minefield.svg
mobilephone.svg
monument.svg
museum.svg
music.svg
oil-well.svg
park.svg
park2.svg
parking.svg

parking-garage.svg
pharmacy.svg
pitch.svg
place-of-worship.svg
playground.svg
police.svg
polling-place.svg
post.svg
prison.svg
rail.svg
rail-above.svg
rail-light.svg
rail-metro.svg
rail-underground.svg
religious-christian.svg
religious-jewish.svg
religious-muslim.svg
restaurant.svg
roadblock.svg
rocket.svg
school.svg
scooter.svg
shop.svg
skiing.svg

slaughterhouse.svg
soccer.svg
square.svg
square-stroked.svg
star.svg
star-stroked.svg
suitcase.svg
swimming.svg
telephone.svg
tennis.svg
theatre.svg
toilets.svg
town.svg
town-hall.svg
triangle.svg
triangle-stroked.svg
village.svg
warehouse.svg
waste-basket.svg
water.svg
wetland.svg
zoo.svg