

Taginfo

**Das neue Tag-Informationssystem
für OpenStreetMap**



Jochen Topf

OSM - Objekte

Nodes

1 Mrd

Ways

90 Mio

Relations

1 Mio

93%
ohne Tags

Tags

Key = Value

highway = residential
amenity = post_box

25.000 verschiedene Keys
56 Mio. verschiedene Tags
500 Mio. Key-Kombinationen

Fragen

Welches Tag soll ich für x benutzen?

Was bedeutet Tag x?

Welche Tags soll ich auf meiner Karte darstellen?

Wie sieht Tag x auf der Karte aus?

Wird Tag x oder Tag y häufiger benutzt?

Welche wichtigen Tags sind nicht dokumentiert?

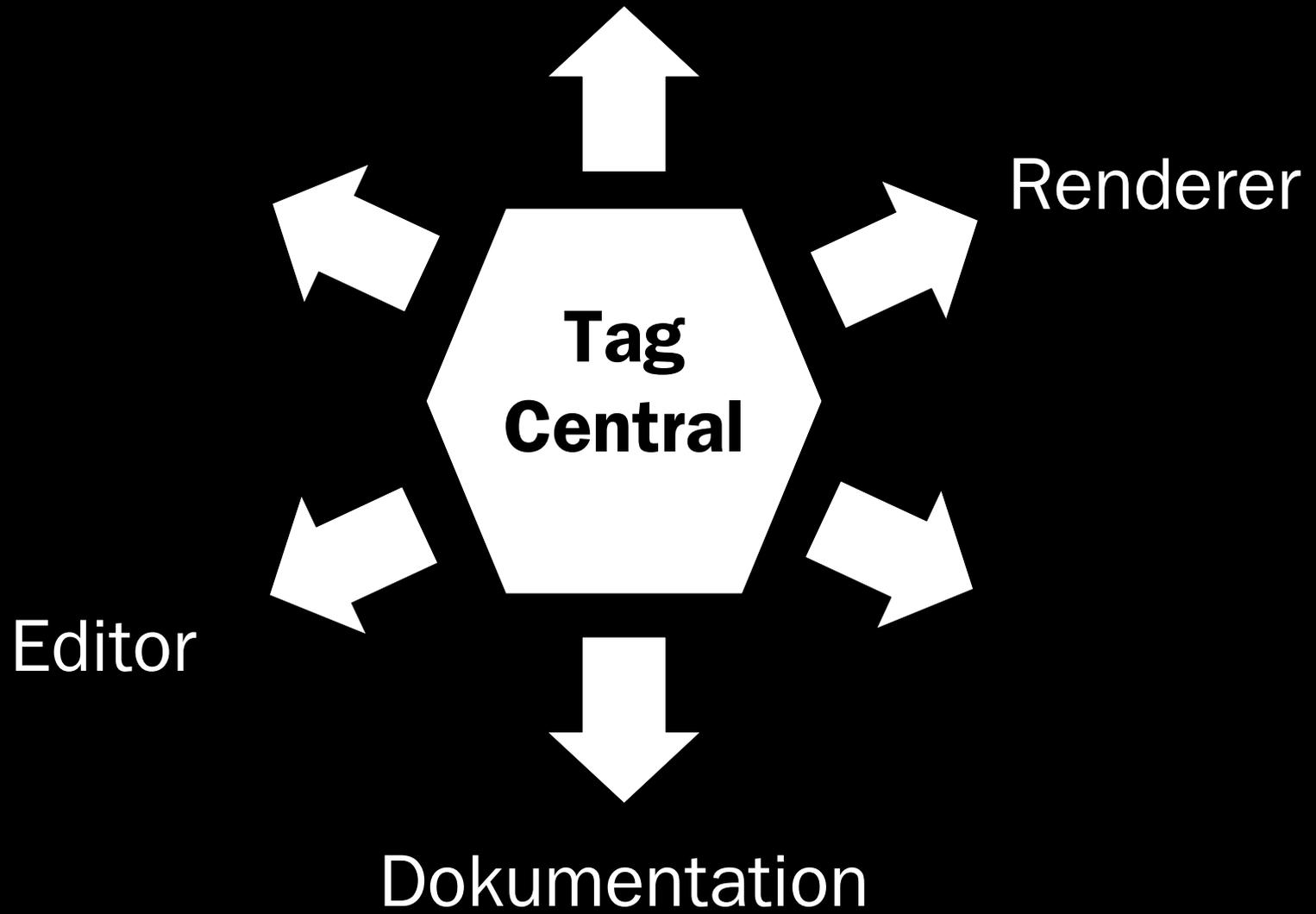
amenity	arts_centre		an arts centre		
amenity	atm		an ATM or cash point		
amenity	baby_hatch		a place where you can drop a baby anonymously for adoption		
amenity	bank		a bank (for a bank that also has an ATM, use amenity=bank and atm=yes)		
amenity	bbq		A public grill for cooking meat or vegetables, most typically to eat outdoors. You may want to include a fuel=wood/gas/electric key		
amenity	bench		a bench to sit down and relax a bit		
amenity	bergaren		Beer garden in Wikipedia		
amenity	bicycle_parking		Facility for bicycles		
amenity	bicycle_rental		Rent a bicycle		
amenity	bureau_de_change		Bureau de change, Currency exchange, Wechsel, Cambio - a place to change foreign bank notes and travellers cheques		
amenity	bus_station		Bus Station (this is a big station, a bus stop is highway=bus_stop)		
amenity	brothel		a brothel		
amenity	cafe		a cafe		
amenity	car_rental		Rent a car		
amenity	car_sharing		Share a car		
amenity	cinema		a cinema		
amenity	college		a college campus or buildings		
amenity	courthouse		a place where justice is dispensed		
amenity	crematorium				
amenity	dentist		A dental practice / surgery.		
amenity	doctors		A doctors practice / surgery.		
amenity	drinking_water		A source of drinking water		
amenity	embassy		An embassy		
amenity	emergency_phone		A telephone dedicated to emergency calls		
amenity	fast_food		Fast Food Restaurant (see also amenity=restaurant). The kind of food served can be tagged with cuisine=*		
amenity	ferry_terminal		Ferry terminal/stop. A place where people/cars/etc. can board and leave a ferry.		
amenity	fire_station		A Fire station		
amenity	food_court		An area with several different restaurant food counters and a shared eating area. Commonly found in malls, airports, etc.		
amenity	fountain		A fountain for cultural / decorative / recreational purposes.		
amenity	fuel		Petrol station; gas station; marine fuel; ... Streets to petrol stations are often tagged highway=service		
amenity	grave_yard		A (smaller) place of burial. Often you'll find a church nearby. Large places should be landuse=cemetery instead.		
amenity	grill_bar		A container that hold grit or a mixture from soil and grit.		
amenity	hospital		Often used in conjunction with emergency=yes to note whether or not the hospital has emergency facilities (A&E (brt.) or ER (com.))		
amenity	hunting_stand		A hunting stand		

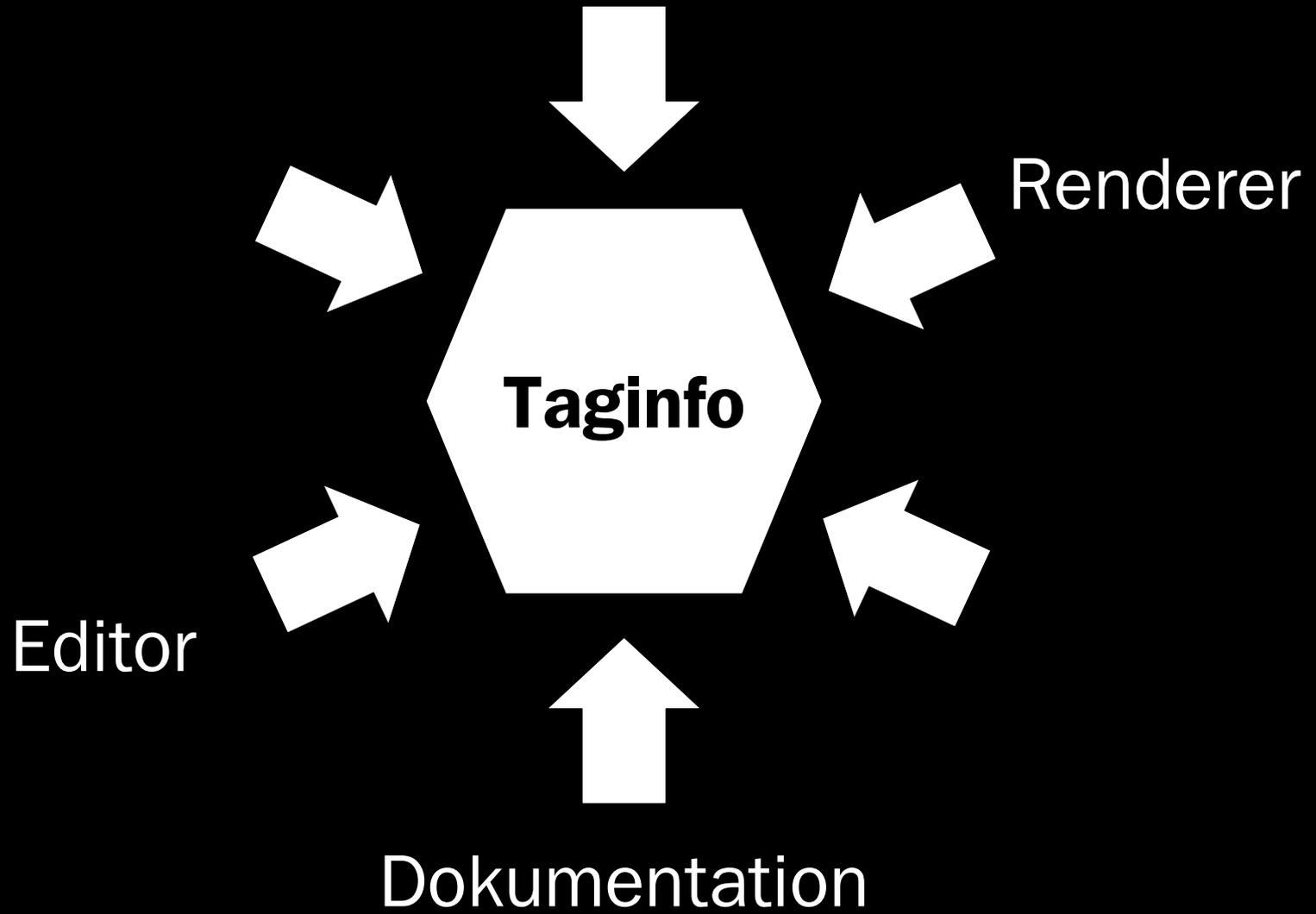
Warum nicht Wiki?

Nicht mal 700 Keys dokumentiert! ~3%

Undokumentierte Keys,
die millionenfach vorkommen!

Dokumentation oft veraltet und unzureichend.





Ziele

Alle Daten (planet)

Möglichst viele weitere Quellen

Mindestens täglich aktualisiert

Auf üblicher Hardware lauffähig

Schnelles und übersichtliches UI

Vorgänger

Tagwatch

Tagstat

OSMdoc

Datenquellen



Datenbank



Wiki



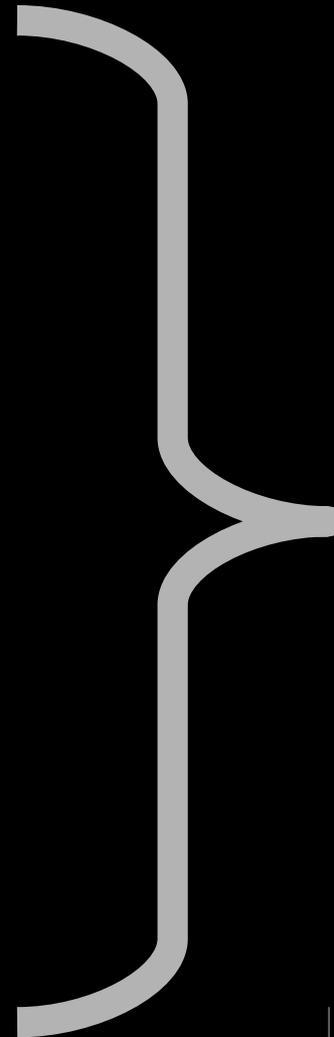
JOSM



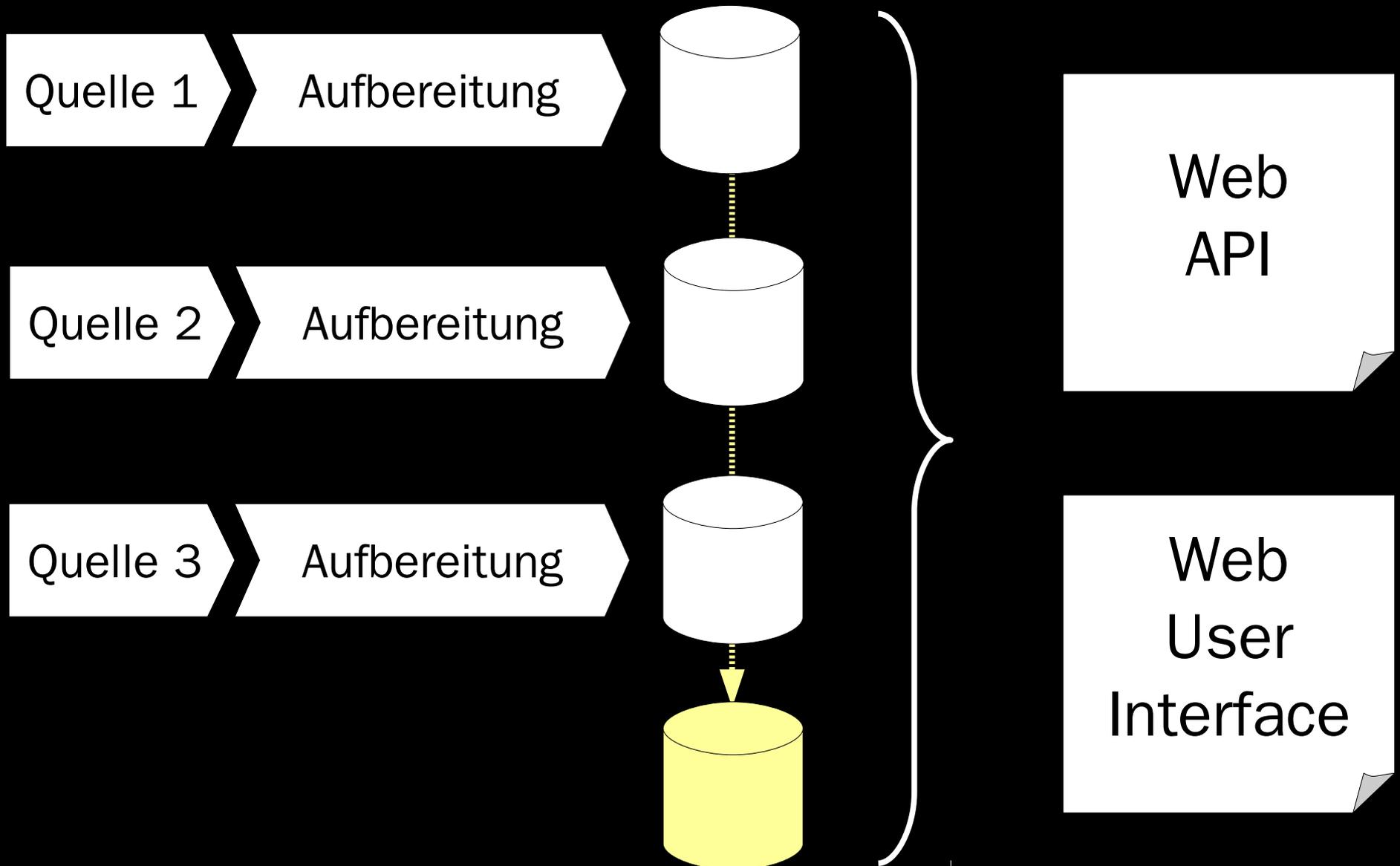
Potlatch 2



Merkaartor



Architektur



Technologien

Statistik: C++ (Osmium)

Datensammlung/-aufbereitung: Ruby, sh, SQL

Datenhaltung: Sqlite

Webinterface: Sinatra (Ruby)

Webseiten: jQuery, flexigrid, Protovis (SVG)

Server

Einer der STRATO-Server (humboldt)

Nächtliche Aktualisierung

ca. 4h, davon 3h für Statistik

braucht ca. 3,5 GB RAM

Datenbanken: ca. 9GB

Tagcloud

AND_nosr_r FIXME abutters **access** addr:city **addr:housenumber** **addr:postcode** **addr:street** **admin_level** **aerialway** **aeroway** **agricultural** **alt_name**
amenity **area** **asb** **atm** **attribution** **backrest** **barrier** **bench** **bicycle** **board_type** **boat** **border_type** **boundary** **brand** **bridge** **building** **bus** **cables**
capacity **collection_times** **color** **colour** **comment** **construction** **converted_by** **covered** **craft** **created_by** **crossing** **crossing_ref** **cuisine** **cutting** **cycleway**
denomination **description** **direction** **dispensing** **distance** **disused** **ele** **electrified** **email** **embankment** **emergency** **fax** **fee** **fenced** **fireplace** **fixme** **foot** **footway**
frequency **from** **gauge** **goods** **height** **hgv** **highway** **hiking** **historic** **history** **horse** **iata** **icao** **import** **import_uuid** **incline** **information** **int_name** **int_ref**
internet_access **is_in** **junction** **key** **landuse** **lanes** **layer** **lcn** **leisure** **level** **line** **lit** **living_street** **loc_name** **man_made** **map_size** **map_type** **material** **maxheight**
maxlength **maxspeed** **maxweight** **maxwidth** **military** **minspeed** **motor_vehicle** **motorboat** **motorcar** **motorcycle** **motorroad** **mountain_pass**
mtb **name** **name_1** **nat_ref** **natural** **ncn_ref** **network** **noexit** **note** **office** **old_name** **old_railway_operator** **old_ref** **oneway** **onkz** **opening_hours** **operator**
park_ride **parking** **passing_places** **phone** **place** **place_name** **population** **postal_code** **power** **power_source** **psv** **public_transport** **railway** **rcn_ref** **ref**
religion **restriction** **route** **route_ref** **ruins** **sac_scale** **seats** **segregated** **service** **shelter** **shop** **ski** **smoking** **smoothness** **snowmobile** **SOURCE** **source_ref**
sport **stars** **step_count** **surface** **symbol** **tactile_paving** **tiger:cfcc** **tiger:county** **tiger:reviewed** **tiger:source** **tiger:tld** **to** **toll** **tourism** **tracks** **tracktype**
traffic_calming **traffic_sign** **trail_visibility** **tunnel** **type** **uic_ref** **uploaded_by** **url** **usage** **vehicle** **vending** **voltage** **wall** **waterway** **website** **wetland** **wheelchair**
width **wikipedia** **wires** **wood**

Keys

Key	* Total		Nodes		Ways		Relation	
source	78 391 755	6.97%	35 736 217	51.95%	42 277 234	47.82%	378 304	40.15%
highway	39 038 195	3.47%	1 846 264	2.68%	37 188 328	42.07%	3 603	0.38%
created_by	33 571 501	2.98%	29 268 042	42.55%	4 264 833	4.82%	38 626	4.10%
building	32 817 241	2.92%	245 213	0.36%	32 539 948	36.81%	32 080	3.40%
name	24 969 312	2.22%	5 370 569	7.81%	19 157 176	21.67%	441 567	46.86%
tiger:source	13 745 938	1.22%	2	0.00%	13 745 934	15.55%	2	0.00%
tiger:tlid	13 743 516	1.22%	946	0.00%	13 742 568	15.54%	2	0.00%
tiger:cfcc	13 679 342	1.22%	37	0.00%	13 679 303	15.47%	2	0.00%
tiger:county	13 387 070	1.19%	935	0.00%	13 386 133	15.14%	2	0.00%
tiger:reviewed	13 383 958	1.19%	46	0.00%	13 381 870	15.14%	2 042	0.22%
tiger:separated	11 394 618	1.01%	0	0.00%	11 394 616	12.89%	2	0.00%
tiger:upload_uuid	11 272 588	1.00%	934	0.00%	11 271 652	12.75%	2	0.00%
addr:housenumber	10 003 798	0.89%	7 938 280	11.54%	2 058 639	2.33%	6 879	0.73%
addr:street	9 182 819	0.82%	7 170 974	10.42%	2 003 415	2.27%	8 430	0.89%
attribution	8 732 989	0.78%	5 234 128	7.61%	3 472 111	3.93%	26 750	2.84%

Daten vom: 2011-04-02 22:00 UTC

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Keys

Key	Total	Nodes	Ways	Relation
name	24 969 312 2.22%	5 370 569 7.81%	19 157 176 21.67%	441 567 46.86%
tiger:name_base	7 499 746 0.67%	12 0.00%	7 499 732 8.48%	2 0.00%
tiger:name_type	6 446 113 0.57%	1 0.00%	6 446 112 7.29%	0 0.00%
KSJ2:filename	3 313 963 0.29%	3 018 957 4.39%	294 216 0.33%	790 0.08%
tiger:name_direction_prefix	1 086 903 0.10%	0 0.00%	1 086 903 1.23%	0 0.00%
tiger:name_base_1	929 968 0.08%	0 0.00%	929 968 1.05%	0 0.00%
name_1	859 988 0.08%	814 0.00%	859 159 0.97%	15 0.00%
kms:municipality_name	827 571 0.07%	827 122 1.20%	449 0.00%	0 0.00%
kms:county_name	827 525 0.07%	827 077 1.20%	448 0.00%	0 0.00%
kms:street_name	827 406 0.07%	826 985 1.20%	421 0.00%	0 0.00%
kms:zip_name	827 401 0.07%	826 953 1.20%	448 0.00%	0 0.00%
kms:parish_name	772 883 0.07%	772 433 1.12%	450 0.00%	0 0.00%
geobase:datasetName	689 642 0.06%	0 0.00%	689 642 0.78%	0 0.00%
name:en	499 725 0.04%	312 388 0.45%	182 661 0.21%	4 676 0.50%
tiger:name_direction_suffix	402 324 0.04%	1 0.00%	402 323 0.46%	0 0.00%

Suche Key

highway

The highway tag is the primary tag used for any kind of street or way.

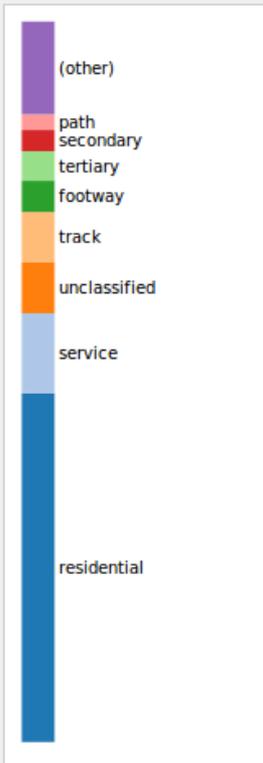
[XAPI](#) [JOSM](#)

Filter:

	Number of objects		Values
*	39 038 195	3.47%	1 402
□	1 846 264	2.68%	548
🗺️	37 188 328	42.07%	970
🗺️	3 603	0.38%	37

[Values](#) [Kombinationen](#) [Karte](#) [Wiki](#) [JOSM](#)

Values used with this key



Count	Value
18 896 008 48.40%	residential
4 333 762 11.10%	service
2 755 165 7.06%	unclassified
2 732 407 7.00%	track
1 694 997 4.34%	footway
1 597 952 4.09%	tertiary
1 149 714 2.95%	secondary
851 001 2.18%	path
717 377 1.84%	bus_stop
698 729 1.79%	primary
446 569 1.14%	road
401 395 1.03%	cycleway
388 212 0.99%	turning_circle
308 348 0.79%	motorway_link
297 039 0.76%	motorway

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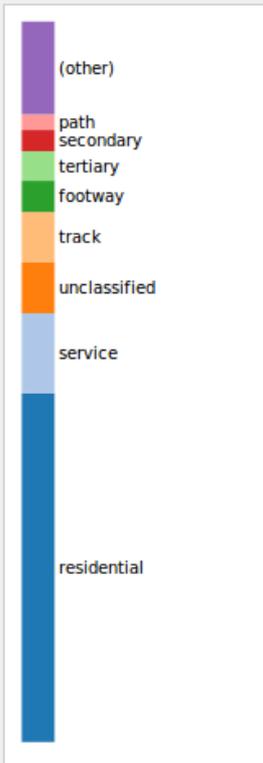
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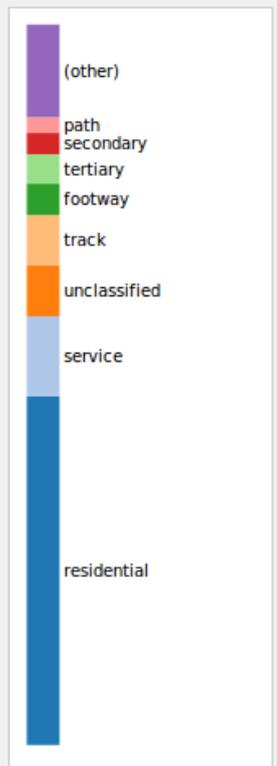
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Filter:

- Values
- Kombinationen
- Karte
- Wiki
- JOSM

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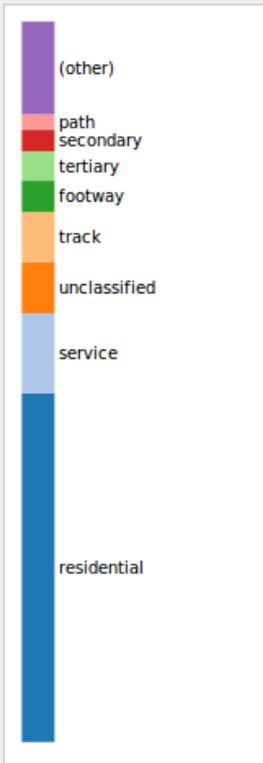
[XAPI](#) [JOSM](#)

Filter: No filter

	Number of objects		Values
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[Values](#) [Kombinationen](#) [Karte](#) [Wiki](#) [JOSM](#)

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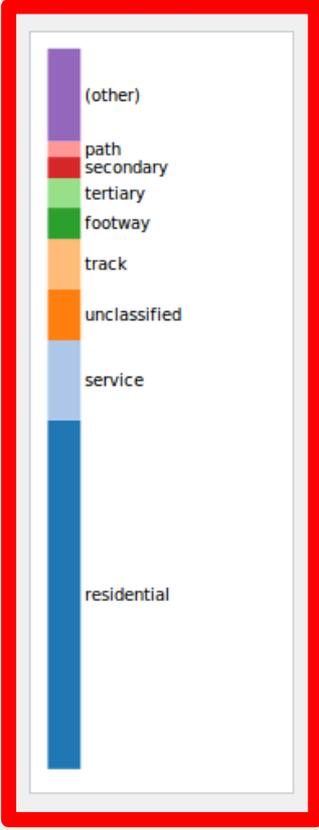
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[Values](#) [Kombinationen](#) [Karte](#) [Wiki](#) [JOSM](#)

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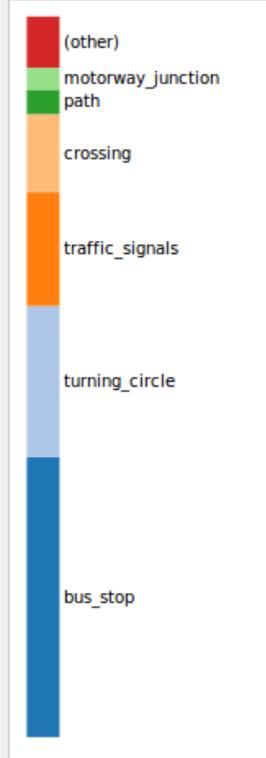
Filter: **Nodes only**

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□	1 846 264 2.68%	548
□	27 100 220 12.07%	970
□	0.38%	37

Count	Value
717 028 38.84%	bus_stop
387 819 21.01%	turning_circle
291 280 15.78%	traffic_signals
200 277 10.85%	crossing

Values **Kombinationen** Karte

Values used with this key



717 028	38.84%	bus_stop
387 819	21.01%	turning_circle
291 280	15.78%	traffic_signals
200 277	10.85%	crossing
62 545	3.39%	path
56 148	3.04%	motorway_junction
32 577	1.76%	mini_roundabout
25 282	1.37%	stop
13 207	0.72%	street_lamp
9 144	0.50%	emergency_access_point
7 148	0.39%	speed_camera
6 835	0.37%	ford
5 510	0.30%	milestone
2 544	0.14%	stile
2 361	0.13%	services

highway

The highway tag is the primary tag used for any kind of street or way.

[XAPI](#) [JOSM](#)

Filter: **Nodes only**

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Values **Kombinationen** Karte Wiki JOSM

Other keys used together with this key

Count →	Other key	→ Count
674 884 36.55%	name	674 884 12.57%
370 625 20.07%	source	370 625 1.04%
184 978 10.02%	naptan:AtcoCode	184 978 82.78%
184 971 10.02%	naptan:CommonName	184 971 83.71%
182 952 9.91%	naptan:Bearing	182 952 83.82%
177 926 9.64%	naptan:Street	177 926 83.23%
176 219 9.54%	naptan:verified	176 219 83.21%
155 181 8.41%	naptan:Indicator	155 181 82.39%
134 992 7.31%	naptan:NaptanCode	134 992 80.91%
119 955 6.50%	crossing	119 955 94.12%
118 853 6.44%	naptan:Landmark	118 853 82.40%
109 384 5.92%	operator	109 384 31.13%
100 861 5.46%	shelter	100 861 91.32%
99 880 5.41%	ref	99 880 23.70%
93 122 5.04%	naptan:PlusbusZoneRef	93 122 87.74%

highway

The highway tag is the primary tag used for any kind of street or way.

[XAPI](#) [JOSM](#)

Filter: **Nodes only**

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Values **Kombinationen** Karte **Wiki** JOSM

Wiki pages about this key

Language	Wikipage	Description	Image	Objects	Implied Tags
de	DE:Key:highway	Highway ist das Haupt-Tag für Straßen und Wege aller Art.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
en	Key:highway	The highway tag is the primary tag used for any kind of street or way.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
et	Et:Key:highway	"highway" on ükskõik millise tänava või tee peamine märgis.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
fr	FR:Key:highway	Le tag highway est le tag principal utilisé pour toutes sortes de routes.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	
it	IT:Key:highway	La chiave highway è quella principale per etichettare le strade.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	
ja	JA:Key:highway	highwayタグは、道路や道を表す物に使われる中心的なタグです。	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
pl	Pl:Key:highway	The highway tag is the primary tag used for any kind of street or way.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
pt-br	Pt-br:Key:highway	O "tag" "highway" é o "tag" primário usado para qualquer tipo de via.	Image:Dirt road para-br.jpg	🗺 🗺 🗺 🗺	access=yes
pt-br	PT-br:Key:highway			🗺 🗺 🗺 🗺	
ru	RU:Key:highway	Тег highway это основной тег, применяемый для обозначения дорог.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
sq	Sq:Key:highway	Highway ist das Haupt-Tag für Straßen und Wege aller Art.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	access=yes
sq	SQ:Key:highway			🗺 🗺 🗺 🗺	
tr	Tr:Key:highway	highway etiketi öncelikle her türlü yolu belirlemekte kullanılır.	Image:Motorway-photo.jpg	🗺 🗺 🗺 🗺	

highway

The highway tag is the primary tag used for any kind of street or way.

[XAPI](#) [JOSM](#)

Filter:

	Number of objects		Values
*	39 038 195	3.47%	1 402
□	1 846 264	2.68%	548
◻	37 188 328	42.07%	970
☐	3 603	0.38%	37

Values

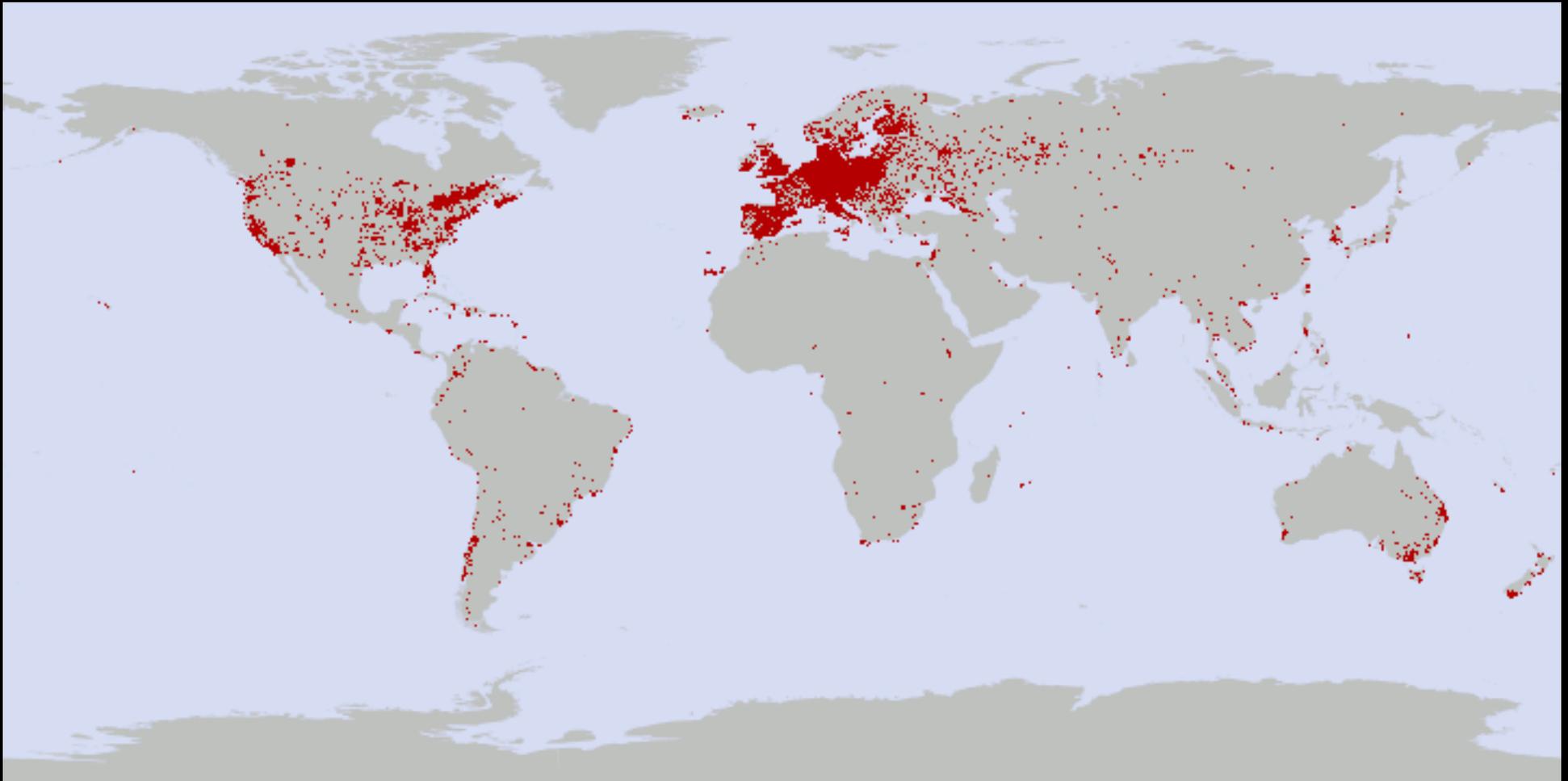
JOSM style rules with this key

Choose style:

Value	Rule XML
bridleway	XML
bus_guideway	XML
bus_stop	XML
choker	XML
construction	XML
crossing	XML
cushion	XML
cycleway	XML
emergency_access_point	XML
footway	XML
ford	XML
incline	XML
incline_steep	XML
living_street	XML
mini_roundabout	XML

```
<rule> <condition k='highway' v='construction' /> <line dashed='true'
priority='10' colour='construction#ffff00' width='2' realwidth='5' /> <icon
src='misc/construction.png' priority='10' /> </rule>
```

Karte



Verteilung addr:housenumber

Karte



Verteilung `addr:conscriptionnumber`

Karte

- Nur für Nodes
- Nur für Keys (nicht ganze Tags)
- Statische Karten mit 720x360 Pixeln
- Zeigt nur Vorkommen, nicht Häufigkeit

- Speicheraufwand:
 $25.000 \text{ Keys} * 720x360 / 8 = 772 \text{ MByte}$

Übersetzer gesucht

I18N

|  Deutsch | ▾

Daten vom: 2011-04-01 22:00 UTC [Datenquellen](#) [Download](#) [Über Taginfo](#) [Wiki](#)

|  English | ▾

Data from: 2011-04-01 22:00 UTC [Sources](#) [Download](#) [About Taginfo](#) [Wiki](#)

|  Italiano | ▾

Dati da: 2011-04-01 22:00 UTC [Fonti](#) [Download](#) [Riguardo a Taginfo](#) [Wiki](#)

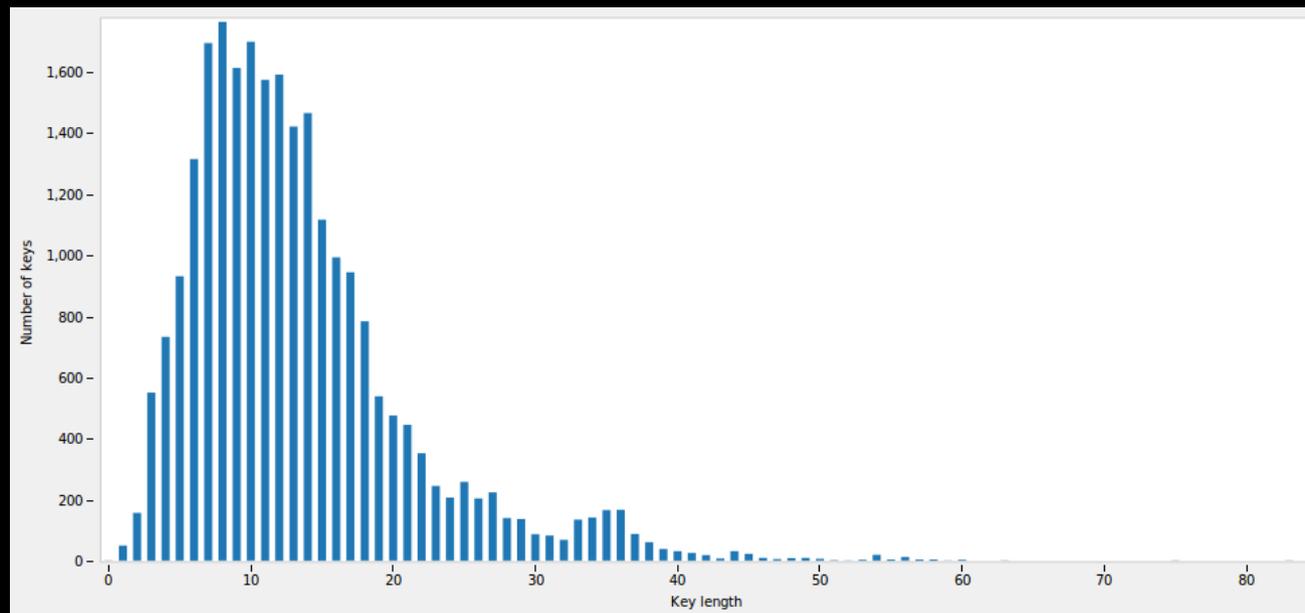
Suche



- Suche nach: Keys, Values, Tags
- Autocomplete
- OpenSearch
- Benutzt Sqlite Full Text Search (FTS3) extension

Reports

- Fassen meist Daten aus mehreren Quellen zusammen
- Zeigen Daten aus verschiedenen Perspektiven
- Tabellarisch und teilweise mit Graphen



Vorhandene Reports

- Zeichen in Keys
- Häufig benutzte Keys ohne Wiki-Seite
- Key-Längen
- Sprach-Vergleichstabelle für Keys aus dem Wiki
- Sprachen
- Wiki-Seiten über nicht-existierende Keys

API

- RESTful Web API
- Kann und darf jeder benutzen
- Wird auch intern benutzt
- Anfrageparameter in URL
- Ergebnis immer JSON

```
/api/2/db/keys/values?  
  key=landuse&filter=all&  
  page=1&rp=15&  
  sortname=count&sortorder=desc
```

Wiki-Einbindung

- Auf allen Key- und Tag-Seiten
- Wird live eingeblendet
- Eingebaut ins Template
- Nutzt `iframe` und spezielles Mediawiki-Plugin



highway



Beschreibung

Highway ist das Haupt-Tag für Straßen und Wege aller Art.

Gruppe

Highway

Element [Hilfe](#)



Impliziert

• [access=yes](#)

 **Taginfo** [More...]

 1 841 396

 37 082 786

 3 586

TODO

- Historische Daten?
- Geographische Aufteilung?
- Detailliertere Statistiken?
- Weitere Quellen?
- Bessere Suche?
- ...

Taginfo Developer Workshop

7./8. Mai in Karlsruhe

Gemeinsam an Taginfo und
verwandten Projekten arbeiten.

Taginfo in eigenen Projekten nutzen.

<http://wiki.osm.org/wiki/Taginfo/Workshop2011>

The End

Noch Fragen?

taginfo.openstreetmap.de
wiki.osm.org/wiki/Taginfo



Jochen Topf

jochen@topf.org