



Erweiterungen rund um OpenAddresses

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Inhalt

- OpenAddresses Basics
- Qualitätsaspekte
- Synchronisation mit OSM



OpenAddresses Basics

OpenAddresses (OA):

- www.openaddresses.org
- Erfassung von geokodierten
Gebäudeadressen als Punkte
(Strasse, Hausnummer, Postleitzahl, Ort, Gebäudeangaben, Land, u.a.)
- Geokodier-Dienste
- Adressdaten-Download
- Lizenz: identisch mit OSM
- Realisiert mit MapFish / PostgreSQL/PostGIS
- PSC



OpenAddresses Basics

Management of free and open worldwide localized addresses

OpenAddresses.org

Deutsch Link

1 Klick in Karte
2 Adressdaten eingeben
3 Speichern

Fertig!

OpenAddresses ist ein Portal für die Erhebung und Verarbeitung von Gebäudeadressen weltweit

[Benötigen Sie Hilfe?](#)

Routing Hochladen Bezug Dienste Statistik Lizenz Impressum Über OpenAddresses

Dessau (Germany,populated place)

12.22, 51.84

long/lat: WGS84



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Routing
Hochladen
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Dienste
Statistik
Lizenz
Impressum
Über OpenAddresses

Dessau (Germany,populated place)

Adresseneditor

Benutzername: stark
Strasse: Hardenbergerstrasse
Gebäudenummer: 9
Postleitzahl: 06846
Stadt: Dessau-Roßlau
Land: Germany
Qualität: Digitalisiert
Gebäudename:
Locality: Dessau
Region: Sachsen-Anhalt

Löschen Abbruch Erstellen

Map showing the address entry interface for a location in Dessau, Germany. The map displays streets like Große Salze, Leibnizstraße, and Hauptbahnhof Dessau. A red dot marks the address point. An address editor dialog is open, showing fields for user name, street, house number, postal code, city, country, quality, building name, locality, and region. Buttons for 'Delete', 'Cancel', and 'Create' are visible at the bottom of the dialog.

long/lat:WGS84



OpenAddresses Basics

Project Home Downloads Wiki Issues Source

Summary People

Project Information

[Project feeds](#)

Code license
[GNU GPL v3](#)

Members

cedric.m...@gmail.com,
jlmise...@gmail.com,
luki.bae...@gmail.com,
yves.bol...@gmail.com,
s.and...@fh-kaernten.at,
jaykay...@gmail.com,
luca.pa...@gmail.com,
hansjoer...@gtempaccount.com,
gisl...@gmail.com,
stef.and...@gmail.com

Links

Blogs
[Openaddresses](#)
[Twitter](#)

Groups
[Discussion](#)

www.openaddresses.org

www.openaddresses.org is an Open Source web portal for the management of Open worldwide geolocated postal addresses.

www.openaddresses.org offers an easy to use address editing service and geocoding/reverse geocoding services based on address data.

www.openaddresses.org stores ONLY geolocated postal addresses. Features associated to postal addresses like persons, companies, point of interests are not part of openaddresses.

www.openaddresses.org aims to collaborate nicely with www.openstreetmap.org by exchanging data, but since localized addresses are a very specific topic, it is appropriate to have a platform dedicated only to addresses.

www.openaddresses.org is based on an original idea of Hans-Jörg Stark who initiated www.openaddresses.ch and www.openaddresses.at

Some areas of interest:

- [Carmignano, Italy](#)
- [Solothurn, Switzerland](#)
- [Bad Kleinkirchheim, Austria](#)
- [Lausanne, Switzerland](#)
- [München, Germany](#)

Information

- [Number of addresses created today](#)

Thanks to the addresses donators

- [Canton of Zug, Switzerland](#)
- [Canton of Solothurn, Switzerland](#)
- [City of Grossaffoltern, Switzerland](#)
- [City of Goldach, Switzerland](#)
- [City of Morges, Switzerland](#)
- [City of Flond, Switzerland](#)
- [City of Ilanz, Switzerland](#)
- [City of Klosters, Switzerland](#)
- [City of Luven, Switzerland](#)
- [City of Sagogn, Switzerland](#)
- [City of Surcasti, Switzerland](#)
- [City of Surcuolm, Switzerland](#)
- [City of Tersnaus, Switzerland](#)
- [City of Uors, Switzerland](#)
- [City of Villach, Austria](#)



OpenAddresses Basics

GeoCoding Service

Examples

- Get three addresses of Genève containing Vogt
 - <http://www.openaddresses.org/addresses/?limit=3&attrs=street,housenumber,city&query=Gen%E8ve%20Vogt>
- Get three addresses of Genève containing Vogt, with callback
 - <http://www.openaddresses.org/addresses/?limit=3&attrs=street,housenumber,city&query=Gen%E8ve%20Vogt&callback=myCallback>
- Get the coordinate of the address of "Chemin des Fleurettes 31" in "Lausanne"
 - http://www.openaddresses.org/addresses/?queryable=city,housenumber,street&city_ilike=%Lausanne%&housenumber_like=31&street_ilike=%Chemin%20Des%20Fleurettes%
- Extract the first three addresses in the city of "Lausanne" and return only the street, housenumber and city attribute, without geometry.
 - http://www.openaddresses.org/addresses/?limit=3&&queryable=city&city_ilike=Lausanne&attrs=street,housenumber,city&no_geom=true
- Extract the addresses near a point with a specific name:
 - http://www.openaddresses.org/addresses?lon=6.62&lat=46.51&tolerance=0.01&queryable=street&street_ilike=%Chemin%20du%20M%

Reverse GeoCoding Service

Examples

MapFish Reverse GeoCoding Service

- Extract all the addresses in a tolerance of 1000 m around coordinate 600'000/200'000 of Switzerland EPSG=21781. Return geometry is in EPSG:4326
 - <http://www.openaddresses.org/addresses/?lon=600000&lat=200000&tolerance=1000&epsg=21781>

Count

Examples

- Count the number of addresses
 - <http://www.openaddresses.org/addresses/count/>
- Count the number of addresses created today
 - <http://www.openaddresses.org/addresses/countCreatedToday>
- Count the number of addresses updated today
 - <http://www.openaddresses.org/addresses/countUpdatedToday>

Download

The MapFish protocol and its KVP can be used to create the query. CSV or ZIP containing a csv file can be downloaded.



OpenAddresses Qualität

Qualitätsaspekte (nach ISO/TC211 191xx):

- Vollständigkeit
- Attributgenauigkeit
- Lagegenauigkeit
- u.a.m.

data quality element	data quality subelement	definition
completeness	commission	excess data present in a dataset
	omission	data absent from a dataset
logical consistency	conceptual consistency	adherence to rules of the conceptual schema
	domain consistency	adherence of values to the value domains
	format consistency	degree to which data is stored in accordance with the physical structure of the dataset
	topological consistency	correctness of the explicitly encoded topological characteristics of a dataset
positional accuracy	absolute or external accuracy	closeness of reported coordinate values to values accepted as or being true
	relative or internal accuracy	closeness of the relative positions of features in a dataset to their respective relative positions accepted as or being true
	gridded data position accuracy	closeness of gridded data position values to values accepted as or being true
temporal accuracy	accuracy of a time measurement	correctness of the temporal references of an item (reporting of error in time measurement)
	temporal consistency	correctness of ordered events or sequences, if reported
	temporal validity	validity of data with respect to time
thematic accuracy	classification correctness	comparison of the classes assigned to features or their attributes to a universe of discourse (e.g. ground truth or reference dataset)
	non-quantitative attribute correctness	correctness of non-quantitative attribute
	quantitative attribute accuracy	accuracy of quantitative attributes



OpenAddresses Qualität

Qualitätsaspekte für OA:

- Vollständigkeit der Adressen – Bei Eingabe
- Attributgenauigkeit – Vergleich mit OWMS
- Lagegenauigkeit – Vergleich mit OWMS





OpenAddresses Qualität





OpenAddresses Qualität

Implementierung:

- Nach Erfassung / Mutation Vergleich des OA Datensatzes mit OWMS (GM, YM, BM)
- Speichern der Ergebnisse
 - Attribute: binär
 - Lage: Lagedifferenz
- Ausgabe eines Reports



OpenAddresses Qualität

Quality-Report:

- Aufruf über URL mit KVP
- QM-Manager für spezifische Gebiete

Quality-Messaging

- Automatische Mail-Benachrichtigung (bspw. für Behörden)

Screenshot of the OpenAddresses project website showing the Quality Assurance page.

The screenshot shows the following content:

- Header:** openaddresses Management of Open Source Geolocated Addresses
- Navigation:** Project Home, Downloads, Wiki (selected), Issues, Source
- Search Bar:** Search Current pages for [input] [Search]
- Page Title:** qa
- Section:** Quality Assurance
- Section:** General comment on Quality Assurance
- Quality assurance (QA) is still one of the key issues in the field of volunteered geographic information (vgi). There are many aspects to quality measurements. OpenAddresses focuses in this context on

 - Spatial accuracy and
 - Attribute accuracy

While spatial accuracy is computed as the deviation from the user entered location to the location provided by one of the three open web-map services (owms) Bing Maps, Google Maps and Yahoo Maps, attribute accuracy is defined as a binary comparison of the user entered address parameters to the address parameters provided by each owms. In this comparison upper and lower case are relevant, also special characters like '-' or ',' etc.

- Section:** Quality Assurance report
- The OpenAddresses project will shortly provide a report that shows these comparison results in a tabular format. As mentioned above, the comparison provides mostly binary results: is the user entered spelling of street-name identical to the one provided by the owms? The deviation is provided in metric units as.

Call <http://www.openaddresses.org/qa/qareport> for a short introduction to the QA report.

By default the comparison results are presented in a table, sorted descending by date.

- Section:** Key Values
- The report can be customised by certain key values:

 - `limit`: Reduce the number of addresses in the QA report to a certain amount.
 - `user`: Filter the QA report to show only addresses provided by a specific user.
 - `date`: Filter the QA report to show only addresses digitised on a specific day. The format must be YYYYMMDD.
 - `datesince`: Filter the QA report to show only addresses digitised on a specific day. The format must be YYYYMMDD.
 - `datesince`: Filter the QA report to show only addresses digitised on a specific day. The format must be YYYYMMDD.
 - `orderby`: Customise the report in the way the records are ordered. The value must be a valid column name of the OpenAddresses table (e.g. `created_by` (=user), city, postal etc.).
 - `street`: Filter the QA report to show only addresses of a specific street.
 - `zip`: Filter the QA report to show only addresses of a specific zip/postal code.
 - `city`: Filter the QA report to show only addresses of a specific city.
 - `country`: Filter the QA report to show only addresses of a specific country.
 - `bdistsh`: Filter the QA report to show only addresses with a deviation to the Bing Map location smaller than a specific value (in m).
 - `bdistgr`: Filter the QA report to show only addresses with a deviation to the Bing Map location greater than a specific value (in m).
 - `gdistsh`: Filter the QA report to show only addresses with a deviation to the Google Map location smaller than a specific value (in m).
 - `gdistgr`: Filter the QA report to show only addresses with a deviation to the Google Map location greater than a specific value (in m).



OpenAddresses Qualität

Quality Report for 26 OpenAddresses Objects

This page shows results of comparison of OpenAddresses.org addresses to OpenWebMapServices from Bing, Google and Yahoo.

Distance values as deviations are in [m]. 'True' and 'False' values indicate the result of a binary comparison of the user entered values to the ones from the mentioned OWMS.

'Precision' indicates as binary value whether the user entered address values could be geocoded by the OWMS to address-level.

In order to change the position or address values of an address simply click on its id. OpenAddresses launches in a new window at the address' location.

id	User Street	Number	Zip code	City	Country	Bing Distance	Bing Address	Bing Zip	Bing City	Bing Precision	Google Distance	Google Address	Google Zip	Google City	Google Precision	Yahoo Distance	Yahoo Address	Yahoo Zip	Yahoo City	Yahoo Precision	Date			
13193656	stark Frobburgstrasse	16	4052	Basel CH		19.3442		True	True	True	True	1.4795		True	True	True	True	20.5827		True	True	True	True	2012-03-15-10:08:03
13195462	stark Homburgerstrasse	4	4052	Basel CH		14.4294		True	True	True	True	1.5029		True	True	True	True	6.3613		True	True	True	True	2012-03-15-10:05:18
13193657	stark Frobburgstrasse	14	4052	Basel CH		17.8348		True	True	True	True	6.2077		True	True	True	True	22.0151		True	True	True	True	2012-03-15-10:02:13
13193654	stark Frobburgstrasse	20	4052	Basel CH		20.182		True	True	True	True	6.566		True	True	True	True	16.0675		True	True	True	True	2012-03-15-09:51:08
13193655	stark Frobburgstrasse	18	4052	Basel CH		15.333		True	True	True	True	4.9477		True	True	True	True	14.27		True	True	True	True	2012-03-15-09:43:37
13195471	stark Homburgerstrasse	20	4052	Basel CH		13.4774		True	True	True	True	7.312		True	True	True	True	7.9298		True	True	True	True	2012-03-15-09:18:39
13193653	stark Frobburgstrasse	22	4052	Basel CH		24.3203		True	True	True	True	3.1005		True	True	True	True	17.0606		True	True	True	True	2012-03-15-09:08:52
10200717	stark Frobburgstrasse	24	4052	Basel None		26.1031		True	True	True	True	2.7786		True	True	True	True	16.1167		True	True	True	True	2012-03-15-09:08:10
13195597	stark Wildensteinerstrasse	11	4052	Basel CH		38.307		True	True	True	True	5.2081		True	True	True	True	25.2528		True	True	True	True	2012-03-10-16:20:09
13195587	stark Farnsburgerstrasse	39	4052	Basel CH		26.2209		True	True	True	True	9.0695	False	True	True	True	True	13.2428		True	True	True	True	2012-03-09-20:49:43
14655800	stark Schwarzwaldallee	22	4058	Basel CH		40.2206		True	True	True	True	1.7737		True	True	True	True	36.5529		True	True	True	True	2012-03-09-15:29:34
13227175	starki Frobburgstrasse	17a	4052	Basel CH		25.1313	False	True	True	True	True	7.7732	False	True	True	True	True	23.8104	False	True	True	True	True	2012-03-09-15:25:27
13195432	stark St. Alban-Rheinweg	200	4052	Basel CH		1951.6274	False	False	True	True	True	8.995	False	True	True	True	True	12.6817	False	True	True	True	False	2012-03-09-15:19:55
13195437	stark Ramsteinerstrasse	3	4052	Basel CH		25.1283		True	True	True	True	2.9274		True	True	True	True	15.5094		True	True	True	True	2012-03-09-15:01:58
13230733	stark Gellertpark	2	4052	Basel CH		36.4475		True	True	True	True	5.9134		True	True	True	True	26.6281		True	True	True	True	2012-03-09-14:50:04
13195516	stark Zürcherstrasse	149	4052	Basel CH		56.6209		True	True	True	True	22.6969		True	True	True	True	46.2507		True	True	True	True	2012-03-09-12:28:45
13195515	stark Farnsburgerstrasse	7	4052	Basel CH		78.5256		True	True	True	True	1.8525		True	True	True	True	53.5356		True	True	True	True	2012-03-09-12:28:20
14455576	OSM Hardstrasse	41	4052	Basel CH		601.205	False	True	True	False	False	63.7508	False	True	True	True	True	65.893	False	True	True	True	False	2012-03-08-11:24:17
14655784	stark Alemannengasse	22	4058	Basel CH		35.1107		True	True	True	True	67.0361	False	True	True	True	True	36.4306	False	True	True	True	False	2012-03-08-11:09:27
13322919	stark Römergasse	8	4058	Basel CH		43.7298		True	True	True	True	49.749		True	True	True	True	17.7681		True	True	True	True	2012-03-08-11:08:09
13322921	stark Schaffhauser Rheinweg	7	4058	Basel CH		20.5554	False	True	True	True	True	1354.3771	False	True	True	False	True	20.6628	False	True	True	True	True	2012-03-08-11:07:28
14655775	stark St. Alban-Rheinweg	108	4052	Basel CH		584.2672	False	False	False	False	False	4.0894	False	True	True	True	True	136.4943	False	True	True	True	False	2012-03-07-16:43:35

OpenAddresses Qualität

The screenshot shows an email message window with the following details:

Subject: One of your addresses in OpenAddresses.org has changed - Nachricht
Datei Nachricht McAfee E-Mail-Scan

Message Content:

Diese Nachricht wurde beantwortet oder weitergeleitet.

Von: qm@openaddresses.ch
An: hansjoerg.stark@openaddresses.org
Cc:
Gesendet: Fr 09.03.2012 15:28

Betreff: One of your addresses in OpenAddresses.org has changed

The following address record was deleted:
Schwarzwalallee 44, , 4058 Basel, CH
at position (long/lat): 7.611500 / 47.560700

To check the location open the following link in your browser:
<http://www.openaddresses.org/?northing=6034075.265030&easting=847312.470271&zoom=18&overlayOpacity=0.7>

If you want to restore the deletion, open the following link in your browser:
<http://176.9.98.116:4000/qa/restore/14655799>

Weitere Informationen über: qm@openaddresses.ch.

OpenAddresses Qualität

One of your addresses in OpenAddresses.org has changed - Nachricht
Datei Nachricht McAfee E-Mail-Scan

Von: qm@openaddresses.ch Gesendet: Fr 09.03.2012 15:30
An: hansjoerg.stark@openaddresses.org
Cc:
Betreff: One of your addresses in OpenAddresses.org has changed

[changed?]	[old value]		[new value]
[x] street:	[Schwarzwaldalle]		[Schwarzwaldallee]
[] housenumber:	[22]		[22]
[] houseame:	[]		[]
[] postcode:	[4058]		[4058]
[] region:	[]		[]
[] city:	[Basel]		[Basel]
[] country:	[CH]		[CH]
[x] Deviation:	6.810m		
user:	stark		

i Weitere Informationen über: qm@openaddresses.ch.



OpenAddresses OSM Sync

Implementierung:

- OA-Adressen werden automatisch in OSM eingetragen
- Mutationen werden automatisch an OSM weitergegeben
- Löschen von OA-Adressen führt zum Löschen der entsprechenden OSM Adresse



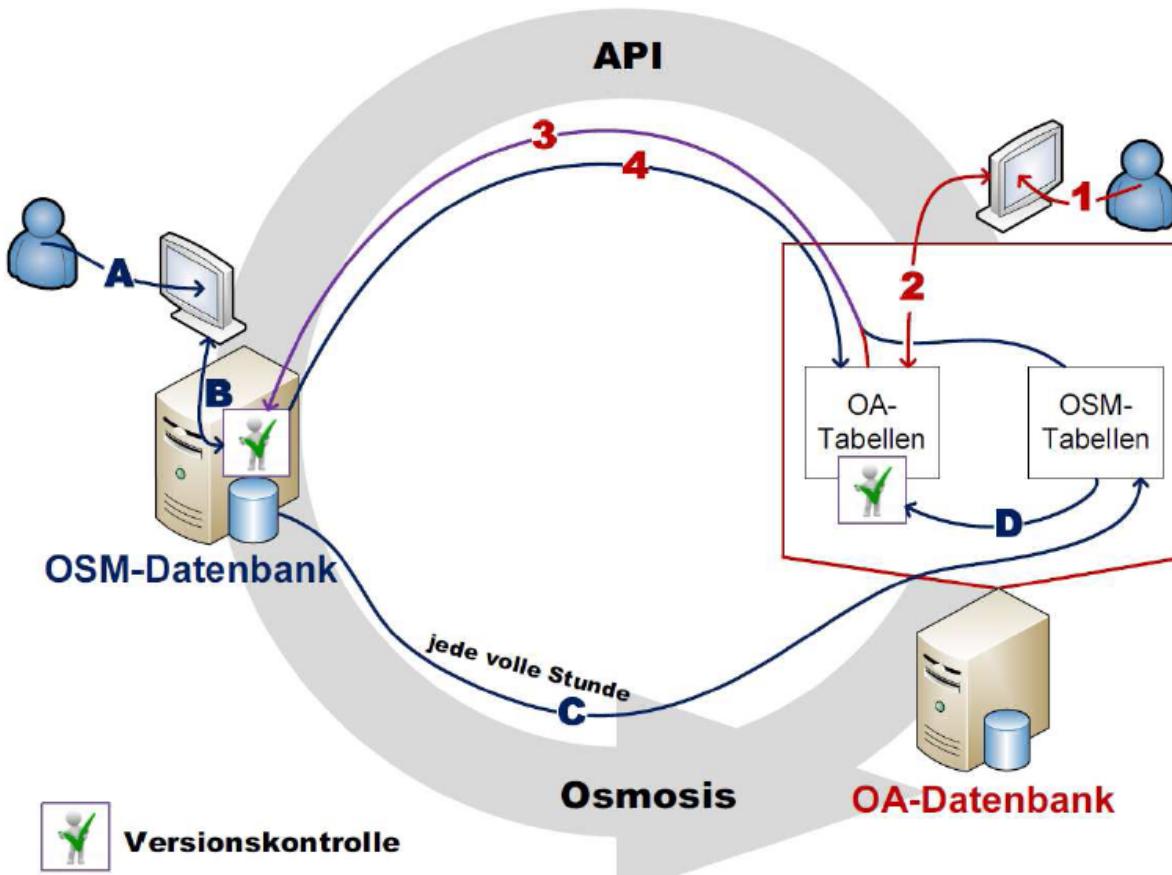
OpenAddresses OSM Sync

Implementierung:

- OSM-Adressen werden periodisch aus OSM in OA importiert und Änderungen entsprechend vollzogen (*keine Interpolation!*)
- Änderungen werden mit OSM-Versionsnummer dokumentiert, anhand derer eine Mutation (nicht) übernommen wird
- Löschen von Adressen in OA, die ursprünglich von OSM stammen, können nur in OA, nicht aber direkt in OSM gelöscht werden



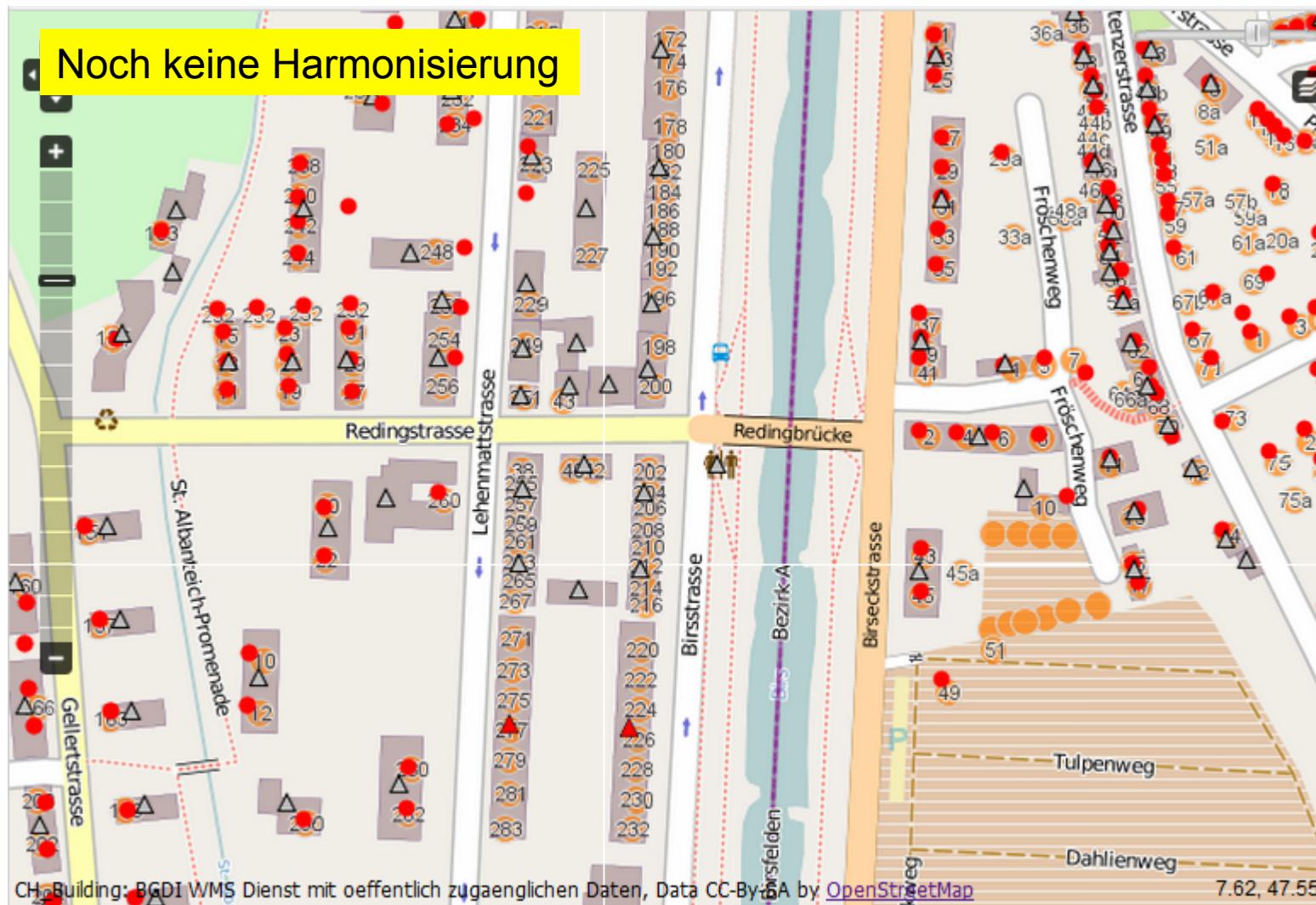
OpenAddresses OSM Sync



- 1 OA Benutzeroaufruf**
 - 2 Bezug OA-Daten und aktualisieren**
 - 3 OA-Daten mit OSM-Daten angereichert an OSM-DB**
 - 4 Rückgabe neuer Versionsnummer**
-
- A OSM Benutzeroaufruf**
 - B Bezug OSM-Daten und versionsgeprüfte Aktualisierung**
 - C jede volle Stunde Bezug von OSM-Datendifferenzen**
 - D neue Version in OA aufbereiten**



OpenAddresses OSM Sync





OpenAddresses

Fazit:

- OA soll OSM als einfaches GUI für die Adressdatenerfassung dienen
- OA bietet erweiterte Möglichkeiten für QA
- OA offeriert gute Dienste für Geokodierung (improvements still in progress...)
- tbd: OSM-OA Harmonisierung (Datenbestand)

Diskussion

Besten Dank für Ihre Aufmerksamkeit!

Try it out: <http://176.9.98.116:4000>

hansjoerg.stark@fhnw.ch