

Crowdsourcing Geodata

Mit Beispielen aus



Frederik Ramm
ramm@geofabrik.de

Fachhochschule Nordwestschweiz
Muttenz, 16. Oktober 2008

Was ist OpenStreetMap?

- Wiki-Weltkarte von “allem”
- CC-BY-SA-Lizenz
- Vor ~ 4 Jahren in England gestartet



OpenStreetMap

- Heute 60.000 registrierte Benutzer weltweit, davon 10% jeden Monat aktiv
- 500 Mio. GPS-Trackpunkte (70 MJ!), 300 Mio. manuell nachbearbeitete Geo-Objekte
- 30 nationale Mailinglisten auf 5 Kontinenten



Aber wir haben doch...

The screenshot shows a Firefox browser window titled "karlsruhe germany - Google Maps - Firefox". The address bar contains the URL "http://maps.google.com/maps?f=q&hl=de&q=karlsruhe". The search bar contains "karlsruhe germany" with a "Maps-Suche" button. Below the search bar are buttons for "Karte durchsuchen", "Branchen suchen", and "Route berechnen". The main map area shows Karlsruhe, Germany, with a green arrow pointing to the city center. The map includes labels for "Weststadt", "Innenstadt-West", "Innenstadt-Ost", "Oststadt", "Südweststadt", and "Südstadt". Major roads like "Kriegsstraße", "Kaiserallee", and "Moltkestraße" are visible. The map is in a standard street view style. The browser's status bar at the bottom shows "Done" and an "Adblock" extension icon.



Aber wir haben doch...

karlsruhe-germany - Google Maps - Firefox

WebStadtplan --- Karlsruhe - Firefox

File Edit View Go Bookmarks Tools Help

http://geodaten.karlsruhe.de/stadtplan/

Karlsruhe WebStadtplan---Karlsruhe

Region
Übersicht
Stadtgebiet

Stadtplan
Stadtplan generalisiert
Orthobilder 2004 (sw)
Orthobilder 2005 (farbig)

Straßen
Straßen: _____ Nr.: _____ ?
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Objekt-Suche A - Z
Autoverkehr

Ergebnisfenster

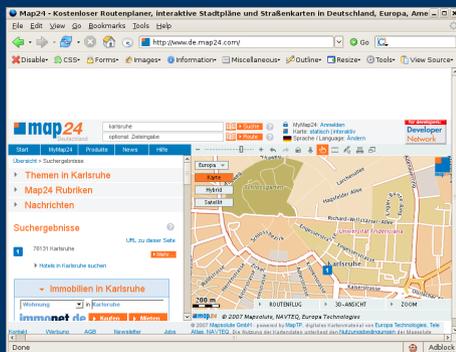
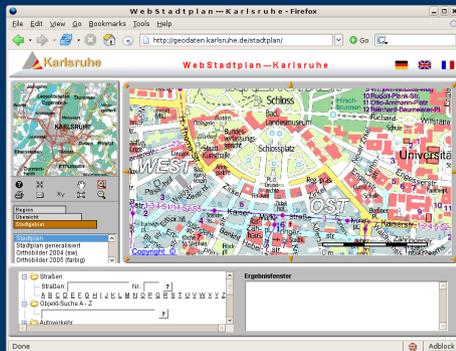
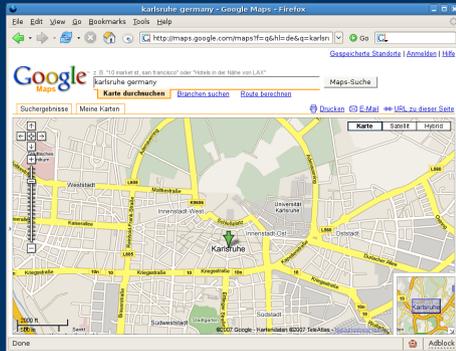
Done Adblock

Aber wir haben doch...

The screenshot displays the Map24 website interface. At the top, the browser title is "Map24 - Kostenloser Routenplaner, interaktive Stadtpläne und Straßenkarten in Deutschland, Europa, Ame". The main navigation bar includes "Suche" (Search) and "Route" (Route) buttons, along with links for "MyMap24: Anmelden", "Karte: statisch | interaktiv", and "Sprache / Language: Ändern". The search results section shows "76131 Karlsruhe" with a "Mehr..." link and a section for "Immobilien in Karlsruhe" (Real Estate in Karlsruhe) with a search bar for "Wohnung" in "Karlsruhe" and buttons for "Kaufen" (Buy) and "Mieten" (Rent). The map view on the right shows a street map of Karlsruhe with labels for "Schlossgarten", "Universität Fridericiana", and "Engesserstrasse". The footer contains copyright information: "© 2007 Mapsolute GmbH - powered by MapTP, digitales Kartenmaterial von Europa Technologies, Tele Atlas, NAVTEQ. Die Nutzung der Kartendaten unterliegt den Nutzungsbedingungen der Mapsolute".



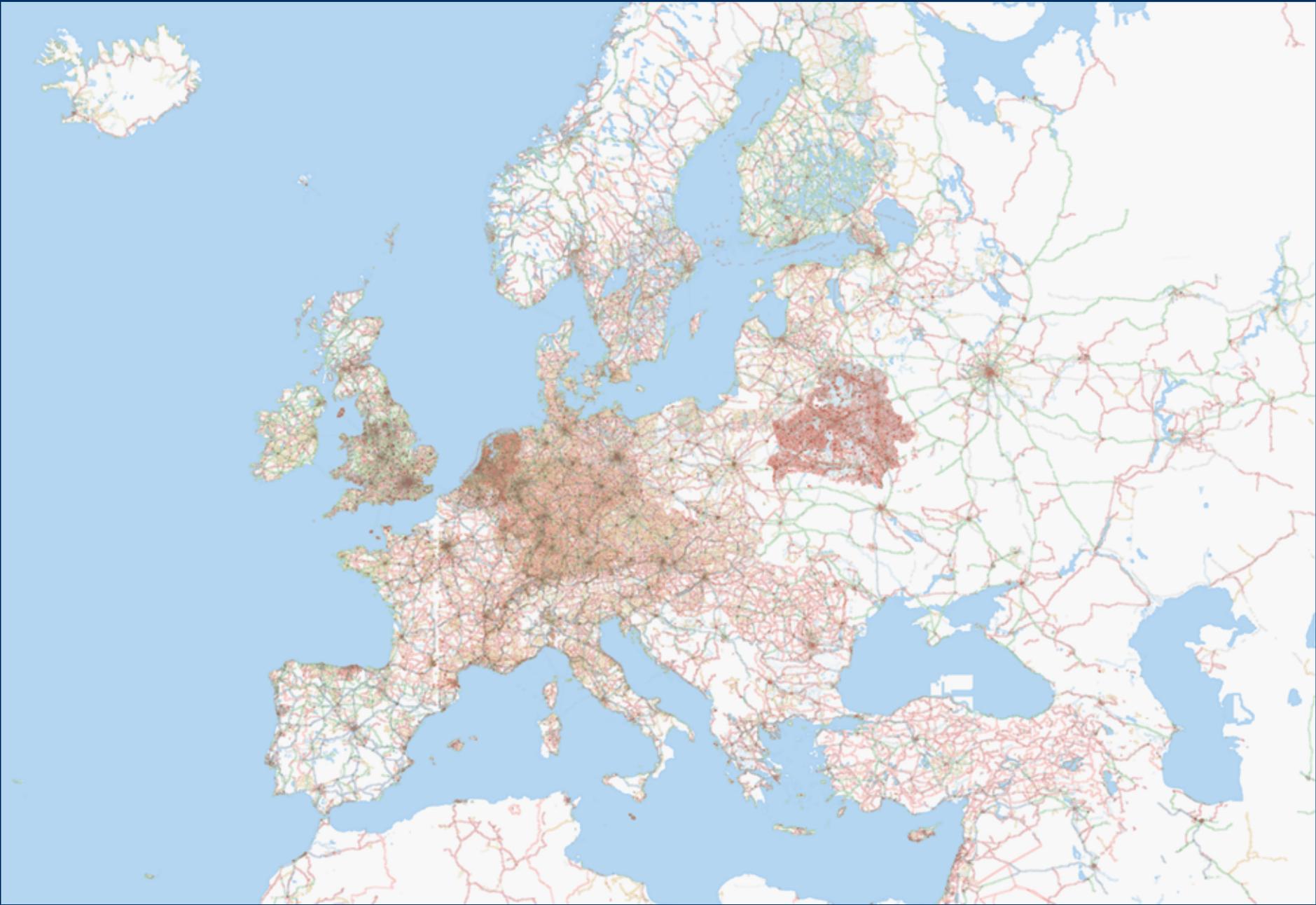
Aber wir haben doch...



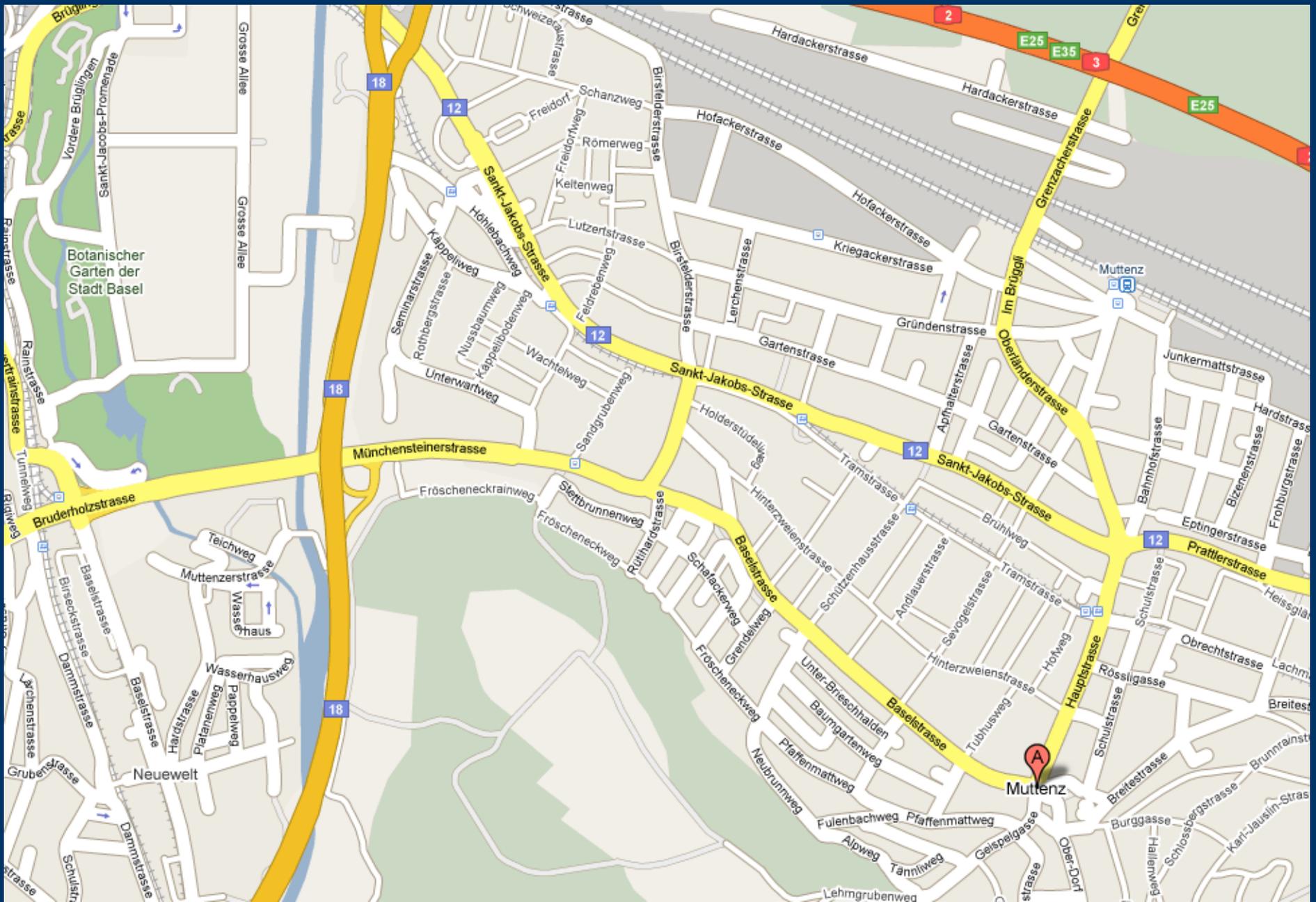
- existierende Angebote sind manchmal kostenlos, aber nie „frei“
- kostenlose Angebote gibt es nicht mit “Quelltext”
- sie sind absichtlich fehlerhaft
- sie sind nicht aktuell und nicht vollständig

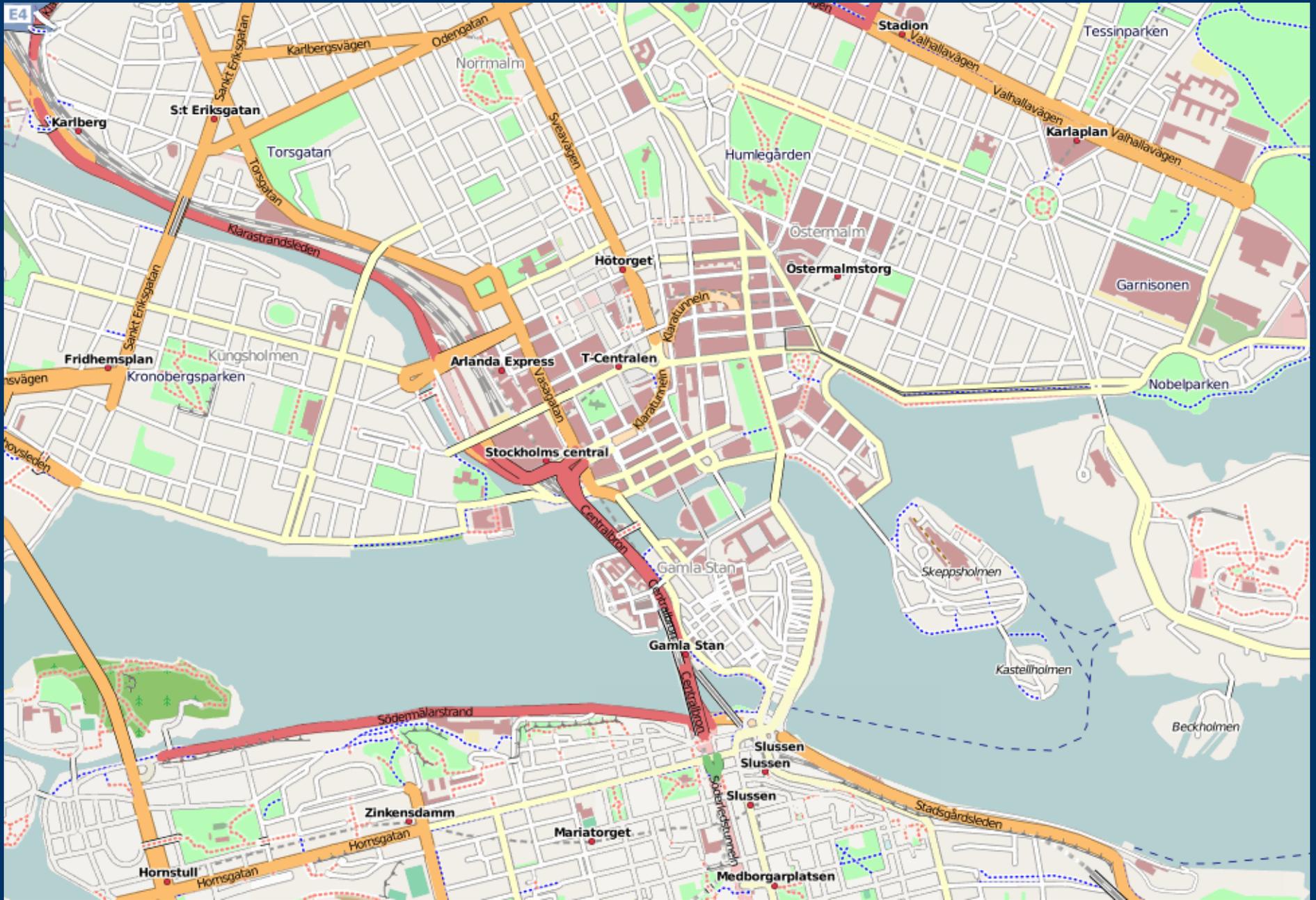
*Wie weit ist
OpenStreetMap?*

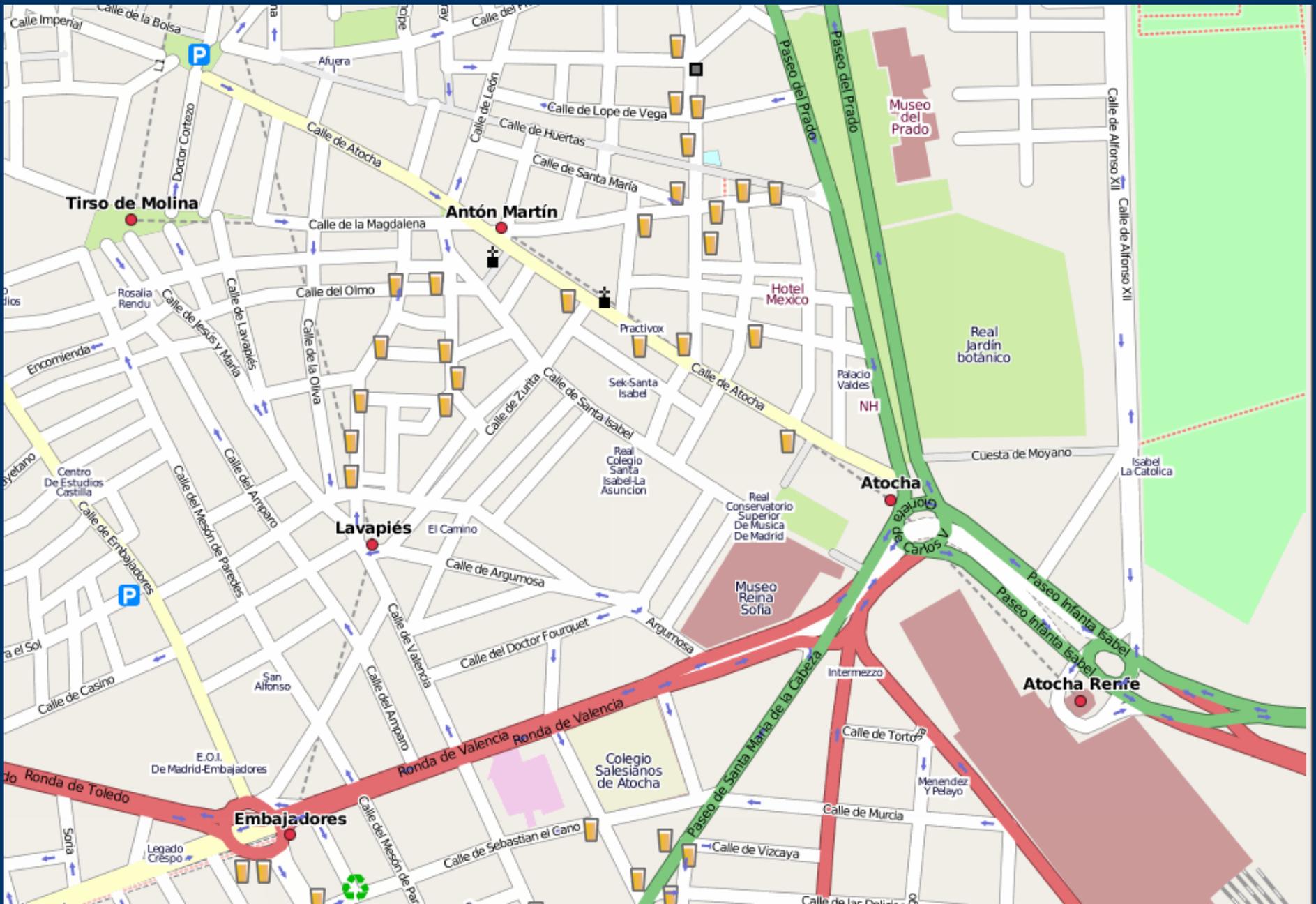














***Crowdsourcing:
vom Schimpfwort
zum Erfolgskonzept***



Crowdsourcing

User generated content



Crowdsourcing

User generated content



Crowdsourcing

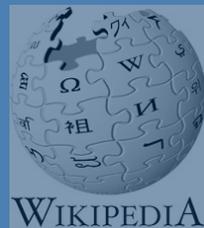
User generated content



Crowdsourcing



Volunteered Geographic Information



OpenStreetMap



Map Share

Wikimapia

OpenAddresses.ch

Crowdsourcing: offen / geschlossen

- “geschlossenes” Crowdsourcing:
Nutzer als billige Arbeitskräfte, gesteuert von zentraler Organisation
- “offenes” Crowdsourcing:
Nutzer als Partner und Mitgestalter, Aufbau einer Community

BAUTEN DES FÜNEJAHRPLANES



EISENHÜTTENKOMBINAT OST (EKO)
Aus sowjetischem Erz und polnischer Kohle
wird deutscher Friedensstahl

*Wie funktioniert
OpenStreetMap?*

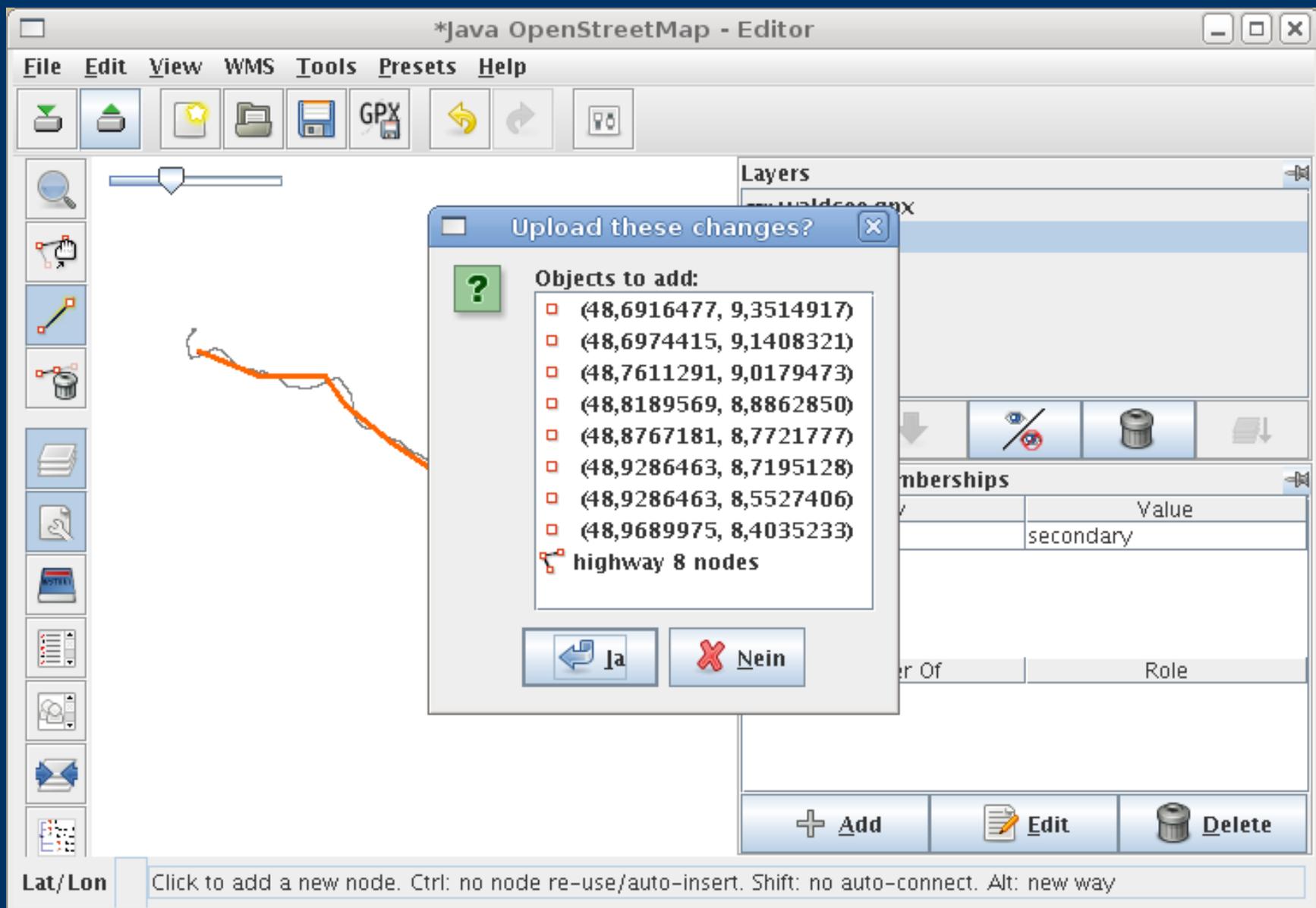




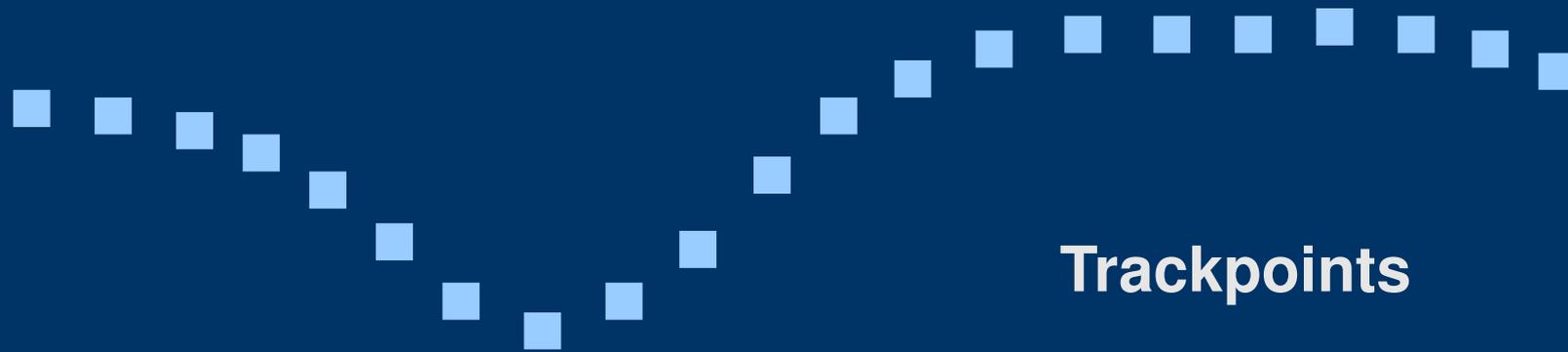
+





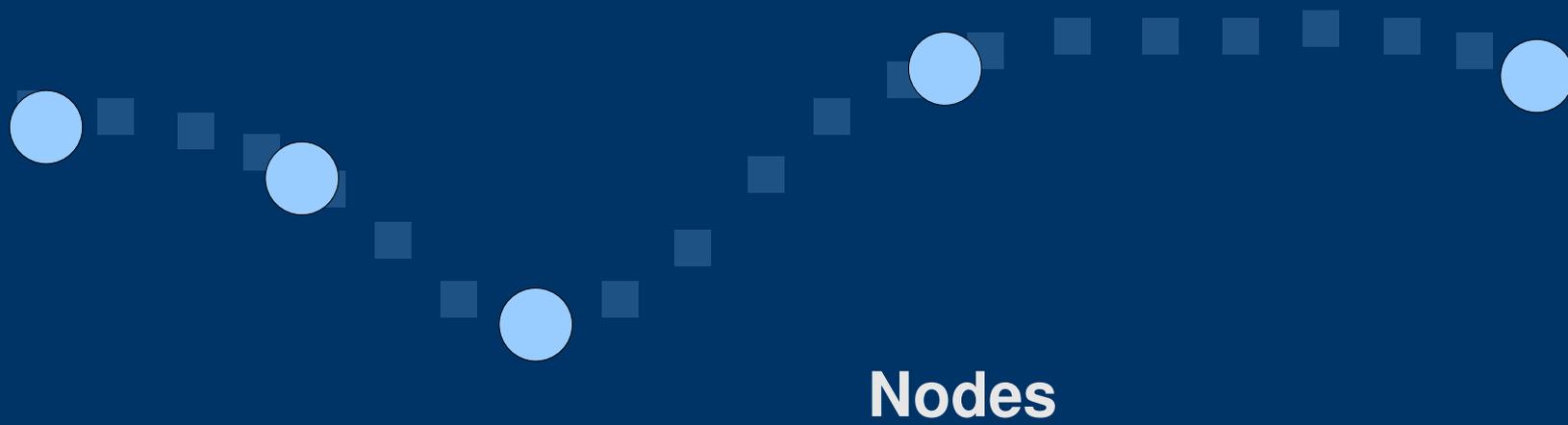


Datenmodell



Trackpoints

Datenmodell



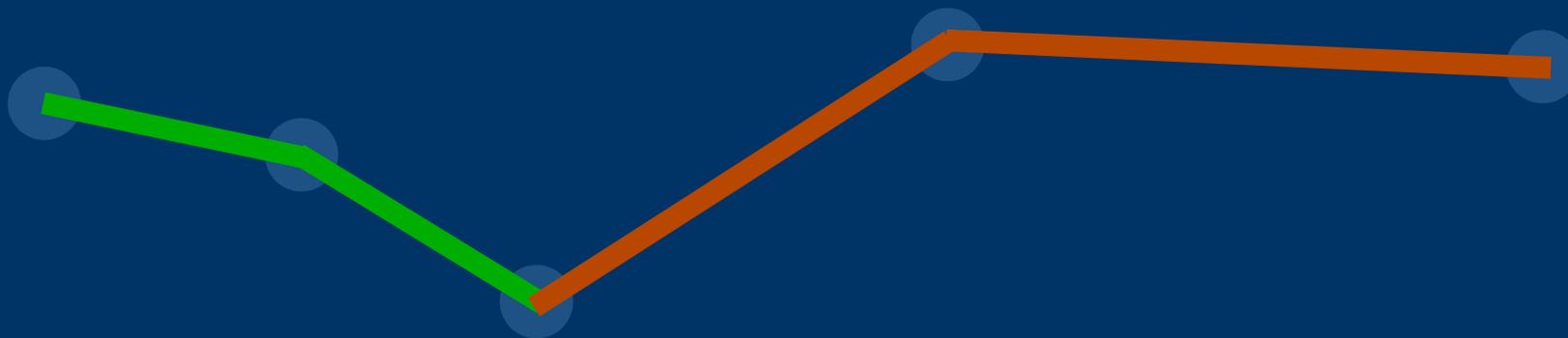
Datenmodell

Ways



Datenmodell

Ways



highway = residential
name = Schillerstraße
oneway = true

highway = secondary
name = Kaiserallee

Tags

Typische „Tags“



*Wer bestimmt,
welche “Tags”
es gibt?*

*Was ist richtig,
was ist falsch?*



*Was motiviert
60,000 Menschen?*



map

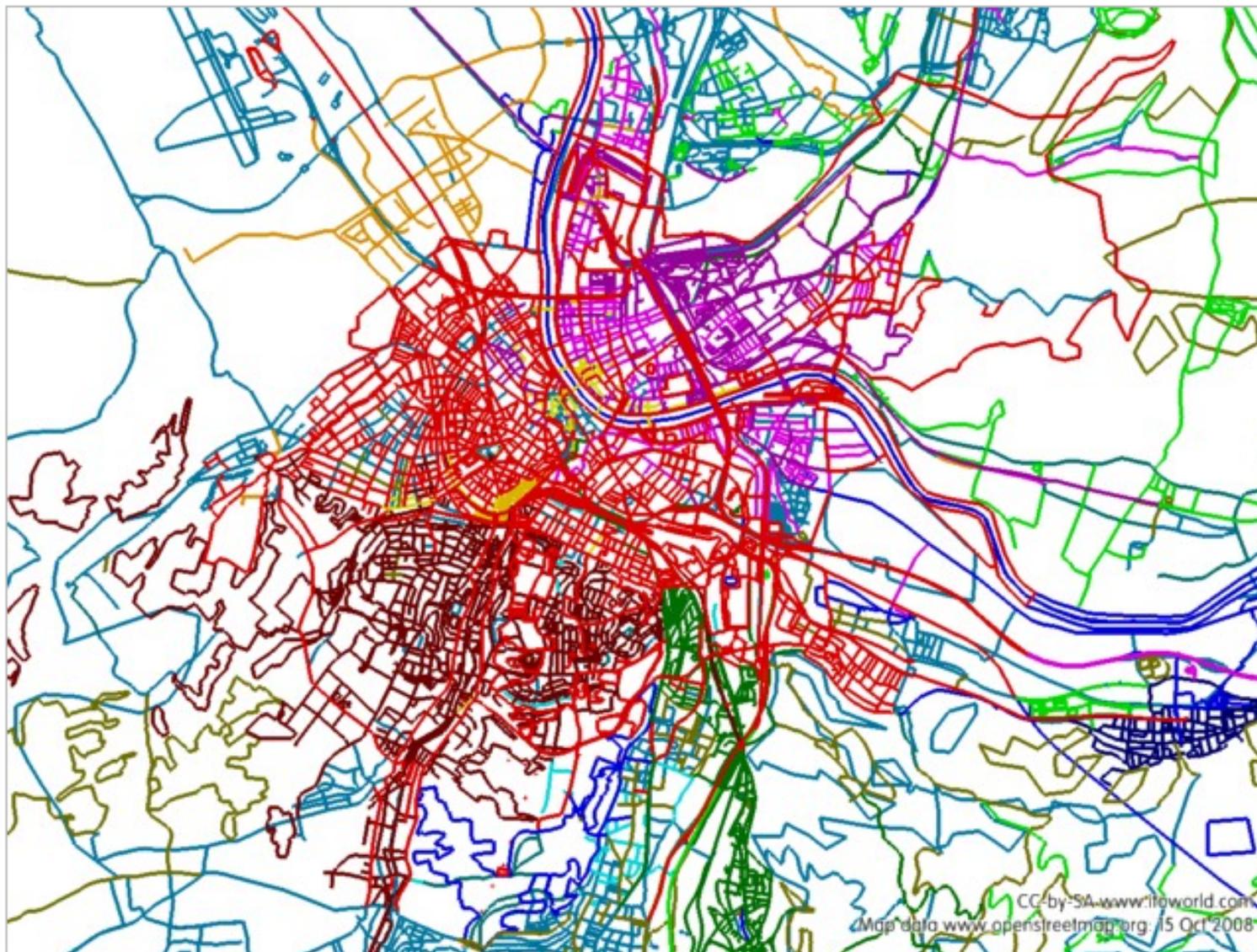
Export image

users

All

Colour User

■	longsch
■	yxcv
■	Bebbi Mapper
■	DaBear
■	makol
■	GarryX3D
■	kuede
■	rhomeo
■	Adrian Vogt
■	kaeru
■	DaMutz
■	Peter Schilling
■	RickH86
■	zapfen
■	gigu
■	Alexander Hunziker
■	efes
■	Pieren



CC-by-SA www.itoworld.com
Map data www.openstreetmap.org 15 Oct 2008



OpenStreetMap Statistics - Iceweasel

File Edit View History Bookmarks Tools Help

http://www.openstreetmap.org/stats/data_stats.htm cyprus demarcatic

Disable CSS Forms Images Information Miscellaneous Outline Resize Tools View S

Ciprian 61096
 StefanB 610161
 Lum Honhoff 607781
 nyem 605887

Number of users editing over the past...

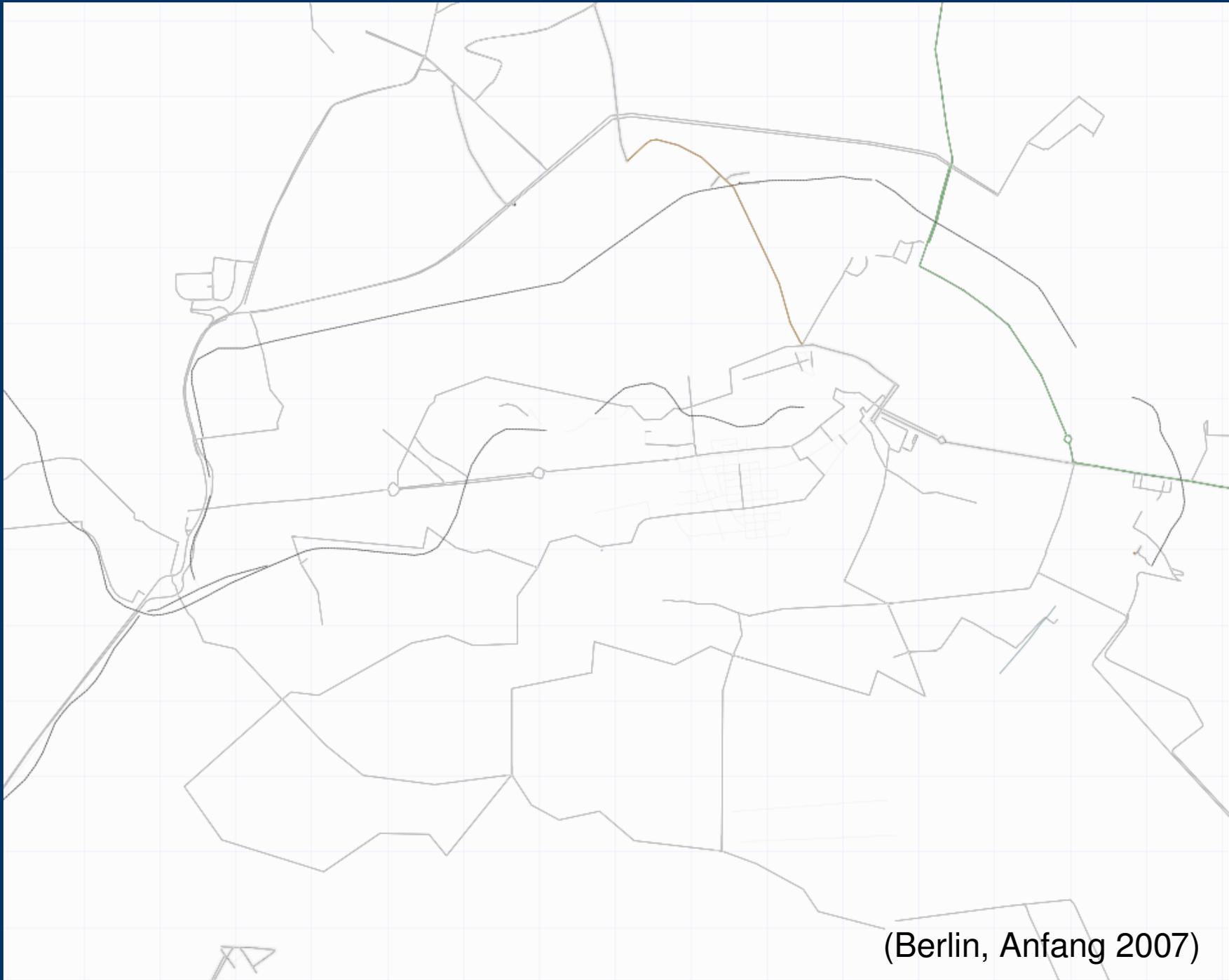
Data Type	Day	Week	Month
GPX Files	177	580	1126
Nodes	561	1626	2947

Top users editing over the past...

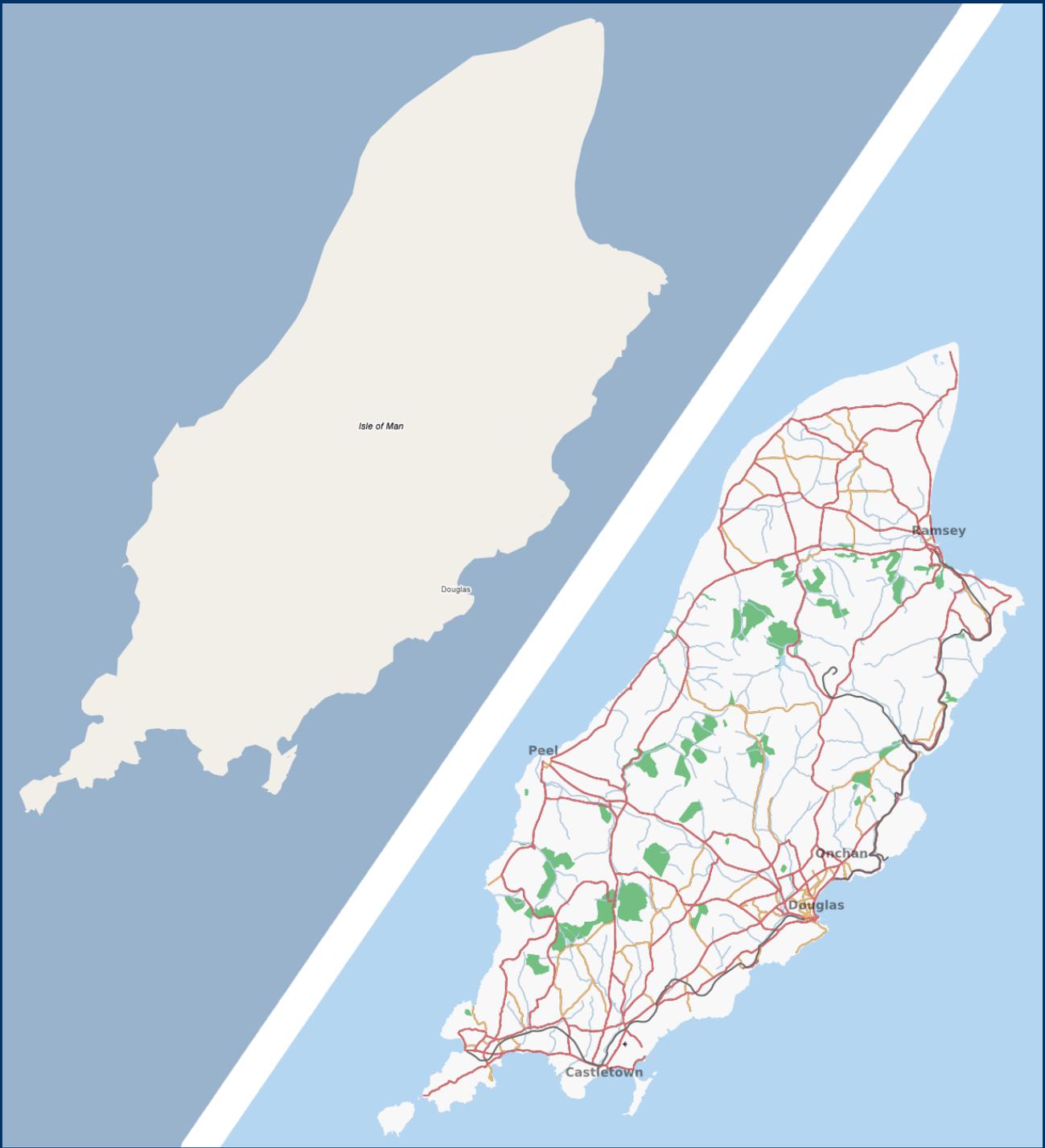
Day	Week	Month
61096 DaveHansen	149824 bcrosby_bulk	319067 Adrian Frith
27949 cheatoss	140125 DaveHansen	225485 katpatuka
22378 katpatuka	62689 katpatuka	149824 bcrosby_bulk
11384 AntonyGIS	47267 crystalwalrein	142152 DaveHansen
10911 mikes	42752 bcrosby	139992 johnrobot
8930 ivansanchez	40866 johnrobot	135389 CaveCrasher
7496 Rosscoe	38861 cheatoss	111598 mersar
5474 anthlant	27211 mikes	99084 crystalwalrein

Done





(Berlin, Anfang 2007)



User:Lambertus - OpenStreetMap - Iceweasel

File Edit View History Bookmarks Tools Help

http://wiki.openstreetmap.org/index.php/User:Lambertus cyprus demarcati

shop=garden_center (node, polygon) a shop where garden stuff is sold (plants, tools, etc.)

MegaStar [\[edit\]](#)



Lambertus is awarded a MegaStar for uploading one million track points.

Categories: [Users in the Netherlands](#) | [Users in Gelderland](#) | [Users in Apeldoorn](#) | [MegaStar recipients](#)

Done



Menschen

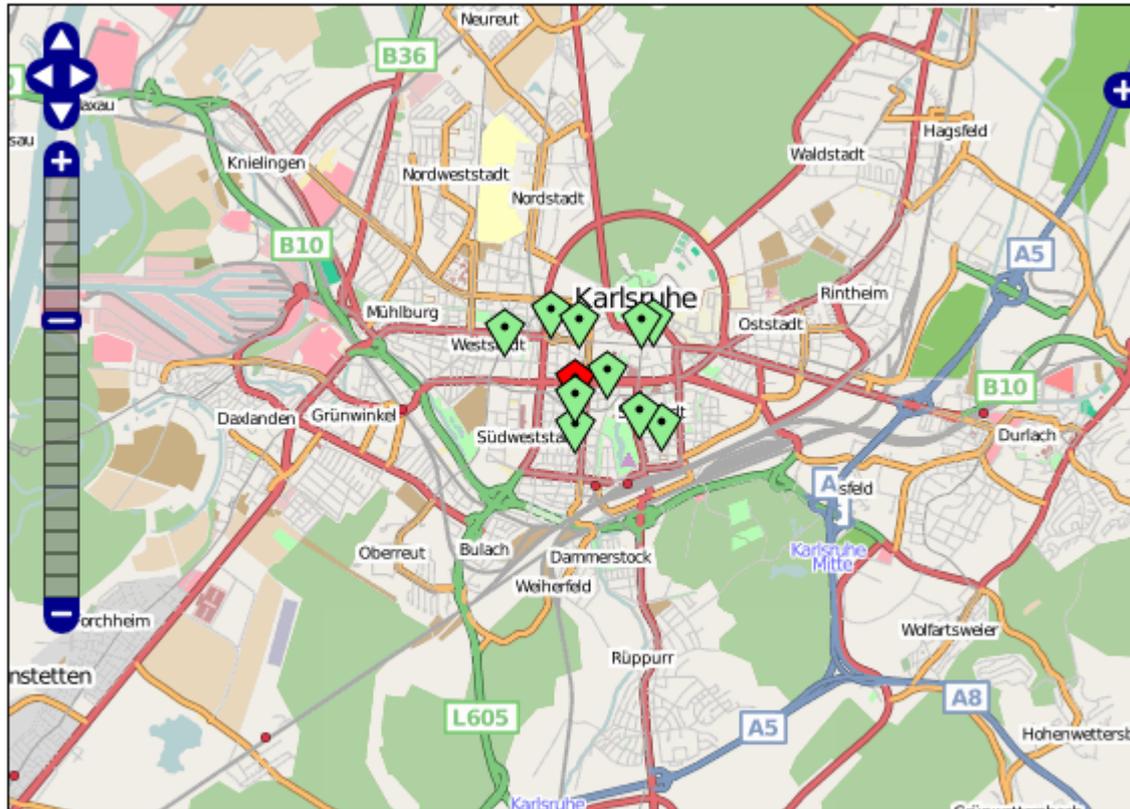


Menschen unterscheiden sich in...

- technischer Kompetenz
- Sachkompetenz
- Dauer und Intensität der Mitarbeit
- Engagement in der Community
- ...

Pflege der Community

Nearby users:



- | | |
|-----------|---|
| yamduc | 0km away (send message) |
| Helmut | 0km away (send message) |
| SlowRider | 1km away (send message) |

Pflege der Community

Event Calendar ^{+/-}		
Recent big events: State Of The Map and 4th Anniversary party		
	Oct. 14	Hamburger Mappertreffen, Germany
	Oct. 15	Post-ESRI conference  pub meeting (both lunch and beer )
CONF	Oct. 15	Henk Hoff giving OSM talk at GIS-o-TOPO-lis  , Brussels
	Oct. 15	Karlsruher Mappertreffen
	Oct. 15	OSM-Ostwestfalen-Lippe 19:30 Zweischlingen Bielefeld, Germany 
	Oct. 15	London Pub Meetup in Beckenham
MAP	Oct. 18-19	Kiev mapping party
MAP	Oct. 18-19	Denver Mapping Party
MAP	Oct. 18	Dresden/Tharandter DGFK-Event
MAP	Oct. 18	maning talks about OSM Philippines to waypoints  dot ph guys
MAP	Oct. 19	Hoboken (Antwerpen) mapping party
	Oct. 21	München Monthly Meeting, Germany
	Oct. 21	Lüneburg OSM Treffen, Germany

Wem gehört das Projekt?

Index of / - Mozilla Firefox

File Edit View History Bookmarks Tools Help

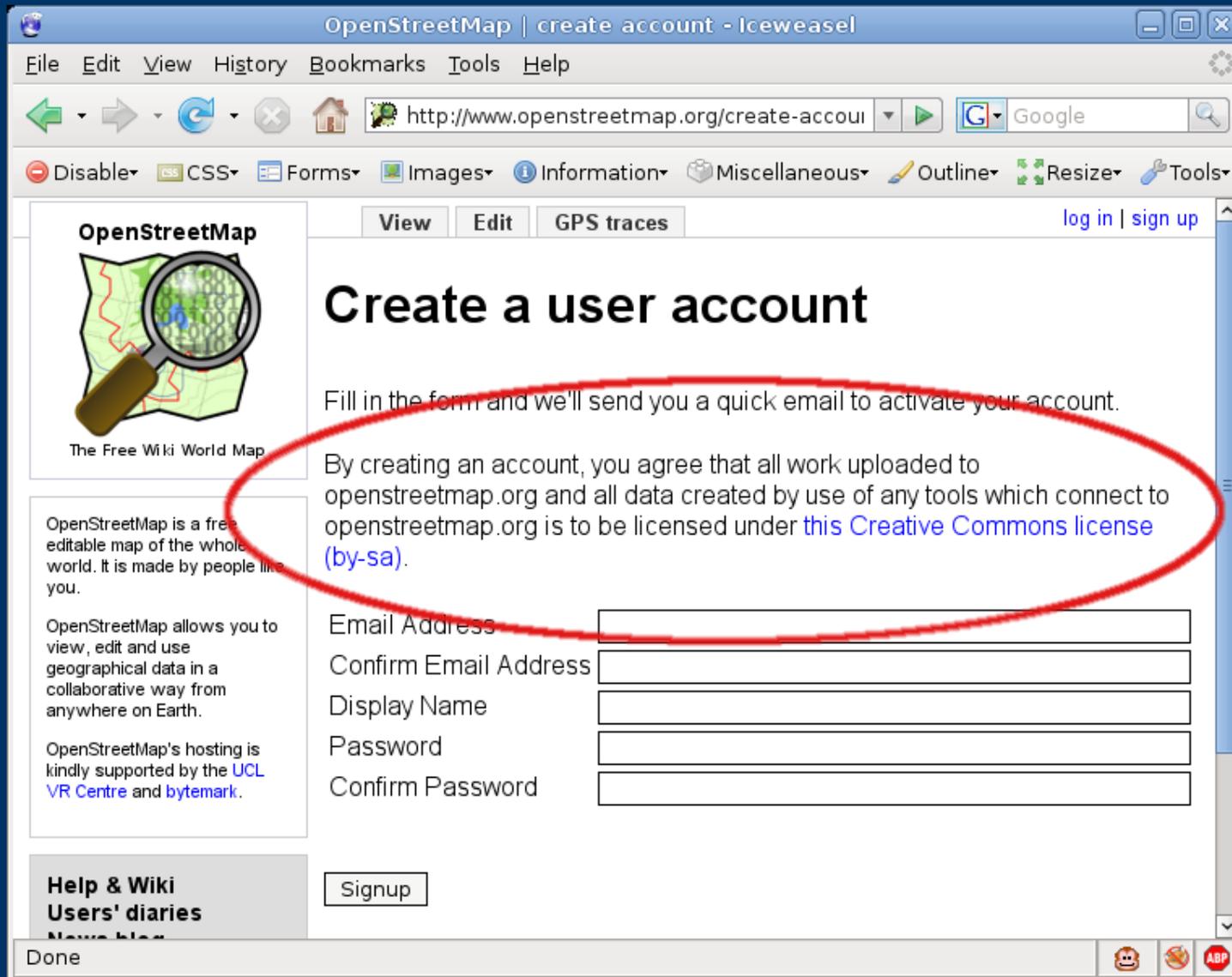
http://planet.openstreetmap.org/ Google

Getting Started Latest BBC Headlines

planet-080917.osm.bz2	17-Sep-2008	21:34	4.4G
planet-080917.osm.bz2.md5	17-Sep-2008	21:36	56
planet-080924-081001.diff.xml.bz2	02-Oct-2008	17:02	55M
planet-080924.osm.bz2	24-Sep-2008	22:42	4.4G
planet-080924.osm.bz2.md5	24-Sep-2008	22:45	56
planet-081001-081008.diff.xml.bz2	09-Oct-2008	17:31	52M
planet-081001.osm.bz2	01-Oct-2008	22:39	4.5G
planet-081001.osm.bz2.md5	01-Oct-2008	22:43	56
planet-081008.osm.bz2	08-Oct-2008	23:30	4.5G
planet-081008.osm.bz2.md5	08-Oct-2008	23:33	56
planet-081015.osm.bz2	15-Oct-2008	23:53	4.5G
planet-081015.osm.bz2.md5	15-Oct-2008	23:55	56
planet-081015.osm.gz	15-Oct-2008	08:30	5.4G
planet-081015.osm.gz.md5	15-Oct-2008	08:49	55
planet-latest.osm.bz2	15-Oct-2008	23:53	4.5G
planet-latest.osm.bz2.md5	15-Oct-2008	23:55	56

Done

Wem gehört das Projekt?



OpenStreetMap | create account - Iceweasel

File Edit View History Bookmarks Tools Help

http://www.openstreetmap.org/create-accou Google

Disable CSS Forms Images Information Miscellaneous Outline Resize Tools

View Edit GPS traces log in | sign up

Create a user account

Fill in the form and we'll send you a quick email to activate your account.

By creating an account, you agree that all work uploaded to openstreetmap.org and all data created by use of any tools which connect to openstreetmap.org is to be licensed under [this Creative Commons license \(by-sa\)](#).

Email Address

Confirm Email Address

Display Name

Password

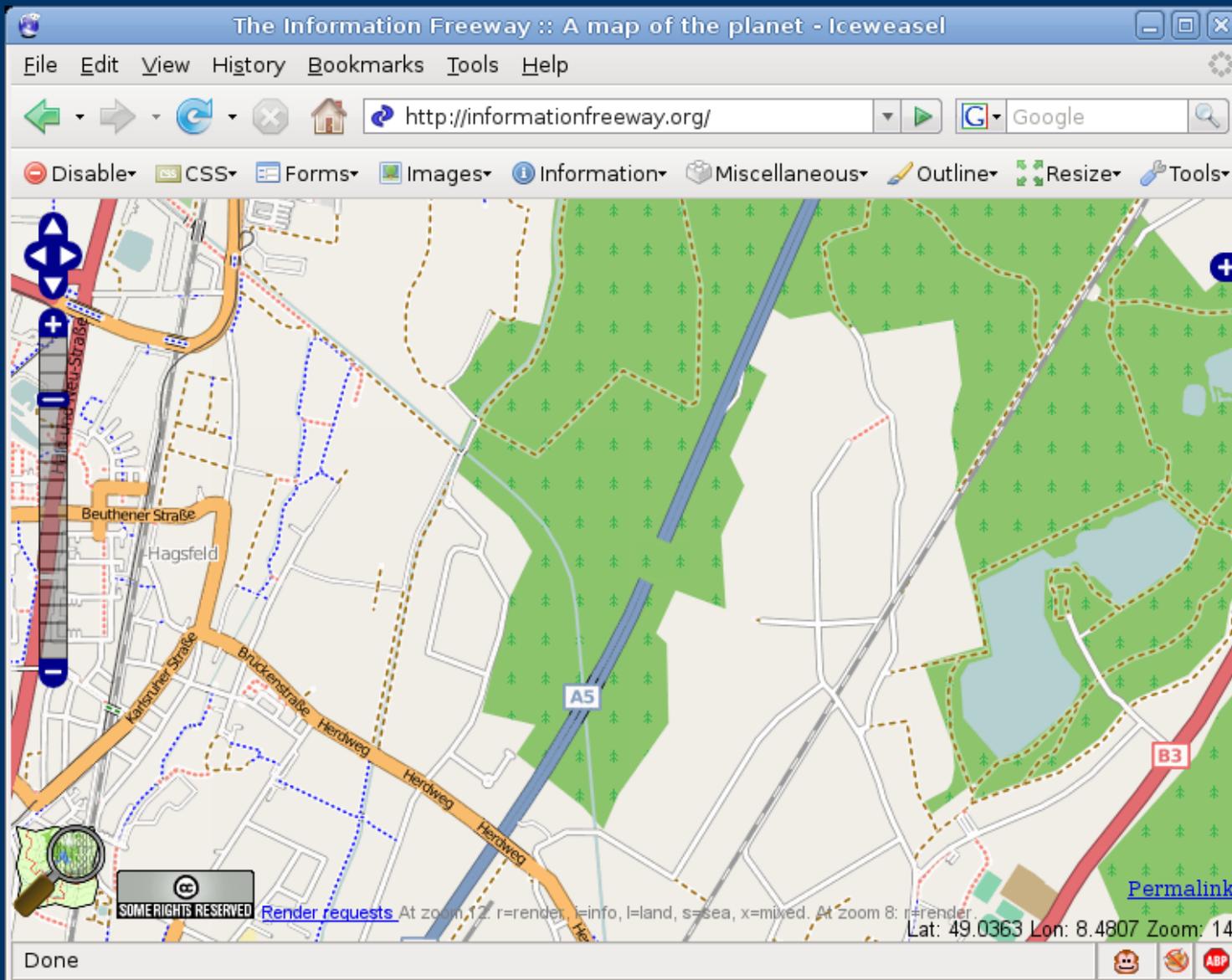
Confirm Password

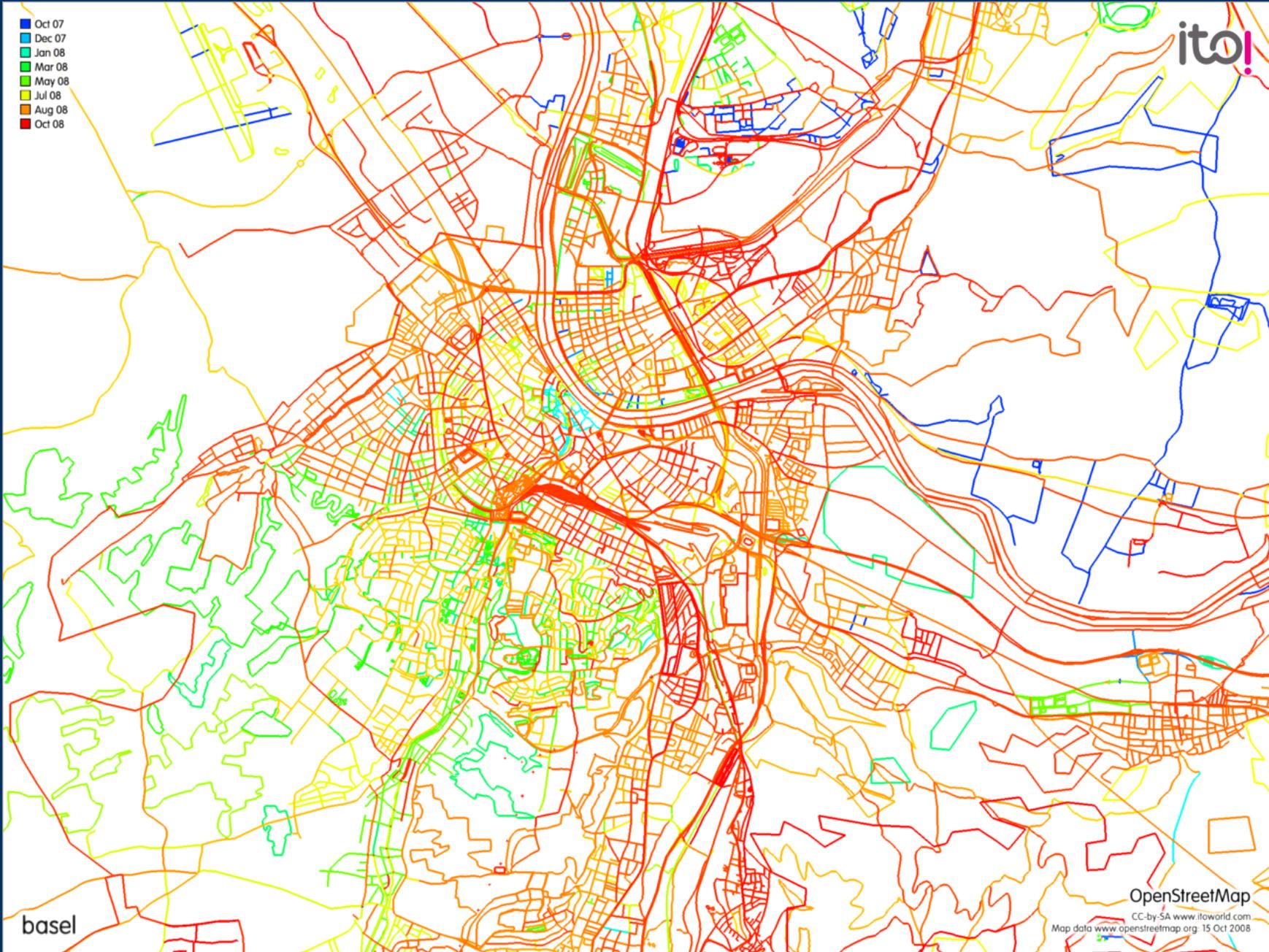
Signup

Done

Help & Wiki
Users' diaries
News blog

Qualität und Kontrolle





... der langen Rede kurzer Sinn:

- kleine Einstiegshürde
- Nutzer = Teilhaber, Kontrolle abgeben
- Vertrauensvorschuss
- “instant reward”
- langer Atem

Das Buch zum Film

Frederik Ramm
Jochen Topf

OpenStreetMap

Die freie Weltkarte nutzen
und mitgestalten



Lehmanns Media





www.openstreetmap.org

Frederik Ramm
ramm@geofabrik.de

GEOFABRIK 