

Navigating OSM

Elbe-Labe Meetup Dresden 2016

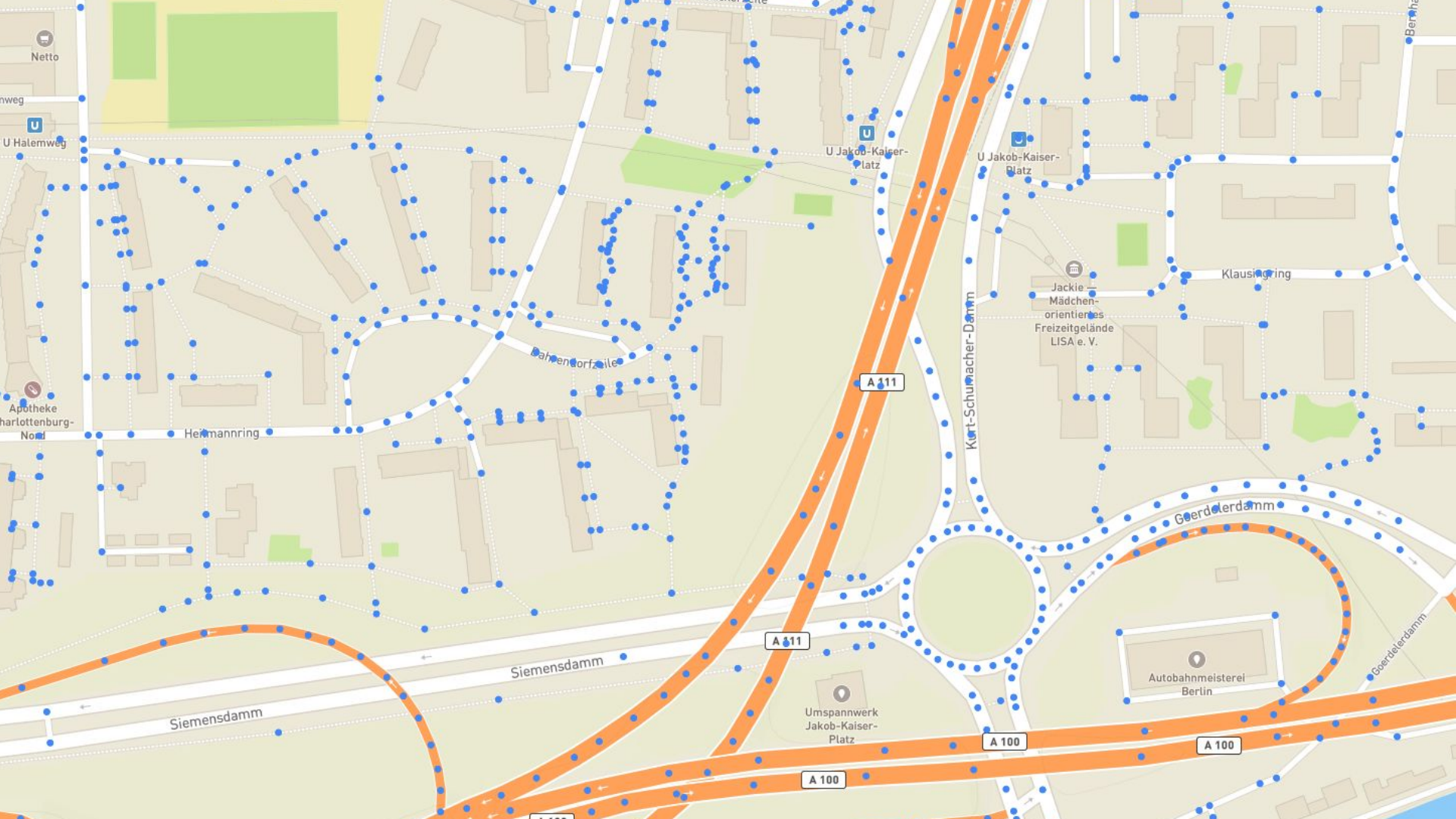


\$ whoami

Daniel J H, with [Mapbox](#) ([Directions](#) / [Drive](#))

<https://github.com/daniel-j-h>

A Routing Engine's View



Netto

U Halenweg

U Jakob-Kaiser-Platz

U Jakob-Kaiser-Platz

U Jakob-Kaiser-Platz

Apotheke Charlottenburg-Nord

Heimannring

Bahnhofstraße

A 111

Kurt-Schumacher-Damm

Jackie-Mädchen-orientiertes Freizeitgelände LISA e. V.

Klausiering

Siemensdamm

Siemensdamm

A 111

Umspannwerk Jakob-Kaiser-Platz

A 100

Autobahnmeisterei Berlin

A 100

Geordlerdamm

Geordlerdamm

A 100

Navigation based on OSM

[Open Source Routing Machine](#)

[Supported Tags](#), [HTTP API](#)

osrm-talk

oftc/#osrm

[Johan's SOTM talk](#)

Debug Map

Tag-derived Maxspeeds

Connectivity Issues

Soon: Turn Penalties

Debugging Routing Decisions: [example](#)

<http://map.project-osrm.org/debug>



km/h: 0-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 90+

Staggered Intersections

Left-Right or Right-Left Zig-Zagging

Common in rural and exurban areas

<https://github.com/Project-OSRM/osrm-backend/pull/2738>

[Patrick's Analysis for CA](#)



Oak Street

Cedar Drive

Cedar Drive

Run Avenue

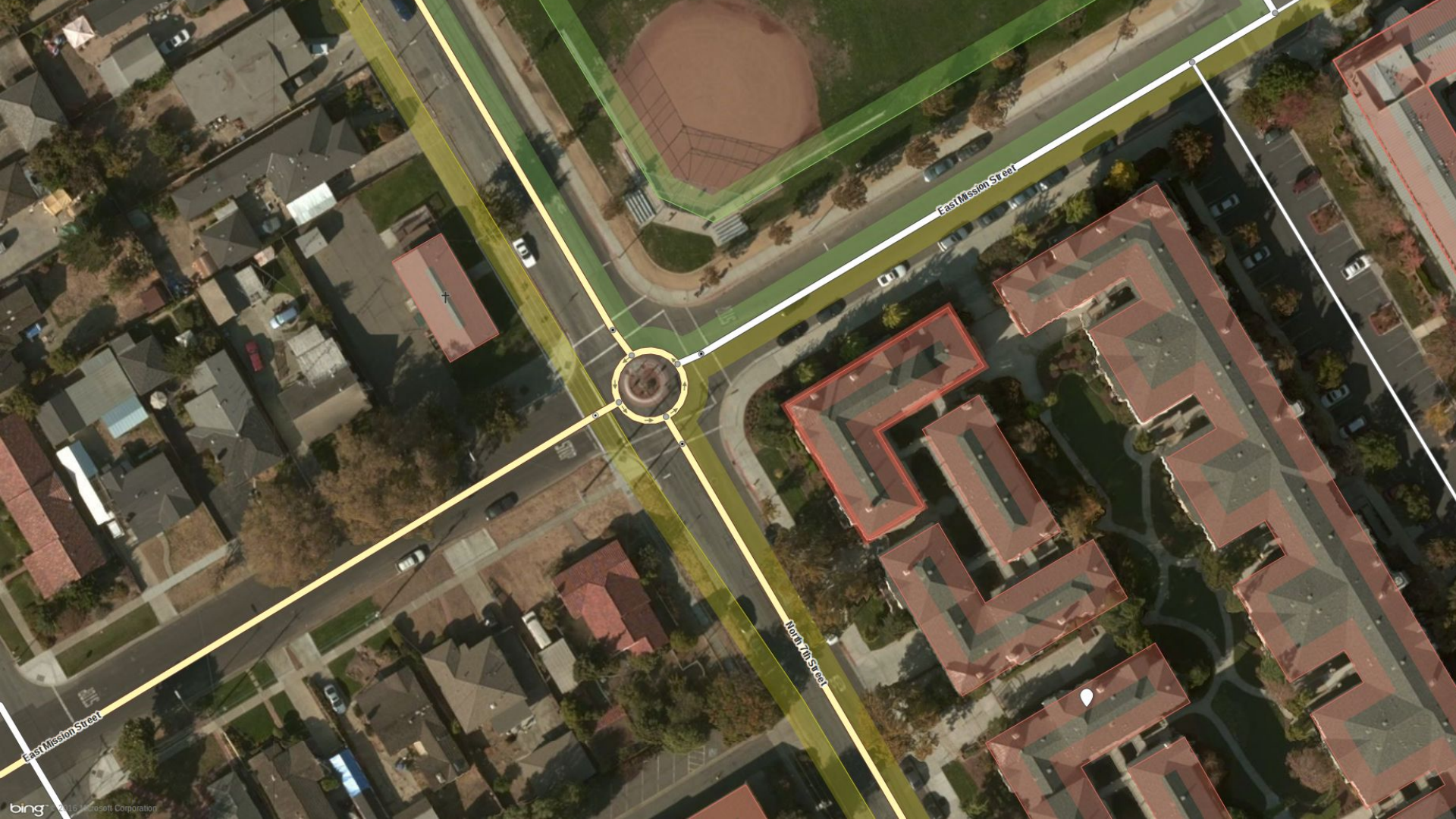
Oak Street

Roundabout Intersection

Take Nth Exit -> Turn Right

<https://github.com/Project-OSRM/osrm-backend/pull/2718>

Roundabout vs Roundabout Intersection vs Rotary vs [ActuallyNotRoundabout](#)



East Mission Street

North 7th Street

East Mission Street

Lane Anticipation

Anticipate lane changes for subsequent quick turns

Turn lanes later on in the route depend on turn lanes earlier

<https://github.com/Project-OSRM/osrm-backend/pull/2520>

Lanes in Roundabouts

Turn vs Restriction

Lane Anticipation

<https://github.com/Project-OSRM/osrm-backend/pull/2693>

Nopenopenope

Reversible Oneways

High Frequency, e.g. every 10, 20 minutes

Low Frequency, e.g. twice a day

<https://github.com/Project-OSRM/osrm-backend/issues/2837>

Open Issue! Ideas?

Tagging

From Tags to Instructions

Lua Profiles

Node Based Graph – Guidance Pre-Processing happens here

Edge Based Graph

Routing – Guidance Post-Processing happens after route is found

Assemble API response

Navigation Data Tagging

[Navigation Data in OSM](#)

[Turn Lanes](#)

[Turn Restrictions](#)

[Modeling Roads](#)

[Destination Signs](#)

Tags for Routing

http://wiki.openstreetmap.org/wiki/OSM_tags_for_routing

[Project's Taginfo: Supported Tags](#)

[Data Driven Tests](#)

Limitations, e.g. only node via restrictions: `fromWay, viaNode, toWay`

<https://github.com/Project-OSRM/osrm-backend/issues/2681>

Questionable* Decisions

`exit_to=` vs `destination=`

Stop Sign, Give Way tagging

Permission Inheritance (e.g. mixing lane access tags, hov lane tags, ...)

[Arbitrary situations make for arbitrary complexity](#)

* from our point of view

What's Next

Open Source Routing Machine v5.4 Release

[5.4](#) – Guidance, Improved Lane Handling

Turn penalty function fit to real data, Lane Access Tags, HOV Lanes,

Name change heuristic, Better instruction collapsing, ...

Roadmap

Better Turn Angles (Moritz recommends having a look [here](#))

Turn Penalties: [approach / exit speed](#), [turns through traffic](#), [road priorities](#)

More on Guidance: [Advanced Lanes](#), [Turbo Roundabouts](#)

[Leaflet Routing Machine](#) + [OSM Integration](#) (needs some frontend love)

Say Hi!

Please talk to us!

oftc/#osrm

<https://github.com/Project-OSRM/osrm-backend/issues>