

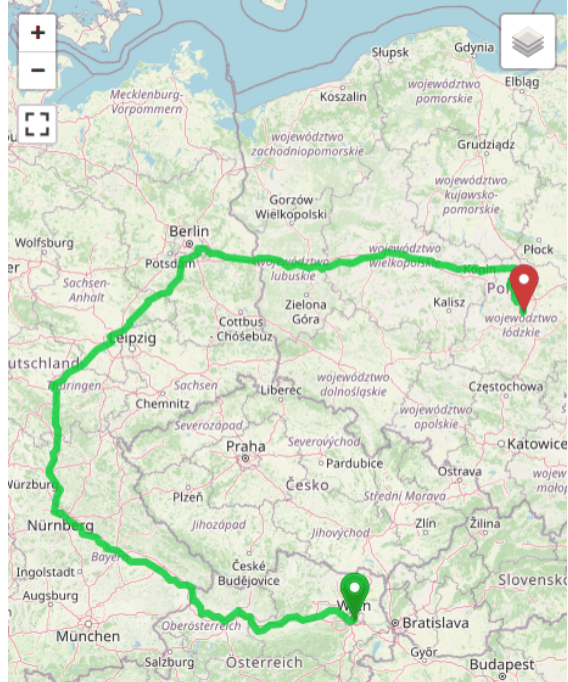
OpenRailRouting Release 1.0

Michael Reichert

michael.reichert@geofabrik.de

State of the Map Europe

Łodz, 2024-07-19



History

Michael
Reichert

History

Use cases

Previous
Features

Release 1.0

Demo instance

- idea in 2017
- routing on the tracks, not on timetable
- based on a fork of GraphHopper
- prototype and later production use at SNCF
- presentation at FOSSGIS 2018 and SotM 2018
- code on GitHub <https://github.com/Geofabrik/OpenRailRouting>

Use cases

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Release 1.0

Demo instance

- display routes of trains on the map
- calculate distances on railway network for logistical optimisations
- calculate distances to estimate arrival of trains

Previous Features

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Release 1.0

Demo instance

- routing on railway tracks
- map matching
- special treatment of points
- take into account
 - gauge
 - electrification (voltage, frequency)
 - penalties for reversing

New in Release 1.0

New Features

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History

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Features

Release 1.0

Demo instance

- upgraded GraphHopper fork to version 3.1
- custom cost models at runtime in JSON

New in Release 1.0

New Features

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History

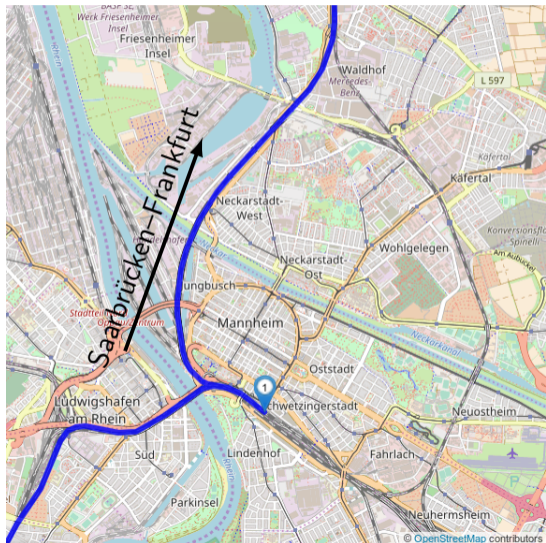
Use cases

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Release 1.0

Demo instance

Solved by GraphHopper:
Penalties for reversing
(*heading_penalty*)



New in Release 1.0

New Features

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Demo instance

- upgraded GraphHopper fork to version 3.1
- custom cost models at runtime in JSON

New in Release 1.0

New Features

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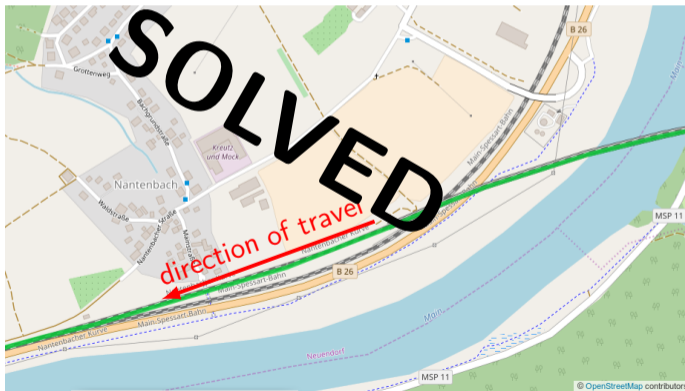
Previous
Features

Release 1.0

Demo instance

Left/right track

`railway:preferred_direction=forward/backward`



Public demonstration instance

Michael Reichert

<https://routing.openrailrouting.org>
For experimental use only, not for production!

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Demo instance

The screenshot shows the OpenRailRouting website interface. The browser address bar displays the URL <https://routing.openrailrouting.org/maps/?point=wien+hbf&point=lodz+kaliska>. The main map area shows a green route starting at Wien hbf (Vienna) and ending at Łódź Kaliska (Poland), passing through cities like Berlin and Poznań. On the left side, there is a control panel with the following elements:

- Logo: **OpenRailRouting**
- Search bar: `all_trail_tr TER 1435`
- Origin input: `wien hbf`
- Destination input: `lodz kaliska`
- Flex on: `OPX`
- Links: [Intro](#) | [Example](#)
- Code block containing JSON configuration:

```
{
  "speed": [
    {
      "if": "electrified==NO",
      "multiply_by": 0.0,
    },
    {
      "if": "voltage > 18000",
      "multiply_by": 0.0
    }
  ]
}
```
- Search button: `Search`
- Summary: `1454km werden 11h brauchen km|mi`
- Footer links: [Imprint](#), [Privacy](#), [source code \(backlog\)](#), [documentation](#), [map matching frontend](#)

The development of this software has been sponsored by



and its clients

Source code: <https://github.com/Geofabrik/OpenRailRouting>

GraphHopper fork: <https://github.com/Geofabrik/GraphHopper>

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