

JOSM Public Transport Assistant Plugin

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OpenStreetMap



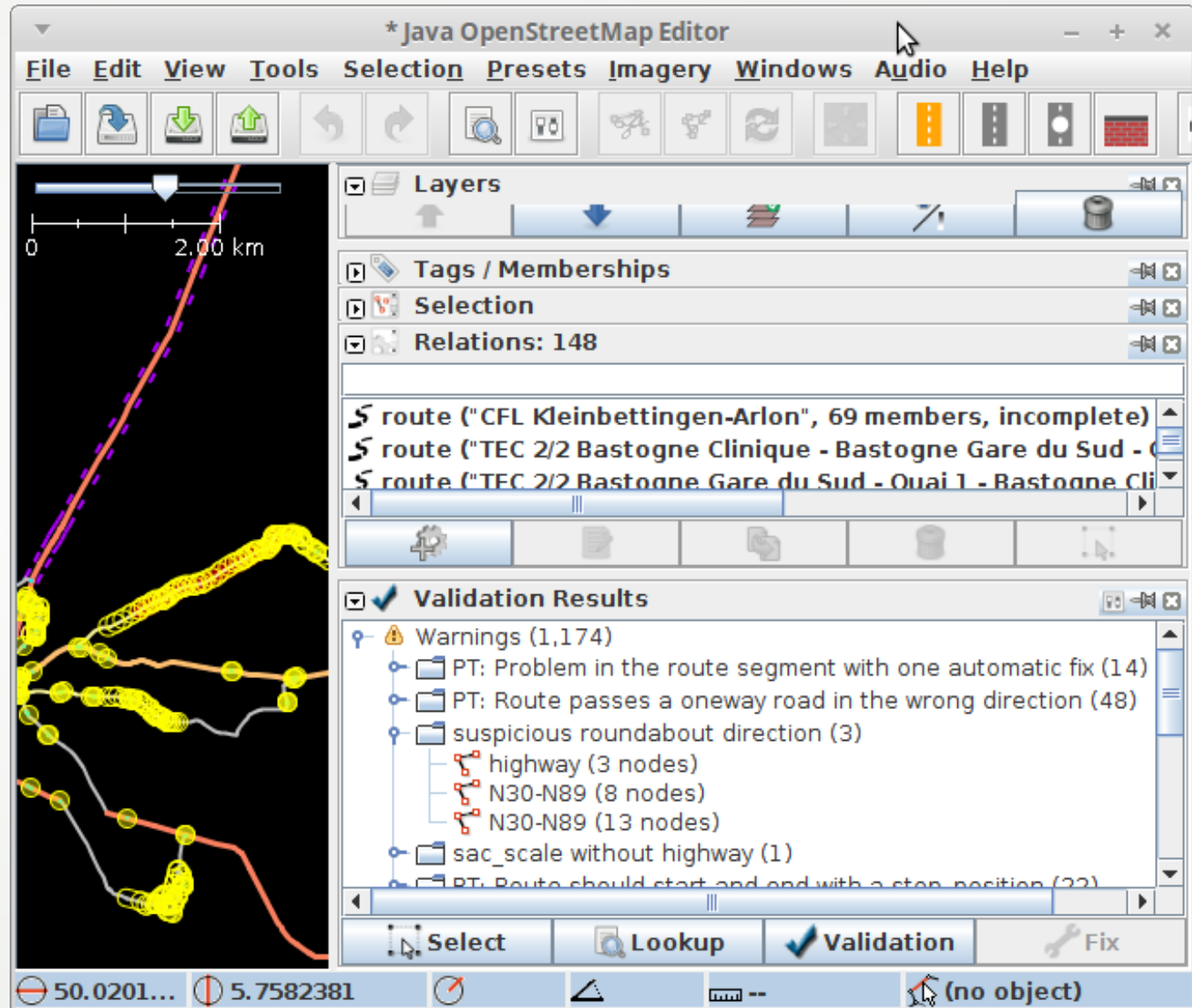
Google
Summer of Code



**STATE OF
THE MAP**
Brussels, Belgium 2016

What is JOSM?

- OSM editor written in Java
- Extensible with built-in (>130 in SVN repository) & external plugins
- pt_assistant



Public Transport Mapping

Technisches Rathaus

4 - 12

4,5

4 - 11

Technisches Rathaus

4,5

Edit relation #5,700,757 in layer 'josm_13521_example.osm'

Tags and Members Parent Relations Child Relations

Tags

Transport/Public Transport/Public Transport Route (Rail) ...

Annotation/Description ...

Key	Value
from	Technische Fakultät
name	Straßenbahnlinie 4: Messe =>...
name:de	Straßenbahnlinie 4: Messe =>...

Members

Role	Refers to
stop	Technisches Rathaus (48.0021199...)
platform	railway (6 nodes)
stop	Bissierstraße (48.0021199...)
platform	Bissierstraße (10 nodes)
stop	Am Lindenwäldle (47.994...)
platform	Am Lindenwäldle (10 nodes)
	railway (3 nodes)
	railway (3 nodes)
	railway (2 nodes)
	railway (41 nodes)
	railway (2 nodes)
	railway (20 nodes)
	Linie 5 (15 nodes)
	railway (8 nodes)
	Linie 1;Linie 3 (2 nodes)
	Linie 1;Linie 3 (10 nodes)
	Linie 1;Linie 3 (2 nodes)
	Linie 1:Linie 3 (7 nodes)

Selection

rail

Apply Role:

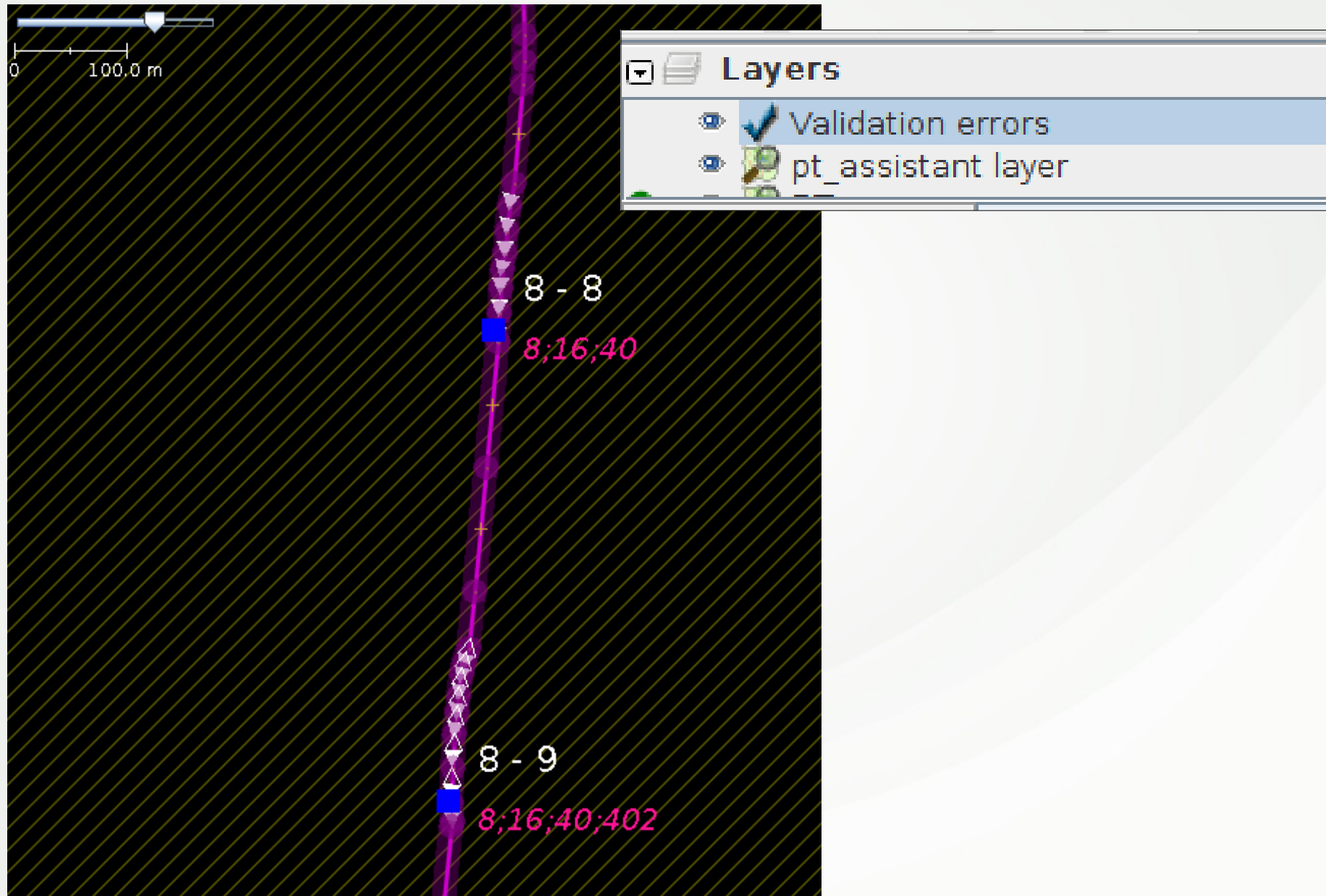
Why Another Plugin?

- Public transport routes can be easily broken
- Inconsistencies in public transport routes due to changes in the underlying road network
- Facilitation of mapping
- Propagation of changes to other routes
- OSM public transport schema version 2.0

Eligible Routes

- Tagged as “public_transport:version =2”
- Bus, trolleybus, share taxi, tram, subway, light rail, train => two-directional routes
- Assumption: order of stops is correct
- Priority of tags over roles in the relation

pt_assistant layer



Available Tests

17 tests:

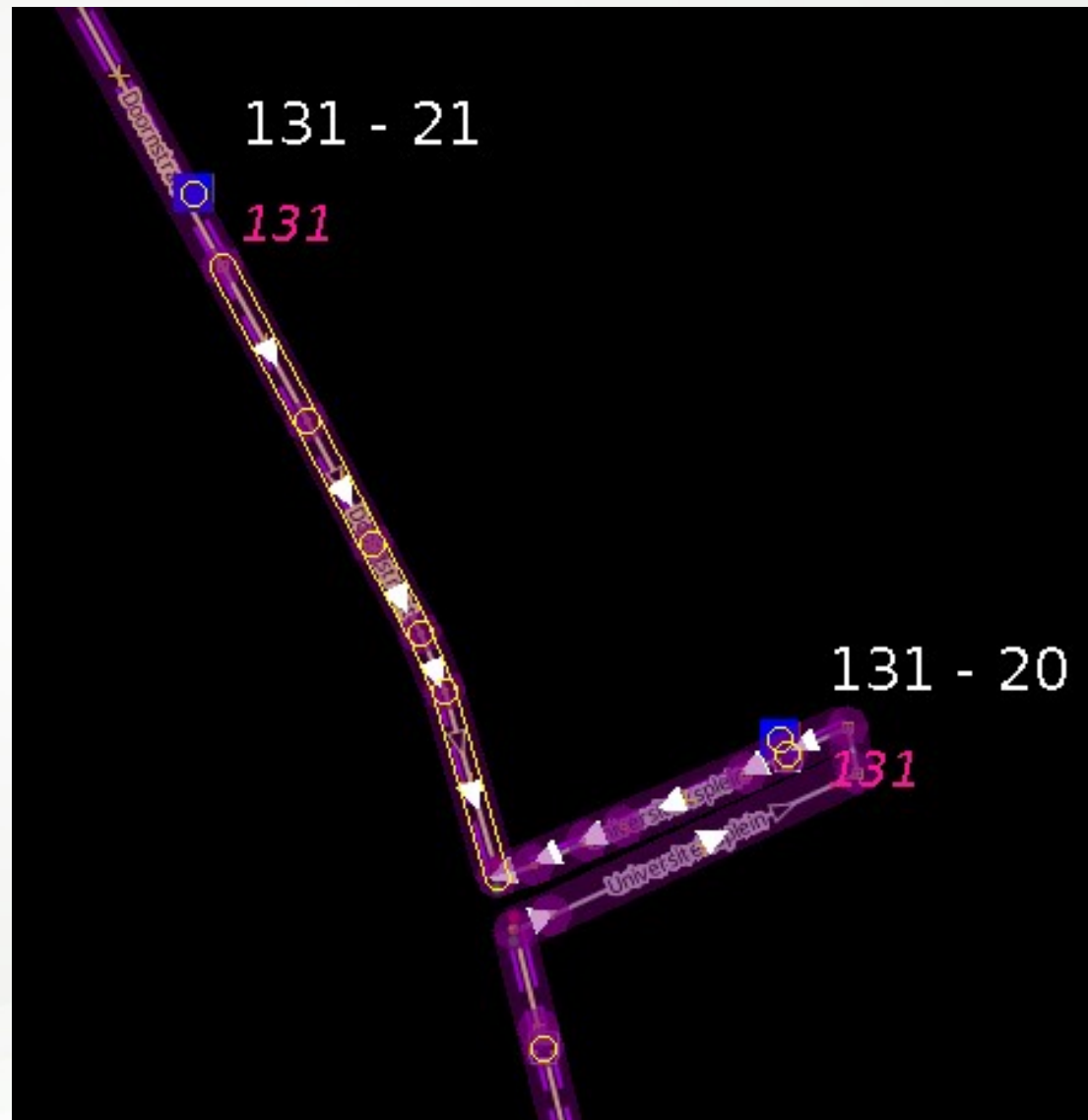
- Stops (6)
- Individual ways (3)
- Route segments (7)
- Complete route (1: sorting test)

Available Tests: Stops

- No solitary stop_positions allowed
 - Platform cannot be part of a road
- } fix by editing tags
- Stop_area tests: by xamanu

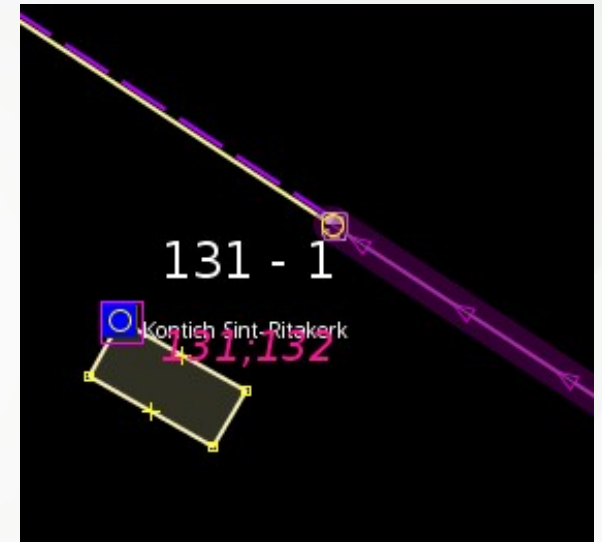
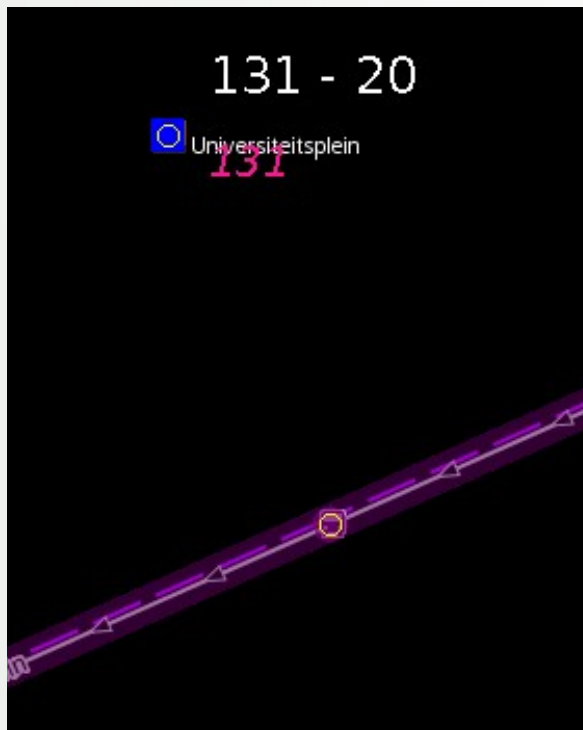
Available Tests: Individual Ways

- Oneway streets in the wrong direction
- Road type does not match the route type
- Road marked as construction
- Fix: opens the Relation Editor, selects problematic ways & zooms in



Available Tests: Route Segments

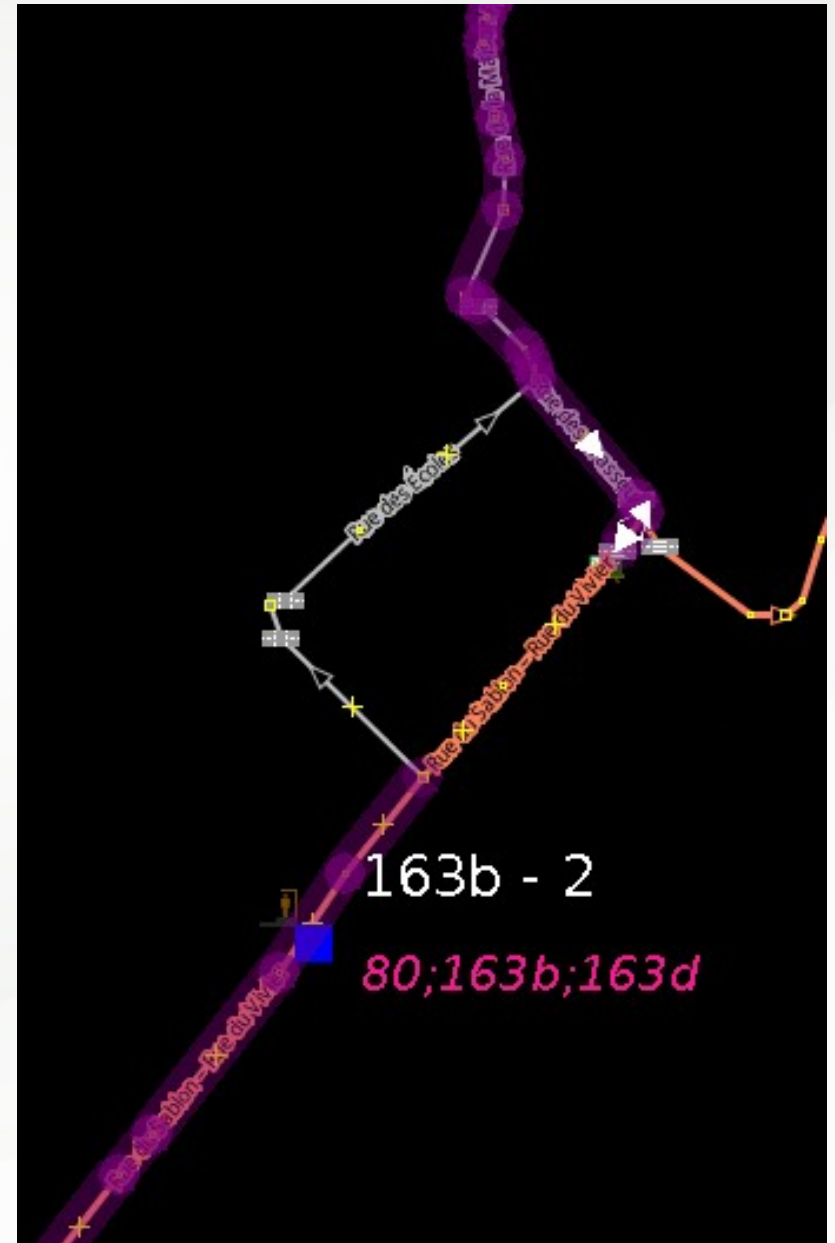
- First / last ways should end with a stop_position
- All stops should be served
- Continuous sequence of ways



- Data model: PTStops & PTWays
- Stop-to-way assigner
- List of correct route segments

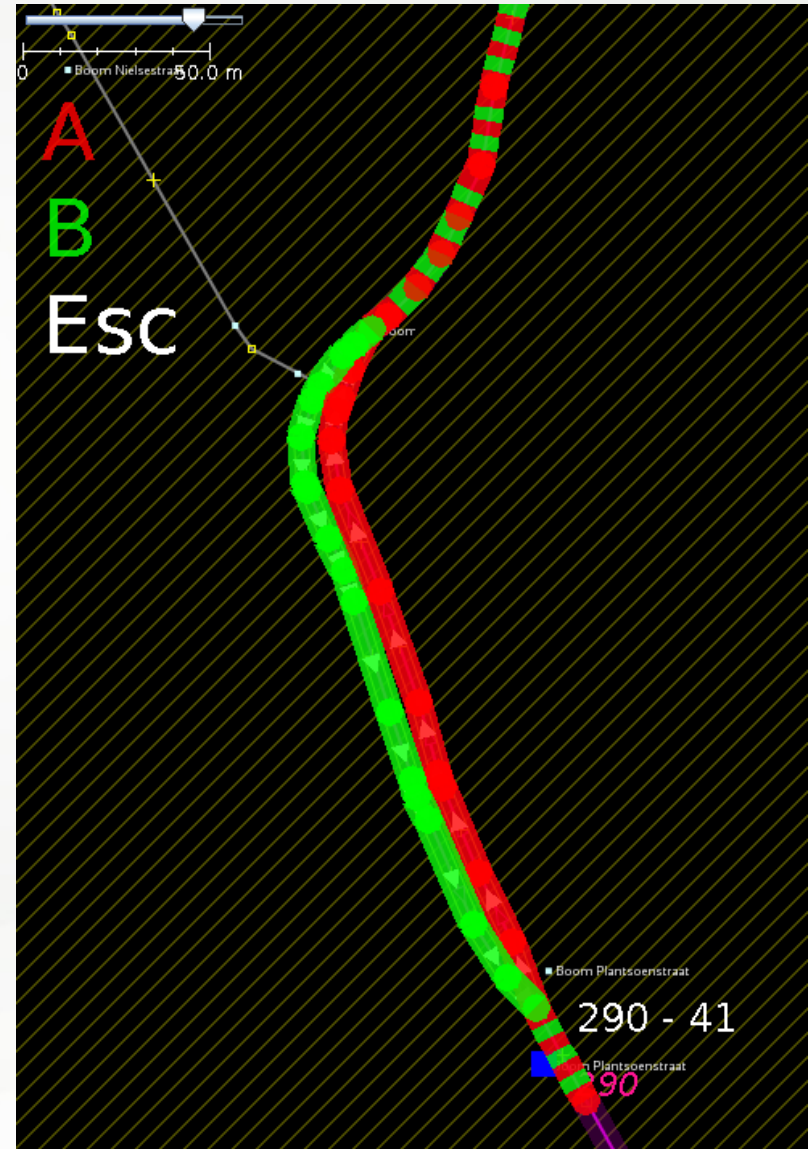
Route Segment Fixes

- Try to use correct segments list
- Try to sort / remove ways of this route segment



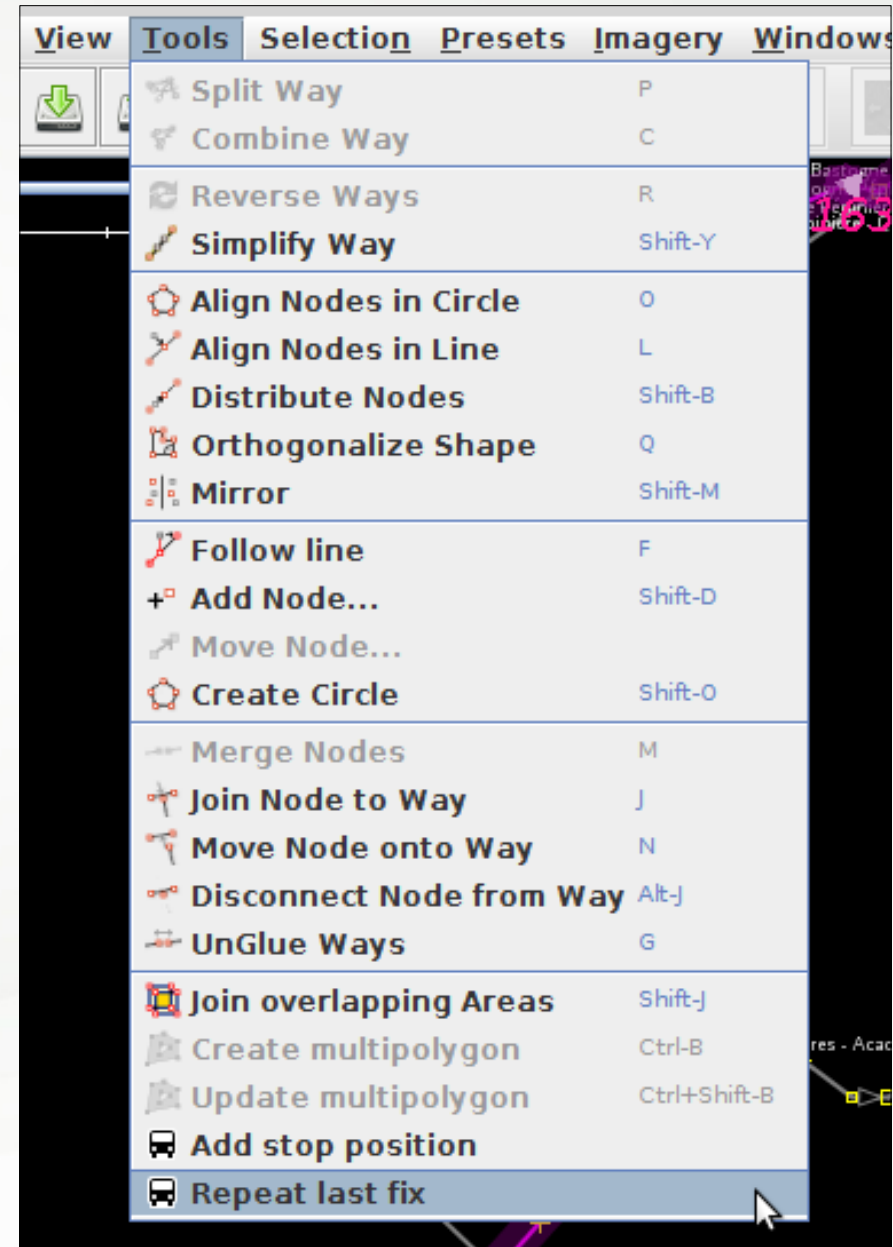
Route Segment Fixes

- Up to 5 variants displayed



Tools Menu Items

- Adds a new point with stop_position tags
- Repeats the last fix if available



User Preferences

- Incomplete relations are not validated

