

OurWay: Collaborative route planning

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About MAG

- ▶ Østfold University College, Halden, Norway.
- ▶ Mobile applications, implementation and use.
- ▶ Some background in digital maps (OneGlobe, OneMap)
- ▶ Found OSM through interest in geo-tagging.
- ▶ Attended the loW mapping party.

Introduction

- ▶ Route planning.
- ▶ Collaboratively created geodata - OSM.
- ▶ Collaborative use and on-line information sharing.
- ▶ Cases: wheelchairs and baby strollers.
- ▶ Paper recently accepted at NGMAST 2007.

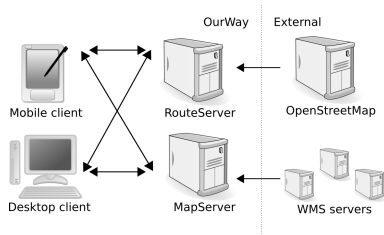
What OurWay does

- ▶ A point to point route planner.
- ▶ Users select/create peer groups.
- ▶ Users can give feedback as they move along a route.
- ▶ Routes are adapted to a groups collective annotations.



Arhcitecture

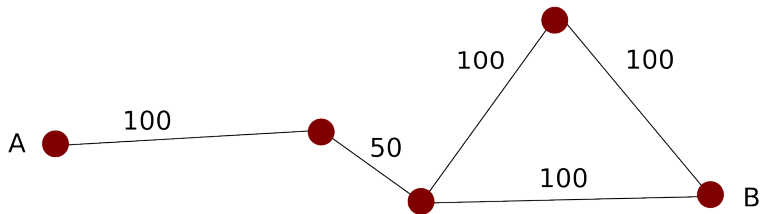
- ▶ Map server
- ▶ Route server
- ▶ Mobile client
- ▶ Desktop client



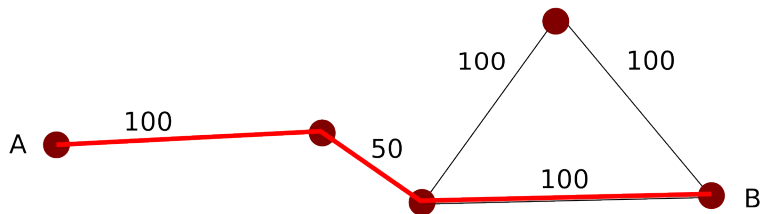
Algorithm

- ▶ A pragmatic network approach.
- ▶ Filtering OSM data during import.
- ▶ Using A* for discovering routes.
- ▶ Simple user feedback: three levels of accessibility.
- ▶ Feedback is attached to segments.

Weighting example

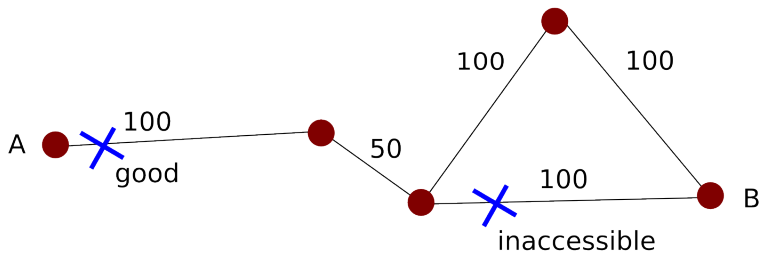


Weighting example

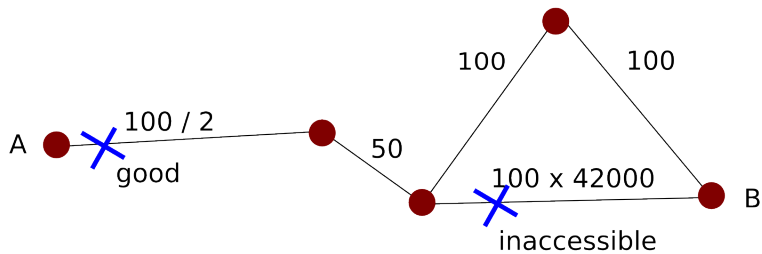


Min. dist.: 250

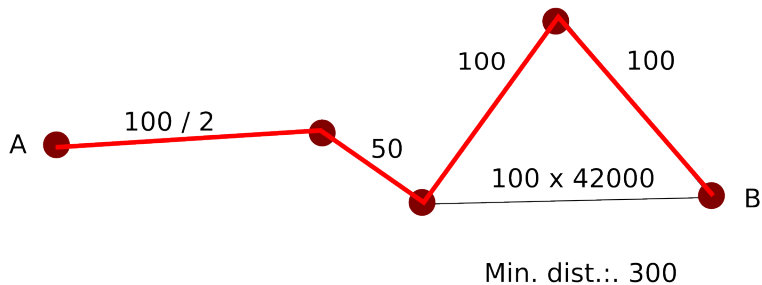
Weighting example



Weighting example



Weighting example



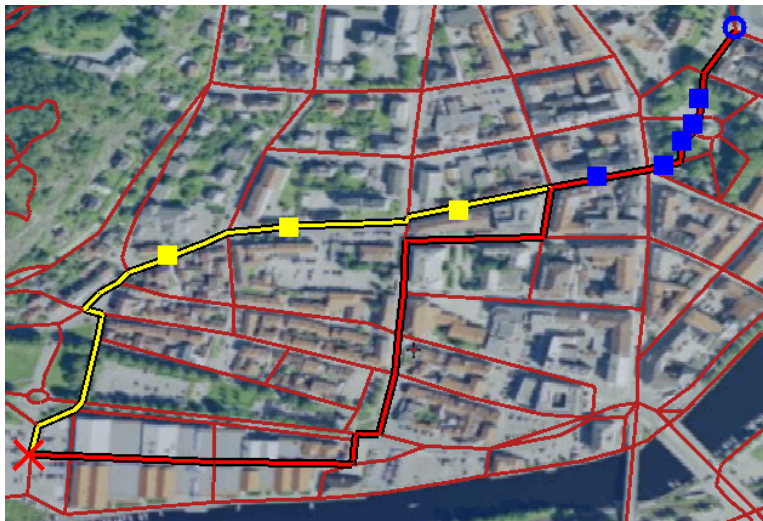
OurWay example



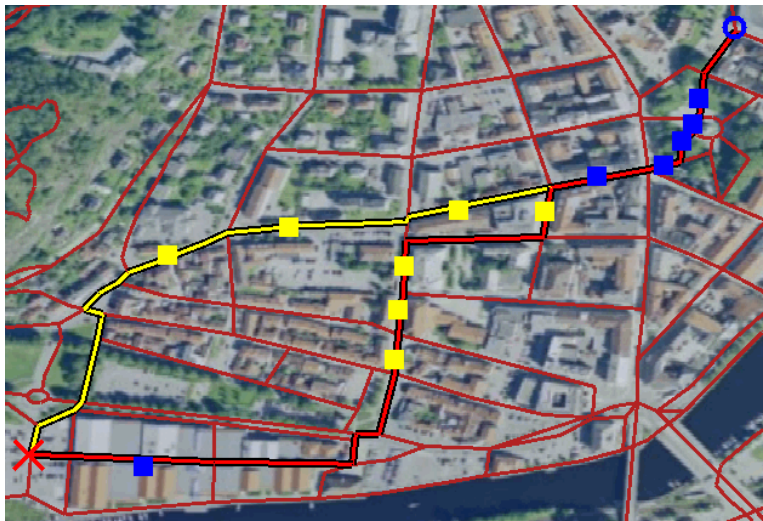
OurWay example



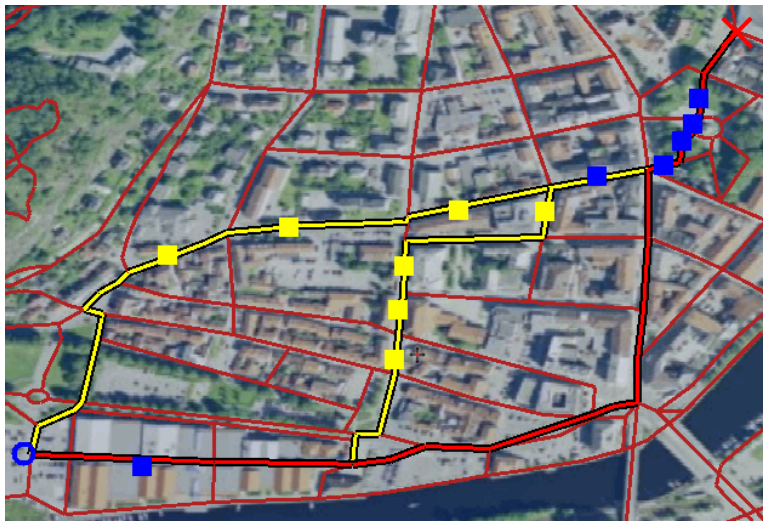
OurWay example



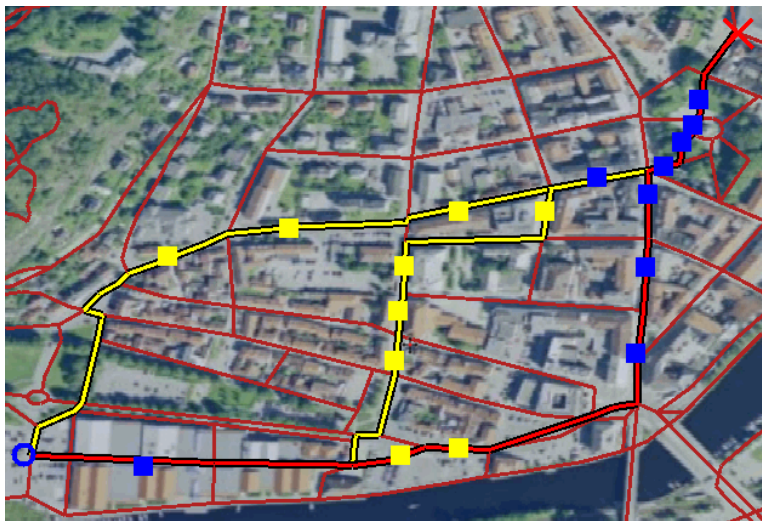
OurWay example



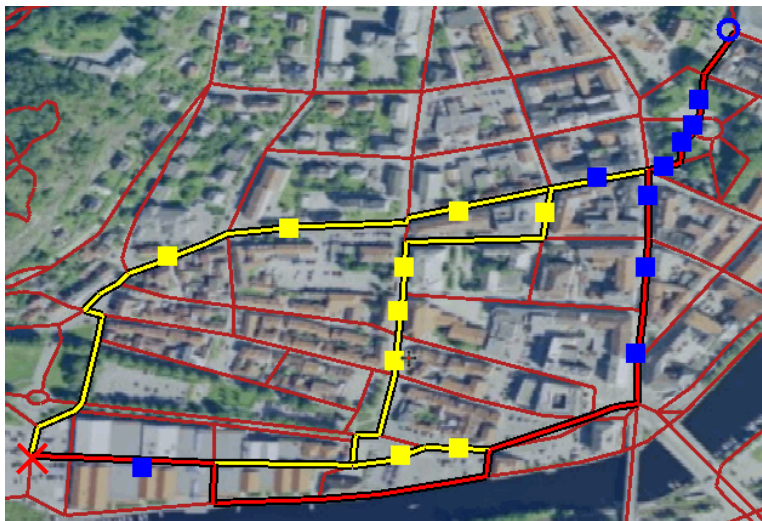
OurWay example



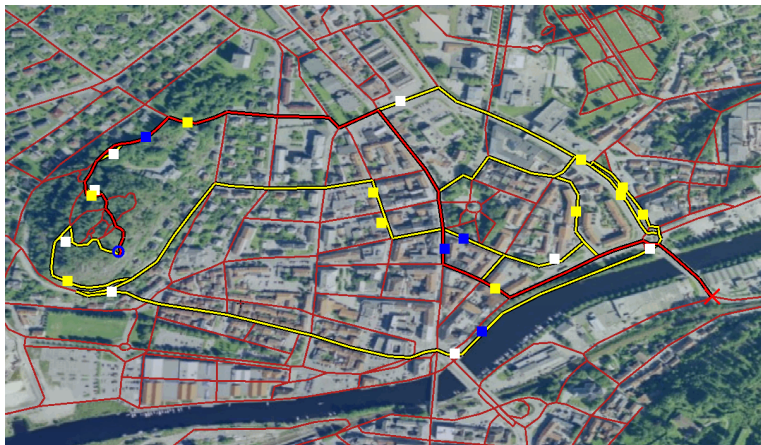
OurWay example



OurWay example



OurWay example



Blue=good, yellow=uncomfortable, white=inaccessible.

Some challenges

- ▶ It's mobile and on-line.
- ▶ Establishing trust
 - ▶ Displaying source of annotations.
 - ▶ Showing annotations on the map.
 - ▶ Visualizing data changes over time.
- ▶ Handling temporal data.
- ▶ Handling conflicting user feedback.
- ▶ Controversial annotations.

Next steps

- ▶ Sharing of data between groups.
- ▶ Understanding motivation for use and contribution.
- ▶ Change of client platform.
- ▶ OSM exporter - create new tracks on the device.

Licensing

- ▶ We'll release the source under GPL soon.
- ▶ Who owns the annotations?
- ▶ Can this become part of OSM “core”?

The End

Questions or comments?



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