Project Part I: Visualisation
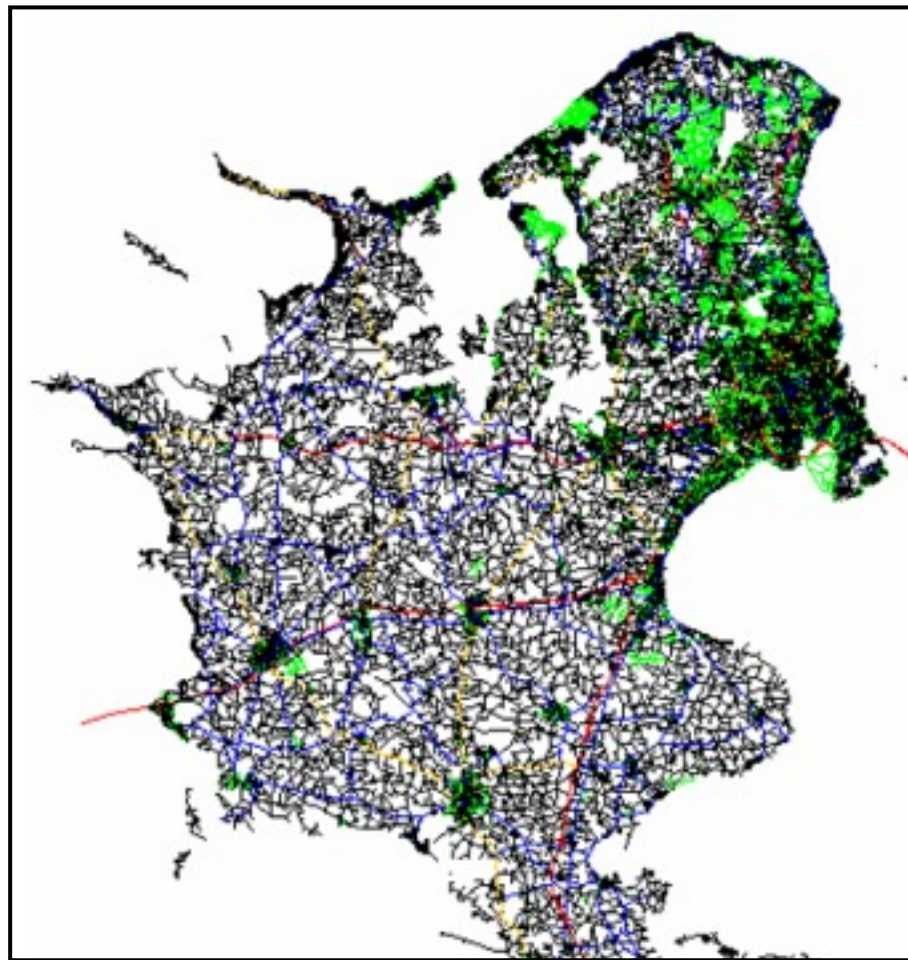
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Draw the map

- Make an application that draws all the road segments in the dataset
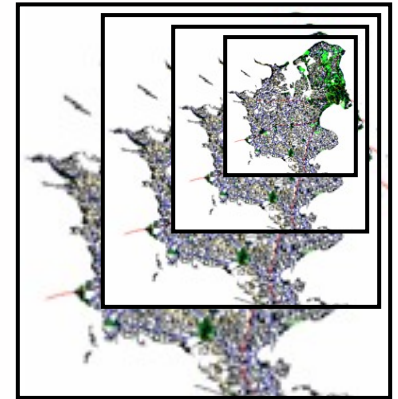
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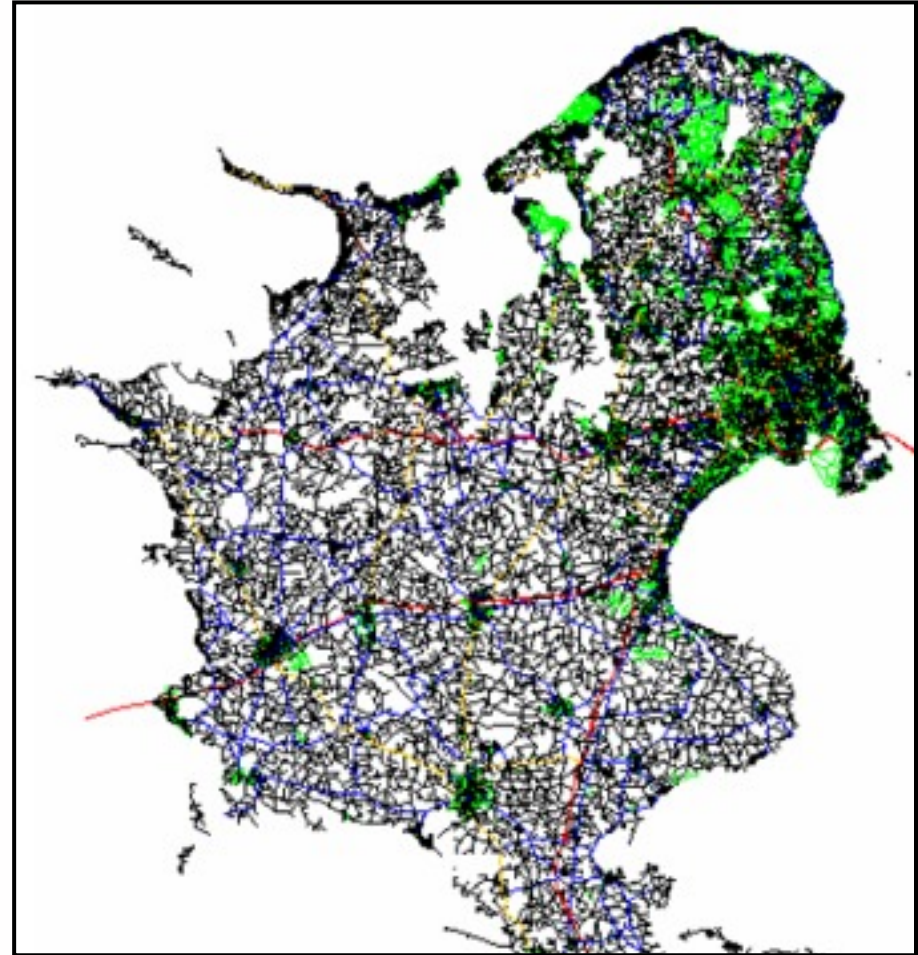
Differentiate between roads

- Draw different segment types with different colours, e.g.
  - Highways: red
  - Main roads: blue
  - Paths: green
  - Other: black

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Adjust size
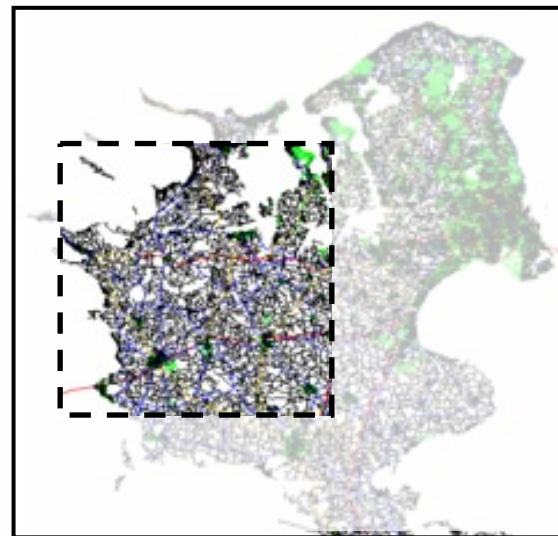
It must be possible to adjust the size of the map drawing, i.e. when resizing the panel with the mouse or maximizing the window.

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Zoom in

- You must be able to focus on a specific area of the map by dragging a rectangle with the mouse.
- Zoom means that not all road segments are shown and that pixel coordinates change

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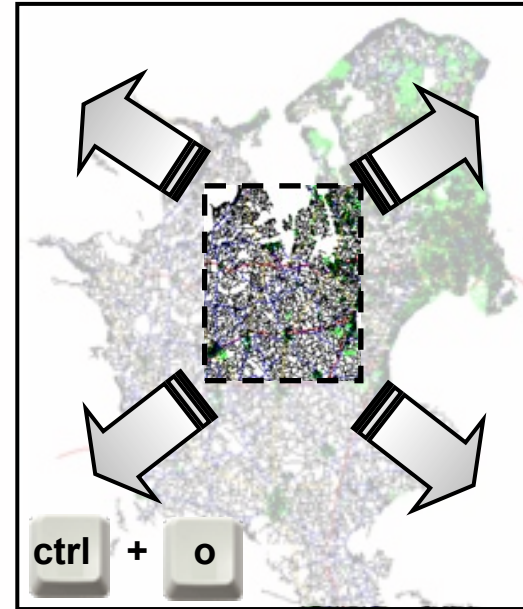
Display closest road name

• Either continuously or when a user **hovers** over the map, unobtrusively display the name of the road closest to the mouse, e.g., in a status bar.

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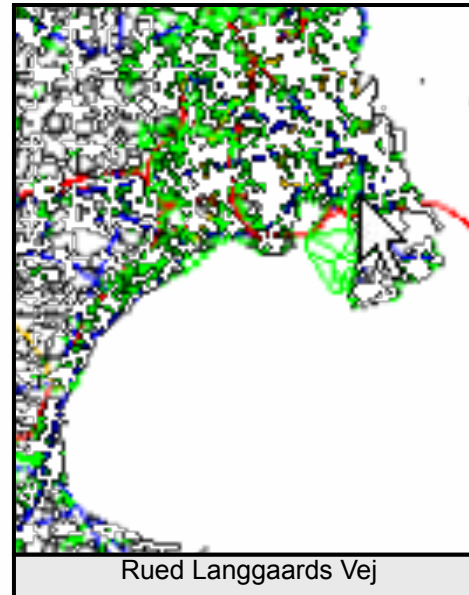
Optional

Zoom out

- User must be able to zoom out e.g. by using the mouse wheel or by pressing the key '**O**' or **Ctrl+O** etc.

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Scrolling

- You should be able to scroll the map by using e.g. the arrow keys or the mouse

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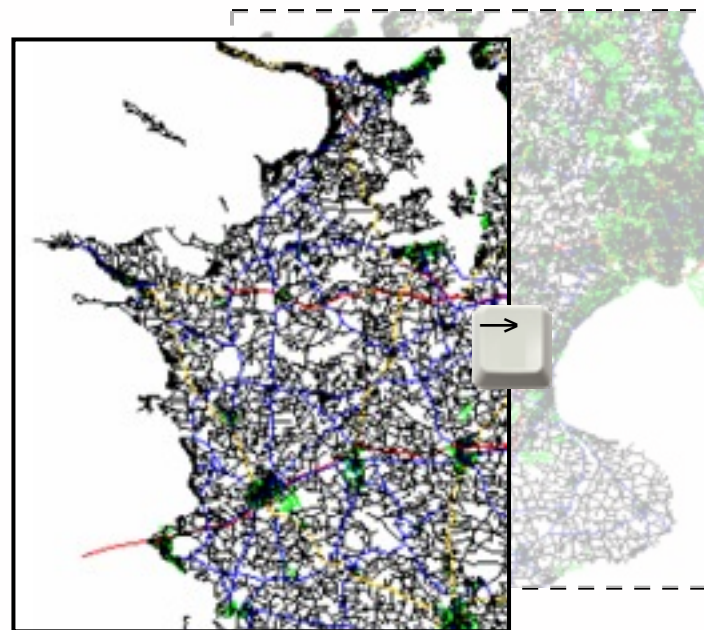
Display certain types of roads

- Add options so that user can decide to display only **certain kinds of roads**

  e.g. Motorways, paths etc.

- Alternatively this can be that the user chooses transport medium and thus e.g.

  - **No paths** for cars
  - **No motorways** for bicycles

Optional
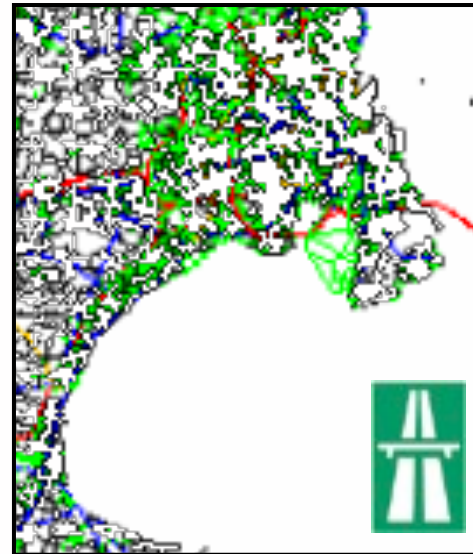
Draw coastline

- A coastline file from OpenStreetMaps, also containing regional boundaries, can be made available to you by the course manager or you can create your own at e.g. here http://www.ngdc.noaa.gov/mgg_coastline/
- (lon/lat format!)

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Be creative! Add you own features! Make it better than Google Maps

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Datasets

Possible datasets:
1. Use Krak ASCII dataset (has accompanying Java loader)
2. Use OpenStreetMaps data (data only, no program sources)

Language:
You are encouraged, but not required to use Java.

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Important dates

- **Wed. Apr. 2 2014 @ 2pm**
    - **Deadline** for the source code and the reports

- **Mon. Apr. 7 2014 10-16**
    - groups will present a 15' demo of their products +5mins for questions

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What to deliver

At the deadline

- **Source code:** .java files not .class files
- **A report:**
  - .pdf up to 12 pages
  - group constitution

Every Monday (apart from April 1):
- worksheets
- group diaries

ALL SUBMISSIONS IN LEARNIT!

One submission pr. group.

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Some advice

- **Use step-wise refinement:**
  - First analyze, design and implement a simple solution then make a more complicated solution
- **Define milestones e.g. 1-2 every week:**
  - Work on a specific required part of the project and then after milestones have been reached ,work with the extensions
- **Be ambitious**
  - You are lot of people with lots of time.
- **Remember Testing!**
  - Not required to hand in now but will be part of the final project

Office hours.

- **See learnit (calendar, top-left).**

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Have fun!

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