
HVORFOR SÅ MYE STÅHEI RUNDT VECTORTILES?

Sverre Wisløff

NORKART

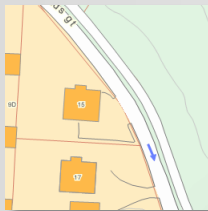
The logo for NORKART, featuring the word "NORKART" in a bold, sans-serif font. A small green triangle is positioned below the letter "A".

Hva er vectortiles?

Raster



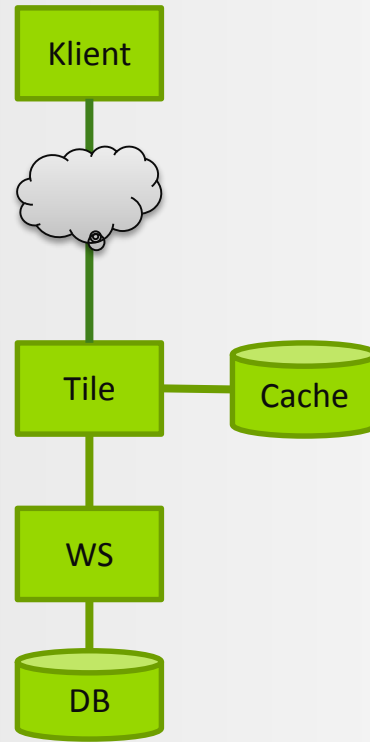
- Fast projeksjon
- Def Ruteinndeling
- Def URL adressering
- Lokale koordinater
- Faste tegneregler
- Faste målestokker



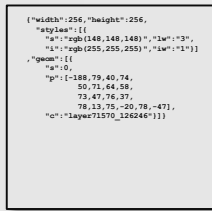
tile.osm.org/{z}/{x}/{y}.png

tile.osm.org/{z}/{x}/{y}.vector.pbf

Vektor



- Fast projeksjon
- Def Ruteinndeling
- Def URL adressering
- Lokale koordinater
- Generalisering



KORT HVA DET ER

- Struktur:
 - layers
 - features - unique id
 - attributes: key:value pairs
 - geometries: array of ints
- Geometrier:
 - Punkt, linjer og polygoner
 - Koordinater som integers
 - Delta encoding
 - Zigzag encoding
- Protobuf
- Overzooming
- Generalisering

```
layers {
  name: "points"
  features {
    id: 1
    tags: 0
    tags: 0
    type: Point
    geometry: 9
    geometry: 2410
    geometry: 3080
  }
  keys: "hello"
  values {
    string_value: "world"
  }
  extent: 4096
  version: 2
}
```

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uint32

[[-122, 48], [-121, 47], [-122, 46]], ...

->

[-122, 48, -1, -1, -1, -1, ...]

0 , -1 , 1 , -2 , 2 , ...

->

0 , 0 , 1 , 2 , 3 , ...

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*** .PBF**



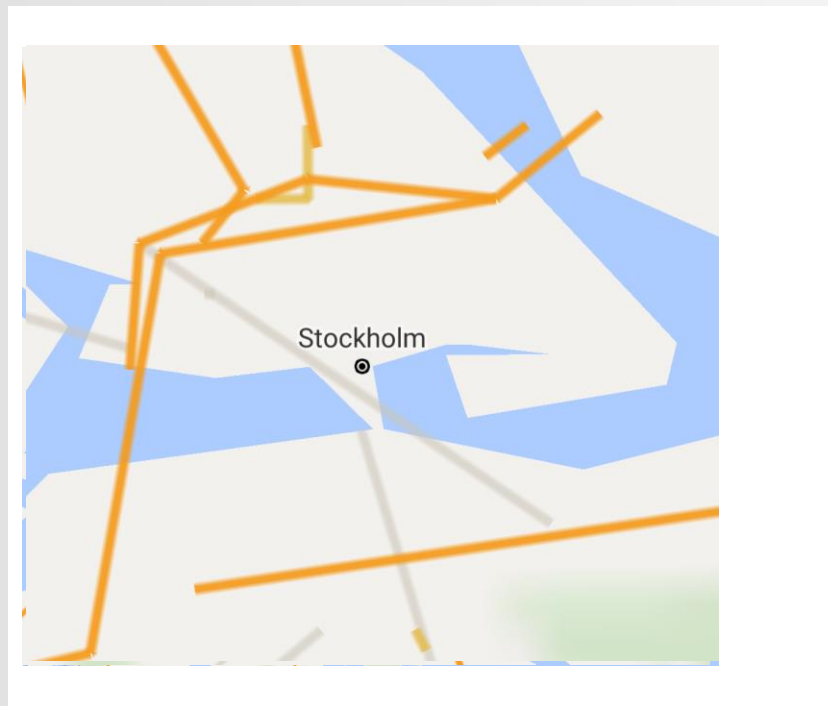
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...

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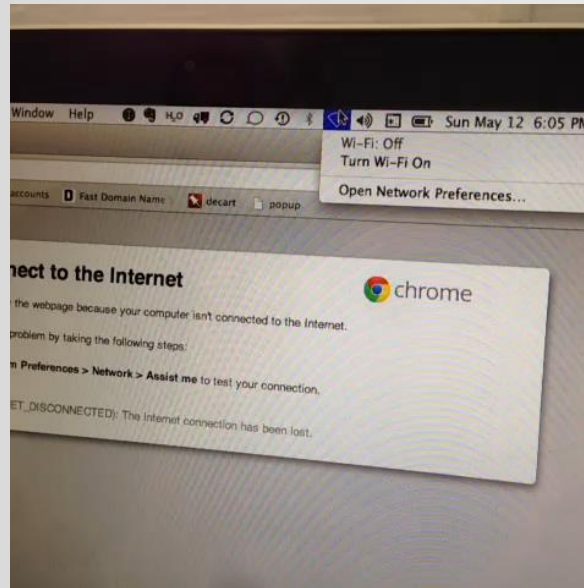


Hva gir vectortiles?

VECTORTILES GIR LETTERE OVERFØRING OG RASKERE OPPTEGNING

20-50%

VECTORTILES GIR LETTERE OVERFØRING OG RASKERE OPPTEGNING



VECTORTILES GIR
TEKNOLOGI BEDRE TILPASSET MOBIL

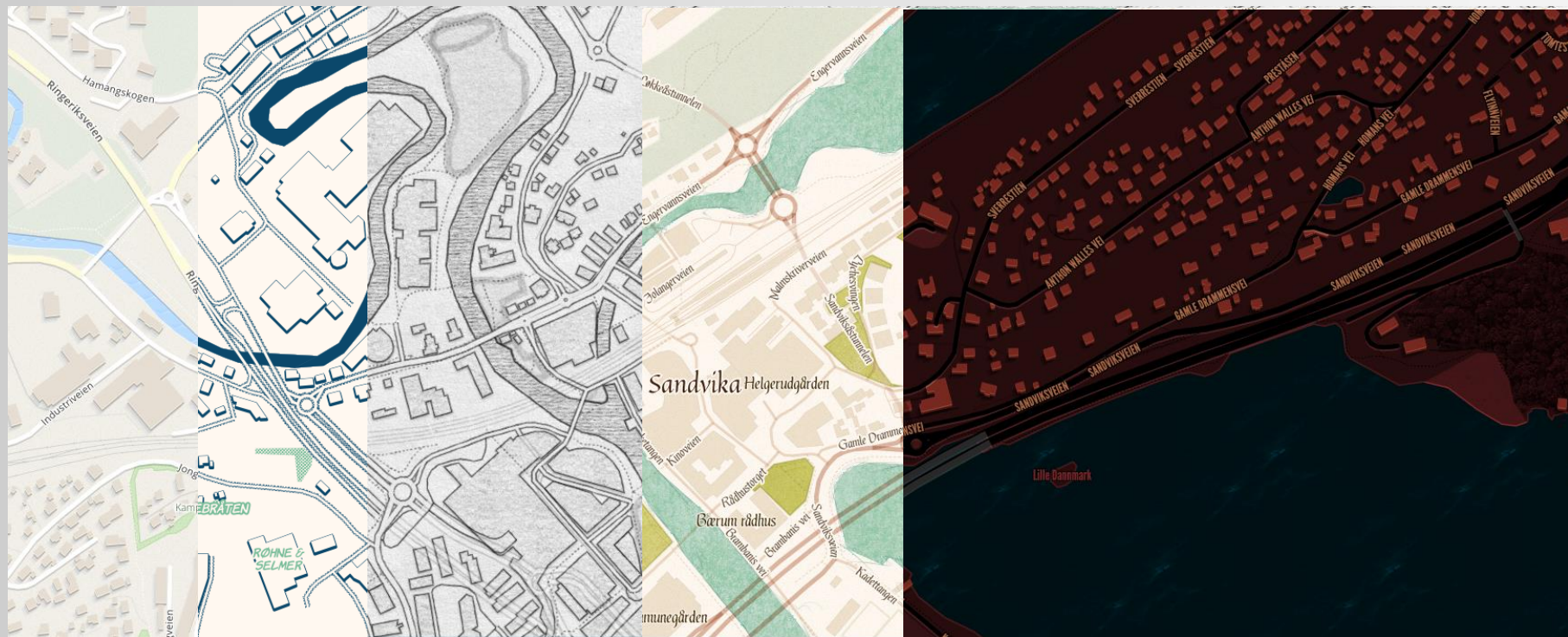
JSON

VECTORTILES

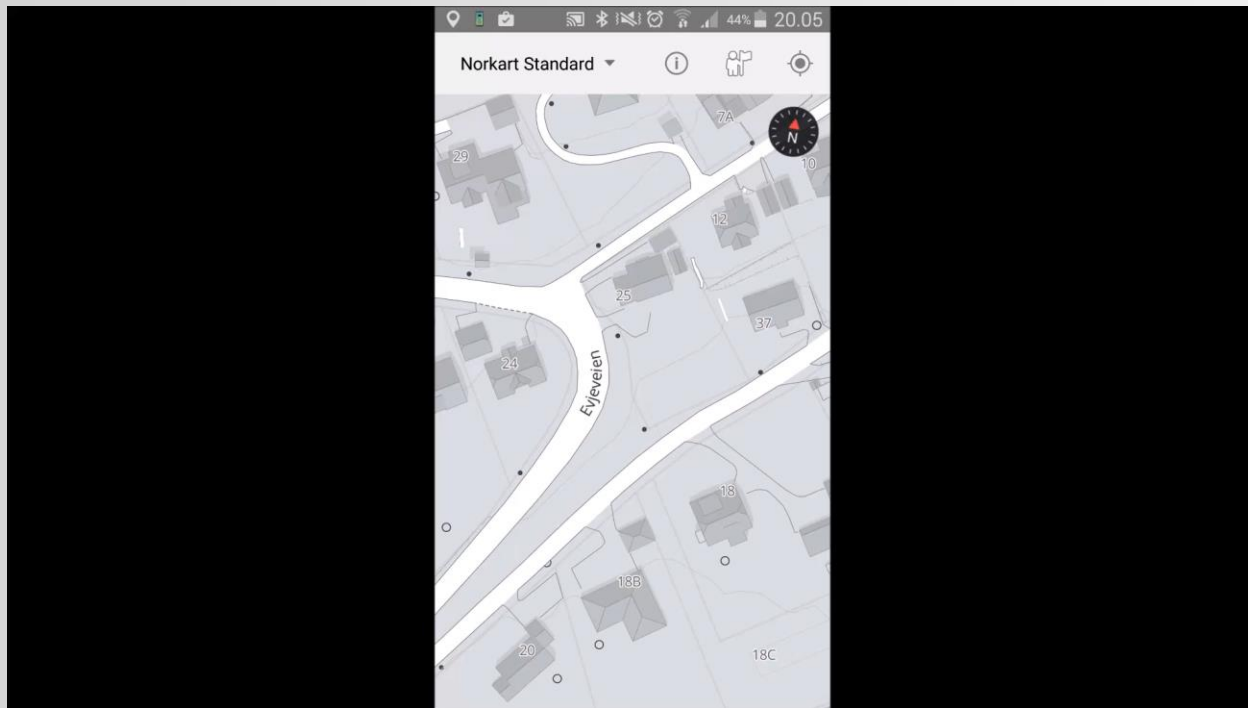
SKILLER DATA, TEGNEREGLER OG RENDRING

Data ↔ Style

VECTORTILES GJØR AT KLIENTEN KAN BESTEMME KARTOGRAFI SELV

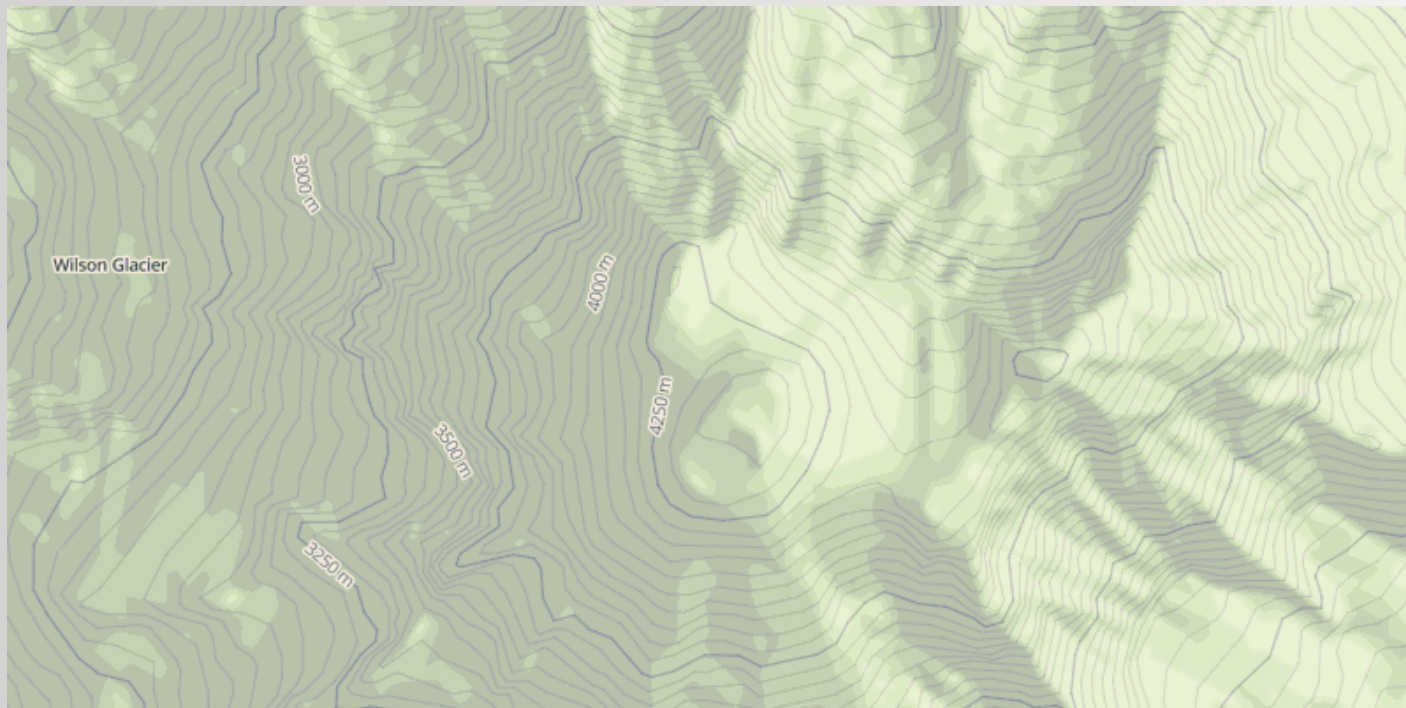


VECTORTILES GIR BEDRE TEKSTER



VECTORTILES GIR

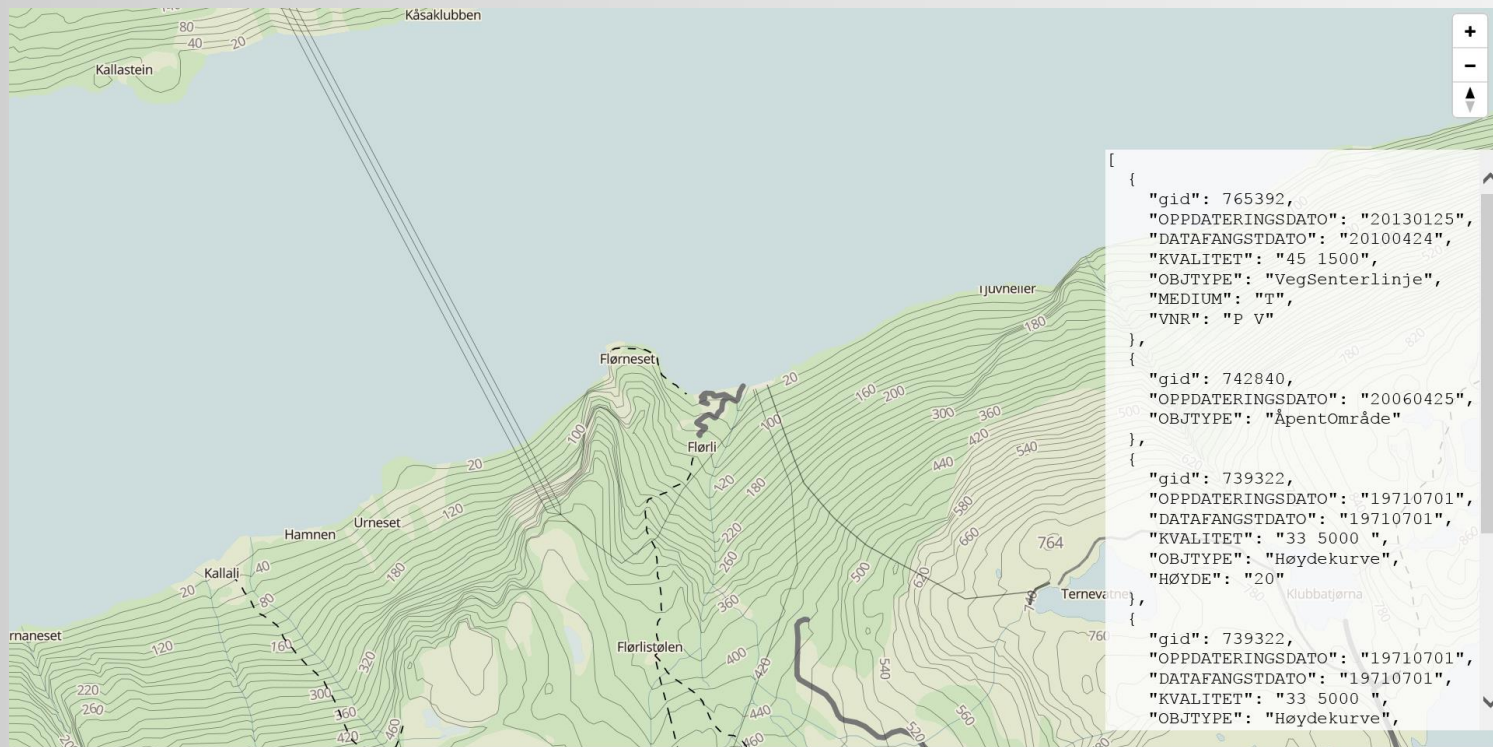
MULIGHETEN TIL ROTERTE KART



VECTORTILES GIR TILGANG TIL EGENSKAPER



VECTORTILES GIR INTERAKTIVITET VED MOUSE-OVER

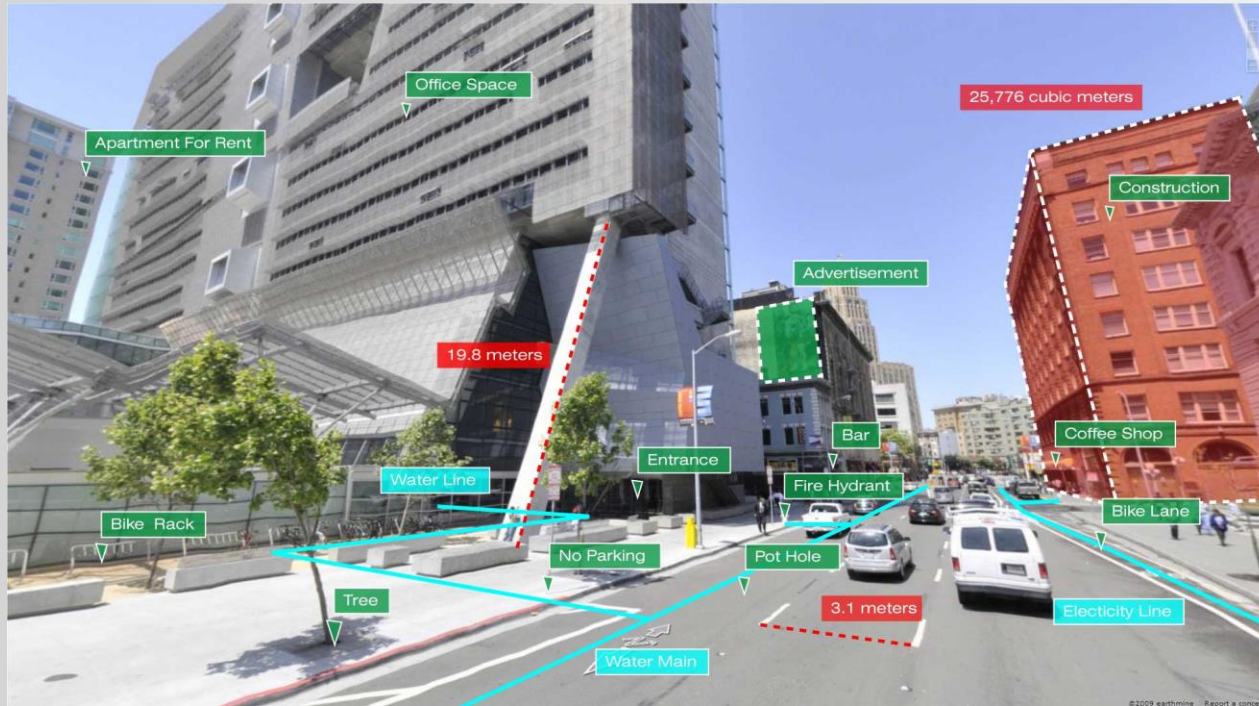


VECTORTILES GIR

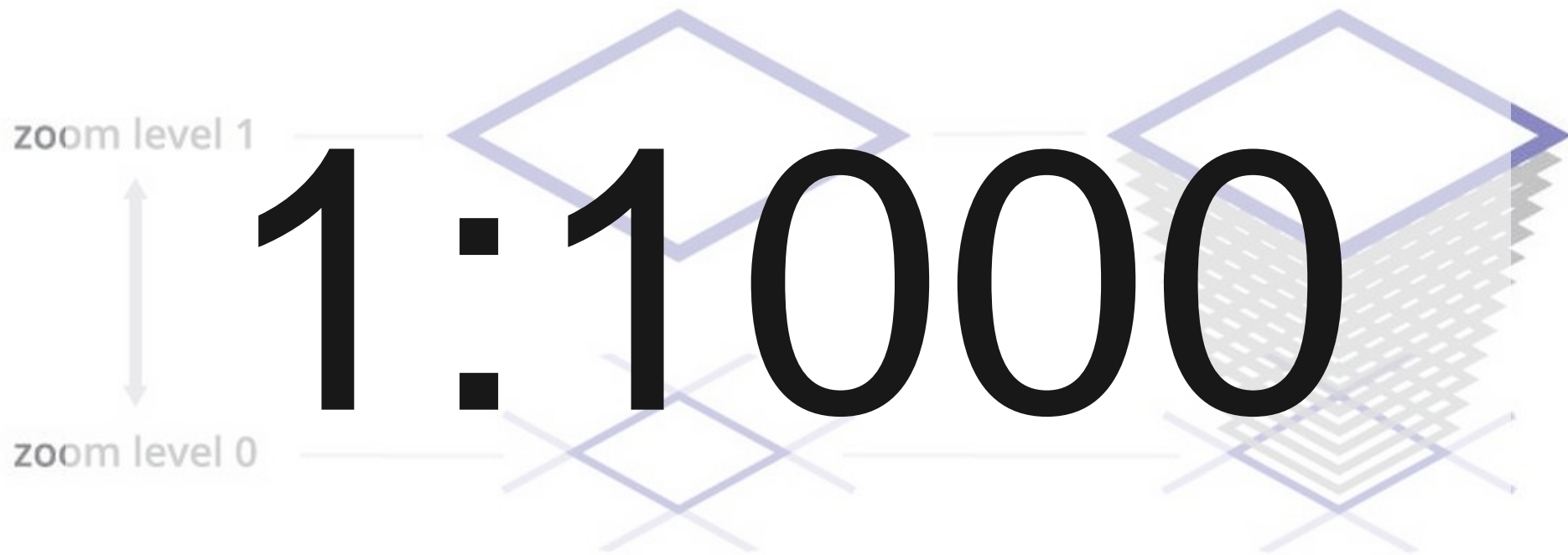
MULIGHET FOR Å SPØRRE ETTER MER DATA

Lazy loading
Eager loading

VECTORTILES GIR VEKTOR I 3D OG I SKRÅBILDER



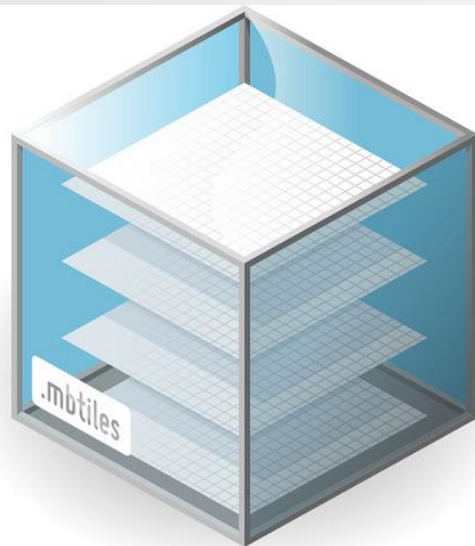
VECTORTILES GIR PRESENTASJON I ALLE MÅLESTOKKER



VECTORTILES GIR
BEDRE UTSKRIFTER

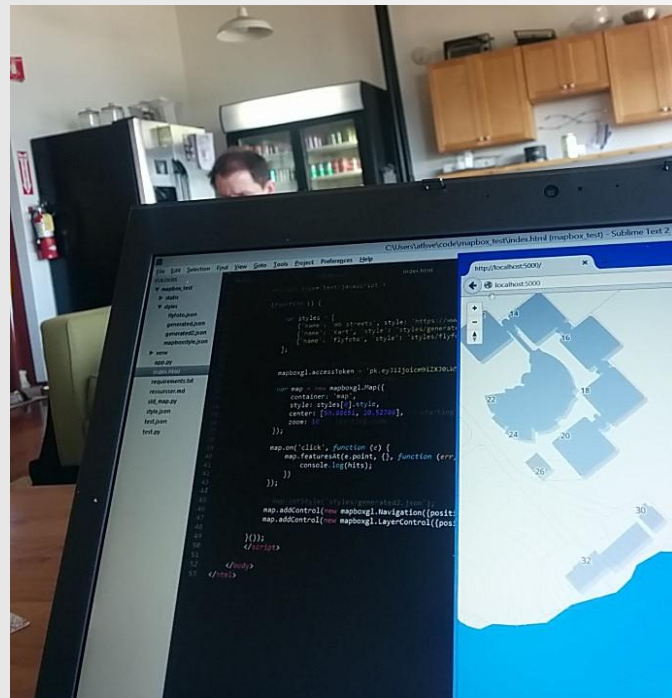
dpi

VECTORTILES GIR MULIGHET FOR OFFLINEKART



Noen eksempler

NORKART JOBBER MED VECTORTILES

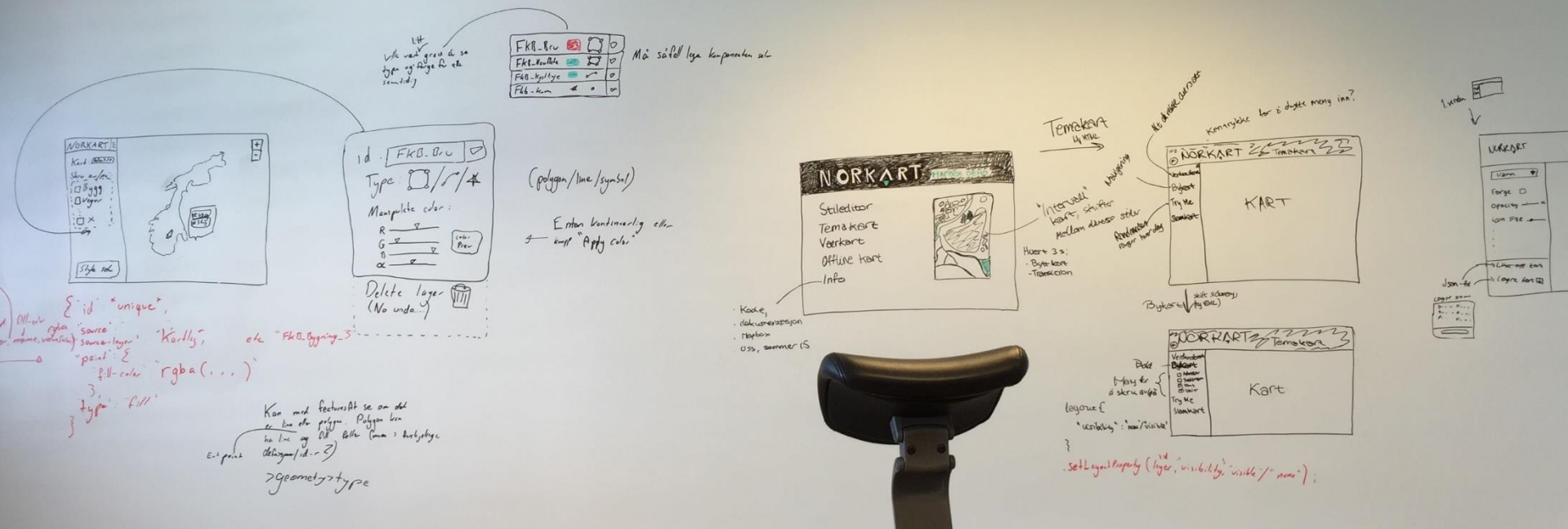


<http://sverreskort.blogspot.no/2011/10/dd-over-raster-tiles.html>

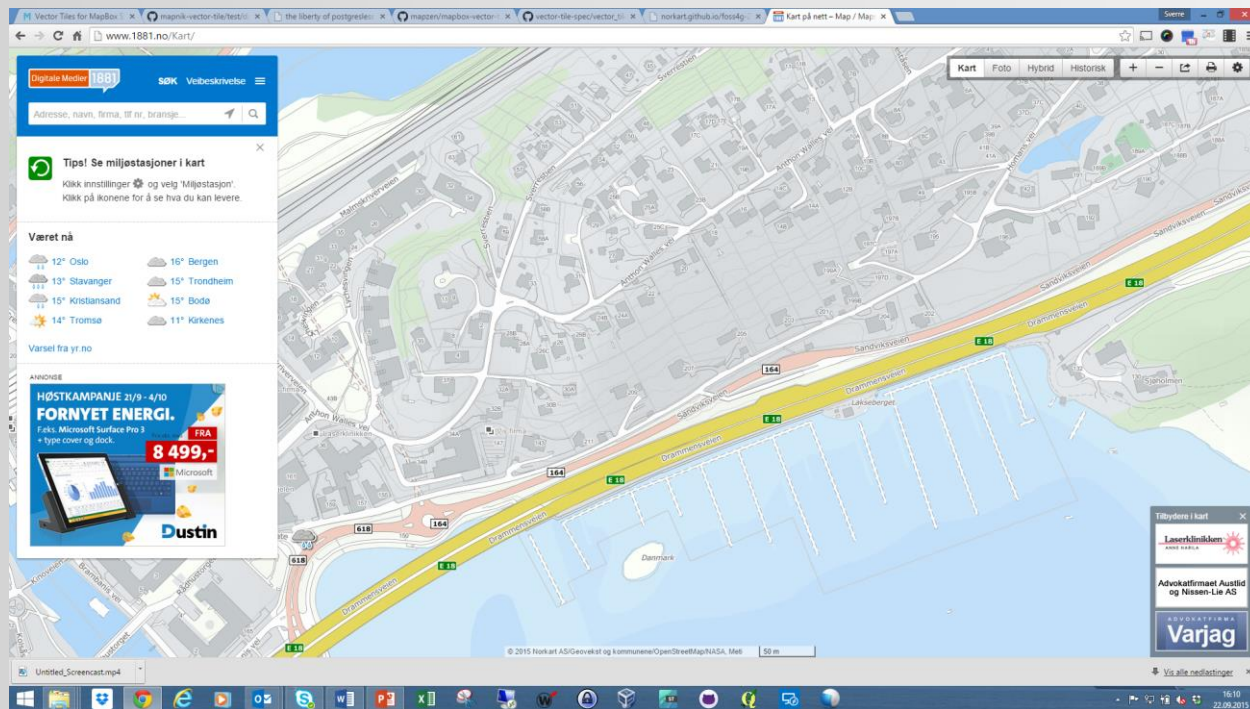
<http://www.norkart.no/mapbox-revolusjonerer-gis/>

<http://www.norkart.no/besok-hos-mapbox/>

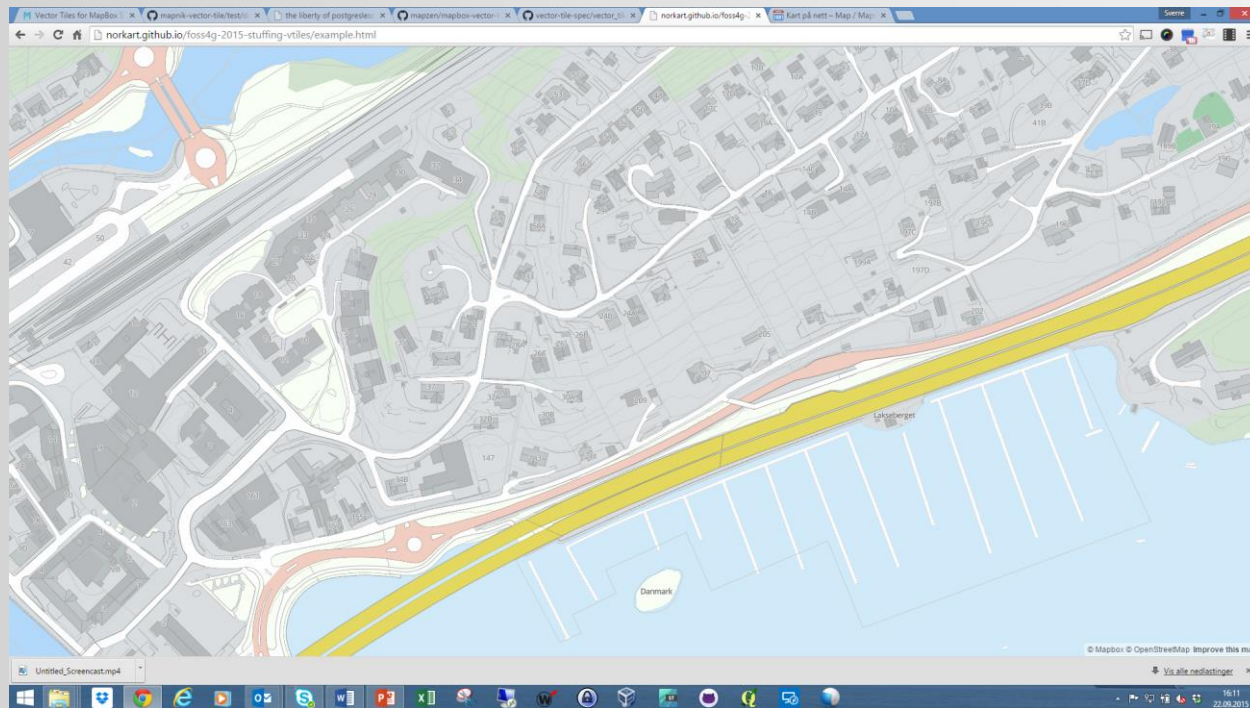
NORKART JOBBER MED VECTORTILES



VTILES AV FKB

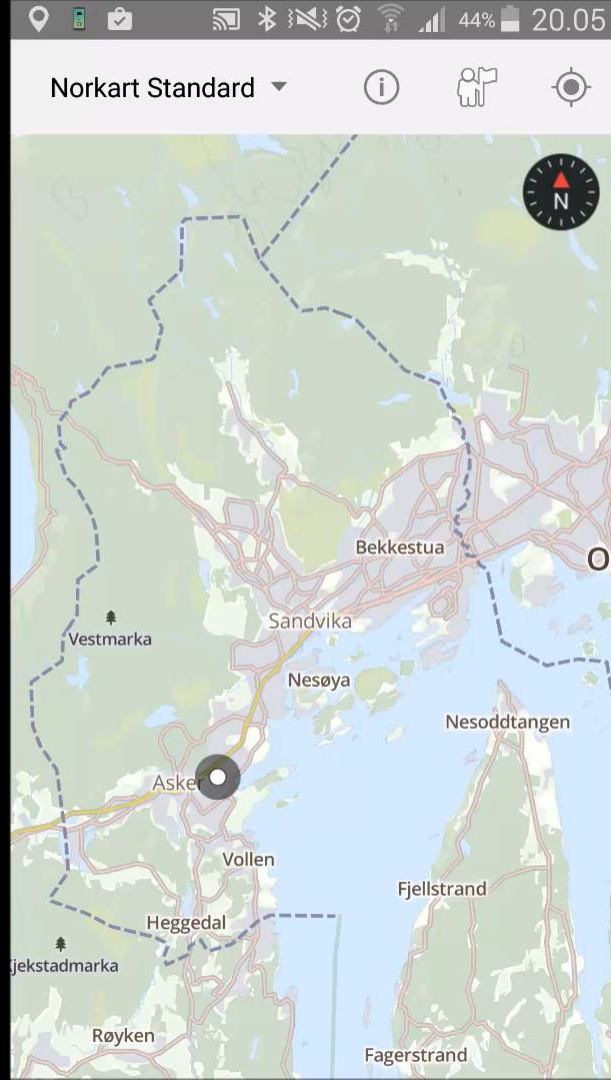


VTILES AV FKB



<http://norkart.github.io/foss4g-2015-stuffing-vtiles/example.html>

ANDROID APP



Hits: 0
Position: 59.908791424939, 10.543967753034291, 16
Speed : -0.0020212036392920824, -0.0014713041318885917, 0.0025
Acceleration: 0.001
TipAngle: 250



Pitch

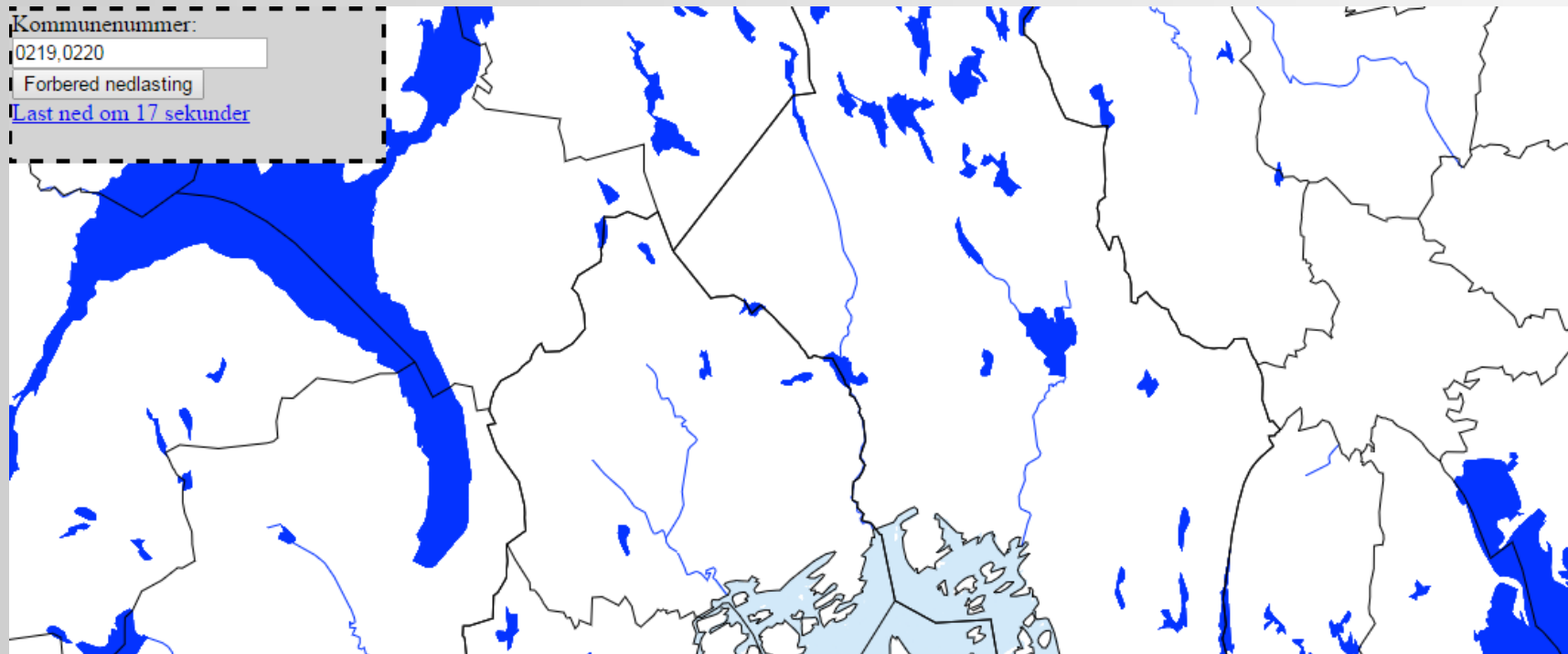
© Mapbox © OpenStreetMap [Improve this map](#)

NORKART

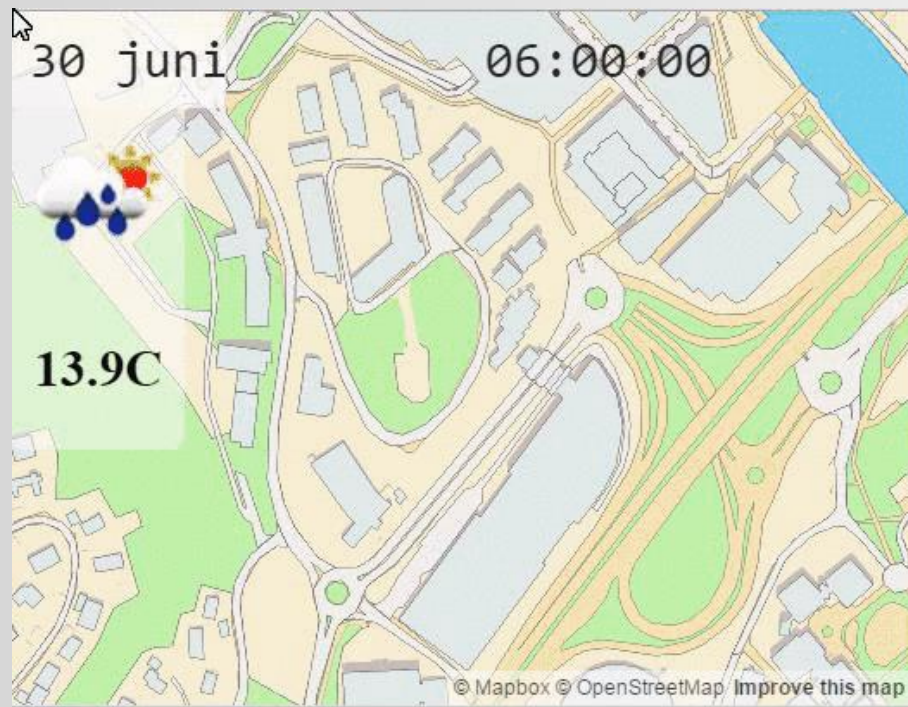
IOS-APP



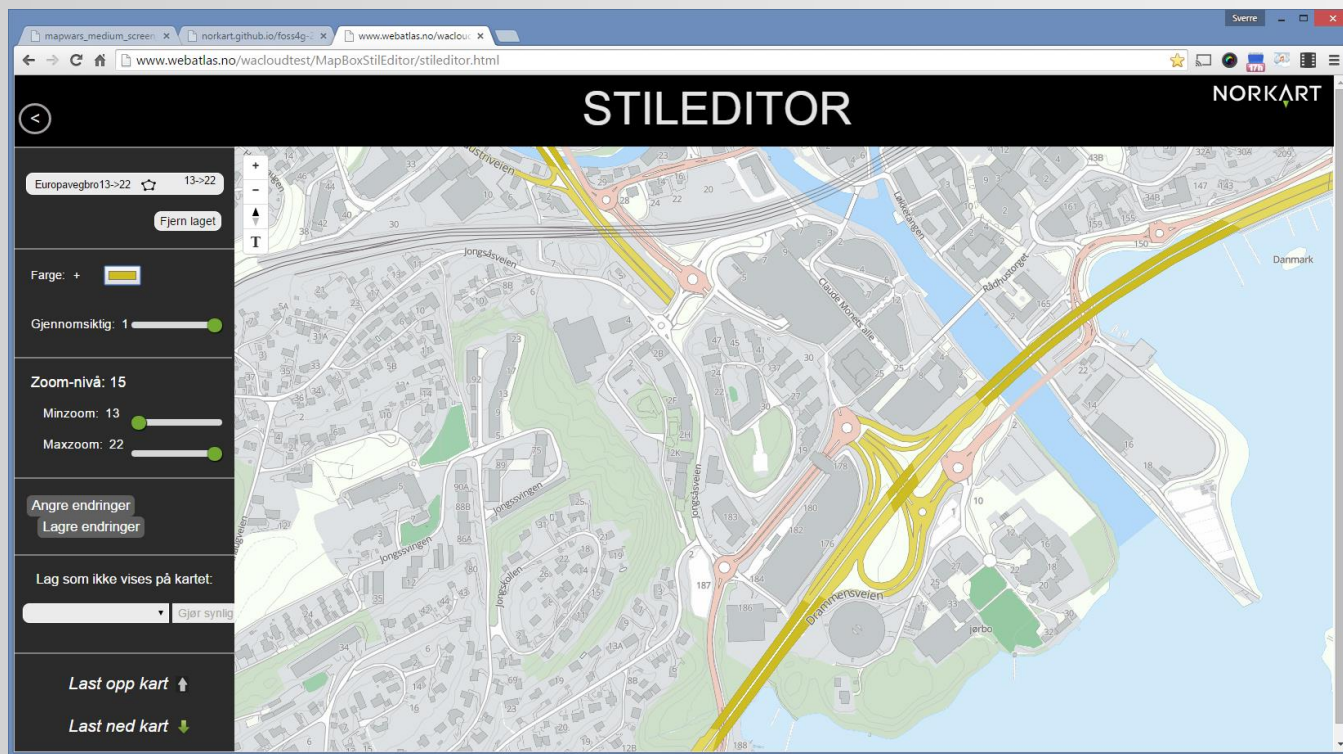
KARDA MED UT I ØDEMARKEN



HUMØRKART



STILEEDITOR





Vectortiles
- mange nye muligheter

NORKART