



OpenSeaMap

the free

Nautical Chart

71% Sea





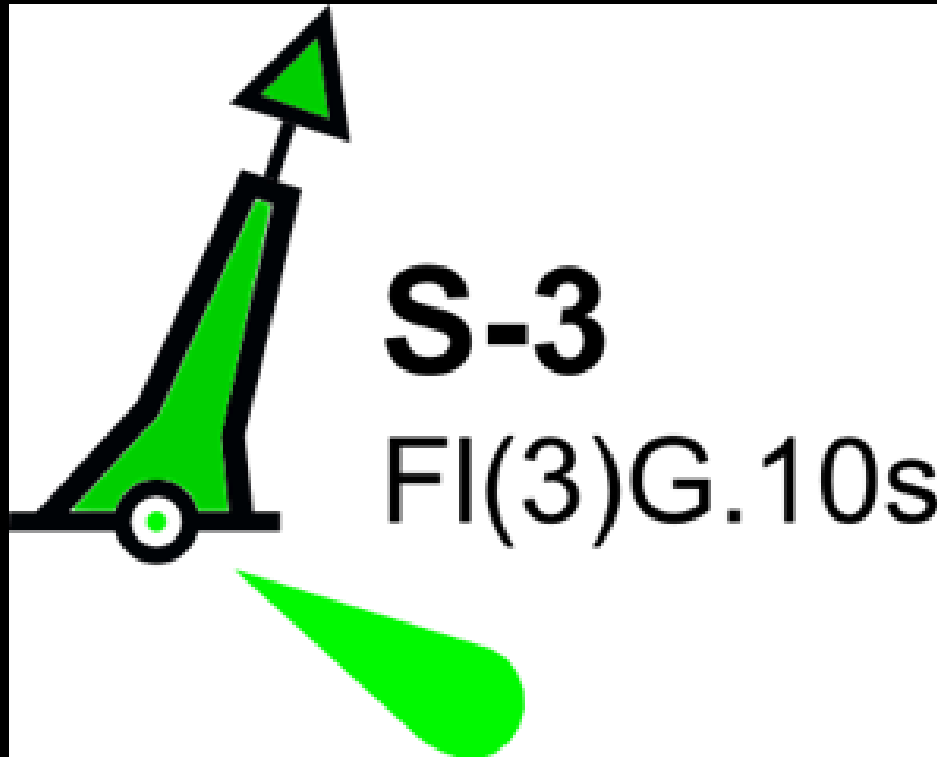


SOTM 2011

Markus

project @ OpenSeaMap.org

We will see this



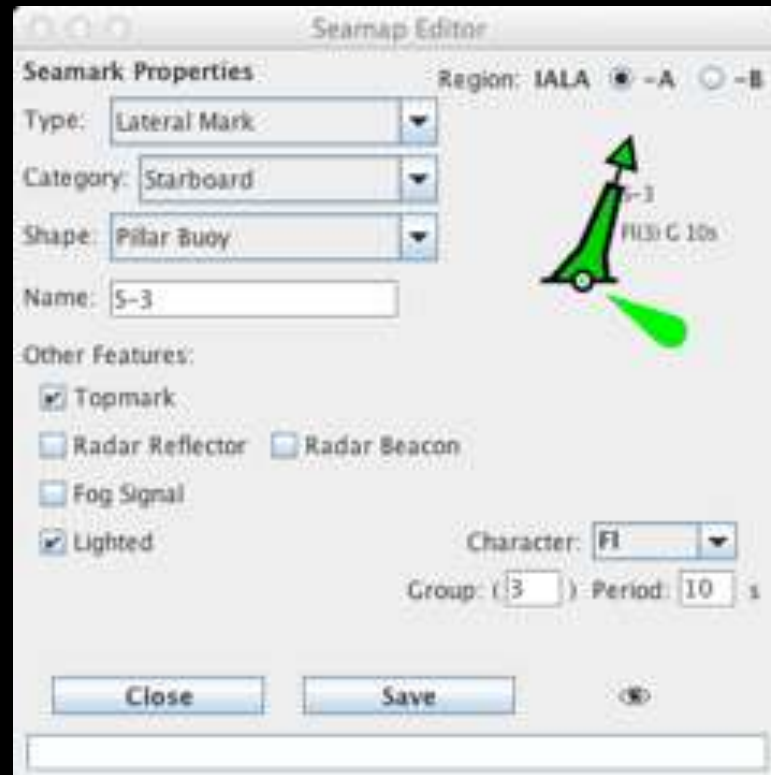
Complex data scheme

Properties: 12 / Memberships: 0

Key	Value
seamark:buoy_lateral:category	starboard
seamark:buoy_lateral:colour	green
seamark:buoy_lateral:shape	pillar
seamark:buoy_lateral:system	iala-a
seamark:light:character	Fl
seamark:light:colour	green
seamark:light:group	3
seamark:light:period	10
seamark:name	S-3
seamark:topmark:colour	green
seamark:topmark:shape	cone, point up
seamark:type	buoy_lateral

+ Add Edit Delete

Current JOSM plugin



User-friendly GUI



A lot of Information...

The screenshot shows the 'SeaMap Editor' application window. It has a menu bar with 'File' and 'Help'. Below the menu bar are three tabs: 'Harbour' (selected), 'Seamarks', and 'About'. The main form contains the following fields and options:

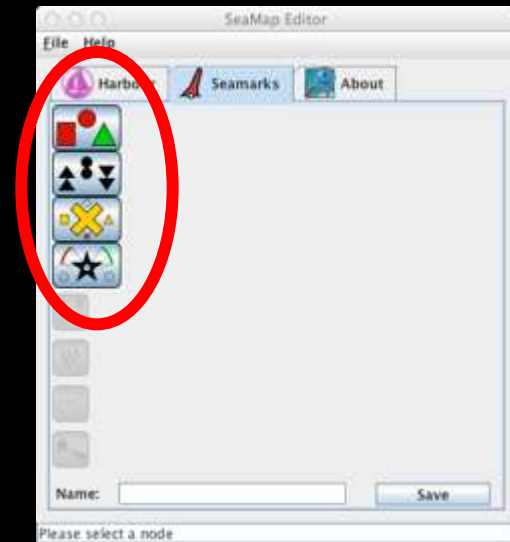
- Hafenname:** A text input field.
- Land:** A dropdown menu.
- Region:** A text input field.
- Nr.:** A text input field.
- Type:** A dropdown menu.
- Position:** Includes 'Lat' and 'Lon' text input fields.
- Harbor:** A text input field.
- Size:** A dropdown menu.
- Type:** A dropdown menu.
- Publication:** A text input field.
- Karte:** A text input field.
- Lotsendienst:** Includes checkboxes for 'obligatorisch', 'lokal Hilfe', 'verfügbar', and 'ratsam'.
- Schleppdienst:** Includes checkboxes for 'Bergungsschiff' and 'Schlepphilfe'.
- Quarantäne:** Includes checkboxes for 'üblich', 'Desinfektion', and 'anderes'.
- Schutz:** A 3x3 grid of buttons with directional arrows (N, NE, E, SE, S, SW, W, NW).
- Datensatz:** A text input field.
- Suche nach:** A dropdown menu with 'Hafen' selected.

On the right side of the form, there are several icons and labels: 'Schnaken', 'Dienste', 'Unglücke', and 'Kartenblätter'.

Seamark

A simple buoy...

- Function



Seamark

A simple buoy...

- Function
- Category



Seamark

A simple buoy...

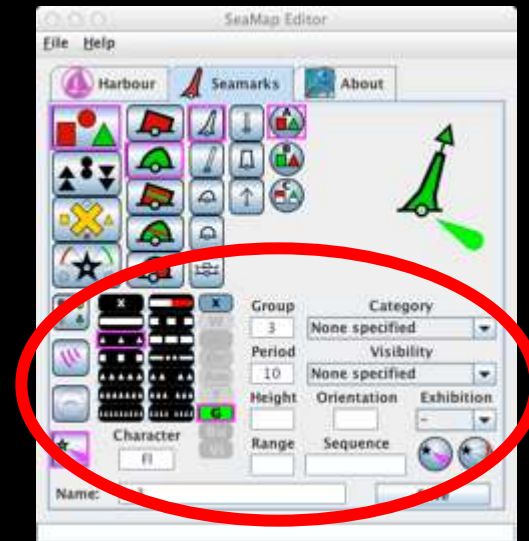
- Function
- Category
- Form



Seamark

A simple buoy...

- Function
- Category
- Form
- Topmark, Light, ...





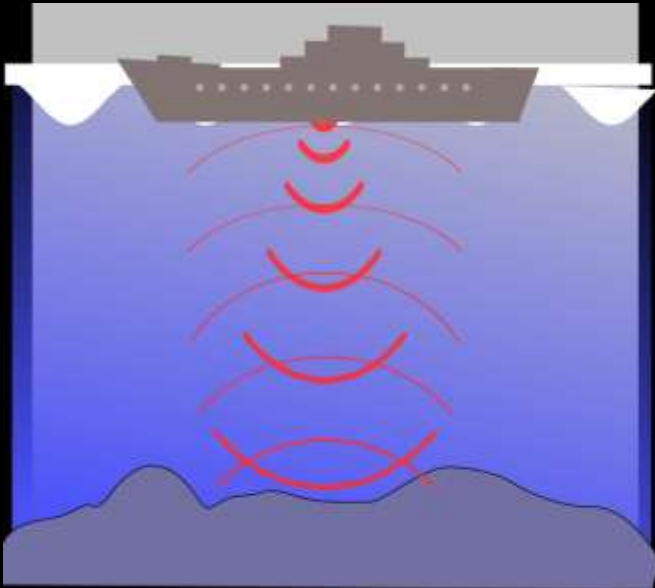
project @ OpenSeaMap.org





OpenSeaMap and Deep Water

GEBCO for OpenSeaMap



Global Dataset

Release 2009

30" Grid ~500 m

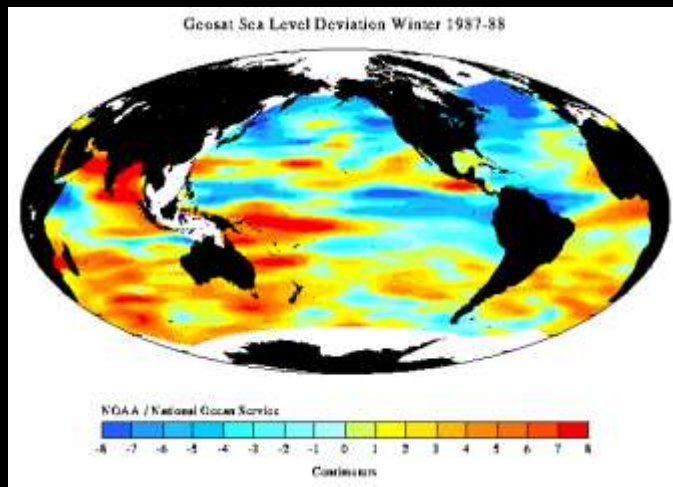
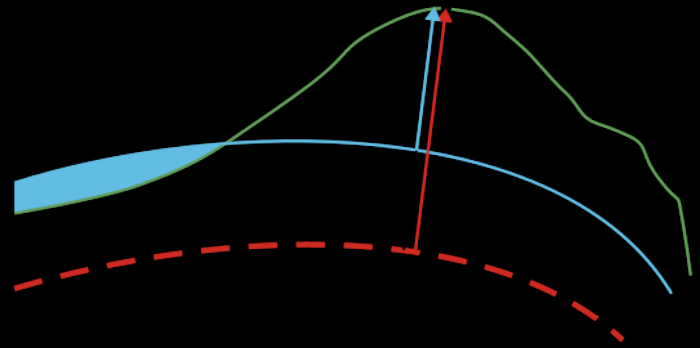
290 Million soundings

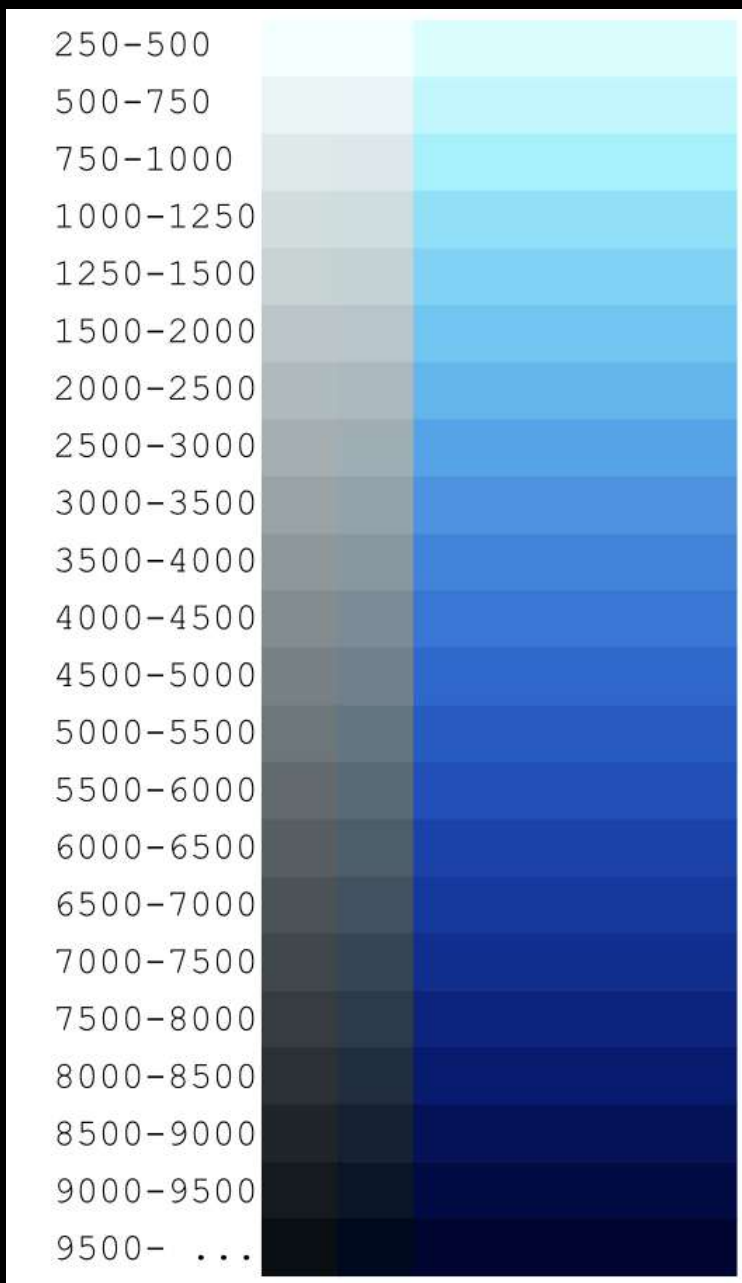
1 Billion Points

Agreement

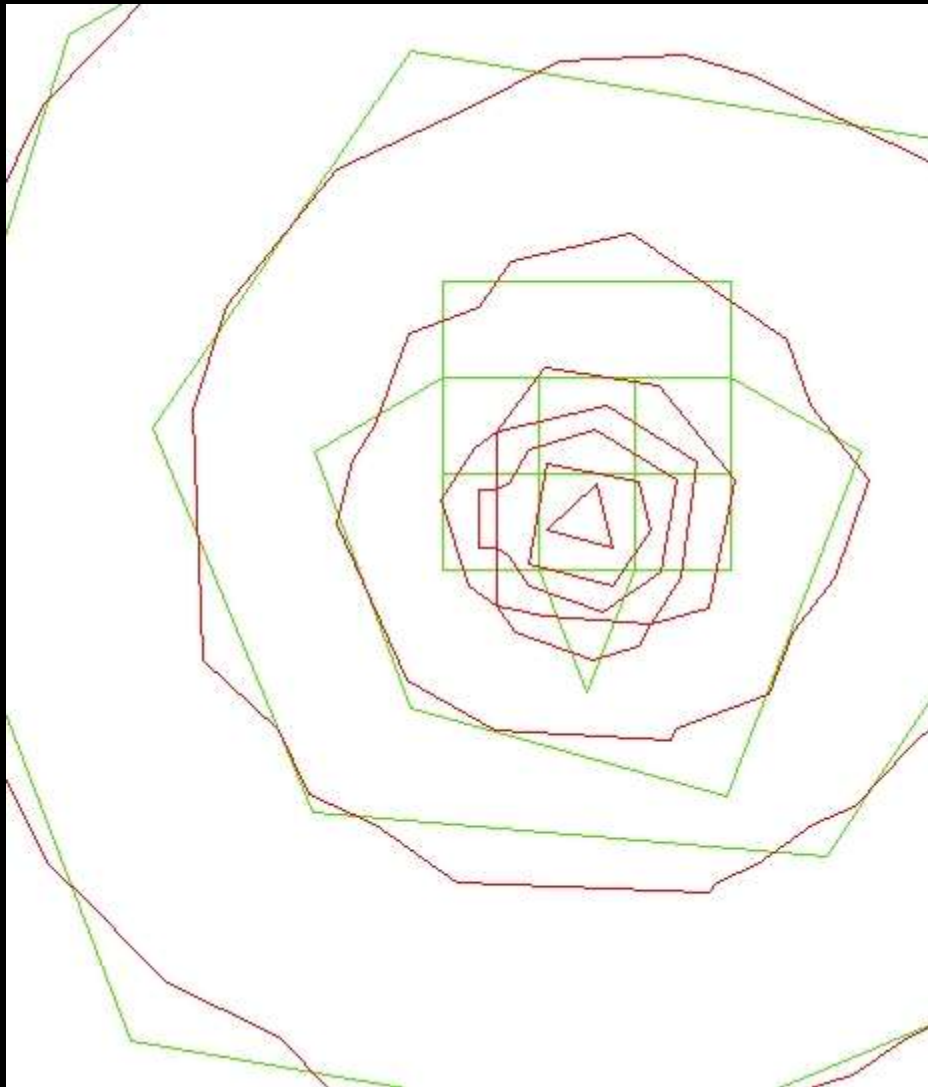
with OpenSeaMap

Sea Level



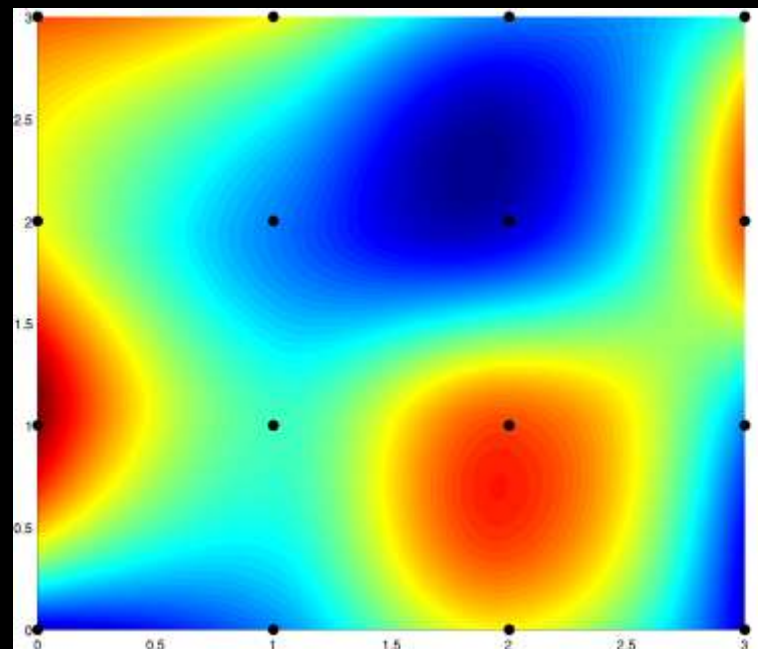
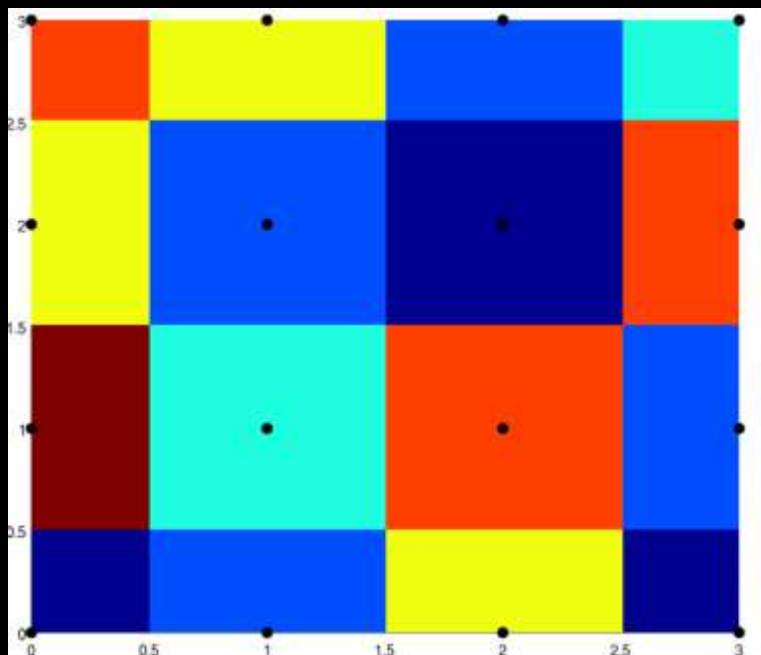


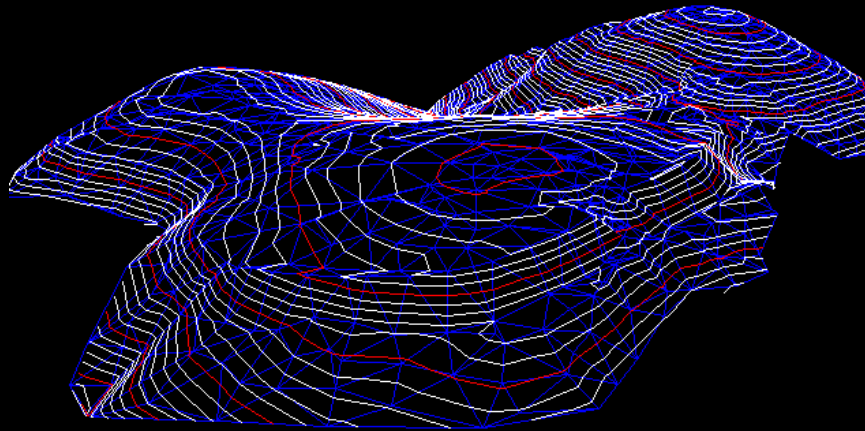
23 Classes



Not nice...

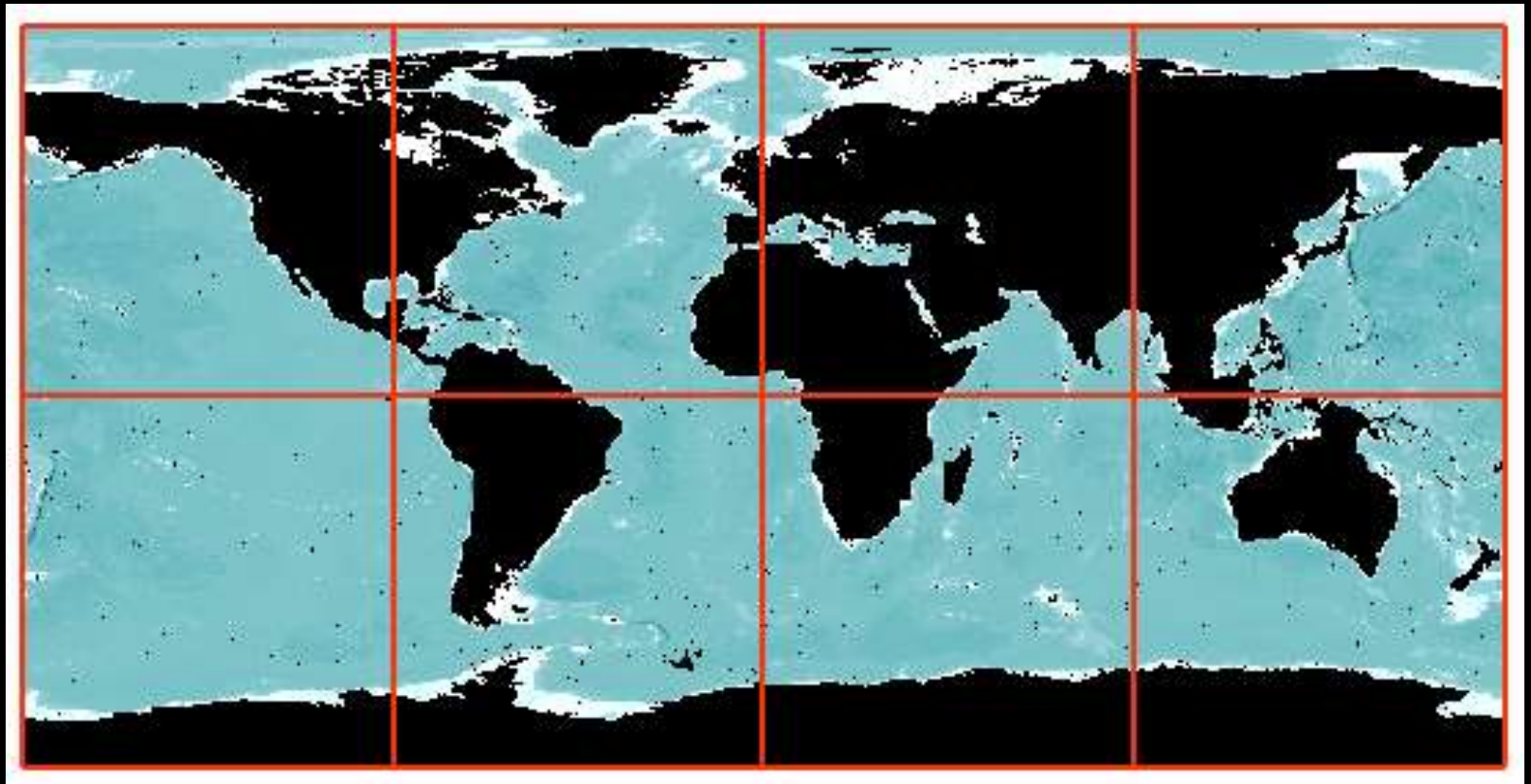
Bicubic Interpolation



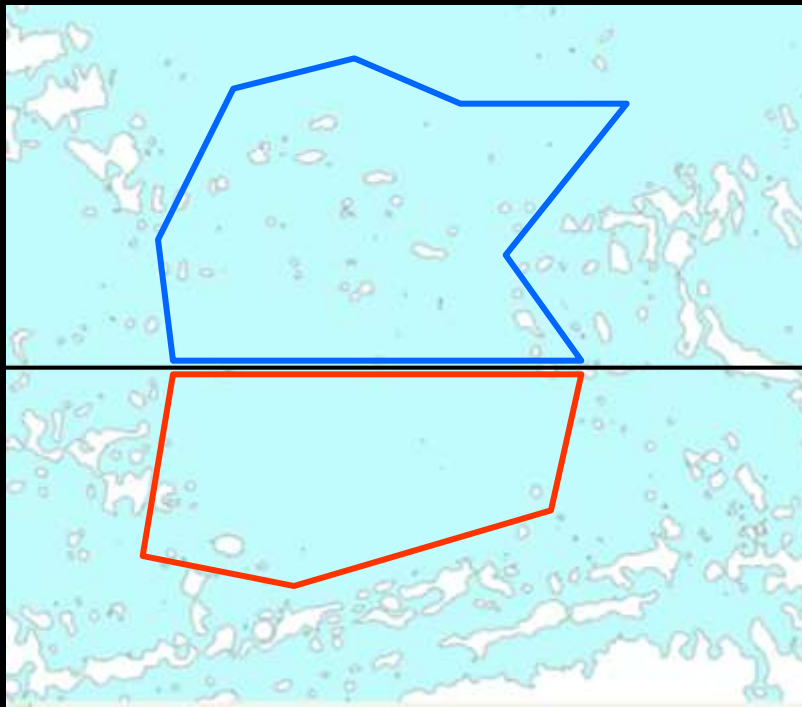


Nice...
But too big

Split



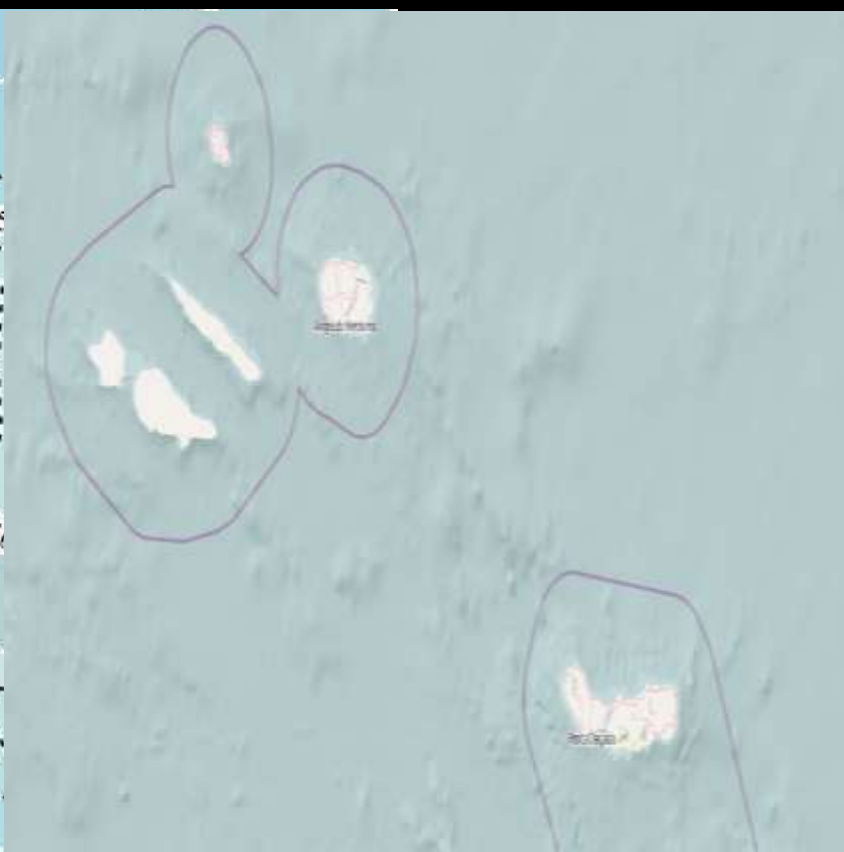
Resolving of Intersection



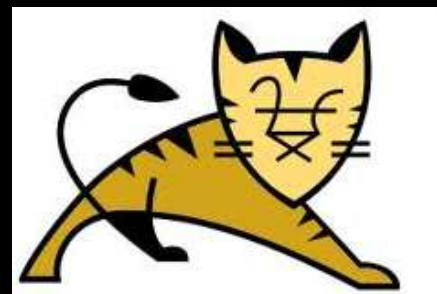
Polygon

Polyline

Sea-Shade









Help wanted:

- Faster tile server
- Cutting land without opacity

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Import of Lights

Bernhard R. Fischer

<bf@abenteuerland.at>

PGP-Key

B760 4E9C

74AE8

61F7 C605

B80C 1DA8

7FC3

5C5F FD47

twitter

-Rahro-

• IT-Professional

• Yacht Sailing Instructor

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Marine Lights and Seamarks



Very important for navigation of vessels.



Mapping of seamarks

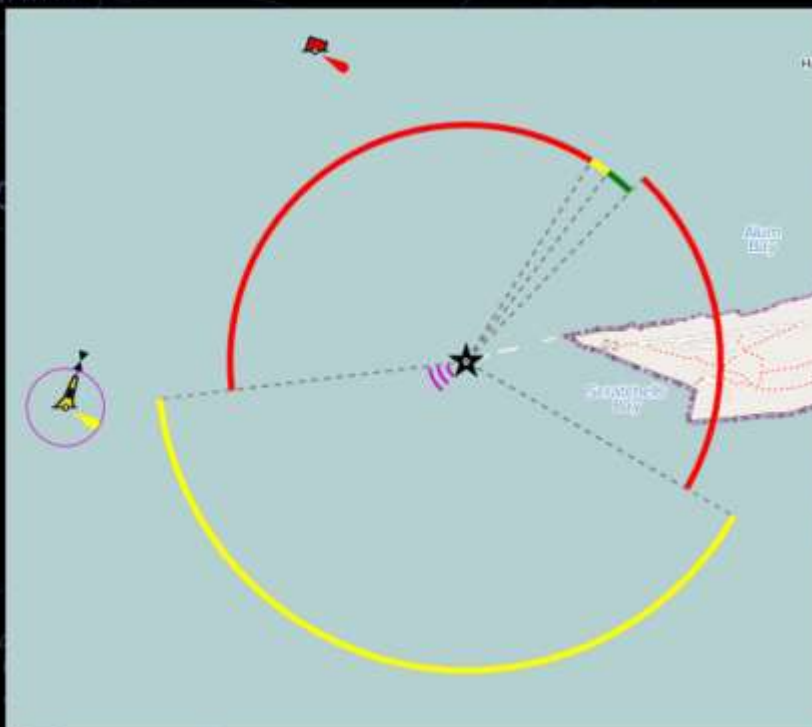
Roadmap: man_made=lighthouse



In a Seachart: many different attributes



The Needles Lighthouse



```

man_made = lighthouse
name = The Needles Lighthouse
seamark = lighthouse
seamark:fog_signal:category = horn
seamark:fog_signal:group = 2
seamark:fog_signal:period = 30
seamark:light:1 = red:224:300:140
seamark:light:1:colour = red
seamark:light:1:sector_end = 300
seamark:light:1:sector_start = 224
seamark:light:2 = white:300:083:170
seamark:light:2:colour = white
seamark:light:2:sector_end = 083
seamark:light:2:sector_start = 300
seamark:light:3 = red:083:212:130
seamark:light:3:colour = red
seamark:light:3:sector_end = 212
seamark:light:3:sector_start = 083
seamark:light:4 = white:212:217:130
seamark:light:4:colour = white
seamark:light:4:sector_end = 217
seamark:light:4:sector_start = 212
seamark:light:5 = green:217:224:130
seamark:light:5:colour = green
seamark:light:5:sector_end = 224
seamark:light:5:sector_start = 217
seamark:light:character = 0c
seamark:light:group = 2
seamark:light:height = 24
seamark:light:period = 20
seamark:light:range = 15
seamark:name = Needles
seamark:type = landmark
source = OS OpenData StreetView
wikipedia = en:The Needles
    
```

/fh///
st.pölten



Tagging Difficulty

- Scheme defined in OSM Wiki
- Seamap editor for JOSM
- Online editor

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Where do those Lights come from?



Manual survey

⊕ position correct

⊖ attributes doubtful

- List of Lights (LoL)

- ~ 50k officially IALA-registered lights
- automatic import

584 -Needles.
A 0528

50° 39.7' N Oc.(2)W.R.G.
1° 35.4' W period 20s
lt. 2s, ec. 2s
lt. 14s, ec. 2s

80 W. 17 Round granite tower, red band, R. shore-300°, W.-083°, R.
24 R. 14 red lantern; 102. (unintensified)-212°, W.-
G. 14 Helicopter platform. 217°, G.-224°.
Horn: 2 bl. ev. 30s.



Attributes vs. Position accuracy

Controversal opinions

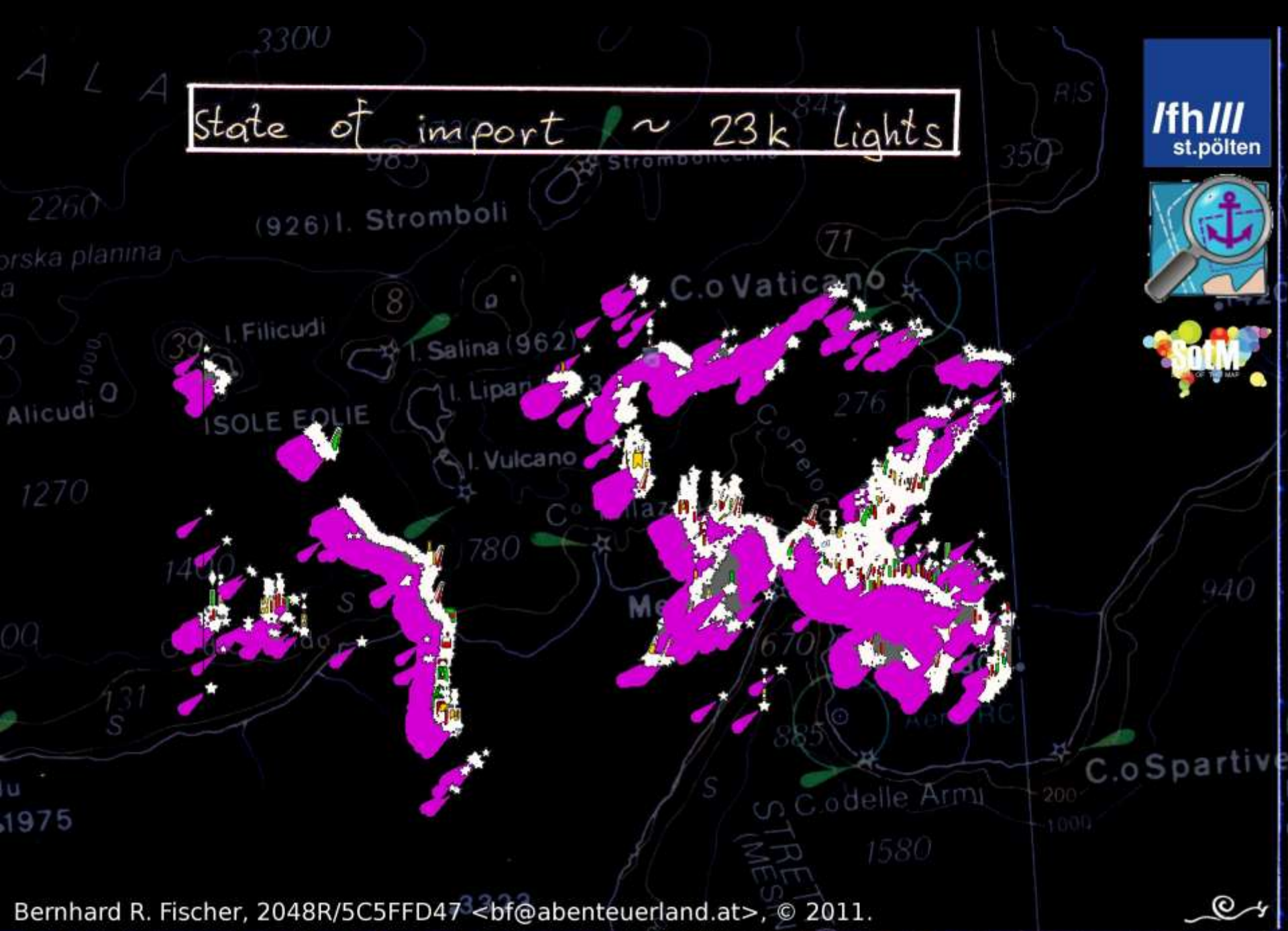
→ Positions may be corrected easily
but attributes are not

high zoom level $\neq$ high pos. accuracy



State of import ~ 23k lights

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Problems

- Maintenance
- Consistency of reference IDs
- LOL updates

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Visions

