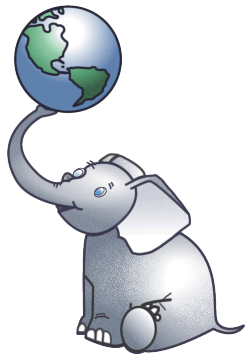


What You Type Is What You See

Comparing two web-based open source approaches to display the results of spatial SQL queries

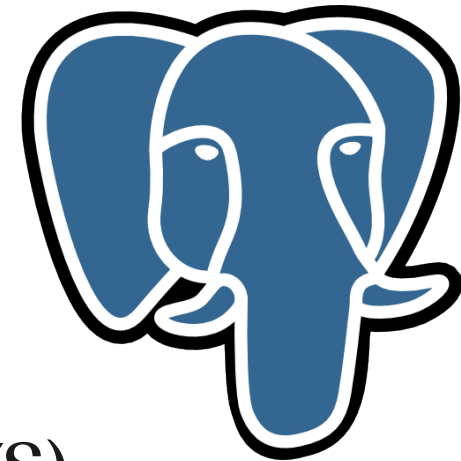


Marc Jansen, terrestris GmbH & Co. KG

Nicklas Avén, postgisonline.org

Outline

- About us
- Motivation
- Implementation
 - What You Type Is What You See (WYTIWYS)
 - postgisonline.org (PGO)
- Limitations
- Demos
- Future



About us

- Marc Jansen
 - application developer for terrestris
 - mainly frontend
 - In love with PostGIS since ~ 2006
- Nicklas Avén
 - Working in the forestry business
 - PostGIS-trunk committer
 - postgisonline.org



What are we talking about?

- WebGIS...
- ... with a simple form ...
- ... in which one can enter spatial SQL ...
- ... which gets evaluated on the server ...
- ... that server sends a response ...
- ... which is being displayed on the map ...
- ... or:

What are we talking about?

```
SELECT ST_Intersection(  
  ST_Buffer(  
    ST_GeometryFromText(  
      'POINT(40 30)', 4326  
    ), 10  
  ),  
  ST_Buffer(  
    ST_GeometryFromText(  
      'POINT(30 40)', 4326  
    ), 10  
  )  
)
```

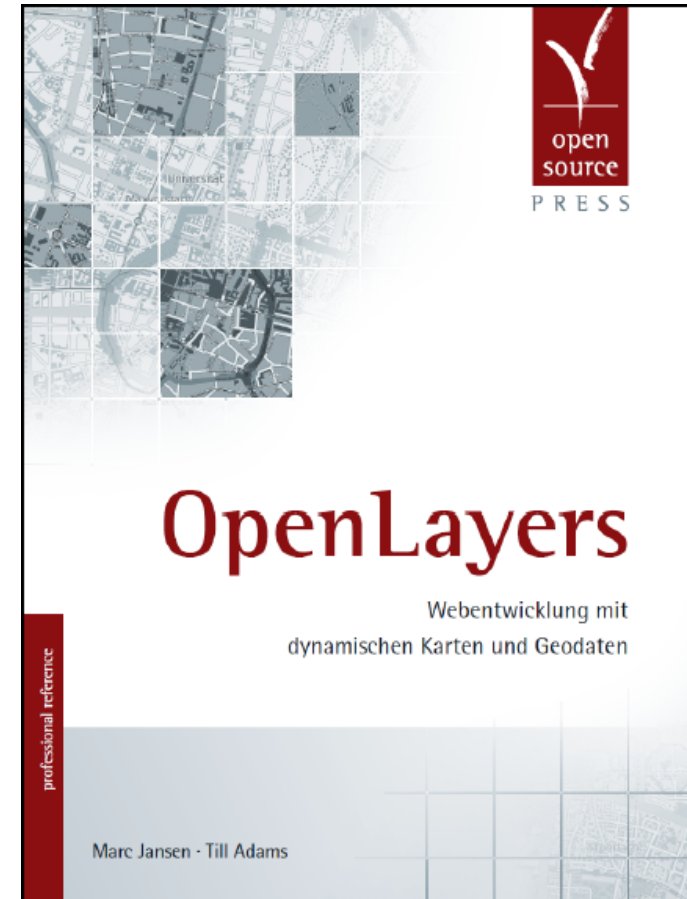


Why Nicklas and me?

- December 2009: Nicklas describes his idea about postgisonline
<http://postgis.refractions.net/pipermail/postgis-devel/2009-December/007909.html>
- December 2009: Marc has a minimal version of WYTIWYS ready...
- ...but cannot publish it until THE BOOK is done
- We had some discussions about different approaches and different motivations

Motivation – WYTIWYS

- OpenLayers book
- About the complete OpenSource GIS stack
- How to visualize PostGIS database functionality?
- In a book about OpenLayers?
=> with an interactive OL-Map



Motivation – PGO

Many people are GIS-people *or* DB-people. How to make them see the possibilities in using the DB to analyze and process spatial data?

- Trying
 - An easy way to see what spatial sql is all about
- Training
 - When there is more tutorials out there it might be a platform for learning and training
- Showing
 - Shall be an easy way for anyone to show solutions to GIS problems and show cool ways of doing things.

Implementation – WYTIWYS

- Simple: focused on education and comprehensibility
- Proof-of-concept
- Asynchronous requests through OpenLayers
- Data exchange format is Well-Known-Text
- Display SQL-results
 - as vector geometries
 - or as info-alerts

Implementation – PGO

- Just adding “Create table” in front of users query.
- Mapserver produces a transparent gif from the created table



Multiuser handling - PGO

- The table gets named “Map1” plus the session string like: `map1f180021ebe27c62bfc91163c9e7290f1`
- This makes it possible to reference “my” Map1 when creating Map2
- On every access of the site all tables belonging to sessions unused for half an hour gets erased

Mapserver - PGO

LAYER

```
NAME 'pointMap1'  
TYPE point  
CONNECTIONTYPE postgis  
CONNECTION "host=127.0.0.1 user=webuser password=XXXXXX  
dbname=%db % port=5432"  
  
DATA "the_geom FROM  
(SELECT ST_CollectionExtract(ST_Force_Collection(the_geom),1) as the_geom, idmap1 FROM  
userdata.%relation%)  
as a USING UNIQUE idmap1 USING SRID=%srid%"
```

STATUS ON

```
OPACITY 100  
CLASS  
  STYLE  
    SYMBOL 'circle'  
    size 8  
    COLOR 0 0 255  
  END  
END
```

END

Limitations – WYTIWYS

- Only lon/lat (4326)
- One row and one field
- Not persistent
- Performance of vectors in OpenLayers
- Neither management functions nor geography of PostGIS
- Not a real console
- SQL injection :-)

Limitations – PGO

- You can only use `SELECT`-queries, not update, insert or delete
- The geometry to be shown must be named `the_geom`
- You can not use `;` inside a query, problem with WKT and SRID.
- Not yet supporting new types in PostGIS 2.0

- <http://openlayers-buch.de/beispiele/chapter-09/postgis-terminal.html>
- PostGISonline

- Remove limitations
- Maybe join forces
- Become a real OS project
- Integration into PostGIS Manual?
- Others see some potential in the idea

P. Ramsey:

<http://blog.cleverelephant.ca/2010/02/nyc-sprint-day-3.html>

talking about a solution by T. Schaub using GeoScript

References

- **Firefox logo:**
http://upload.wikimedia.org/wikipedia/en/d/d8/Firefox_3.5_logo.png
- **Talk about WYTIWYS at FOSSGIS 2010:**
<http://www.fossgis.de/konferenz/2010/events/30.en.html>
- **GeoScript**
<http://geoscript.org/>
- **OpenLayers**
<http://openlayers.org>
- **PostGIS**
<http://postgis.org>

Thanks to ...

Nicklas is here as a private person and has had financial support to participate in FOSS4G in Barcelona from:

Asplan Viak Internet
www.avinet.no

Avinet, the best represented Scandinavian company here at FOSS4G, in other words the company best updated in FOSS4G technologies ...



SB SKOG, a progressive Norwegian Forest management company, and also my employer. Will probably (hopefully) adapt the open source GIS stack soon ...

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<http://openlayers-buch.de/beispiele/chapter-09/postgis-terminal.html>

<http://postgisonline.org/>