

# FOSS4G 2009, Sydney, AUS

## Comparing apples and oranges:

Uncovering the mystery  
of component selection  
in WebGIS projects



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- Preface
- The problems
- The brain (... and the setting)
- The hands (... and the habit)
- The heart (... and the guts)
- Conclusion



# Who I am, what I do

## Marc Jansen

- Diploma in geography
- WebGIS-developer (~ 5 years)
- Project leader
- OpenSource-GIS trainer



## terrestris GmbH & Co. KG (Bonn, Germany)

- OpenSource Web- and DesktopGIS
- development, training, consulting
- We solve spatial problems



# What to expect from this talk

- A **personal view**...
- ...at the **process of component** selection in WebGIS-projects
- Some **hints** for improvement
- Some **questions** to ask yourself
- Reasurement: **uncertainty is very common**

# ... and what NOT to expect

- This talk is **not scientific** in even the broadest sense, it is based on personal experiences
- Besides from apples and oranges, there are **many other fruit**: don't expect completeness
- No decision tables
- No final answers
- (maybe not even new questions)

# The problems

## Pick a fruit in limited time



DOĞRU ZİTKE

ITHALAT  
7500.000  
75.772

MUT  
000 TL

Handwritten price tag for a small container of nuts.

BÜZLÜM  
5000.000  
5 TL

4000.000  
4.5 TL







# Possible Web Components

- PHP, Python, ASP, ColdFusion, Ruby, ...
- PostgreSQL, MySQL, SQLite, Flatfile, ...
- Apache, lighthttpd, IIS ...
- Symfony, Cake, CodeIgniter, Ruby on Rails, ...
- YAML, YUI Grids, ...
- jQuery, Prototype JS, Ext JS, ...



# ... and now „spatially“ enabled

- PostGIS, Oracle, SpatiaLite, ...
- UMN Mapserver, Geoserver, Deegree, ...
- FeatureServer, GeoWebCache, ...
- Google Maps, Yahoo Maps, Bing Maps, ...
- OpenLayers, MapFish, Mapbender, Geomajas...
- OW-Services, GeoRSS, GML, ...

# For example

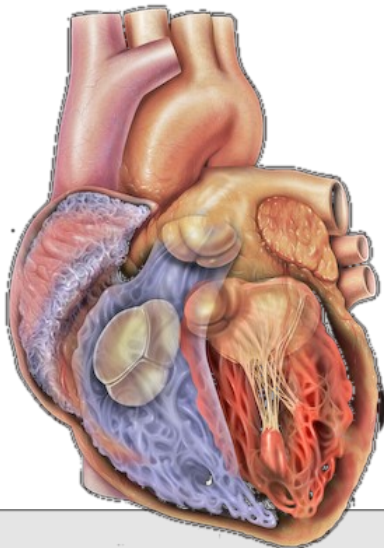
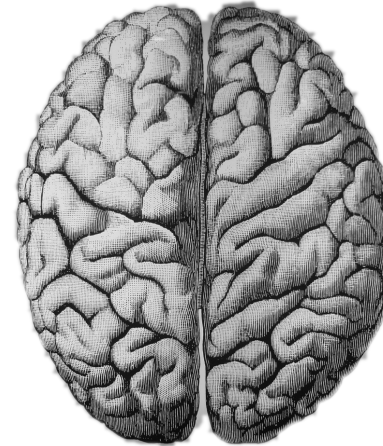
- Should I use UMN Mapserver or Geoserver as Mapserver?



# Select the right ones! But how?

I say you choose using...

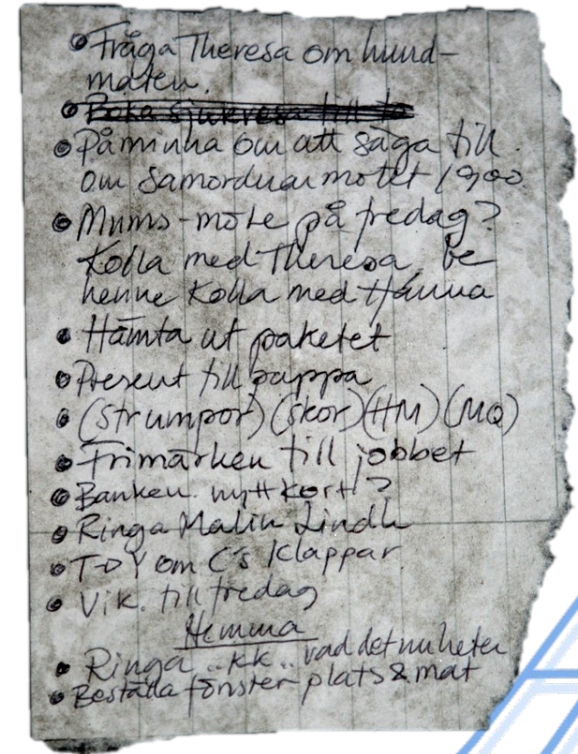
- ...your **brain**
- ...your **hands**
- ...your **heart**



# The brain: What is it?

## Hard facts

- Integration into existing architecture
- Reduction of possible items
  - Some components fixed
  - Some components verboten
- Licenses!
- Features
  - WFS-T: ~~UMN Mapserver~~



- Speed of data rendering (see the performance shootout)
  - UMN Mapserver vs. Geoserver vs. ArcGIS Server
- Security
  - Windows vs. Linux
- Often the answer will be: it depends!
  - Think of datasources that cannot be controlled
  - Think of later administration of the system

# How does your brain do this?

- Through **reduction of complexity** / elaborateness
  - Find the unique feature
- This enables you to make oranges and apples comparable (temporarily)
- You even realise dependencies

No Java → No Geoserver → No WFS-T → No Digitizing!

No Java → No Geoserver → No WFS-T → No transactional digitizing!

No Java → No Geoserver → No WFS-T → Many hours for a workaround to get transaction-save digitizing



# The hands: what are they?

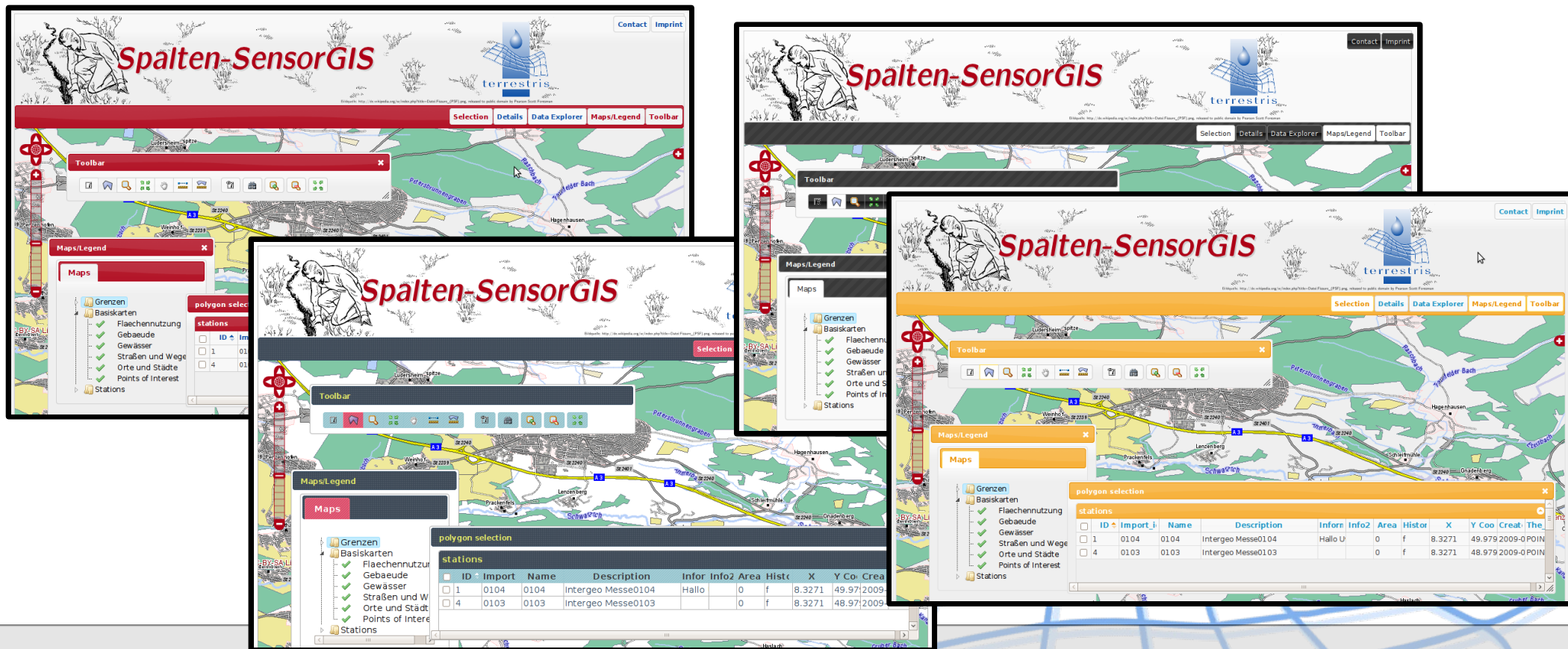
- The hands are a symbol for the things you use everyday
- Your habits in problem solution
- Your experience let's you pick components you already know and used successfully in the past



# The heart: what is it?

- Your pick/drop is often based upon feelings
  - Hippieness of software / approaches / techniques
  - You all love appealing examples
- This can be highly irrational (just as love is supposed to be)

## Why did we design the project „Spalten-SensorGIS“ the way we did?



The screenshots illustrate the user interface of the Spalten-SensorGIS application, which is a web-based GIS tool. The interface includes a map, a toolbar, and several panels for map management and data display.

The top navigation bar contains the following menu items: Selection, Details, Data Explorer, Maps/Legend, and Toolbar.

The main toolbar includes various icons for map navigation and interaction.

The Maps/Legend panel shows a list of map layers with checkboxes for selection:

- Grenzen
- Basiskarten
- Flaechennutzung
- Gebaeude
- Gewasser
- Straßen und Wege
- Orte und Städte
- Points of Interest
- Stations

The polygon selection panel displays a table of selected polygons:

ID	Import	Name	Description	Infor	Info2	Area	Hist	X	Y	Co	Cre	The
1	0104	0104	Intergeo Messe0104	Hallo		0	f	8.3271	49.97	2009		
4	0103	0103	Intergeo Messe0103			0	f	8.3271	48.97	2009		

# Spaltensensorgis

- The project was for a trade fair
- Brain: Fast build process (Copy'n'Paste, mainly)
- Hands: no experiments here
- Heart: We (and many others) love visual coherency and user interfaces for components
- Showing themeroller and Geoserver is impressive and takes peoples fear away

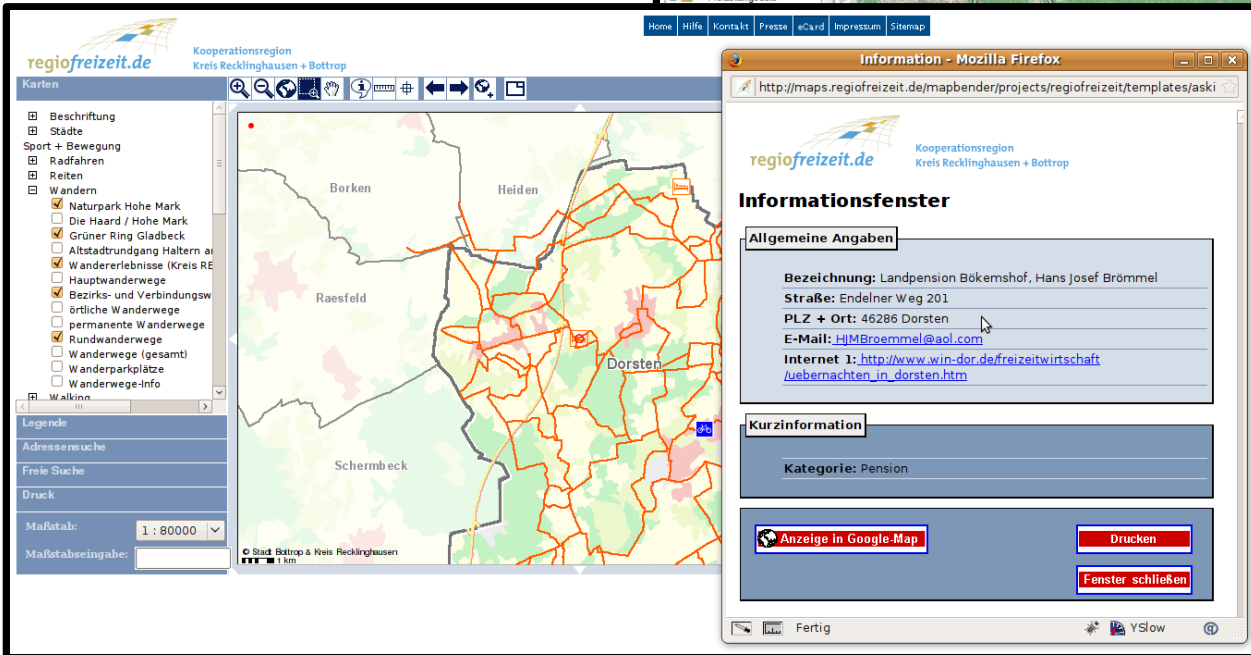
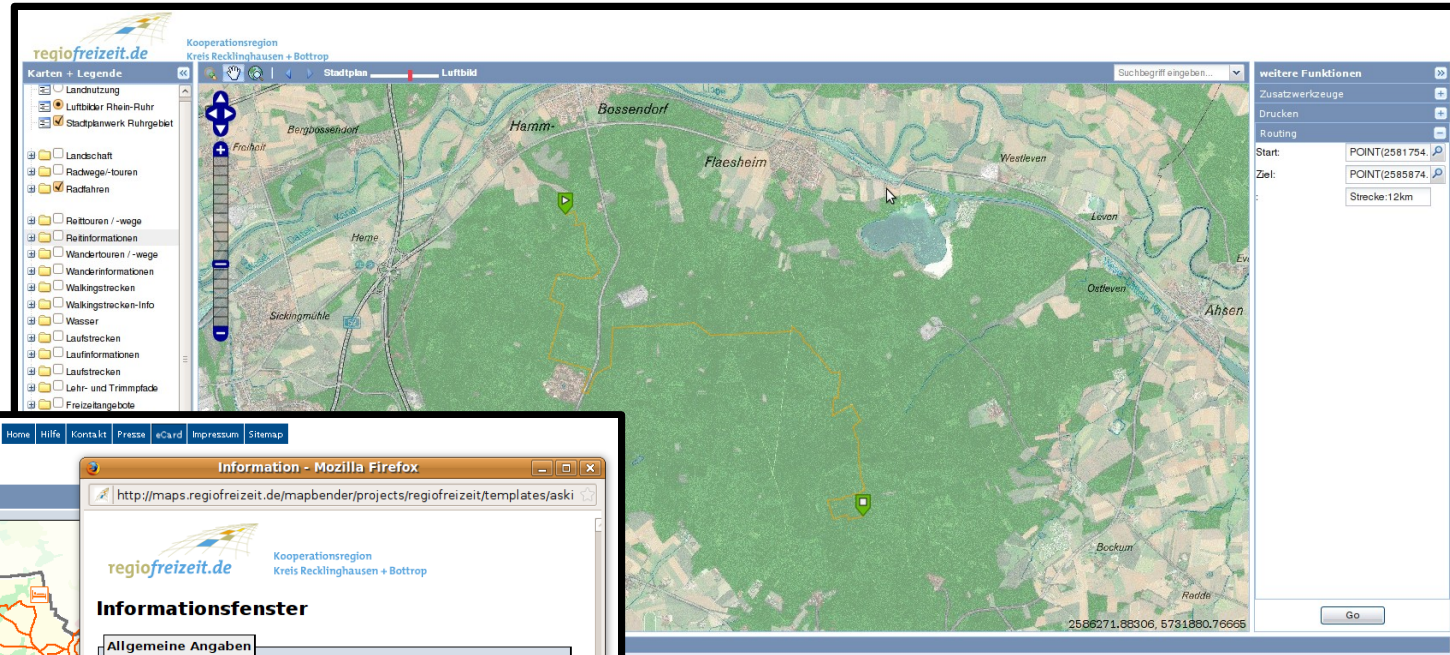
<http://www.terrestris.de/spaltensensorgis/web/>

<http://jqueryui.com/themeroller/developertool/>



# Another example: Regiofreizeit

- More than 60 thematic layers in different GUIs
- To be administered by a non-hardcore technician
- UMN, Mapbender, some other easy-to-use interfaces
- Now to be partially redesigned using MapFish
  - Extended target group
  - Time
  - Hiphness / Visually appealing



# Summary

- Your brain, hands and heart are important factors when components need to be selected
- This is **perfectly normal!**
- This is **good!**
  - Hard facts **ONLY DO NOT** represent your specific knowledge in the GIS field
- Many projects **evolve over time** as new possibilities / questions arise
  - Hard facts **DO NOT** always grasp that

# Conclusion

- We need to **think about the process** of component selection
  - To make it better
  - To increase transparency
  - To avoid duplicating of errors
- We have to be aware of the **immanent uncertainty** of the business

# Conclusion

- Train your brain
  - e.g. by visiting conferences, reading blogs, ...
- Train your hands
  - e.g. by changing tools / languages ...
- Train your heart
  - e.g. be open to new stuff, embrace new ideas, use them every now and then



# Conclusion

- „Man sieht nur, was man weiß“  
“You only see what you know“

(J. W. Goethe, accredited)

- You can't consider sth. you don't know
- Look around!
- Go to conferences!

*(Hey, maybe that's why you here)*



# Conclusion: Train your heart

Hannibal Lecter: No! He covets. That is his nature.  
And **how do we begin to covet**, Clarice? Do we seek out things to covet? Make an effort to answer now.

Clarice Starling: No. We just...

Hannibal Lecter: No. **We begin by coveting what we see every day.** [...]

# Team Up!

- If you cannot provide every aspect of a fitting design...
- ... **team up!**
- ... find partners!
- ... use your social network

# Conclusion

- **Our clients trust us.**

*(That's why they hired us in the first place)*

- Communicate to the client, that your decision/recommendation/design is **not solely based upon facts.**
- They'll understand...
- **... and trust you even more**

# BTW: apples and oranges

A reading recommendation:

“Apples and Oranges – A Comparison” by Scott A. Sandford,  
NASA Ames Research Center, Mountain View, California,  
1995

“[...] it is apparent from the figure that **apples and oranges are very similar**. Thus, it would appear that the comparing apples and oranges defense should no longer be considered valid. This is **a somewhat startling revelation**. It can be anticipated to have a dramatic effect on the strategies used in arguments and discussions in the future.”

<http://www.improbable.com/airchives/paperair/volume1/v1i3/air-1-3-apples.html>



# Thank you – Questions?

**Thank you very much  
for your attention!**

## Questions?

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## Images (all CC-BY licensed )

- Orange Squirrel: <http://www.flickr.com/photos/calliope/101303989/>, by Muffet
- Nikon D80 Apple: <http://www.flickr.com/photos/abhijittembhekar/3345977842/>, by Abhijit Tembhekar
- Fruit stand: <http://www.flickr.com/photos/heydrienne/22080973/>, by heydrienne
- Time Reloaded: <http://www.flickr.com/photos/lrargerich/3093287432/>, by lrargerich
- The Brain: <http://www.flickr.com/photos/mykloventine/3957270282/>, by Mykl Roventine
- Left Hand: [http://www.flickr.com/photos/hortulus\\_aptus/2213493360/](http://www.flickr.com/photos/hortulus_aptus/2213493360/), by hortulus
- Heart: <http://www.flickr.com/photos/patrlynch/450129144/>, by Patrick J. Lynch
- The List: <http://www.flickr.com/photos/wrote/2120667505/>, by Wrote

## Links

- Quote from „The silence of the lambs“:  
<http://www.imdb.com/title/tt0102926/quotes>
- jQuery Themeroller Developer Tool:  
<http://jqueryui.com/themeroller/developertool/>
- Spaltensensorgis (snapshot: might be turned off without notice):  
<http://www.terrestris.de/spaltensensorgis/web/>
- OpenLayersButtonGenerator:  
<http://www.terrestris.de/wp-media/downloads/OpenLayersButtonGenerator.tar.gz>
- Regiofreizeit:  
<http://maps.regiofreizeit.de/>
- “Apples and oranges – a comparison“, by Scott A. Sandford  
<http://www.improbable.com/airchives/paperair/volume1/v1i3/air-1-3-apples.html>





# Imprint

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