Comparing apples and oranges:
Uncovering the mystery of component selection in WebGIS projects

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Outline

• 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
- Asides 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
Possible Web Components

- PHP, Python, ASP, ColdFusion, Ruby, ...
- PostgreSQL, MySQL, SQLite, Flatfile, ...
- Apache, lighttpd, 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 verbotenen
- Licenses!
- Features
  - WFS-T: UMN Mapserver
Examples

• 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 $\rightarrow$ No Geoserver $\rightarrow$ No WFS-T $\rightarrow$ No Digitizing!
No Java $\rightarrow$ No Geoserver $\rightarrow$ No WFS-T $\rightarrow$ No transactional digitizing!
No Java $\rightarrow$ No Geoserver $\rightarrow$ No WFS-T $\rightarrow$ 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
  • Hippness of software / approaches / techniques
  • You all love appealing examples
• This can be highly irrational (just as love is supposed to be)
An example

Why did we design the project „Spalten-SensorGIS“ the way we did?
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
  - Hippness / Visually appealing
Regiofreizeit

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 changings 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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List of sources

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