A Carto Dashboard for Distributed Statistical Data

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“how I learned to stop worrying and love coding in cartography”

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A change in my world

My tools once were these:
A change in my world

...but now look like this:
A change in my world

Computers gave me this at first:

SYMAP line printer output (1965, by Howard Fisher)
A change in my world

...but have been improving since:

NY CityHenge (2013, by Andrew Hill) – http://nychenge.com/
CODED CARTOGRAPHY possible...?
CODED CARTOGRAPHY
...or an oxymoron?
Can coders be cartographers...

...or should cartographers become coders?
TRENDS

Technology influences cartography
TRENDS

Technology influences cartography

Cartography ≠ Technology
TRENDS

Technology influences cartography (or at least its tools)

Cartography ≠ Technology
TRENDs

Technology influences cartography (or at least its tools)

Cartography ≠ Technology

publishing maps:
manuscript → print → digital → web
TRENDS

Technology influences cartography (or at least its tools)

Cartography ≠ Technology

drawing maps:
hand drawing → digital drawing
→ digital construction (coding)
TRENDS

Technology influences cartography
(or at least its tools)

Cartography ≠ Technology

Cartography = visualising spatial data
with a certain INTENT
Technology influences cartography
(or at least its tools)

Cartography ≠ Technology

Cartography = visualising spatial data with a certain INTENT

sketched manuscript ↔ coded website
So....

Can coders be cartographers ...?
So....

Can coders be cartographers ...?

Sure, just as engravers could be cartographers
So....

Can coders be cartographers ...?

Sure, just as engravers could be cartographers

*Cartography is a state of mind*
So....

Can coders be cartographers ...

...or should cartographers become coders?
So....

Can coders be cartographers ...

...or should cartographers become coders?

Sure, just as they could become engravers

*It's just another tool!*
The new role of the cartographer

providing

tools that implement cartographic intent
The new role of the cartographer

providing
(cartographic knowledge for)
tools that implement cartographic intent
The new role of the cartographer

providing
(cartographic knowledge for)
tools that implement cartographic intent:

“code that thinks like an atlas”
The Dutch National Atlas

www.nationaleatlas.nl
Atlas as part of a Spatial Data Infrastructure

a combination of two different worlds
Mapping in a webservices environment
Mapping in a webservices environment as part of
Mapping in a webservices environment as part of
conceptual change needed

sub-optimal combination of arbitrary map layers
conceptual change needed

sub-optimal combination of arbitrary map layers

integrated mapping of data layers
Architecture
- use data services (WFS) requests
- GeoJSON where possible
ATLAS utility services & basedata
Atlas Viewer:
- based on the Open Web Platform
- uses D3 library
Statistics Dashboard
Statistics Dashboard

Building further on the Atlas prototype
Statistics Dashboard

Building further on the Atlas prototype

Specifically for Statistical Data
From Statistics Netherlands (CBS)
- Open Data, API using ODATA standard -
  To be combined with other SDI data
Population dynamics; birth, death and migration per region

June 16 2014 | more info

Enschede
158 627 (number)
Statistics Dashboard

Building further on the Atlas prototype

Specifically for Statistical Data

Concentrating on *comparison* tools

*in space*: same variable, different places or same variable, different aggregation

*in time*: same variable, different times

*in theme*: same place and time, different variables
Statistics Dashboard UI setup

1. Make map
2. Choose subject
3. Compare with
4. Overlay
5. Side-by-side
6. Swipe

Nodes:
- Population
- No. of inhabitants
- Per municipality
- Per province
- Nature
- Population density

Connections:
- Subject
- Etc...
- Etc...

UI components:
- Simple render
- MAP
- Transparency
- MAP
- MAP
Statistics Dashboard UI setup

- Make map
- Choose subject
- Compare with
- Map setup
- Simple render
- Overlay
- Side-by-side
- Swipe
- Per province
- Per municipality
- Population density
- No. of inhabitants
- Nature
- Etc...
- Etc...
% non-western foreigners  % western foreigners
% non-western foreigners

% western foreigners

SWIPE
TRANSPARENCY

% non-western foreigners  % western foreigners
TRANSPARENCY

% non-western foreigners

% western foreigners

[Map showing distribution of non-western and western foreigners]
% non-western foreigners  % western foreigners
Thank you!

http://www.nationaleatlas.nl

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