Creating a Web Atlas in an SDI environment using the D3 library

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For details see: Cartographic Journal 50:3, pp. 225–231
Demo time!

www.nationaleatlas.nl
demo shows the “public face”

what’s the story behind it?
Brief history of the Dutch National Atlas
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Brief history of the Dutch National Atlas after 1998 government involvement and funding ended => limited and fragmented academic projects to keep atlas alive

2000:
digital facsimile of 2nd edition
Atlas as part of a Spatial Data Infrastructure
Atlas as part of a Spatial Data Infrastructure presents a synthesis optimised for visualisation.
Atlas as part of a Spatial Data Infrastructure

visualisation of separate data, not optimised for combinations (synergy)
Atlas as part of a Spatial Data Infrastructure

a combination of two different worlds
Mapping in a webservices environment
where the atlas is "just another SDI node"...
Mapping in a webservices environment

typical set-up nowadays
Mapping in a webservices environment

possibilities for **direct** and automatic production of maps
Mapping in a webservices environment

possibilities for direct and automatic production of maps

...but “automatic” is limited: cartographic decisions are fixed beforehand
Mapping in a webservices environment as part of
Mapping in a webservices environment as part of the direction of research.
Architecture

Central Bureau of Statistics
municipal level
socio-economic data

Ministry of Environment
protected natural areas

NATIONAL GEODATA INFRA-STRUCTURE
WFS
GML
GeoJSON

Atlas metadata
Atlas basemaps
(coastlines, rivers, cities etc)

NATIONAL ATLAS SERVICES
WFS
JSON
GeoJSON

User input
(menu choices, search, etc.)

Data integration & mapping component
(D3 Javascript API)

HTML5 + SVG web pages

Atlas maps
Architectural Diagram

- use data services (WFS) requests
- GeoJSON where possible
Architecture

Atlas Viewer:
- based on the Open Web Platform
- uses D3 library
Architecture

- bind arbitrary data to the DOM
- then apply data-driven transformations to it
⇒ very suitable for our project
Conclusions

the test bed shows:
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that a (National) Atlas as an integral part of a (National) SDI is feasible
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that a (National) Atlas as an integral part of a (National) SDI is feasible

provides many advantages (up-to-date, flexible, extensible, interoperable)
What’s next?

work in slow progress (funding ended 2009)

core is implemented, still missing parts:

viewer:
better menus, full legends, more maptypes

atlas services:
spatial aggregator & more
Thank you!

follow the progress at:

www.nationaleatlas.nl
(follow the english)

D3-based viewer:
https://github.com/kobben/NatAtlas