New Map Production Environment
- optimizing map production

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Data Visualization
In the department of Data Visualization we produce maps for many purposes.

Sometimes it must be done quickly!
What if we had:

1 data model
1 database
1 method
1 tool

for producing 25 different topographical maps out of always updated data worldwide?
Aim:

• robust and flexible production environment
• common environment for development and production
• change to ESRI-ArcGIS platform
• DGA has a limited amount of applications and providers
• common platform = less dependency on key persons
• automatic continuous updating = ”map alert”
• automation: Maps without hands
Effects:

- better quality assurance: better quality of maps
- production time reduced: efficiency
- reduced use of resources: efficiency
- automation, reuse of data and cartography: homogenous products
- shared knowledge: teamwork
2 main principles:

- central production database, shared data
- including introduction of cartographic representations
- very limited need for manual corrections
But input data have to be valid and complete!
MPE is worldwide
MPE has a common data model
## Content of the database

### Table: Database Schema Information

<table>
<thead>
<tr>
<th>Schema</th>
<th>No. rows</th>
<th>Size (MB)</th>
<th>Extent</th>
<th>Featureclasses</th>
<th>Representations</th>
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</thead>
<tbody>
<tr>
<td>S10</td>
<td>25,810,558</td>
<td>5525</td>
<td>DK, GL</td>
<td>82</td>
<td>1</td>
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<td>25307</td>
<td>global</td>
<td>379</td>
<td>1</td>
</tr>
</tbody>
</table>
Automatic updating, +/÷ corrections

MPE (ArcSDE/Oracle)

Table with time stamps

÷ Archiving + Indexing

data transfer

SourceDB (S.50)

Archiving

Danish Geodata Agency
What are representations?
Standing Operating Procedure for
Series Transit Flying Chart (Low Level)
Scale 1:250,000

Produced by
Danish Geodata Agency, Denmark

- Map frame
- Data content
- Text placement
- Workflow
- Export/printing specifications

Refer to this document as:
SCP for TPCL
Edition 2-GR
Production example: 50k defence map

Development of

- frame
- mapsheets, content
- texts
- grid
- legend
- SOP
Production example: 50k defence map

- Using Data Driven Pages to make a complete map series containing 115 map sheets

- Issue with overlapping UTM zones
Modernising 50k defence map

2010 (Maps without hands)

Total DK production from base scale (1:10.000) to end product (1:50.000)

1½ years (from start to print)

10-15 employees involved

Cartographic production time:

average 36 hours pr. map sheet

Generalization process:

9 months for all of DK

2014 (Maps without hands 2.0)

Total DK production:

1½ years (but fewer resources)

5 employees involved

Cartographic production time:

4½ hours pr. map sheet

Generalization process:

Can potentially be improved

Danish Geodata Agency
Trap Denmark Topographic Atlas

published 6.11.2015
Why map production alert?

Support for the Defense and Emergency Management

Effectively and quickly produce maps

TLM 1:50.000 all over the Earth

Max 1 hour per map

Map production fully automated
Total: 37 minutes
Per map: 9 minutes
Conclusion:

Rule based automatic map production enables:

- a standardized production platform for products and services nationally as well as internationally
- products updated centrally and continuously (in MPEdb), thus always synchronised with updates in base data
- we avoid dependency on key persons
- minimal need for "handwork", when product-workflow developed
- each product can be produced faster and more often
Thank you!

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