New national maps for Switzerland

11. November 2015

Dominik Käuferle
National Map Process chain

product management
configuration management
quality management
...
DCM production architecture

- **Genius-DB**: ArcGIS Application
- **GenDab**: ArcGIS Geoprocessing: Arcpy, Python, ModelBuilder
- **GenDV**: FME, ArcGIS Geoprocessing

**Data preparation**:
- TLM: without foreign territory
- CRM: realised or in operating
- VEC200: with foreign territory

**Manual Generalization**
- DCM10
- DCM25
- DCM50
- DCM100
- DCM200
- DCM500
- DCM1M

**Automatic Generalization**
- DCM25
- DCM50
- DCM100
- DCM200
- DCM500
- DCM1M

**SysDab**: expand

**DCM200**, **DCM500**, and **DCM1M** without foreign territory.

**DCM25**, **DCM50**, and **DCM100** with foreign territory.

---

Bundesamt für Landestopografie swisstopo
Technik und Innovation

EuroCarto, Vienna
11. November 2015
1:10 000: first release June 2016

Digital Cartographic Model 1:10’000 = new national map 1:10’000

• Fully automated production, perimeter Switzerland
• Source TLM, DTM and DCM25 rock/relief-rasters
• Little automatic generalization (vegetation)
• Automatic text placement
• Digital product
1:25 000: in production

Digital Cartographic Model 1:25 000 = new national map 1:25 000
1:25 000

30 map sheets published
1:50 000 : production starts 2016

Digital Cartographic Model 1:50 000 = new national map 1:50 000
Automatic generalization 1:50 000

test output october 2015
Automatic generalization 1:50 000

TLM vs. DCM50 test output
Automatic generalization 1:50 000

ArcGIS geoprocessing models

Currently 85 models with 88 different geoprocessing tools, which are called ~3 100 times in total.
Automatic generalization 1:50 000

4 step dev process

modeling in ArcGIS ModelBuilder
create Python scripts
run Python scripts as batch
quality assurance

development & testing
agile / scrum

production
## Automatic generalization 1:50 000
processing times

<table>
<thead>
<tr>
<th>Map sheet</th>
<th>Duration</th>
<th>Process diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>224 Olten</td>
<td>13.4h</td>
<td><img src="image1" alt="Process diagram for 224 Olten" /></td>
</tr>
<tr>
<td>225 Zürich</td>
<td>25.8h</td>
<td><img src="image2" alt="Process diagram for 225 Zürich" /></td>
</tr>
<tr>
<td>226 Rothrist</td>
<td>23.9h</td>
<td><img src="image3" alt="Process diagram for 226 Rothrist" /></td>
</tr>
</tbody>
</table>
Questions?