Swiss Digital Cartographic Models

and the New National Maps of Switzerland / May, 8th 2014

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Digital Cartographic Models DCM

- Structured GIS database
- Cartographic representations of the topography of Switzerland
- …7 Digital Cartographic Models DCM, one per scale
- Vector- and Raster data
- Feature linked multi-scale database
- Nationwide, no map sheet cuts
- Derived from TLM (3D, ±1m) and VEC200
- Georeference dataset acc. federal legislation
- Part of the National Geodata Infrastructure

-> see http://map.geo.admin.ch

- DCMs are the interface to geodata for the human user and geodata at the same time
History of Swiss National Maps

The National Map of Switzerland: started by general Dufour 175 years ago, enhanced in several map generations.
Why this modernisation?

- Production technology out-of-date
- New 3D base data
- New demands by map users require new data
- Vector data and databases as basis for quicker actualisation

Stereo console in the 1990ies

Mobile products are in demand

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New base data TLM

The new National Map is based on swisstopo’s Topographic Landscape Model TLM. In TLM the landscape is represented in three dimensional vector data with an accuracy of +/- 1m combined with a digital terrain model DTM.
Main Production steps

Sources: aerial images and official data

Base data base:
Topographic Landscape Model

Intermediate product:
automatically generalised data

Base product:
Digital Cartographic Model

End-products: NM, Swiss Raster Map, Swiss Map online…
Before automatic generalisation
After automatic generalisation
Changes in map design

Transportation network differentiation by color

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Changes in map design

Railways in red, stations labeled

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Changes in map design

Borders in magenta
Changes in map design

New font family «Frutiger Neue LT»

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The new Product Base (DCM)

The Topographic map
- The new finalized National Map Series design as standard representation

Base maps
- e.g. light colours
- e.g. grayscale

Customized maps
- New selection
- New symbols
- New fonts
- New colours
- New contents
- New extent

«The» base map
Derived products

Map data in applications:
Publishing sequence

DCM construction ➔ follows TLM ➔ follows the 6 year update cycle

Rough planning: publication years of new National Maps
How to find DCM25 on map.geo.admin.ch

1. May 8th 2014

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Swiss Digital Cartographic Models

- verlässiglich
- fiable
- affidabile
- reliable
- leicht lesbar
- facile à lire
- facile da leggere
- easy to read
- intelligent
- intelligente
- intelligente
- intelligent