

**ICA-CMC workshop
Bohinj, March 2006**

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Bundesamt für Landestopographie
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Federal office of topography

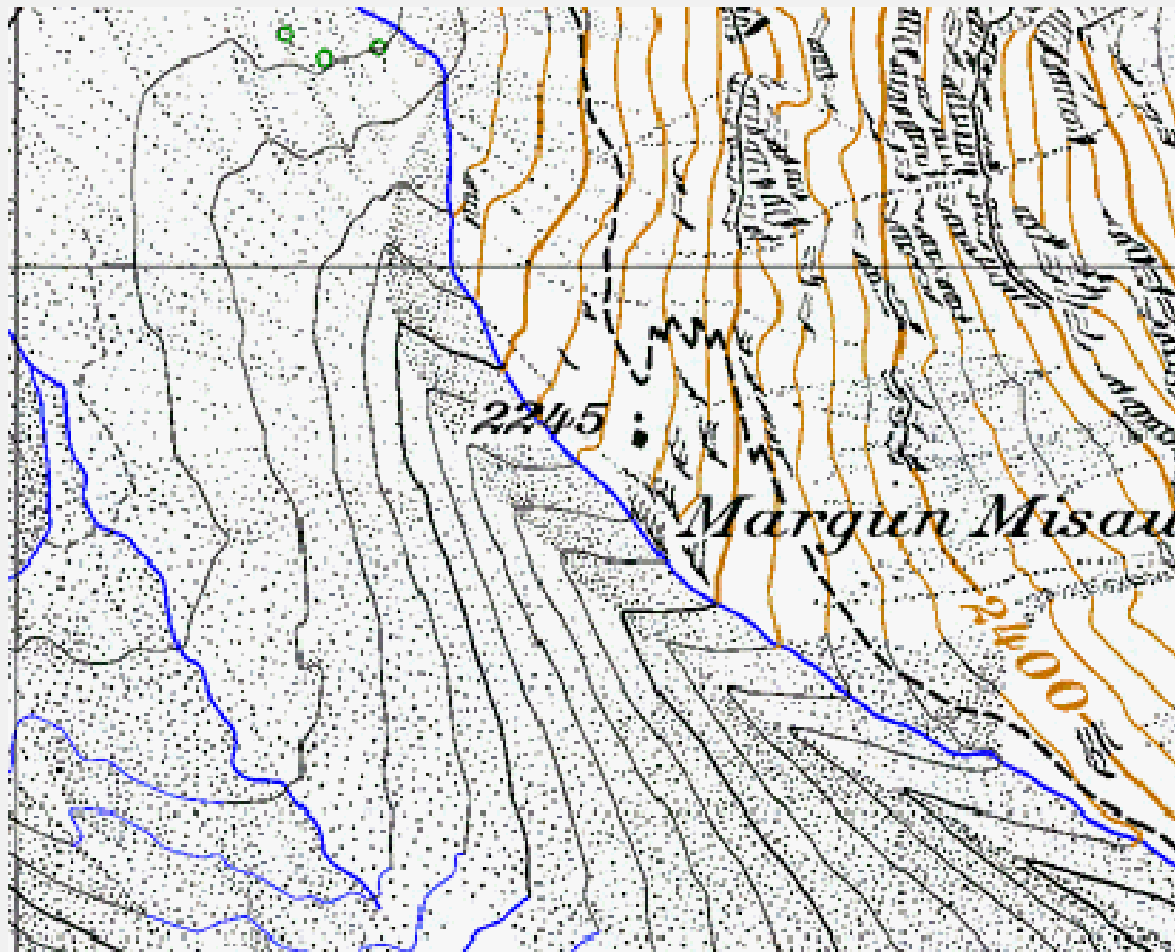
**From the field
sheet to the complete
digital workflow**

from nature ...



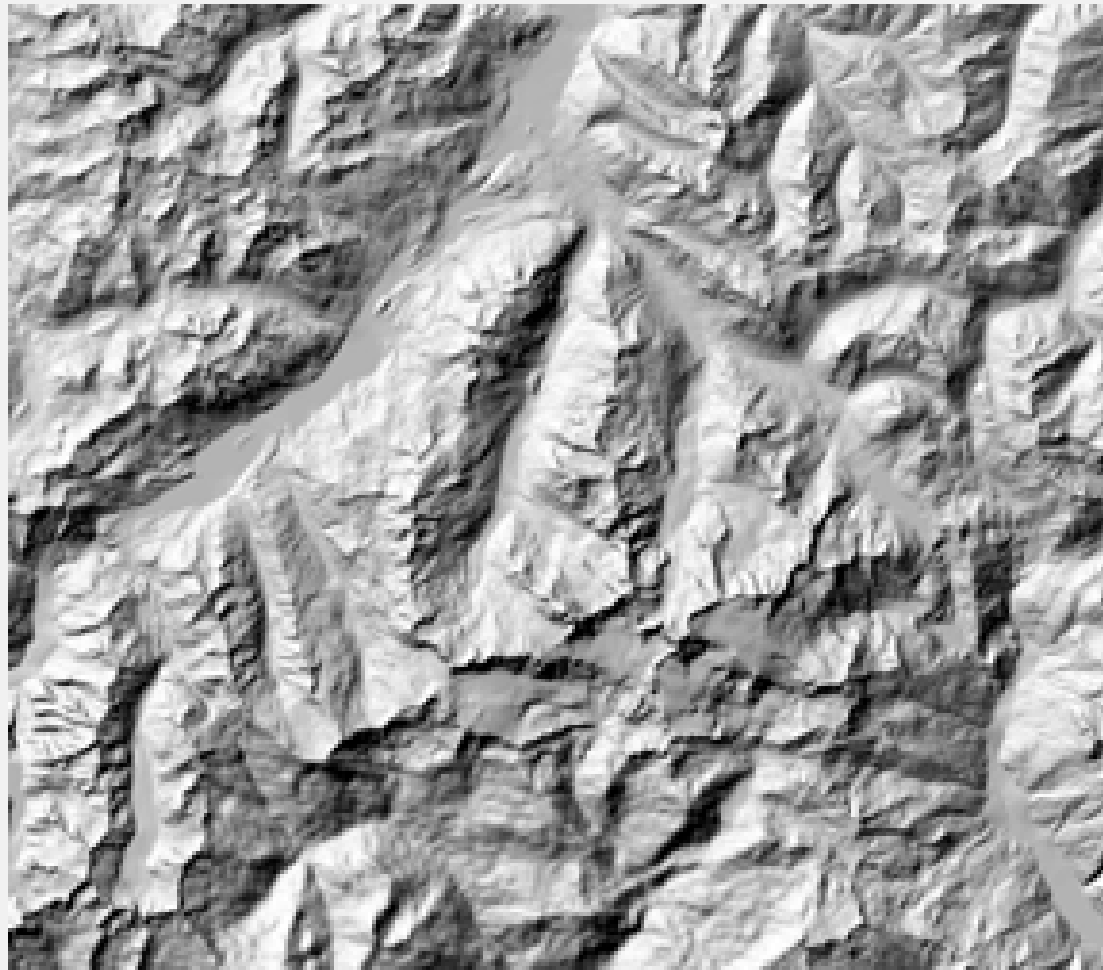
Tschierva glacier

... to the map



1:25'000

... or a digital model



„side“ product



technology



from reality to models and representations

landscape

survey

selection and editing

data bank

cartographic treatment

visualization

reproduction

publication

plane table survey

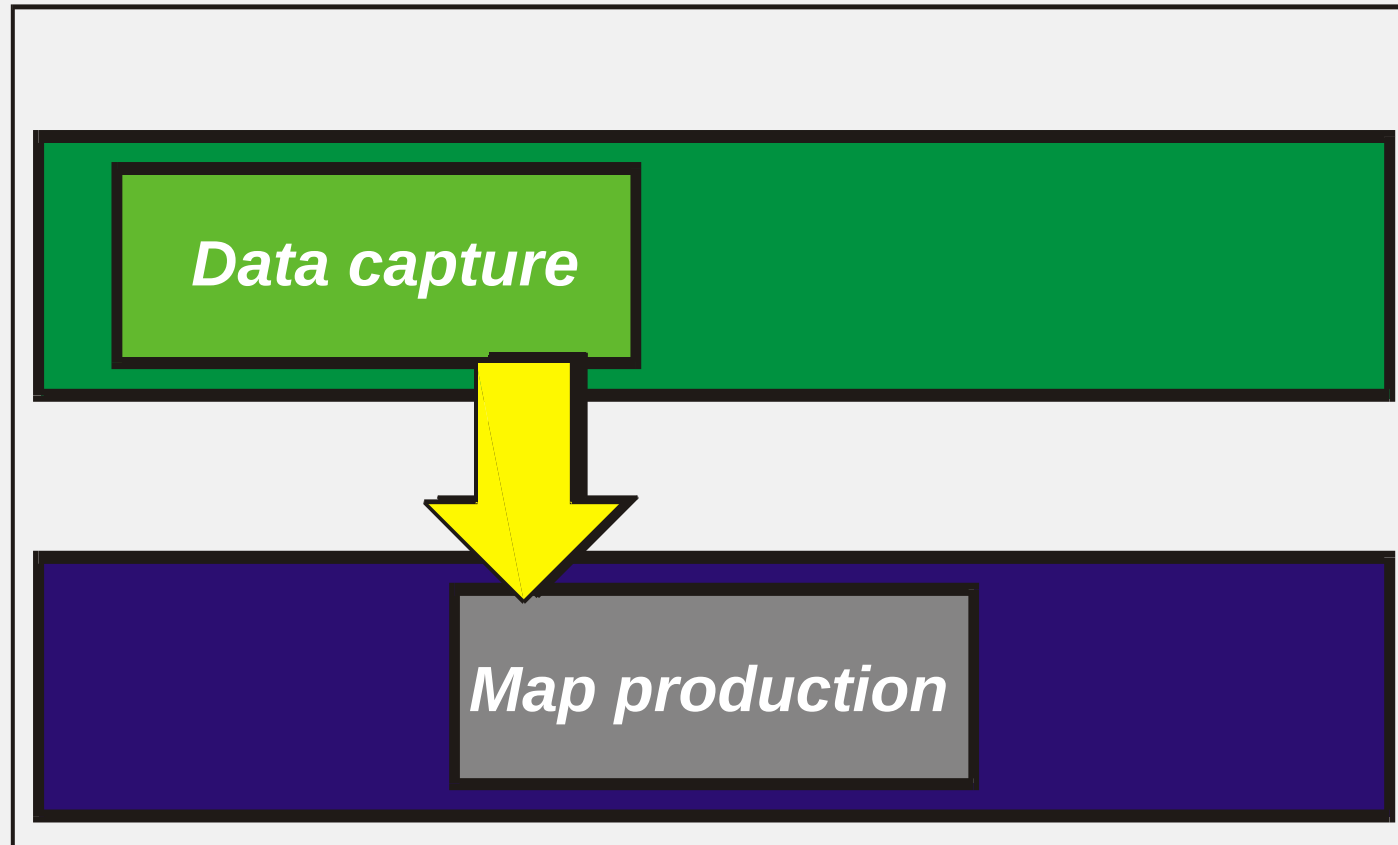


- rules as „data model“
- direct measures
- instant classification
- storage on sketch map

maps of the 19th century



map production



map production 1960

- cadastral base map 1:10'000
- updated with aerial photographs
- field check
- scribing on glass plates

cadastral base map 1:5000 (or 1:10'000)



stereo plotting



field check



scribing on glass plates



National Map Series 1:25'000



map revision 1980



field check



field sheets



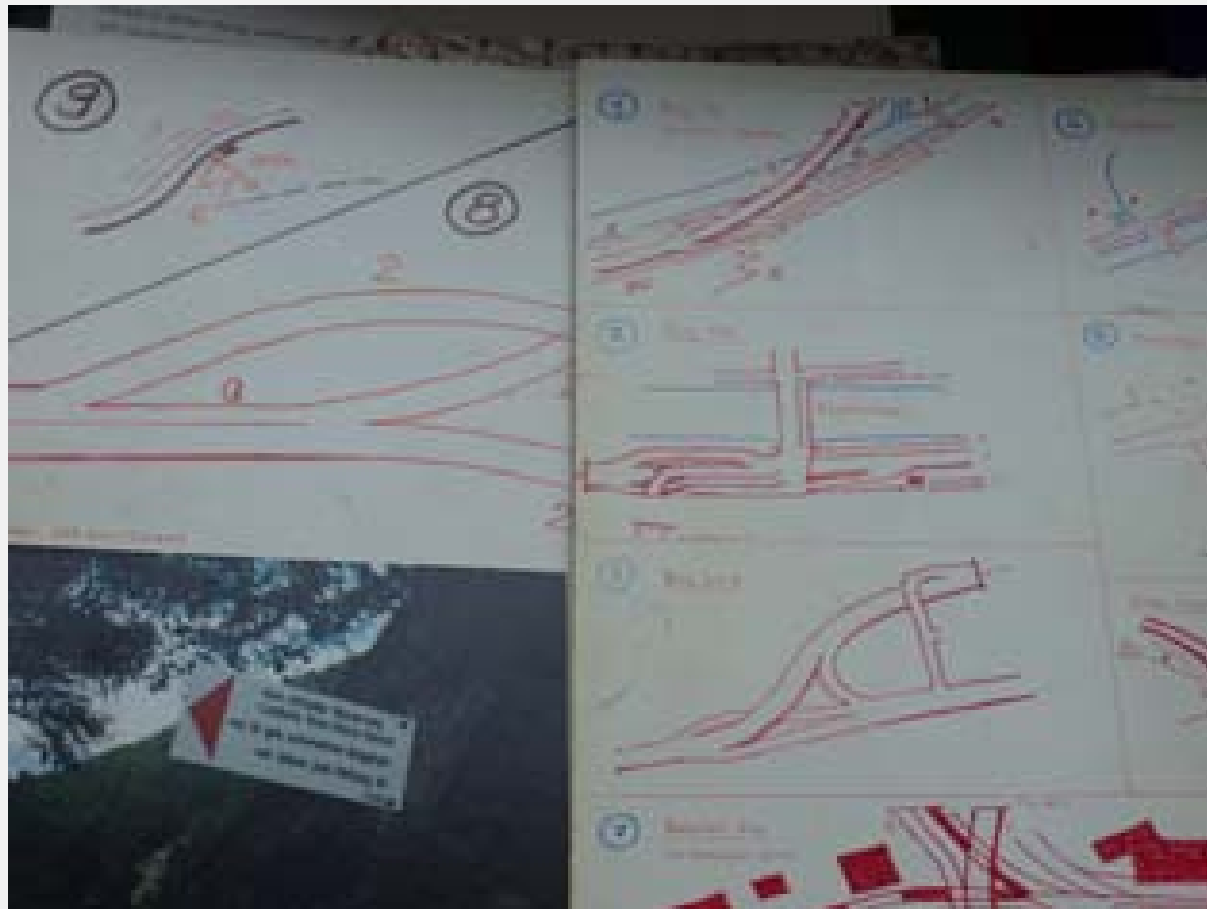
additions and deletions



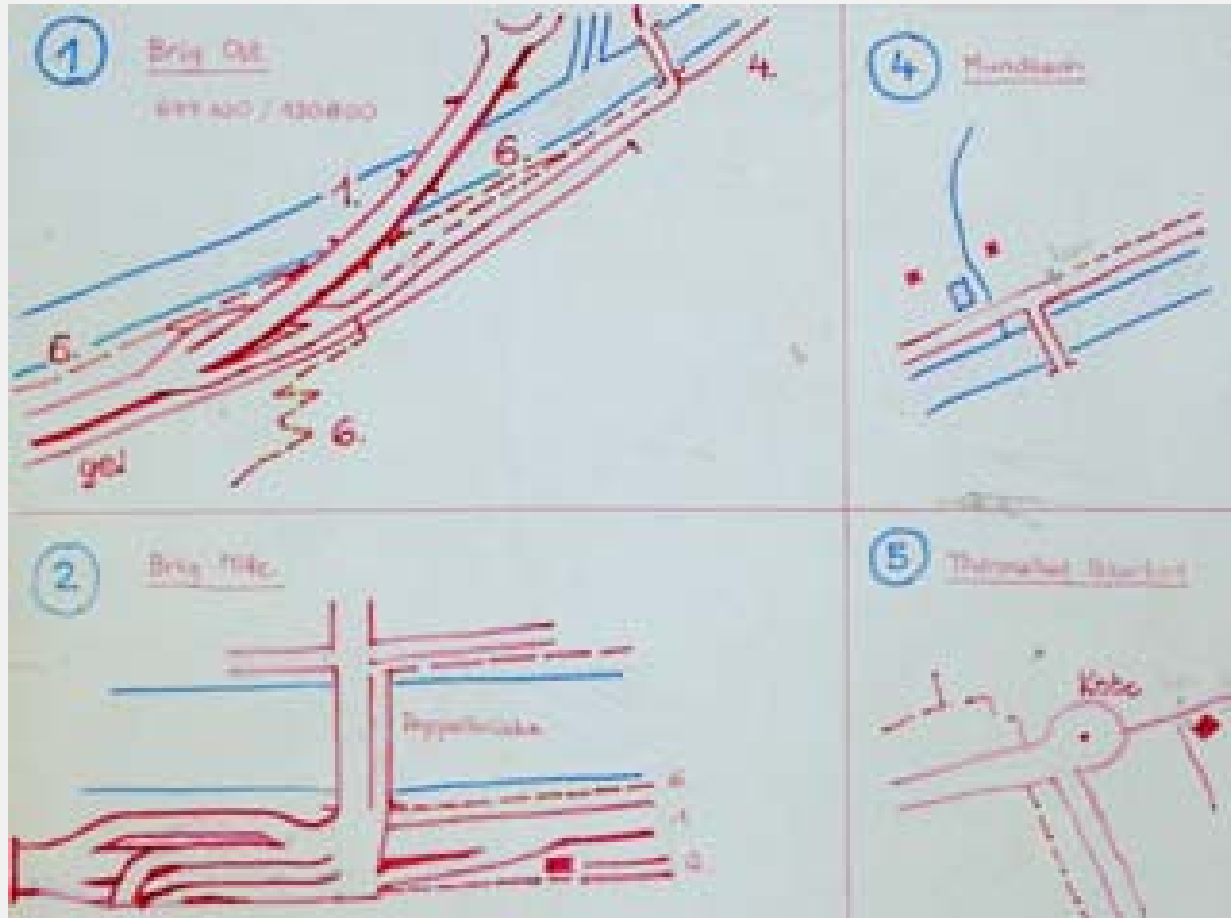
comments



details



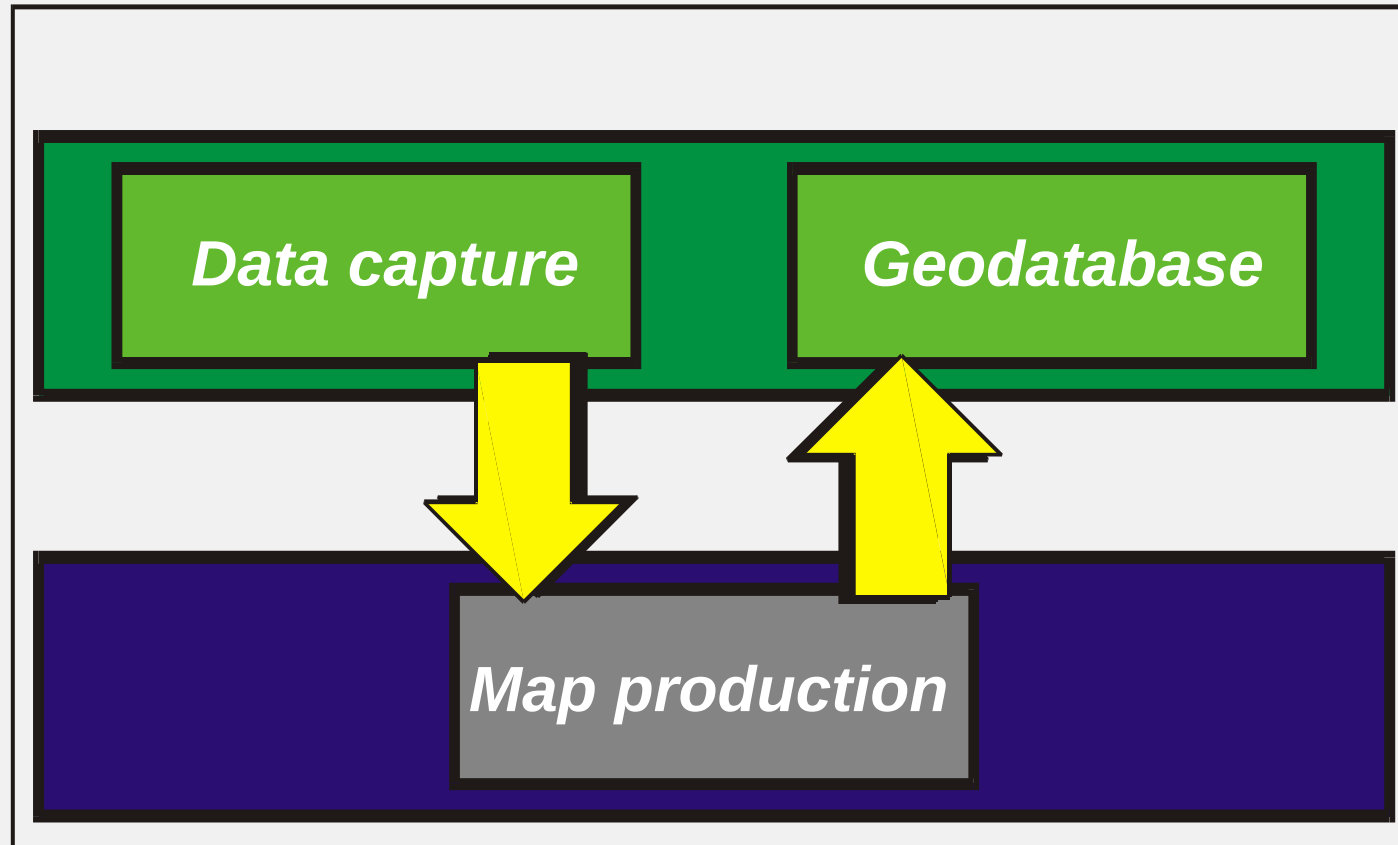
details (2)



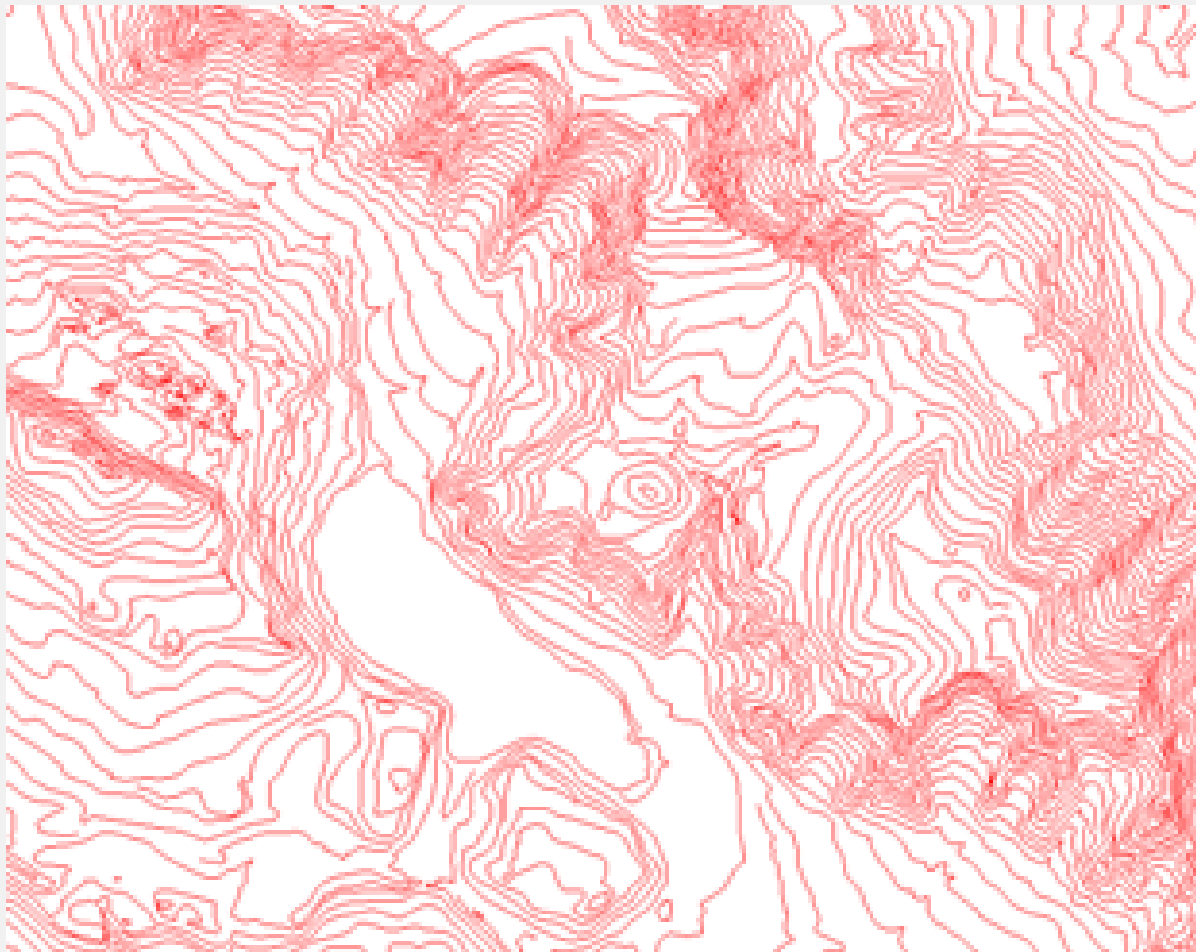
map revision 1990



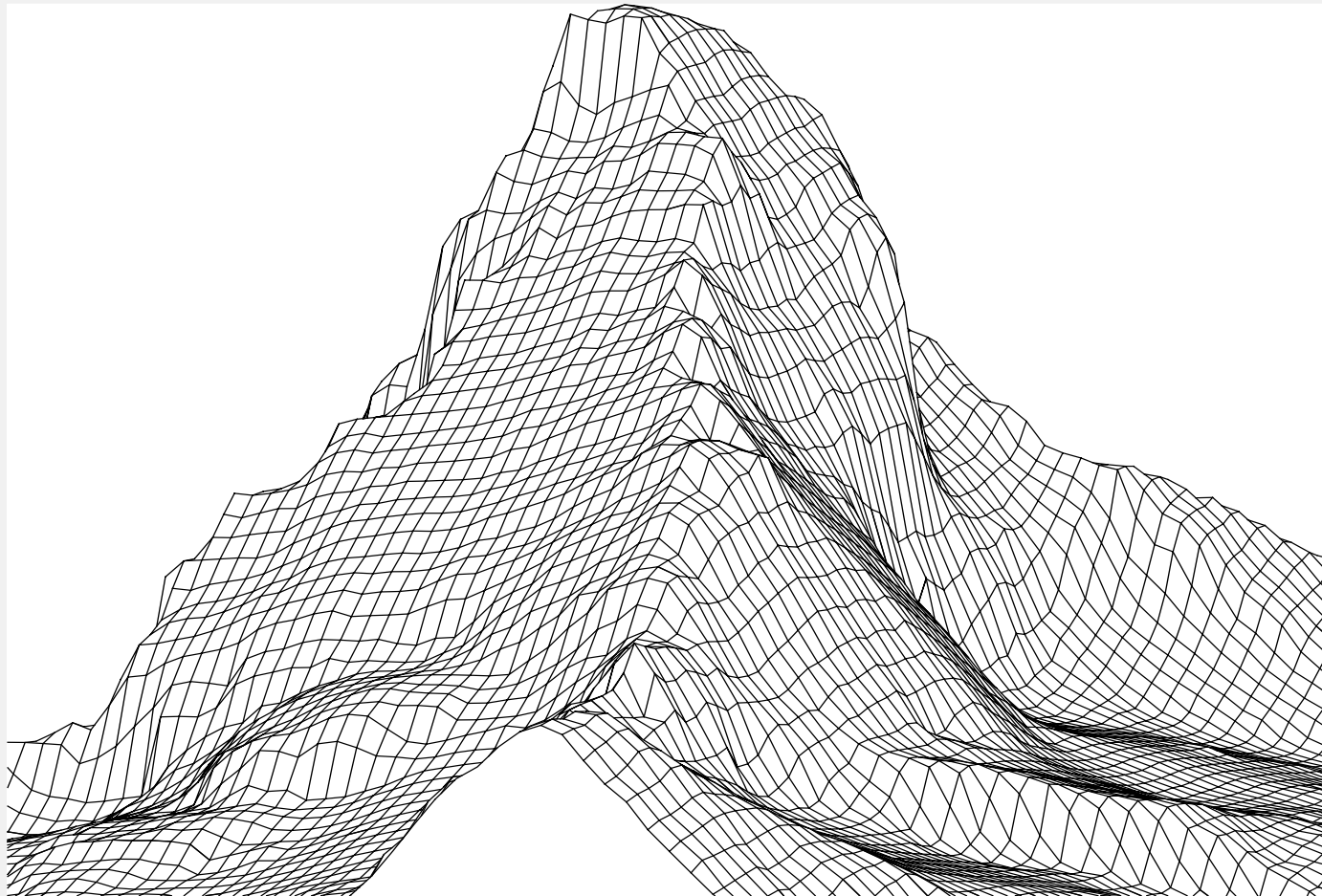
first digital models



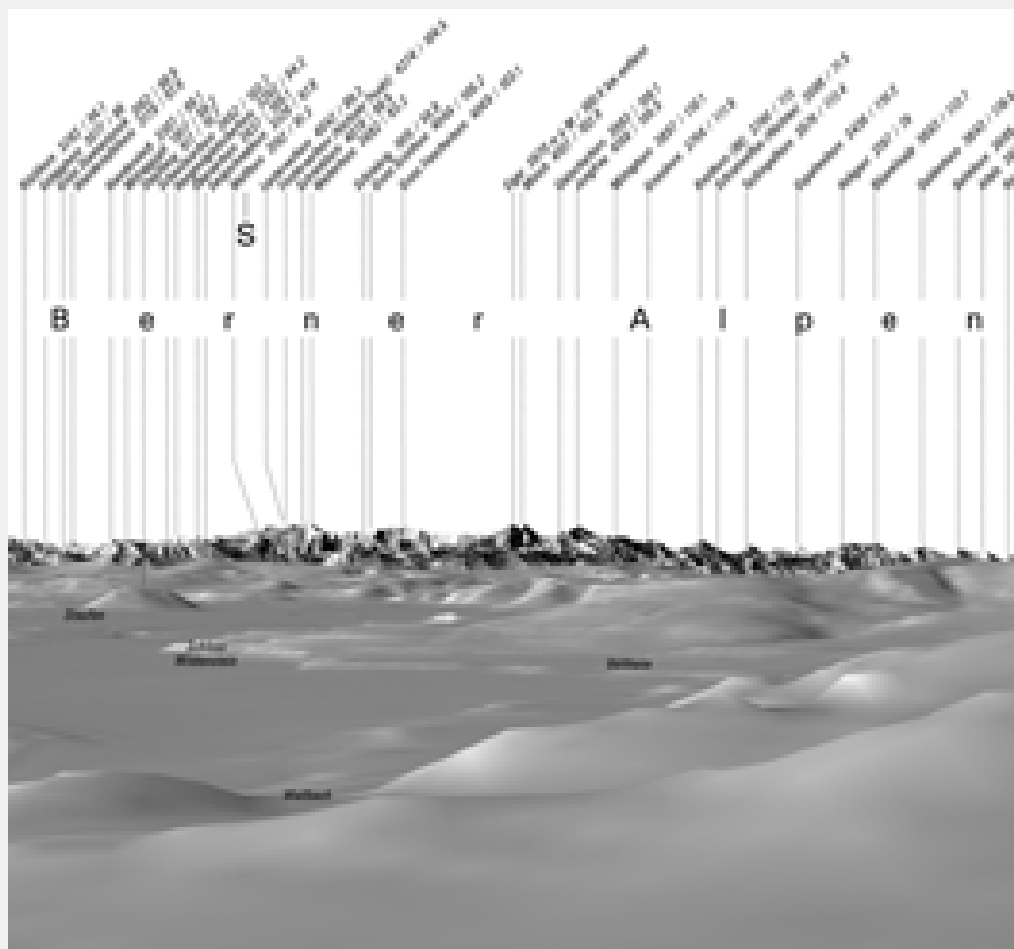
digital elevation model



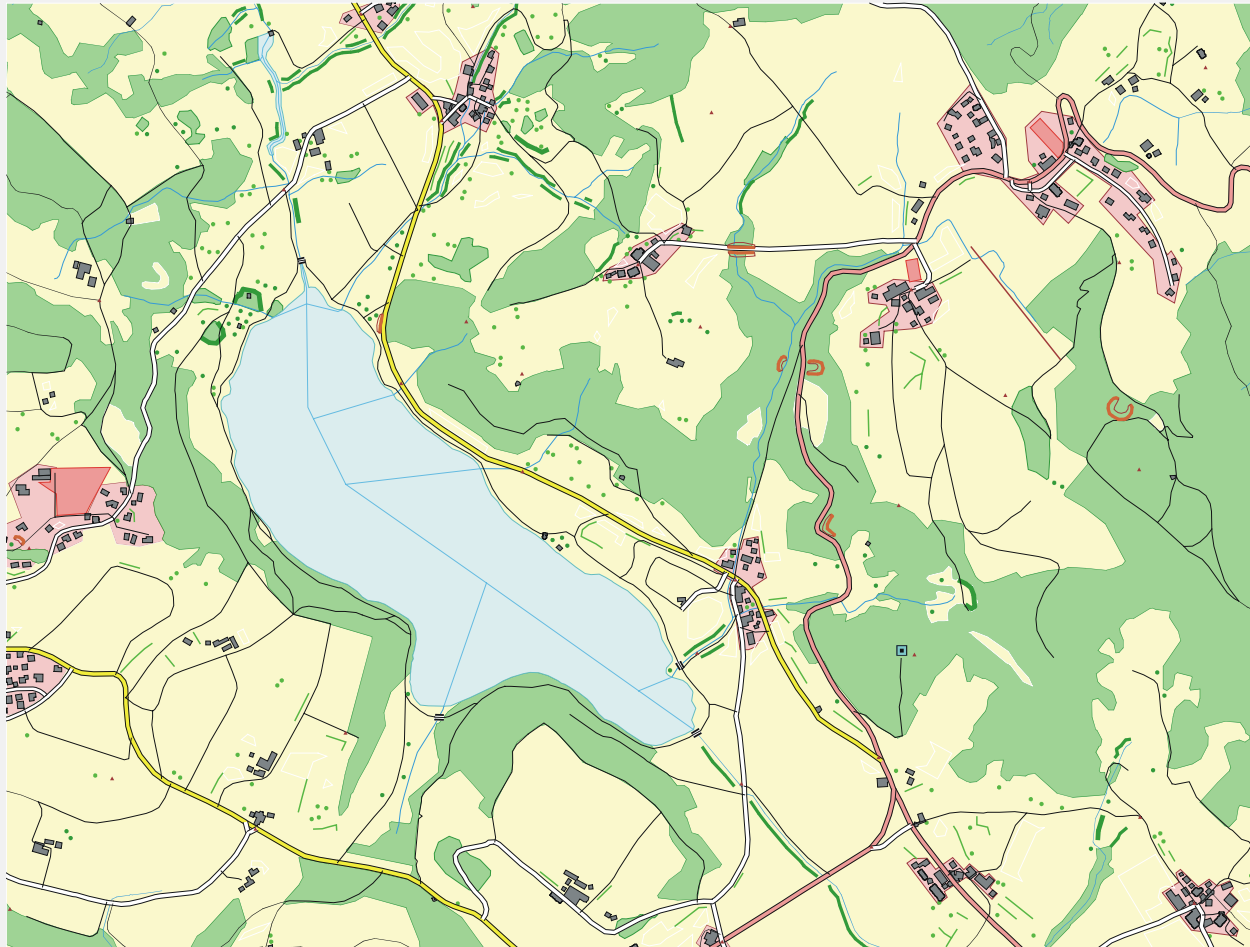
„wire frame“



panoramas



vector25



data capture 2005



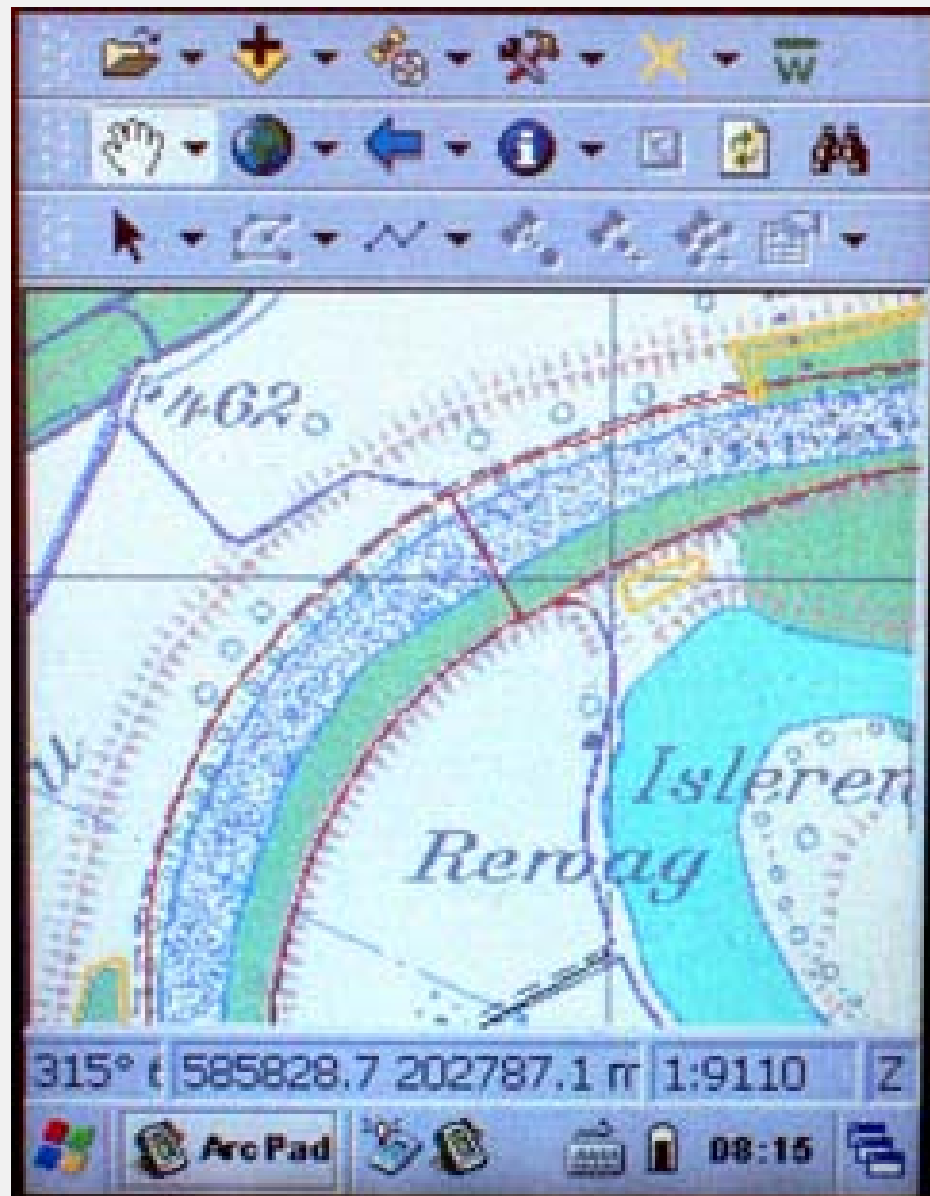
field check



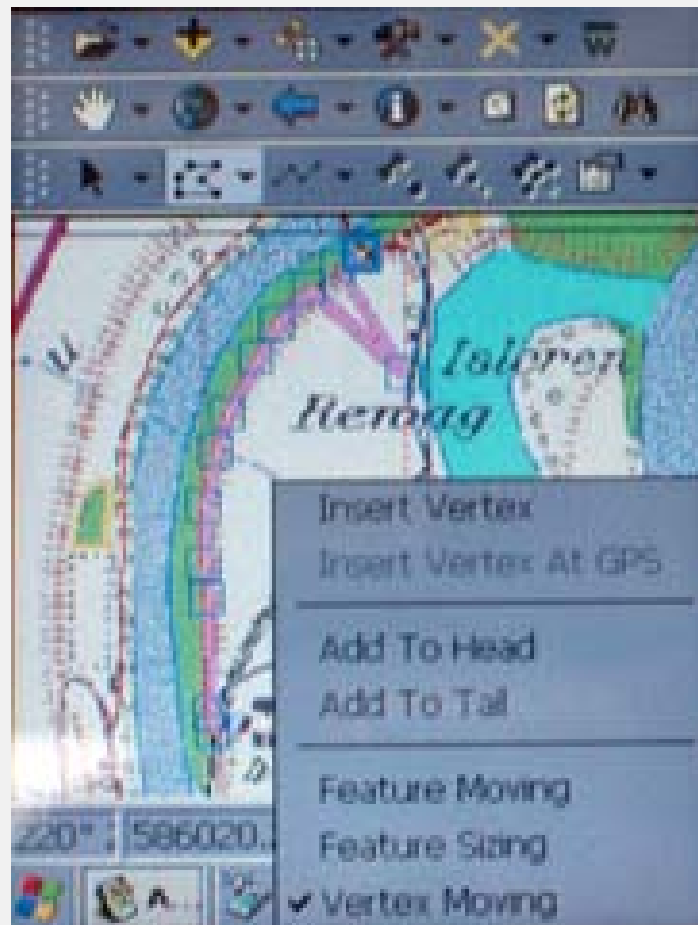


GPS and vector editing

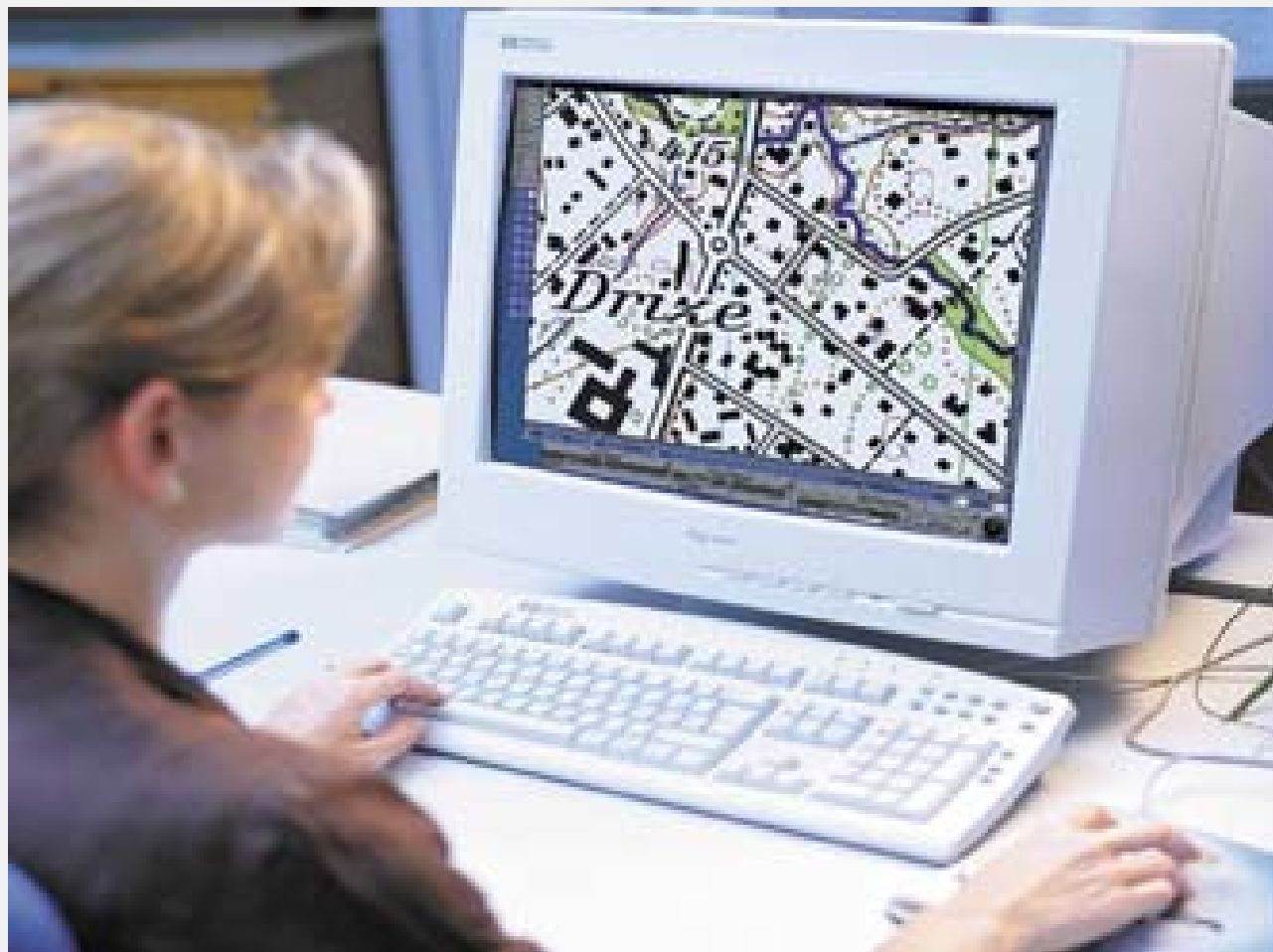
TopoPad



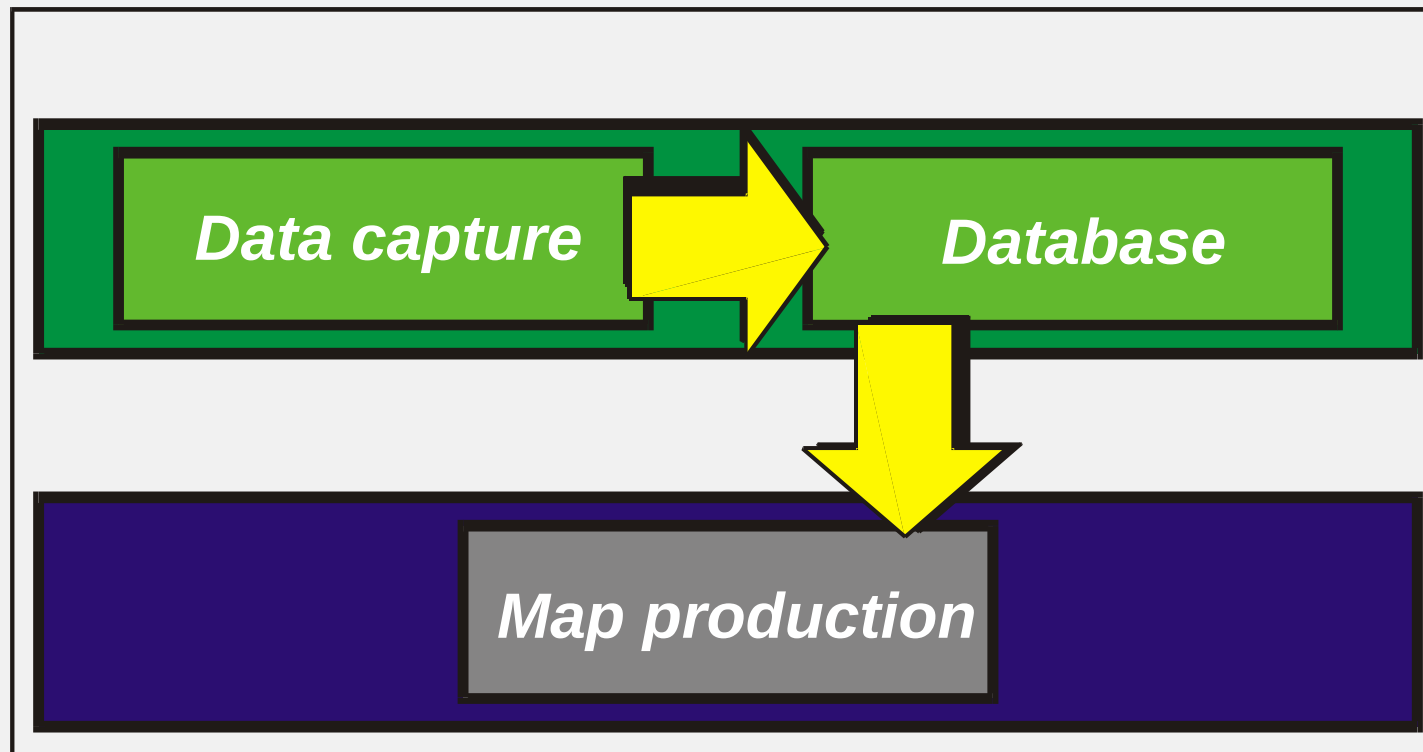
editing



cartography



updating the database 2010



aerial photography



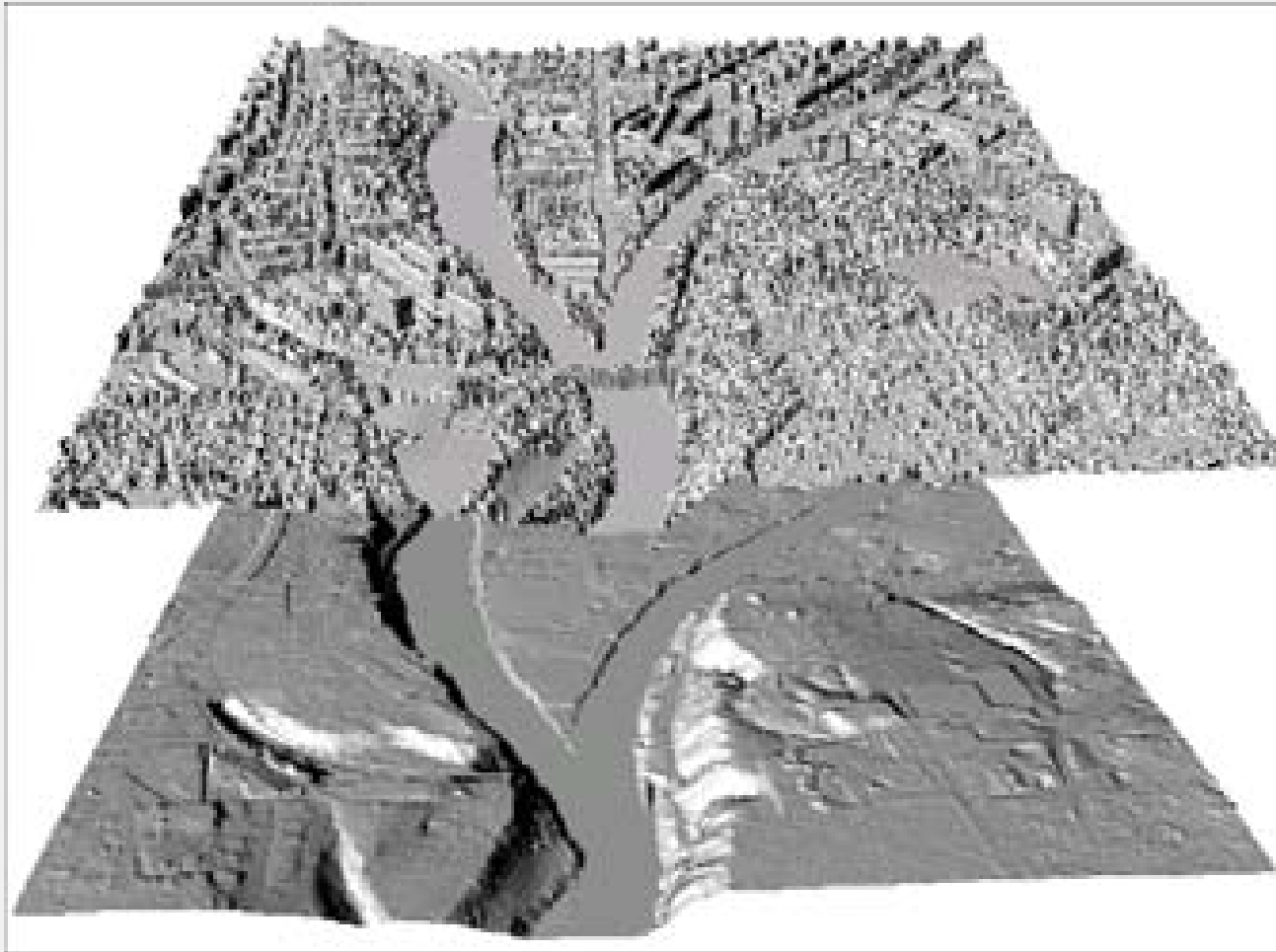
stereo plotting



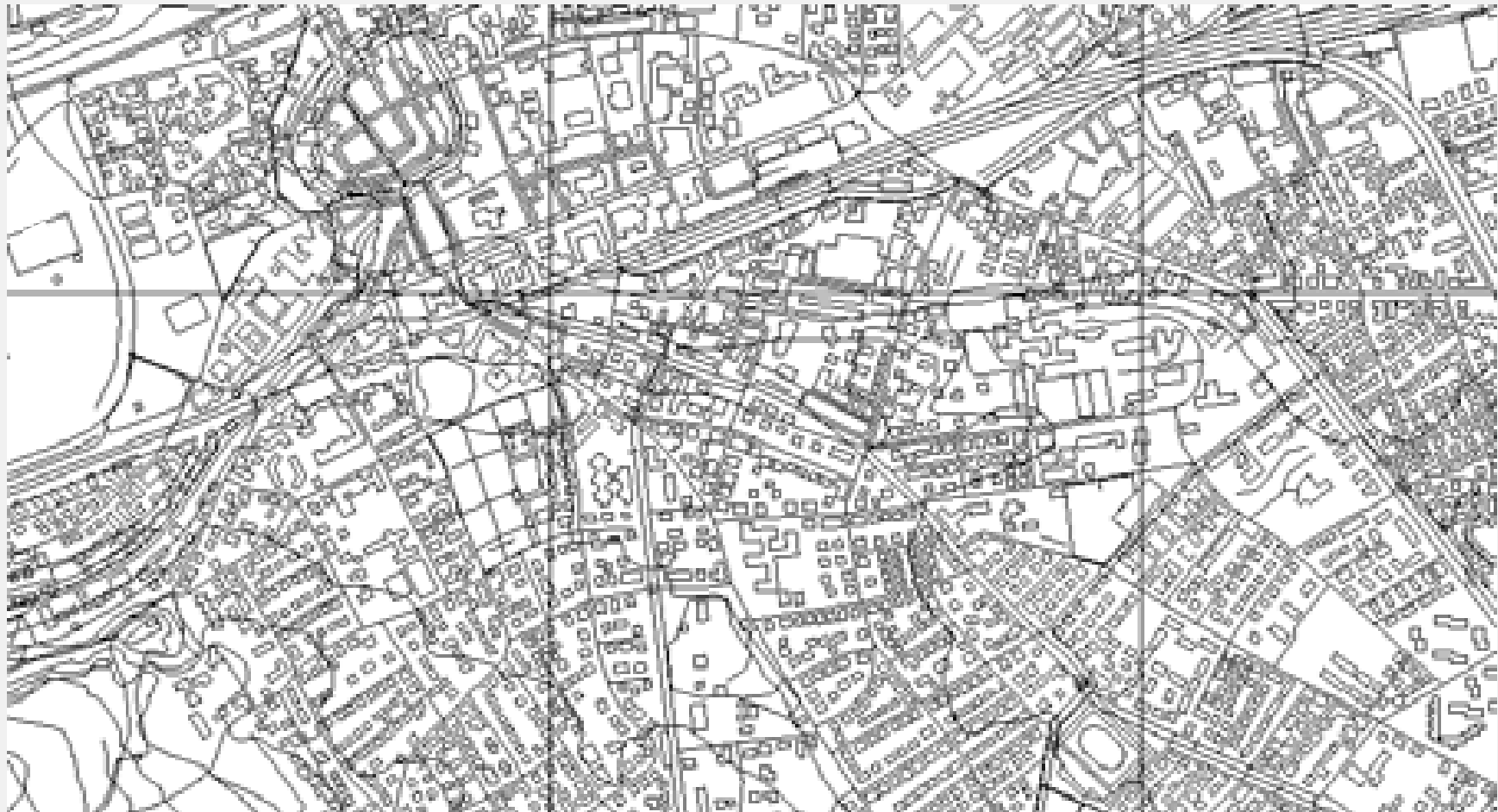
new vehicle ?



terrain / surface models



digital cartographic model



test sheet 2005



	Data model	Data capture	Data storage	Cartographic treatment	Publication
1920	Dufour and Siegfried	plane table survey	sketch map	copper engraving	paper maps
1960	National Map Series	aerial photogrammetry, field check	glass plates	scribing on glass plates	aerial photographs, paper maps
2000	National Map Series, VECTOR25	analytical plotter, field check	analogue and vectors	completely digital (bitmaps)	orthophotos, vectors, paper maps, pixel maps
2010	topographic landscape model	digital stereo plotter, field check	vectors	digital (vector graphics)	orthophotos, vectors, vector maps, paper maps, pixel maps

additional information for tourists

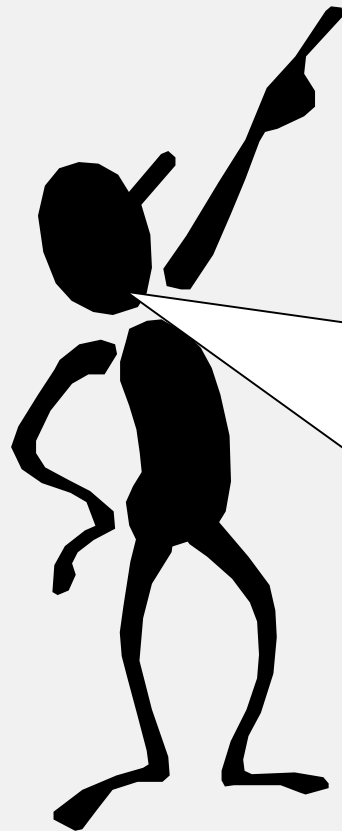


- public transport
- informations centres and panels
- marked trails
- tracks for prams, bicycles, ...
- accommodation
- other supplies

conclusion

a thorough **field check**
– combined with data collected
from other sources –
can provide **reliable information**
for maps and topographic data bases
to be used by tourists.

map quality



*The best map
is the one that offers
no surprises
to the user!*

synthetical „view“



