Some Intermediate Results of KartoGen Generalization Project in HGK

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Presentation Plan

- KartoGen Project
- KartoGen Project Applications
- KartoGen Project Future Plans
- Conclusions
1. **HGK: Turkish NMA**

- HGK is NMA of TURKEY.
- (HGK: Harita Genel Komutanlığı – General Command of Mapping)
- www.hgk.mil.tr
2. **TOPO25 Data**

- TOPO25 is the master data of Turkey; consist of 25K STM content data.
- Data Collection and Production of **2000 x 25K Sheets** are completed.
- Studies for constructing “**a multi-purpose geographic database**”, related with TOPO25 data, are still ongoing.
- For the time being, TOPO25 data are stored in “**a Seamless Data Library** (ESRI-Librarian)”. 
3. Needs For A New Project

- The production of 50K and 100K scale STMs, which has been successfully carried out with classical methods, are aimed to be handled on digital environment using “Generalisation Techniques” and “TOPO25 data”. 
4. KartoGen Project

- KartoGEN Project Group has been established in 2002.
- Staff (4 engineers + 3 technicians + ...)
- Aimed: 25to50K + 25or50to100K Production Lines.
5. **Project Aims**:

- To produce hardcopy maps of 50 & 100K through production lines
- As soon as possible (production with conventional workflow stopped)
- As automated as possible
- As standardized as possible.
- ..........
1. Some Intermediate Results
a. Generalisation Needs:

Generalisation operators;
refinement,
typification
aggregation

1:25 000 scale symbols

1:100 000 scale symbols
b. Aggregation Example (Convex Hull Method):
c. Aggregation Example (algorithm developed by KartoGen)

Final geometry

Comparison with 1:25 000

Comparison with 1:100 000
d. Displacement Example:

1:25 000 scale symbols

1:100 000 scale symbols

1:100 000 scale symbols

After displacement
e. Building Rotation Example:

Before Rotation

After Rotation
2. Some Scripts, Interfaces, and Menus
KartoGen Project Applications

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Research & Studies.
Investigating existing DataModel of TOPO25.
Studies on Promising Technologies including OODM, OOverusOR, MAS, Multiple Resolution & Presentation & Multiscale DBs...
Incremental Updating & Versioning
Generalization “on the fly” as much as possible for hardcopy production, Digital and WEB needs
U Identifier, GeomID, ....
Generalize on database
Conclusions

- Many generalization tools and user interfaces have been developed to conduct generalization and to establish 25to100K production line,
- A system for arranging the sequence of generalisation processes has to be considered,
- For tuning the generalisation results, a system of changing parameter inputs has to be implemented,
- Tools developed in this project are still under construction.
- The intermediate results are quite encouraging.
- Much remains to be developed to obtain more automatic generalization.
THANK YOU
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