International Cartographic Association
Commission on Map Generalization

Workshop on Progress in Automated Map Generalization

28 – 30 April 2003

Institut Géographique National
2-4 avenue Pasteur
St. Mandé (Paris), France

Final Program

Monday 28 April 2003 (Day 1)

09.00 – 09.15 Opening and Introductory Remarks

09.15 – 10.45 Session 1: Developments for Production Cartography I (Chair: William Mackaness)

- Blanca Baella and Maria Pla (ICC): An Example of Database Generalization Workflow: The Topographic Database of Catalonia at 1:25 000
- Novit Kreiter (swisstopo): Project OPTINA — Multiscale Databases and Generalization at swisstopo
- Cécile Lemarié (IGN): Generalisation Process for Top100: Research in Generalisation Brought to Fruition

10.45 – 11.15 Coffee Break

11.15 – 12.45 Session 2: Developments for Production Cartography II (Chair: Robert Weibel)

- Dan Lee (ESRI): Recent Generalization Development and Road Ahead
- Vince Smith (Intergraph Huntsville, USA): Generalization for Medium Scale Mapping — Results and Statistics from One Production Implementation
- Paul Hardy, Melanie Hayles and Patrick Revell (Laser-Scan): Clarity — A New Environment for Generalisation Using AGENTS, JAVA, XML and Topology

12.45 – 14.15 Lunch Break

14.15 – 15.45 Session 3: Generalization 3-D Objects and Model Generalization (Chair: Monika Sester)

- Andrea Forberg and Helmut Mayer (UFAF Munich): Squaring and Scale-Space Based Generalization of 3D Building Data
- Jagdish Lal and Liqiu Meng (TU Munich): Recognition of 3D buildings Structure and Their Aggregation
- Matthias Bobzien and Dieter Morgenstern (U Bonn): Abstracting and Formalizing Model Generalization
15.45 – 16.15 Coffee Break

16.15 – 17.45 Session 4: Generalization Algorithms: Clustering, Typification and Amalgamation (Chair: Tiina Sarjakoski)

Karl-Heinrich Anders (U Hannover): *A Hierarchical Graph Clustering Approach to Find Groups of Objects*

Dirk Burghardt (U Zurich): *Mesh Simplification for Building Selection*

Nicolas Regnauld (OSGB): *Algorithms for the Amalgamation of Topographic Data*

17.45 – 18.00 Wrap-up Session of Day 1

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**Tuesday 29 April 2003 (Day 2)**

09.00 – 10.30 Session 5: Measures and Data Enrichment (Chair: Tumasch Reichenbacher)

Birgit Elias (U Hannover): *Determination of Landmarks and Reliability Criteria for Landmarks*

Byron Nakos and Vassilis Mitropoulos (NTU Athens): *Local Length Ratio as a Measure of Critical Points Detection for Line Simplification*

Cécile Duchêne, Sylvain Bard, Xavier Barillot, Anne Ruas, Jenny Trévisan and Florence Holzapfel (IGN/COGIT): *Quantitative and Qualitative Description of Building Orientation*

10.30 – 11.00 Coffee Break

11.00 – 12.30 Session 6: Knowledge Extraction, the User, and Generalization Quality (Chair: Nicolas Regnauld)

Lichun Sui (TU Munich): *Acquisition of Generalization Knowledge using Matching Methods*

Frédéric Hubert and Anne Ruas (IGN/COGIT): *A method based on samples to capture user needs for generalisation*

Sylvain Bard (IGN/COGIT): *Evaluation of generalisation quality*

12.30 – 14.00 Lunch Break

14.00 – 15.30 Session 7: Generalization Using Techniques from Optimization and Computational Intelligence (Chair: Cécile Duchêne)

J. Mark Ware, Nathan Thomas and Christopher Jones (U Glamorgan, U Cardiff): *Resolving Graphic Conflict in Scale Reduced Maps: Refining the Simulated Annealing Technique*

Bin Jiang and Lars Harrie (U Gävle, U Lund): *Cartographic Selection Using Self-Organizing Maps*

Ian D. Wilson, J. Mark Ware and J. Andrew Ware (U Glamorgan): *Reducing Graphic Conflict In Scale Reduced Maps Using A Genetic Algorithm*

15.30 – 16.00 Coffee Break

16.00 – 17.30 Session 8: Agent-Based and Knowledge-Based Methods (Chair: Mark Ware)

Cécile Duchêne (COGIT): *Coordinative agents for automated generalisation of rural areas*

Martin Galanda (U Zurich): *Modelling constraints for polygon generalization*

Robert B. McMaster (U Minnesota): *Multiscale Research and Generalization for the US National Historical GIS*

Wenxiu Gao, Jianya Gong and Zhilin Li (U Wuhan, PolyU Hong Kong): *Knowledge-based Generalization of Land-use Data* (paper not presented; authors unable to attend)

17.30 – 17.45 Wrap-up Session of Day 2
Wednesday 30 April 2003 (Day 3)

09.00 – 10.00  Session: Demos (Chair: Anne Ruas)
   Mark Ware, Nathan Thomas (U Glamorgan): Demo — Simulated Annealing for Map Generalization
   Monika Sester (U Hannover): Two Demos — Online Building Generalization and Displacement
   Karl-Heinrich Anders (U Hannover): Hierarchical Graph Clustering

10.00 – 10.30  Coffee Break

10.30 – 12.45  Break-out Groups (5): Discussion of Selected Topics
   - Common research platform
   - Database issues for generalization; incremental updating
   - 3-D generalization
   - Generalization for small displays
   - Pattern analysis for generalization

12.45 – 14.00  Lunch Break

14.00 – 15.00  Plenary: Reports of Break-out Groups (Chair: William Mackaness)

15.00 – 15.15  Coffee Break

15.15 – 16.00  Plenary: Wrap-up and Closing (Chair: William Mackaness)