



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 Regnaud (OSGB): *Algorithms for the Amalgamation of Topographic Data*
- 17.45 – 18.00 Wrap-up Session of Day 1

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 Regnaud)
- 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)