Generalization in the production flowline of the new baseline map of the IGN France

New baseline map project :

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The new baseline map

- New production flowline :
  - Aims :
    - produce a vectorial cartographic database at 1 : 25 000 scale on the whole France
    - Use of automatic tools to speed up the production cycle : 10 years to cover France
  - Cartographic production launched in may 2011
    - Work on square areas of 20km (1543 areas for France)
    - No major problems
    - Work in low density areas.

Demo

- Two test areas : urban or low density area
- Several fully cartographied examples

Generalization in the flowline

- Homogeneous generalization on France
- Two fully automatic and different processes :
  - Networks generalization : beams/GAEL
  - Buildings generalization : AGENT
- Need of topology
  - Main softwares :
    - PostgresSQL/PostGIS : databases
    - Geoconcept / Publisher from Geoconcept : GIS
    - Clarity from 1Spatial : Automatic and generalization software

Networks generalization

- Process :
  - Data preparation (data smoothing, schema modifications)
  - Flexibity graphs (Lemarié 01) : detect conflicts.
  - GAEL (Gaffuri 08) structuration : creation of micro agents based on flexibility graphs
  - Beams (Bader 01) / diffusion : fixed objects : rivers, railroads, bridges, roundabouts
  - GAEL : buildings, urban blocks displacement
- Results :
  - Earth banks / roads displacement.
  - Few displacements in low density areas.
  - Problems in urban areas (work in progress).

Buildings generalization

- Needs urban structures.
- Process :
  - Data preparation : small building elimination : area of the geometry < 20 m²
  - AGENT (Ruas 99) elimination : remove buildings based on group density
  - AGENT micro : squaring and size increase
  - AGENT displacement : building move
- Results :
  - Good nearly everywhere
  - Few « eliminations » with AGENT (as required)
  - Few errors : squaring, displacements when a building moves closer to a road.
  - Asks for some parameters modifications