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Generalization for Multi-scale Mapping

Jamie Conley and David Watkins

Generalization and Conflict Resolution

- **Generalization** is the simplification and clarification of features to clarify their display at smaller scales
- **Conflict Resolution** is the management of the extent and placement of symbolized features on maps
- Both improve the quality of multi-scale map display

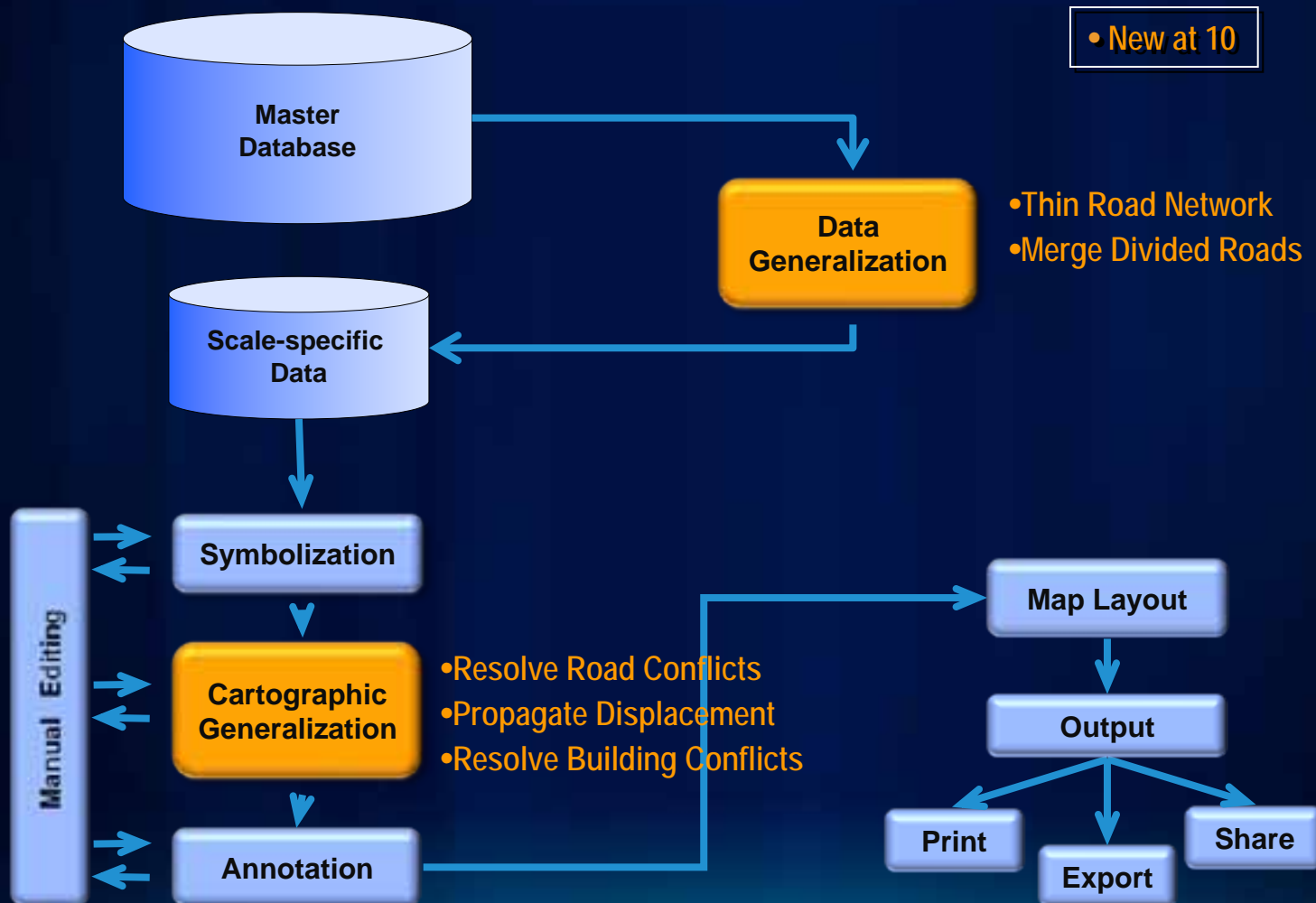


Contextual Generalization with Geoprocessing

- **Simplify data to display at smaller scales**
 - Assess multiple layers contextually
 - Maintain representative pattern, density, and character
 - Resolve conflicts between symbolized features at scale

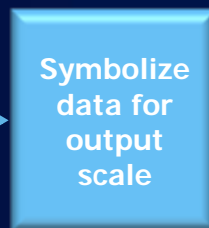
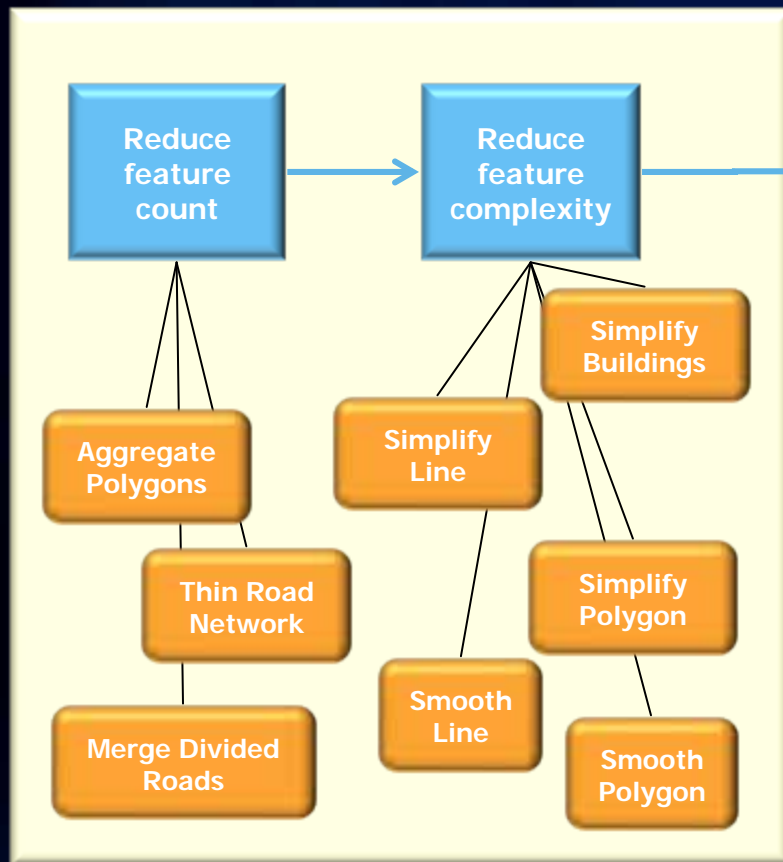


Cartographic production workflow

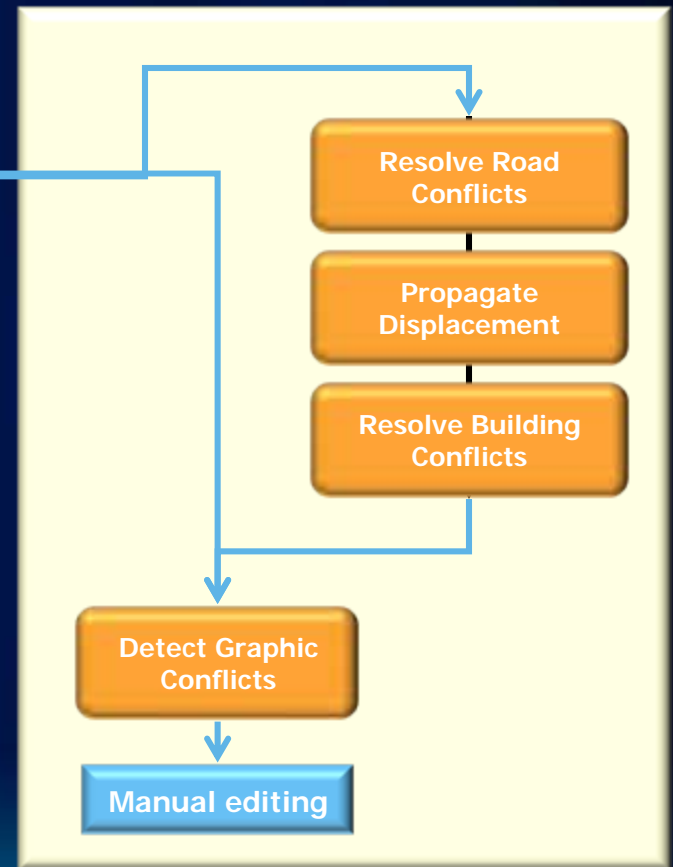


Cartographic processes

Data Generalization (Generalization toolset)



Conflict Resolution (Graphic Conflicts toolset)



Resolving Graphic Conflicts

Thin Road Network tool

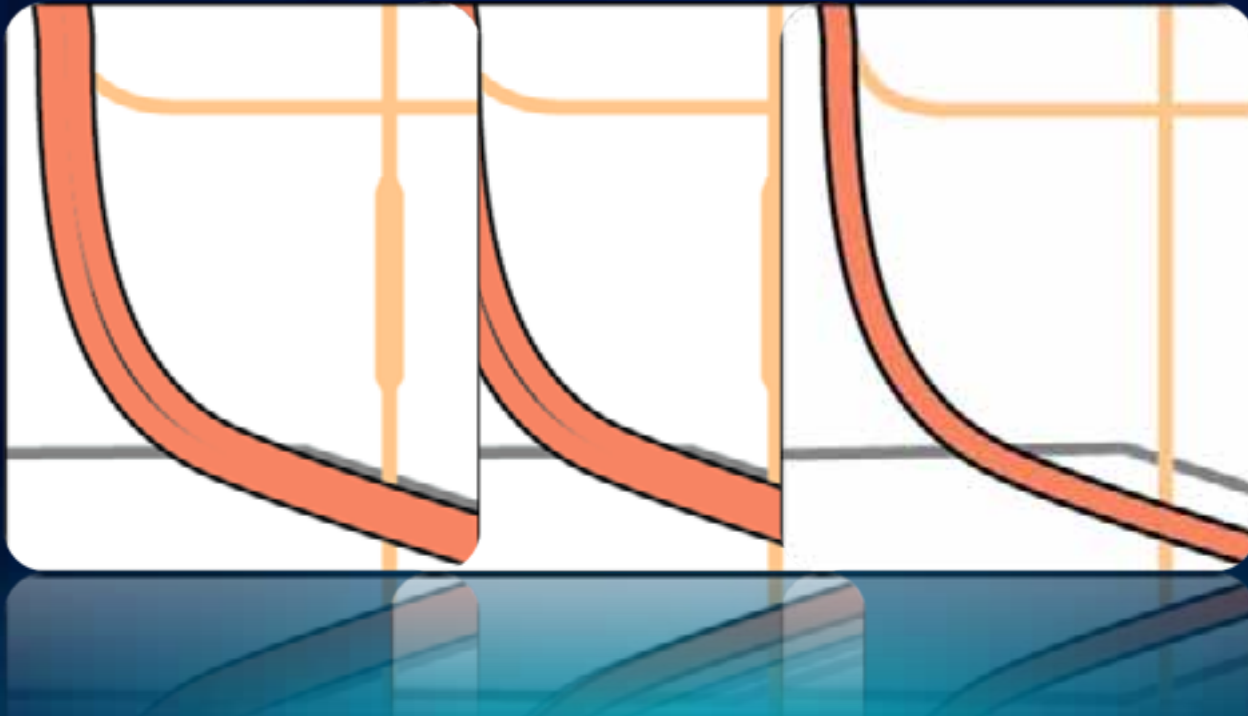
- Removes less significant roads from display
- Retains representative pattern and connectivity
- Visibility controlled by attribute, easy to modify



Resolving Graphic Conflicts

Merge Divided Roads tool

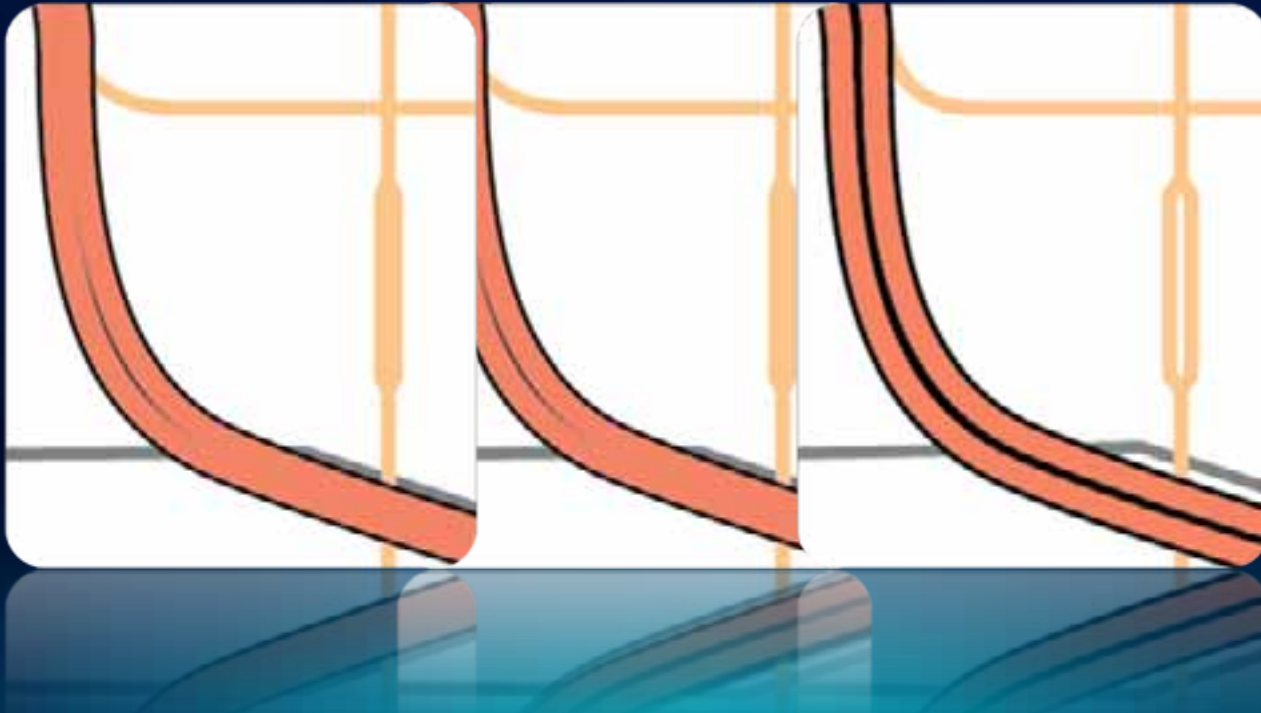
- Create a single highway feature from multiple lanes
- Create a single road from a boulevard
- Merge only equal-class roads together



Resolving Graphic Conflicts

Resolve Road Conflicts tool

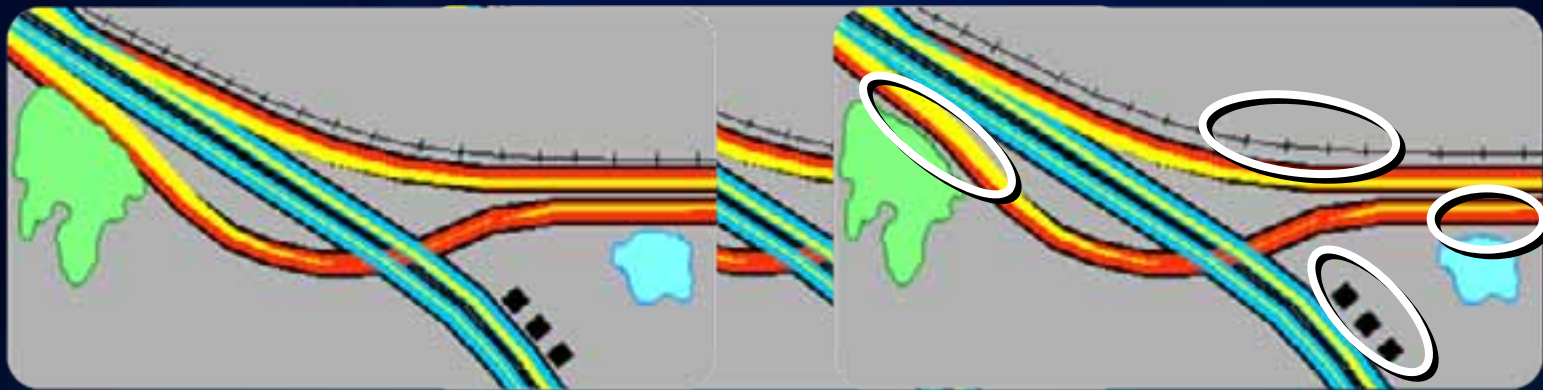
- Adjust roads to show visual separation
 - multi-lane highways, boulevards, dead-ends, roundabouts
- Less significant roads moved to accommodate more significant roads



Resolving Graphic Conflicts

Propagate Displacement tool

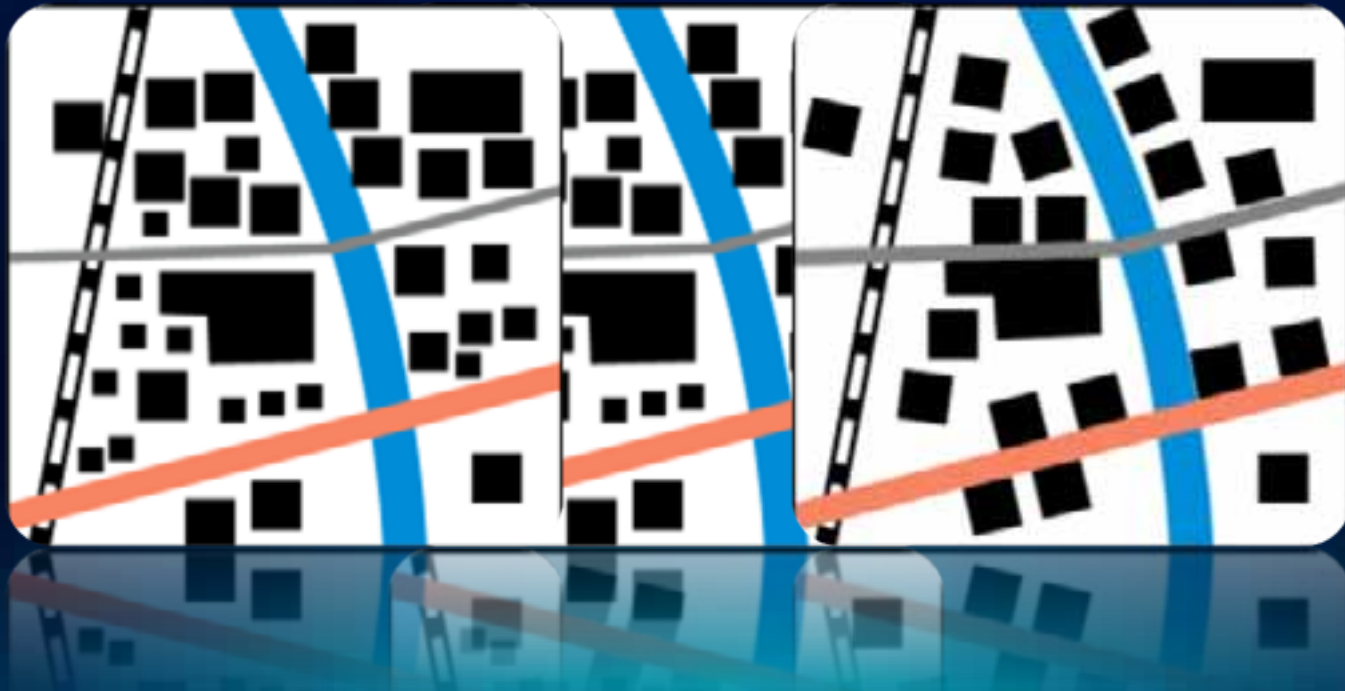
- Conflict resolution may introduce spatial discrepancy
 - Adjust adjacent features to reestablish relationships
- Use displacement output from other tools
 - *Merge Divided Roads tool*
 - *Resolve Road Conflicts tool*



Resolving Graphic Conflicts

Resolve Building Conflicts tool

- **Separate buildings from each other and from barriers**
 - Retain relative density and pattern
 - Adjust visibility, size, and spacing, orientation



DeKalb County Board

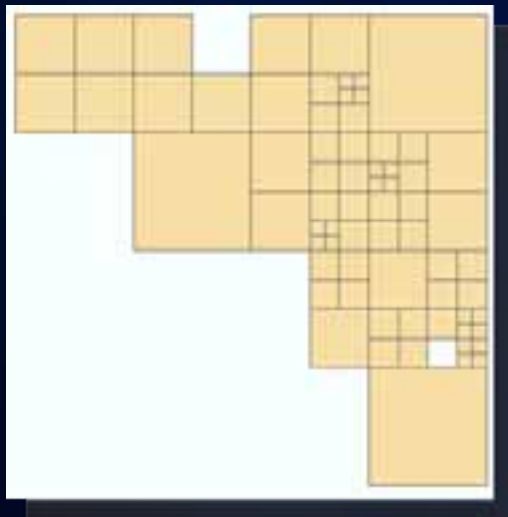
Fulton County Dept. of Health and Wellness/District 3, Unit 2, 2014

Demonstration



Generalization Road Ahead – 10.1

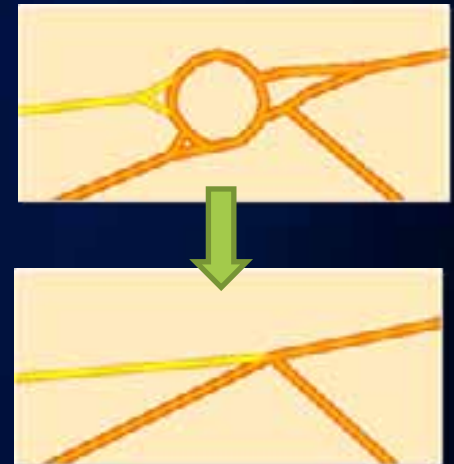
- Process large data sets
- Collapse road details
- Delineate built-up areas



Cartographic Partitions



Built-up Areas



Road Detail

Questions?



Thank you



