Database-Driven Cartography From a Digital Landscape Model, With Multiple Representations and Human Overrides

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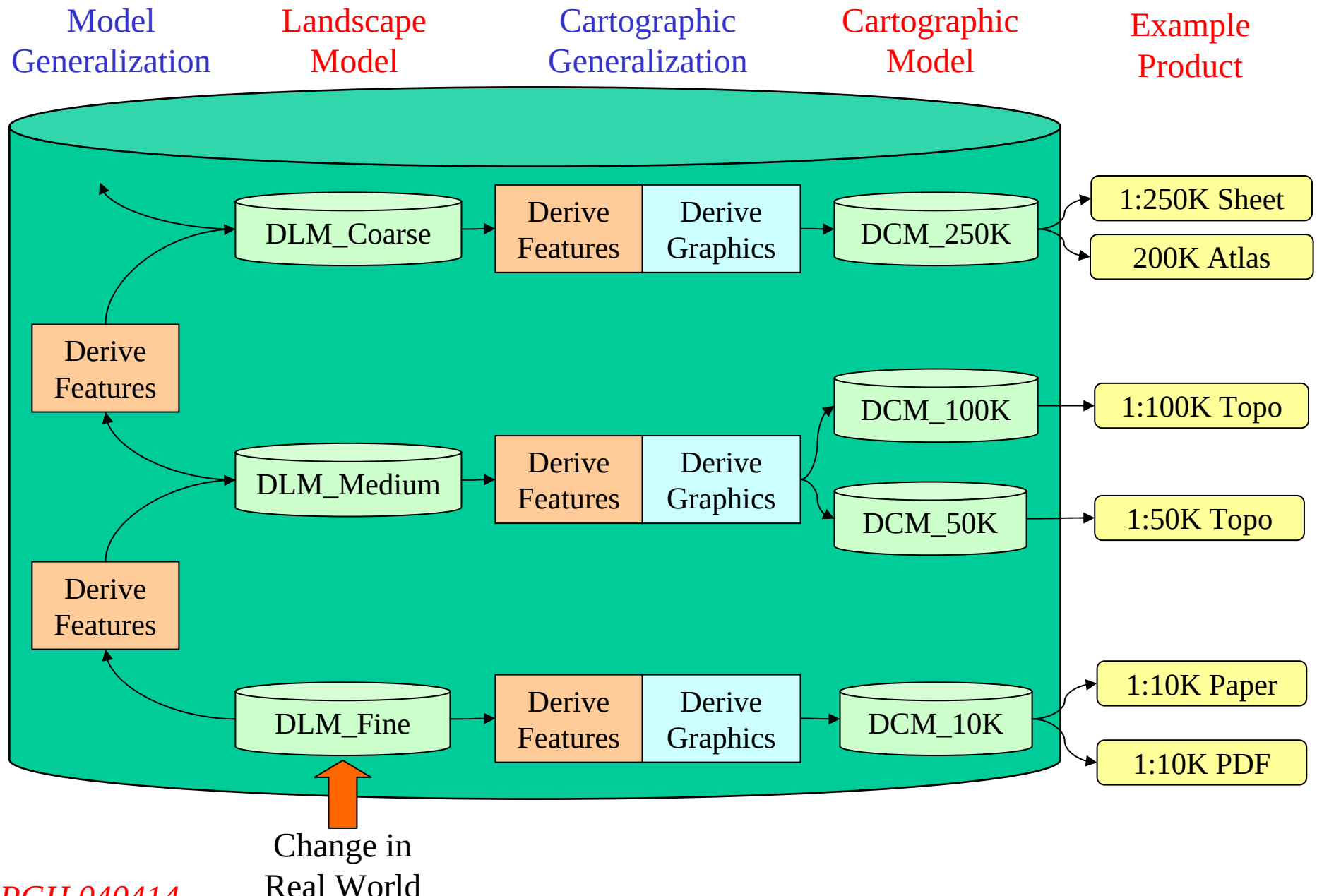
Caveat

- **This is a forward-looking presentation, and much of the capabilities it describes are still under development.**
- **As such, it is intended to give guidance as to likely future direction and should not be interpreted as a commitment by ESRI to provide precise capabilities in specific releases.**

Landscape Models, Cartographic Models, and Products



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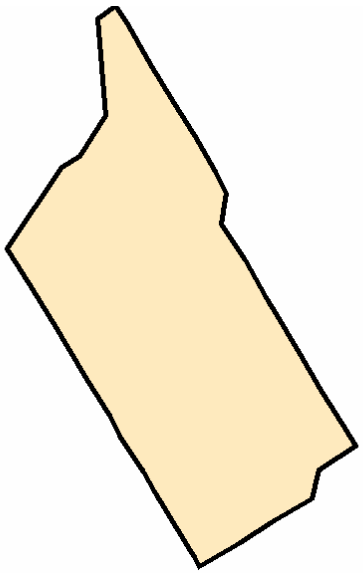
Multiple Representations

- One DLM feature should often be represented differently for reasons of
  - Scale
  - Product specification
  - Cartographic licence
  - Sheet edges
- Could copy to new class, but
  - Gives divided workflow
  - Problems with update
- Could do products in graphics package or map finishing system, but
  - Not WYSIWYG
  - Different environment
  - Lose late updates

Project Vision for ArcGIS Cartography

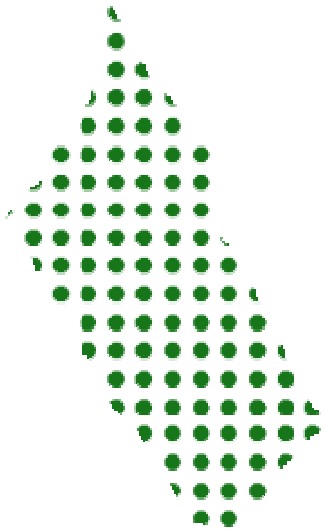
- **One environment from start to end of cartographic process**
- **Provide the cartographer with tools to:**
  - **Automatically generate high-quality cartographic representations from GIS data**
  - **Override the automated representation for individual features where necessary for clarity**
  - **Interact with the cartographic representation using intuitive tools like those in Adobe Illustrator etc.**
  - **Store representation definitions and overrides in the geodatabase.**

Four Stages of Representation Control



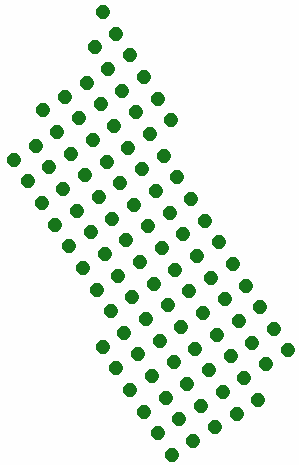
1

Polygon feature (Orchard)



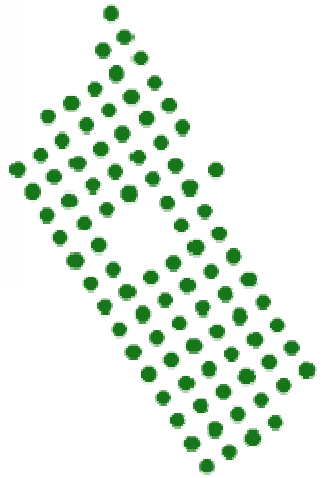
2

GIS Clipped fill



3

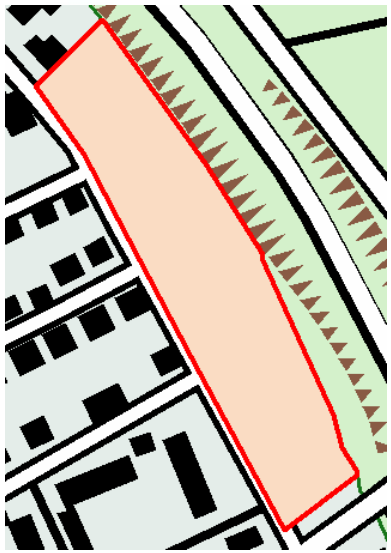
Automatic Representation



4

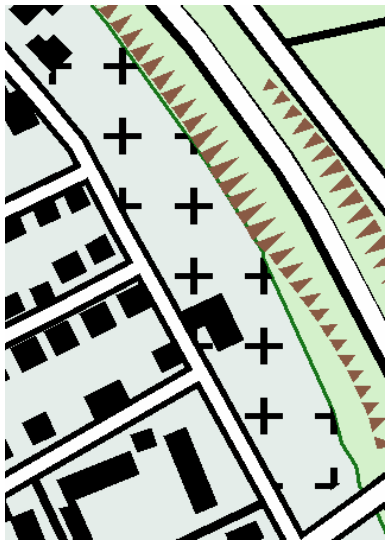
Manual override

Four Stages of Representation Control



1

Polygon feature (Cemetery)



2

GIS Clipped fill

3

Automatic Representation

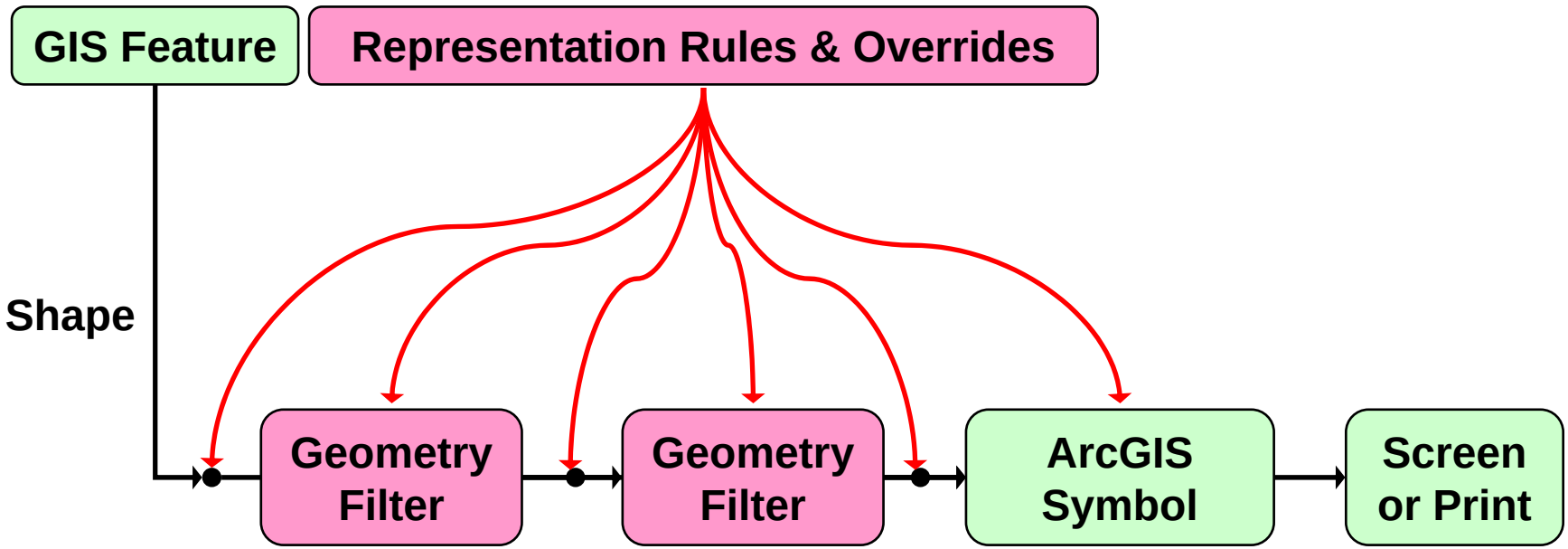
4

Manual override

Key Capabilities

- **New Representation Class in the Geodatabase**
  - Like a feature class, but for vector representations
- **Automated representation pipeline**
  - Geometry filters + symbolization rules
- **Geometry Filters**
  - Modify geometry for display (offset, fill with points,…)
- **Human overrides**
  - Position, size, color, shape, …
- **Intuitive graphical editing tools**
  - Operate directly on representation
  - Like best of Illustrator, Freehand, etc

Representation Pipeline



Escarpment – Stages of Control

1

Line features

2

GIS symbol

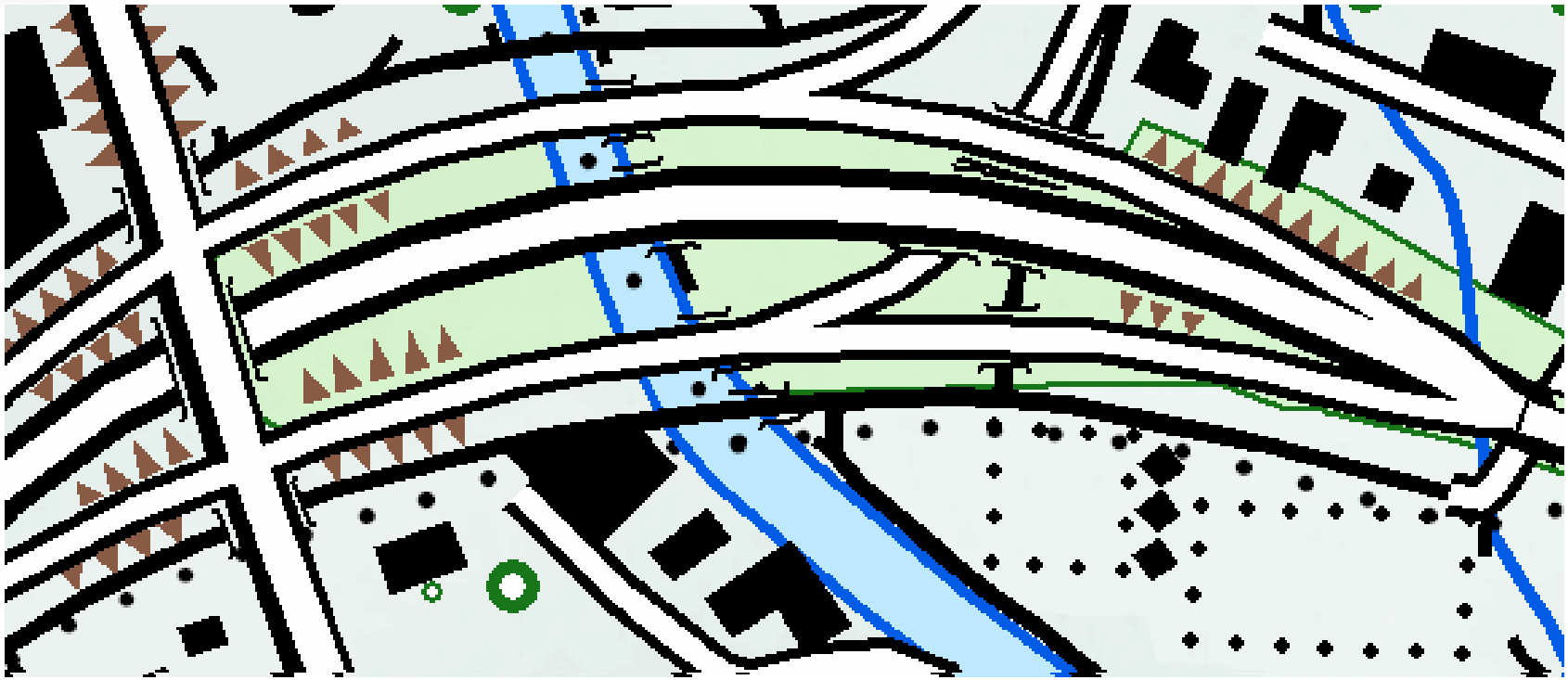
3

Representation

4

Manual Override

Road crossings



Road intersections ambiguous

Automatically calculate crossings

Use crossing areas as mask

Can add parapets automatically

Demonstration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Schachen
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379
469
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