Migrating Data To The Parcel Fabric
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What is a parcel fabric?

• Dataset of related feature classes and tables
  - Polygons, lines, points, plans, etc.
  - System attributes
• Connected parcel groups
  - Forms a parcel boundary network
• Explicit topology
  - Defined by common parcel corner points
• Parcel Editor toolbar
Parcel fabric data model

Line points

- Preserve original recorded dimensions, ensure topology between parcels
Parcel fabric data model

Overlapping parcels

Subdivisions, Lots, Tax Parcels, Historic parcels all share same common points
Parcel fabric data model

- Data model can be optimized for your organization, for example, esri’s Local Government Information Model
Local government Information Model (LGIM)

- GIS datasets, web services, maps and apps
- GIS information and processes are organized across departments
- Parcel fabric is used for parcel editing
- Parcel fabric can be enabled with the LGIM
Parcel fabric enabled with the LGIM

- Extends the parcel fabric data model
  - Optimized for parcel editing in the USA
- Provides a configured map for streamlined editing
- Provides automated parcel editing workflows
Demo

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Migrating data to the Parcel Fabric

- Setup the data model
  - Extend the parcel fabric model
  - Or use the Local Government Information Model
- Setup a staging environment
- Format and prepare data
- Use the Load a Topology to a Parcel Fabric geoprocessing tool
- Import control points
Migrating data to the parcel fabric

Steps

1. Create a parcel fabric
2. Setup staging & create attributes
3. Prepare geometries
4. Load data
5. Configure the map
6. Import control points
Step 1: Create a parcel fabric

Data migration steps

- **Create in a feature dataset**
  - Projected or geographic
- **Extend the data model**
  - Add your own attributes, tables
  - Or enable the Local Government Information Model (USA)
Demo: Step 1

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Step 2: Setup staging & create attributes

Data migration steps

• Review source data
  - Inventory of polygons

• Create an empty polygon feature class for each parcel type
  - In a separate feature dataset

• Add and map attribute fields
  - Fields must match fields in parcel fabric tables (both system and additional)

• Calculate any necessary attributes in source polygons
  - Types, historic parcels

• Use Simple Data Loader
  - Load your source polygons into new empty polygons
Step 2 cont…Staging
Data migration steps

• Use the LGIM
  - Staging feature classes are setup for you
  - Download and unpack the staging layer package

• Other considerations
  - Check alignment between parcel types
Demo: Step 2

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Step 3: Prepare geometries

Data migration steps

- For each parcel type:
  - Check and repair any polygon geometries
  - Polygons to lines
  - Curves and lines Add-in
  - Rebuild polygons
  - Check polygon inventories
Demo: Step 3

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Data migration steps

1. Create a parcel fabric
2. Setup staging & create attributes
3. Prepare geometries
4. Load data
5. Configure the map
6. Import control points
Step 4: Load data

Data migration steps

- Load a Topology to a Parcel Fabric geoprocessing Tool
- Separate topologies for each parcel type
- Topology validated against a required set of rules
Steps 1 to 4: Summary of staging

- Polygon feature class for each type
- Separate feature datasets
- Add/map fields for migration to fabric

- Load source polygons using Simple Data Loader

- Create lines
- Format lines
- Rebuild polygons from lines
- Create/validate topologies
- Load topologies
Step 5: Configure your map

Data migration steps

- If using the LGIM:
  - Drag LGIM-enabled parcel fabric into the map

- If using your own model
  - Query parcels and save layer files
Demo: Step 5
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Step 6: Import control points

Data migration steps

- Why have control?
  - Accuracy for new parcels
  - Deeds references control points
- Use Import Control Points wizard
- Use XYZ coordinates or shape geometry
- Loaded multiple times for new updates to coordinates
Demo: Step 6

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Additional considerations

- **Script to automate the loading process**
  - Takes polygons, creates lines, validates topology and loads data
  - Polygons must be typed
  - On Github

- **Iterate tool for large datasets**
  - Divide into zones

- **Overlapping parcels of the same type**
  - Planarize your lines

- **Starting with lines instead of polygons**
  - Format lines, type lines, build polygons
Resources

• **Documentation**
  - Latest release of help documentation
  - videos

• **Land Records resource center**
  - Local Government Information Model
  - Data migration staging package
  - Add ins (Iterator, Curves and Lines, etc.)

• **Land Records meetup**
Additional sessions

• Editing and Maintaining Parcels
  - Tuesday, July 15th, 1:30pm – 2:45pm, 14B
  - Thursday July 17th, 10:15 – 11:30am, 14B

• Parcel Editing: Advanced
  - Wednesday, July 16th, 10:15am – 11:30am, 06B
  - Thursday, July 17th, 1:30pm – 2:45pm, 06D

• Land Records Meetup
  - Thursday, July 17th, 12pm – 1pm, 31B
Thank you...

• Please fill out the session survey:

First Offering ID:  41

Online – www.esri.com/ucsessionsurveys
Paper – pick up and put in drop box