Parcel Editing: Advanced

Tim Hodson
Jason Camerano
Topics

- Slides
  - Community Resources
  - Parcel Fabric Overview

- Demonstrations
  - Construction, CAD, Control Points and Adjustments

- Questions & Answers
Community Resources and Participation

• Community for Land Records
  - Group on Esri’s GeoNet (New!): http://tinyurl.com/LandRecordsGroup
  - Meetup: http://tinyurl.com/LandRecordsMeetup
  - Resource Center: http://tinyurl.com/ParcelEditingResourceCenter
  - Ideas: http://tinyurl.com/IdeasForParcelSolution
  - Training: http://tinyurl.com/TrainingParcelFabricEditing

• Meetup Recordings:
  - How to improve your spatial accuracy, part 1: http://tinyurl.com/spatialaccuracy1
  - How to improve your spatial accuracy, part 1: http://tinyurl.com/spatialaccuracy2

• Attribute Assistant Add-in:
  - Help: http://tinyurl.com/AttributeAssistant
  - Installing latest June release: http://tinyurl.com/TaxParcelEditingMap
Parcel Fabric Overview
What is the Parcel Fabric?

- Dataset for storing land records

- Managed Group of feature classes
  - Control Points
  - Parcels, Lines, Points, Line-points
  - Plans

- Uses explicit, attribute-based topology
  - Example, “From Point” and “To point” ids stored on lines
Parcel Fabric Overview

- Plans
  - Parcels
    - Points
      - Control
    - Line Points
  - Lines
Data model
Plans contain parcels

• Record information about groups of parcels
  - Date of Survey, Subdivision name, etc.
Parcel Fabric
Parcels formed by lines
Parcel Fabric

Lines store record dimensions
Parcel Fabric
Lines connect points
Parcel Fabric

Topology

- **End points are common**
- **Each parcel has its own set of lines**
  - Lines overlap for a common boundary
- **Redundant network**
  - Many lines may connect at a point

# of lines = 16
# of points = 9
All Subdivisions, Lots, Tax Parcels, etc. are “Parcels” in the Parcel Fabric
Parcel Fabric
Line Points help fix gaps
Parcel Fabric
Line Points keep original record dimensions

249.42 + 249.59 = 500
Data model

Construction

Parcel grid lines short-cuts

Jason Camerano
Fabric Adjustment

Tim Hodson
Accuracy in Parcel Data

Types of accuracy in parcel data

- Attribute data
- Topological
- Spatial accuracy (ground truth)
- Relative accuracy
Accuracy in Parcel Data

Attribute data

• Correct dimensions
  - Data entry, parcel misclose
Accuracy in Parcel Data

Topological accuracy

• Parcel joining
Fabric Adjustment

Spatial Accuracy

- Use survey control and COGO dimensions to recalculate update parcel corner points
Fabric Adjustment

Benefits

• Improve spatial accuracy of parcel corners
  - Uses control points and record line dimensions (COGO attributes)
  - attributes on lines are *not* changed
  - Control point locations are held fixed
  - Fabric point (parcel corner) positions updated

• Find mistakes/blunders in parcel data

• Find where more control or connectivity is needed
Feature Adjustment

Relative Accuracy

- Fabric feature adjustment aligns layers from other sources to adjusted parcel boundaries
- Coordinates changes from fabric adjustment are stored as vectors
- Vectors are used in a feature adjustment to adjust and align overlaying layers
Adjustments
Two types of adjustments

Fabric adjustment

Feature adjustment
Control Points
Fabric Adjustment
Feature Adjustment

Tim Hodson
Fixing gaps

Using the Transform toolbar

CAD Integration Workflows

Jason Camerano
Attribute Assistant - Overview

What is the Attribute Assistant?
Attribute Assistant - Overview
What is the Attribute Assistant?

• Editor Extension (ArcMap)
  - Always used in an active edit session

• Predefined set of rules
  - Automated attribute edits

• You define how the rules should work
  - Configured for your environment

• Turn off or on
Attribute Assistant – Why use it?

Why use the Attribute Assistant?

• **Increase productivity**
  - Reduce repeated data entry
  - Automates “search > copy > paste”

• **Improve data quality and validation**
  - Fewer typing errors & other human errors
Attribute Assistant - Overview

Components

Toolbar

Dynamic Value table

Generate ID table
Parcel Fabric + Attribute Assistant

What’s new in latest release of Attribute Assistant Add-in?

• Prior releases of Attribute Assistant- no support for fabrics

• Newest release of Attribute Assistant
  - Support for *manual* rules on selected parcels
  - Blocked from editing fabric system fields
    - (example: FromPointID / ToPointID)

• Does not support automatic rules
  - Future release (10.3.1)
Attribute Assistant for Parcel naming

Example

• Tax Parcel Naming conventions
Attribute assistant for parcel naming

Example

- Township Area – tax parcel *Intersects* township feature
Attribute assistant for parcel naming

Example

- Section Number – tax parcel *Intersects* section feature
Attribute assistant for parcel naming

Example

- Quarter Section Number – tax parcel *Intersects* quarter section feature
Attribute assistant for parcel naming

Example

- Block Number - tax parcel *Intersects* Block feature
Attribute assistant for parcel naming

Example

- Assigned number – 3 string character, unique identifier within the block
Community Resources

Tim Hodson
Community
GeoNet Land Records Group

- NEW! GeoNET https://geonet.esri.com/groups/land-records
Community
Meet-up

- [http://tinyurl.com/LandRecordsMeetup](http://tinyurl.com/LandRecordsMeetup)

- Bi-weekly Virtual Meet-up:
  - Live Demos
  - Interactive Discussion
  - Your Ideas
  - Your Support Incidents
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Thank you...

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