Advanced Parcel Editing

Amy Andis
Tim Hodson
Overview
What to expect in this technical workshop

• Review of the Parcel Fabric Data Model
• Advanced Tips and tricks for Parcel entry
• Assessing Quality of Parcel data
• Methods for Adjusting Parcel data
Why use the Parcel Fabric?

- Optimized Data Model for Maintaining Parcels
- Preserves original recorded information
- Ensures topology between parcels
- Supports Overlapping Parcels
- Maintain Historic Parcels
- Efficient workflows
- Adjust to Control Points
- Create a More Accurate parcel layer
Topics

- Data Model Review
- Editing in the Fabric
  - Demos
    - Parcel Editing Tips and Tricks
    - Data Sharing and Replication
- Esri Supported Add-ins
- Accuracy in Parcel Data
- Fabric Adjustment
  - Demo
Data Model Review

Amy Andis
Demo

Parcel Editing Tips and Tricks
Joining parcels
Fixing legacy data
…and more…

Data Sharing and Replication
Esri supported Add-ins

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Esri Supported Add-ins

ArcGIS Online items supported

- Parcel Fabric Quality Control
- Fabric Point Move to Feature
- Curves and Lines
- Delete Fabric Records
- Extended Fabric Properties
- Parcel Fabric Geoprocessing Tools
- Parcel Edit Helper (Developer Samples)
Parcel Fabric Quality Control
Esri supported Add-in

- Visualize Quality indicators on parcels
- Re-calculate directions or distances (Inverse)
  - Filter by geometry comparison with existing attributes
  - Distance also calculates a combined factor
- Interpolate elevations from a surface layer

http://arcg.is/28ROQfd
Fabric Point Move To Feature
Esri supported Add-in

- Update fabric points using point or line features
  - Configurable behavior
  - Uses standard feature classes
  - Batch merge close fabric points
- Interpolate elevations from a surface layer

http://arcg.is/28OeXB2
Parcel Fabric Geoprocessing Tools
Esri supported Add-in

- 6 Parcel Fabric Toolboxes with tools for:
  - Fabric Adjustment
  - Feature Adjustment
  - Data Migration
  - Export and Reporting
  - Field Calculations
  - Sample python script code

- Installer places the toolboxes in

Parcel Fabric Geoprocessing Tools
http://arcg.is/29QobNB
Accuracy in Parcel Data

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
Accuracy in Parcel Data

Topological accuracy

• Merge close points
Accuracy in Parcel Data

Spatial Accuracy

• Spatial accuracy (Ground Truth)
Accuracy in Parcel Data

Relative Accuracy

- Relative accuracy between different
  - Layers / datasets
  - Parcels in the same dataset
  - Points in the same parcel
Accuracy in Parcel Data

Relative Accuracy

• Relative accuracy between layers
Accuracy in Parcel Data
Relative Accuracy

- Relative accuracy between layers
Relative accuracy between different parcels
Accuracy in Parcel Data
Relative Accuracy

- Relative accuracy in same parcel
  - Map Coordinates vs Measurements
  - “Shape” accuracy
Accuracy in Parcel Data

Relative Accuracy

• Relative accuracy in same parcel
  • Map Coordinates vs Measurements
  • “Shape” accuracy
• Comparing Distances
Accuracy in Parcel Data
Relative Accuracy

- Relative accuracy in same parcel
  - Map Coordinates vs Measurements
  - “Shape” accuracy
- Comparing Distances
- Comparing Angles
Adjustment
Two types of adjustment

- Fabric Adjustment
- Feature Adjustment
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 with related feature layers

- Fabric feature adjustment aligns layers from other sources to adjusted parcel boundaries
- Coordinate changes in fabric are stored as **vectors**
- Vectors are used in a feature adjustment to adjust and **align overlaying layers**
Demo

Fabric Adjustment
Community
Land Records Meetup


Redlands, CA
Founded Dec 21, 2012
About us...
Invite friends

Land Records Professionals
Group reviews 16
Upcoming Meetups 1
Past Meetups 53
Our calendar

Land Records Meeting at the Esri UC
San Diego Convention Center
111 West Harbor Drive, San Diego, CA (map)

A face to face meeting with members of the Land Records Meetup. Assessors, Cadastral Managers, Parcel Editors, Surveyors, Land Administration Professionals, County...

Thu Jul 23
12:00 PM
61 going
8 comments

LEARN MORE
Hosted by Amir Bar-Maor (Co-Organizer), Brent Jones (Co-Organizer), and Noel Loughrin (Co-Organizer)
Community
Geonet Land Records Group

- geonet.esri.com/groups/land-records
Additional offerings - Thursday
Technical Workshops

• Editing and Maintaining Parcels with ArcGIS Parcel: An Introduction
  - Thu 7/13/2017, 08:30 AM - 09:45 AM, Room 09
• ArcGIS Pro: What's New and the Road Ahead
  - Thu 7/13/2017, 10:15 AM - 11:30 AM, Ballroom 06 A
• Land Records Meetup
  - Thu 7/13/2017, 12:00 PM - 01:00 PM, Room 30 A
• Migrating Data into the Parcel Fabric
  - Thu 7/13/2017, 01:30 PM - 02:45 PM, Hilton - Sapphire Ballroom E/F
Additional offerings - Friday
Technical Workshops

• Parcel Editing in ArcGIS: Advanced Topics
  - Fri 7/14/2017, 09:00 AM - 10:15 AM, Ballroom 06 E

• ArcGIS Pro: What's New and the Road Ahead
  - Fri 7/14/2017, 09:00 AM - 10:15 AM, Ballroom 06 A
The Next Generation of Parcel Management

Esri will support parcel management in future releases of ArcGIS Pro. The new generation of parcel management will be of interest to customers who maintain cadastral records at any scale, domestically and internationally.

The new generation will introduce 2D/3D editing capabilities and a simpler more efficient approach for parcel maintenance. The new generation of the parcel fabric can be edited from the entire ArcGIS Platform and maintained using the new improved editing functionality of ArcGIS Pro.

Existing customers will be able to easily upgrade their parcel fabric without having to re-migrate their data, thus saving their investment.
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