

# 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



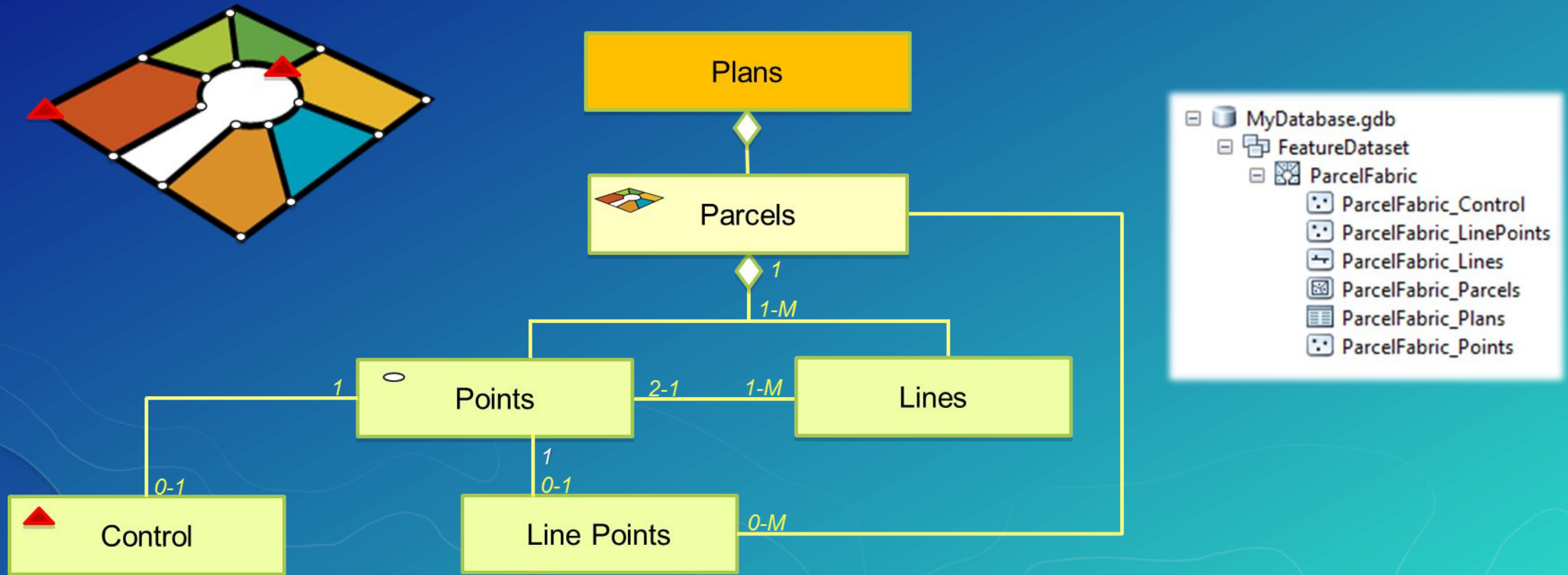


# Data Model Review

Amy Andis



# Fabric Data Model





# Demo

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

Data Sharing and Replication



UC



# Esri supported Add-ins

Tim Hodson



# Esri Supported Add-ins

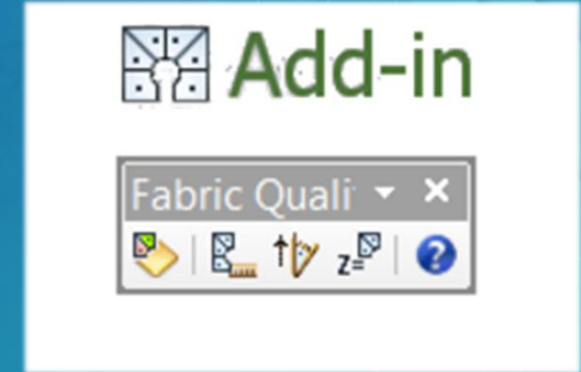
ArcGIS Online items supported

- 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



# 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



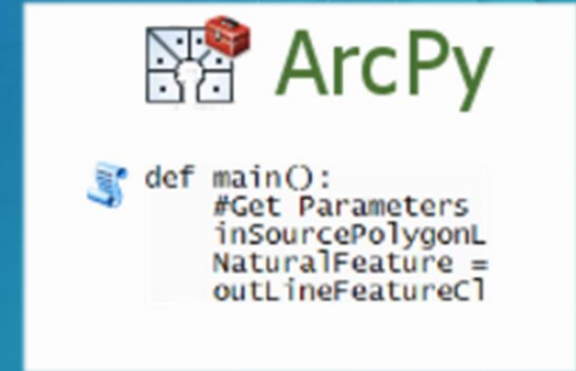


# Parcel Fabric Geoprocessing Tools

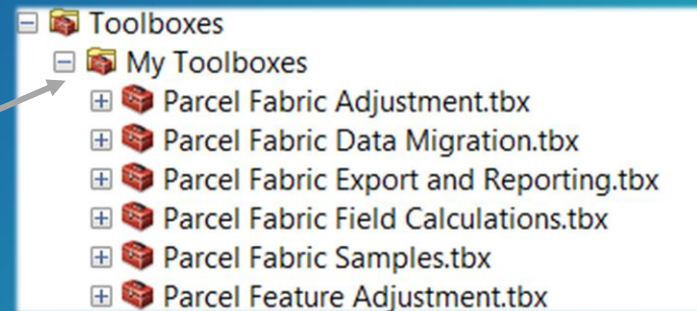
Esri supported Add-in

- 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



# Accuracy in Parcel Data

Tim Hodson

# Accuracy in Parcel Data

Types of accuracy in parcel data

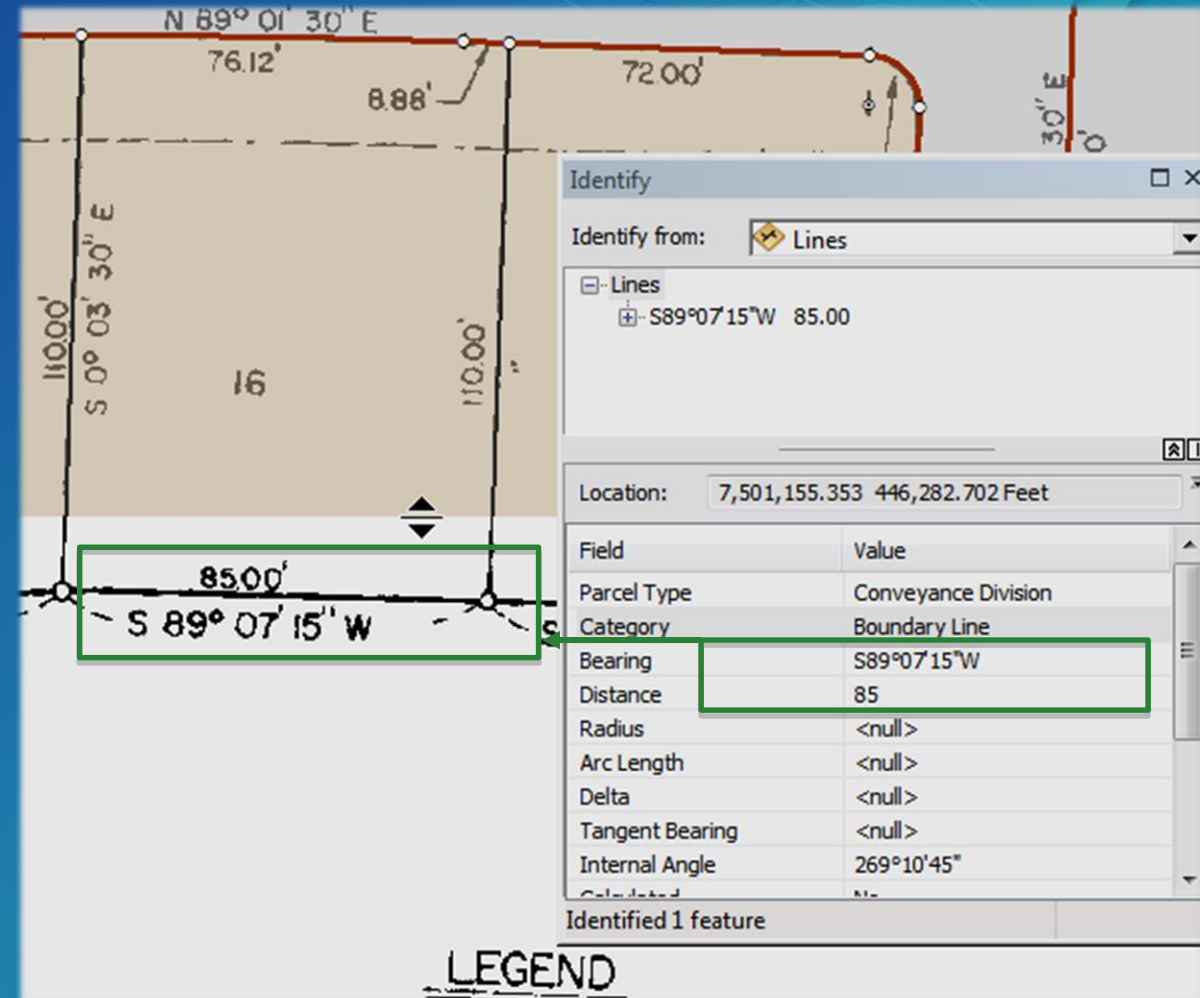
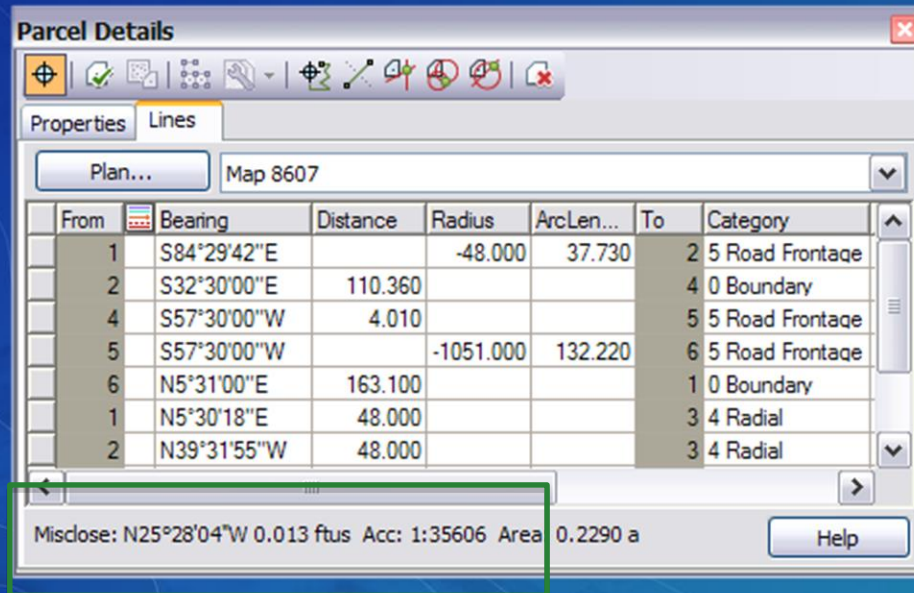
- Attribute data
- Topological
- Spatial accuracy (ground truth)
- Relative accuracy



# Accuracy in Parcel Data

## Attribute data

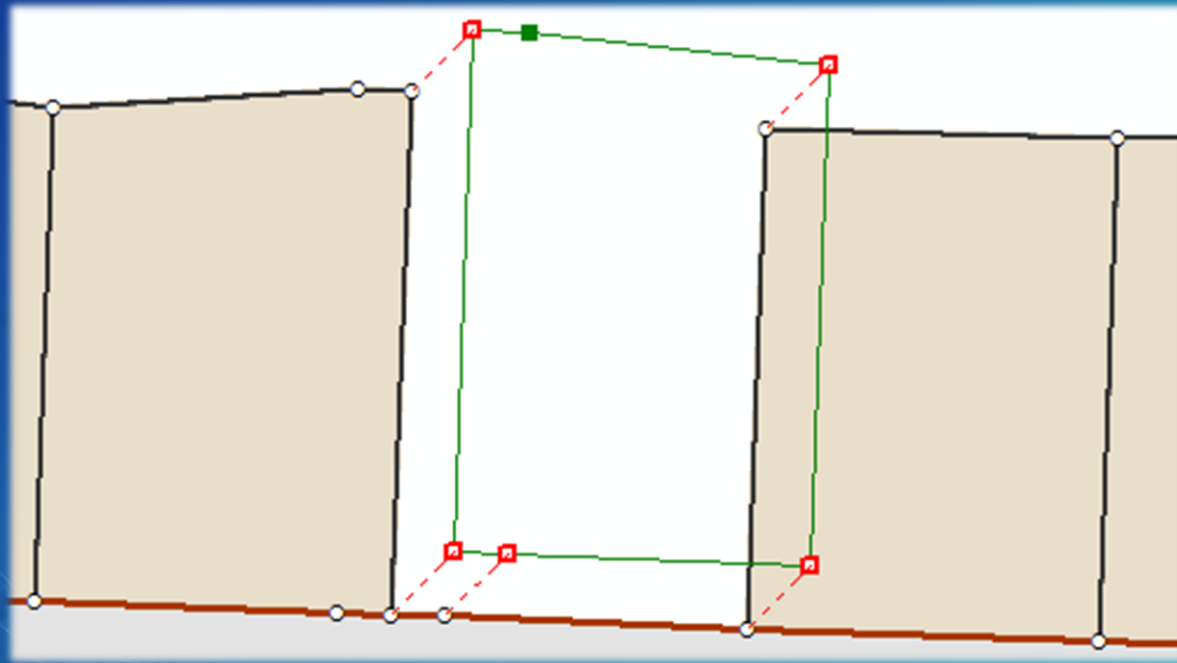
- Correct dimensions
  - Data entry, parcel misclose



# Accuracy in Parcel Data

Topological accuracy

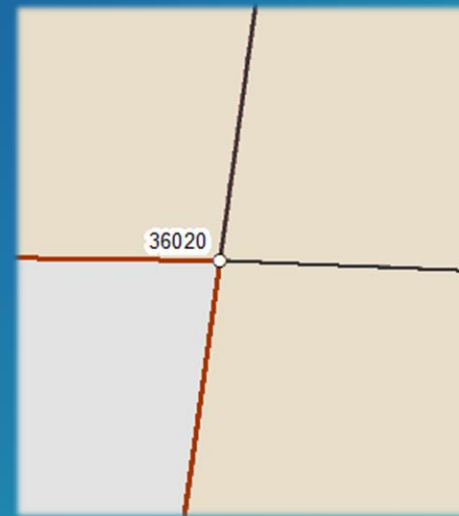
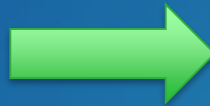
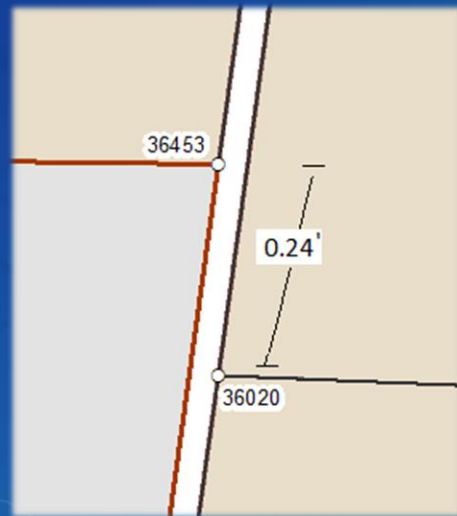
- Parcel joining



# Accuracy in Parcel Data

Topological accuracy

- Merge close points





# Accuracy in Parcel Data

## Spatial Accuracy

- Spatial accuracy (Ground Truth)



Control

PT_No	Name	X Residual	Y Residual
<input checked="" type="checkbox"/> 2804	1415		
<input checked="" type="checkbox"/>	Control2494		
<input checked="" type="checkbox"/>	1471		
<input checked="" type="checkbox"/>	1510		
<input type="checkbox"/>	Control 2515		

Check Fit

Pan To

Edit

Delete

Template... City / Town

New

Update

Property	Value
Associated Network PointID	
Name	Control 2515
X	7500960.908
Y	447061.268
Z	180.945
Accuracy XY	
Accuracy Z	
Survey Date	

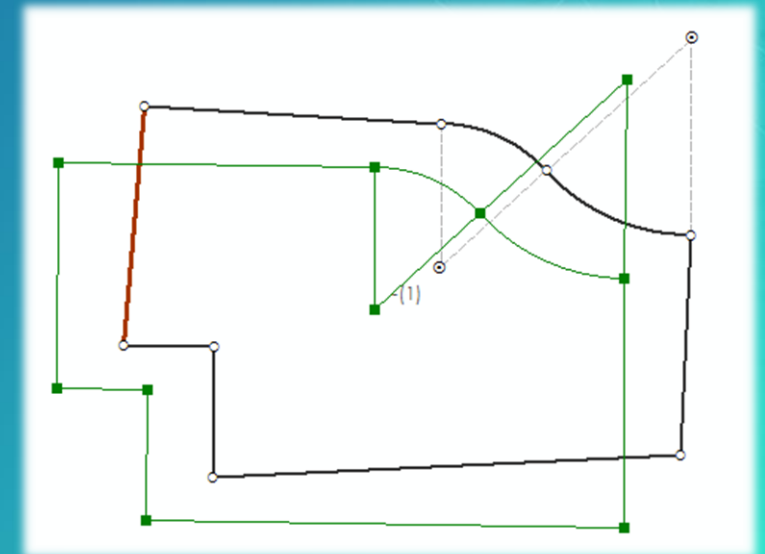
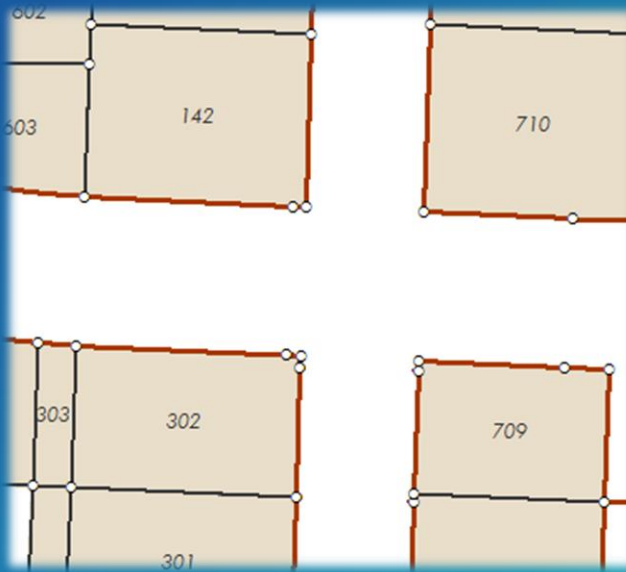
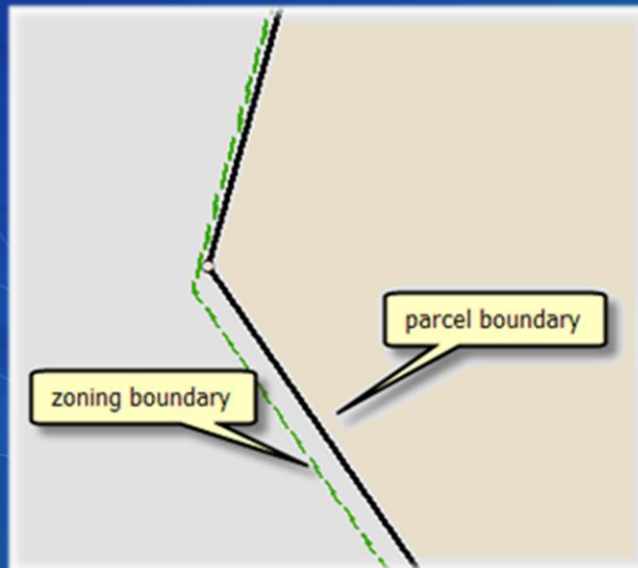
Close

Adjust...

# Accuracy in Parcel Data

## Relative Accuracy

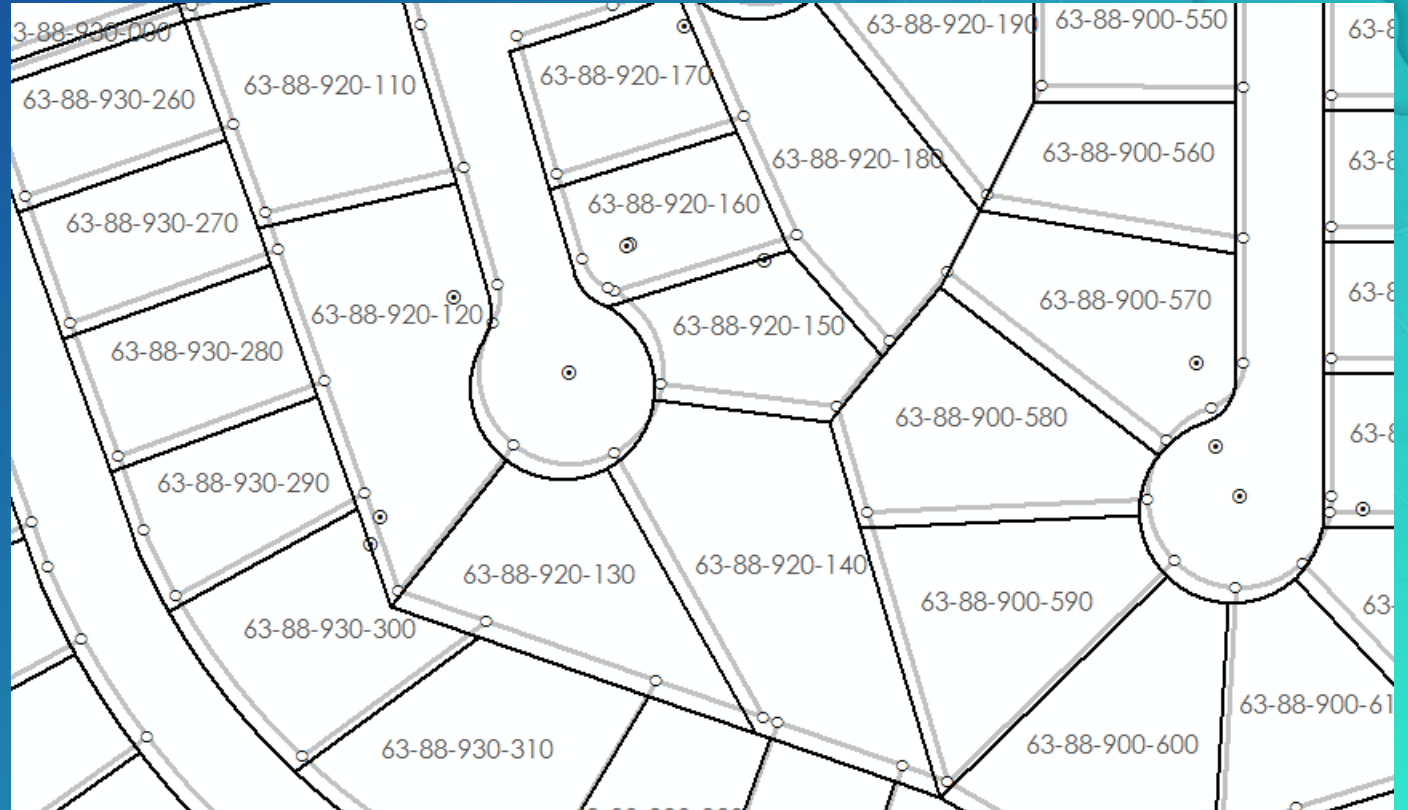
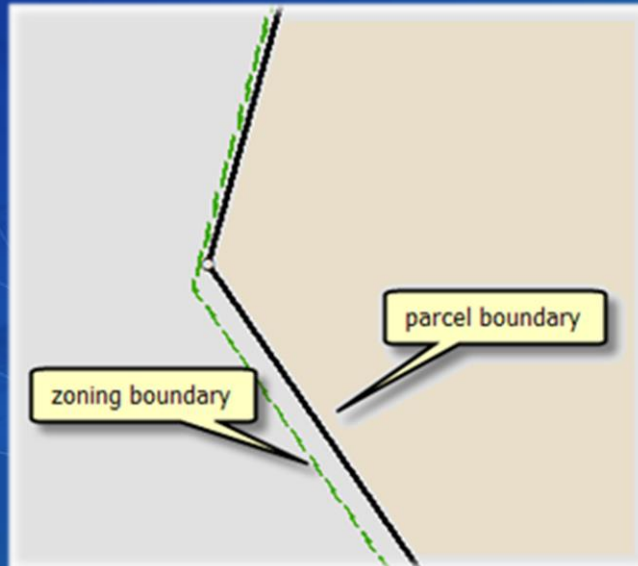
- Relative accuracy between different
  - Layers / datasets
  - Parcels in the same dataset
  - Points in the same parcel



# Accuracy in Parcel Data

## Relative Accuracy

- Relative accuracy between layers

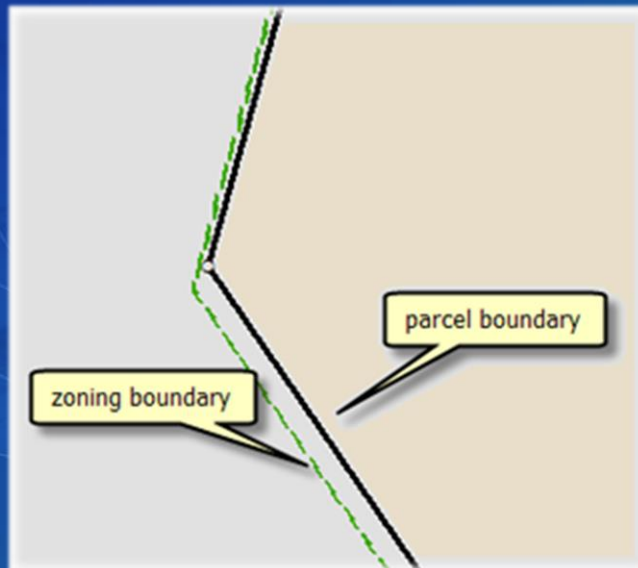




# Accuracy in Parcel Data

## Relative Accuracy

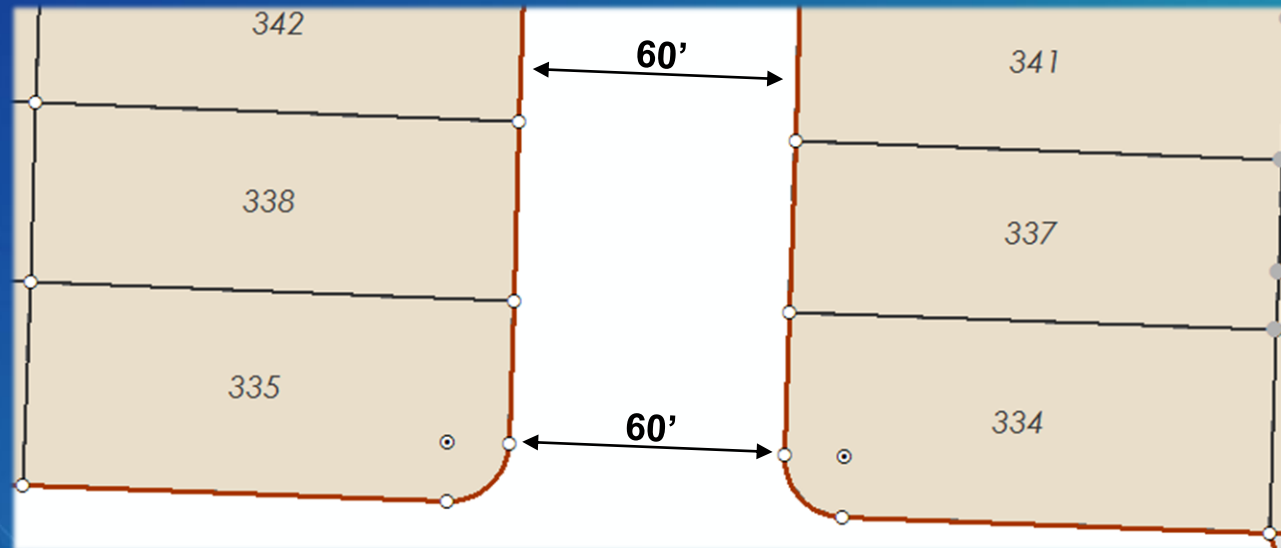
- Relative accuracy between layers



# Accuracy in Parcel Data

## Relative Accuracy

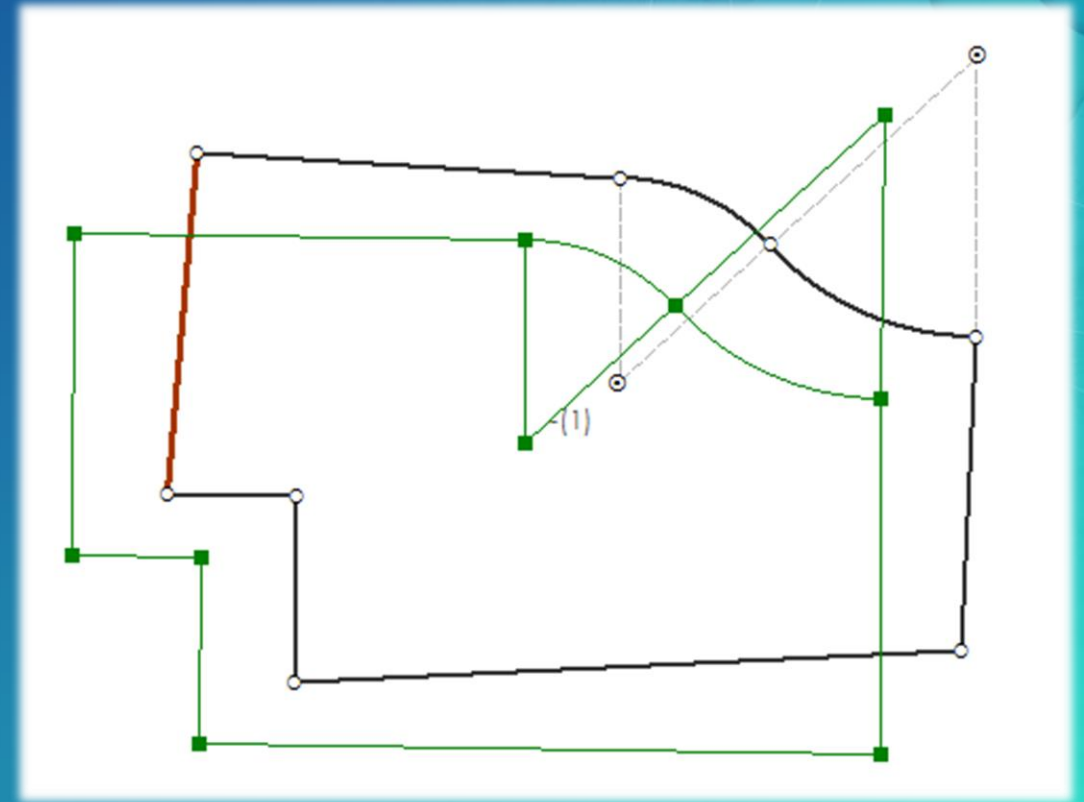
- Relative accuracy between different parcels



# Accuracy in Parcel Data

## Relative Accuracy

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

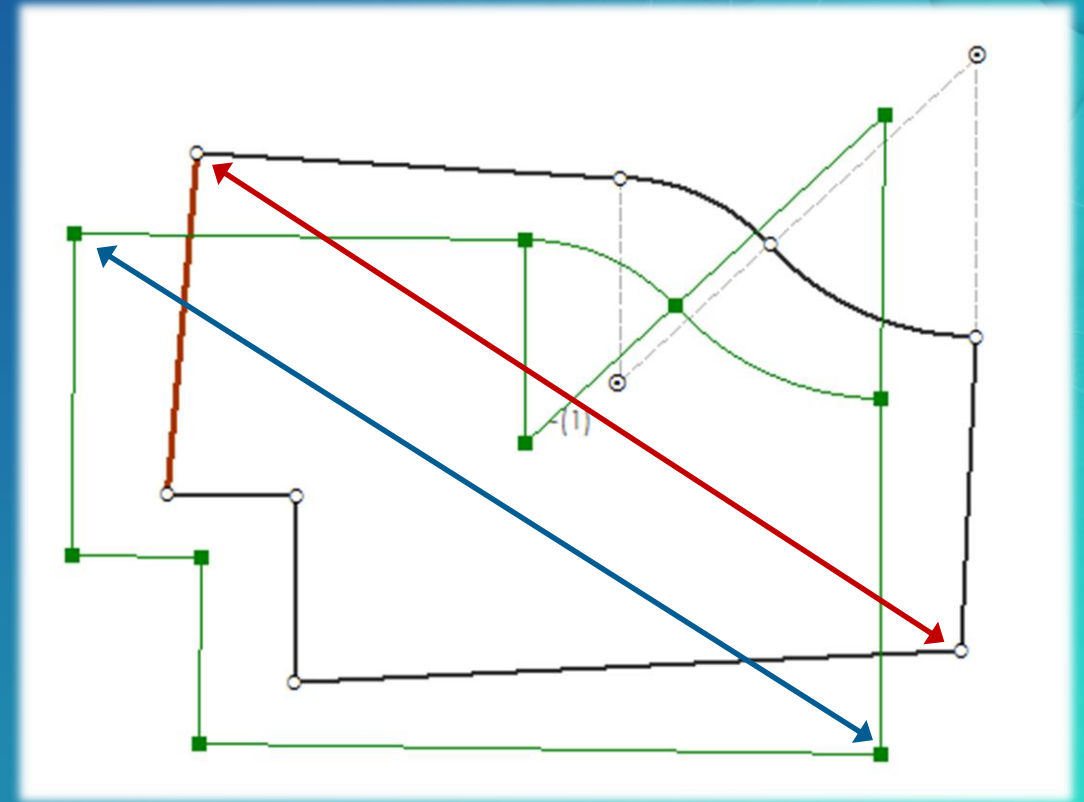




# Accuracy in Parcel Data

## Relative Accuracy

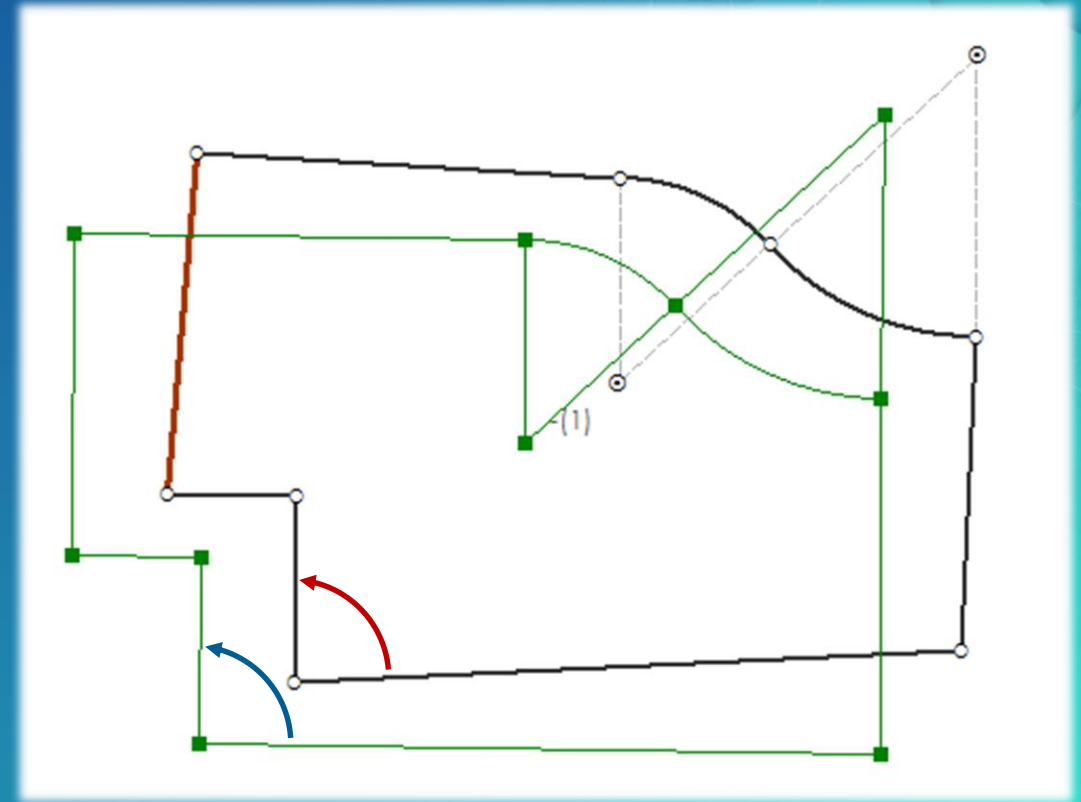
- Relative accuracy in same parcel
  - Map Coordinates vs Measurements
  - “Shape” accuracy
- Comparing Distances



# Accuracy in Parcel Data

## Relative Accuracy

- Relative accuracy in same parcel
  - Map Coordinates vs Measurements
  - “Shape” accuracy
- Comparing Distances
- Comparing Angles



# Fabric Adjustment

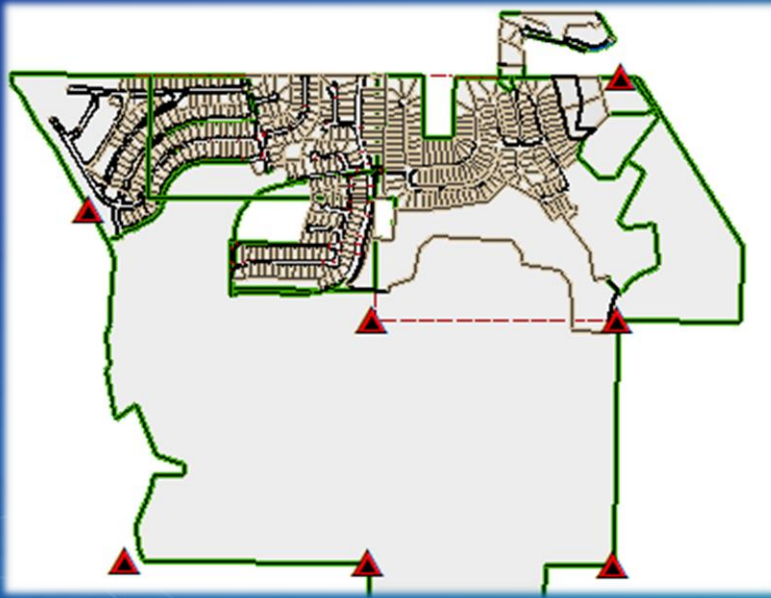
Tim Hodson



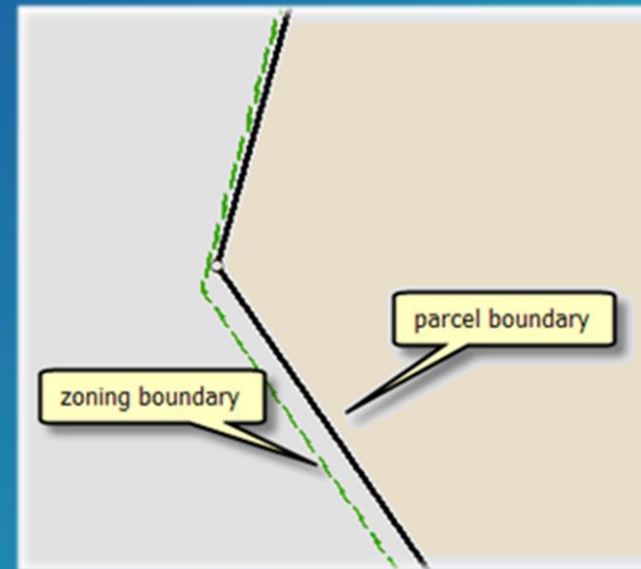
# Adjustment

Two types of adjustment

- Fabric Adjustment
- Feature Adjustment



Fabric adjustment



Feature adjustment

# Fabric Adjustment

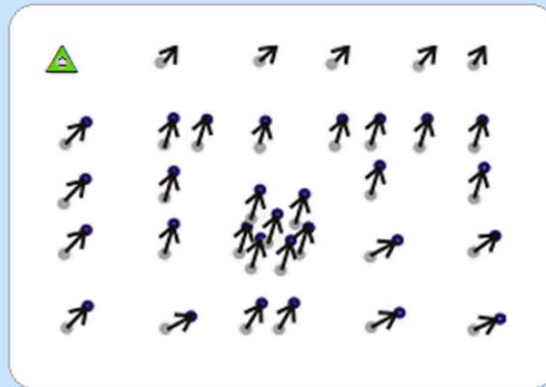
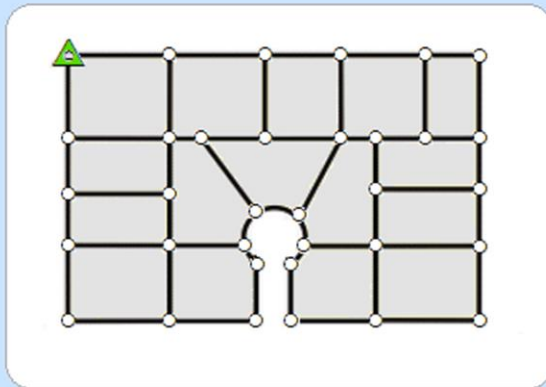
## Benefits

- 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



<http://www.meetup.com/Esri-Land-Records-Meet-Up/>



### Redlands, CA

Founded Dec 21, 2012

About us...

+ Invite friends

Land Records Professionals 1,088

Group reviews 16

Upcoming Meetups 1

Past Meetups 53

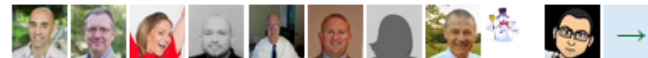
Our calendar



### 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...

[LEARN MORE](#)

Hosted by: Amir Bar-Maor (Co-Organizer), Brent Jones (Co-Organizer), and Noel Loughrin (Co-Organizer)

Thu Jul 23

12:00 PM

✓ I'M GOING

61 going

8 comments



# Community

Geonet Land Records Group

- [geonet.esri.com/groups/land-records](https://geonet.esri.com/groups/land-records)

The screenshot displays the Esri GeoNet website interface. At the top, the Esri logo is on the left, and navigation links for Industries, Products, Support & Services, About, and Community are on the right. A search bar is also present. Below this is a dark banner with the 'GeoNet' logo and the tagline 'The Esri Community'. A secondary navigation bar includes links for Home, Content, People, Places, and Map, along with a notification icon (2), a sun icon, and a search bar. The main content area features a map of a land record with various colored polygons. Overlaid on the map is a dark box with the text 'Following in ~ 2 streams'. To the right of this box is a button labeled 'Join this group', which is highlighted by an orange rectangle. At the bottom of the map area, there is a row of links: Activity, Content, People, Projects, Calendar, Actions, About, and Share.



# 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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**Scroll down to find the survey**



**Complete Answers and Select "Submit"**





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