Parcel Fabric Modernization in Tioga County

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Agenda

- Background
- Project
- Q&A
Background

Tioga County PA
- 42,000 people / 26,700 parcels
- Marcellus Shale region
  - natural gas and iron
- Grand Canyon of Pennsylvania
Background
Issues

• Had parcel polygon layer that was crummy
• Properties that had been misidentified as tax sale
• Major acreage discrepancies
• Parcels identified on wrong side of road
Pilot

• Small subset in west part of county
• Parcel / Lots / Subs
• Completely from scratch
• ArcGIS 10.1
Pilot

• Worked to develop the best method to “compile” the information into the parcel fabric – tried many methods

• Determined the best way at the time was to COGO parcels into a “construction” layer

• Still captured the COGO attributes which the fabric uses to maintain the original legal descriptions as well as for LSA
Fabric

- Accuracy Classes
- COGO GPS
- COGO Unadjusted
- COGO Adjusted
- COGO Misclosure
- Precision Input
- Other
Acreage Discrepancies (Before)
Acreage Discrepancies (After)
Acreage Discrepancies (Before)

- Less than .50 acres: 38.85%
- .50 - 2.00 acres: 7.55%
- 2.00-5.00 acres: 25.41%
- 5.00-10.00 acres: 3.13%
- Greater than 10.00 acres: 2.76%

Percentages based on total parcel count of 543
Acreage Discrepancies (After)
Fabric Notes

• Included control points that added accuracy to monumentation

• All parcels were mapped with legal bearings and distances

• Regardless of the data format, Tioga County is a tough place to map accurately given the source data.
Fabric Notes

• The book and page references in the deeds have been invaluable for research

• Many of the descriptions were described with a 9 degrees rotation which causes some issues in the fabric

• Trained on new mapping system
Fabric Benefits

- Ownership parcel lines will accurately match other GIS layers, e.g. updated imagery.
  - Building footprint layer with dimensions.
  - Structure points – 911 addresses.
  - Road centerlines.
  - Accurate with respect to other County GIS layers.

- Businesses that rely on accurate parcel data.
  - Gas-unit maps.
  - Real estate sales maps.
  - Lawyer / litigation searches & title searches.
Fabric Benefits

- Reduce confusion among the general citizenry.

- General property line location inquiries.

- Property line disputes.

- Instances of trespassing, e.g. during hunting season.
Fabric Benefits

- **Increasing revenue.**
  - Hyper-accurate parcel map availability may generate a significant amount of new digital data sales.
  - Justification for charging increased fees for digital data.

- **Staff efficiency.**
  - Processing new deeds and subdivision maps.
  - Quicker turnaround time.
Demo
The Actual Fabric