Intersections – More Than Just a Location

• **Challenge – MIRE FDE - Intersections**
  • Locate all intersections for public roads
  • All intersections must have a unique ID
  • Intersection Type
  • Intersection Angle
  • AADT for all intersecting roads
  • Traffic Control at Intersection
  • Unique Approach Identifier
  • Functional Class
  • Complex Intersections (Interchanges)
  • AND...the list goes on...

It sounded like an exciting endeavor...
Intersections – More Than Just a Location

• **1st Attempt**
  - 2013 – We can do this! – Manual Methodology
  - Lesson Learned after 2 months: No way this can be completed or maintained – What were we thinking?
Intersections – More Than Just a Location

• **1\textsuperscript{st} Attempt – What Went Wrong**
  • Employee availability/individual interpretation
  • Unique ID method was not ideal
  • We were basing this from imagery locations/not LRS
  • The process at each intersection took too long
  • What’s a Unique Approach Identifier? – We still had some things to learn
2\textsuperscript{nd} Attempt

2015 to 2016 – We can do this! – ARNOLD is the key!

Lesson Learned after a little while: Sure, we can find the intersection and generate approach angles...how do we handle new roads? What if geometry changes? Next!
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• **2\textsuperscript{nd} Attempt – What Went Wrong**
  • How do we constantly tie ADT, Traffic Control, Angle, etc... for this?
  • Unique ID – what should it be?
  • We got points! That’s not enough
  • If we had other data owners (ADT, Road Inventory, etc...) adopt the Unique ID for each intersection in their data... **NO!**
  • What’s a Unique Approach Identifier? – More unique IDs??? **WHAT!?!**

THEN...
Intersections – More Than Just a Location

- 2017 GIS-T
  - We saw this presentation at GIS-T 2017, Phoenix

- After returning home, we called Transcend
Intersections – More Than Just a Location

• 3rd Attempt
  • November 2017 - It’s happening!
  • The key is temporal/standard data and some additional software 😊
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- **3rd Attempt - So far so good!**
- Intersection safety...
• **3rd Attempt - Lessons Learned/Learning**
  • Did you know that we were supposed to have a Interchange database to identify the complex interchanges?
Intersections – More Than Just a Location

• **3rd Attempt - Lessons Learned/Learning**
  • Since Intersection Manager uses a temporal indicator to alert change, we need to make sure that there is a temporal date/time field present
    • Road Inventory
    • ADT (Generate based on once a year update)
    • Future – Traffic Control, RR Crossings, etc...
    • Enterprise Data Warehouse set-up would be ideal