Presenting Two Way Feeds in a Mobile GIS Environment

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AGL Resources

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AGL Resources Overview

• Is the parent company of
  Atlanta Gas Light Company
  Chattanooga Gas Company (1988)
  Virginia Natural Gas (2000)
  AGL Networks (2000) (Dark Fiber)

• Is the oldest Corporate Citizen in Georgia (1856)

• Serves over 1.8 million customers in 250 communities in 8 states
The Good News!

• AGL has a Mobile GIS solution
• Extracted directly from ArcSDE
• Deployed to over 500 FSR’s, 450 Locate Contractors (STS, Heath, Promark, & Byers)
Better News!

- Deltas are transported to all users via the intra/internet
- Through an ESRI customization, we are able to view Flow direction using by creating a Flow Direction layer in GIS
The Problem

- ESRI’s Flow direction doesn’t take into account regulator stations that alter flow direction by reducing pressure on the outlet side
- If you have a Medium Pressure system that has 2 or more inputs from the Same High pressure System, the HP system will show a 2 way feed between these areas
What do you do?

• If there was a way to…
  – Use the Regulator stations as a Source
  – By changing these to Sources, you could then change the flow direction

• Problem
  – If they were Sources, then they would act as a source in both directions.

• But –
  – What if you were able to temporarily do it?
The Solution: Versions are your friend!

What if .. You create a version and do all that?

Step 1: Create a Version
Step 2: Go to each Regulator Station
Step 3: Determine the Lower Pressure side
Step 4: Disconnect the Lower Pressure segment and pull that one away from Station
Step 5: Add a Source Node
Step 6: Repeat for each Station
Step 7: Run the Create Flow Direction on this version
Step 8: Delete the version
Putting it all together

• Packaged the above process as a VB.Net program, and scheduled to run on the weekend
• The process takes 12 hours to process over 3,700 Stations
• The ESRI process to create the Flow Direction Feature Class takes an additional 10 hours to process
Questions?