

# You might be a GIS professional if:

- 🌐 you hear the words spatial and enterprise and do not think of Star Trek
- 🌐 your idea of curling up with a good book is with a Rand McNally Street Atlas
- 🌐 you are the only person in your organization that realizes the term 'GIS system' contains a redundancy
- 🌐 you actually care about what datum was used
- 🌐 FGDC metadata does not put you to sleep
- 🌐 you find yourself critiquing Mapquest maps
- 🌐 you notice inconsistent signage on streets
- 🌐 you can navigate a southbound trip without turning the map upside down
- 🌐 the Map Store is your favorite stop at the mall
- 🌐 when told to turn 'East' you know which way to go
- 🌐 you can make the wrong turn and get back on the correct route without anyone else knowing it wasn't just part of the trip
- 🌐 you can give directions without mentioning McDonalds or Starbucks

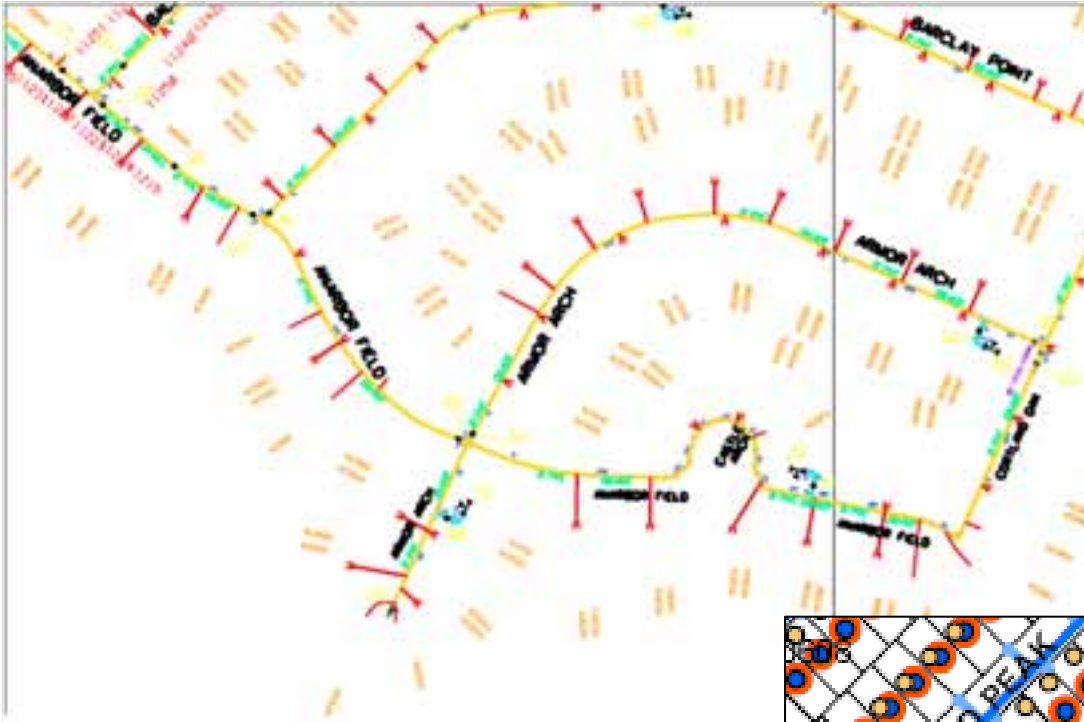
# Getting to the “AHA!” in Data Interoperability

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Conversion  
from CAD  
based  
mapping

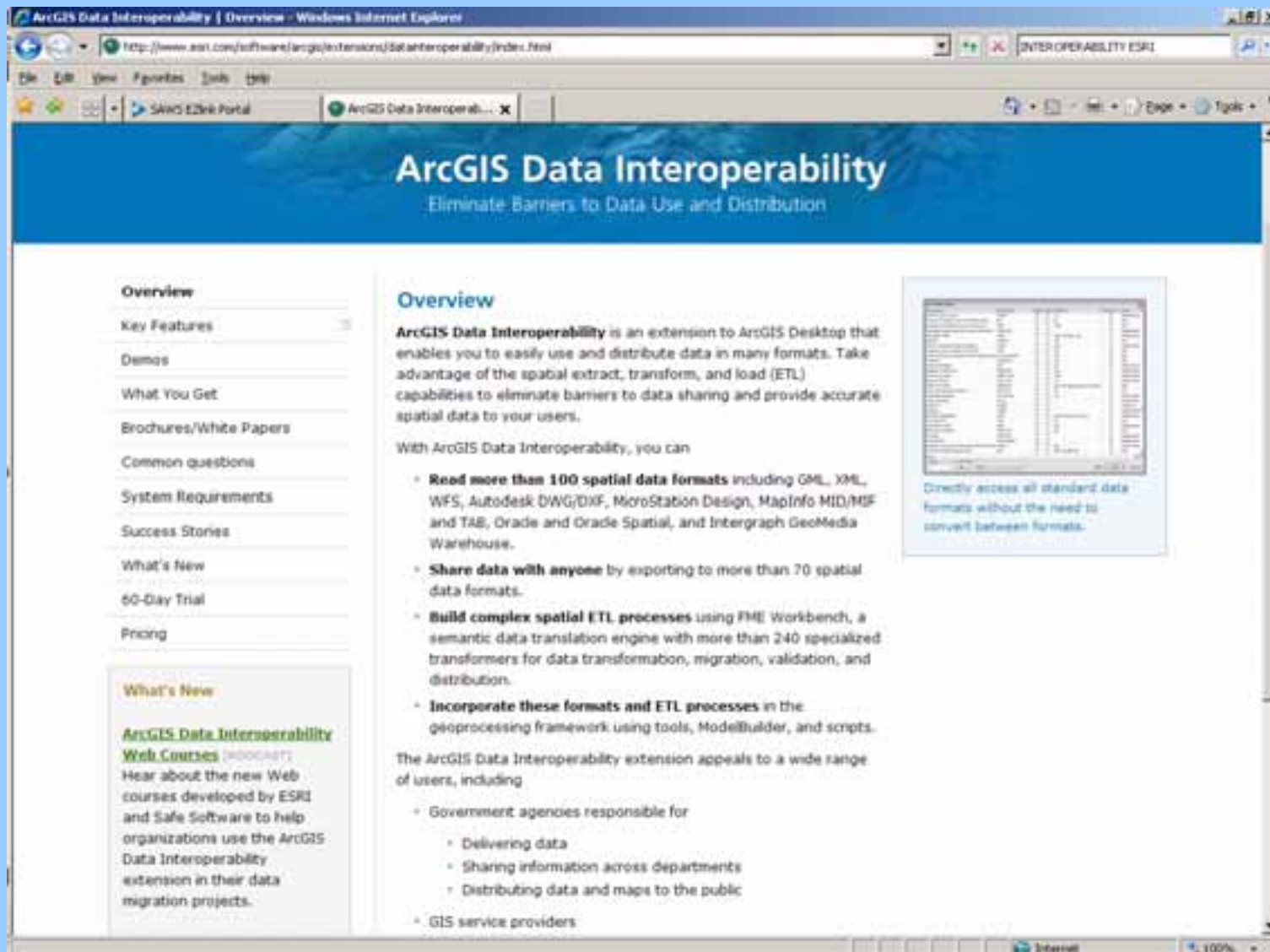
To Enterprise  
GIS



# Obstacles to Conversion

- Account data in mainframe tables
- Billing data in separate mainframe tables
- Updates to Account data or Billing data not always synced across tables
- All data relating to Impact fees, jobs and permits tracked in Access DB
- All mapping done in Microstation
- New Asset Management System, Hansen
- In Hansen assets based on addresses

# Enter, the solution!



The screenshot shows a web browser window displaying the ArcGIS Data Interoperability website. The browser's address bar shows the URL: <http://www.esri.com/software/arcgis/extensions/DataInteroperability/index.html>. The page features a blue header with the title "ArcGIS Data Interoperability" and the subtitle "Eliminate Barriers to Data Use and Distribution".

**Overview**

**Key Features**

**Demos**

**What You Get**

**Brochures/White Papers**

**Common questions**

**System Requirements**

**Success Stories**

**What's New**

**60-Day Trial**

**Pricing**

**What's New**

**ArcGIS Data Interoperability Web Courses** (BROADCAST)  
Hear about the new Web courses developed by ESRI and Safe Software to help organizations use the ArcGIS Data Interoperability extension in their data migration projects.

**Overview**

**ArcGIS Data Interoperability** is an extension to ArcGIS Desktop that enables you to easily use and distribute data in many formats. Take advantage of the spatial extract, transform, and load (ETL) capabilities to eliminate barriers to data sharing and provide accurate spatial data to your users.

With ArcGIS Data Interoperability, you can

- **Read more than 100 spatial data formats** including GML, XML, WFS, Autodesk DWG/DXF, MicroStation Design, MapInfo MID/MIF and TAB, Oracle and Oracle Spatial, and Intergraph GeoMedia Warehouse.
- **Share data with anyone** by exporting to more than 70 spatial data formats.
- **Build complex spatial ETL processes** using FME Workbench, a semantic data translation engine with more than 240 specialized transformers for data transformation, migration, validation, and distribution.
- **Incorporate these formats and ETL processes** in the geoprocessing framework using tools, ModelBuilder, and scripts.

The ArcGIS Data Interoperability extension appeals to a wide range of users, including

- Government agencies responsible for
  - Delivering data
  - Sharing information across departments
  - Distributing data and maps to the public
- GIS service providers

**Directly access all standard data formats without the need to convert between formats.**

# Data Interoperability

Data Interoperability is an extension to ArcGIS Desktop that enables you to easily use and distribute data in many formats. Take advantage of the spatial extract, transform, and load (ETL) capabilities to eliminate barriers to data sharing and provide accurate spatial data to your users.

# What is Data Interoperability?

- ESRI extension
- Extract, Transform, and Load
- Over 70 Geospatial formats supported
- Translators and Transformers
- 240+ Transformers
- Built on Data Flow Architecture
- Allowing GIS Departments to  
“Do More with Less”

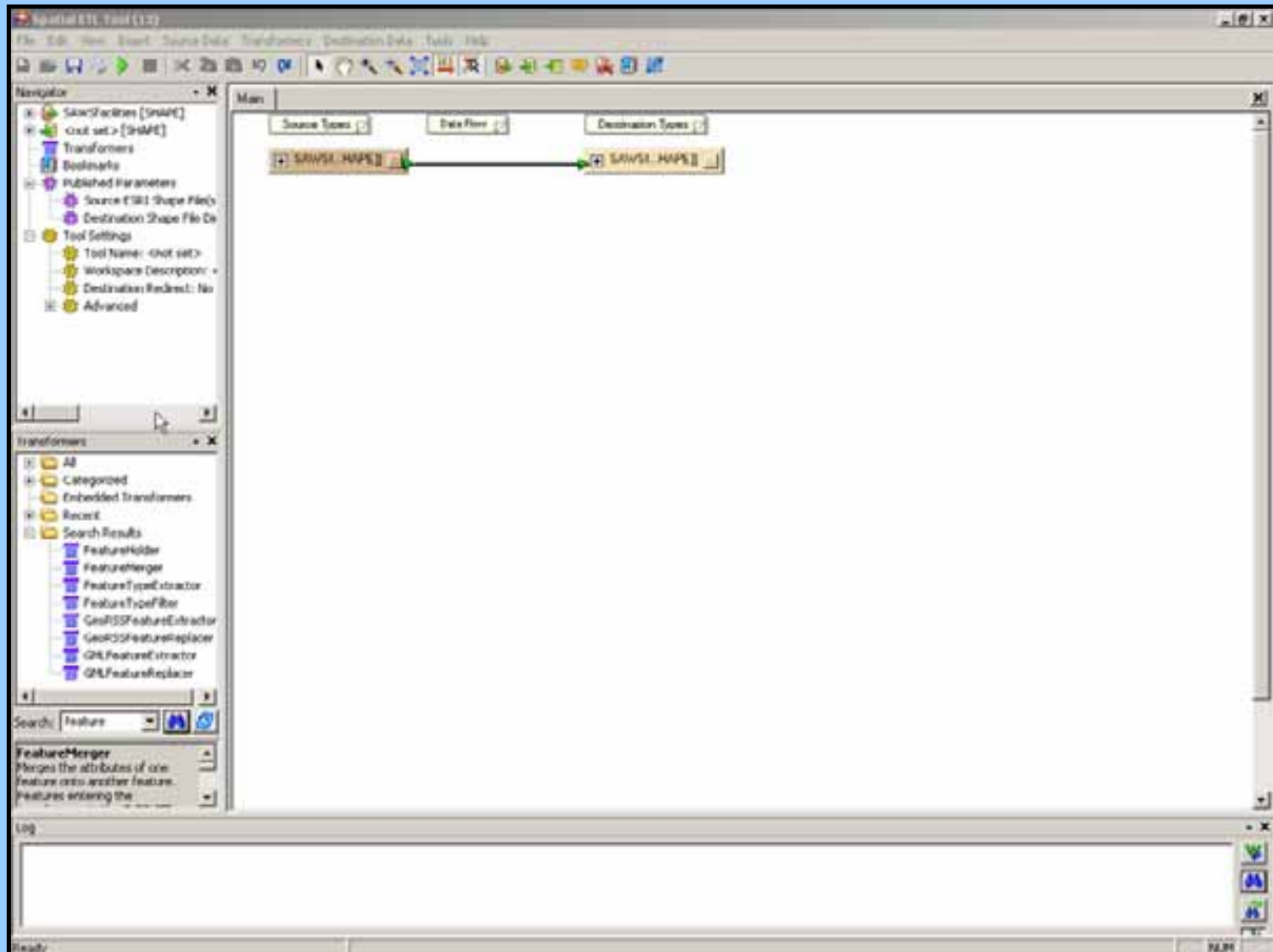


# DI Terminology

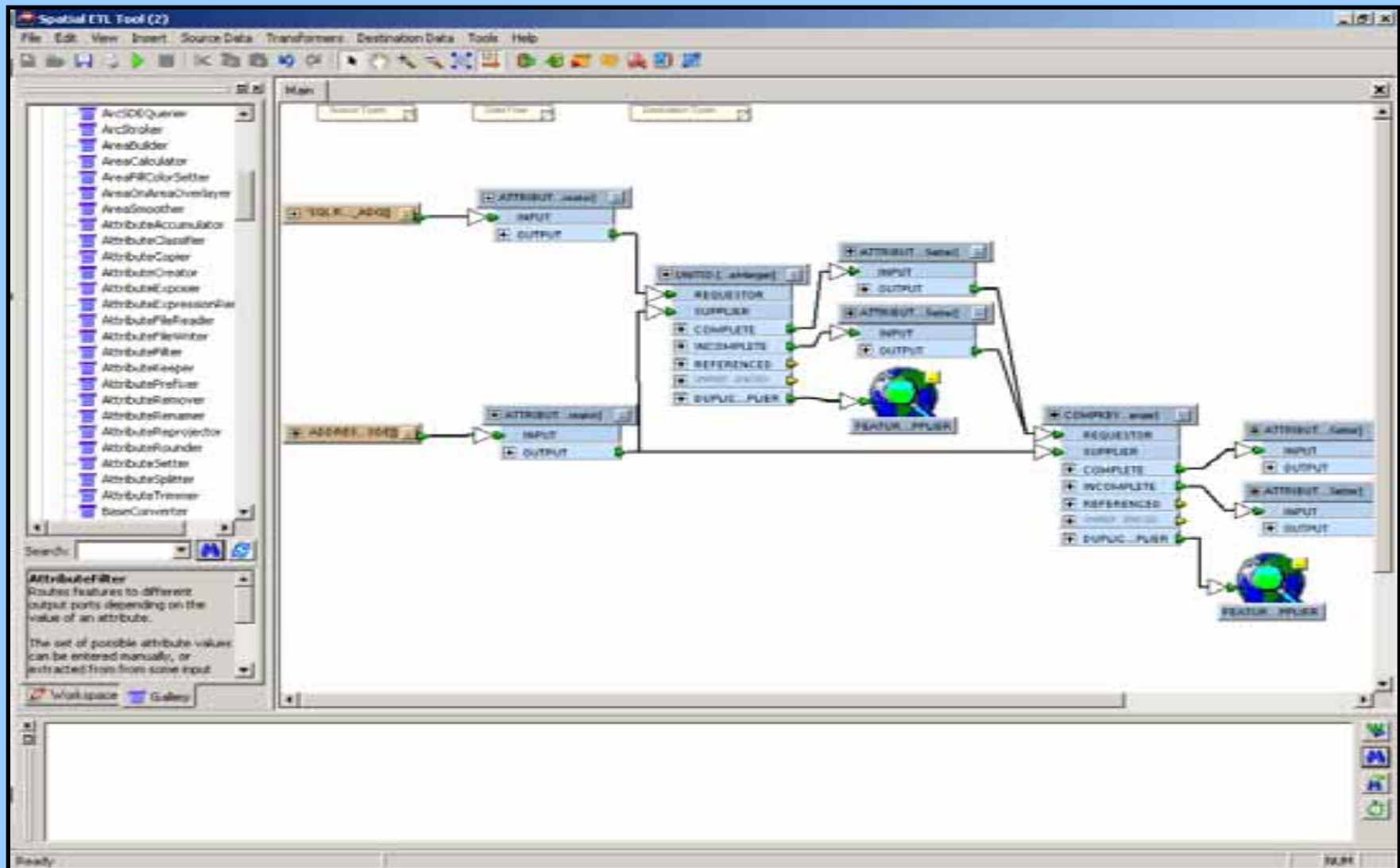
- Data Source – Source data
- Data translator – Import/Export
- ETL - Extract, Transform and Load.
- Transformer - Transformers are the building blocks used in DI.
- Workbench – The “canvas” is used to graphically build translations or transformations.



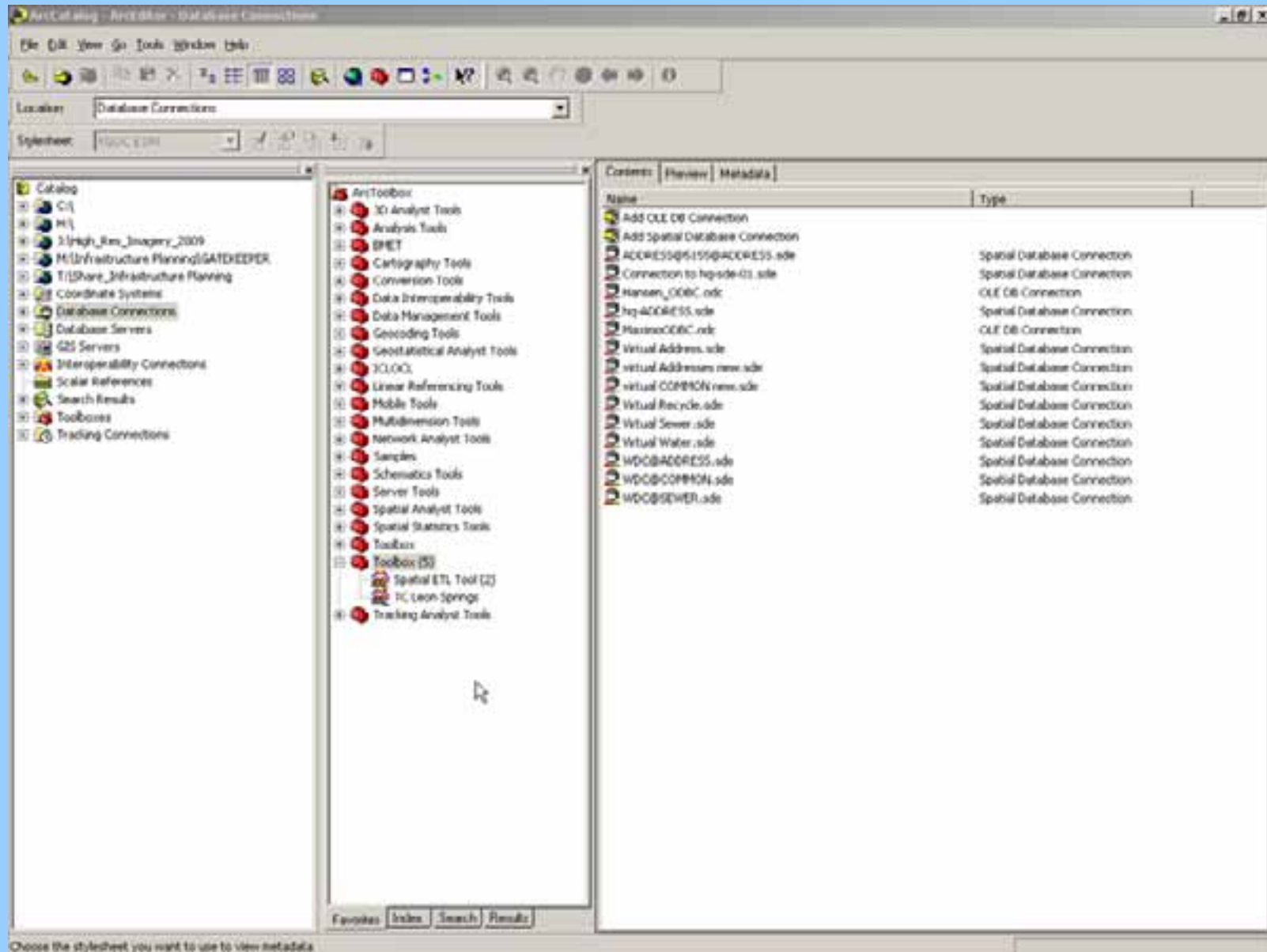
# Data Interoperability Workbench



# Scripting Using Modules

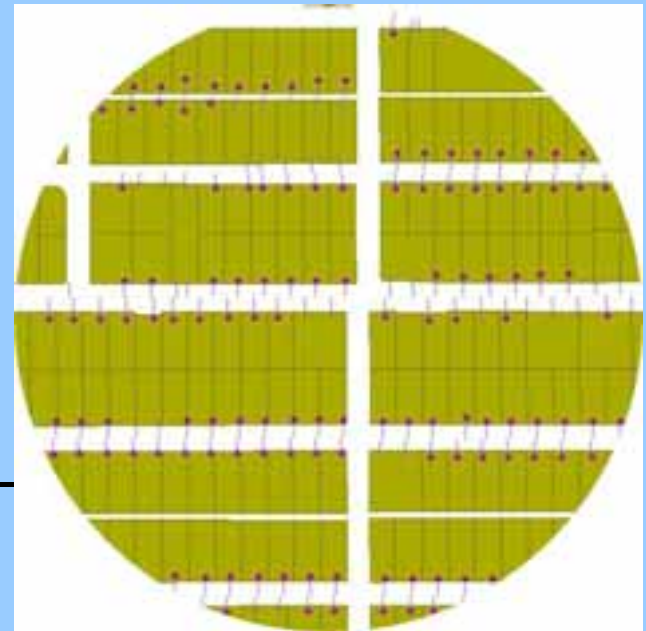
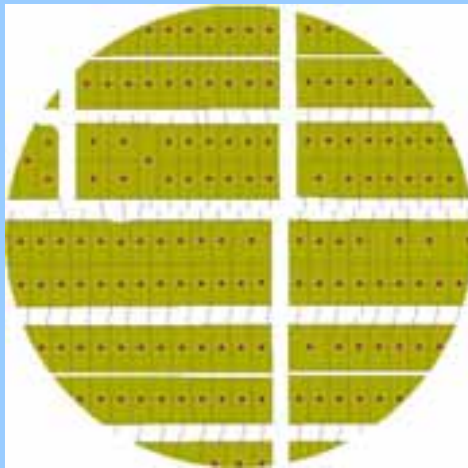


# Drag and Drop Transformer Building



# Point Snapper

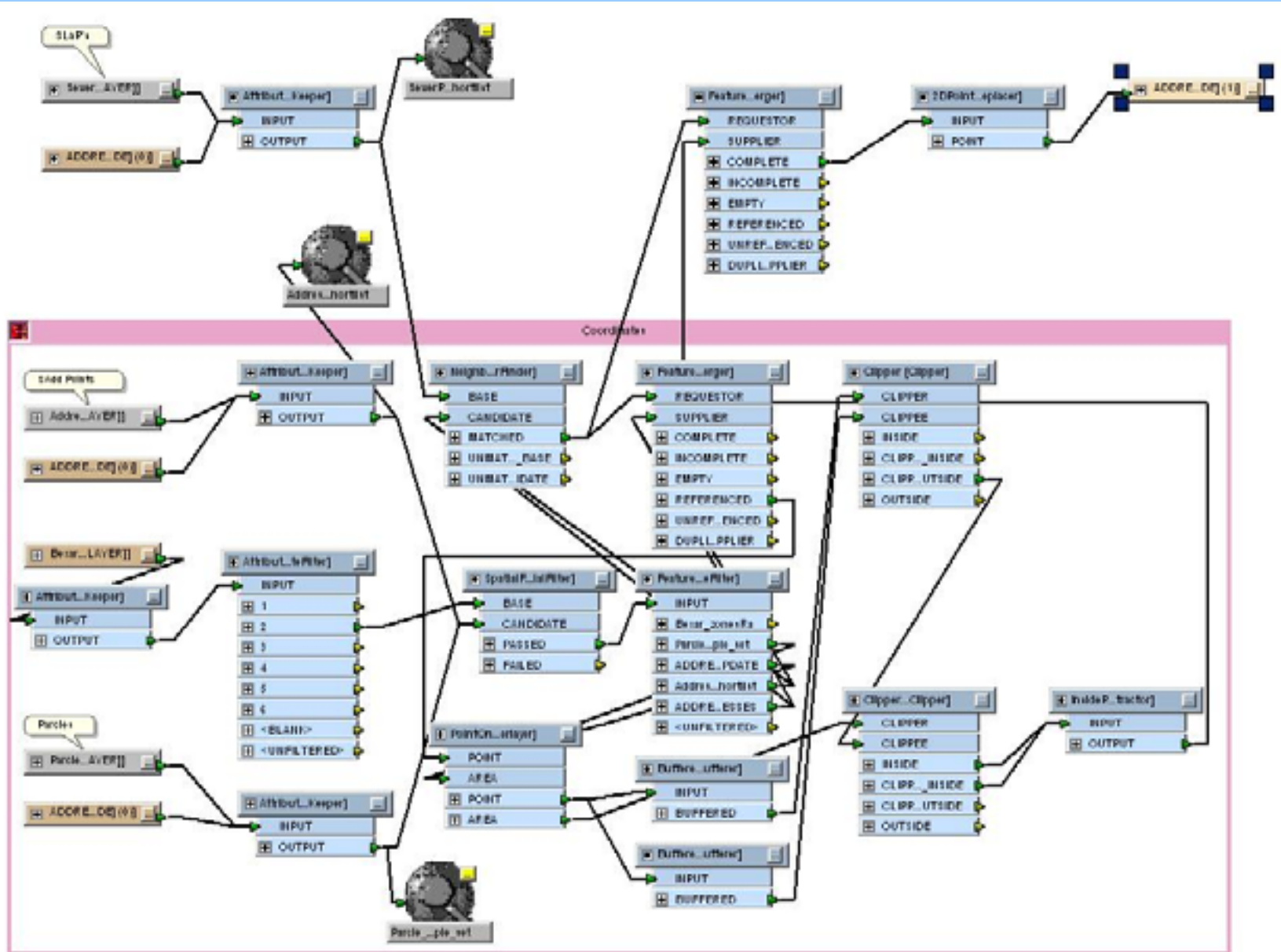
Problem: Sewer Lateral Points stacked on Address Points.



One Sewer Lateral Point -  
One Sewer Lateral Line.

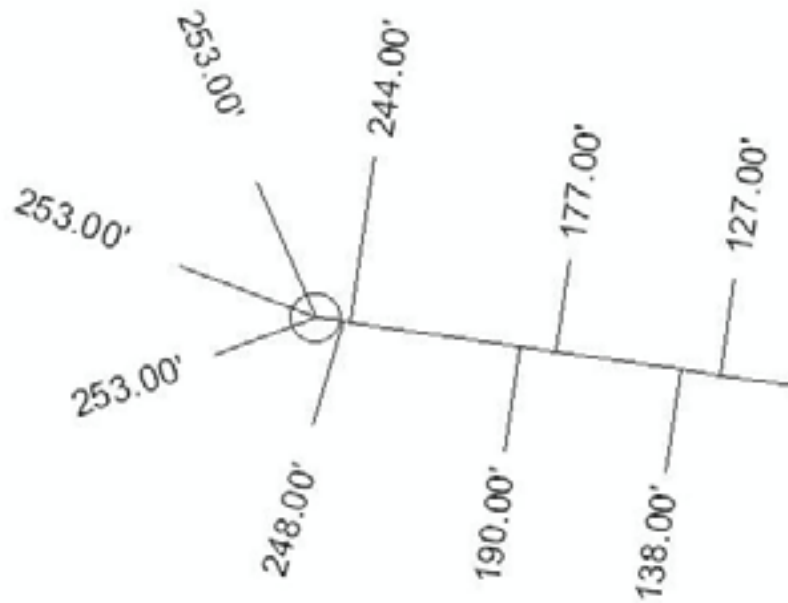
211,000 points moved

# Point Snapper Canvas

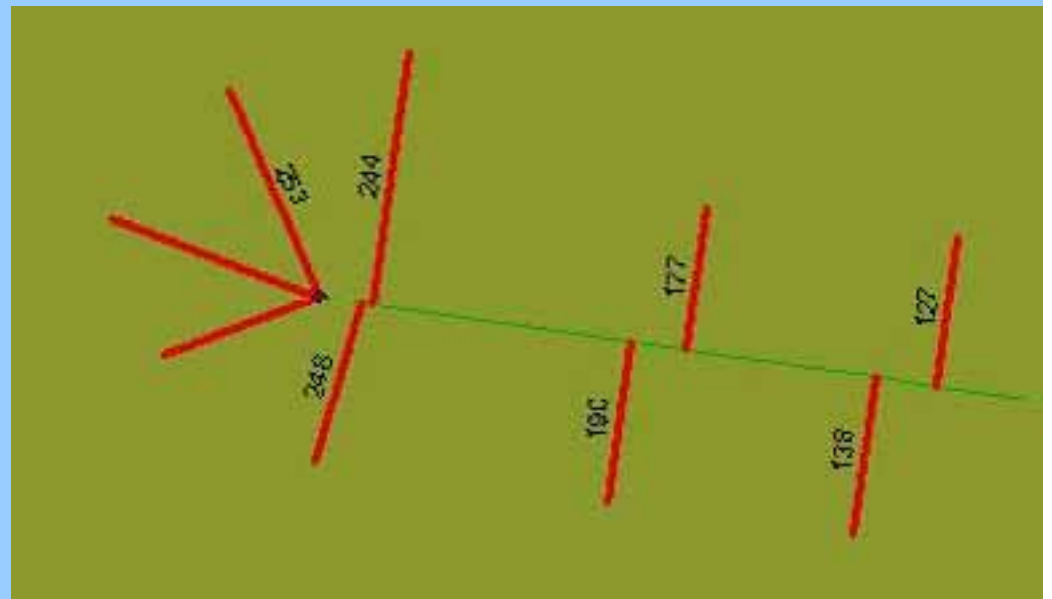


# Microstation Labels to Arc Attributes

Problem: Sewer Lateral distance labels on Microstation.



Microstation



Arc

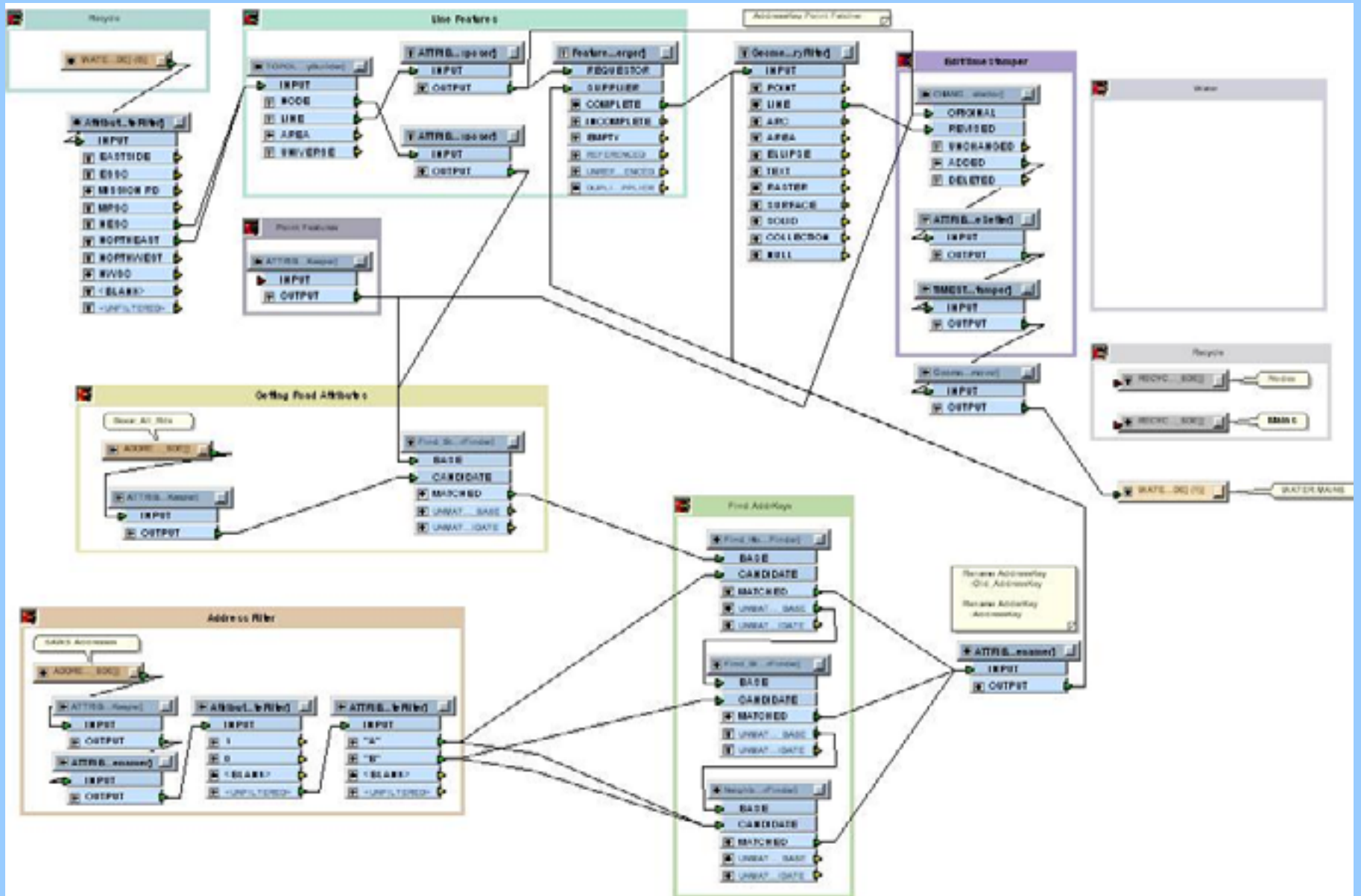
170,891 Tap distance pulled into field in Arc







# No Topology or Know Topology



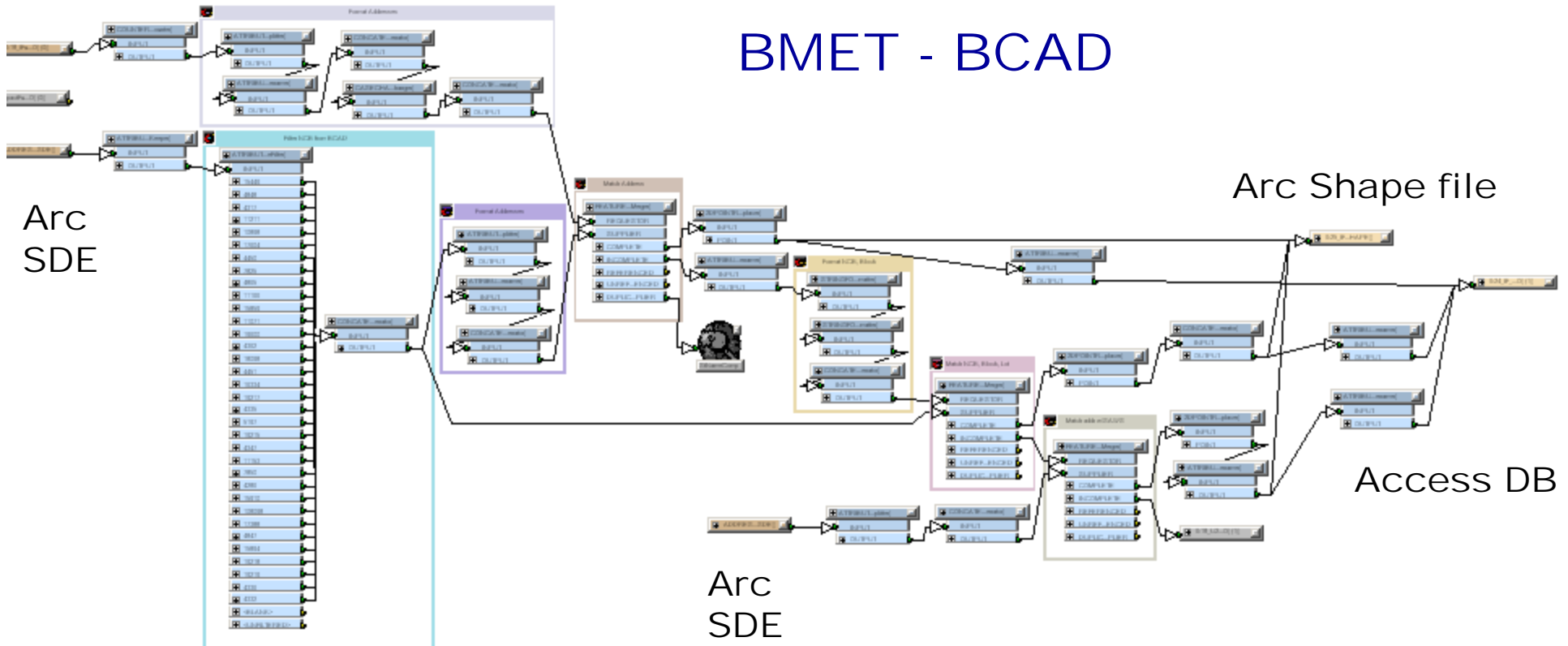
# Transformer with Multiple Data Formats

Access DB

BMET - BCAD

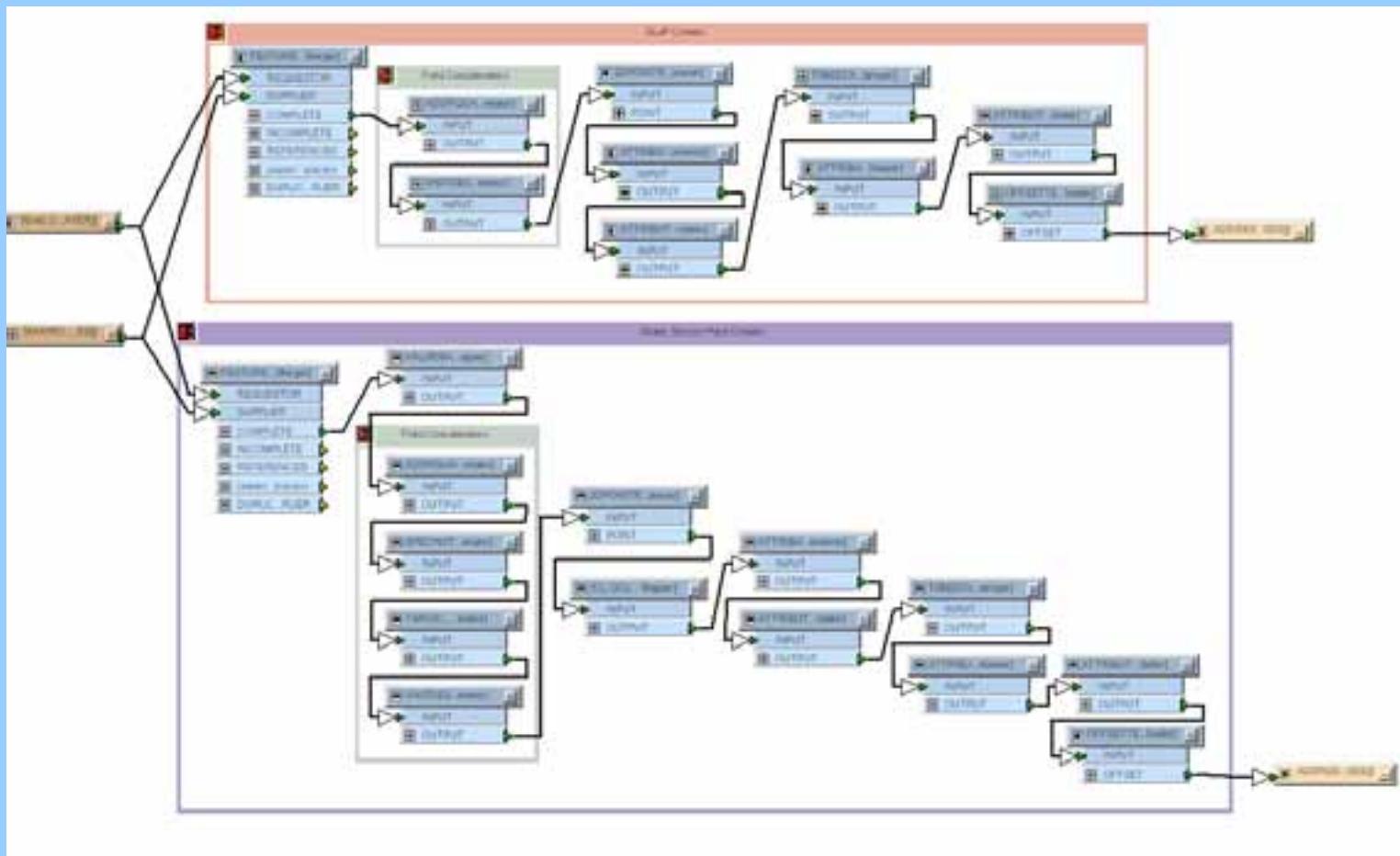
Arc Shape file

Access DB

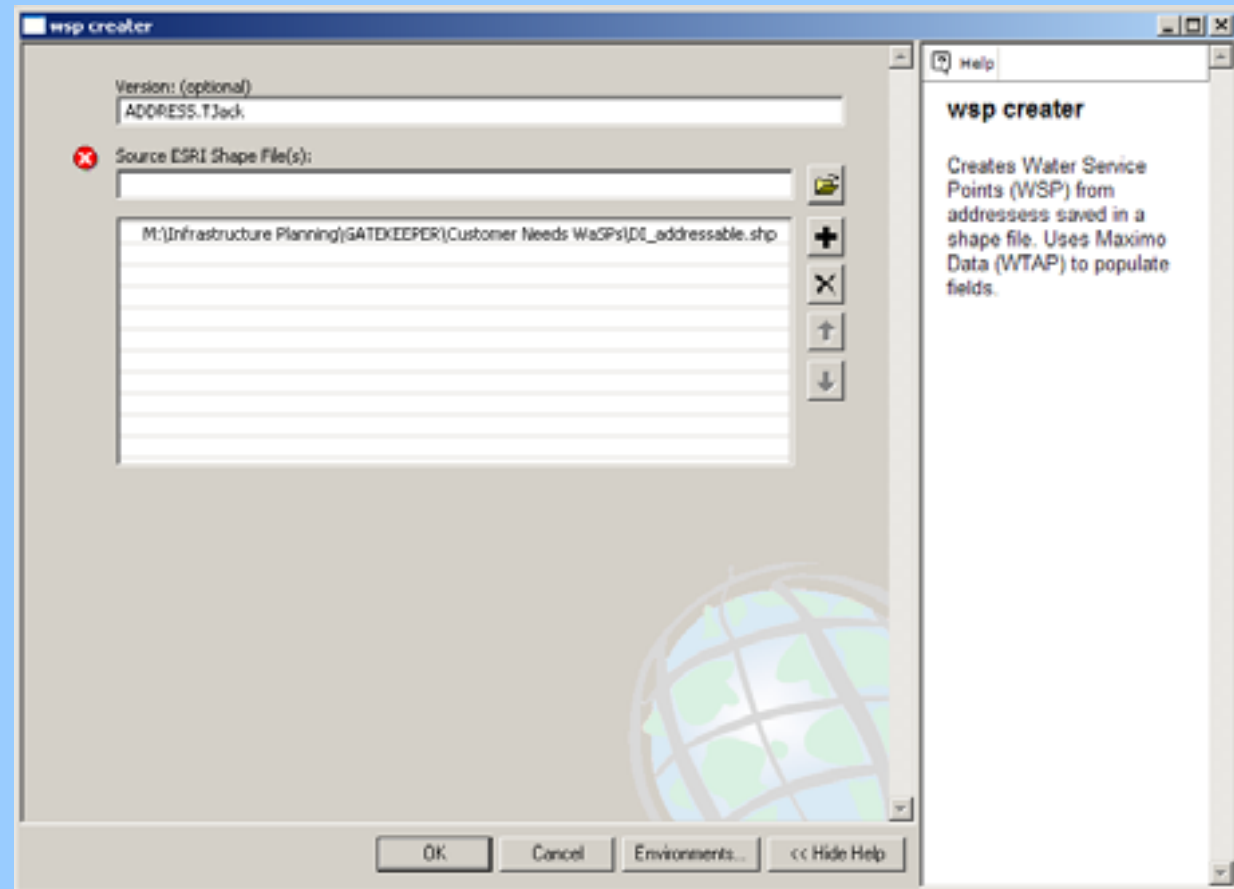
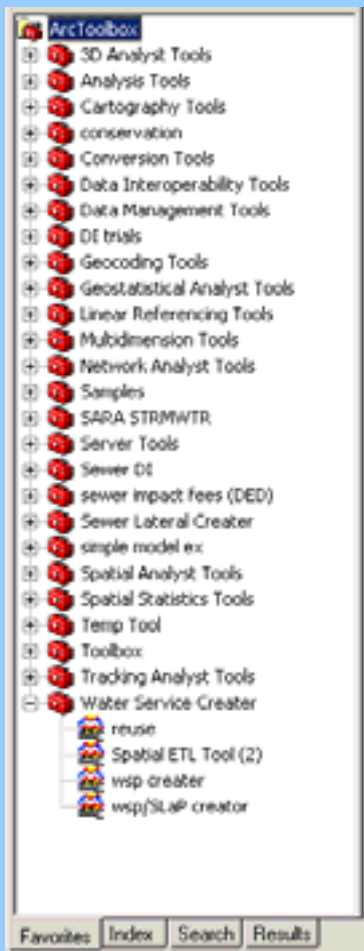


# Water & Sewer Pointinator

Example of a transformer that can be run over and over again.



# Transformers as Toolboxes



# “Doing More With Less”

- BMET-BCAD
  - 3 days to build/test/run
    - \$480
  - 4 People, 2 months
    - \$27,680
  - Savings
    - \$27,200/8 mos.
- Manhole Locator
  - 4 days to build/test/run
    - \$640
  - 2 GIS Techs, 2 months
    - \$6,920
  - Savings
    - \$6,280/4 mos.
- Sewer Lateral Point Snapper
  - 3 days to build/test/run
    - \$480
  - 2 GIS Techs, 8 months
    - \$55,360
  - Savings
    - 54,880/1 year
- Water/Sewer Point Generator
  - 3 days to build/test/run
    - \$480
  - GIS Tech
    - \$160 per GCP, 8 hrs
    - 162 GCP's ~ \$25,920 annually,
  - Savings
    - Limitless
- Microstation Labels

