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

Toni Jackson, GISP
Larry Phillips
San Antonio Water Systems
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!
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
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.

170,891 Tap distance pulled into field in Arc
Microstation Labelinator Canvas
Manhole Locatinator
No Topology or Know Topology
Transformer with Multiple Data Formats
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.**

- **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**

- **Manhole Locator**
  - 4 days to build/test/run
  - $640
  - 2 GIS Techs, 2 months
  - $6,920
  - Savings
  - **$6,280/4 mos.**