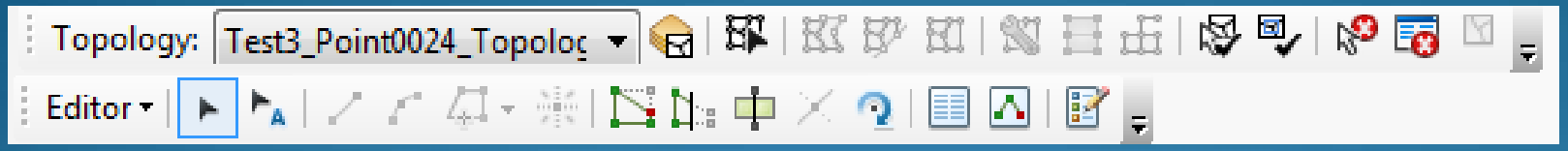
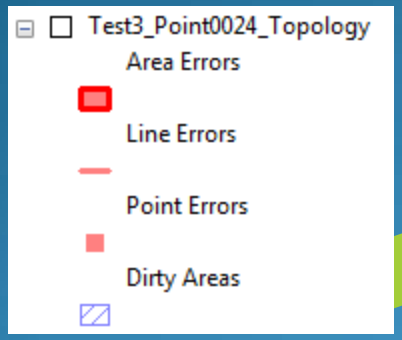
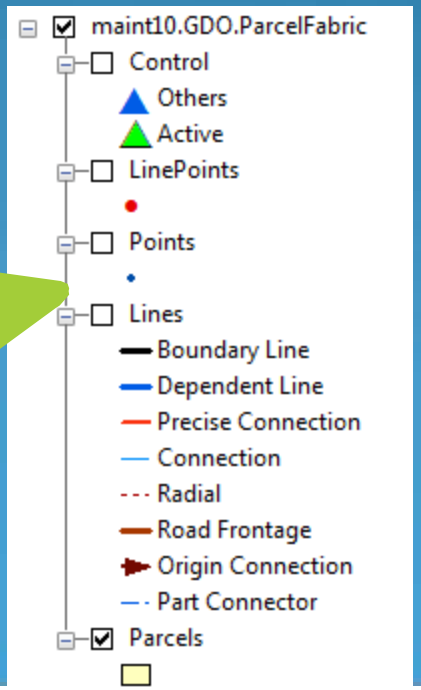
How not to migrate from Topology to Fabric







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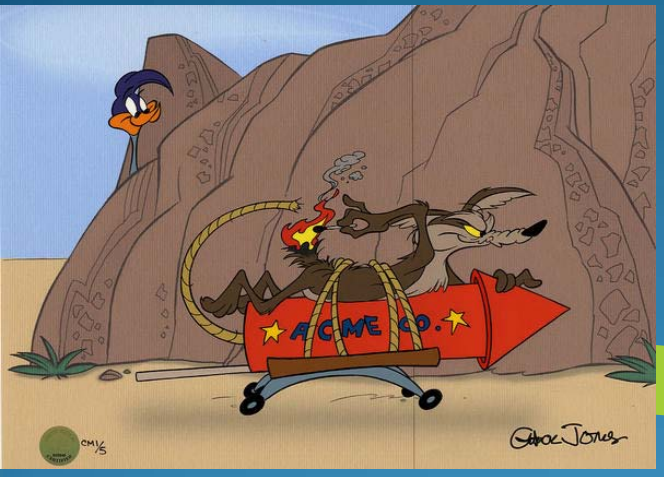
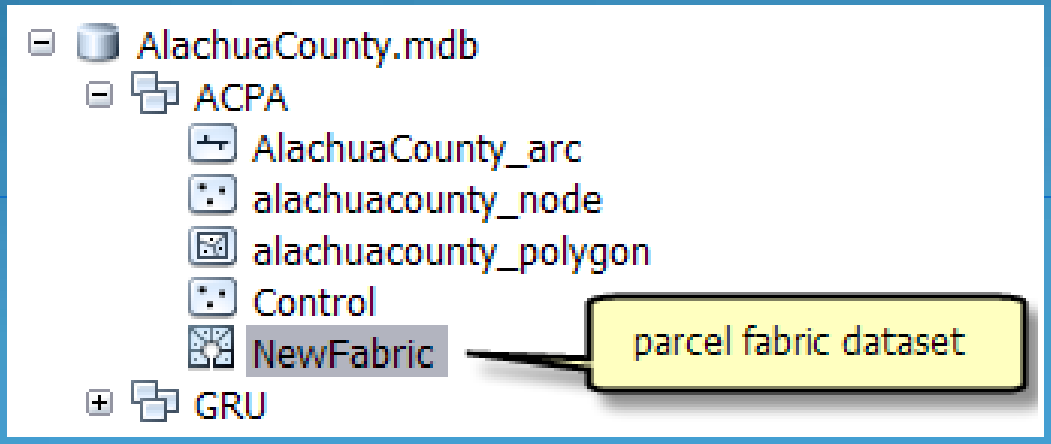
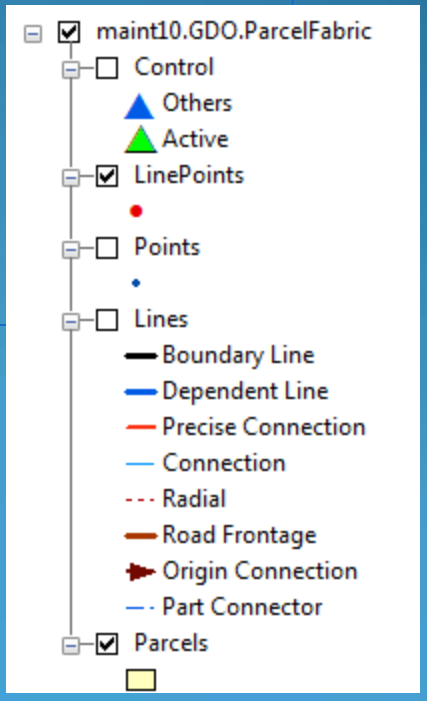


What is a Parcel Fabric?

A parcel fabric is a dataset for the storage, maintenance and editing of parcels. A parcel fabric is created under a feature dataset and inherits its spatial reference from the feature dataset.





What is a Parcel Fabric?

A parcel fabric stores a continuous surface of connected parcels or parcel network. Parcels in a fabric are defined by polygon features, line features, and point features. Polygons are defined by a series of boundary lines that store dimensions as attributes in the lines table.

What is a Parcel Fabric?

Parcel fabric combines the best ideas from:

- Survey Analyst extension
- Topology
- Coverages
- GPS
- COGO

It expects and works best with high accuracy data with lots of surveyed monuments.

It thinks all parcel data is survey accurate, and all parcel puzzle pieces will perfectly fit together to make an absolutely accurate map… Like that ever happens

What is a Parcel Fabric?

A parcel fabric is made up of these key features:

- Parcel lines, which store and preserve recorded boundary dimensions
- Parcel points, which store x,y,z coordinates derived from a least-squares adjustment
- Parcel polygons, defined by parcel lines
- Line points, which are parcel corner points that lie on the boundaries of adjacent parcels
- Control points, which have accurate, published coordinates for a physical location

What is a Parcel Fabric?

A parcel fabric is made up of these key features:

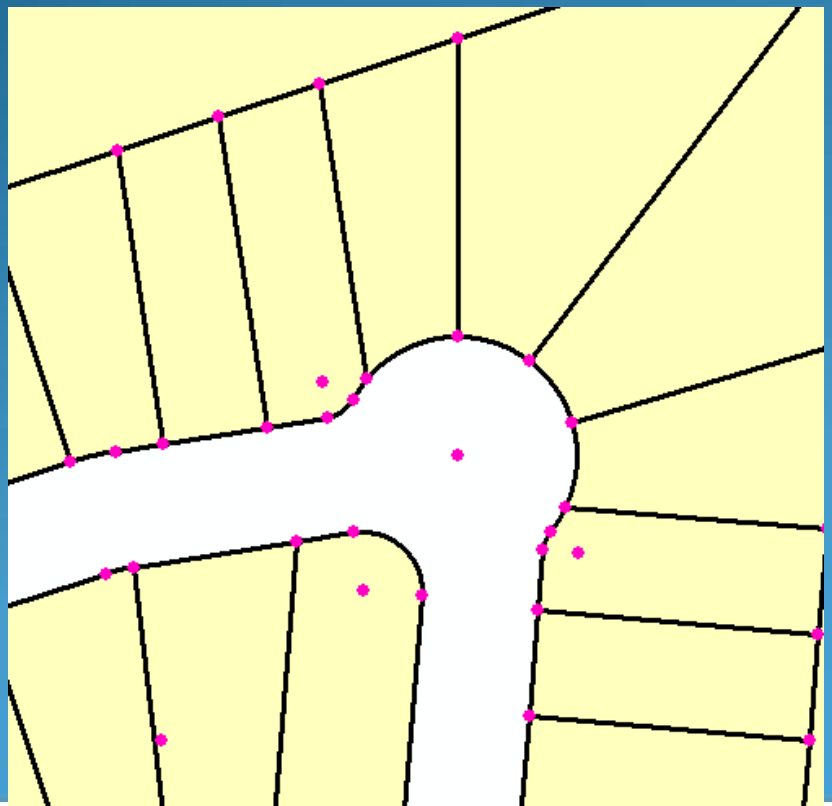
- Plans (table), which store information about the record of survey
- Parcel fabric jobs (table), which track edits to the parcel fabric
- Accuracies (table), which weights parcels in the least-squares adjustment
- Adjustment vectors (table), which store sets of displacement vectors from least-squares adjustments

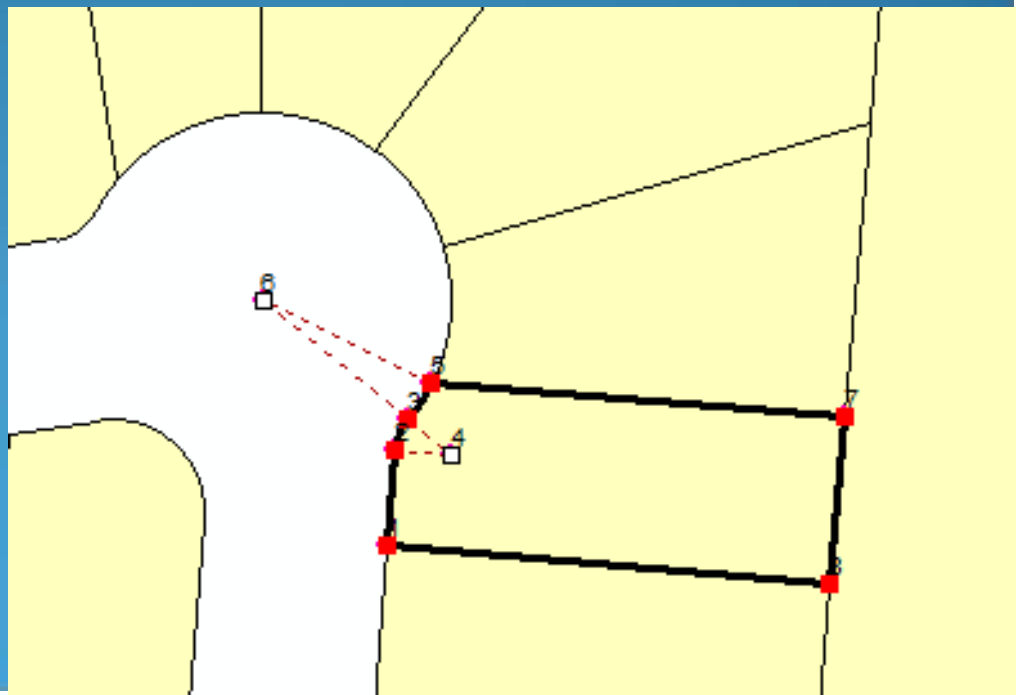
Major Advantages

- Requires near perfect existing parcels and parcel lines
- History is saved for all parcel splits & plats etc.
- Can help improve accuracy of the parcel data
- Stores much more details about parcel geometry
  - radial points & lines
  - radius of curves
  - Survey points
  - geometry adjustments applied (if any)
- Allows storage and labeling of deeded line info
- Allows for much better placement of line labels
- Free web apps if you use ESRI data models

Parcel Geometry

From	Bearing	Distance	Radius	ArcLen...	To	Category
1	N4°48'17"E	25.833			2	0 Boundary
2	N21°55'30"E		15.000	8.964	3	0 Boundary
3	N32°14'20"E		-51.000	12.114	5	0 Boundary
5	S85°11'42"E	111.832			7	0 Boundary
7	S4°48'18"W	45.000			8	0 Boundary
8	N85°11'42"W	120.000			1	0 Boundary
2	S85°11'40"E	15.000			4	4 Radial
3	S50°57'20"E	15.000			4	4 Radial
3	N50°57'22"W	51.000			6	4 Radial
5	N64°33'58"W	51.000			6	4 Radial





Some Dis-advantages

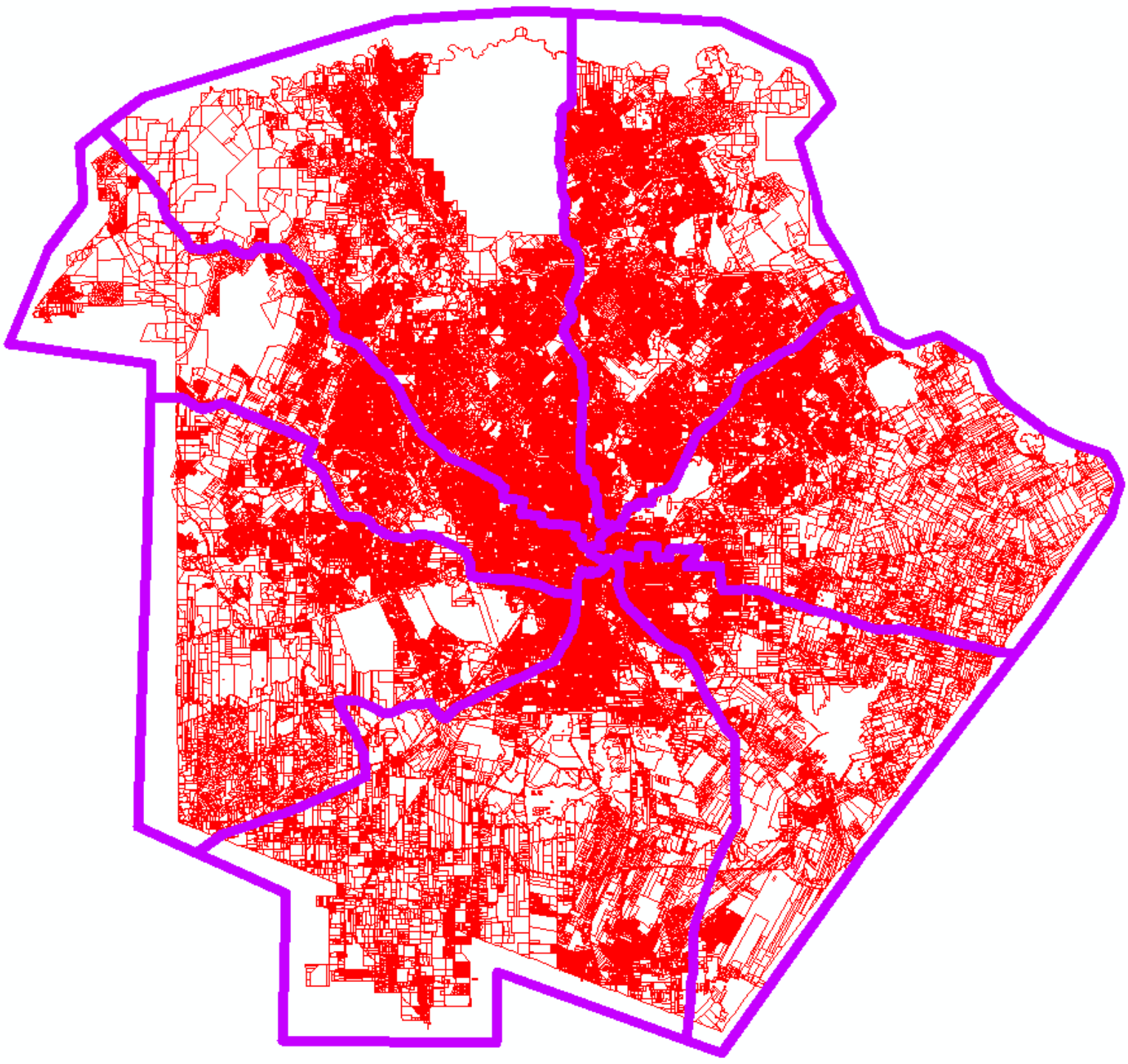
- Training is marginal at best. (at the moment)
- Does allow overlaps and gaps
- No way to check for or fix overlaps and gaps
- Moving multiple parcels is difficult
  - Actually moving them is pretty easy
  - Stitching them into adjacent parcels is tough

Fabric Migration Things to do

- Read all ESRI white papers about migrating
  - Then read them again & highlight questions or expected problem areas
- Plan the migration out as a major project
- Include all fabric required topology rules in your active editing environment NOW!
  - Start fixing any problems and don't migrate to fabric until no topology errors.
- Build pilot project area
  - Decide on and build data model / SDE database
  - Prepare input data
  - Migrate Pilot area
  - Test, Test, Test

Fabric Migration Things to do

- Make editors take ESRI on line fabric editing classes
- Make them watch Larry Demo video
- Give them plenty of time to gain abilities, and confidence in the new tools.
- Visit with others who have already migrated to the fabric with similar size, state laws, etc
- May need to break Migration project into phases
  - Stop editing in area 1
  - Clean-up source data, load parcels into fabric
  - Make sure all looks well
  - Resume editing in area 1
  - Start next area…



Fabric Migration Things Not to do

- Do not under-estimate this migration
- Do not get in a hurry
- Do not assume your current data is good enough
  - Make sure it is
- Do not expect this to be like most ESRI upgrades
  - The software part is easy
  - The data migration is not
- Do not expect your editors to catch on right away

Fabric Migration Lessons we learned

- Loading parcels requires lots of memory and a fast processor
- Many smaller batches works better than a few large batches
- If you don't have complete and accurate parcel lines you have a ton of work to do to create them.
- If you re-create your lines you have to explode any multi part polygons first. (then merge them back later)
- Not everything loads the first time
- Fix missing parcels a few at a time
- Some parcel geometries create unclosed polygons

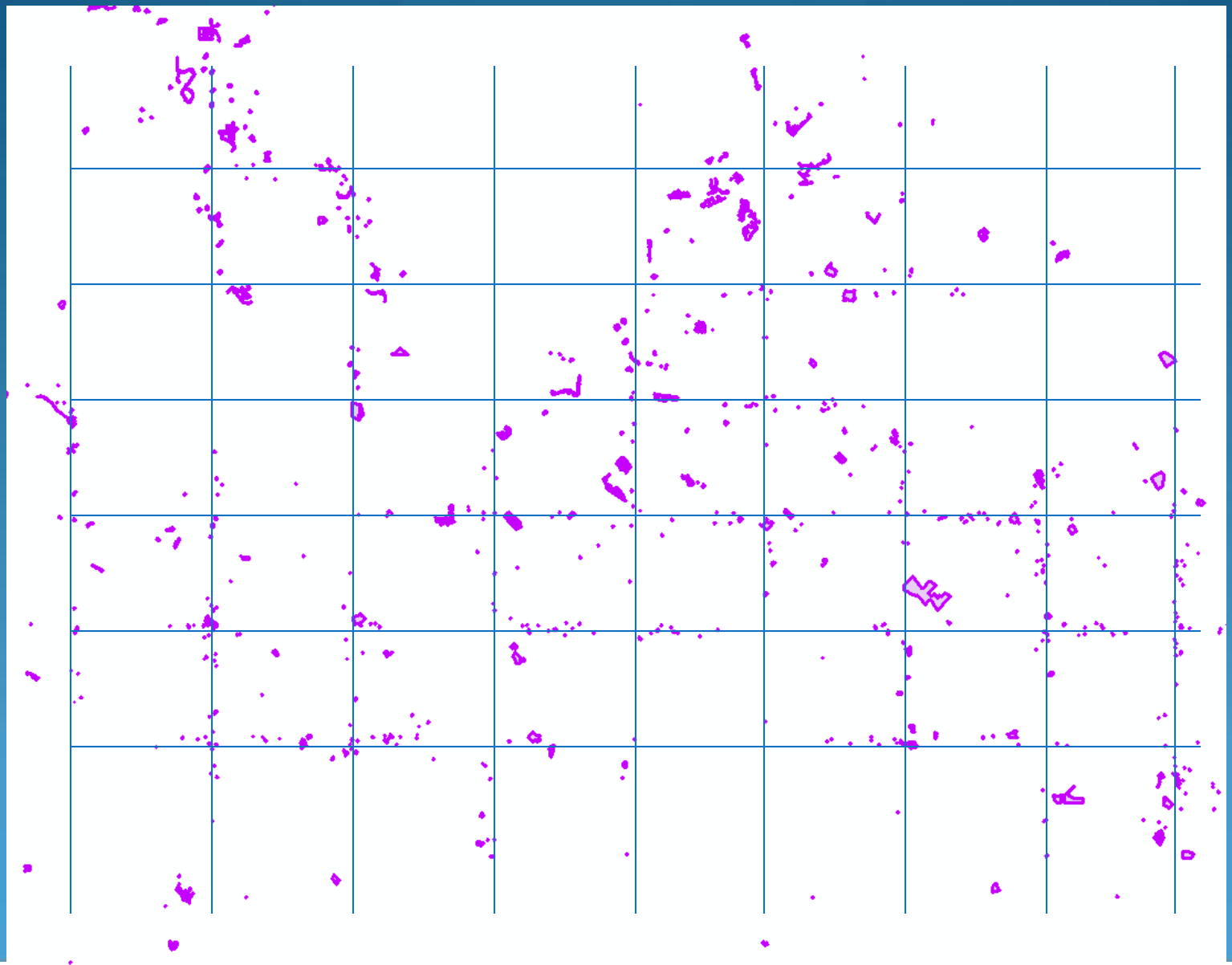
Fabric Migration Lessons we learned

- Check for missing geometries after every fabric load
  - Also check all other layers, check anno layers twice
- Check for fabric errors after every load
- Check for unclosed fabric polygons

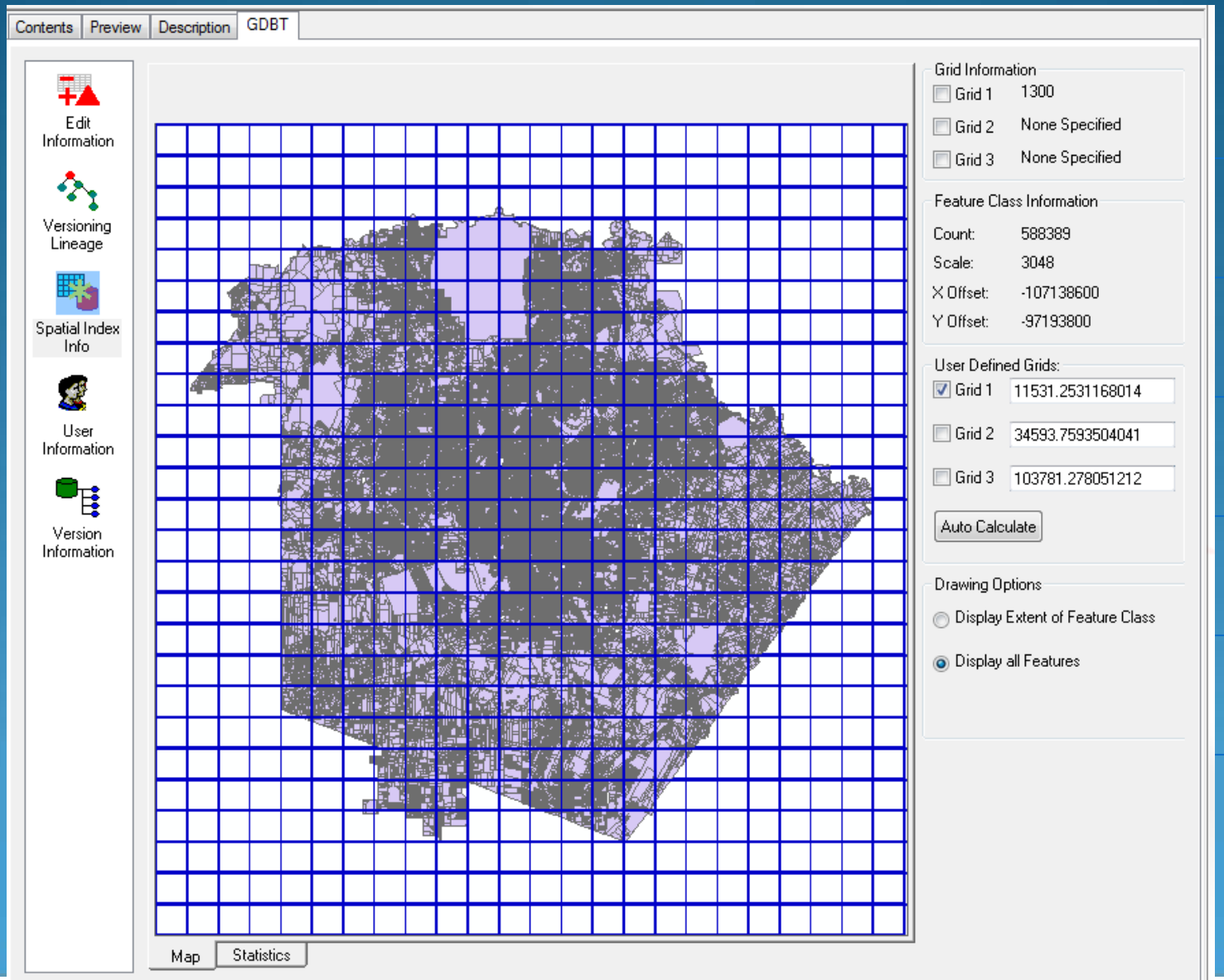
Parcels that didn't load

Parcels that didn't load

Parcels that didn't load



Default spatial grid



Fabric Migration

If you can afford it I highly recommend getting ESRI jump start help!

- They will help you make a plan
- They will help you clean up you existing data
- They'll help you migrate
- They'll help get your editors up to speed

They don't do the work for you, but they help you and make sure any problems get resolved.