

A STATEWIDE ADDRESS DATABASE ISSUES AND OPPORTUNITIES

*Lightning talk presented by Howard Ward,
President, TerraSystems Southwest.
GIS CoOp Meeting, October, 2014.*

BACKGROUND

For the past two years, TSSW has been assisting the State of Arizona E 9-1-1 Program Office develop and assemble statewide databases in anticipation of moving the state toward adoption of Next Gen 9-1-1 (NG 9-1-1).

In NG 9-1-1, GIS steps up from an ancillary mapping role to the primary role in call routing and dispatch. It also offers the ability to work more easily across E 911 Authority boundaries if seamless GIS data is available.

To date we have assembled

- a 15-county statewide **road network**,*
- a 13-county Emergency Service Zones **(ESZ) layer**,*
- a 12-county Master Street Address Guide **(MSAG) community layer** and*
- a 9-county **address point database**.*

At the next append, we should have complete 15-county ESZ and MSAG community layers. We are now working to complete a 15-county address database by the end of the year.

WHY E 9-1-1 NEEDS ADDRESS POINTS

Address points are a **more accurate** source for geocoding and dispatching calls than road networks.

Address points geocode to the **actual parcel, access point or structure location** while geocoding on a road network is an interpolated “guess” as to an address location.

Geocoders based on address points **can better handle non-standard parity**, where you have both even and odd addresses on the same side of the road. Geocoders based on road segments expect even address on one side and odd on the other.

Geocoders based on address points **can handle non-sequential addresses**, addresses where the numbering is not consistently ascending or descending.

WHO ELSE NEEDS ADDRESS POINTS

- **Arizona Broadband Mapping Project** – for geocoding service addresses.
- **ADOT All Roads Project** – for cross checking road network address attributes.
- **ADOR Tax Simplification Program** – for taxing the right business for the right taxing authority.
- **ADHS epidemiological studies** – for more accurate mapping and study of diseases, epidemics and more.
- **And more.**

HOW WE APPEND

Collect E9-1-1 related data bi-annually (moving toward more real-time) from each of the 15 counties and/or their E 9-1-1 center.

Run QA checks and provide feedback to the data providers

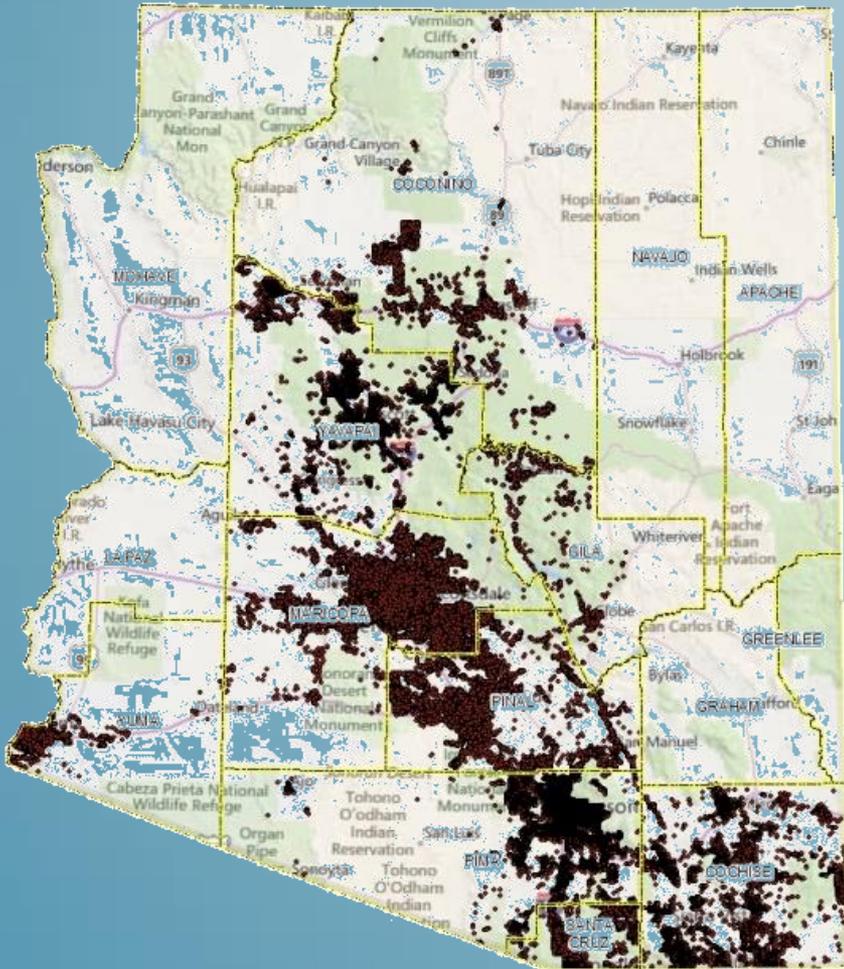
Append to a standard schema based on the developing National Emergency Number Association (NENA) Geographic Data Model.

Build statewide address locators and run against test address databases collected from various sources around the state. Provide feedback to the data providers.

Publish the statewide databases and locators on AZGEO portal for E911-Public Safety members, statewide.

WHAT WE HAVE SO FAR

Nine counties have address points or parcels with situs information.



2,606,235 address points in 9 counties.

Match rates are very competitive with commercial products.

Data Source	Total Matched	%	Total Tied	%	Total Unmatched	%	Total Addresses
Arizona	1,541,665	86	17,122	1	237,491	13	1,796,278
StreetMap	1,601,234	89	229	0	194,815	11	

HOW WE PLAN TO COMPLETE

All but Greenlee County have parcel geometry with APN. Still researching data sources there.

We plan to link County TaxMaster situs addresses to parcel centroids and then scrub the results using geocoding, reverse geocoding and pattern checks.

Best estimate is a 15-20% error rate in Assessor Situs address information

We are engaging with the new University of Arizona GIST Center in the design, processing and QA effort.

HOW YOU CAN PARTICIPATE

*This effort has been successful only because local data providers participate and provide very high-quality data. If you are one of those, we are in your debt... **THANK YOU!!***

You may want to take a more active role in shaping how statewide data sets are collected, processed and made accessible:

- *Join AGIC Data Committee*
- *Join AGIC Data Committee, E 9-1-1 Working Group*
- *Respond to E 9-1-1 Office Data Requests*
- *Sign up for AZGEO and share data.*

THE END