Overview

The Ark-Tex Council of Governments (ATCOG) is a voluntary association of local governments established under state law for the purpose of promoting intergovernmental cooperation and strengthening local units of government within Bowie, Cass, Delta, Franklin, Hopkins, Lamar, Morris, Red River, and Titus counties in Texas, as well as Miller County in Arkansas. The primary goal of ATCOG is to improve the quality of life for all citizens in the region on behalf of regional governmental organizations by providing perspective on information and problem solving, as well as coordinating funding, resources, programs, and services.

The Challenges

The move to NG9-1-1 is never easy. The surge of cell phone usage multiplying daily significantly complicates the migration to NG9-1-1, as well as landlines switching to Voice over Internet Protocol (VoIP) at rapidly increasing rates. Additionally, the eminent closure of traditional tap-and-ring landline telephone networks, which have been the foundation of 9-1-1 for 50 years further complicates the migration process. Other complicating factors include the state and federal governments handing down edicts to deliver the next generation of 9-1-1 emergency services by 2018, which is a difficult feat for an industry that has historically been behind the curve of emerging technologies.

"It's a lot of work," says John Beasley, GIS Coordinator for the ATCOG. "Next Gen represents a fundamental change in the way we receive, process, and manage data, and with the speed of technology moving at such an incredible rate, we in the 9-1-1 community are constantly playing catch up."

Beasley joined the ATCOG team in 2015 to oversee the COG's transition to NG9-1-1. His challenge was to create a new database schema that could plot structure-addresses accurately through a synchronization process that would update existing MSAG data, verify phone numbers and location, and eliminate the "theoretical" range of addresses on any given street within the COG's 40 incorporated cities and unincorporated areas.

"There are many pieces to the puzzle," says Beasley. "Matching MSAG to street centerlines, determining the true range of addresses on a street, exploring sub-sets of address points for multi-family dwellings, office buildings, retirement homes, and eliminating telephone numbers and address points that no longer exist. And there are more to come that we probably don't even know about yet."

Ark-Tex COG Streamlines Preparation for NG9-1-1 with 911 Datamaster

Luckily for Beasley and his colleagues at ATCOG, help was on the way. In 2015, ATCOG installed 911 Datamaster's SpatialStation application, which is a user-configurable database tool-set that allows users to build and validate mission-critical spatial data that will support the requirements of NG9-1-1. Installing SpatialStation brought both good and bad news for the commission. The bad news was that SpatialStation illuminated a high volume of errors in their existing spatial database. The overwhelming amount of errors in ATCOG's database made it clear that that it would not be able to support the requirements of NG9-1-1 functionality. The good news was that Beasley and his team at ATCOG now had access to the tools and resources to build an all new data schema.

"Our biggest challenge has been synchronizing the database with the move to a new schema," says Beasley. "But that is just the tip of the spear. Next Gen calls for centerlines and MSAG address points to locate sub-address points within complexes such as mobile home parks, retirement communities, apartment complexes, office buildings, and more. It is definitely a lot of work, and a lot of data, but luckily we have much needed help from 911 Datamaster and our implementation of SpatialStation."

Beasley said his team relies on three key components of SpatialStation to identify, correct, and confirm their spatial data.

"We use MSAG to Road Centerlines, ALI to Address Points, and ALI to Road Centerlines Compare on a daily basis," says Beasley "And, we are finding phone numbers and street addresses that have not existed in years. Address points that end on a road when there are numerous unaddressed structures on the map. VoIP numbers associated with an address point in a city, only to find that the resident and VoIP number were now in the Philippines or Europe."

"All the data we are now able to manage will be used in our move to NG9-1-1, and it will ensure that when a call is made to 9-1-1 within our service area, we will be able to locate that caller whether the call is made on a mobile phone, VoIP, or landline," says Beasley.

Another major component to the 911 Datamaster solution is the Help Desk, according to Beasley. "The Help Desk at 911 Datamaster has been a tremendous asset for our team. I've never had to wait for assistance and it just keeps getting better with new technologies coming online."

Meeting the 2018 Deadline with 911 Datamaster

The NG9-1-1 mandates are looming. The Texas Commission on State Emergency Communications (CSEC) requires that 98 percent of address points, and road centerlines match within each regional planning area by January 2018. The Federal Communications Commission has added "Indoor Location Accuracy to the NG9-1-1 mandates as well.

"With all the new technology that exists, we can achieve the goals of NG9-1-1," says Beasley. "It starts with what we are doing here with the basics. In the future we may be adding building blueprints, 3-D modeling, and numerous other location technologies to our map."

Beasley says he is confident that with the dedication of his staff and the help of 911 Datamaster, ATCOG will be able to meet the CSEC mandate, and set the bar for NG9-1-1 services in the State of Texas.

"It is not an easy process," says Beasley, "But with the right people and the right resources, I'm confident it can be accomplished. Everything we are doing is preparing us for the future of 9-1-1."

About 911 Datamaster

911 Datamaster is an industry-leading software developer, GIS data technology integrator, and GIS services company specializing in both geospatial and traditional 9-1-1 database applications. Leveraging more than 25 years of experience in mission critical enhanced 911 database deployments, 911 Datamaster has created a suite of GIS-driven applications and services that support state, regional, and local government transitions from E9-1-1 to NG9-1-1.