GISServices® Nortex Case Study

911 Datamaster's GIS Services is Part of the Equation at Nortex

The migration from MSAG to Geo-MSAG is a major step on the road to the next-generation of emergency call handling.

Location, location, location. It's always been a buzzword in business, but now in the next generation of 9-1-1 call processing, location is more than just a street address. Location is a spatial datapoint.

The volume of 9-1-1 calls has never been a problem for public safety answering points (PSAPs) in a nine-county area in north central Texas. The total population in the Nortex Regional Planning Commission (NRPC) is just north of 77,000 residents. In this largely rural area, street address matching, road splits, and service area boundaries have always been somewhat of a challenge. But the real challenge began when cell phones became the default phone device making calls to 9-1-1.

"In a geographically scattered region such as ours, migrating to an all-new Geo-MSAG was a major challenge," says Tim Bryant, Director of 9-1-1 Emergency Services for Nortex. "We needed to find a solution to integrate GIS data into the new NG9-1-1 format to meet both state and NENA requirements. And, of course, we needed to do it the most time-sensitive, cost-effective manner possible."

Bryant and his team at Nortex met with several different vendors at a 2010 NENA conference before choosing solutions offered by 911 Datamaster.

"We had some specific challenges within our area that needed to be addressed and we already had good working relationships with several of the people at 911 Datamaster," says Bryant. "We chose SpatialStation as our software solution and we added their GIS Services to help with updating data-layer schemas, creating responder polygons, remediating polygon errors, road centerline errors, address points, and creating an address-point layer for VoIP records."

One of the first steps in the data migration process for Nortex was to create and update data-layer schemas to meet both NENA and GIS Data Model requirements. The GIS Services team at 911 Datamaster took existing GIS data and conformed the schemas to match that of the NENA NG9-1-1 Data Model.

"The expertise at 911 Datamaster streamlined this process for us and the work was completed in weeks as opposed to months if we had done it ourselves," says Bryant. "911 Datamaster also created missing layers and polygons that will be required in the migration to NG9-1-1."

The 911 Datamaster GIS Services team helped Nortex move from its tabular MSAG to a geospatial polygon variant of MSAG. The team was then able to take the GIS data and create responder polygons to match the NENA NG9-1-1 Data Model.

"This was going to be a lot of work to do inhouse, so it was important for us to be able to tap into the expertise at 911 Datamaster to complete this portion of the upgrading of our GIS data," says Bryant.

Accurately representing the geographic extent of the PSAP and emergency responders' area of responsibility is key to ensuring a smooth transition to NG9-1-1. 911 Datamaster's GIS Services team reviewed existing Nortex data sources to build service area polygons and then remediate any errors. The standard for this type of GIS data is zero gaps and overlaps, which requires edge-matching of the polygons with no errors.

"Creating responder polygons that are geospatial variants of the MSAG and then resolving gaps and overlaps in the geospatial polygons requires time, expertise, and manpower," says Bryant. "This was a job very well suited to the GIS Services team at 911 Datamaster."

Accurate road centerlines and address points have long been dominant factors in the formation of MSAGs, but today's NG9-1-1 requires more granular detail than E9-1-1. NG9-1-1 now requires a level of detail with no missing data. The accuracy level needed to eliminate any misrouting of a 9-1-1 call is dependent on complete accuracy of the GIS data.

"I had spent many hours working to resolve errors in our dataset before I enlisted the help of 911 Datamaster," says Bryant. "In the interest of time, I turned over our GIS data to the 911 Datamaster team and asked them to fix, repair, and create what was missing. Allowing 911 Datamaster to complete this work moves our agency so much closer to the deadline of migrating to NG 9-1-1."

Today, the ability to spatially locate the source of a call with the correct data field is a vital tool for any PSAP. 911 Datamaster's GIS Services team helped remediate road centerline errors and address points at Nortex, and helped them create the first-ever Address Point Layer for VoIP.

"I am familiar with other companies and offerings, and they are all very good," says Bryant. "I was drawn to 911 Datamaster as a result of many years of personal knowledge with some of them, and as we began using SpatialStation, I became more aware of their superior knowledge and expertise in the field of GIS data."

"I now have the confidence in knowing that the staff on 911 Datamaster's GIS Services team is absolutely qualified to take my GIS Data and bring it into conformance with the NENA NG9-1-1 Data Model. As a bonus, over the years I have become friends with the folks at 911 Datamaster as our paths cross often throughout the year, and we are all working together to make NG9-1-1 work for the future of emergency call handling and response. And, they are always just a call away."