SPATIAL SYSTEMS ASSOCIATES, INC. | NEWS FOR THE GIS & FMIS USER COMMUNITY

911/EMERGENCY SERVICES

Streamlining NG911 Data Maintenance

A Message from Larry E. Newman
President, P.E., LEED AP

It is common to expect that when an emergency occurs or when help is needed, a call to 911 is the first step to obtaining a rapid response. For many years, geospatial data has been used in the emergency management environment to support computer aided dispatch (CAD) systems and perform address data validation and automation. In the past, before the advent of the internet and mobile phones, simply knowing the phone number that was incoming to a 911 call center was sufficient to geographically locate the origin of the call and to determine which dispatch center the call needed to be routed to. In this environment, GIS data had been used to maintain locational address and street centerline data to facilitate routing of emergency response vehicles.

Global Positioning System (GPS) technology became widely available in the early 1990's, allowing anyone to identify geographic coordinates for where they were anywhere in the world. Miniaturization and incorporation of GPS in a variety of devices has allowed the proliferation of personal navigation applications on the cell phones that virtually everyone carries with them every day.

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SpatialMap 911 OVERVIEW

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Individuals, accustomed to being able to call 911 in an emergency, continued to call that number when they started carrying mobile phones. However the billing address for a mobile phone has little to do with the location of the phone when a call to 911 is made. Callers, who are often in distress when calling 911, were challenged to provide adequate locational information to a dispatcher. Further, since the location from which the call originates is necessary to determine which call center the call needs to be routed to in the first place, mobile phone technology became a problem for the 911 industry. Fortunately, cell phone manufacturers quickly incorporated GPS technology into virtually every cell phone, and the coordinates from the GPS chip became available to the cell phone company for use in emergency situations.

In addition to cell phones, the advance of the internet starting in the mid 1990's and the use of the internet for phone calls has further complicated the 911 response process. When a 911 call comes in from an internet-based device, it is a real challenge to determine where that call is coming from, particularly if the call is coming from a mobile internet device.

Next generation 9-1-1 is the shift away from the fixed location origin of voice dependent calls, to an Internet protocol (IP) based service enabling text and video communication in addition to the traditional voice calls. As part of this transition, geospatial awareness is all the more important as the call location that determines which call center the call is routed to and the location that is presented to the dispatcher will be generated by a GIS. As such, data maintenance and management is critical.

Spatial Systems has been supporting emergency call centers in data development and maintenance for close to 10 years. In addition to building emergency service related data (address locations, street centerlines, driveway/connector lines, emergency service network boundaries, etc.), we have also developed a commercial product that provides maintenance tools that improve the address maintenance workflow, prevent errors, maintain street centerlines, and provide flexibly in managing the emergency service data. The product, SpatialMap 911, has been used in dozens of counties in Maryland, Virginia, Pennsylvania, Tennessee, and Mississippi.

SpatialMap 911 is a user driven application that allows the user to make informed decisions based on their expertise and the existing information. SpatialMap911 provides

user to comply with those recommendations or override the recommendations with user defined information. SpatialMap 911 provides a mechanism to quantitatively measure the quality of the resulting data. These evaluations can be performed on individual streets, subdivisions, or the entire jurisdiction.

For more information please visit www.spatialsys.com/GIS/Products/SpatialMap 911 and don't hesitate to contact us to see how SpatialMap 911 can assist your jurisdiction in better building and maintaining your 911 data.

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