



AGRC Support of E-911 Emergency Services

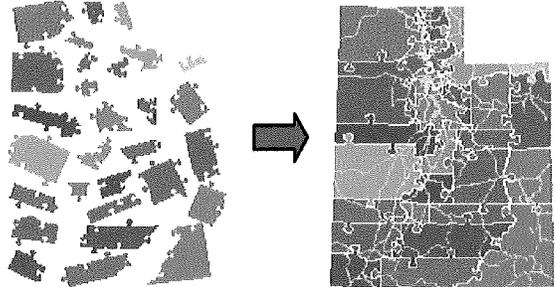
Statewide the computer aided dispatch systems rely on accurate centerline road data and descriptive data to map the location of the call and get responders to the right place.

Background:

AGRC

The Automated Geographic Reference Center (AGRC), founded in 1981, is a state agency charged with facilitating an enterprise-wide approach to the implementation of digital mapping, locational analysis, and related geographic technologies in Utah.

State law requires AGRC to perform specific duties that benefit state and other levels of government, as well as the private sector and citizens. These include: maintaining data and access to a geographic data library called the State Geographic Information Database (SGID); providing a survey grade Global Positioning System base reference network; and, stewardship of geographic datasets and services in support of emergency response, road and property inventories, local administrative and voting boundaries, and municipal and regional planning.



Standards, Coordination & Integration Build Statewide Resources

Statewide Road Centerline Dataset Digital Mapping

The SGID's statewide road centerline dataset is maintained through a partnership between AGRC, UDOT, local governments. AGRC provides the coordination, data integration, and quality/consistency assurance to bring local data together and make it functional as a statewide map data layer. The road centerline dataset currently consists of over 350,000 road segments, representing over 120,000 miles of urban, suburban, and rural roads.

For emergency response to function optimally, each road feature must be linked to descriptive database attributes:

- road name & type, alias names
- one way restrictions, mileposts ranges
- cartographic codes
- seasonal restrictions
- address ranges for both sides of the street
- jurisdictional information
- surface types
- travel speeds.

E911 centers use these data together with sophisticated dispatch software solutions to log and locate callers and dispatch the appropriate responders.

Data standards, integration, creation and maintenance efforts for the geographic database of statewide road centerlines is funded through the E911 Restricted Fund based on a 1 cent per month per cell phone (UCA §53-10-605)

Public Safety Answering Point (PSAP) Data Support and Integration

AGRC has provided geographic data development and data integration technical support to over half of Utah's PSAPs. Technical support includes the generation of master street address guides, software-specific data derivation, address coordinate grid definition, local address assignment, and quality assessment.

Saint George Area Data Development Example

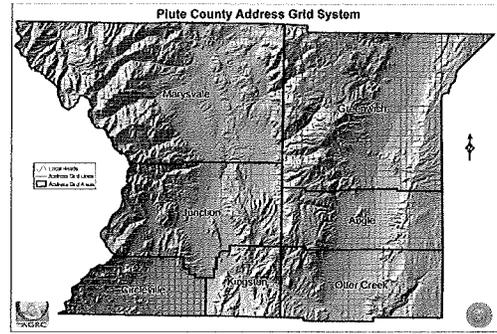


2004

2006

Road Centerline Coordination & Data Standards

AGRC works extensively with local government partners to develop addressing and data standards that facilitate data sharing and integration. Typically, three counties are updated per month, and updates to the road centerline dataset updates are published every 6-8 weeks by AGRC. This data is utilized by state agencies, federal partners (including Census and USGS), local government, the private sector, and other organizations including Blue Stakes of Utah's "Call Before You Dig" center.



AGRC E911 Address/Centerline Goals & Activities:

Road Centerline Data Build-Out and Maintenance Goals:

July 1, 2010

- Milepost Location: Geographic locations can be derived for all milepost and fractional milepost locations along state and federal routes (deadline: July 1, 2010)
- Cartographic Representation: Cartographic codes allow for the selective symbolization and display of road centerlines by: road class, functional category, jurisdiction, and surface type.

July 1, 2011

- Centerline-based Address Location: Accurate geographic locations can be derived from the datasets road geometry and their addressing attributes for at least 95% of valid Utah addresses statewide
- Routing: Point to point optimal route solutions can be found statewide through network analysis on the road centerline's travel cost estimate attributes including: speed limit, surface type, seasonal closures, directional restrictions

July 1, 2012

- Point-based Address Location: Work with local government and state agencies to compile and derive a statewide set of physical addresses and their geographic point locations 95% of valid Utah addresses statewide

Prioritization of Activities

AGRC has allocated funding from the E911 Restricted Fund levy to support the following priority activities and associated tasks (by fiscal year):

	<u>FY09 & FY10</u>	<u>Proposed FY11</u>
<ul style="list-style-type: none"> • Centerline Data Creation, Collection & Integration: <ul style="list-style-type: none"> ▪ Incorporating local roads data updates into statewide roads data layer ▪ Field collection of road centerline and address data ▪ Field verification of addressable road centerlines ▪ New addressing systems and new address grid generation ▪ System-level readdressing and address grid generation at local level ▪ Resolving individual local address assignment issues 	20%	5%
<ul style="list-style-type: none"> • Centerline Data Maintenance: <ul style="list-style-type: none"> • Initiating enhancement edits to statewide roads data layer • Maintaining topological connectivity for the road network • Developing or refining milepost reference systems • Enhancing and testing of routing capability 	35%	40%
<ul style="list-style-type: none"> • Centerline Data Quality Assessment: <ul style="list-style-type: none"> • Geocoding performance assessment & metric development 	10%	5%
<ul style="list-style-type: none"> • Centerline Standards & Coordination: <ul style="list-style-type: none"> • Data standards development and promotion • Maintaining metadata for road centerline datasets • Database administration and public data access provision 	10%	10%
<ul style="list-style-type: none"> • PSAP Support & GIS Data Integration: <ul style="list-style-type: none"> • Data development assistance to local road data stewards to improve E911 results • Geoprocessing assistance to locals to facilitate GIS data loading • E911 related map production 	25%	25%
<ul style="list-style-type: none"> • Additional Priority Activities TBD by State E911 Committee 	??	15%

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Section 605 Use of money in fund -- Criteria -- Administration.

53-10-605. Use of money in fund -- Criteria -- Administration.

(1) Subject to an annual legislative appropriation from the fund to:

(a) the committee, the committee shall:

(i) authorize the use of the money in the fund, by grant to a local entity or state agency in accordance with this Subsection (1) and Subsection (2);

(ii) grant to state agencies and local entities an amount not to exceed the per month fee levied on telecommunications service under Section [69-2-5.6](#) for installation, implementation, and maintenance of unified, statewide 911 emergency services and technology; and

(iii) in addition to any money under Subsection (1)(a)(ii), grant to counties of the third through sixth class the amount dedicated for rural assistance, which is at least 3 cents per month levied on telecommunications service under Section [69-2-5.6](#) to:

(A) enhance the 911 emergency services with a focus on areas or counties that do not have E-911 services; and

(B) where needed, assist the counties, in cooperation with private industry, with the creation or integration of wireless systems and location technology in rural areas of the state;

(b) the committee, the committee shall:

(i) include reimbursement to a provider of radio communications service, as defined in Section [69-2-2](#), for costs as provided in Subsection (1)(b)(ii); and

(ii) an agreement to reimburse costs to a provider of radio communications services must be a written agreement among the committee, the local public safety answering point and the carrier; and

(c) the state's Automated Geographic Reference Center in the Division of Integrated Technology of the Department of Technology Services, an amount equal to 1 cent per month levied on telecommunications service under Section [69-2-5.6](#) shall be used to enhance and upgrade statewide digital mapping standards.

(2) (a) Beginning July 1, 2007, the committee may not grant the money in the fund to a local entity unless the local entity is in compliance with Phase I, wireless E-911 service.

(b) Beginning July 1, 2009, the committee may not grant money in the fund to a local entity unless the local entity is in compliance with Phase II, wireless E-911 service.

(3) A local entity must deposit any money it receives from the committee into a special emergency telecommunications service fund in accordance with Subsection [69-2-5\(4\)](#).

(4) For purposes of this part, "local entity" means a county, city, town, local district, special service district, or interlocal entity created under Title 11, Chapter 13, Interlocal Cooperation Act.

Amended by Chapter 384, 2008 General Session

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