



ALABAMA 911 BOARD

October 26, 2021
Talk About It Tuesday!



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Alabama 9-1-1 Board



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<http://al911board.com>

Introduction & Contact Information

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Agenda

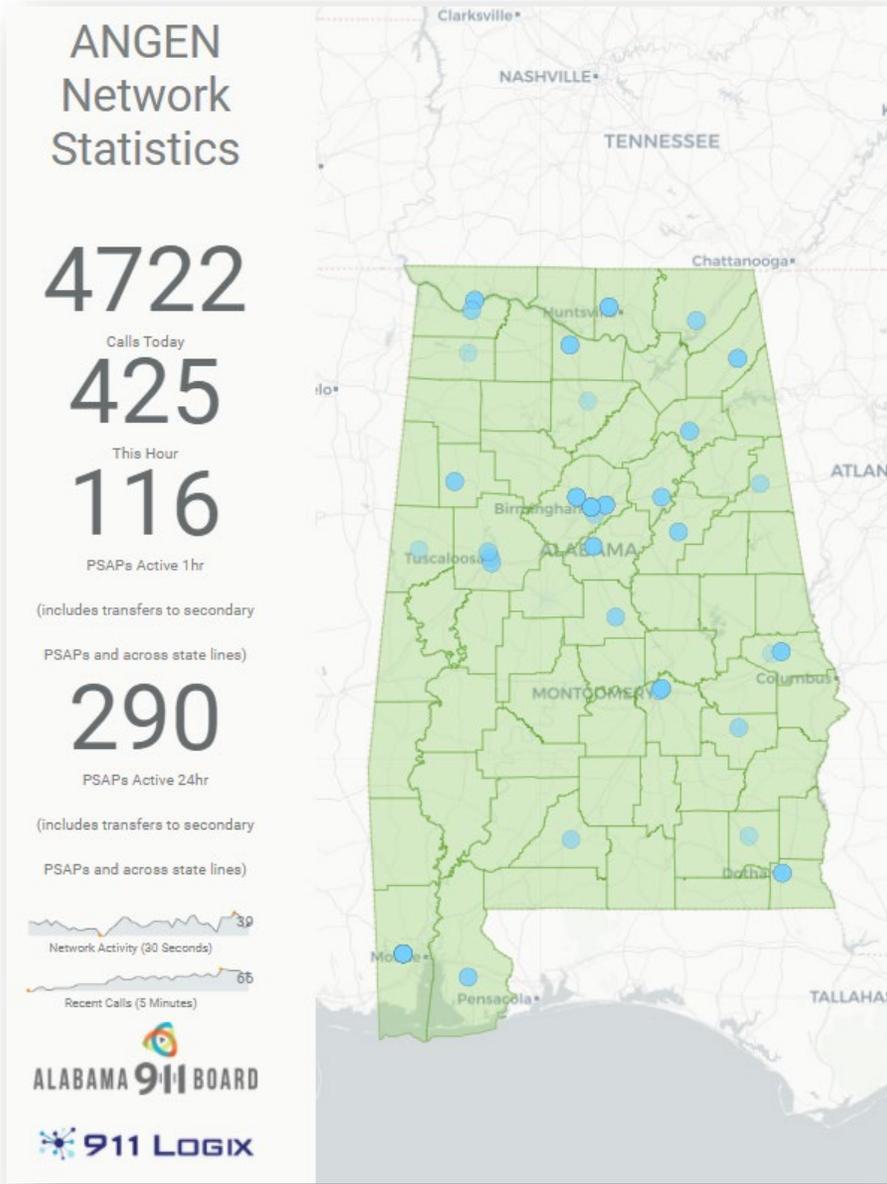
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- NG9-1-1 GIS and Why it is Important



NG9-1-1 GIS Project

- The Alabama 9-1-1 Board is in the process of implementing the Alabama Next Generation Emergency Network (ANGEN), a fully functional and standards-compliant Next Generation 9-1-1 (NG9-1-1) system comprised of an interconnected and interoperable system known as an Emergency Services IP Network (ESInet) to replace the legacy 9-1-1 system currently in service across the state.
- Geospatial call routing and location validation are major components of a fully functional NG9-1-1 system, requiring an accurate statewide GIS dataset.
- We began our education campaign to the 9-1-1 and GIS communities at the GISA Conference in 2016.
- In 2019, we were awarded federal grant funding to start the NG9-1-1 GIS Project to aggregate the statewide dataset that will be used with ANGEN.



NG9-1-1 GIS Project

- The NG9-1-1 GIS Project will be divided into two phases:
 - Call Routing Platform Implementation, requiring the collection of authoritative PSAP boundaries that will be used to build the polygon layer used by the ANGEN Service Provider to route calls to the appropriate PSAP based on the caller's location.
 - NG9-1-1 Database Administration, divided into two stages. The first focusing on development of the Location Information System (LIS) that will synchronize currently used tabular databases (MSAG & ALI database) with authoritative GIS data that will be used for location validation in the call delivery workflow. The second stage will be to implement a statewide GIS system for use by PSAPs and other state and local entities during daily operations.
- Project Progress
 - DATAMARK contracted for GIS tools and services in September 2020
 - As of today, datasets from 77 ECDs have been collected and analyzed
 - 54 ECDs have been onboarded to VEP, allowing for the use of the tools provided by DATAMARK



NG9-1-1 GIS Project



- The partnership of DATAMARK and the Alabama 9-1-1 Board will provide the following services to the 85 Emergency Communication Districts and the Board staff:
 - Gap Analysis
 - Training
 - Data Validation using the NENA GIS Data Model
 - Remediation Support
 - Statewide Data Aggregation



Role of GIS in NG9-1-1

- GIS becomes the central database for 911 call operations
- GIS is fully integrated and required for Next Generation 911
- Allows for geospatial call routing through the ECRF to the correct PSAP
- Identifies the Emergency Services Zone (ESZ)/Emergency Service Number (ESN) for the 9-1-1 spatial location
- Provides emergency service routing instructions based on caller location rather than the data associated with the telephone number



NENA Standard GIS Layer Definitions

➤ **Required**

- These relate directly to NG9-1-1 location validation, geospatial call routing or to the appropriate agency for dispatch, public safety mapping applications, and other related functions.

➤ **Strongly Recommended**

- These layers are utilized by the Emergency Call Routing Function (ECRF) and the Location Validation Function (LVF) and can be used by other public safety functions.

➤ **Recommended**

- These layers may not be provisioned into the LVF or the ECRF but are beneficial for PSAP map display and 9-1-1 call taking.

NENA Standard GIS Layers for NG9-1-1

Required

- Site/Structure Address Points
- Road Centerlines
- PSAP Boundary
- ESN/ESZ Polygons
- Provisional Boundaries

Strongly Recommended

- Street Name Alias Table
- States Boundaries
- County Boundaries
- Municipal Boundaries
- Landmark Names
- Hydrants

Recommended

- Railroad Centerlines
- Hydrology layers
- Cell Site Locations
- Mile Markers



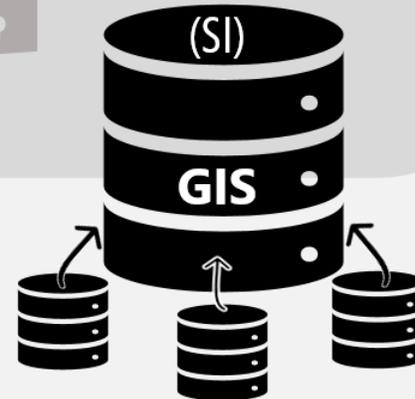
THE NG9-1-1 ENVIRONMENT

(Simplified Diagram for Illustrative Purposes Only)

"CALL" ORIGIN
(WIREFINE, WIRELESS,
INTERNET/VOIP)



ESInet
(ECRF, LVF, LPG,
ESRP/PRF, LNG/LSRG)



PSAP



CAD



FIRST
RESPONDERS



ESInet Replaces Legacy System
(Selective Router → ALI/ANI Database → MSAG)

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Questions

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