

GIS Standard Applications

A review of GIS applications to support NG9-1-1 data readiness

Welcome

- Introductions
- Housekeeping
 - Restrooms
 - Virtual classroom info
 - Login
 - Files



Links

- Class 1:
- OK GIS Standard, Toolkit Download, and Toolkit User Manual:
http://www.okmaps.onenet.net/address_standards.htm
- State of OK Data: <https://okmaps.org/OGI/search.aspx>

Agenda

- Module 1 – Creating New GIS Data with OK Toolkit Prep Tools
- Module 2 – Modifying Existing GIS Data with OK Toolkit Adjustment Tools
- Module 3 – Migrating GIS Data into the OK NG9-1-1 GIS Standard with OK Toolkit Enhancement Tools
- Module 4 – Best Practices and Recommendations

Poll: Did you attend B1?

Required Layers for NG9-1-1

- Address Point
- Road Centerline
- Emergency Service Zone (ESZ) Boundary
- Emergency Service Boundary (Fire, Law, EMS)
- Public Safety Answering Point (PSAP) Boundary (provided by State)
- Discrepancy Agency Boundary (Provisioning) Boundary (provided by State)

Poll: Do you personally maintain your GIS data or do you use a vendor?

Poll: Which of the required layers do you currently maintain?

Data field requirement attributes

- **Mandatory (M)** – field must be populated
 - i.e. “County” field will always have a value such as Garvin County
- **Conditional (C)** – IF an attribute value exists, it **MUST** be populated. If no value exists, the field is left blank unless other guidance is given.
 - i.e. “PreDir” **MAY** have a value such as “North” in 100 North Main
- **Optional (O)** – field must be present but may or may not be populated
- **Transportation (T)** – fields that are essential to Transportation and Routing functionality, fields must be present but may or may not be populated
 - “SpeedLimit” may have a value such as 25, which should be included in the field. Default speed should be set at 21 unless the limit is known.

Poll: Do you currently maintain
ALL fields required by the
standard?

Current-State Data Assessment

Data Quality



Accuracy



Currency



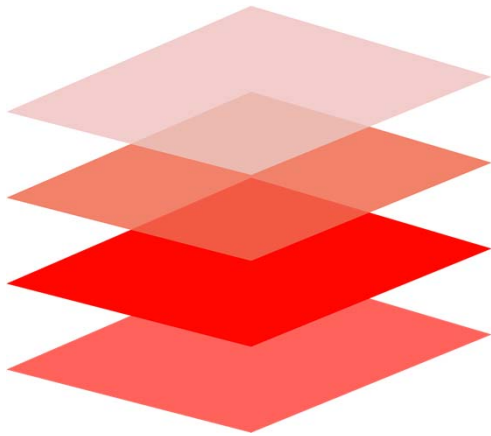
Consistency



Completeness

Completeness

- All layers present
- All attributes filled in where appropriate
- All features represented within the layer



Pre-Toolkit Data Assessment

- Know your data!
 - Identify gaps
 - Missing Layers
 - Missing Fields
 - Existing business needs
 - Legacy Fields
- Understand the OK Standard

Poll: Do you have a QA/QC process for your GIS data?

Creating New GIS Data with OK Toolkit Prep Tools

OK GIS Data:

- Publicly available data sources:
<https://okmaps.org/OGI/search.aspx>

Creating GIS Data from Scratch

- Address Points
 - Generate from centroid (parcel or building footprint)
 - Field collection
 - Georeferencing
- Road Centerlines
 - Field collection
 - Planimetric/digitize from orthophotography

Creating GIS data from scratch

- Emergency Service Zones (ESZs)
 - Create manually with assistance from Public Safety
- PSAP Boundary
 - Download from the State
- Discrepancy Agency Boundary
 - Download from the State
- Emergency Service Boundaries for Fire, Law, EMS
 - Create manually or with Toolkit, review and refine with Public Safety

NG9-1-1 GIS Toolkit

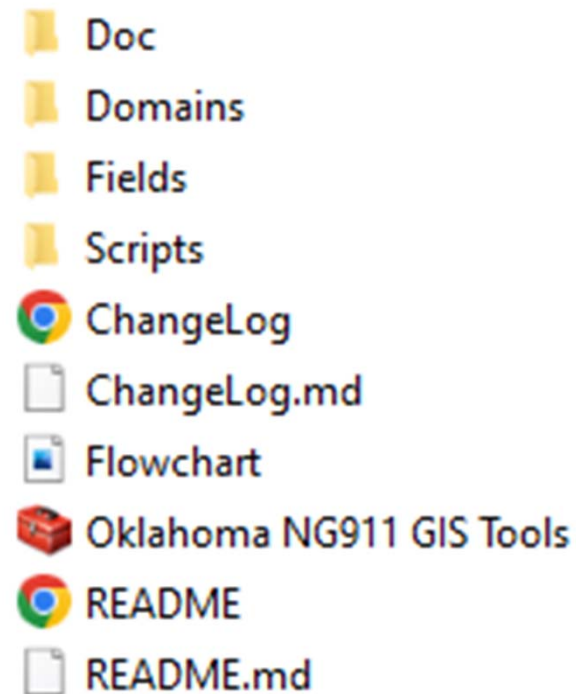
What is the 9-1-1 GIS Toolkit?

- State-provided tool to prepare GIS data for NG9-1-1 standards and submit to the State repository
- Transforms your GIS data to conform to the OK Standard compliant schema
- Functionality:
 - Create a new geodatabase
 - Create new data
 - Field map your data into the schema
 - Populates some required fields
 - Topology and validation tools for QA/QC

NG9-1-1 GIS Toolkit v6.1

Download

- http://www.okmaps.onenet.net/address_standards.htm



NG9-1-1 GIS Toolkit Technical Requirements

- Software
 - ArcMap v 10.7
 - Basic license level
 - Python 2.7
 - Leave folders in native structure
- GIS Skills
 - 1 year of GIS experience to include:
 - Basic navigation of ArcMap and ArcCatalog
 - Database and attribute editing and management
 - Critical thinking skills in a GIS environment

NG9-1-1 GIS Toolkit Technical Support

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Toolkit Exercise

Scenario

- You are a GIS Analyst who is managing your County's GIS data within one geodatabase
 - Source gdb: **OK_SourceData_Initial.gdb**
 - Road Centerlines (Centerlines)
 - Address Points (SSAP)
 - Emergency Service Zones (ESZ)
 - Discrepancy Agency Boundary (DISCREPANCYAGENCY_BOUNDARY)*
 - PSAP Boundary (PSAP_BOUNDARY)*

Best Practices and Recommendations

Best Practices for Data Management

- Know your data!
 - Data authority
 - Business needs
 - Educate stakeholders
- Data quality
 - Availability
 - Completeness
 - Accuracy
 - Timeliness
 - Consistency



Data Maintenance

- Follow attribution standards
 - Parse
 - Standardize street types
 - True nulls
 - House number
 - Integer value
 - Manage sub-addressing in separate field
 - Standardize address point and road centerline street types
 - Ensure fields are consistent across data sets:
 - ESN
 - Postal codes
 - Community fields

Legacy/Existing Fields

- Pre-assessment is important!
- What fields do you need for existing business needs?



Boundaries

- GIS and PSAP should work together
 - Call routing boundaries are PSAP decisions!
- Engage State for PSAP and Discrepancy Agency boundary adjustments

The Path Forward

- Strategic planning
- Data maintenance plan
- Ongoing QA/QC



Questions?