Today’s Agenda

- What is NG9-1-1
- GIS and 9-1-1 Today
- GIS in NG9-1-1 Environment
- 9-1-1 GIS Grant Project
- Open Discussion
What is NG9-1-1?
Today’s 9-1-1 System – Timeline

1968:
- Basic 9-1-1:
  - Copper Land Line
  - Analog Technology

1980s-90s:
- Enhanced 9-1-1:
  - ANI / ALI

1990s-2000s:
- Wireless E9-1-1:
  - Phase I
  - Phase II

Today:
- Voice over IP, Images, Video, Text, Telematics

Vol P
What is NG9-1-1?

The current 9-1-1 system is not broken

- Initially designed to do one thing – complete emergency calls
  - 3 digit dialing from fixed locations (landline) to reach emergency response
- CAMA trunks added ANI
- E9-1-1 adds in ALI w/ANI

New technologies caused a patchwork of modifications

- **Wireless** added through considerable system modification and effort (patches)
- **VoIP** added but still has limitations (more patches)
- Legacy 9-1-1 Platform is not extensible to support newer technologies

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<tr>
<th>9-1-1 Today</th>
<th>NG9-1-1</th>
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<td>Primarily voice calls via telephone handsets</td>
<td>Voice, text, or video information available from many different types of communication devices</td>
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<td>Minimal data available</td>
<td>Advanced data sharing is available</td>
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<td>Access to services are locally provided, backup is local, usually not enhanced</td>
<td>Enhanced capabilities; physical location of PSAP becomes less important</td>
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<td>Routing based on phone number / MSAG</td>
<td>Ability to route “calls” more accurately</td>
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Current Relationship With GIS and 9-1-1
Overview of GIS and 9-1-1 Today

- Locate address, coordinates, physical location on earth’s surface
- Plays an important role in providing location to 9-1-1 call takers on mapping displays in PSAP, especially during wireless calls
- Importance of accurate and complete GIS data effective decision-making by call takers – trust in the data
- What if GIS data is incorrect or incomplete?
  - Incorrect routing of emergency responders
  - Increases response time
  - Lives in jeopardy – every second counts
Overview of GIS and 9-1-1 Today
Routing of Wireline Call and Use of GIS During 9-1-1 Call

814-555-7777
Selective Router
PSAP
SRDB
ALI DB
CAD/Mapping

Central Office
814-555-7777

814-555-7777
ESN

814-555-7777
John Doe
111 Maple Ln
Anytown, USA
ESN 123
Fire: Station 1
Police: PD 1
EMS: EMS 4
Issues Today – Accuracy

-79.67865
41.32456
Issues Today – Current Data
Role of GIS in a Next Generation 9-1-1 (NG9-1-1) Environment
GIS in NG9-1-1

- GIS plays crucial role in NG9-1-1 call routing - ECRF
- Routing database is GIS data centric
- Accuracy of GIS data is paramount
- Shared data – coordination
- 9-1-1 authority is responsible for the data
- Location is delivered with call
- Location is pre-validated using GIS data - LVF
Each PSAP could be also be a Regional ESInet duplicating the call processing services in the core of the ESInet on a regional basis. This is an option.
9-1-1 GIS Data - Focus Themes

- Accuracy
- Maintenance
- Standards
- Policy and Governance
9-1-1 GIS Grant Project
ENHANCE 9-1-1 Grant

- History
- Background
  - Act in place in 2004
  - Funds authorized, but not appropriated until 2009
- June 2009 announcement
- June 2009 SNC approval of application
- August 2009 application due
- Sept 2009 award announced of $1,699,999
  - $1,108,704 base
  - $591,295 supplemental
What is the project NOT about?

- NOT replacing the local 9-1-1 GIS data systems and making the state responsible for all PSAP GIS data
- NOT for use to create a single statewide CAD or PSAP
- NOT creating a platform for non-public safety purposes
What Grant Project IS About

- Creating a central 9-1-1 GIS Repository
  - Enabling PSAPs to share GIS information
  - Establishing MOAs
  - Setting standards for GIS data entry
  - Future framework for NG9-1-1 database
- Statewide Public Safety Answering Point (PSAP) Boundary Layer
- Statewide Road Centerline Layer
Formation of the TAC:

- Established as a technical advisory committee to the Local and State Cross Boundary Technology Steering Committee
  - Local representation from the 9-1-1, IT, and GIS communities to provide first hand knowledge and experience to the 9-1-1 GIS Grant Project
  - Will make recommendations on project direction to the Local and State Cross Boundary Technology Steering Committee
Project Organization Overview

- **Project Sponsor**
  Harriet Miller-Brown – Michigan 9-1-1 State Administrator

- **DTMB Project Staff (CSSTP)**
  Eric Swanson - CSSTP, Project Sponsor, Director
  Laura Blastic – CSSTP, Project Manager, Geo-Framework Services Manager
  Paul Harmon – CSSTP, Communications Liaison
  Mathi Ramachandran – CSSTP, Data Architect
  John Clark – CSSTP, GIS Solutions Architect
  Mark Holmes - L.R. Kimball
Technical Advisory Committee (TAC)

9-1-1
- Mike Muskovin, Ottawa County
- Mike Szor, Alpena County
- Phyllis Fuller, Barry County
- Harriet Miller-Brown, State 9-1-1 Office

IT
- Ron Plamondon, Leelanau County
- Dawn Siegel, Oakland County
- Tom Shewchuk, Ingham County

GIS
- Scott Ambs, Jackson County
- Chris Cantrell, Midland County
- Nathan Fazer, Eastern UP Planning Region
- Eric Swanson, CSSTP
Role of the TAC:

- Provide local insight and collaboration as project develops
  - Project documents (e.g. Charter, MOA’s)
  - Develop technical standards
  - Develop communication and outreach plan
  - Initial data assessments
  - Serve as the voice of the local units of government who will be the end users of the system
Project Tasks Overview

- Initial Assessment and Data Development Plan
- Community Outreach
- Statewide 9-1-1 Database Design
- Develop and Implement Database and Application Architecture
- Develop Statewide PSAP Boundary Layer
- Develop Complete Statewide GIS Road Centerline and an Initial Point Address Layers
- Maintenance Plan and Workflows Implementation
9-1-1 GIS Survey

- Statewide survey that was sent in May of 2011 to PSAP Managers/Directors and County 9-1-1 Coordinators
- High level participation - 115 of the 168 PSAPs provided responses
- Get a current snapshot of GIS/9-1-1 systems today
- Collaborate with GIS resources to fill out survey
- Survey has guided the planning of the project
System Architecture

- **GIS Repository**
  - **Data Standards**
    - Road Centerlines and PSAP Boundaries – Mandatory
    - Address Points and Emergency Service Zones
    - 9-1-1 GIS Data Standards for GIS Repository
      - Incorporates current 9-1-1 standards
      - Includes NG9-1-1 data standards for future implementation

- **Public Comment Period**
  - Beginning September 30, 2011 Until October 14, 2011
  - Document available at:
    - [www.michigan.gov/911gisgrant](http://www.michigan.gov/911gisgrant)
    - [www.michigan.gov/snc](http://www.michigan.gov/snc)
  - Comment form also available for download at above web sites
System Architecture

- User Interfaces Into System
  - ETL Processes
    - Translation scripts
    - Projections
    - Field mapping
  - Interactive Map
    - Red lining of edits to road, PSAP boundaries
    - Data update approval processes
  - Quality Control Tools and Reports
  - Import and Export Utilities
Data Interoperability

PSAP A
Data Uploaded To System

PSAP B
Data Uploaded To System

PSAP C
Data Uploaded To System

Scripts Translator QC

9-1-1 GIS DATABASE
Download to PSAPs
Data Sharing and Agreements

- Enhanced Access to Public Records Act
  - DTMB Policy Developed Specific to Project
  - Local Participant Will Need a Local Enhanced Access to Public Records Act Policy
  - Project Will Provide Examples of Enhanced Access to Public Records Act Policies – If Local Participant Does Not Have One in Place
- Memorandum of Agreement Between CSSTP and Each Participating Entity
  - Outlines Roles and Responsibilities of CSSTP and Participants
  - Established Disclaimers for Data Sharing
  - Signed Agreement
Local Grant Program

- Developing Grant Guidelines
- Developing Grant Application Form
- Proposed Timetable
  - Nov 1, 2011 – Local Grant Program Opens
  - Jan 3, 2012 – Local Grant Application Deadline
  - Feb 1, 2012 – Local Grant Award Notifications
  - June 30, 2012 – Local Grant Project Completion
- Local Grants will be Prioritized Based on the ENHANCE 9-1-1 Grant Project Requirements for Road Centerlines
Current Activity

- Request for Letters of Intent to Participate
- Participating Counties/PSAPs for Pilot
  - Alpena, Jackson, Leelanau, Barry, Midland, and Allegan Counties
- Steps to Participation
  - Sign Letter of Intent to Participate
  - Sign Memorandum of Agreements Between Participant and CSSTP
  - Implement Local Enhance Access to Public Records Act Policy
  - Provide Data to CSSTP for Data Assessment
- Talk to your GIS department
  - Discuss Participation
  - Make inquiries to the TAC members if you have questions
More Information

- **www.michigan.gov/911GISGrant**
- **www.michigan.gov/snc**
- Harriet Miller-Brown
  - MillerHR@michigan.gov
  - 517-241-0080
- Laura Blastic
  - blasticl@michigan.gov
  - 517-373-7910
Questions

Open Discussion