

# Building a Public Safety GIS Foundation

Aidan Holmes, GISP

Lake Emergency Medical Services - Florida

UC

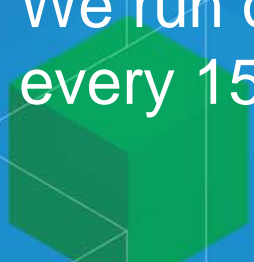
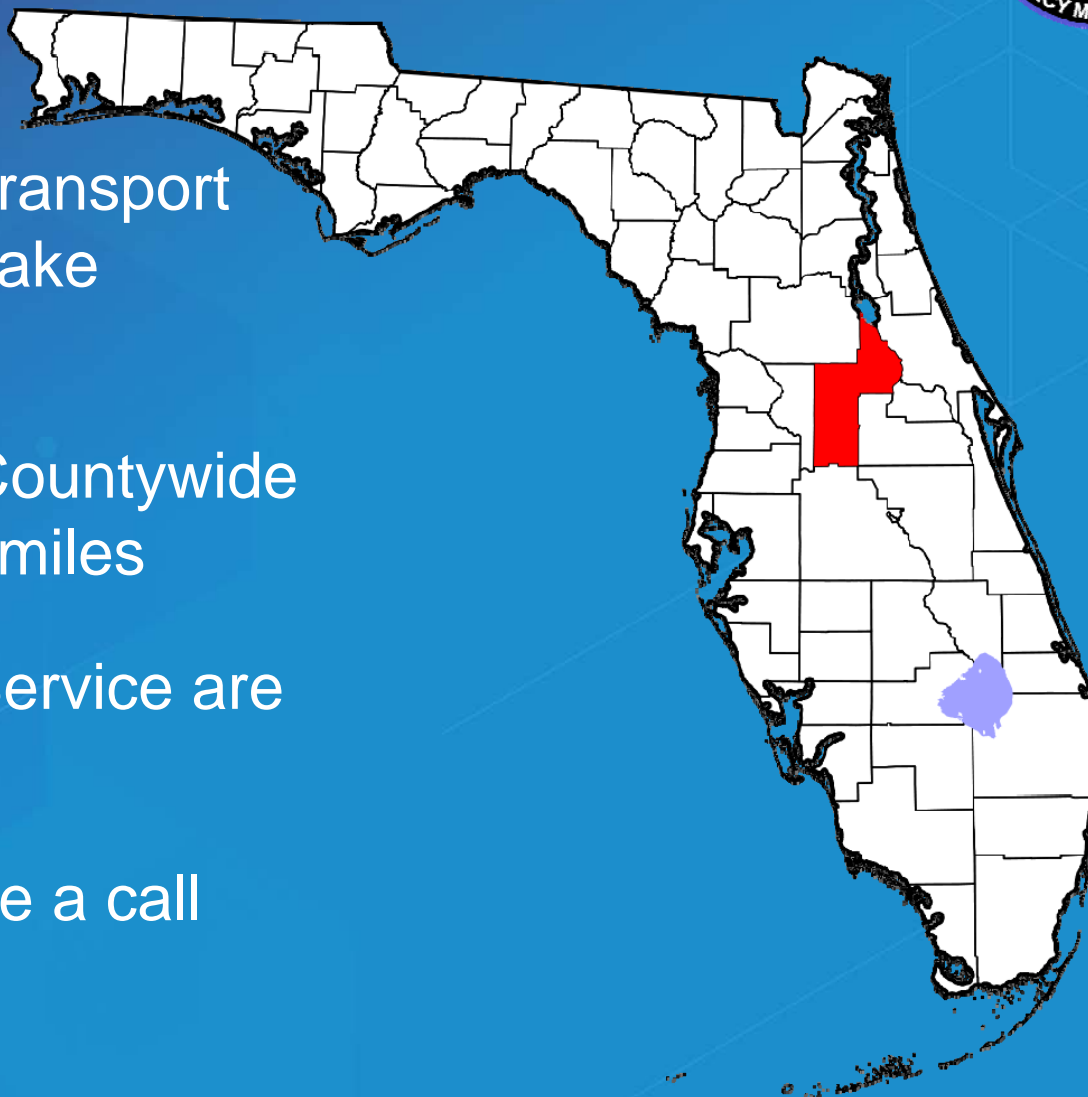


# Building a Public Safety GIS Foundation

Lake County Florida



- Lake EMS - sole transport agency for all of Lake County
- 22 ALS Stations Countywide covering 1,157sq miles
- Annual Calls for Service are approx. 50,000
- We run on average a call every 15 minutes



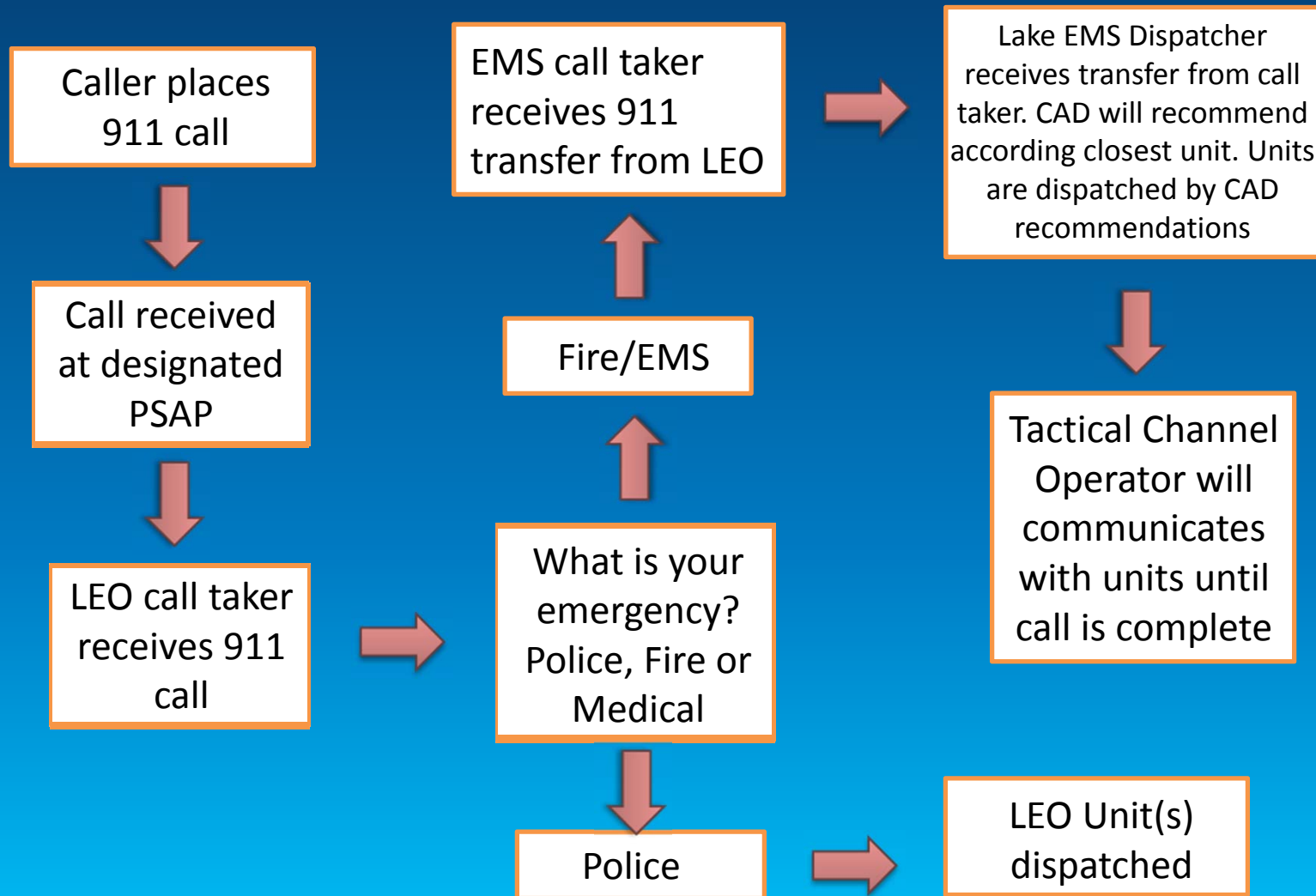


# Building a Public Safety GIS Foundation

- Lake EMS had (late 2015) minimal GIS support internally
- ArcMap Basic, no SDE, no ArcGIS Online in use.
- Dependent upon County GIS for all features via zipped shapefiles over FTP.
- CAD Mapping update took an extended period of time with portions completed by Lake GIS and by the CAD vendor Zoll.
- Mapping updates were done live without testing.
- Dispatchers reported issues with routing units and recommendations within CAD.

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## 911 Call Taking Process





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## Zoll's CommCAD

- We use a CAD/MDT solution from Zoll Data Systems. Command CAD (CommCAD) and Navigator on MDT's.
- CommCAD is geocentric in nature and depends heavily on good accurate GIS data.
- CAD reads only shapefiles, no support for \*.gdb
- Base features include Address Points, Streets, Parcels, Fire/EMS Zones and a live location feed from field unit AVL's.
- All EMS & the majority of Fire units are equipped with a Peplink AVL (Automatic Vehicle Locator).
- Navigator reads (locally) the same shapefiles as CAD.

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Partnership with Lake County GIS Division



- **Cost sharing, access to SDE and ArcServer**
- **Lake GIS setup remote access via RPD**
- **Secured gdb for use by Lake EMS and sharing with Lake GIS as needed**
- **Sharing of CAD data such as Calls for Service pre geocoded.**
- **Consumption of data & services by Lake GIS and such as Streets, Address Points, Tax Parcels etc.**



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## Streamline Data Process

- **Setup test CAD environment from backup of live system within VMWare.**

**Brought external processes in-house.**

- **Data model from Lake GIS – reconfigure streets schema for Zoll’s CAD Admin Tool.**
- **Deployed Zoll’s CAD Admin Tool internally - Street and Address point standardization.**
- **New updates developed in house, tested in house before packaging into \*.msi package deployment into the live environment and over the air to field units with MDT’s.**



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## CAD's Current Update Process



File Edit View Tools Help

Standardizer

Street Data

Original Data Layer: C:\\_MapStore\LakeEMS\1.1.0.10\client\maps\AddressPoints\_Lake.shp

Destination Data Layer: C:\\_MapStore\LakeEMS\1.1.0.10\client\maps\Standardized\AddressPoints\_Lake.shp

Geocoding Configuration File: C:\\_MapStore\LakeEMS\1.1.0.10\client\config\GeoConfig for AddressPoint Standardization.xml

Standardize

Progress

Status:

Source Layer:

Destination Layer:

Total Records:

Tool Explorer

- Administration
  - Agencies
  - Call Taking
  - Commands
  - Crew
  - Database
  - Dispatching
  - Enterprise
  - Locations
  - Map Data
    - General Configuration
    - Generate Street Network
    - Map Layer Types
    - Map Layers
    - Standardize Address Points

Navigator Maps Update 2.0 - InstallShield Wizard

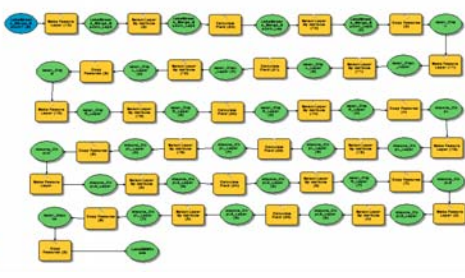
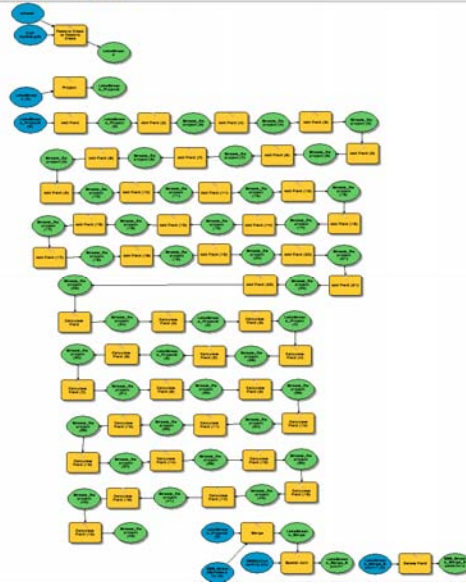


### Lake Emergency Medical Services

## Navigator Maps 2.0

InstallShield

< Back Next > Cancel



972 Location: 2761 WOLD US HWY 441, MOUNT DORA, FL 32757

A GIS map showing a residential and commercial area in Mount Dora, Florida. The map includes street names such as JAVENS CIRCLE, PALMETTO ROAD, GOLDEN TRIANGLE SHOPPING CENTER, and WASHINGTON ROAD. A red location pin is placed at 2761 WOLD US HWY 441. The map also shows various landmarks and building footprints.



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## Leveraging Collaboration, SDE & ArcGIS Online for Public Safety



Save | Share | Print | Directions | Measure | Bookmarks | Find address or place

80% 10:11

CAD Map Test

BldgFtPrntsJoinTx: LOWE'S HOME...  
LOWE'S HOME CENTERS INC

Owner Name: LOWE'S HOME CENTERS INC	
BLDG HEIGHT	24
STORIES	1
FEATURE COD	COM
AltKey	3858123
ParcelType	Land Base
ParcelStatus	Valid
ParcelNumber	35242600010
Subdivision	0001
Owner Name	LOWE'S HOME CENTERS INC
Owner Address	1605 CURTIS I RD

Zoom to | Get Directions | Edit

Esri, HERE, DeLorme, INCREMENT P, NGA, USGS

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## Data Analysis: GIS to Tableau



Tableau - ISBAAnalysisDRAFT

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Normal

**Dashboard**

- ISBA Analysis
- ISBA Analysis Map

**DRAFT ISBA Analysis Map**

**Agency**  
(All)

**Year**  
2016

**Month**  
January

**Day**  
(All)

**Hour**  
(All)

**Disposition**  
(All)

**Agency**

- Clermont Fire Dept.
- EMS
- Lake County Fire R.
- Minneola Fire Dept.

**ISBA Analysis**

Agency	Location	Disposition	
Clermont Fire Dept.	Clermont ISBA	Cancelled at Stage	1
		Cancelled Before Enroute	4
		Cancelled Enroute	12
		Cancelled On Scene	2
		Command Terminated	1
		Complete	34
		FIRE - Refusal	4
		FIRE Monitoring	2
		No Code / No Vitals	1
		Public Assist	3
EMS	Clermont ISBA	Cancelled Before Enroute	2
		Cancelled Enroute	16
		Cancelled On Scene	11
		EMS - Refusal	2
		EMS Monitoring	2
		Public Assist	1
		TOT Airsupport Agency	1

Horizontal Image  
Vertical Web Page  
Text Blank

New objects:  
Tiled Floating

**Layout**  
Dashboard  
Tiled

# Building a Public Safety GIS Foundation



Pages Columns

Rows Agency Location Disposition

Filters

- Agency
- Day
- Hour
- Year: 2016
- Location: Clermont..
- Disposition
- Month: January
- Full Protocol
- Unit
- Unit Type

Marks

Abc Automatic

Color Size Text

Detail Tooltip

Abc 123 CNTD(Incident Key)

Agency	Location	Disposition	
Clermont Fire Dept.	Clermont ISBA	Cancelled at Stage	1
		Cancelled Before Enroute	4
		Cancelled Enroute	12
		Cancelled On Scene	2
		Command Terminated	1
		Complete	34
		FIRE - Refusal	4
		FIRE Monitoring	2
		No Code / No Vitals	1
		Public Assist	3
EMS	Clermont ISBA	Cancelled Before Enroute	2
		Cancelled Enroute	16
		Cancelled On Scene	11
		EMS - Refusal	2
		EMS Monitoring	2
		Public Assist	1
		TOT Airsupport Agency	1
		Transported	61
Lake County Fire Rescue	Clermont ISBA	Cancelled Before Enroute	7
		Cancelled Enroute	7
		Complete	51
		FIRE - Refusal	5
		FIRE Monitoring	1
		Public Assist	2
		Unfounded	1
Minneola Fire Dept.	Clermont ISBA	Complete	1
		FIRE - Refusal	1

Agency

- (All)
- Clermont Fire Dept.
- EMS
- Eustis Fire Dept.
- Fruitland Park Fire Dept.
- Groveland Fire Dept.
- Lake County Fire Res...
- Leesburg Fire Rescue
- Mascotte Fire Dept.
- Minneola Fire Dept.
- Montverde Fire Dept.
- Mt. Dora Fire Dept.
- Tavares Fire Dept.
- Umatilla Fire Dept.

Location

Clermont ISBA

Month

January

Day

(All)

Hour

(All)

Year

2016

Disposition

(All)

Full Protocol

(All)

Unit

(All)

Unit Type

(All)

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Questions?



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Lake Emergency Medical Services, FL

