



Virginia Information Technologies Agency

Using Geographic Knowledge to improve Public Safety Response

Virginia Base Mapping Program (VBMP)

Wendy Stout

Geospatial Program Manager

Virginia Geographic Information Network

December 11, 2013



Overview

- *Using Geographic Knowledge to improve Public Safety response*
- *The VGIN VBMP overview*
- *Sharing the VBMP Imagery*
- *Applications for Public Safety initiatives*





VBMP Program 2013-2016

- Commonwealth provides full color, leaf-off, digital orthophotography for the entire land base of Virginia.
 - Eastern portion of the State was acquired in Spring 2013.
 - Western portion of the State will again be acquired in Spring 2015.

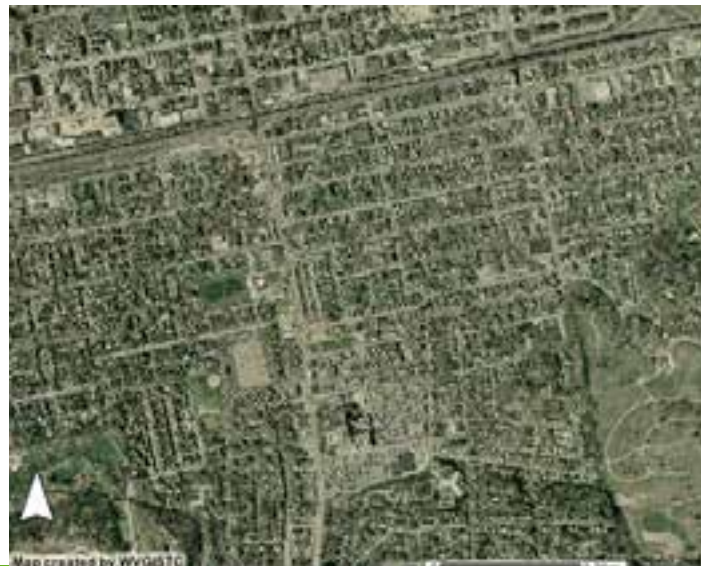


Virginia Information Technologies Agency

Sharing the VBMP

Locality Deliveries

- Localities will receive Geotiffs, MrSids, DTM, metadata
- VGIN will also provide mosaic and surrounding locality data upon request



GIS Clearinghouse

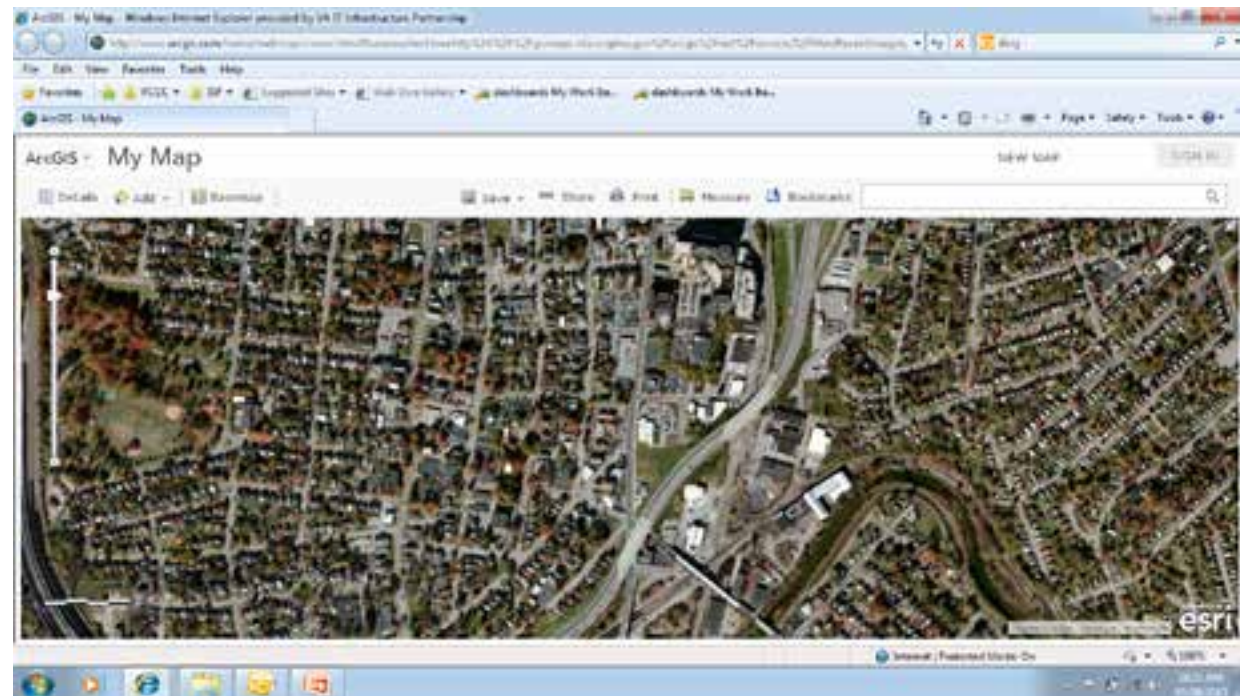
- GIS Clearinghouse is a repository of geospatial data
- Local and state government can share data with each other
- The goal is for all localities to participate with base data
- <https://vgin.maps.arcgis.com/home/>





VBMP Most Recent Imagery as a web map service

- http://gismaps.vita.virginia.gov/arcgis/rest/services/MostRecentImagery/MostRecentImagery_WGS/MapServer





Virginia Information Technologies Agency

Public Safety Esri-based software applications using the VBMP

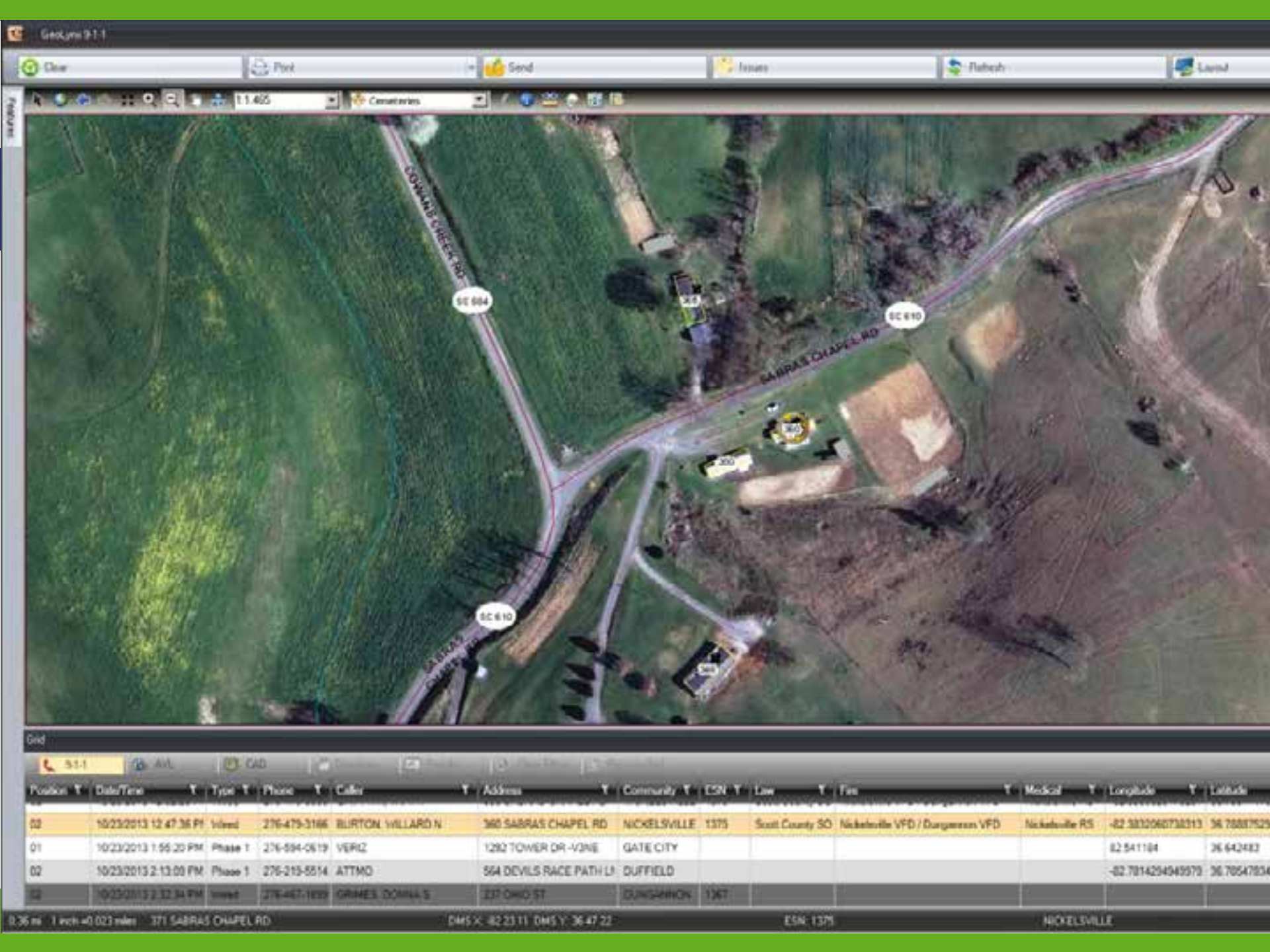




- 276-
- WIL
- 172
- GAT
- ESN
- LAW
- FIRE
- REI
- Exam
- Long
- Land

Type	Phone	Caller	Address	Community	ESN	Law	Fire	Medical	Longitude	Latitude
Wireless	276-431-1862	PAYNE, JUANITA	2236 US HIGHWAY 23 NO	DUFFIELD	1361					
Wireless	276-405-2146	CONNIE B BARNES	237 MCHAMARA CIR	BRISTOL	1365	Scott County SO	Hilona VFD / Washington County	Scott County RS	-82.3138294929617	36.6261578796883
Phase 2	804-285-3427	VERIZON	148 STIRRUP DR	GATE CITY	1369	Scott County SO	Gate City VFD / Weber City VFD	Scott County RS	-82.615857	36.632763
Wireless	276-386-7470	WILLIAMS, WILLARD	172 UNA ST	GATE CITY	1378	Gate City PD	Gate City VFD / Weber City VFD	Scott County RS	-82.6051438288525	36.6324038991256
Wireless	276-475-1536	GRIFFITH, TAMMY	150 SARRAS CHAPEL RD	NICKELVILLE	1375	Scott County SO	Nickelville VED / Damascus VED	Nickelville RS	-82.3830036170297	36.7887417045905

Highway 23 North DMS X: 82 36 13 DMS Y: 36 37 55 ESN: 0 GATE CITY Database Connected



Grid

9-1-1 AVL CAD

Position	Date/Time	Type	Phone	Caller	Address	Community	ESN	Law	Fes	Mod/Sid	Longitude	Latitude
02	10/23/2013 12:47:36 PM	Invest	276-479-3166	BURTON WILLARD N	360 SABRAS CHAPEL RD	NICKELSVILLE	1375	Scott County SO	Nickelville VFD / Dargasson VFD	Nickelville RS	-82.5832060738313	36.78887529
01	10/23/2013 1:56:20 PM	Phase 1	276-594-0619	VERIZ	1292 TOWER DR -V3NE	GATE CITY					82.541184	36.642483
02	10/23/2013 2:13:09 PM	Phase 1	276-215-5514	ATTMO	564 DEVILS RACE PATH LN	DUFFIELD					-82.7814254545579	36.70547854
02	10/23/2013 2:32:34 PM	Invest	276-467-1699	GRMES DOMIN S	237 OHIO ST	DUNBAR/ON	1367					

E911 Mapping - Landline

The screenshot displays a GIS application window titled 'GisLyn 3.1.1'. The interface includes a 'Layers' panel on the left, a central map view, an 'Overview' window on the top right, a 'Search' bar, and an 'Information' panel on the bottom right. The map shows a residential area with roads labeled 'WOLLUPS HILL RD' and 'MAYZOTT RD'. A blue circle on the map indicates a specific location. The 'Layers' panel lists various data layers, including 'routing_network', 'ATL', 'CAD', and several 'TracingLayer' entries. The 'Information' panel displays contact information for 'HOWARD THEIS' at '3708 BARRINGTON BRIDGE PL, TUCKAHOE DISTRICT', along with 'FD 13 ESN 156', 'PD 84', and 'Tuckahoe AMB'. It also provides coordinates: 'Exact match located Lat: 37.63851 Long: -77.60507'. At the bottom, a table shows call records with columns for Position, Date/Time, Type, Phone, Caller, and Address.

Position	Date/Time	Type	Phone	Caller	Address
12	2/6/2013 16:59:02	Phase 1	9100000000	AT&T MOBILITY	64172 ATTNO
14	2/6/2013 16:58:48	Miscd	7173361000	VAN 570 000 0000	650 WOLLUPS HILL
11	2/6/2013 16:19:20	Phase 2	9110151000	T-MOBILE USA, INC	



E911 Mapping – Wireless Phase 2

The screenshot displays the ledLine 911 software interface. On the left is a 'Layers' panel with various map features. The main map area shows an aerial view with a red location pin and a grey circular area. An inset map shows a different view of the same area. At the bottom, a data table lists emergency calls.

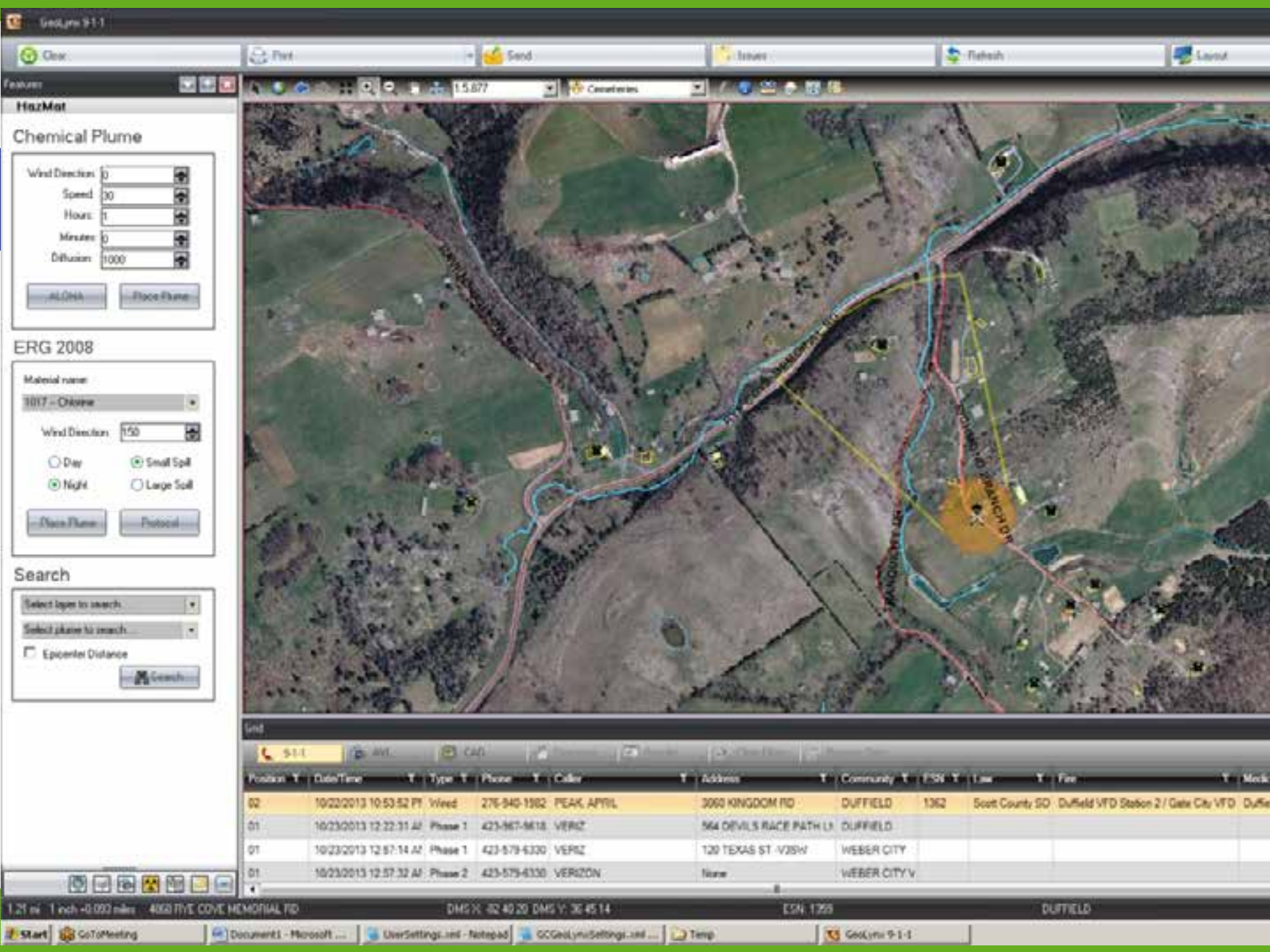
Position	Date/Time	Type	Phone	Caller	Address	Community	ESN
14	26/2013 16:22:16	Wire	717872200	COMMUNICATIONS	7 KAY DR	PEQUEA TOWNSHIP	2304
12	26/2013 16:21:56	Phase 2	717800000	VZW CALL	JEFFERSON RD	ADAMSTOWN BOROUGH	7100
11	26/2013 16:21:32	Phase 2	717134000	SPRINT NEXTEL - CD	S CHERRY AVE	ELIZABETHTOWN BOROUGH	2401



HazMat analysis and ENS

The screenshot displays the HazMat software interface. On the left, there are controls for 'Chemical Plume' (Wind Direction, Speed, Phase, Whistle, Diffusion) and 'ERG 2008' (Material name, Wind direction, Day/Night, and Search options). The main area shows a topographic map with a simulated plume. A central window displays the 'Emergency Response Guide Data' for 'GASES, TOXIC and/or CORROSIVE - 2304/29'. The data includes sections for 'POTENTIAL HAZARDS', 'HEALTH', 'ENVIRONMENTAL HAZARD', 'PUBLIC SAFETY', and 'PROTECTIVE ACTIONS'. At the bottom, a table lists incident data:

ID	Date/Time	Phase	Agency	Location	City	County	Station	Latitude	Longitude
01	10/22/2013 10:03:51 PM	Phase 4	216 INC-190	PEAK, APRIL	3000 KINGDOM RD	DUFFIELD	1902	38.6617940916	-82.8617940916
02	10/22/2013 12:02:31 AM	Phase 1	425-867-8610	VERZ	504 DEVILS FACE PATH LA	DUFFIELD	1902	38.791467	-82.791467
03	10/23/2013 12:57:14 AM	Phase 1	425-678-4338	VERZ	130 TENA ST	VIEW	HEBER CITY	38.571461	-82.571461
04	10/23/2013 12:57:32 AM	Phase 2	425-678-4338	VERZ/CH	None	HEBER CITY	1902	38.571461	-82.571461



HazMat

Chemical Plume

Wind Direction: 0
Speed: 30
Hours: 1
Minutes: 0
Diffusion: 1000

ALPHA Place Plume

ERG 2008

Material name: 3017 - Chlorine

Wind Direction: 150

Day Small Spill
 Night Large Spill

Place Plume Protocol

Search

Select type to search
Select plume to search

Epicenter Distance

Search



Position	Date/Time	Type	Phone	Caller	Address	Community	ESN	Law	Fire	Medic
02	10/23/2013 10:53:52 PM	Wind	276-940-1982	PEAK, APYRL	3000 KINGDOM RD	DUFFIELD	1362	Scott County SO	Duffield VFD Station 2 / Gale City VFD	Duffield
01	10/23/2013 12:22:31 AM	Phase 1	423-867-8618	VERIZ	564 DEVILS RACE PATH LN	DUFFIELD				
01	10/23/2013 12:57:14 AM	Phase 1	423-579-6330	VERIZ	120 TEXAS ST - W35W	WEBER CITY				
01	10/23/2013 12:57:32 AM	Phase 2	423-579-6330	VERIZON	None	WEBER CITY V				



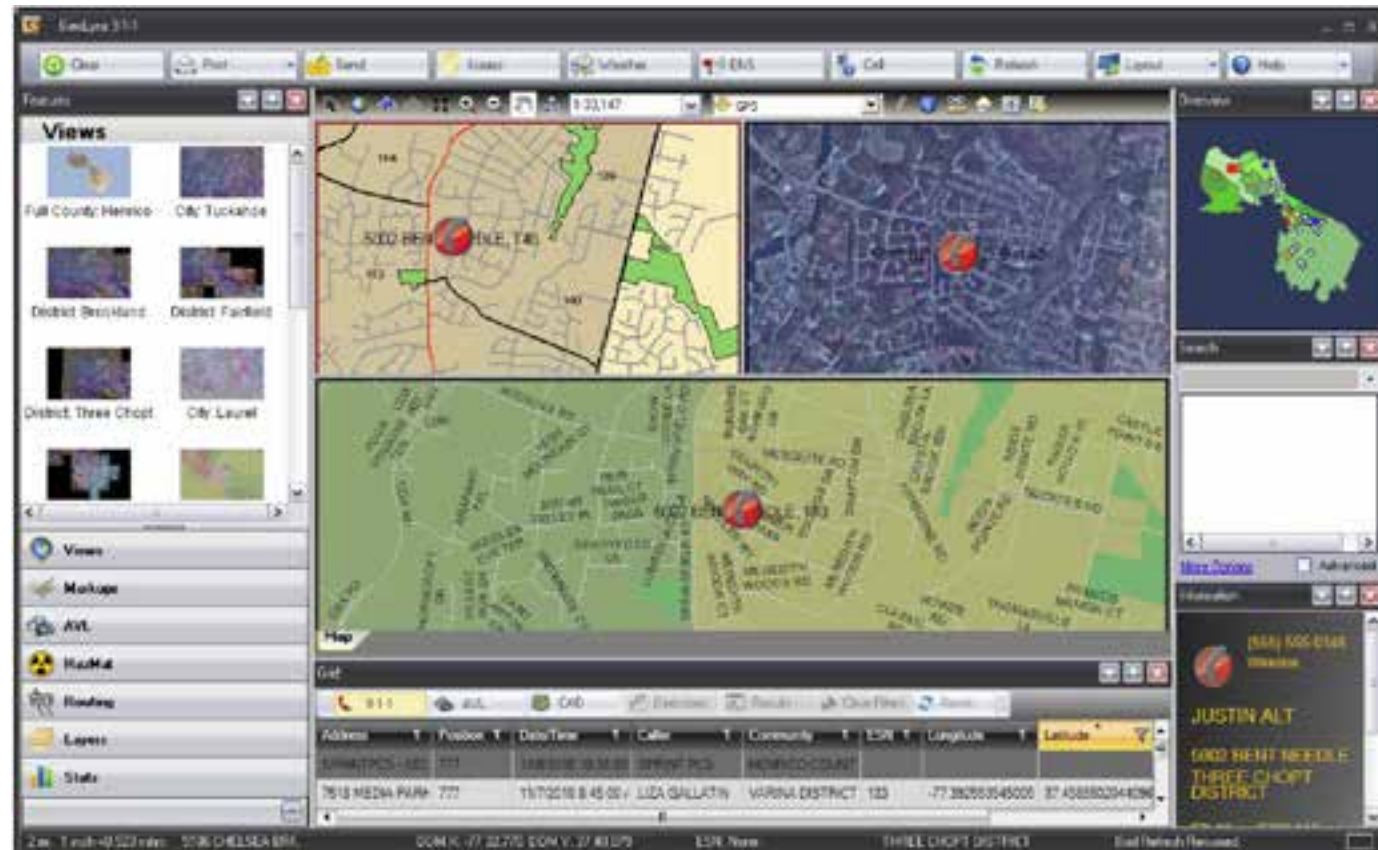
Mobile mapping for on-scene responders





Complete your Response using VBMP

- Hazmat analysis
- AVL and Mobile units
- Automatic Routing
- Multiple views
- Validates what is actually on the ground!
- Resource Planning
- Layer maintenance





Required GIS Data for NG9-1-1

- Service Area Boundaries
 - PSAP (initial call routing)
 - Law, Fire, Medical (selective call transfers)
 - Other: Poison Control, etc. (other possible transfers)
- Data for Validating and Routing Civic Addresses (*House Number, Street Name, Community*)
 - Structure Points
 - Parcels or Sub-Parcels (building footprints)
 - *Ranged Road Centerlines*
 - *Updated Digital Orthophotos*



Summary - Local and State Considerations

- Make GIS a priority within your NG9-1-1 strategy
- Evaluate and start the process to improve your GIS data today (MSAG/ALI sync)
- Recognize that localities will be authoritative sources for GIS data modifications
- Design and implement a “local-up” GIS data maintenance workflow (for any regional efforts with surrounding counties)
- Implement the ideal combination of GIS editing tools and GIS data management apps that are tailored to the needs of Public Safety
- Take full advantage of the Virginia Base Mapping Program imagery!



References

Special thanks to ...

**Chris Knights, Regional Sales Consultant
at GeoComm, Co-Author of Presentation**

Email: cknights@geo-comm.com



Thank-you!!!!

Wendy R. Stout (VITA)

Geospatial Program Manager, Virginia Geographic Information Network

Office: 804.416.6029

Cell: 804.481-5036

Email: wendy.stout@vita.virginia.gov

