Maintaining, Integrating and Disseminating
in Erie County, Ohio

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Erie County, Ohio – Auditor's Office

2008 Ohio GIS Conference

September 10-12, 2008

Crowne Plaza North Hotel

Columbus, Ohio

Erie County, Ohio GIS

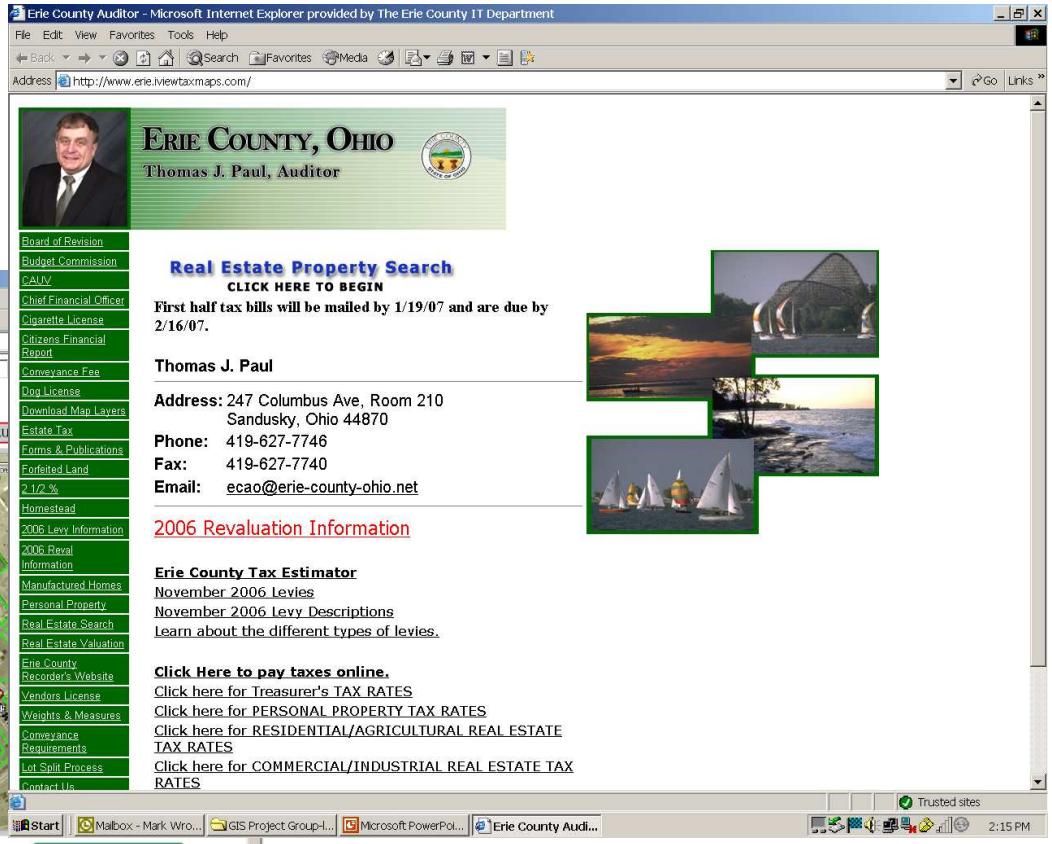
- AccuGlobe Applications
- ECDES Water & Sewer mapping
- Aerial Photography
- E911 System
- LBRS Program
- **Addressing in Erie County**

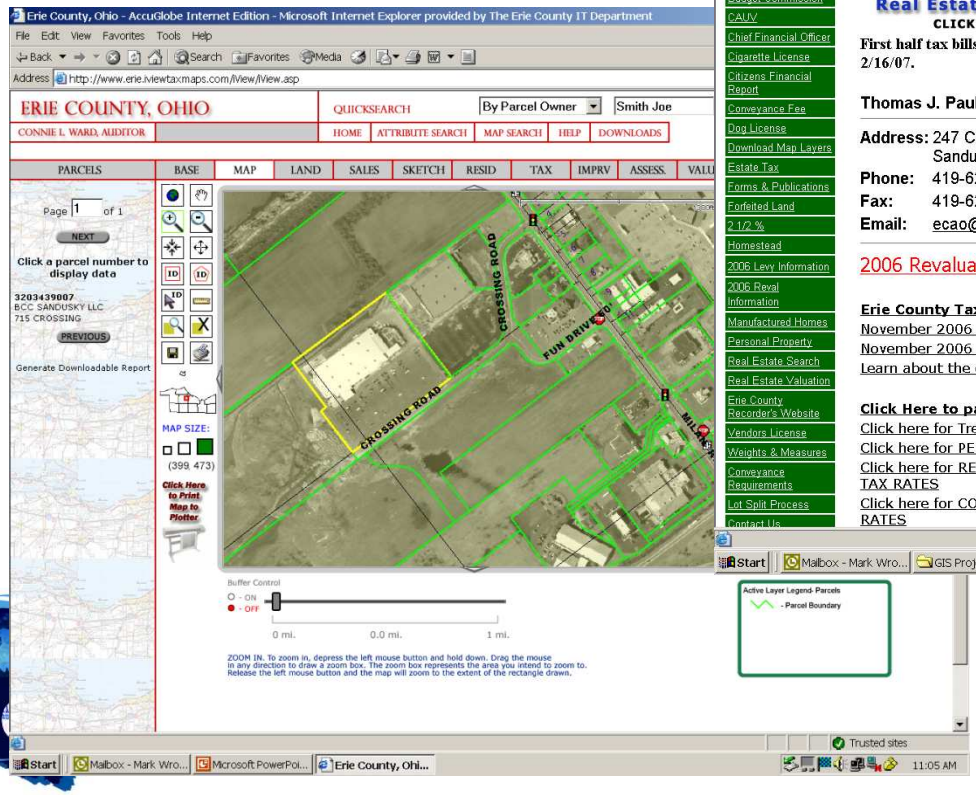
AccuGlobe Applications

- AccuGlobe Website – www.erie.iviewtaxmaps.com
- AccuGlobe Data Explorer Edition – The common platform for all Erie County jurisdictions.
- AccuGlobe Data Maintenance– street centerline & address maintenance software.
- AccuGlobe E911 – Emergency response services.

www.erie.iviewtaxmaps.com

- Office Operations
- Property Searches
- On-line Reporting
- Data Downloads

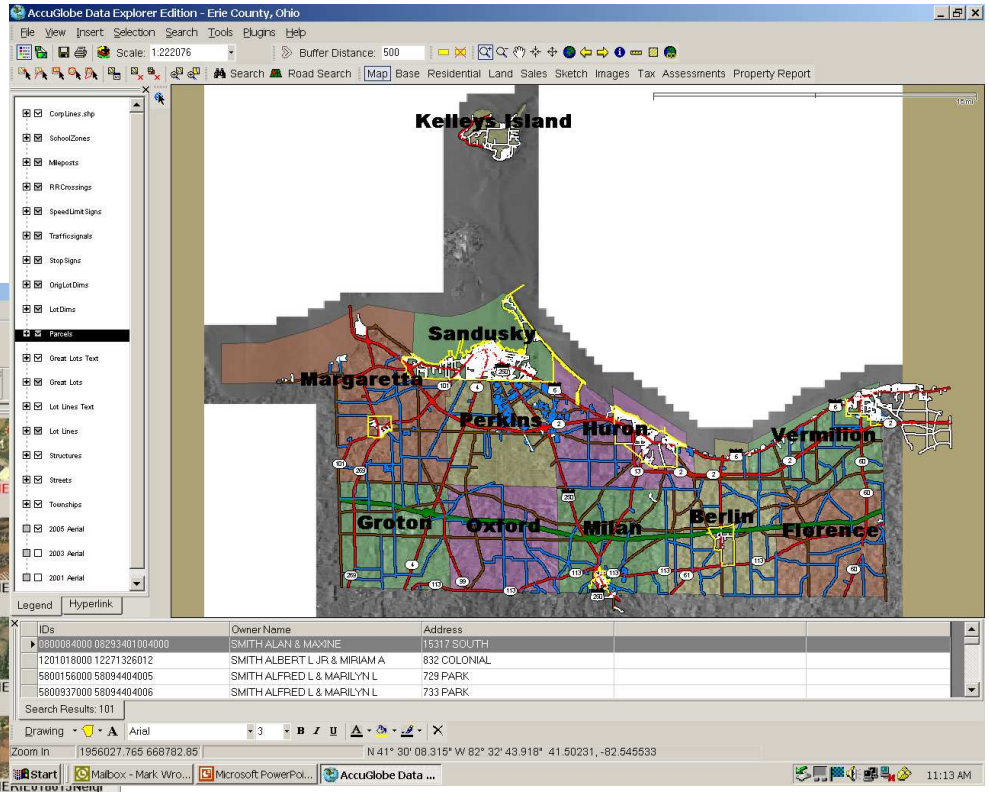


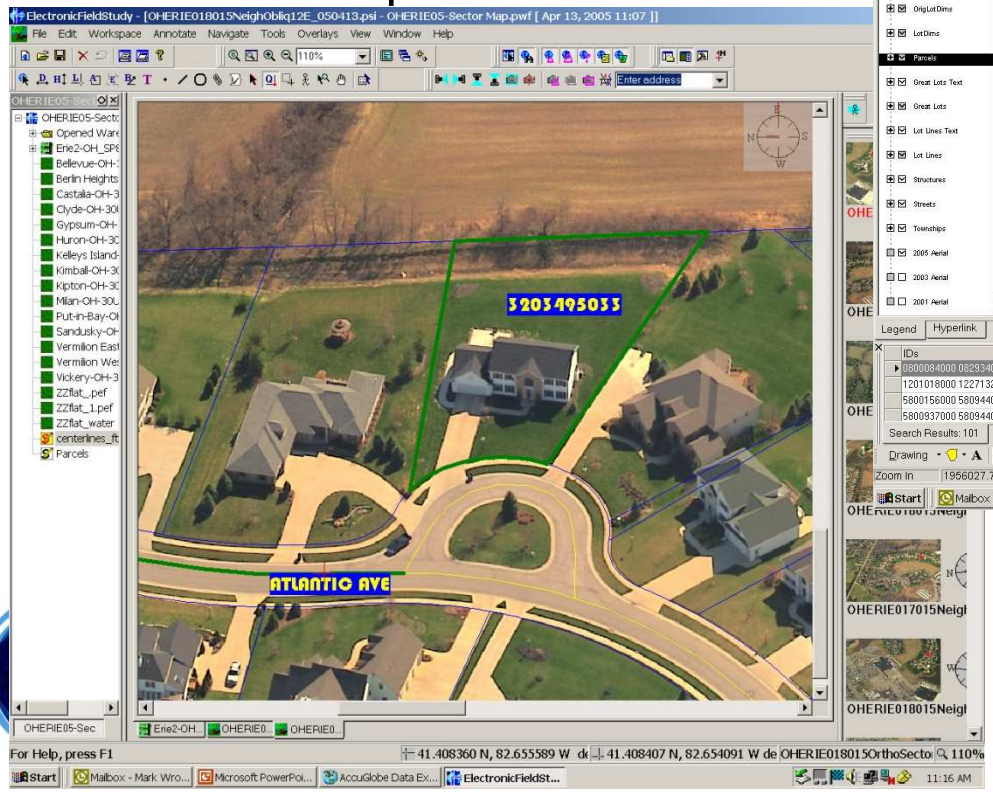


- Questions & Answers
- Contact Us
- Quality Control Mechanism

AccuGlobe Data Explorer Extension

- Property Searches
- Relational Datasets
- Map Production
- Data Exports

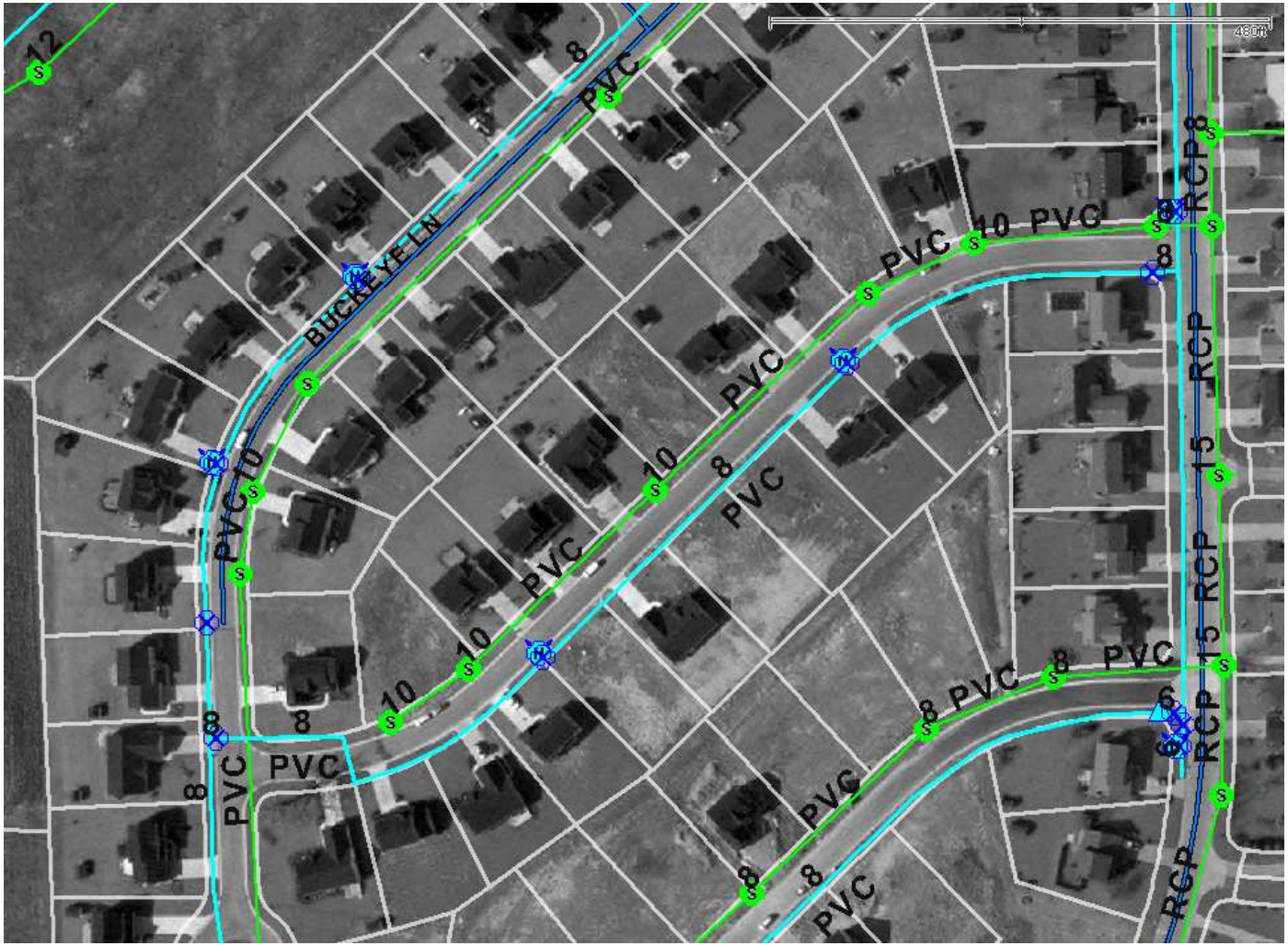




- Common Platform
- Multi-jurisdictional Users
- Data Sharing Mechanism
- Automatic Updates

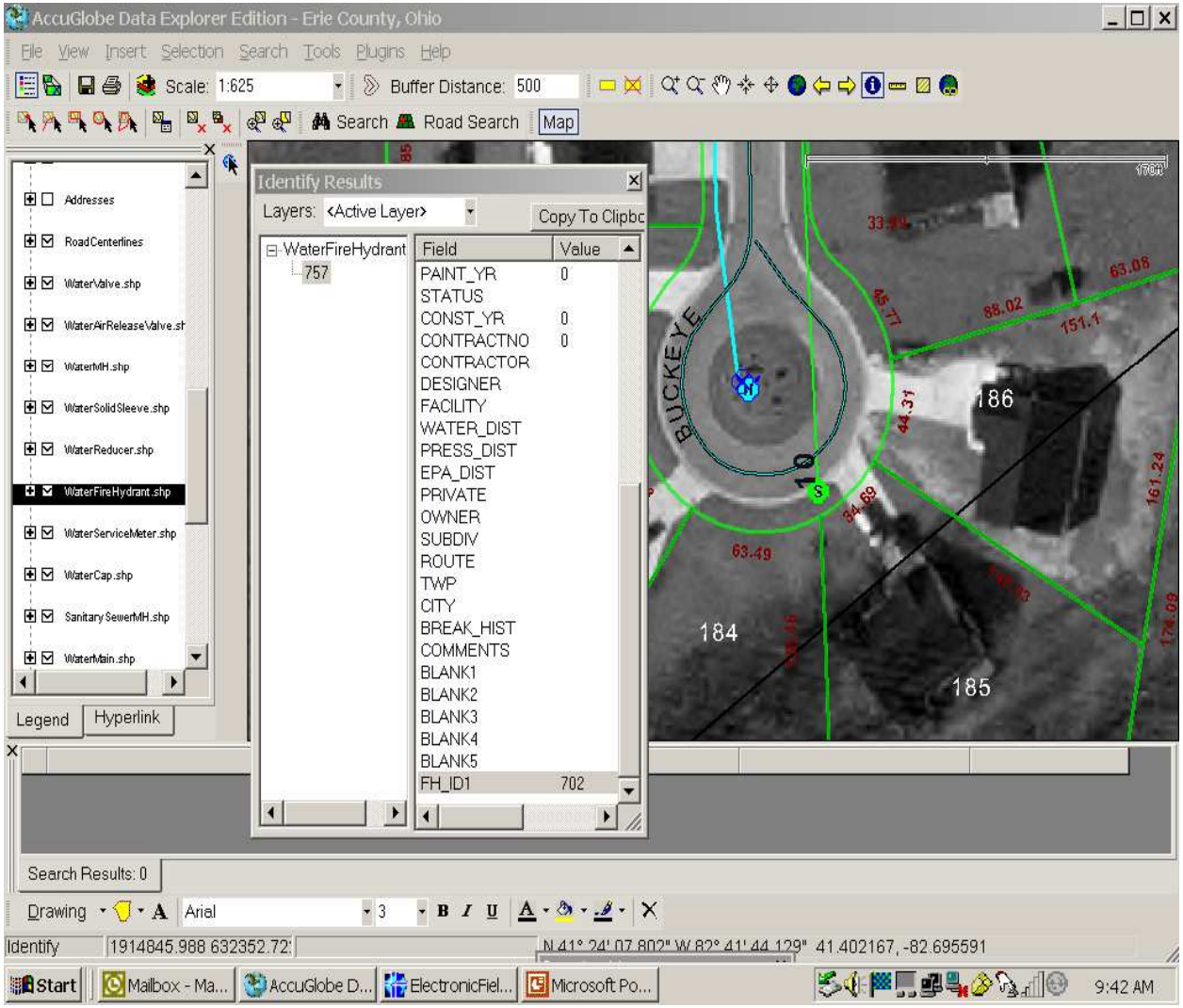
ECDOES Sewer & Water Mapping

- Location
- Size
- Material
- Structures
- Mains
- Laterals



ECDOES Sewer & Water Mapping

- Editable data
- Maintained
- Distributed

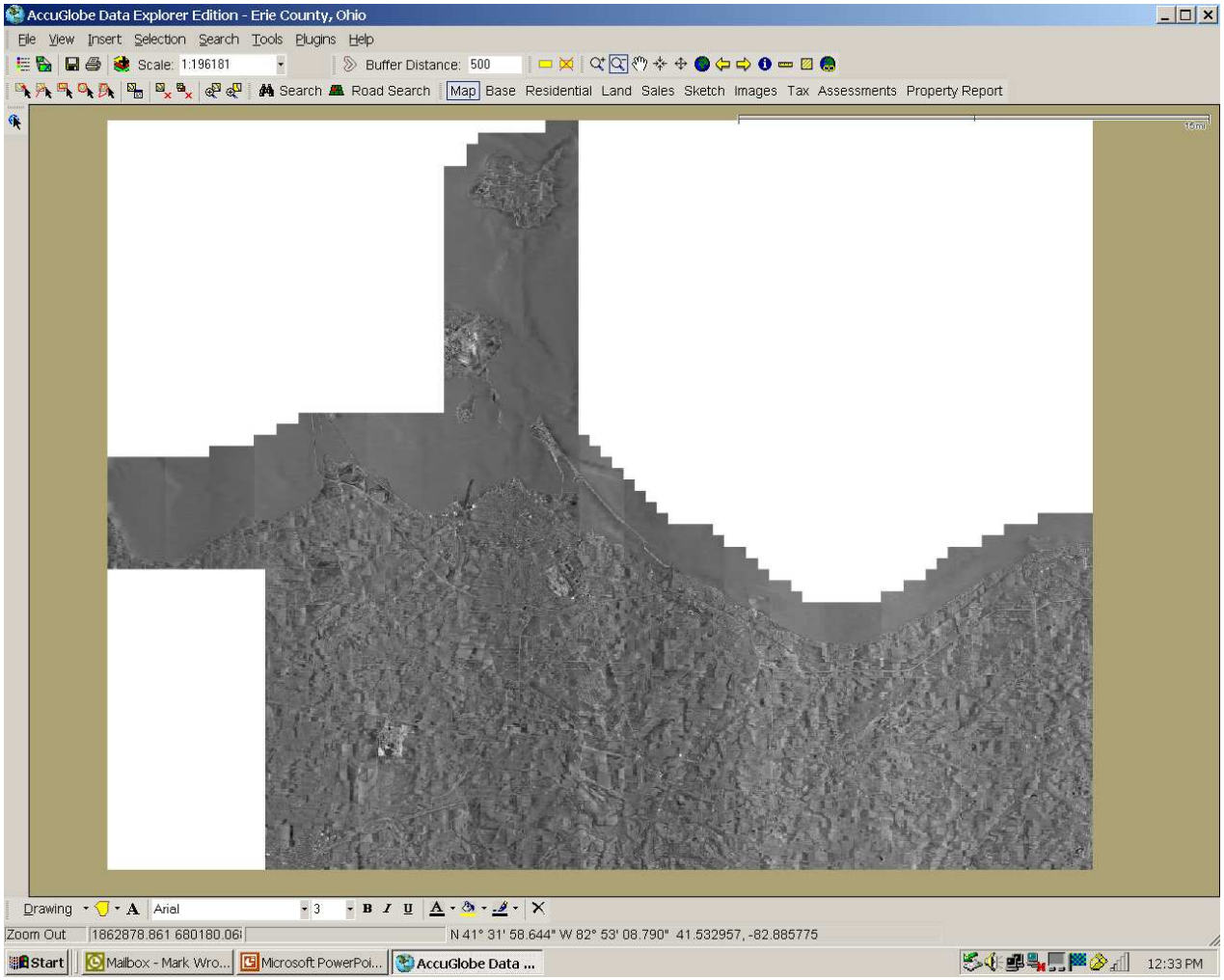


Aerial Photography

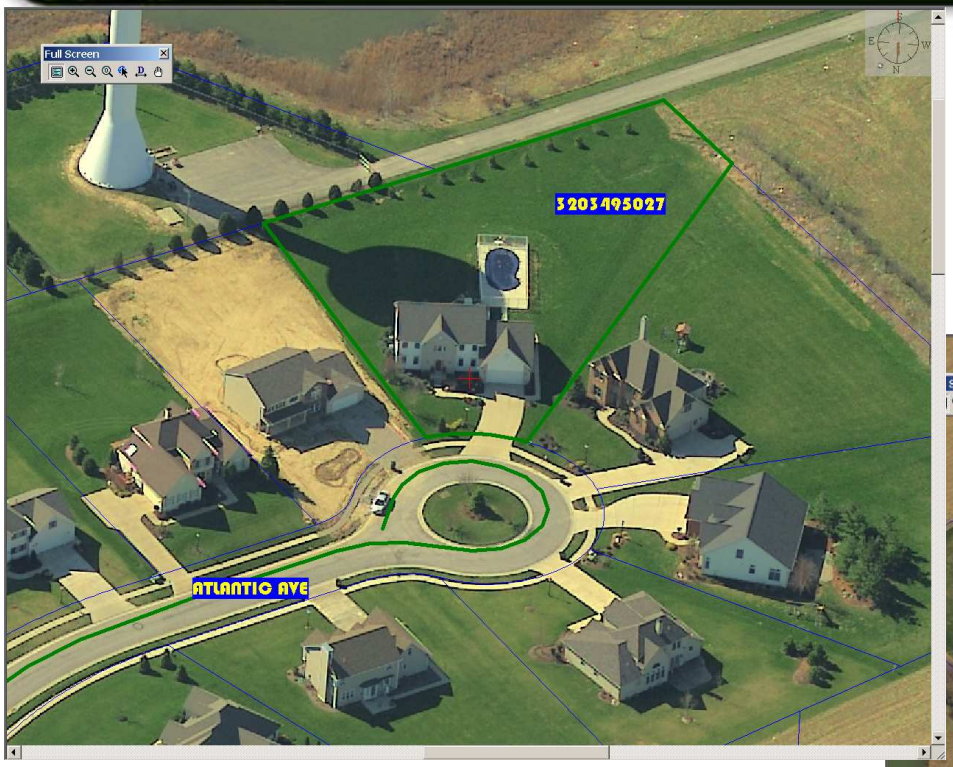
- Image America – B&W orthoimagery
- Pictometry – Color Oblique imagery
- Ohio Statewide Imagery Program (OSIP) – Color Orthophotography & LiDAR
  - Future acquisition possibilities

Image America

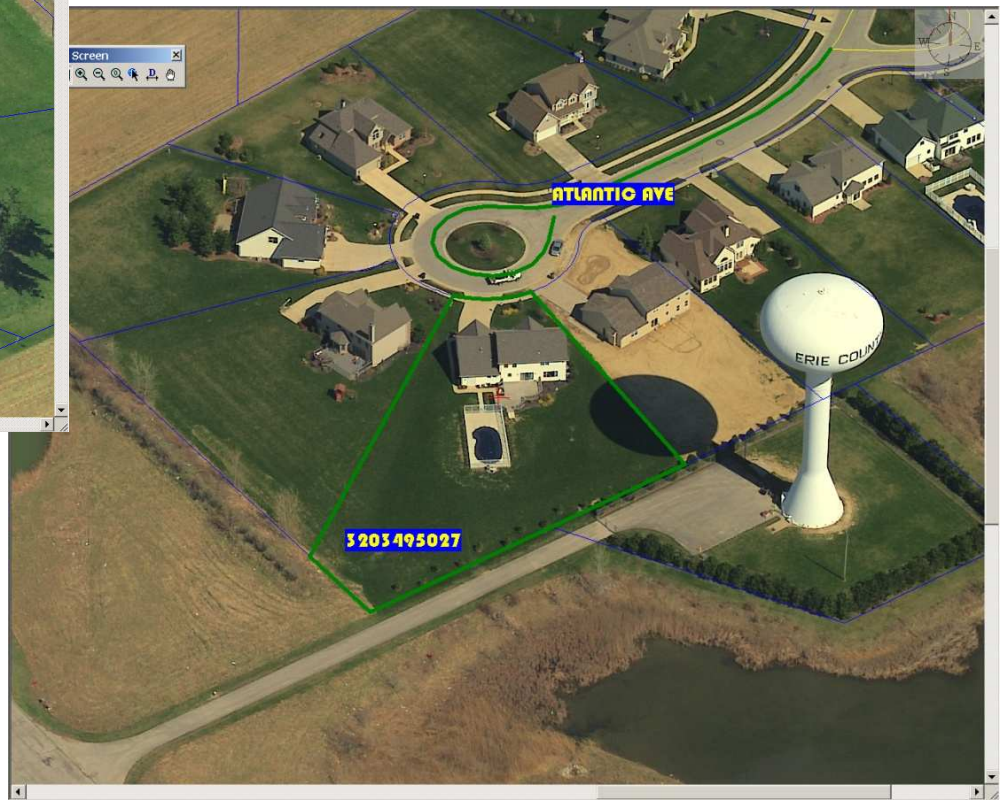
- 2001, 2003 & 2005 flights.
- B&W digital aerial photography
- 0.5’ & 1.0’ raster resolution imagery
- Mr. Sid composites of entire county & township images.
- $27,500 for entire county
- Quick delivery of ready-to-use imagery



Pictometry



- Provides perspective of any area in the county
- Currently a 2-yr. subscription
- Integrated with AccuGlobe

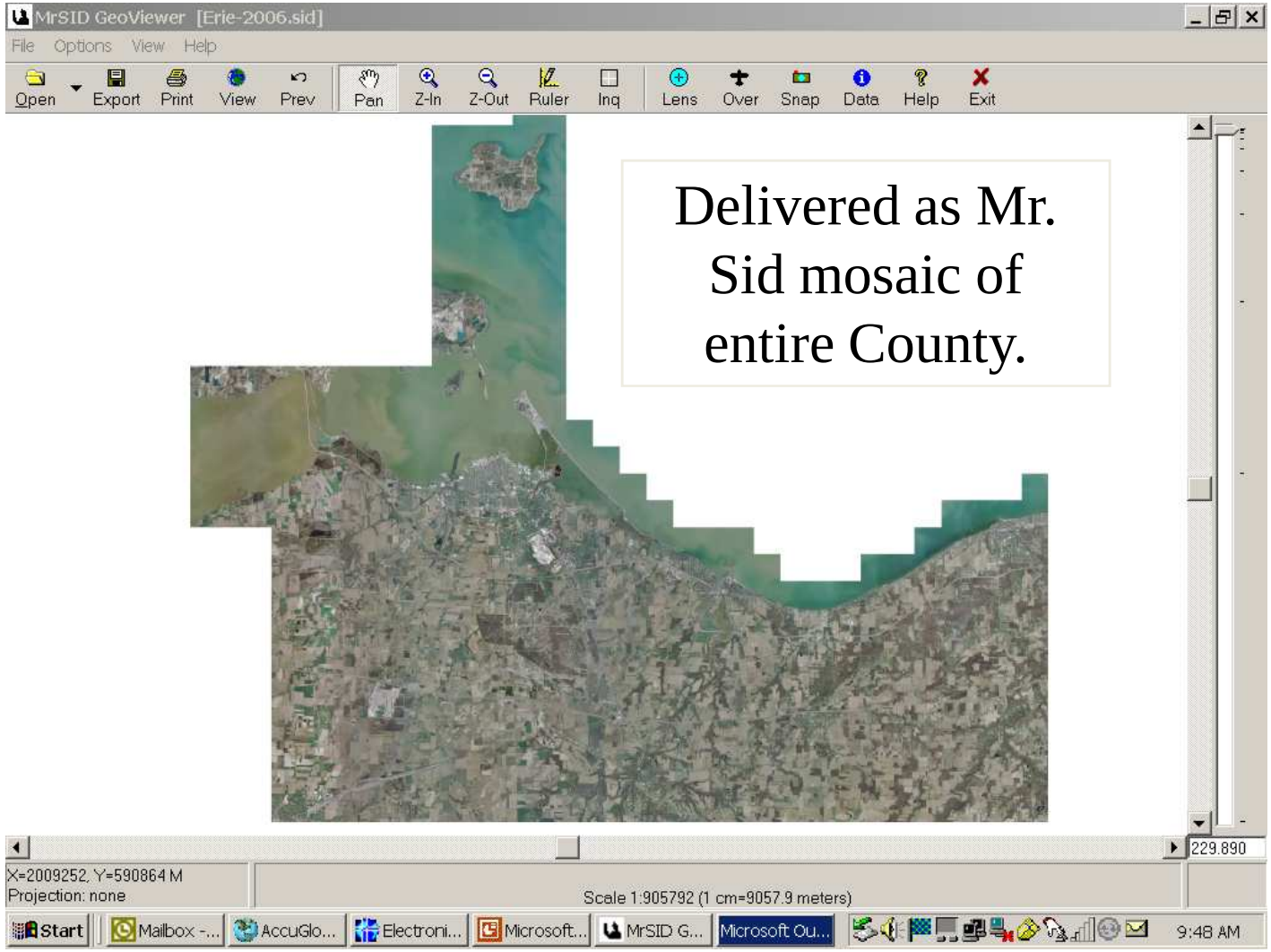


- Spring 2005 & 2007 flight. Spring 2009 flight scheduled.
- Color oblique aerial photography
- Multi-directional imagery

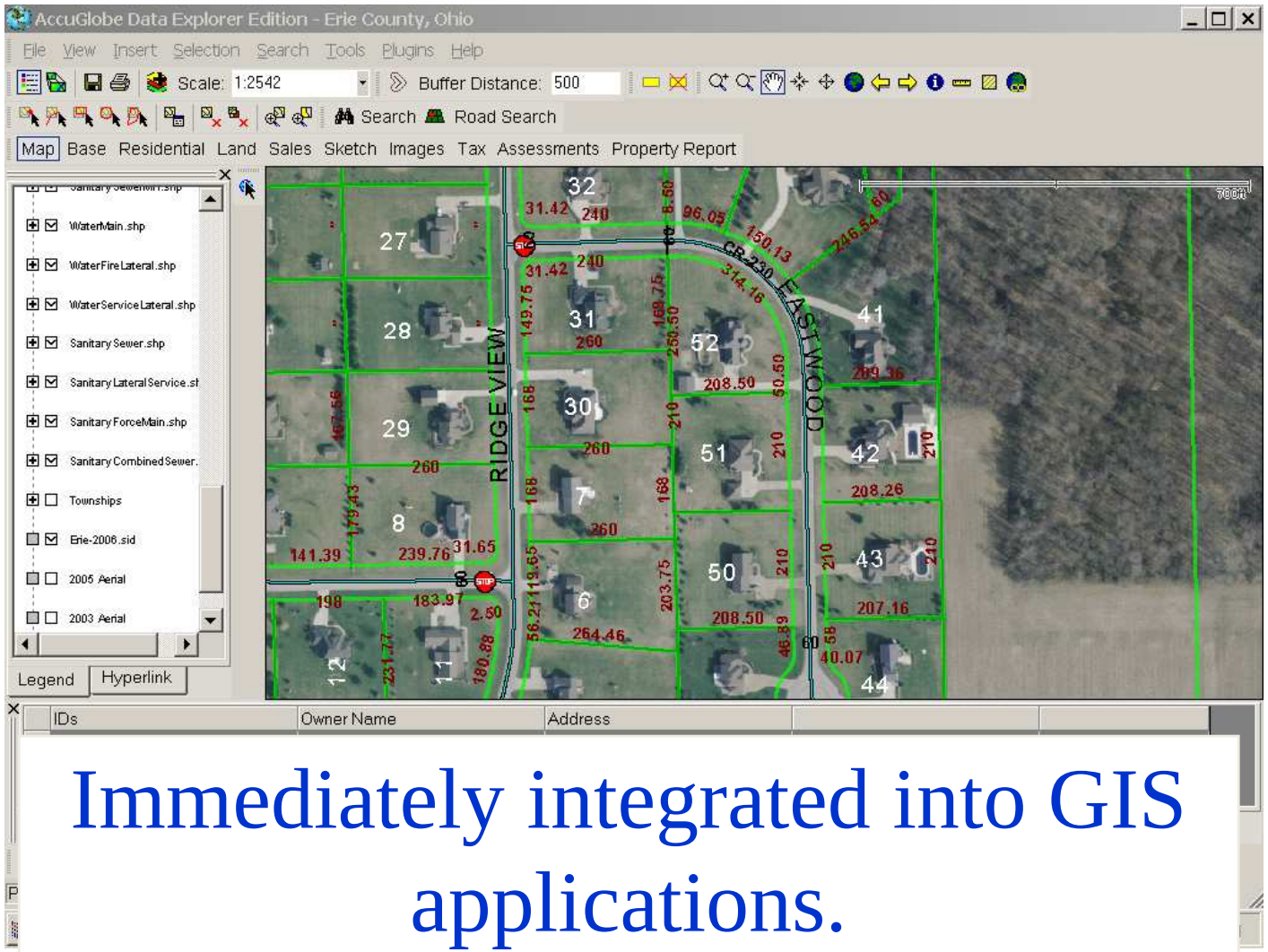
Ohio Statewide Imagery Program (OSIP)

- 1”=200’ scale color orthophotography with a 1-foot pixel resolution (**free**)
- Color Aerial Orthos delivery date May 2007.
- LiDAR – generated digital elevation data (**free**)
- LiDAR has been delivered for use with 2007 Pictometry flight.
- DEM delivered as ASCII format and LIDAR delivered in ESRI .LAS format.
- Contours will be generated from LIDAR dataset to distribute to AccuGlobe DE users.

Ohio Statewide Imagery Program (OSIP)



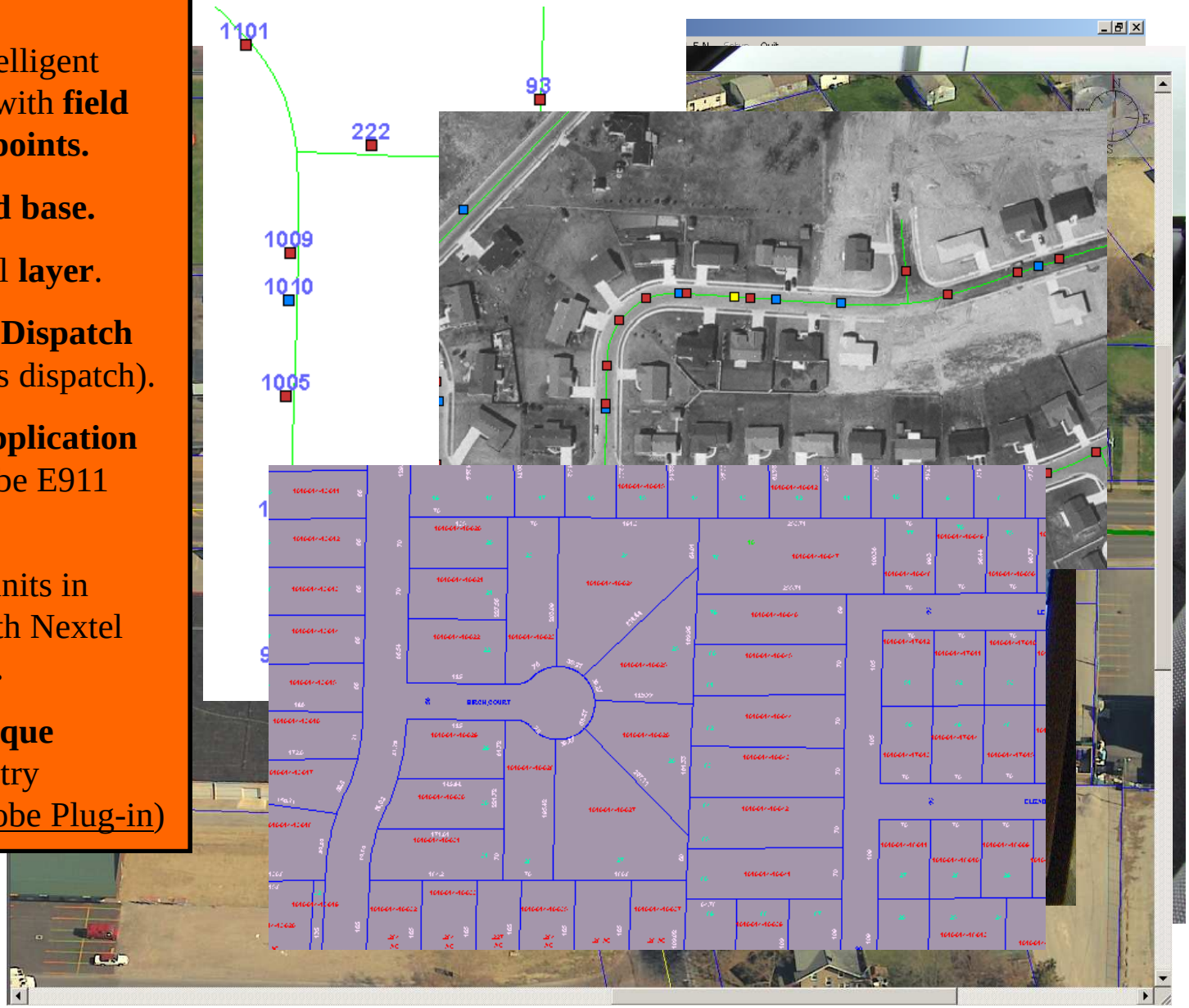
Ohio Statewide Imagery Program (OSIP)



Immediately integrated into GIS applications.

Erie County E911 Components

1. A **Maintained** intelligent **street centerline** with **field verified address points.**
2. An **ortho-rectified base.**
3. **Parcel** or cadastral **layer**.
4. **Computer Aided Dispatch** application (TAC's dispatch).
5. **E911 Mapping application** (DDTI's AccuGlobe E911 Extension).
6. **MDT's** - mobile units in ECSO cruisers with Nextel **wireless network.**
7. Current **color oblique imagery** (Pictometry including AccuGlobe Plug-in)



DDTI E911 Mapping System

- DDTI AccuGlobe E911 Edition tools
- Direct address matching from 911 calls.
- Integrated routing from dispatcher to mobile units via E911 Mobile and Nextel wireless network.
- Automatic Vehicle Location for dispatchers and system users.
- Pictometry imagery plug-in, allowing quick access to color multi-directional images of any area in Erie County.

ECSO Dispatch Terminals

- Multiple screens allow both TAC Dispatch & DDTI E911 mapping applications to be running and visible simultaneously.

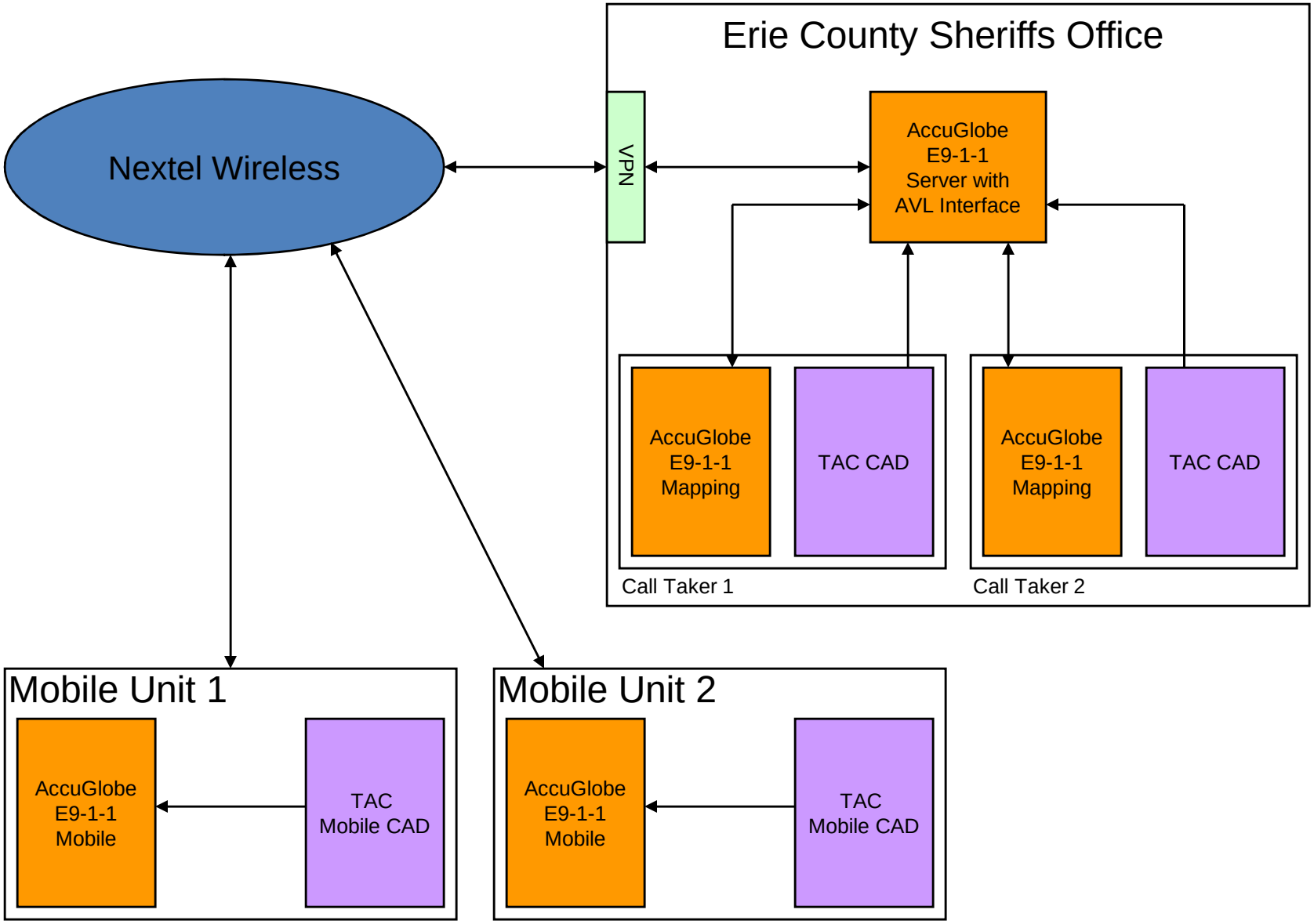
- The Erie County Sheriff's Office has two dispatch terminals running.

ECSO MDT's
Mobile Dispatch Terminals

Panasonic CF-29ETPGZKM
13.3 inch touch screen
1.2 GHz processor
60 Gb hard drive
XP Pro OS, 256 Mb RAM
Price: $5,500/cruiser
Includes laptop, modem, wiring.

Total cost of 25 MDT's: $137,000

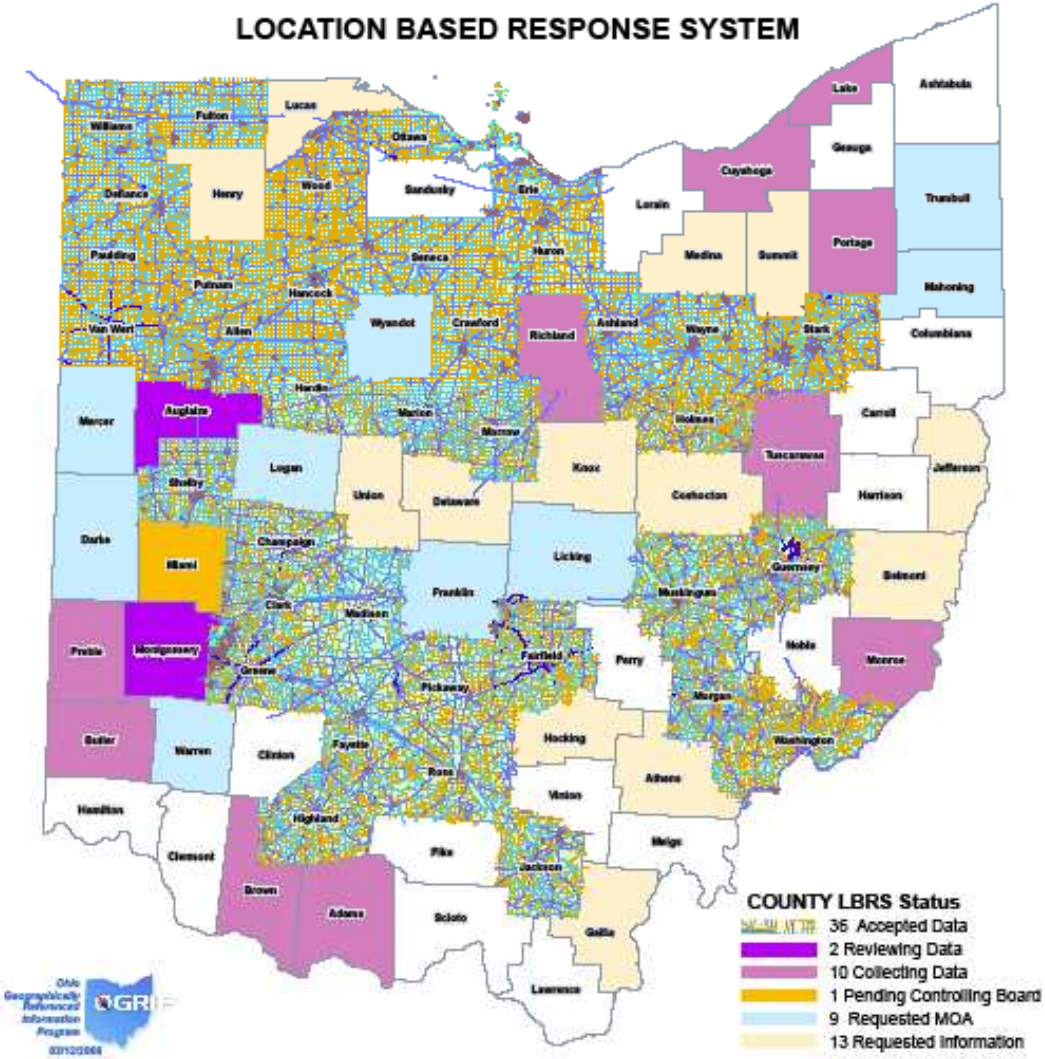
ECSO E911 Schematic



LBRS Program

- Location Based Response System (LBRS)
  - State-level plan for every Ohio county
    - Memorandums of Agreement between the Counties and the State
  - Create spatially accurate street centerlines with field verified site-specific address locations, including linear referencing/mileposts for each address

Ohio LBRS Status

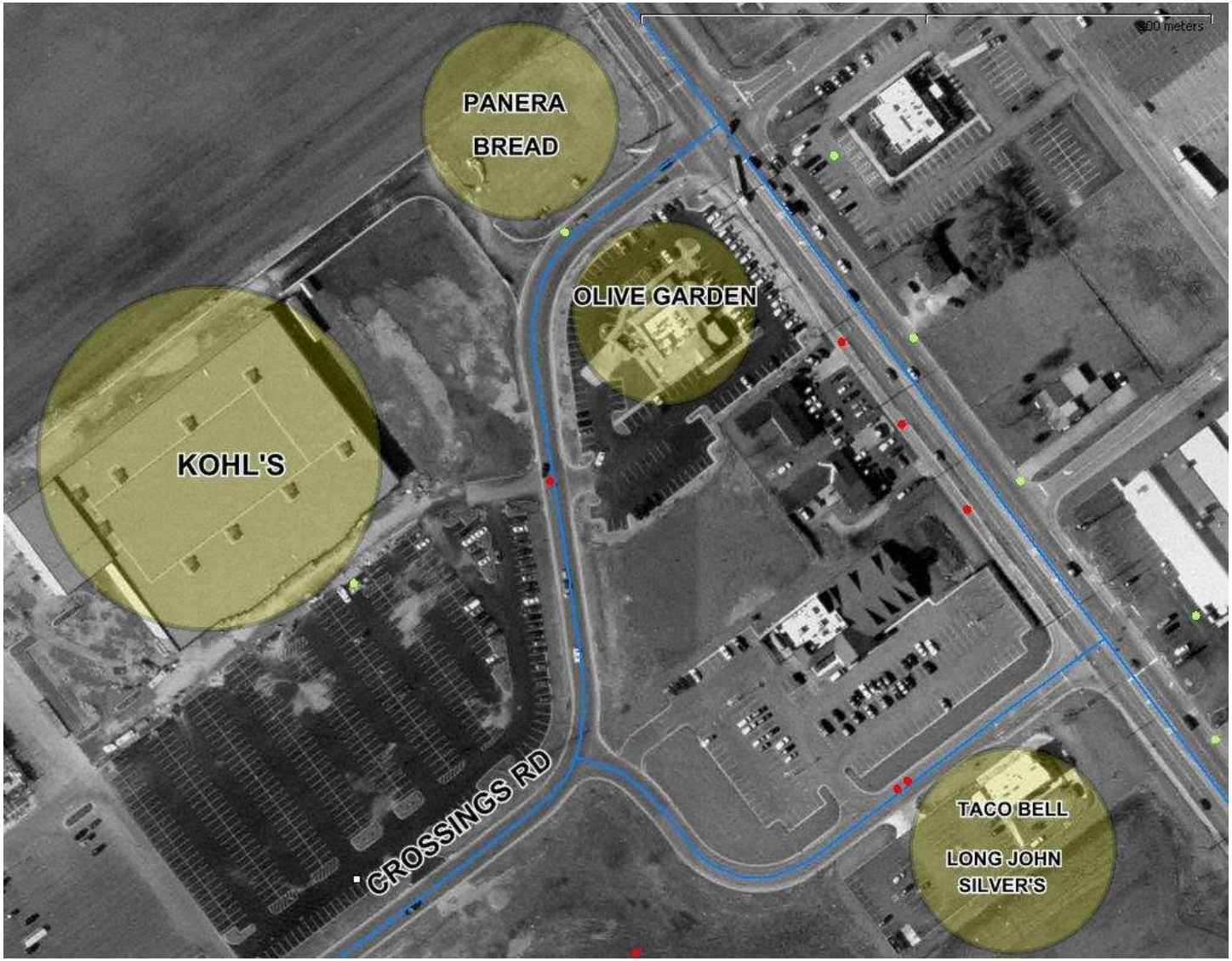


Pre-LBRS Program 2001

Before

LBRS Maintenance Program 2007

After



Pre-LBRS Program 2001

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LBRS Maintenance Program 2007

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Pre-LBRS Program 2001

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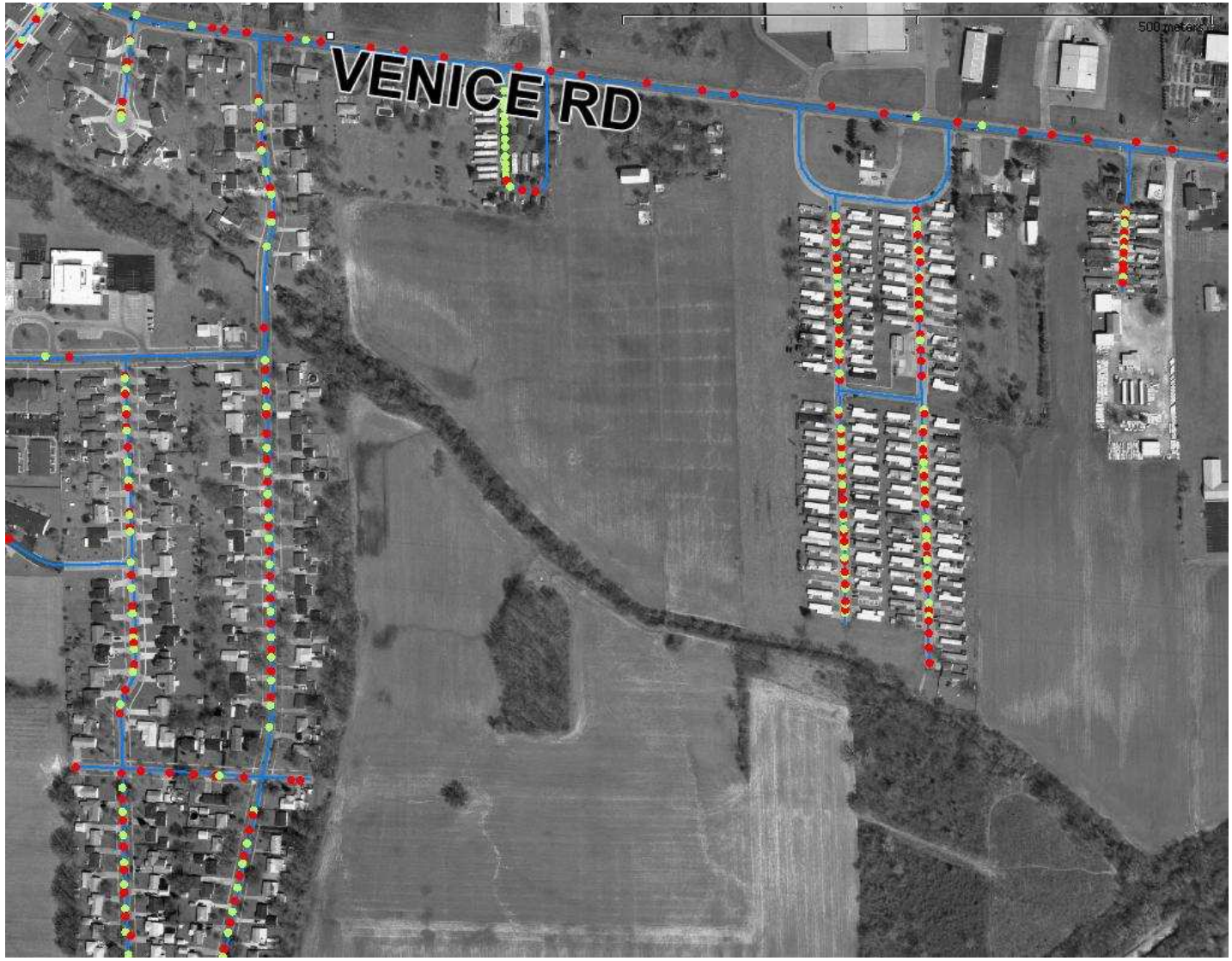
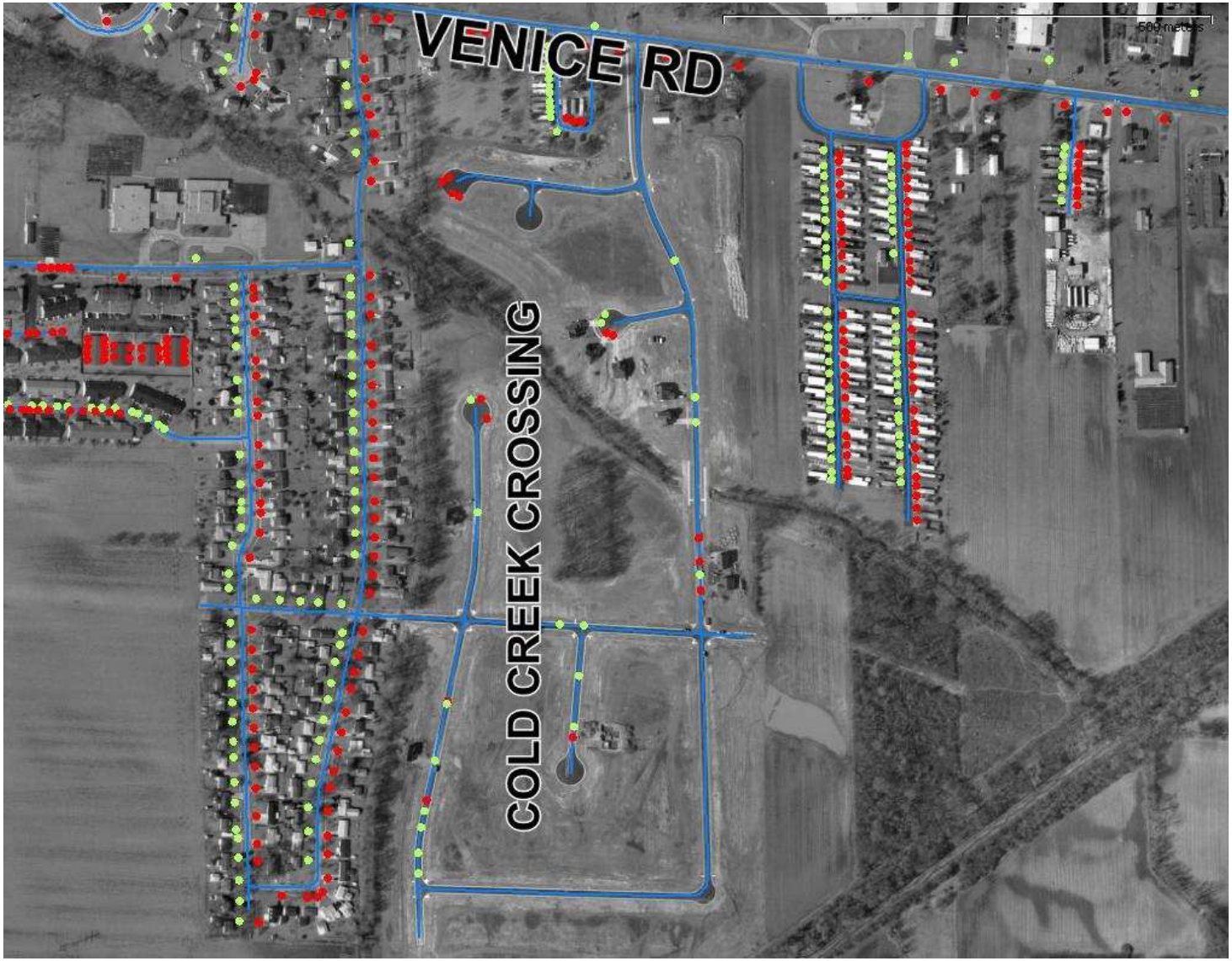
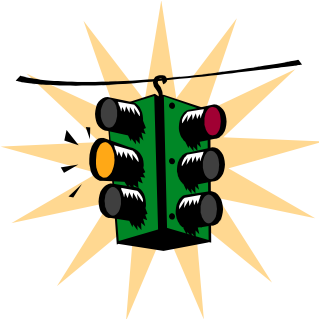


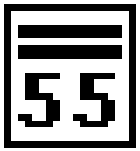
LBRS Maintenance Program 2007

After



LBRS Project Data





ERIE COUNTY, OH		
2007 DATA UPDATE AND LBRS DATA UPGRADE STATISTICS		
	Pre-LBRS	
Mileage	**2001**	**2007**
Miles of Road (total project)	**987.76**	**1073.87**
Miles of Road (Erie County)	931.02	956.01
Miles of Road (other counties)	56.74	117.86
Road Features	**2001**	**2007**
Addresses (total project)	**37,304**	**39,809**
Addresses (ErieCounty)	34,491	36,898
Addresses (other counties)	2,813	2,911
Single Family Homes	29,276	30,133
Duplexes	2,745	2,023
Trailers	1,361	1,395
Apartments	1,116	3,096
Secondary Structures	29	72
Utility structures	137	149
Commercial Structures	2,838	2,923
Driveways	22	12
Bridges and Culverts	638	662
GPS Points	278,267	not yet created
Milepost Signs	149	148
Railroad Crossings	117	117
Yield Signs	86	85
School Zone Indicators	87	87
Speed Limit signs	968	1,022
Stop Signs	2,431	2,511
Traffic Signals	246	248
Turn Arounds	110	115
Flashing Signals	21	21

Issues With Addressing

- PROBLEM: Erie County has 17 addressing authorities. How do we help them maintain their data and integrate it into their daily workflow applications (i.e. 911)with REALTIME data synchronization and with built-in quality assurance?

Solution: AccuGlobe Data Maintenance

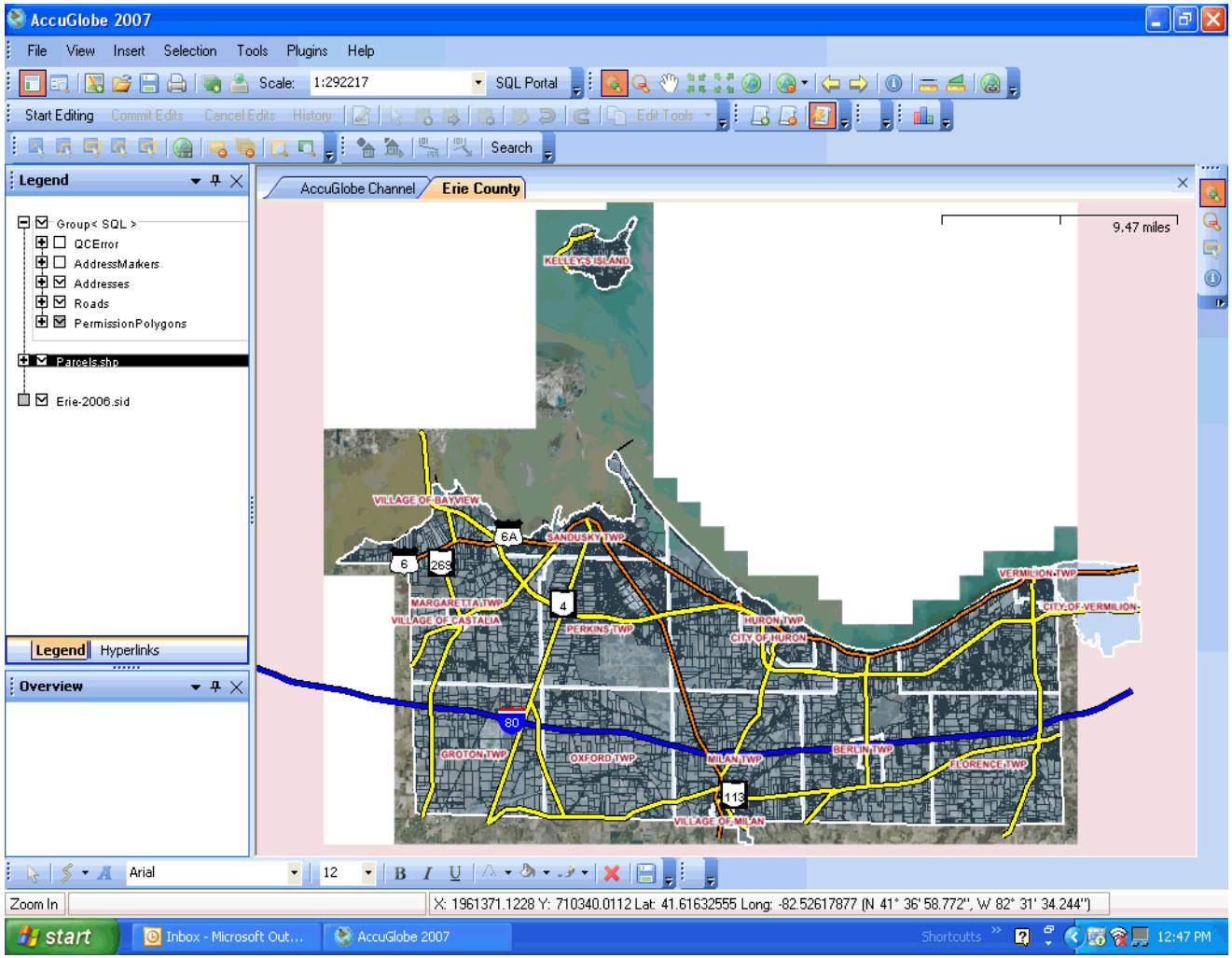
SQL Server Based system

Provides **Dynamic** (real-time) updating.

Provides **One** system for the **Master** Address Database.

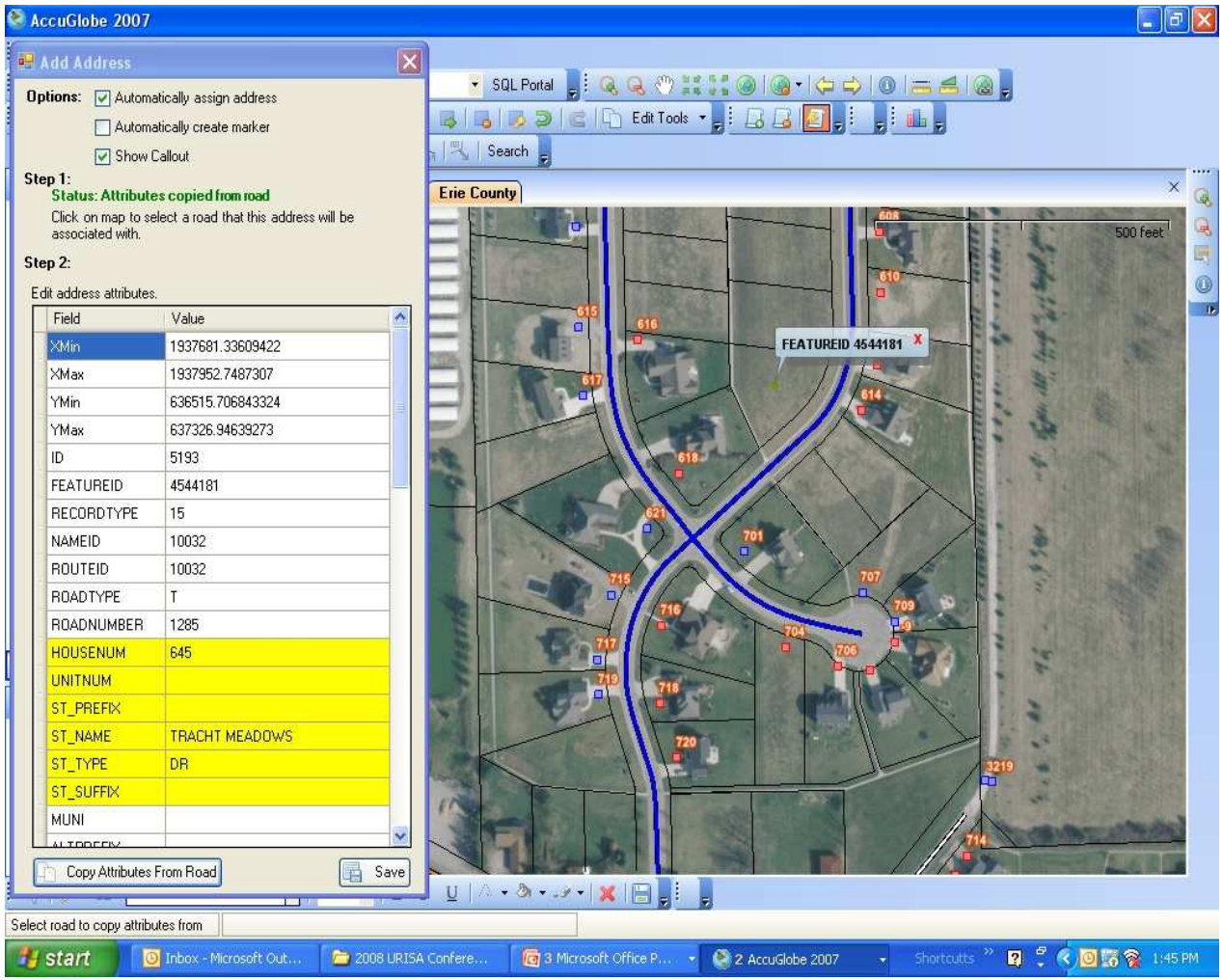
Secure and **EASY** to use.

It's **REAL** and it **WORKS**!



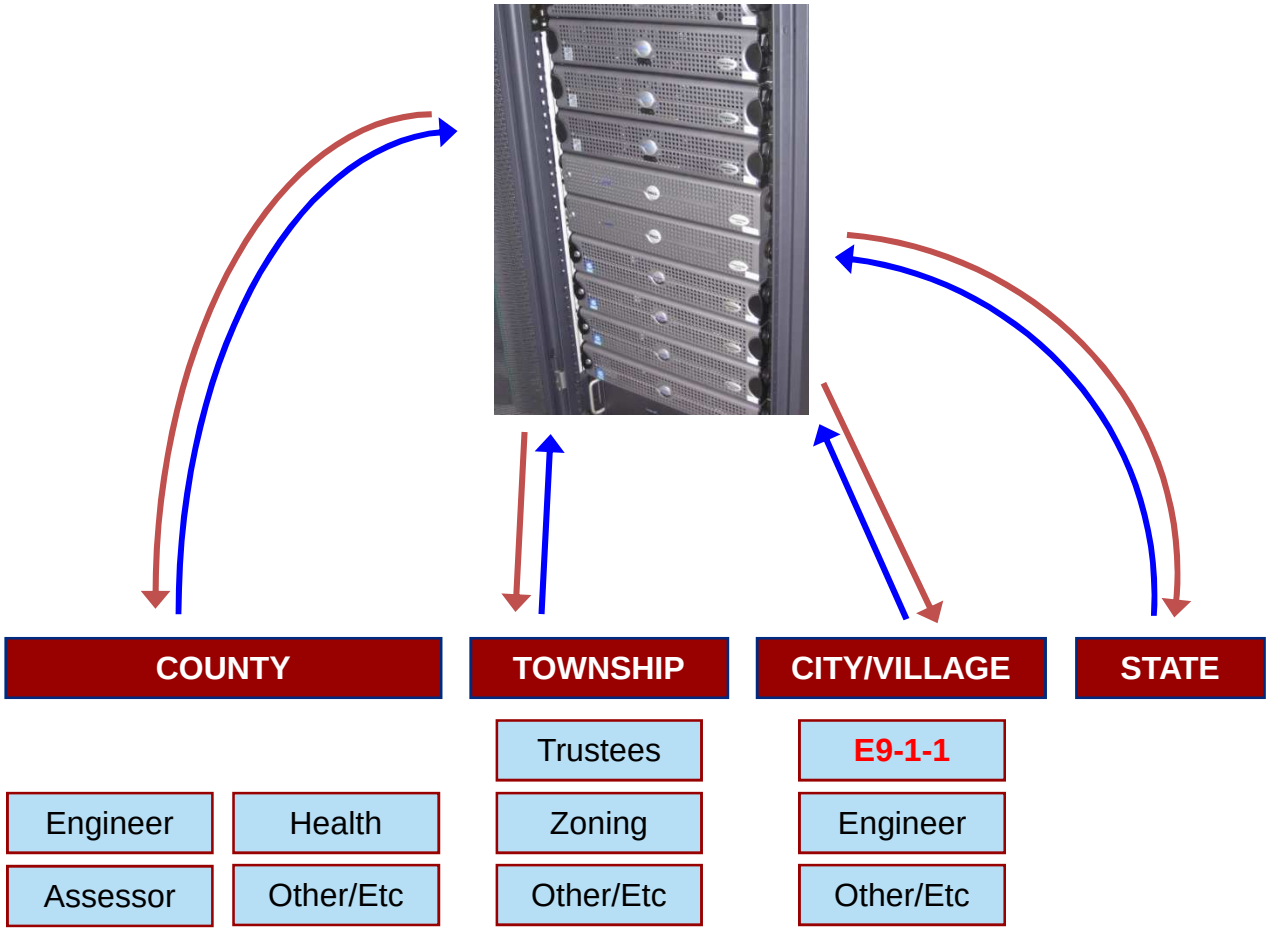
Data Maintenance Solution

- Maintenance software local authorities can use to add, modify, or delete roads & addresses.

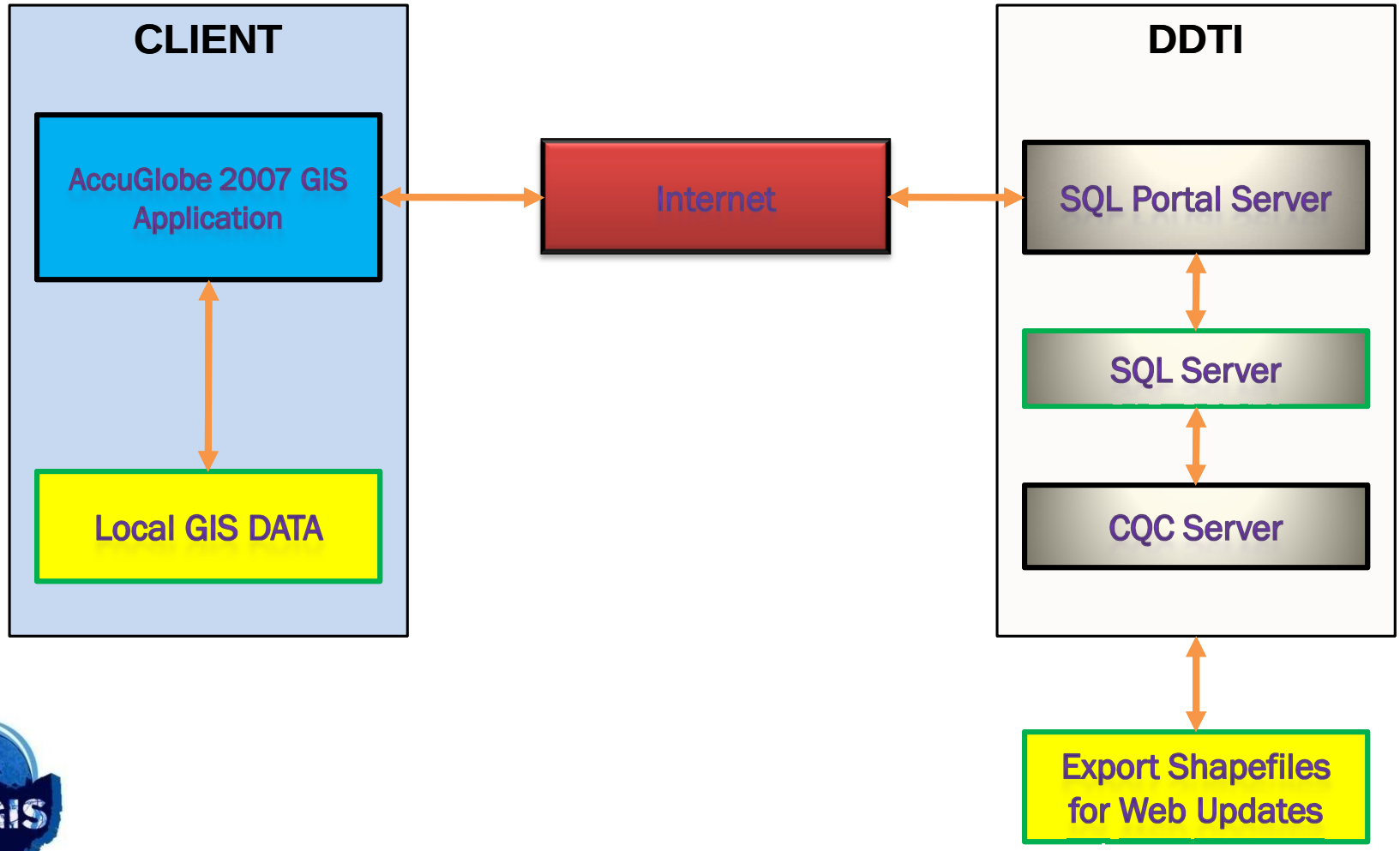


Maintenance

- Data integration and dissemination



Centralized GIS data maintenance service



Centralized GIS data maintenance service

- Multiple users can edit the GIS data (spatial and attribute) simultaneously via the Internet
- Full history of edits are saved with audit trail
- Computed attributes generated on servers
  - User enters only non-computable data
- QC checks populate the error layer within seconds after the changes are committed for quick feedback
- Nightly GIS data extract provides fresh data for GIS applications for other agencies

AccuGlobe 2007 GIS Application

- Provides the user interface to view and edit the GIS data
  - Data layers can come from local sources (orthos, water ways, rail road, special layers for the Client, etc.) or remotely (via SQL Portal, etc.)
  - A redraw of the SQL Portal layer displays the latest committed data on the Servers
  - Edits on SQL Portal layers are sent to the SQL Portal server when the user commits them

SQL Portal Server

- Accepts connection requests, enforces account login
- Verifies that the user has permission to edit an object
- Communicates with SQL Server
- Maintains connections to multiple databases

SQL Server

- Stores all data
  - Layer information, objects in GIS data layers, QCError data, permission, user administration, settings for GIS data exports
  - Life history of all features, archives the begin/end life of all features. This is beneficial for deleted feature retrieval.

CQC Server

- **Performs background computations on recently changed data**
  - Detects the changes and runs a series of computations and QC checks involving multiple layers (Roads, Addresses, Address Markers, etc.) and populates the QCError layer when the data violates business rules
    - The parity of the house number of the address is incorrect,
    - The address has no matching road name,
    - The house number of an address does not fit that of the neighboring addresses,
    - The road prefix, type or suffix does not follow the abbreviation rules, etc.
  - Errors in the QCError layer can be resolved by correcting the address or road data, or –when it is not possible—the user can suppress that particular error for future QC checks

DEMO

Live demonstration of

AccuGlobe Data Maintenance and

WebEx™ remote training and support.

How to get more info.

- Visit us on the web @ *www.erie.iviewtaxmaps.com*
- Email me @ *mwroblewski@erie-county-ohio.net*
- Call me Mark Wroblewski – GIS Coordinator, Erie County Auditor's Office @ (419) 627-6647.
- Digital Data Technologies Inc. @ *www.DDTI.net*

  Ron Cramer *1*-888-800-4003