

for

2006 IAAO Councils and Sections Joint Seminar

May 9-11, 2006

Charleston, South Carolina

Presented by

George Donatello, CMS

Principal Consultant
TEAM Consulting

Libbordisonne

Washington, DC Using New Technology



Office of Tax and Revenue

- The Statistics
 - 61 square miles
 - 176,000 parcels
 - \$105 billion market value
- New CAMA System
 - No sketches in system
 - Annual valuations
- Double Digit Increases in Value



Washington, DC's Problem

- New CAMA System
 - No sketches in system
 - Annual valuations
- Data Inconsistencies
 - No comprehensive review in 10 years
 - Large portion of properties could not be modeled because of data
- Double Digit Increases in Value

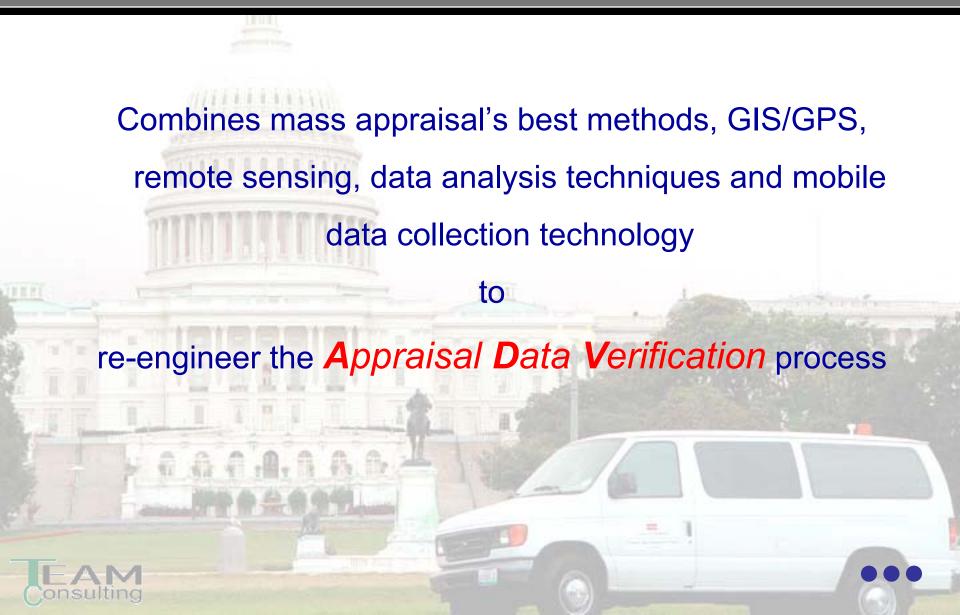


Goals and Objectives

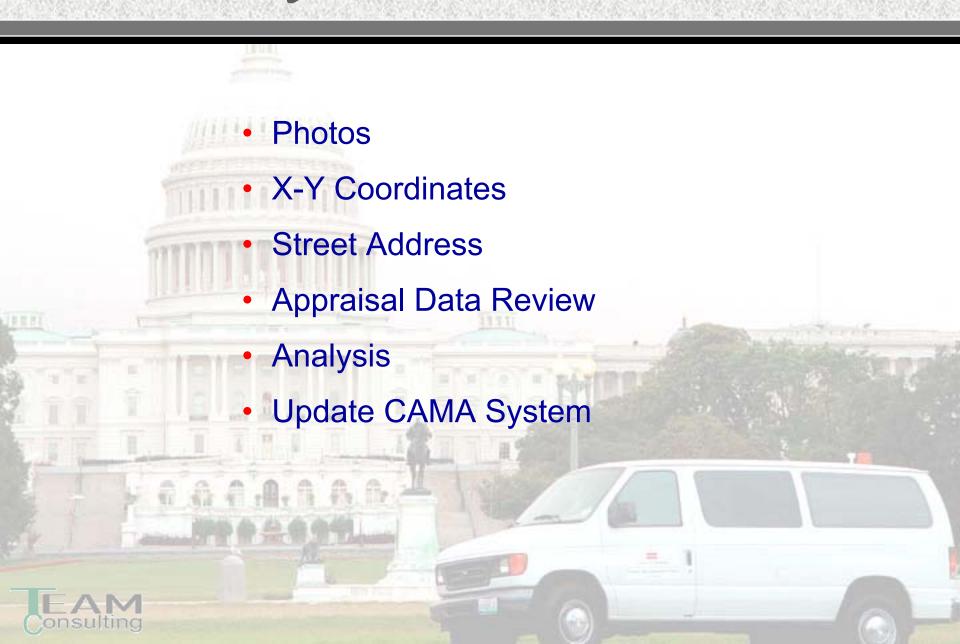
- Review of All Taxable Properties (except condos and coops)
- 125,000 Residential and Commercial Properties
- Outsource Data Review
- Use the Latest Technology
- Complete Project in Less than 12 Months
- Spend Less than \$1,000,000







ADV+ Process



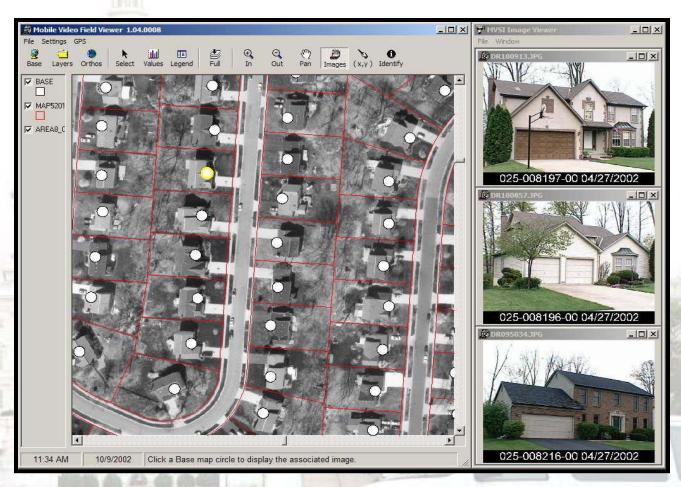
Property Imaging



Image reflects overall value and minimal obstructions.



X-Y Coordinates

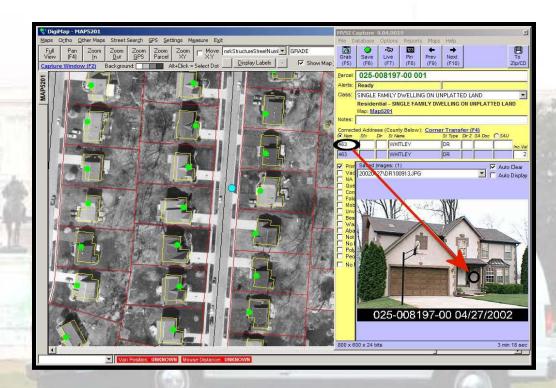


Intelligent points link each structure's x-y coordinate to its parcel number, verified address, CAMA file and street-view photograph



Address Verification

- Site Address Verified to Address on Face of Structure
- Data Segments Collected in National Emergency Numbering Association (NENA) Format
- X-Y Coordinate for Each Primary Address
- Corrections Identified with Attributes
 - Corrected Street Name
 - Correct Number
 - Confirmed or Unverified
 - Multiple Address





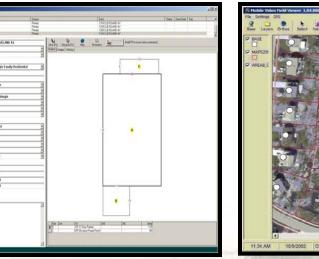




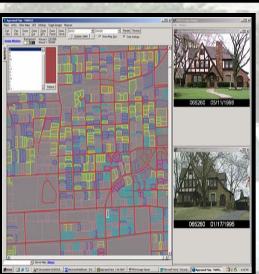
Data for Field Verification

- **CAMA Data**
- **PRC JPEG**
- **Property Sketches**
- GIS
- Orthophotographs
- Planimetric Footprints
- **Oblique Imagery**





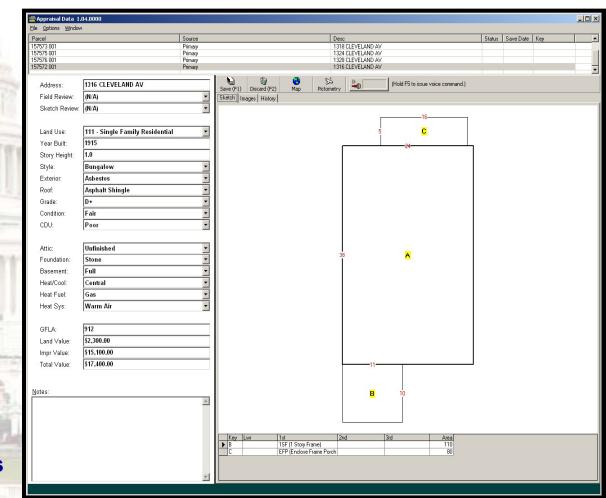






Objective Characteristics

- Property Class-Use
- Style
- Effective Age
- Exterior Walls
- Story Height
- Roof Material
- Attic
- Basement
- Foundation
- Air Conditioning
- Out Buildings
- Parking
- Jurisdiction-Specific Factors

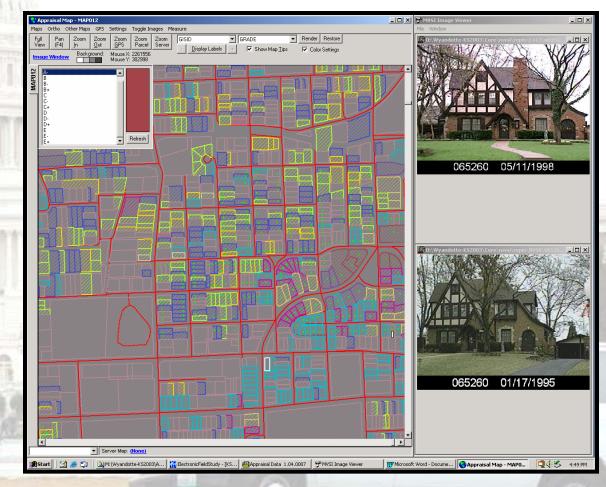




Subjective Characteristics

- Grade
- Condition
- Location Factors
- Jurisdiction-Specific Factors

The integration of data with GIS, sketch and imaging provides for a high-quality review and enhanced productivity.

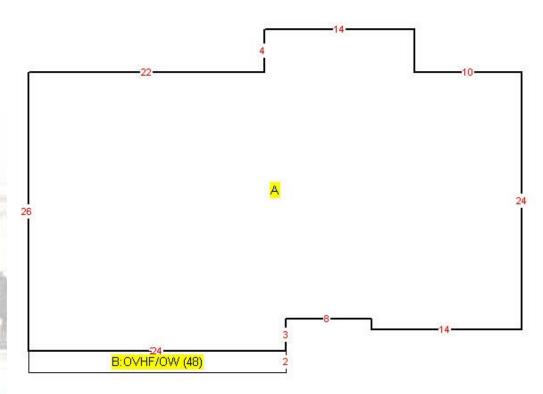




Verify Sketch and Measurements

In-Field Sketch Comparison To:

- Structure
 Verify sections, levels and labels
- Planimetric Footprint
 Verify perimeter measurements
- Orthophotography
 Identify additions and obstructed view



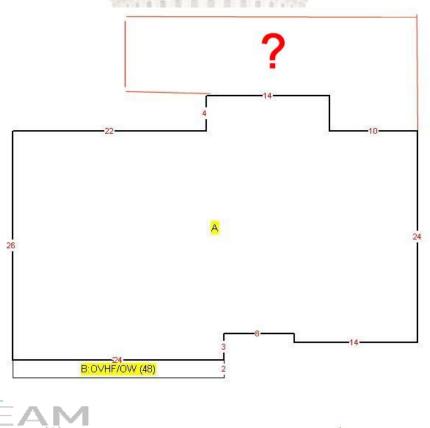


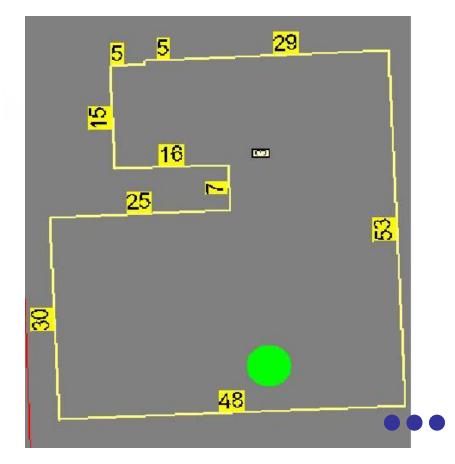


Verify Sketch and Measurements

Planimetric Footprint

The mass appraiser in the field collection unit compares the dimensions on the planimetric footprint (minus the estimated roof overhang) with the same walls on the CAMA sketch to see if the two are within allowable tolerances.



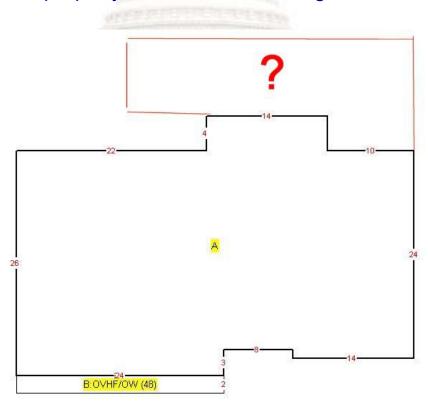




Verify Sketch and Measurements

Oblique View

The use of Oblique Photography provides the mass appraiser with the ability to view the entire property to determine building orientation, outline, characteristics and context.







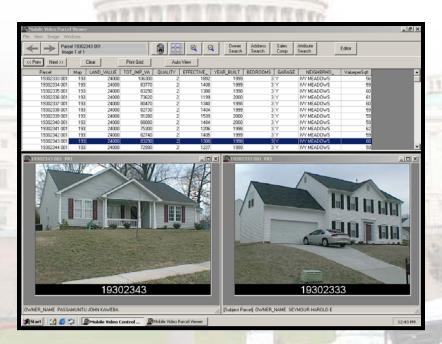
Workflow Processes

- Data organized into review levels
- Each review level has separate procedures for review and entry
- Problem data elements are pushed to higher review levels
- Data entry into CAMA system
 - Mass update when supported by CAMA system
 - Manual data entry due to software limitations

Image Management and Analysis Software

Focused Software Applications

- Analyze data exceptions
- Virtual walk through neighborhood
- Linked to GIS and Pictometry



- Display and print comp report
- Maintain image warehouse
- Analyze sales and data





Data Exceptions for 125,000 Residential Parcels

<u>Level</u>	Count	<u>Description</u>
1	372,990	Property Characteristics
2	2,190	Review Characteristics
3	7,252	Office Action Required
4	12,569	Office Action Complete
5	3,172	No Sketch
6	2,947	Field Action Required
7	2,817 403,937	Field Action Complete
		ALC: NO.

Residential	
- Use Code	2,394
- Old Style	4,768
- Roof Covering	25,768
- Building Type	1,400
- Story Height	7,079
- Air Conditioning	1,235
- Exterior Finish	7,599
- New Style	103,198
- Parking	104,433
- Grade	44,409
- Condition	29,011
	331,294



Resolution of Field and Sketch Review Parcels

Office Action

Count	<u>Description</u>
2,932	Building Razed
2,948	Minor Addition (deck/porch/garage)
1,064	Correct Sketch
	Measurements/Labels
308	Verify Use
7 252	

Field Action

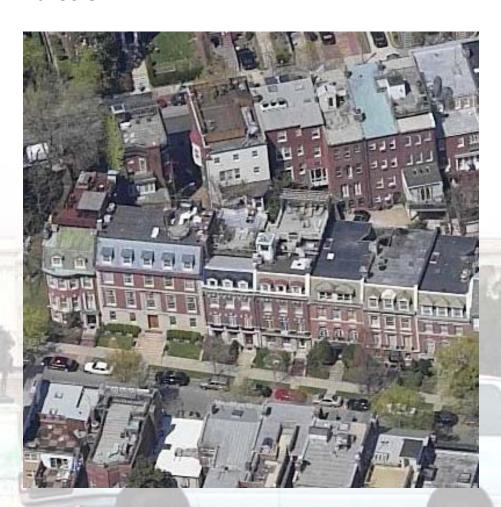
Count	<u>Description</u>
664	Additional Sq. Ft. Not on Sketch
509	New Construction
1,774	Field Verify (significant variation)
2,947	



Resolution of Field and Sketch Review Parcels

Appraisal staff can investigate and resolve data exceptions at the desktop with software applications.

Data exceptions are linked to GIS or Pictometry through address x-y points.





What We Learned

- Appraisal staff was more productive due to data:
 - Consistency
 - Accuracy
 - Timeliness
- Appraisal staff was able to focus on valuation work instead of data collection.
- The use of the best available qualified mass appraisers yielded a higher level of confidence in resulting data and final values.
- There was a substantial reduction in the amount of field work during final review.



What We Learned

- Traditional data collection techniques are not necessary on most properties
- Dramatically reduces cost, while improving the quality and timeliness of property valuation data
- High tech alternative to "walk around" data collection methods used in past
- Win-Win for the Office of Tax and Revenue and taxpayers
 - Provides a quality data review at a reasonable cost



Project Timeline

- May 1, 2004 Project Start
- June 1, 2004 Begin Field Work
- October 27, 2004 Field Work Completed
- April 1, 2005 Project Completion

 April 1, 2005 Project Completion

 Consulting

Project Cost

- Approximately \$8.00 per parcel
 - Picture
 - X-Y Coordinate
 - Address Verification
 - Data Review
 - Appraisers
 - Software
 - Quality Assurance
- Cut Cost by Using Your Own Appraisers
- \$8 vs. \$30 Using Traditional Methods



Return on Investment

A114 1 1 1 1 1 1 1 1 1	<u>DC</u>	<u>Other</u>
Total Parcels	125,000	40,000
Market Value Discovered	\$948M (1)	\$89M (2)
Effective Tax Rate	.91%	1.4%
Tax Revenue	\$8,729,900	\$1,372,635
Contract Amount	\$800,000	\$200,000
ROI (minimum)	11:1	7:1

NOTE:

- (1) From only three data elements (parking, grade and condition)
- (2) Figure does not include effective age changes



Wyandotte County, Kansas Commercial Valuation & Final Review



Project Summary





The Process



Parcel Count Analysis

The County provided Mobile Video with a list of commercial parcels identified with a review code.

Review Code	Count of PID
Apartments	483
Comm_Multiple Card	2540
Comm_Single Card	1607
Exempt	817
Hotel	33
MH Park	12
No Structure	570
Res Mixed	85
Tower	29
Vacant	1370



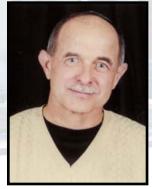
Valuation and Review Staff

The Final Review was conducted by five qualified appraisers with expertise and knowledge of the valuation techniques employed to value commercial properties.

- MAI
- CAE
- State Certified General Appraiser











Week 1: Training and On-Site Review

The appraisal team came on site to view the properties and become familiar with the CAMA system and valuation tools.

- Calibrate Cost System
- CAMA System Training
- Review Software/Technology
- Neighborhood Inspection
- Visit Sale Properties



Calibrate Cost System

- Review of sales ratio using current cost parameters vs sales.
- Analysis of current data and any required updating.
 - Cost Index
 - Economic Life
 - All forms of depreciation
- Re-costing of files following updates.
- Review of sales ratio using updated cost parameters vs sales.



Review Technology

The reports in the appraisal review application provide the means to analyze specific data exceptions. The user can create customized reports or use the Appraisal Management Reporting application that provides preformatted standard reports.





Review Technology

TEAM Consulting appraisers utilized the KSCAMA system to determine and document final values.

They connected to the County's network through a VPN connections from remote sites.





Review Technology

The TEAM used Mobile Video's *appraisal review software application* to facilitate the Final Review process. This application allows the user to:

- Query the database to review records.
- Compare the exceptions to their original values.
- Review the sketch, street-view image and the GIS map layers for the parcel.





Weeks 2 and 3: Valuation Process

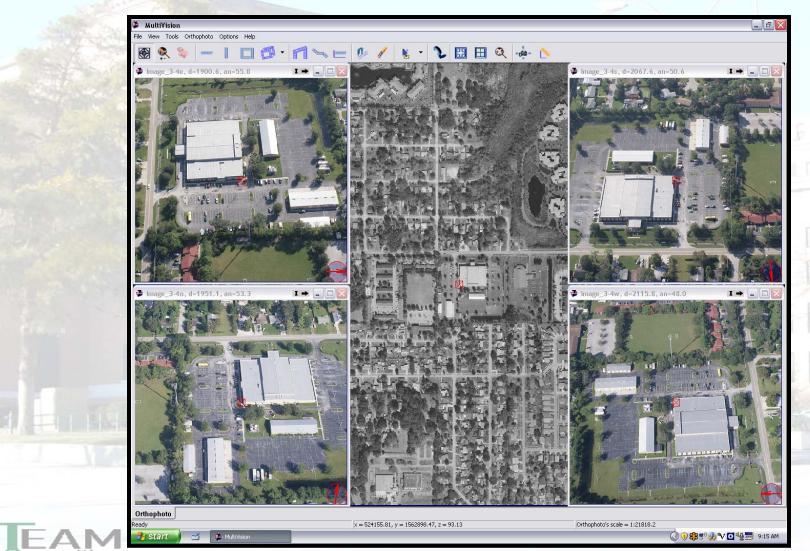
- Data
- Technology
- VPN
- Remote Location
- Valuation
- Data Entry







Ortho and Obliques





Valuation Data

Mobile Video's appraisal review application allowed the appraisers to review the following data components:

- Street-View Imagery
- Oblique Imagery
- KSCAMA Application
- Commercial Valuation Sheets
- Requests for Field Checks
- GIS Data



Commercial Cost Data

- Inventory Content Sheets, Commercial Valuation Sheets and Photos of all valid sales for 2003-2005.
- Current economic life and depreciation tables in CAMA and the same information from Marshall & Swift.
- Valid land sales for 2003-2005.
- Neighborhood delineations and descriptions.
- Index studies for the last three (3) years.



Valuation Process

- Determine that value estimates assigned to improvements and land reflects the actual market value of the property.
- Identify and correct any data entry or transcription errors or changes to physical characteristics that may influence market value.
- Verify consistent and accurate construction quality grading of buildings and improvements.
- Verify and adjust for locational obsolescence factors to reflect market trends originating outside the property.





Valuation Process

- Correlate the indicated value from the approaches used to estimate value.
- Ensure that each property has been valued equitably in relation to other like properties.
- Determine that the classification assigned to each parcel truly reflects the actual use or uses of the parcel.

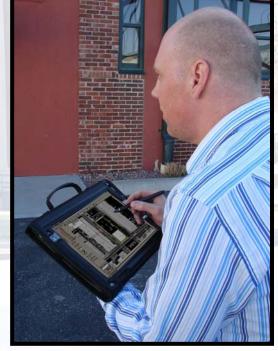


Week 4: Final Review

The Final Review was conducted by correlating the estimates derived through the KSCAMA models, and alternative valuation models, along with considerations of all other relevant data.

A record was maintained containing appropriate documentation to substantiate the final value estimates.





Project Timeline

Data conversion and software installation......Jan 12

On-site training.....Jan 17-20

Off-site review.....Jan 21-Feb 5

On-site completion of review process.....Feb 6-9

This project was completed in just four weeks time!



Future: Formal Hearings

TEAM Consulting appraisal experts will attend appeal hearings to support the final value of the subject properties, should taxpayers wish to contest those values.





Jackson County, Missouri Business Personal Property Field Verification



Reason for Project

Jackson County had a number of school districts that were complaining about tax revenue going to the wrong districts. The primary causes of this problem were:

- Situs Address
- Mobile Homes Moving
- Multi-Parcel Business Returns
- Name Changes (DBA)
- Properties Not on Roll



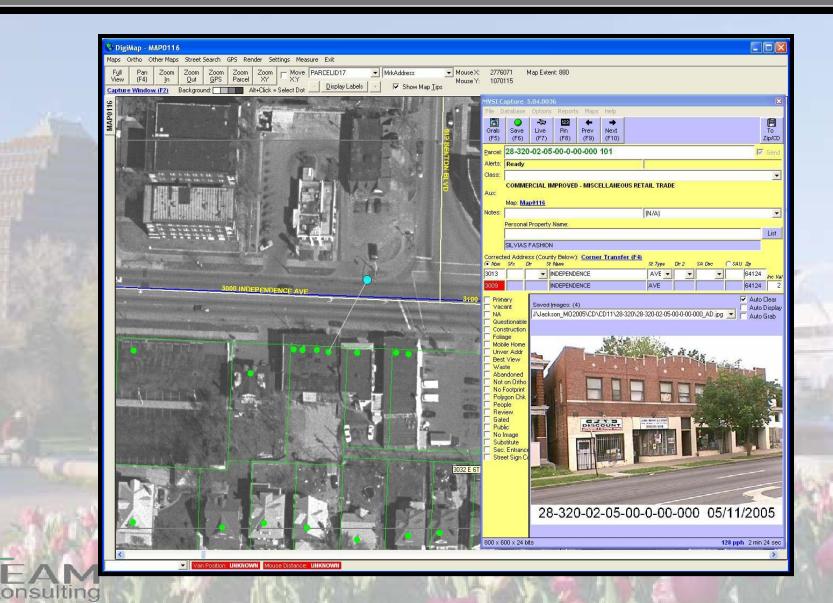


Data Provided by County

- Single unique parcel identifier for each parcel in the jurisdiction
- Fixed-width text file or database with each parcel's unique identifier, site address if available and classification code, tax map number
- ESRI shape files as polygons and street centerline file
- Orthophotography



Data Provided by County



Data Collected

- Street-view image
- Geo-referenced location (x-y coordinate)
- Field-verified address delivered in any specific format
- Name of the business visible from public access

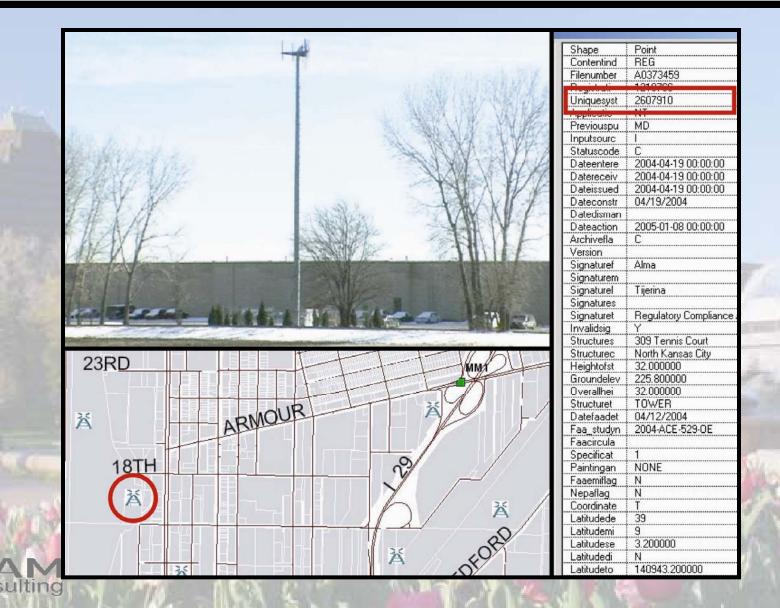


Data Collected

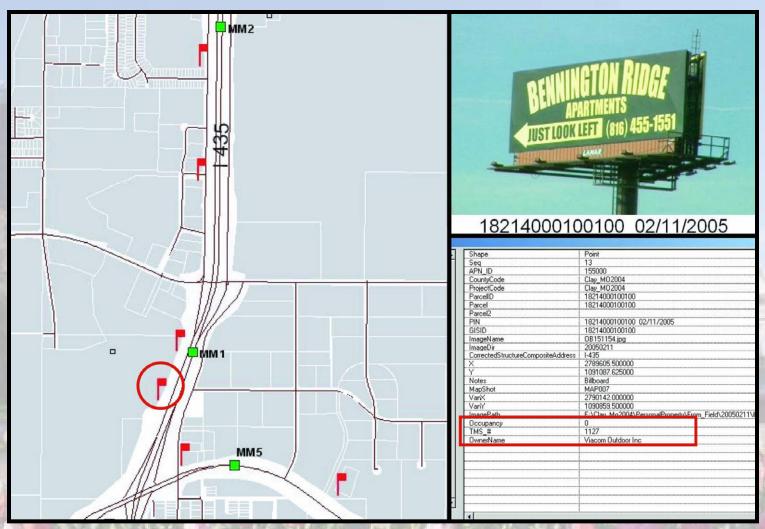




New Types of Property Identified

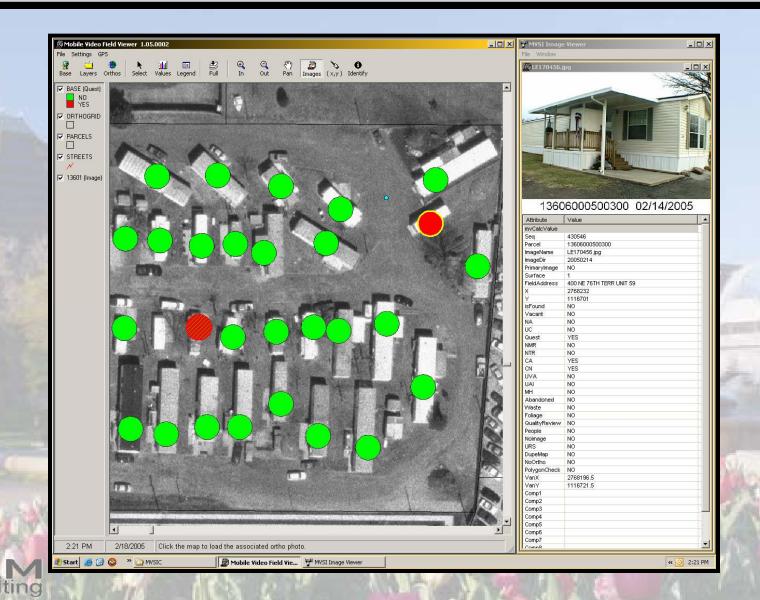


New Types of Property Identified





Mobile Home Discovery



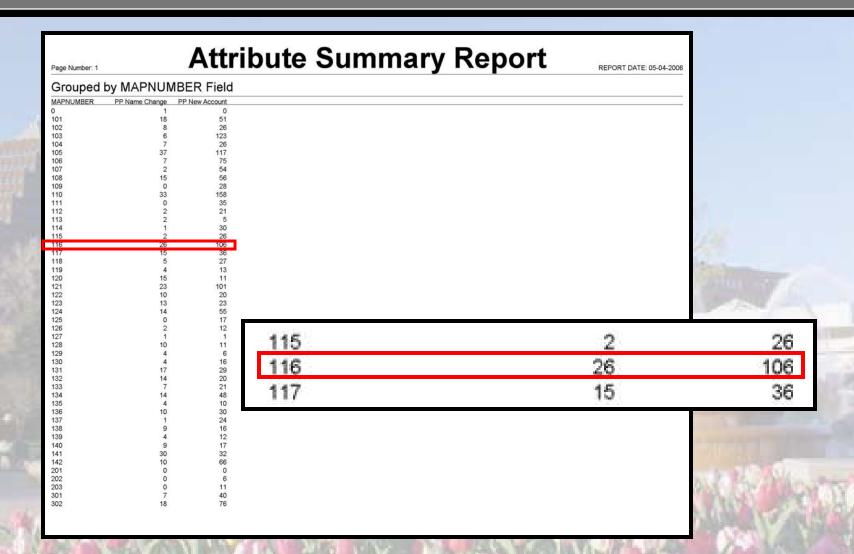
Locating Database Exceptions

Using software to locate exceptions, out of 25,000 commercial accounts

- 989 accounts were located where the business name had changed
- 3,273 accounts were new and not in the business personal property file taken into the field.



Exception Summary Report



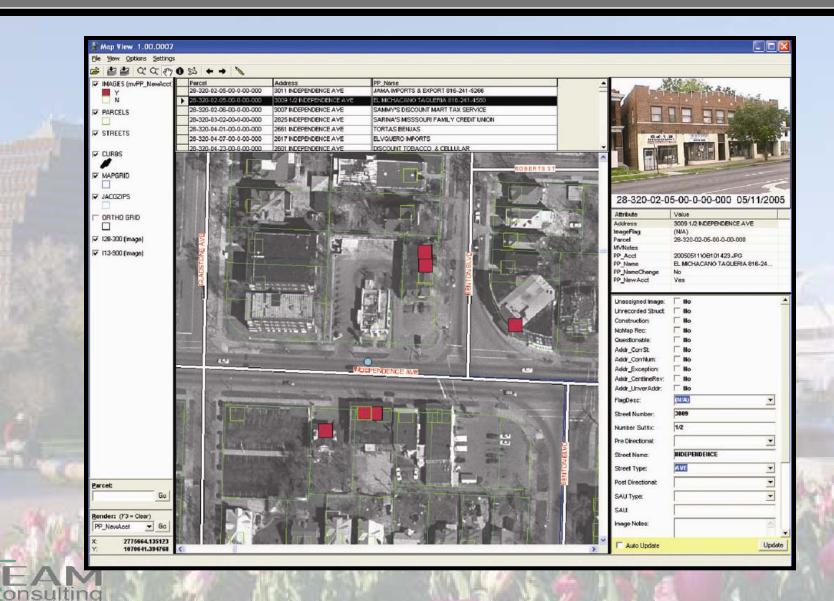


Exception Grid Report

Page Number		40: 1 :		erid Rep	, O i t			REPORT DATE: 05-04-2006		
	P for Map 1		son County FieldAddress	PP Name	DD Name Change	DD Now Accoun	t SEQ			
		MVideoMap 116	3007 INDEPENDENCE AVE	SAMMY'S DISCOUNT MART TAX SERVICE	0	PP New Accoun	170976			
29-110-30-18-00-0-000 116		116	2124 E 12TH ST	HOME SWEET HOME	0	1	113763			
29-130-10-25-01-0-00-000 116		116	1316 E 14TH ST	YELLOW CAB CO	0	1	114070			
29-110-30-18-00-0-000 116		116	2128 E 12TH ST	PAPA LEW'S SOUL DELICIOUS FOOD	0	1	113760			
29-110-30-18-00-0-000 116		116	2120 E 12TH ST	GREEN RIVER	0	1	113761			
29-110-30-18-00-0-000 116		116	2122 E 12TH ST	CB PROPERTIES	0	1	113762			
29-620-08-06-00-0-00-000		116	1212 E 19TH ST	WILTIL COMMUNICATIONS	0	1	114876			
29-210-44-05-00-0-000 116		116	1146 HARRISON ST	SERVICE PRINTING & GRAPHICS, INC	1	0	114593			
9-620-01-07-00-0-02-001 116		116	1700 E 18TH ST	RED VINE	0	1	114864		THE POST OF	
29-130-06-12-00-0-000 116		116	1120 E 13TH ST	WR. MEADOWS, INC	0	1	114059			
9-110-18	28-320-02-05	5-00-0-00-000	116	3011 INDEPEN	NDENCE	JAMA IMPO 816-241-52	RTS & EXPORT 66	0	1	170974
9-110-31 9-110-31	28-320-02-05	5-00-0-00-000	116	3009 1/2 INDE AVE	PENDENCE	EL MICHAC 816-241-45	ANO TAQUERIA 80	0	1	170975
29-110-3		-00-0-00-000	116	2313 E 12TH ST		NATURAL SOAP CO		0	1	171836
29-110-31-05-00-0-000		116	1111 BROOKLYN AVE	MID -K BEAUTY SUPPLY	0	1	113766			
29-110-31-05-00-0-000		116	1123 BROOKLYN AVE	MUCH MUSIC & MORE	0	1	113767			
29-140-41-04-00-0-00-000		116	1601 OLIVE ST	TIME WARNER CABLE	1	0	180391		A STATE OF THE PARTY OF THE PAR	
28-320-02-05-00-0-00-000		116	3011 INDEPENDENCE AVE	JAMA IMPORTS & EXPORT 816-241-5266	0	1	170974		10.00	
28-320-02-05-00-0-00-000		116	3009 1/2 INDEPENDENCE AVE	EL MICHACANO TAQUERIA 816-241-4580	0	1	170975		Sty Miles	ALTA
29-140-03-25-00-0-00-000		116	2313 E 12TH ST	NATURAL SOAP CO	0	1	171836			- Walter
29_120_12_02	2-00-0-00-000	116	1409 ADMIRAL BLVD	ADMIRE MOTEL	0	1	113887		100 100 100	



Single Business Report



Return on Investment

ACCOUNTS \$ PER ACCT. COUNTY TOTAL \$

Data Collection 25,000 \$3.00 \$75,000.00

Missing Properties Identified 3,900 \$500.00 (avg.) \$2,000,000.00

- Using a 2% ETR the return would be \$400,000 on a \$75,000 investment.
 Not a bad return!
- Plus the additional problems that were fixed:
 - Wrong Tax District
 - Situs Address
- Who knows what this is worth?





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