



BECOMING A MOBILE ASSESSOR

MAAO Fall Conference
Duluth, MN



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DATA CLOUD SOLUTIONS, LLC.

AGENDA

- Discussion – What is a **field optimized** mobile solution?
- Desirable Features
- Demonstration
- Client Stats & ROI
- Integrated tools
- Questions?

WHAT IS A FIELD OPTIMIZED MOBILE SOLUTION?

- Going “mobile” or “paperless”?
- Risks and benefits of going mobile
- Qualities of a **field optimized** mobile solution

DESIRABLE FEATURES

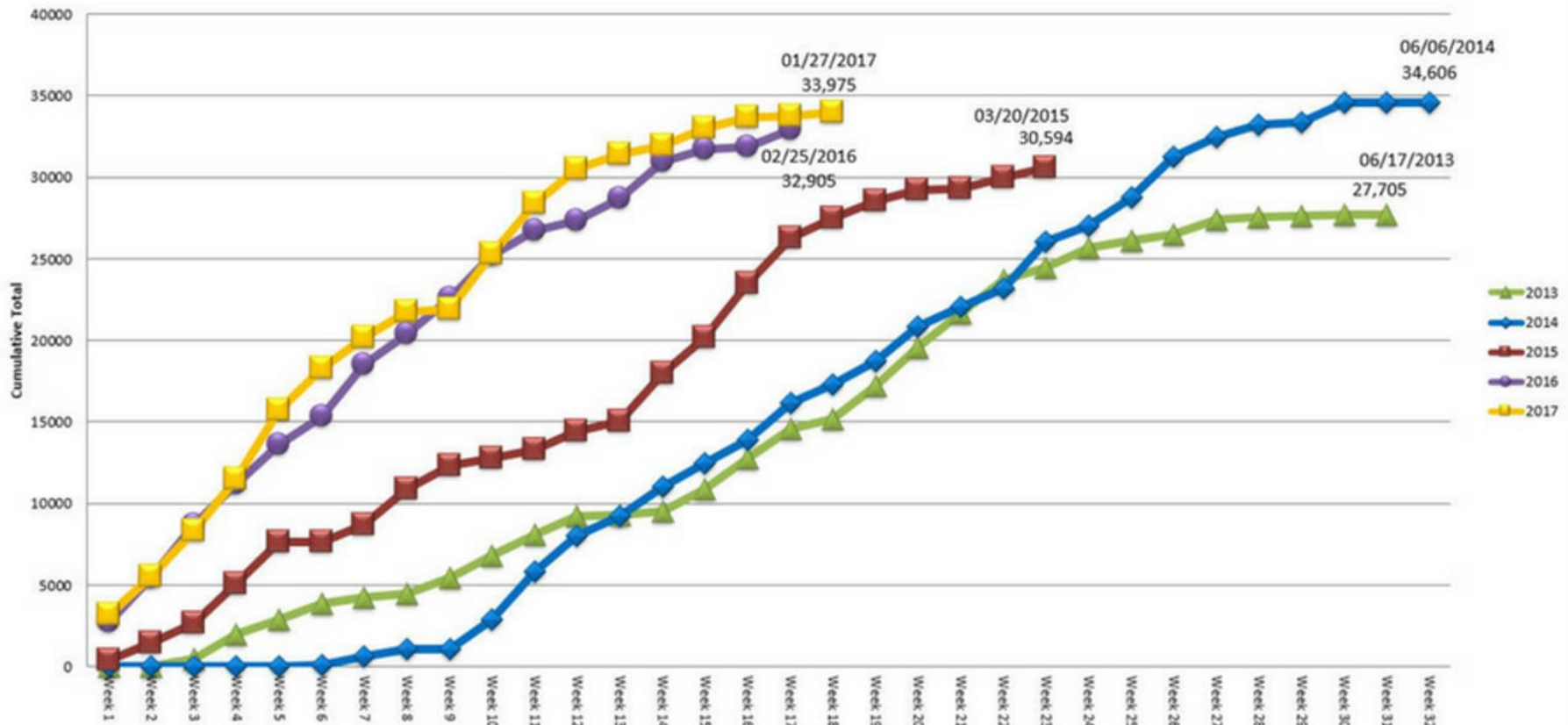
- Optimized & Dynamic Routing
- Instant Photo Association and Synchronization
- Easy Touch-Screen Sketching
- Real-Time Quality Control
- Monitor Productivity (automated reporting)
- No check-in / check-out
- Integration with Leading 3rd Party Tools
- Easy Management of Work Assignments



DEMONSTRATION

CLIENT STATS & ROI

Residential Fieldwork - Field Checks Completed and Data Changes Input into CAMA System



Field Checks Completed by Appraisers

Timeframe	2013	2014	2015	2016	2017
Method	Paper	Paper	iPad	iPad	iPad
Through Week 1	951	896	1,287	2,927	3,221
Through Week 2	3,727	2,154	3,111	5,544	5,519
Through Week 3	4,431	3,692	4,915	8,915	8,333
Through Week 4	5,496	5,054	6,513	11,636	11,509
Through Week 5	7,449	6,709	8,101	14,718	15,723
Through Week 6	9,041	8,634	8,696	15,506	18,312
Through Week 7	11,148	10,037	11,201	18,549	20,191
Through Week 8	11,148	11,085	12,777	20,756	21,749
Through Week 9	13,636	12,771	15,005	22,707	21,891
Through Week 10	15,155	14,868	15,335	25,296	25,286
Through Week 11	15,155	17,878	15,545	26,764	28,416
Through Week 12	15,947	17,909	16,774	28,032	30,494
Through Week 13	16,855	18,952	18,767	29,538	31,403
Through Week 14	17,264	20,607	20,831	31,743	31,948
Through Week 15	18,559	23,092	23,651	31,929	33,006
Through Week 16	19,573	25,608	26,870	32,905	33,673
Through Week 17	20,428	27,549	29,249		33,725
Through Week 18	23,483	29,489	30,594		33,975
Through Week 19	25,112	30,776			
Through Week 20	26,204	31,466			
Through Week 21	27,705	32,156			
Through Week 22		32,876			
Through Week 23		33,741			
Through Week 24		34,606			
Through Week 25					
Through Week 26					
Through Week 27					
Through Week 28					
Through Week 29					
Through Week 30					
Through Week 31					
Through Week 32					

Last Date

Data Entry of Changes Completed and Keyed into PACS

Timeframe	2013	2014	2015	2016	2017	Difference 2017 vs 2016
Method	Paper	Paper	iPad	iPad	iPad	
Through Week 1	2	16	428	2,724	3,221	497
Through Week 2	18	16	1,428	5,417	5,519	102
Through Week 3	505	16	2,628	8,695	8,333	-362
Through Week 4	1,954	16	5,061	11,216	11,509	293
Through Week 5	2,895	16	7,642	13,630	15,723	2,093
Through Week 6	3,866	125	7,661	15,319	18,312	2,993
Through Week 7	4,280	613	8,687	18,522	20,191	1,669
Through Week 8	4,445	1,094	10,905	20,371	21,749	1,378
Through Week 9	5,419	1,095	12,329	22,580	21,891	-689
Through Week 10	6,786	2,918	12,765	25,234	25,286	52
Through Week 11	8,104	5,828	13,305	26,695	28,416	1,721
Through Week 12	9,223	8,003	14,423	27,336	30,494	3,158
Through Week 13	9,281	9,223	15,008	28,681	31,403	2,722
Through Week 14	9,521	11,019	17,948	30,984	31,948	964
Through Week 15	10,866	12,460	20,161	31,685	33,006	1,321
Through Week 16	12,739	13,898	23,483	31,833	33,673	1,840
Through Week 17	14,571	16,137	26,257	32,905	33,725	820
Through Week 18	15,190	17,311	27,484		33,975	
Through Week 19	17,195	18,733	28,573			
Through Week 20	19,568	20,851	29,213			
Through Week 21	21,658	22,082	29,277			
Through Week 22	23,680	23,210	29,988			
Through Week 23	24,474	26,030	30,594			
Through Week 24	25,688	27,047				
Through Week 25	26,141	28,770				
Through Week 26	26,531	31,237				
Through Week 27	27,380	32,474				
Through Week 28	27,524	33,251				
Through Week 29	27,631	33,379				
Through Week 30	27,699	34,584				
Through Week 31	27,705	34,601				
Through Week 32		34,606				

6/17/2013

6/6/2014

3/20/2015

2/25/2016

ANNUAL SAVINGS

YEAR #1

Item	Cost Estimate	Total Cost Savings
Print field cards & building permit details	.097 per page	\$5,936
Personnel cost for print and organize	40 hrs @ 17.50	\$700
Print maps – consumables		\$1,500
Print maps – personnel	80 hours @ \$18.27 per hour	\$1,462
Labor – data entry – clerical staff input	8 people, 30 weeks, \$16.87 per hr	\$161,952
Labor – appraisers – fieldwork processing and photo upload	30 Appraisers @ \$23.57 per hr @ 16 hrs per week for 18 weeks	\$203,645
Labor – appraisers – finishing field effort 6 weeks early	30 Appraisers @ \$23.57 per hr @ 40 hrs per week for 6 weeks	\$169,704
	Cost Savings	\$544,899

- Approximately \$1.65 per parcel in the 1st 12 months.
- After 2-3 years of use, savings are now over \$4.00 per parcel.
 - Each year, not cumulative.


INTEGRATED TOOLS

- Sketch Validation
- DeskTop Review
- Comparable Properties
- MRA

SKETCH VALIDATION

The screenshot displays the CAMA Cloud Sketch Validation web application. At the top left is the logo for CAMA Cloud Sketch Validation. Below the logo is a navigation bar with links for Sketch Validation, History, Reports, Administration, and Logout. A search bar contains the following information: Parcel ID: [empty], Neighborhood: 617R, Flag Status: All, and Reviewed By: [empty]. To the right of the search bar are buttons for Search, Clear, and Refresh. Below the search bar are map controls for Map and Satellite. The main area is a map showing a residential neighborhood with streets labeled: Eastgate Rd, Meadow Rue Dr, Glenbrier Rd, Unity Ct, Vesper Ct, Garden Ridge Dr, Valley Ridge Ct, Valley Way Dr, and Glendel Ln. The map features numerous green circular markers, several orange circular markers, and two purple circular markers. Two white circular callouts are visible on the map. In the bottom left corner is the Google logo, and in the bottom right corner is the text "Map data ©2017 Google Terms of Use". At the very bottom of the page, it says "Powered by CAMA Cloud Copyrights - Data Cloud Solutions, LLC. - All rights reserved."

SKETCH VALIDATION

 CAMA CloudSM
Sketch Validation

Sketch Validation History Reports Administration Logout

Parcel ID: 7815437 Neighborhood: Flag Status: All Reviewed By: Search Clear Refresh

Sketches: RES ??? [7815437] Sections: 1

Zoom: 78% Rotate: -2°

Sketch Validation & Review:

Parcel ID: 7815437 Neighborhood: 2017R

OutBuildings

Line	Code	OB Year	OB Area	Meas 1	Meas 2
1	GARAGE DETACHED - RES	1998	400	1	400

Save Review Reset


Notes:
sketch inaccurate

Field Inspection Data Entry Further Review
 Completed QC Passed

Other flags: Click or slide the button to change state.

Obstructed View NO

Map Satellite



Map data ©2017 Google Imagery ©2017 Terms of Use

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SKETCH VALIDATION



CAMA CloudSM
Sketch Validation

Sketch Validation History Reports Administration Logout

Sketch Validation Reports

Select Report:

Parcels for Further Review

Report Parameters:

Parcel Flags

Field Inspection

Neighborhood

-- Select --

User

-- Select --

Parcel Number

Generate Report

1 of 31 Find | Next

FOR FURTHER REVIEW - SKETCH VALIDATION

Neighborhood	Parcel Number	Street Address	Reviewer's Note
1013R	8369534	6149 HOLLIDAY DR	Rear addn missing, carport/porch?
313R	2315724	3124 BROCK DR	Add on to the house?
617R	2008852	1574 PARK RIDGE LN	Sketch Inaccurate
404R	0460181	1490 FOSTER AVE	large unidentified building.
313R	2315634	3239 BROCK DR	No Sketch
617R	1455594	1638 FALLBROOK RD	Sketch Inaccurate - WDDK turned into sun room
617R	1455604	4499 MEADOW CREEK CT	Sketch Inaccurate
313R	2315657	3211 BROCK DR	Sketch inaccurate
313R	2335907	3163 KEEMONT DR	Sketch Incorrect
617R	2058434	1666 GLENFIELD LN	Sketch Inaccurate
313R	2324474	3014 EDGEBROOK DR	Sketch inaccurate
313R	2324484	2966 EDGEBROOK DR	Sketch innaccurate
315R	2359874	2031 ROANWOOD DR	no sketch!



DESKTOP REVIEW

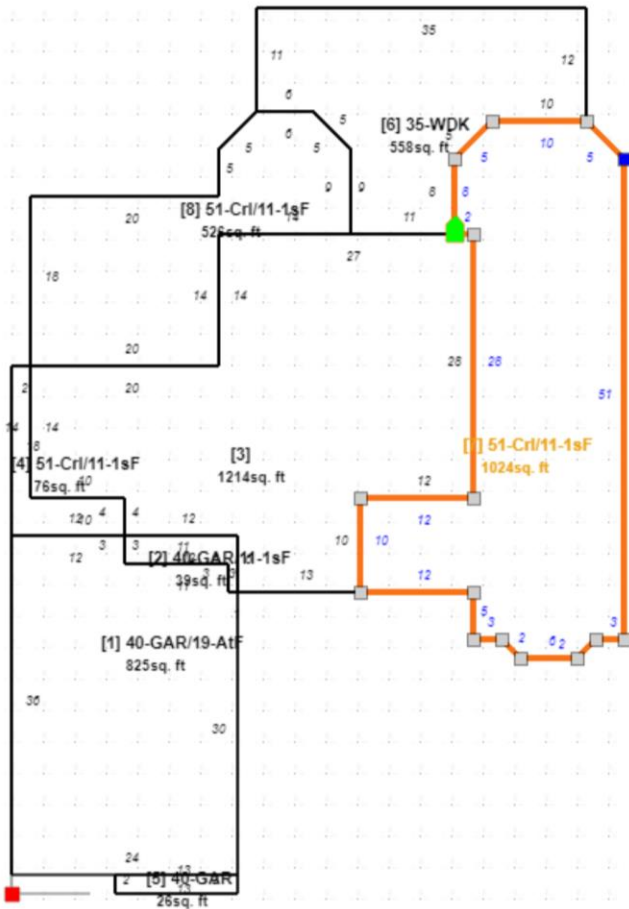


DESKTOP REVIEW

Select Sketch/Segment: RES - 1/2003 [2] [7] 51-Cri/11-1sF 60%



Keys Delete Node Add Node before Save Changes Close

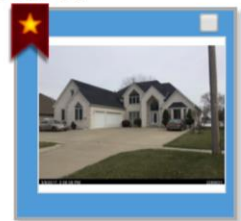


3/9/2017, 2:56:38 PM

2288831

CCImageId:102988

Parcel Photos - showing 1 of 1



Select All

Add Photo


Delete

DESKTOP REVIEW



DESKTOP REVIEW

Save Changes
Close
Set As Not Reviewed
Reject
Previous Parcel
< 17 of 71304 >
Next Parcel



1111 NAVARRE AVE

Property ID
0100407

NOT SET
APPROVE
Soft Reject

Selected Estimate : -- Not Selected --

Dashboard
Parcel Data
Digital PRC
Sketch
GIS Map View
Audit Trail
Parcel Photos

Dwelling ⬆

- Parcel Identification
- Owner
- Sales
- Land
- Dwelling**
- OBY
- Entry
- Value Summary**
- Commercial Buildings
- Legal Information
- Permits
- Temporary Notes


Showing record 1 of 1
X Delete

Main SH : *	6 - TWO STORY								
Max SH :	6 - TWO STORY								
Attic :	1 - NONE								
Construction (ExtWall) :	3 - METAL/VINYL								
Condition (CDU) : *	3: AVERAGE	!	<div style="background-color: #fff9c4; padding: 5px; border: 1px solid gray;"> <p>Click on the appropriate value to select the approved one. You may also select/enter a new value if required.</p> <p>Initial Value: 5: BELOW AVERAGE</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th>Date</th> <th>Changed by</th> <th>New Value</th> </tr> </thead> <tbody> <tr> <td>5/24/2017</td> <td>ESugg</td> <td>3: AVERAGE</td> </tr> </tbody> </table> </div>	Date	Changed by	New Value	5/24/2017	ESugg	3: AVERAGE
Date	Changed by	New Value							
5/24/2017	ESugg	3: AVERAGE							
Style :	17 - OTHER - Standard CDU	!							
Year Built : *	1907								
% Complete :	100								
Grade :	16 - D+	!							
Remodeled (Year) :									
Degree Remodeled :									
Remodel :	0 - MISSING								
Total Rooms :	5								
Bedrooms :	2								
Full Bath :	1								
Half Bath :	0								

AUXROWUID : 17437

DESKTOP REVIEW

Save ChangesCloseSet As Not ReviewedRejectPrevious Parcel< 1 of 1 >Next Parcel



1/3/2017 2:08:38 PM 2288831

2314 SHORELAND AVE

Property ID: **2288831**

Desk Review Status: Edits Made ▼




Last QC Reviewed: 4/6/2017

NOT SETAPPROVESoft Reject

Dashboard**Parcel Data**Digital PRCSketchGIS Map ViewAudit Trail

Residence

Property Situs & Legal InformationShowing record 1 of 1X DeleteAUXROWUID : 674

CLASS : *	Residential	▼
STRAT : *	Improvement	▼
Occupancy : *	1 Story	▼
Grade : *	95	▼ 
Heated Area :	1,440	
Year Built : *	1970	
Effective Yr Blt :	1965	
Condition : *	Good	▼ 
Foundation : *	Concrete Block	▼
Ext Walls : *	Frame	▼
Roofing : *	Composition Shng	▼
Roof Shape : *	Gabel/hip	▼
Floor Construction : *	Wood Joist	▼
Floor Finish : *	Carpet / Vinyl	▼



QUESTIONS?