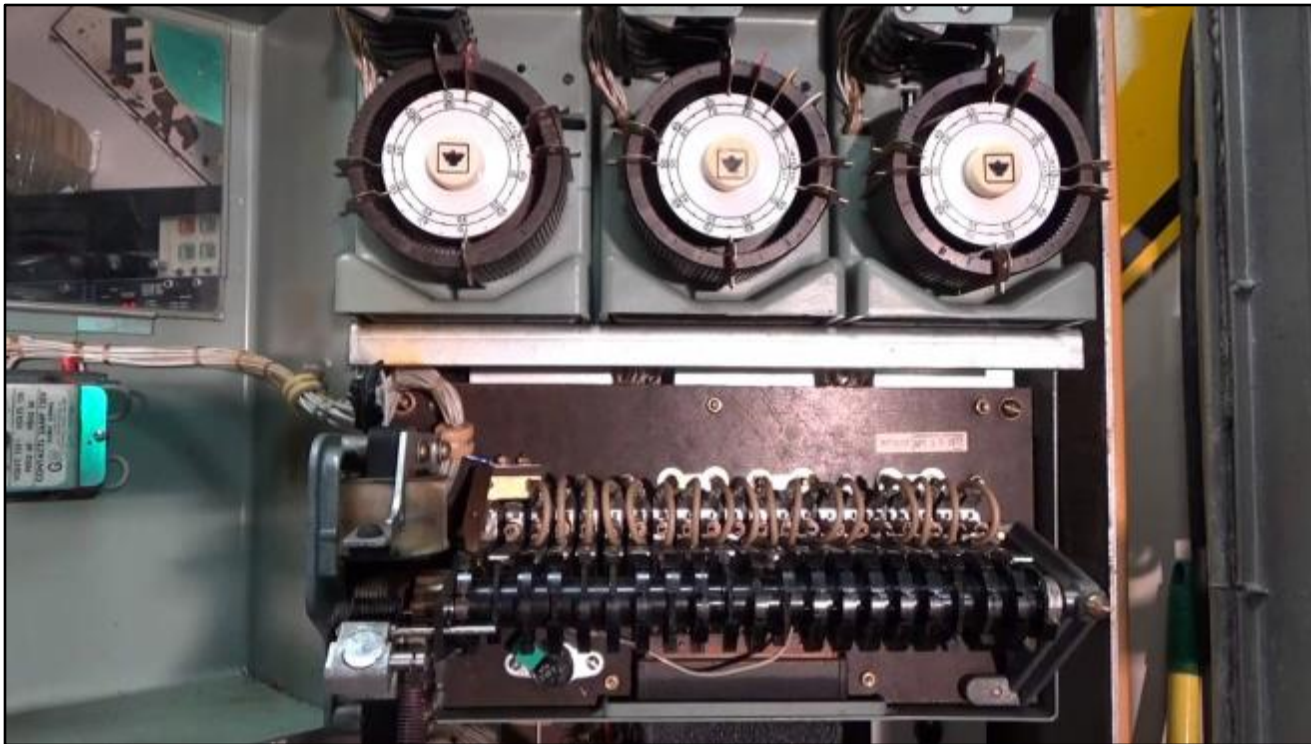


GDOT Signal Software Project Update



Alan Davis, PE, PTOE
Assistant State Traffic Engineer



86°

EQUIPMENT WORLD'S
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DOTS

Georgia DOT partners to install 1,000 smart

Chris Hill | August 30, 2016

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The Georgia Department of Transportation (GDOT) has partnered with Intelight to install 1,000 smart traffic signals across the state by the end of July. The project is part of a multi-year effort to upgrade traffic signals throughout Georgia to an "up-to-the second" control technology.

GDOT says the updates will keep engineers from relying on citizen complaints or on-site checking of signals. Instead the system will allow the signals to automatically provide real-time feedback to a central system in the



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PATCH DEAL HOUND» Dremel, Running Shoes, String Lights and More: Tuesday's Best Deals

Politics & Government

'Smart' Signals Come To Bartow County

The Georgia Department of Transportation has rolled out the new technology at about 1,000 intersections across the state.

By Kristal Dixon (Patch Staff) - August 30, 2016 2:44 pm ET [P](#)



Trending Now Across Patch

Latest News

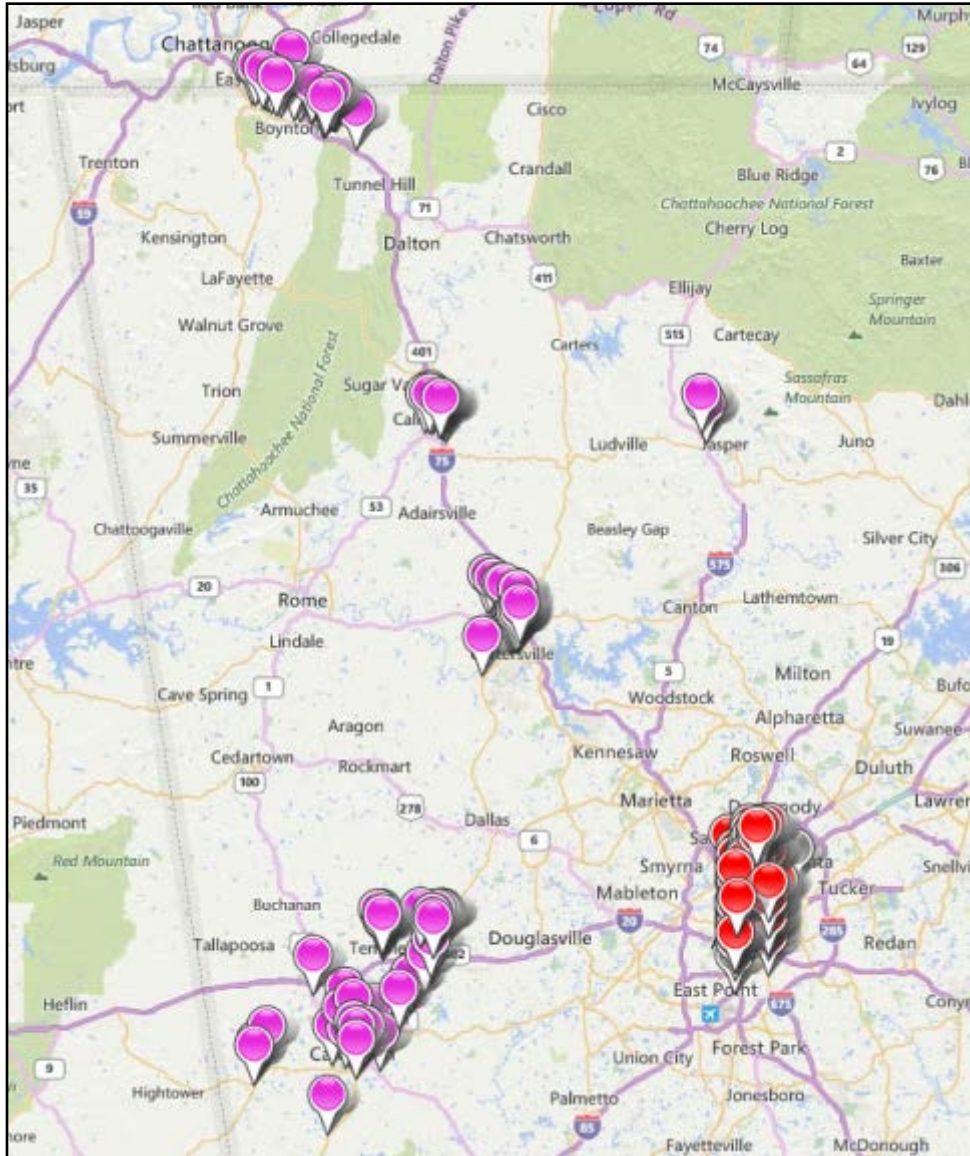
because

- Peachtree Ridge siblings expand CARE closet concept

GDOT Signal Software

1. Current progress
2. Project features and technology
3. Project hurdles and milestones
4. Future initiatives

Current Progress



Deployment as of 2/9/2016

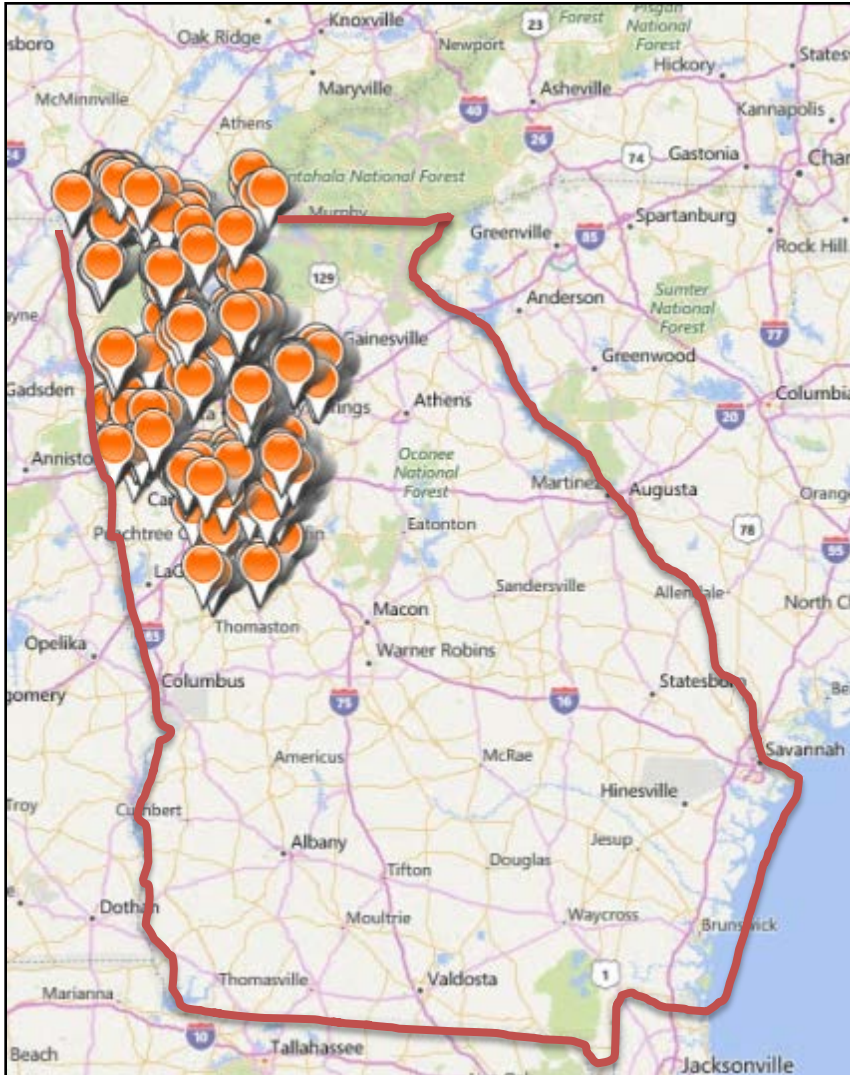
- 185 intersections – RTOP
- 153 intersections – District 6

Scheduled for 2016:

- Gwinnett County
- Athens Clarke County
- City of Atlanta
- Cherokee County
- District 3
- District 5

**4,060 intersections by
February 2017**

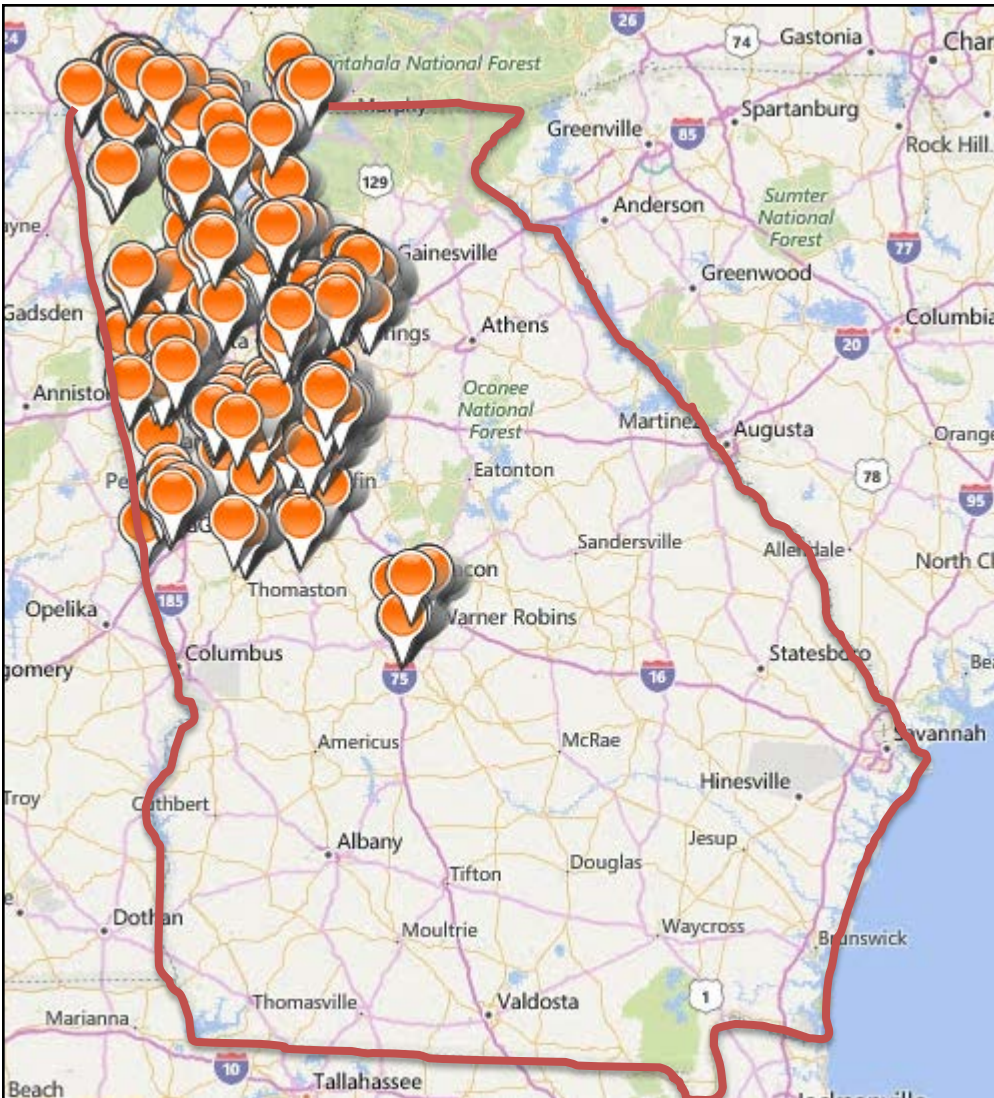
Current Progress



- **937** intersections converted (7/15/2016)
 - 426 – District 6
 - 191 – RTOP/City of Atlanta
 - 132 – District 3
 - 188 – Gwinnett County
- Current Authorized Deployments:
 - RTOP – 790
 - Gwinnett County – 517
 - District 3 – 444
 - Athens Clarke County – 176
 - District 5 - 355

**3,219 intersections by
February 2017**

Current Progress



1,311 intersections converted (8/19/2016)

- 426 – District 6
- 191 – RTOP/City of Atlanta
- 204 – District 3
- 490 – Gwinnett County

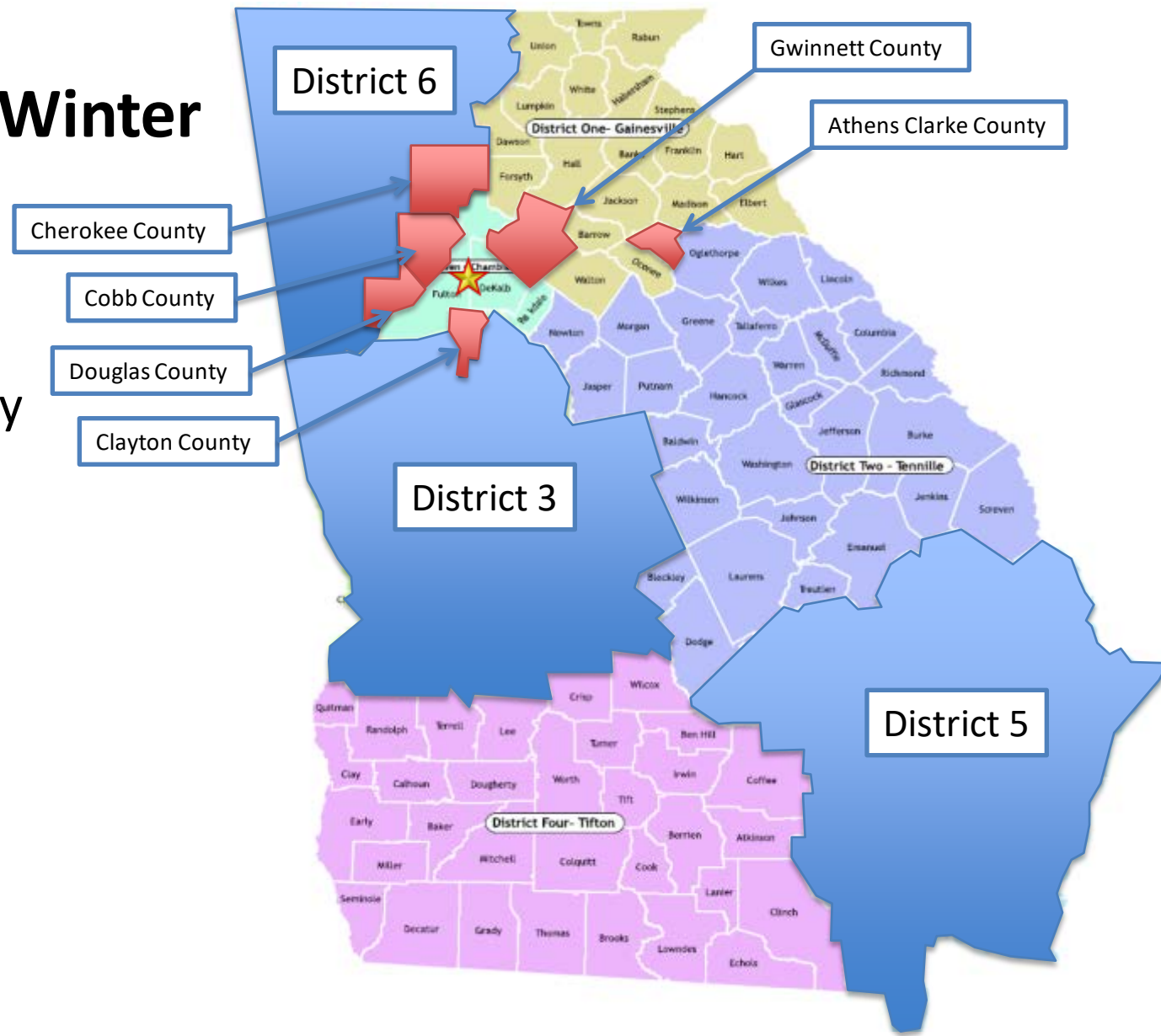
Current Authorized Deployments:

- RTOP – 790
- Gwinnett County – 517
- District 3 – 444
- Athens Clarke County – 176
- District 5 - 355

3,219 intersections by
February 2017

Coming Fall - Winter 2016:

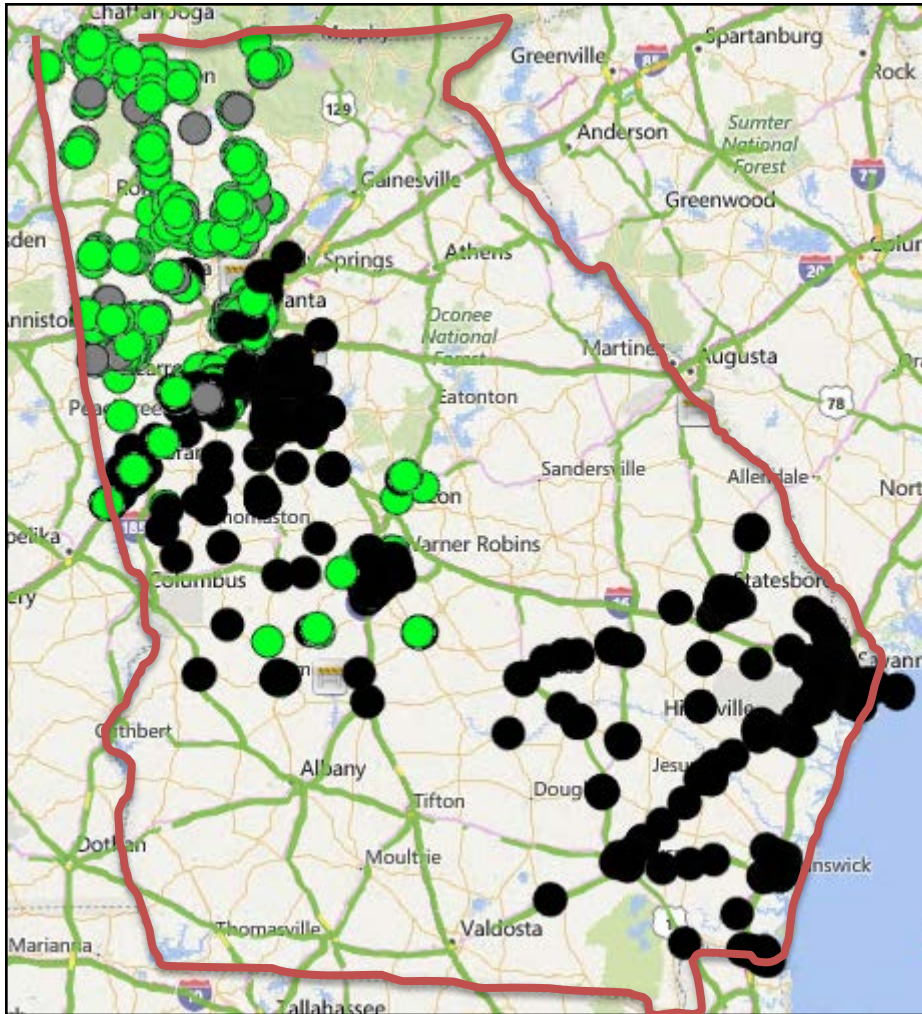
- Cobb County
- Douglas County
- Cherokee County
- Clayton County



Project Features



Communications



- **558** intersections online
 - 426 – District 6
 - 132 – District 3
- **100% of GDOT maintained signals online by May 2017**

GDOT Signal Performance Metrics

->Signal Metrics

Selected Signal
 No Signal Selected

Signals
 District
 Metric Type
 Filter

Signal List

Map

Metric Settings

Metric Type

- ☐ Approach Delay
- ☐ Approach Volume
- ☐ Arrivals On Red
- ☐ Purdue Coordination Diagram
- ☒ Purdue Phase Termination
- ☐ Speed
- ☐ Split Monitor
- ☐ Turning Movement Counts

Time Y Axis Maximum

Volume Y Axis Maximum

Volume Bin Size

Dot Size

☒ Show Plan Statistics

☒ Show Volumes

[Export Data](#)

☐ Upload Current Data

Dates

Start Date AM

End Date PM

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6



Coming Soon



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Railroad Safety Program

Roundabouts

Safe Routes to School

Traffic Signals

Traffic Signals

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TRAFFIC SIGNAL OUTAGE

VISIT 511



Engineering, Technology & Innovation

Traffic Signal Performance Metrics



Coming Soon

QPL 48



Traffic Signal & ITS Equipment

QPL Requirements



Traffic Signal Design Guidelines



Signal Performance Metrics



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STIC Network

AID Demonstration

Resources

every day counts

An Innovation Partnership with States





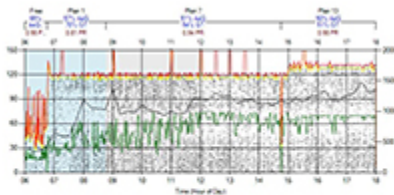
Mobility • Safety • Quality • Environment • Shortening Project Delivery

EDC-4 Innovations (2017-2018)

Signal Performance Metrics

Automated Traffic Signal Performance Measures (ATSPMs)

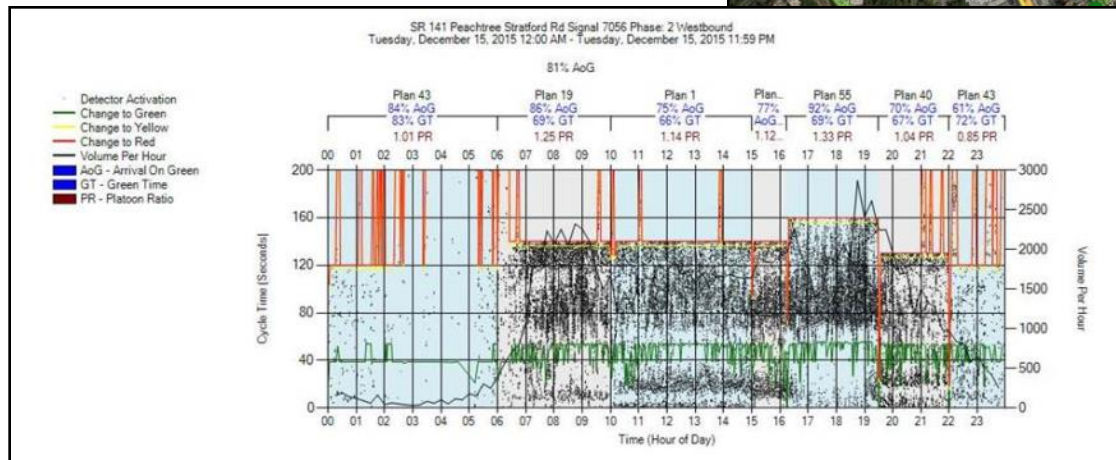
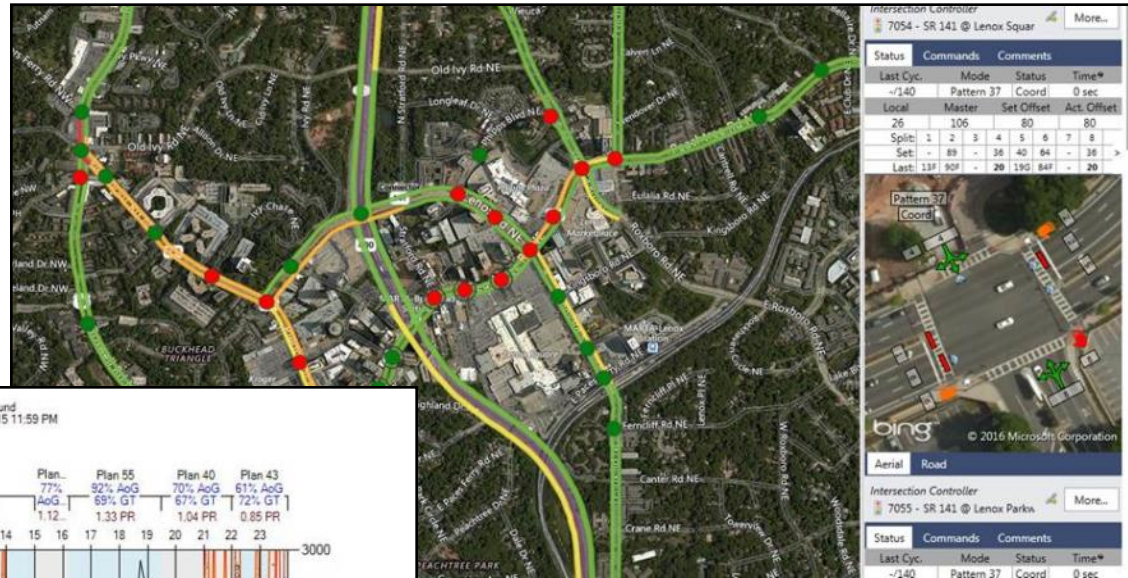
Highway agencies typically rely on complaints or manual data collection processes to identify the need for and outcomes of signal retiming projects. These projects are typically scheduled on a three- to five-year cycle, at a cost of approximately \$4,500 per intersection. The costs and level of effort associated with collection of performance data translates into congestion, reduced safety and increased delays for vehicles, pedestrians and bicycles.



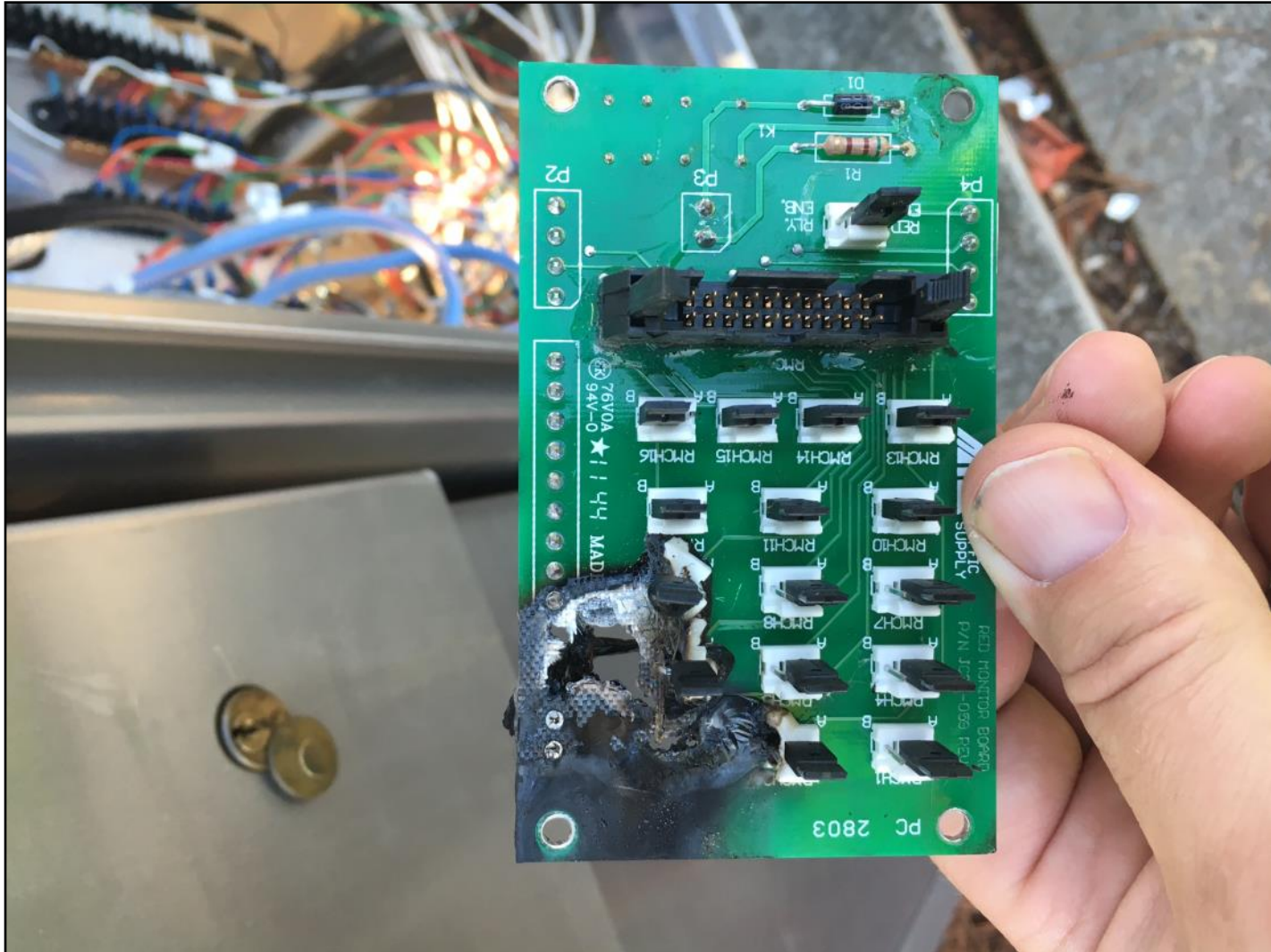
ATSPMs will revolutionize the management of traffic signals by providing the high resolution data necessary to actively manage performance. High quality service can be delivered to customers with significant cost savings to agency maintenance and operations activities. A number of technology implementation options are available including a low-cost open source code framework supported by peers, to fully integrated traffic signal system alternatives provided by vendors or consultants.

Project Features

- Database cleanup and review
- Training
- Improvement



Project Hurdles and Milestones



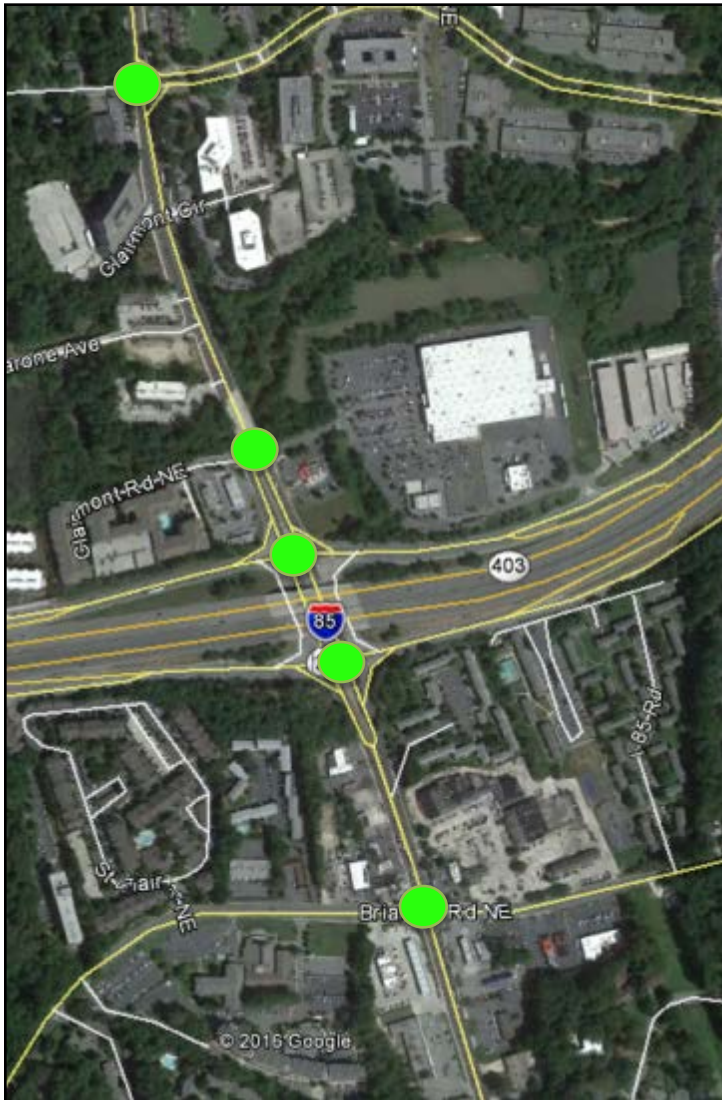
Benefits

Clairmont Drive (SR 155) @ I-85



Gerry de Camp, PE, PTOE

Benefits



Clairmont Drive (SR 155) @ I-85

		NB Thru	NB Left	SB Thru	SB Left	I-85
Monday	6/6/2016	24142	684	20328	2558	230187
Tuesday	6/7/2016	25988	679	22699	2630	233877
Wednesday	6/8/2016	26766	699	23294	2825	239267
Thursday	6/9/2016	26546	653	23681	2808	239344
Friday	6/10/2016	26739	691	23148	2696	244544
Monday	6/13/2016	25591	702	22210	2718	228392
Tuesday	6/14/2016	26404	670	22583	2762	234452
Wednesday	6/15/2016	27255	679	23561	2910	235528
Thursday	6/16/2016	25663	648	23088	2787	242744

		NB Thru	NB Left	SB Thru	SB Left	I-85
Monday	6/6/2016	0.00%	0.00%	0.00%	0.00%	0.00%
Tuesday	6/7/2016	7.10%	-0.74%	10.45%	2.74%	1.58%
Wednesday	6/8/2016	9.80%	2.15%	12.73%	9.45%	3.79%
Thursday	6/9/2016	9.06%	-4.75%	14.16%	8.90%	3.83%
Friday	6/10/2016	9.71%	1.01%	12.18%	5.12%	5.87%
Monday	6/13/2016	5.66%	2.56%	8.47%	5.89%	-0.79%
Tuesday	6/14/2016	8.57%	-2.09%	9.99%	7.39%	1.82%
Wednesday	6/15/2016	11.42%	-0.74%	13.72%	12.10%	2.27%
Thursday	6/16/2016	5.93%	-5.56%	11.95%	8.22%	5.17%

Benefits



Clairmont Drive (SR 155) @ I-85

		NB Thru	NB Left	SB Thru	SB Left	I-85
Monday	6/6/2016	24142	684	20328	2558	230187
Tuesday	6/7/2016	25988	679	22699	2630	233877
Wednesday	6/8/2016	26766	699	23294	2825	239267
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Friday	6/10/2016	26739	691	23148	2696	244544
Monday	6/13/2016	25591	702	22210	2718	228392
Tuesday	6/14/2016	26404	670	22583	2762	234452
Wednesday	6/15/2016	27755	678	23561	2818	237528
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		NB Thru	NB Left	SB Thru	SB Left	I-85
Monday	6/6/2016	0.00%	0.00%	0.00%	0.00%	0.00%
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Thursday	6/16/2016	5.93%	-5.56%	11.95%	8.22%	5.17%



Average 24 hour throughput increase:
10.06%

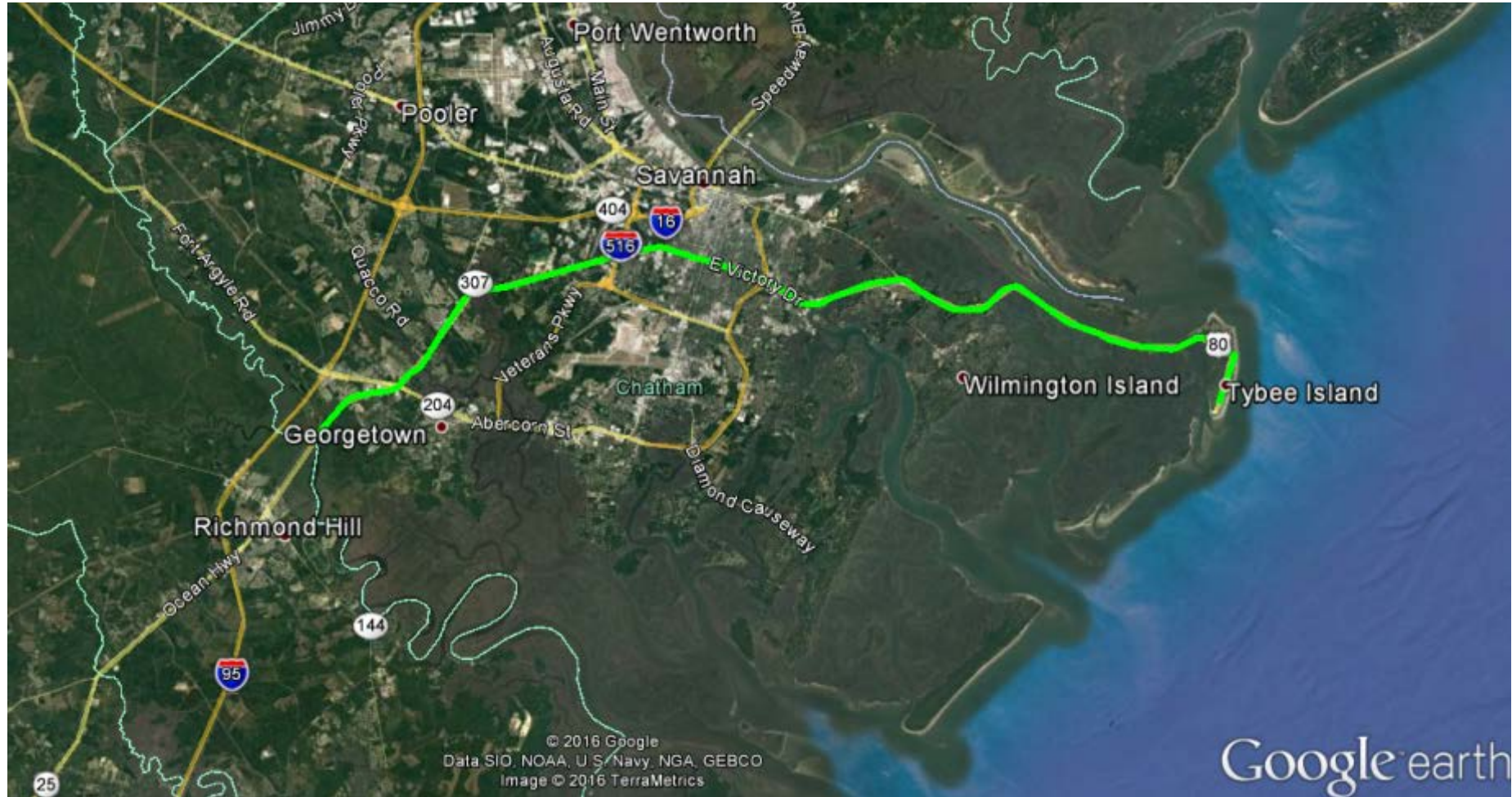
Future Initiatives



Up Next



Victory! (Drive)



***TOP**

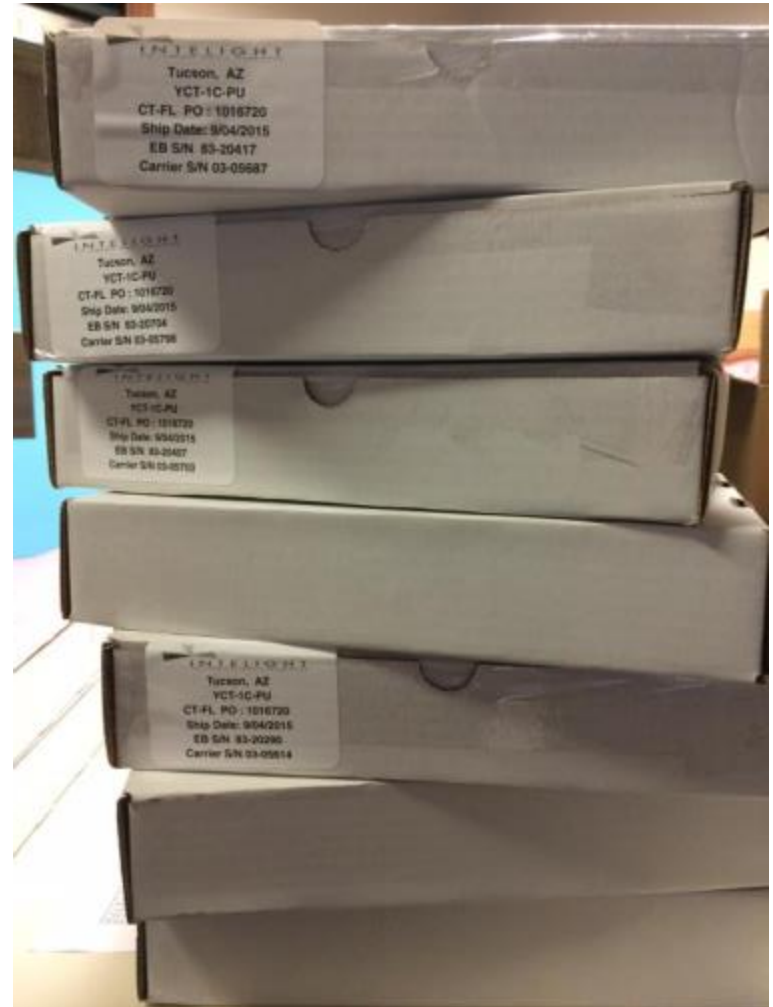
Connected Vehicles



A Reminder

Services Provided: Turn-key

- 1-C CPUs
- Database conversion
- Central configuration
- Training
- Maintenance and support





New CPUs, anyone?

Questions?

Alan Davis, PE, PTOE

Assistant State Traffic Engineer

aladavis@dot.ga.gov

404-635-2832