D4i – Data and Power to Connect!

DALI Alliance seminar at Lightfair 2021

DALI® Alliance

DALI®2 D4i™

D4i – Data and Power to Connect!

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All presentations from the DALI Alliance seminar at Lightfair 2021 are available here

DALI® Alliance

Georgia Power

Lighting & Smart Services

Earning customer loyalty by delivering exceptional value through lighting and smart services.

Future Proofing and Interoperability from a Utility's Perspective

Kevin Fitzmaurice - Principal Engineer - Georgia Power

Vision

To be the most valued and trusted utility lighting and smart solutions provider.

Mission

To earn customer loyalty by delivering exceptional value through lighting and smart services.

Guiding Principles

- Guided by CULTURE
- Lead by STRATEGY
- Focused on CUSTOMER
- Informed by DATA
- Enabled by TECHNOLOGY
- Optimized for RESULTS

Georgia Power – What do we do?

Investor owned utility (IOU) providing electricity to 2.6 million customers

Own, operate and maintenance ≈900,000 outdoor luminaires

- ≈350,000 roadway luminaires
- ≈550,000 area luminaires

Provide "Smart Services" such as:

- Monitoring and control of outdoor luminaires
- Video and license plate recognition (LPR)
- Gun shot detection
- Environmental monitoring
- Pedestrian and vehicle counting
- Small cellular (4G/5G) on lighting poles

Georgia Power – What are we doing?

- Converting ≈900,000 luminaires to LED with networked lighting controllers (NLC)
- Monitoring LED luminaires with a wireless network and central management system
- Utilizing digital communication protocols (e.g., DALI, DALI-2, D4i) in our LED luminaires
- Using sensors for additional functionality
- Actively participating on lighting standards committees (e.g., ANSI, IES)

Why do we use digital communication protocols and which ones do we use?

To provide two-way communications between LED drivers, sensors and networked lighting controllers (NLCs)

DALI, DALI-2 and D4i were selected because they are established protocols with published standards, have a positive track record and provide the functionality needed

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What about sensor interfaces?

- Georgia Power needs standardized sensor interfaces
- These interfaces need to be locking type for easy installation or removal of sensors
- These interfaces are needed so Georgia Power can “future proof” its luminaires
- Georgia Power selected the 7-pin ANSI C136.41 control receptacle on the top of the luminaire for NLCs or PCs
- Georgia Power selected the 4-pin ANSI C136.58 (Zhaga Book 18) interface on the bottom of the luminaire for sensors

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Do these standardized control and sensor receptacles meet Georgia Powers' needs?

Yes!

- Provides a standardized environment for digital communication between our digital drivers, sensors and networked lighting controllers (NLCs)
- It allows Georgia Power to "future proof" its luminaires
- It allows for easy installation and removal of controls and sensors
- It provides a standard framework for manufacturers of drivers, sensors, controllers and luminaires to use for design and production of the tools the lighting industry and Georgia Power need today

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Let’s conclude with a case study

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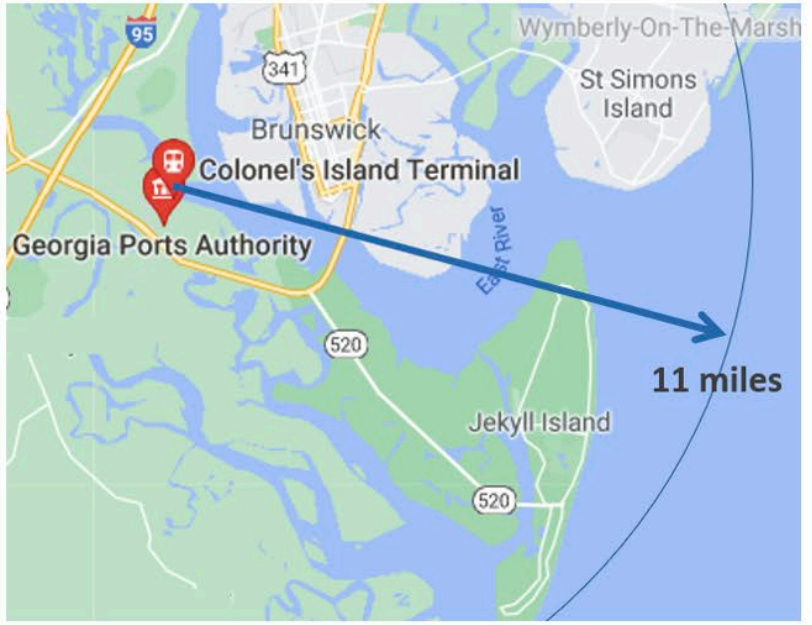
Georgia Ports Authority - Port of Brunswick, GA

The port on Colonel's Island is less than 11 miles from turtle sanctuaries on Jekyll Island

Photo by Georgia Ports Authority



Google Maps

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Case Study: Georgia Ports Authority

Georgia Power installed Cooper Lighting Solutions Navion LED luminaires with Signify sensor ready (SR) drivers, Legrand Wattstopper presence sensors and Telensa NLCs

This configuration provides low lumen output (30% of full) during nighttime hours unless activity (presence) is detected. Activity triggers 100% lumen output until there is 15 minutes of inactivity when the power reduces back to low output (30%)

This assembly provides automatic low or high lumen output, remote monitoring, energy metering and remote operational control

The customer reduces sky glow near a sea turtle nesting area and reduces energy usage


Georgia Power