



CARILEC

An Association Of Electric Energy Solution Providers



A VIRTUAL
SYMPOSIUM

Geographical Information Systems Symposium

Resilience. Sustainability. Continuity.

15 - 16 NOVEMBER, 2021



Build a High Performance

GIS

Success for the utility involves pushing the GIS to meet the needs of the evolving environment.

Let's start right now and make your GIS work for you.

At TruInsights our goal is to help the utility leverage location analytics to solve problems in operations, asset, and vegetation management. TruInsights being an ESRI Partner has experience applying ArcGIS to use cases that are utility-specific. This includes providing simpler more efficient ways for field teams and operations staff to send information back to the office and providing a greater level of accountability and oversight for new or ongoing initiatives.



Consultation

Get the guidance you need to meet your challenges.



Implementation

Implement new ways of operating with GIS.



Training

We teach your teams to take their activities to the next level.

Get in touch:

Kingston, Jamaica
www.truinsights.co
info@truinsights.co



Welcome message



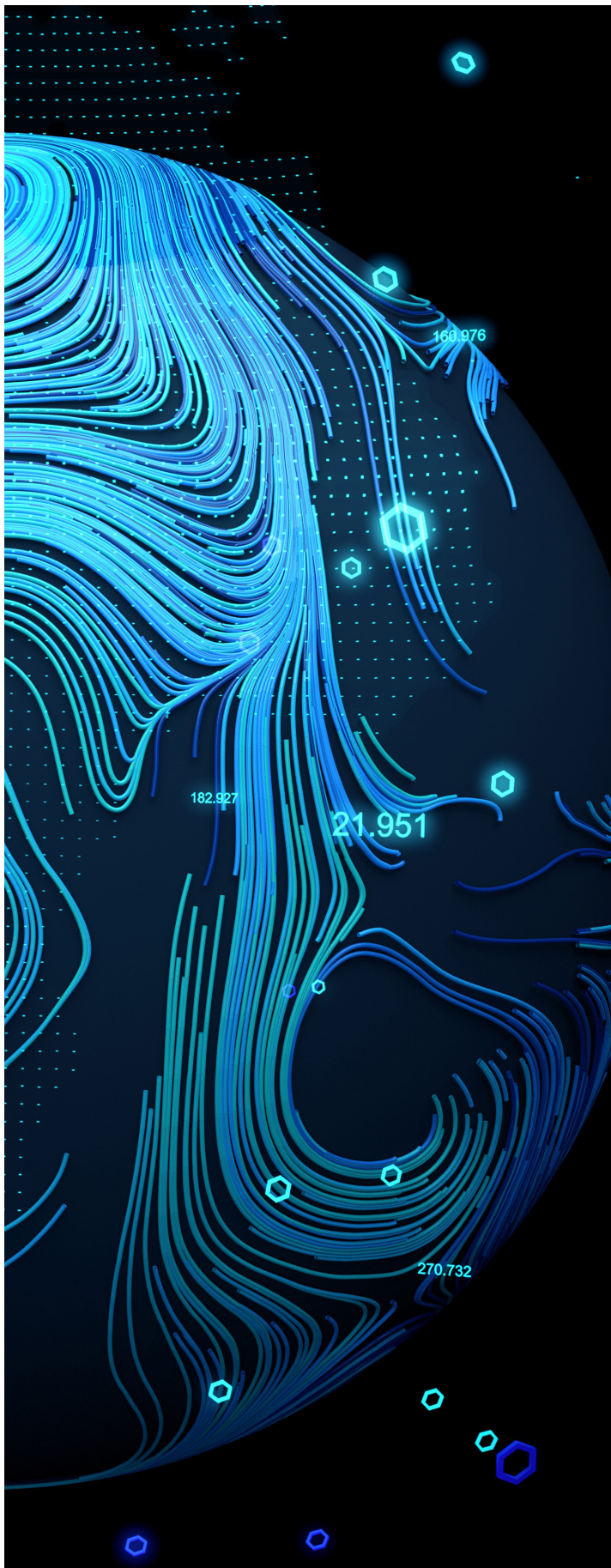
Sophia Laurena Primus

A warm welcome to all participants! It's indeed a pleasure to have you at CARILEC's first-ever virtual GIS Symposium. Your presence signals your unwavering interest to continue to learn, grow and change with the times

and the technology. The Pandemic has not in any way reduced the importance or use of GIS; for that matter, it has received increased attention as a tool to help manage utility decision-making through interoperability and integration. Moreover, the theme "Resilience. Sustainability. Continuity " highlights the role of GIS in the world's current climate crisis, disaster restoration, and continuity planning. I hope, therefore, that the sessions, discussions, and presentations exceed your expectations and your return on the investment of time brings value to your work when you are back at your desk. I encourage you to boldly network and share openly to get the full benefit of the Symposium. I thank you

A handwritten signature in black ink that reads "Sophia Laurena Primus". The signature is written in a cursive, flowing style.

Sophia Laurena Primus
Learning and Development Manager



GEOGRAPHICAL INFORMATION SYSTEMS SYMPOSIUM

Monday 15th November
9:00 a.m. - 4:30 p.m. &

Tuesday 16th November
10:00 a.m. - 4:00 p.m.

OPENING CEREMONY
9:00 a.m - 9:15 a.m

PRAYERS

Nicole Jean-Baptiste,
Learning and Development Officer
CARILEC

WELCOME REMARKS

Sophia Primus,
Learning and Development Manager,
CARILEC
(3 mins)

OPENING REMARKS

Dr. Cletus Bertin,
Executive Director,
CARILEC
(5mins)

BRIEF REMARKS

Dave Williams,
Manager,
GIS. Jamaica Public Service Company
(5mins)

ANNOUNCEMENTS AND HOUSEKEEPING REMARKS

Sophia Primus,
Learning and Development Manager,
CARILEC
(2 mins)

Day 1 - Nov 15th

Presentation 1

9:15 A.M - 9:50 A.M

Topic: The Journey to Lidar

This presentation provides an in-depth look at JPS' journey to implement and use Lidar technology into our data capture and distribution operations. This includes the following:

1. What were the aims and objectives of implementing the technology?
2. What are the components (hardware and software) required to execute and leverage the system?
3. What resources were required to complete successful use
4. What were the many lessons learned along the way including:
 - a. What could we have differently in implementation?
 - b. What use cases are good for Lidar and which are not?
 - c. Which if any additional hardware, software and or vendors could aid in greater success.

Presenter: Sashel Bennett, GIS Technician, Jamaica Public Service Company

Moderator: Shawn Charles, Chairman of the Board of Directors, Grenada Electricity Services Ltd

Presentation 2

9:50 A.M – 10:25 A.M

Topic: GIS-driven Operations for a Resilient Electric Grid During a Pandemic

During a pandemic, such as Covid-19, it is even more critical that the electric grid remains stable amidst everyday challenges. Additional pressures include ensuring long-distanced friends and loved ones stay connected as sources of comfort, the medical institutions and storage, quarantine centers and cold storages for hundreds of corpse. Electrical energy is critical to living and the populace expectations for grid resilience and reliable supply have increased during this pandemic, which cannot be over-emphasized. In normal conditions,

maintaining reliability undergoes challenges from aging power grids, increased distributed generation, customer service optimization, and simply guaranteeing an active distribution network. COVID-19 has raised the reliability risk due by unavoidable workforce disruptions, supply chain interruptions, and increased exposures of the field crews and service personnel. Having significant degrees of uncertainty to the grid operations, the need for measures to mitigate the impact will improved resiliency. Practical knowledge of the grid's assets and customers' locations in collaborations with data from the health authorities can significantly assist with human resource planning and allocations, workforce safety and emergency planning. A GIS posits to facilitate the objectives of maintaining a reliable grid during a pandemic.

Presenter: Dr. Shawn Charles, Chairman of the Board of Directors, Grenada Electricity Services Ltd

Moderator: Sashel Bennett, GIS Technician, Jamaica Public Service Company

MUSICAL BREAK

10:25 A.M – 10:40 A.M

Presentation 3

10:40 A.M – 11:10 A.M

Topic: Automated Customer Notifications from a Mobile App

One of the challenges faced by a utility during a power outage, is the ability to effectively communicate with the affected customers. With limited resources, control room dispatchers will often prioritise power restoration over customer communication. Mobile technologies (Eg SMS) can be used to send global notifications to customers, but GIS enabled systems are needed to identify and notify only the affected customers. This presentation looks at Grenada Electricity Services' (Grenlec) implementation of a mobile app, as an integrated communication channel from an Outage Management System (OMS) to provide automated outage notifications to customers

Presenter: Samantha Hossle, Electrical Engineer, Grenada Electricity Services Ltd

Moderator: Shawn Charles, Chairman of the Board of Directors, Grenada Electricity Services Ltd

Presentation 4

11:10 A.M – 11:45 A.M

Topic: GIS as an Audit Tool in T&TEC

Approximately two years of living in a pandemic has reiterated the importance of resilience, sustainability, and continuity; to be adaptative and to pursue the tools available that encourage sustainable growth. The Trinidad and Tobago Electricity Commission has been pushed to embrace the technological tools available, as this is one of the most effective ways to reduce the human impact and subsequently business impact of our ever-changing world. Geographical Information System (GIS) is one such tool.

One function of the HSE Department is auditing the processes of the Commission to identify and mitigate against possible system hazards. One such mitigation measure is the identification and communication of the hazards associated with Chromated Copper Arsenate (CCA) treated poles. The HSE Department was able to use the GIS system to audit this process throughout the geographical expanse of Trinidad and Tobago.

The presentation will discuss the application of GIS for auditing the CCA poles. It will examine the methodology used for data management and identify the challenges and successes experienced during the implementation.

Presenter: Chrystal Joseph, Electrical Engineer and Farrell Christopher, Senior Analyst, Trinidad & Tobago Electricity Commission

Moderator: Shawn Charles, Chairman of the Board of Directors, Grenada Electricity Services Ltd

Presentation 5

11:45 A.M – 12:20 P.M

Topic: The ECI Restore Damage Assessment App

The Barbados Light & Power is the sole electric utility in Barbados. It is therefore imperative that in the aftermath of a natural disaster that any damage done to its infrastructure can be quickly estimated in order to immediately deploy restoration efforts to its customers. By leveraging the science of Geographical Information Systems (GIS), The ECI Restore application facilitates the rapid collection of damage assessment data submitted

by customers and augments any internal drone assessments or AR assessments being conducted. The various reports and dashboards generated by this ECI restore data then allows business groups at BLPC to further analyze the adverse impact of the weather system on the transmission and distribution network. The ability to leverage this locational intelligence buttresses inputs from other projects such as the Advanced Metering Infrastructure (AMI) project in helping to map outage data from unresponsive meters. Hinged on the speed of sharing useful information, not only within the organization for better planning but with the general public as well, The ECI restore app is your all-Inclusive damage assessment tool.

Presenters: Jerry St. Lewis, CAD/GIS Technician and Chevon Corbin, CAD/GIS Technician I, The Barbados Light & Power Company

Moderator: Rhys Stewart, GIS Technician, Jamaica Public Service Company

Lunch

12:20 p.m – 1:20 p.m

Presentation 6

1:20 P.M – 1:50 P.M

Topic: Building a Digital Twin

Grenada Electricity Services Ltd (Grenlec) has spent over twenty years working on the GIS model of its electrical network, progressively adding layers and improving the quality of the data captured. In 2021, the model is a true digital twin of the electrical network, mapping Transmission and Distribution network assets and connectivity from the substation to the customer meter. The model is used to support Outage Management, engineering analysis, network maintenance and meter services. This session discusses the path taken by Grenlec in building out the model, the challenges faced along the way and the implementation a GIS Data Maintenance Policy to extend the responsibility for the upkeep of the GIS data to the wider T&D group.

Presenters: Kahmal Daniel, Engineering Assistant and Samantha Hossle, Electrical Engineer, Grenada Electricity Services Ltd

Moderator: Rhys Stewart, GIS Technician, Jamaica Public Service Company

Presentation 7

1:50 p.m – 2:25 p.m

Topic: Open Source Enterprise GIS Tool

This presentation will look at a GIS website tool (LiveWire) created to share the JPS' electrical database with the organization. The presentation includes the following:

1. Why was LiveWire created and what was the need
2. What are the functionalities of LiveWire
3. Lessons learnt from creating LiveWire.
4. What's next for LiveWire?

Presenter: Rhys Stewart, GIS Technician, Jamaica Public Service Company

Moderator: Samantha Hossle, Electrical Engineer, Grenada Electricity Services Ltd

Utility Updates: Utilities are encouraged to make a 5-minute presentation on GIS progress, programmes and future plans

2:25 p.m – 2:55 p.m

Musical Break

2:55 p.m - 3:05 p.m

Presentation 8

3:05 p.m – 4:35 p.m

Topic: Using GIS to Support Business Continuity

- Our presentation will be on using GIS to inform the Business Continuity workflows of the utility such as:
- Digitizing and mobilizing the workforce.
- Using Location Data Analytics to gain Insights
- The Covid-19 pandemic will be used to articulate and demonstrate how GIS can be used to assist in Business Continuity for the utility.

GIS can keep the utility field operations working with digital apps, workflows and solutions which will include

demonstrations on route optimization, navigation and tracking. We will also show how to bring it all together to improve your understanding and decision-making ability using the power of location technology.

Full disclosure .. Ian McKay is a consultant to Spatial Innovision regional partners to Esri

Presenter: Ian McKay, Consultant, Environmental Systems Research Institute (ESRI)

Moderator: Samantha Hossle, Electrical Engineer, Grenada Electricity Services Ltd



Participating Companies

1. Barbados Light & Power Company Ltd
2. Belize Electricity Limited
3. Dominica Electricity Services Limited
4. Environmental Systems Research Institute (ESRI)
5. Grand Bahama Power Company
6. Grenada Electricity Services Ltd
7. Jamaica Public Service Company Ltd
8. Nevis Electricity Company Ltd
9. NV Energiebedrijven Suriname
10. Spatial Innovision
11. St. Lucia Electricity Services Limited
12. Trinidad & Tobago Electricity Commission
13. TruInsights

Day 2 - Nov 16th

Training Workshop

10:00 A.M. - 4:00 P.M.



TruInsights presents

Vegetation Management with GIS



DAVE WILLIAMS
GIS CONSULTANT

16th NOVEMBER
2021

10:00 TO
4:00 PM

LIVE ON
ZOOM

Topics Include

Learn to leverage GIS in Vegetation Management to:

- Empower field teams
- Realtime feedback on activities
- Share progress activities
- Leverage the latest tools

Cost: \$175

GIS Seminar Presenters Bio's



Topic: The Journey to Lidar

Presenter: Sashel Bennett

Sashel Bennett started off as a draught person in the field of Land Surveying and now helps to manage one of the most extensive GIS databases in the Caribbean. She currently serves as a GIS Technician at the Jamaica Public Service Company (JPSCo) and has been a GIS professional for over 4 years. She has piloted the application of mobile LiDAR mapping in the data collection of JPSCo's assets and her work includes GIS database management, analysis and mapping. She holds a B.SC degree in Geographic Information Systems and Land Surveying from the University of Technology, Jamaica.



Topic: GIS-driven Operations for a Resilient Electric Grid During a Pandemic

Presenter: Dr. Shawn Charles

Dr. Shawn Charles, a specialist in Geo-informatics and disaster management, and a civil engineer, was born in St. George's, Grenada. He studied at the International Institute for Geo-information Science and Earth Observation (ITC), the Netherlands, earning a Diploma and Masters Degree in Geo-information Science, both with specialization in Geographic Information Systems (GIS). He also obtained an Executive Diploma in Management from the Institute of Business (IOB) of the

University of the West Indies. He also pursued a Masters degree in disaster management and a PhD in civil engineering from the University of Auckland in New Zealand. Dr. Charles experience in the field of Geo-informatics extends over nineteen (19) years in the capacities of supervisor of the Mapping and Drafting Department of the National Water and Sewerage Authority (NAWASA, Grenada) and subsequently an Engineering Assistant/GIS Specialist in the Planning and Engineering department of the Grenada Electricity Services Ltd. (GRENLEC, Grenada). He had responsibility for the implementation and management of the company's Geo-information databases, overhead and underground network design, electrical system planning, analysis and staking.

Dr. Charles was the first Chairman of the CARILEC GIS Committee and promoted the use of GIS among the regional electric utilities. Presently, he serves as Chair the Board of Directors at GRENLEC.

GIS Seminar Presenters Bio's



Topic: Automated Customer Notifications from a Mobile App

Presenter: Samantha Hossle

Samantha Hossle has been employed with the Grenada Electricity Services Ltd (Grenlec) as an Electrical Engineer since 2008. As part of the Planning and Engineering department, Samantha leads the section with responsibility for maintaining and supporting various engineering systems, including the Supervisory Control and Data Acquisition (SCADA) for the Transmission and Distribution network, the Outage Management System (OMS) and the Geospatial Information System (GIS). Samantha also provides technical support for the Company's private radio network (5 GHz and VHF) which is used for various engineering sub-systems including: the Distribution network SCADA, Automatic Vehicle Location (AVL) and Voice communication for T&D crews. Samantha holds a BSc. Electrical and Computer Engineering from the University of the West Indies.



Company Overview - Grenada Electricity Services Ltd.

The Grenada Electricity Services Ltd. (Grenlec), is the sole licensed provider of electricity in Grenada, and has been providing integrated services of generation, transmission and distribution of electricity since 1960. The Company generates from three locations, managing separate grids for the islands of Grenada, Carriacou and Petite Martinique, and serving over 50,000 customers. Grenlec has a total installed capacity of 52.3MW and peak demand of 33.7MW. A 33kV transmission network and two substations at Queen's Park and Grand Anse ensures reliability in the south of mainland Grenada. Over the years, the Company has risen to the challenge of providing safe, reliable service by continually investing in service enhancement, its employees, infrastructure and communities. Grenlec (GESL) is publicly traded on the Eastern Caribbean Securities Exchange (ECSE)..

GIS Seminar Presenters Bio's



Topic: GIS as an Audit Tool in T&TEC

Presenter: Chrystal Joseph

I am an electrical engineer employed with the Trinidad and Tobago Electricity Commission (TTEC), Trinidad and Tobago since 2008. I have worked in the Southern Distribution Area until July 2021, when I was transferred to the HSE Department as the Snr. HSE Coordinator. I continue to work with the Distribution Support Section on the integration of systems like GIS with our existing processes for more effective and efficient management. I am a wife and mother of three and I hold a bachelor's degree in Electrical and Computer Engineering with a focus on Energy Systems, and a master's in occupational and Environmental Safety and Health, both from the University of the West Indies, St. Augustine.

Presenter: Farrell Christopher



Mr. Farrell Christopher is a Senior Analyst at the Trinidad and Tobago Electricity Commission and is responsible for the management of GIS and the Contact Centre at

the Company. He maintains the electrical geometric network and ensures integration of the Geographical Information System (GIS) with other enterprise applications in the Commission. In addition to this function, he has responsibility for maintaining the GIS database, performing programming customization to the ArcGIS environment and the building of web mapping applications for easy GIS access to all users. Farrell holds a B.S. degree in Computer Science and Management and a M.Sc. Degree in Geoinformatics from the University of the West Indies, St. Augustine Campus.



Topic: The ECI Restore Damage Assessment App

Presenters: Jerry St. Lewis

Jerry St. Lewis currently holds the position of CAD/ GIS Technician at the Barbados Light & Power. However, over the 16 years he has worked at the organization he has also held the positions of Plant Inspector and Draughtsman. One thing Jerry has learned in his work experience is that if you want something done right you have to involve yourself and that great teamwork enables you to achieve great things. Since the inception of GIS at BLPC in 2016, Jerry has taken a lead role in the development of the electric geometric network, which allows the organization to leverage technologies since as Outage Management, DasMap and Distribution Automation. However, he currently works on the development of the Pole & Feeder Inspection Process by incorporating GIS workflows to improve efficiency. He is an avid sports fan and was once the biggest supporter of West Indies cricket i.e. until Lara retired.

GIS Seminar Presenters Bio's

Presenter: Chevon Corbin



Chevon Corbin believes that there has been a global shift in the use of geographic data in order to harvest insights. He is currently a CAD/GIS Technician at the Barbados Light and Power Company Limited where he joins the team there in advancing the utility grid through the leveraging of geospatial technology. He is responsible for managing Geographic Information Systems (GIS) workflows that allows business groups to analyze the impacts and opportunities for improvement to the transmission and distribution network. Above all, Chevon enjoys being able to manage the challenge of change.

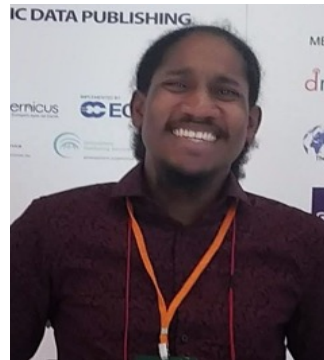


Topic: Building a Digital Twin

Presenter: Kahmal Daniel

Kahmal Daniel holds a BSc in Information Technology and has over 14 years experience in the use of Geospatial Information Systems (GIS). In 2017, Kahmal joined

the Planning and Engineering department at Grenada Electricity Services Ltd (Grenlec) as an Engineering Assistant. Since that time he has played a significant role in the development and continuous improvement of the company's GIS model and data. His immediate past projects include the Pole Tag Audit of the Distribution Network.

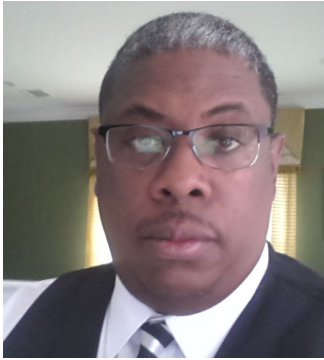


Topic: Open Source Enterprise GIS tool

Presenter: Rhys Stewart

Rhys Stewart has been working with the JPS for over a decade. He has a keen interest in the application of free and open source technologies in the Enterprise GIS space.

GIS Seminar Presenters Bio's



Topic: Using GIS to Support Business Continuity

Presenter: Ian McKay

Ian McKay an IT Professional with over 30 years' experience and is currently a Sale Executive with Spatial Innovision Limited with regional responsibility for the Utilities and Public Safety sectors.

Company Overview

Spatial Innovision Limited (SIL) is the Caribbean's leading Global Positioning System and Geographic Information Systems (GIS) solutions centre.

SIL possesses an impressive array of in-house resources and cadre of personnel which positions them as an industry leader.

SIL has been an advocate for the widespread implementation of GPS and GIS solutions throughout the Caribbean region serving over two hundred (200) government agencies, non-government organizations and private businesses. Since its inception in 1998, SIL has worked alongside various public and private sector businesses locally and regionally in transforming their mapping operations to leverage their spatial information for realizable business benefits.



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