PRESENTATION ABSTRACTS – February 4th, 2016

Keynote - GIS In 2020: Mad Max, Beyond Geodome!

Presented by Chris North, ESRI

This will be a tongue-in-cheek look at the post-apocalyptic world of GIS in the year 2020. GIS as we know it is all but wiped out, and what is left is a landscape littered with the wreckage of bloated and expensive GIS systems that ultimately collapsed under the weight of their own complexity. How did we get here? Where did we go wrong? What could we have done to save GIS as we knew it in 2015? Were the best "spatial-intentions" just not enough to realize the full potential if geographic information within our organizations? Or … is GIS really dead? Do we just not recognize it when we peer through the traditional lens of monolithic GIS solutions?

CityHub: A Cloud Based Smart City Platform

Presented by Dr. Rodger Lea, Sense Tecnic Systems Inc.

This talk will discuss experiences deploying City Hub, a cloud based Smart City platform that combines an IoT platform for real time data with an open data repository. Offering a comprehensive API it is designed to enable the rapid development of Smart City applications. I will give a brief overview of the City Hub platform and discuss its deployment in the UK and Canada. I will showcase several applications developed on the hub and discuss the visual programming tool that makes it easy to integrate the Hub with a variety of other data sources such as GIS systems, existing city backend software and social media.

A Lightweight, Geo-semantics Platform for Urban IoT

Presented by Ron Lake, Galdos Systems

In the near past most urban applications were siloed and rigid.

With the Internet of Things, information access and integration move to the device, greatly increasing the potential for information integration and the creation of a wide variety of new applications at reduced cost.

IoT demands we manage information about the devices themselves, and the objects with which devices interact. For urban applications this information must include device location and location context, device connectivity and frequently the geometry of the physical objects. Device understanding is key to device re-use, re-purposing and the rapid creation of mashup applications.

The OGC CSW-ebRIM Registry specification offers an open standard, light-weight web services platform for capturing, managing and maintaining device and related physical object metadata. With the CSW-ebRIM Registry platform you have all of the machinery needed for the management of device semantics, including device location. No GIS is required.

Open Data Mashups for Flood Management

Presented by Matt Osler, City of Surrey

City of Surrey uses a number of web based tools to support flood management, emergency planning and asset management. Under the City of Surrey's Open Data Policy, new tools and procedures are being developed to locate, visualize, download, and utilize municipal information for improved decision making. Online visualization of spatial and temporal data for flood management in Surrey will be introduced.

Open Data initiatives are becoming more prevalent in all levels of government and opportunities to combine multiple datasets across jurisdiction for improved intelligence are increasing. An increasing number of meteorological and ocean monitoring sites, forecasts and websites will be introduced that assist engineers anticipate and respond to coastal storm surges. A case study exploring a new tool commissioned by Surrey to visualize data and combine multiple data sources to support decision making at the municipal level will be presented.   In this case, a public web application combining water level data from multiple local governments, Department of Fisheries and Oceans and Water Survey of Canada was developed and available for use at: http://surrey.foundryspatial.com.

This app demonstrates the benefits of combining near real-time water level data throughout the Province to assist local governments in planning for and reacting to flood threats during the Fraser River Freshet. A mobile friendly, high performance interactive and intuitive interface will be showcased to highlight the intelligence that can be mined from a comprehensive dataset that spans the length of the Fraser River. Prior to this approach, spreadsheets were used to manually stitch together datasets from a variety of sources into static charts for a variety of stakeholders to interpret. On demand interpretation and interaction with rapidly changing water level data will be explored in this presentation.

How IoT is Improving Service and ROI for Emergency Services, Businesses, and Local Government

Presented by Aaron Koning, Safe Software Inc.

The explosive growth of objects embedded with sensors brings endless possibilities for sharing and analyzing geospatial data in real time. This presentation will explore examples of vehicle tracking with notification systems for police cars, food trucks, and snow plows. Attendees will learn how emergency service providers, businesses, and local governments are leveraging the Internet of Things' data streams to improve their services and return on investment.

Internet of Transport Things (IoT2)

Presented by Clark Lim, Acuere Consulting Inc

With technological advancements and "cross-breeding" across industry domains, it is no surprise Internet of Things (IoT) is quietly making an impact across all sectors. In the transportation domain, the ability to track, monitor, and obtain and transmit situational awareness in real time is a lane changer. Compared to stationary IoT devices, the application of IoT to mobile objects requires the added challenge of verifying positioning constantly in varying environments and conditions. Furthermore, are corporations and government institutions ready to take on the seemingly small trickle of data streams from thousands to millions of devices, and what can and will they do with this information? What role will IoT play in enabling the transportation industry to achieve its "singularity" moment of a connected and autonomous transportation system?

Tracking ships ... not your #1 IOT idea ... but cool nonetheless

Presented by Dave Gibbon, Boundless

AIS (Automatic Identification System) is a tracking system used to automatically identify and locate ships, via shipboard transponders that transmit signals to arrays of both coastal base stations (when close to shore), as well as increasingly to a growing number of satellites (when on the high seas). Such AIS data is used by governments and business alike for many purposes including both real time and historical analyses workflows. Boundless - a provider of open-source geospatial technology support and services - has experience internationally working with both vendors and consumers of such data as they seek to leverage this class of geospatial IOT data into their solutions.

The purpose of this talk is to simply share - at a high level - more about this type of IOT ("big") data, who it's used by, how it's used, the challenges associated with its use, the aspirations of those using the data, and potential corollaries that may be applicable when working with similar types of moving-object-in-time data as it is collected, stored, retrieved and analyzed.

The Era of Connection - Helping you Connect Both the Digital and Physical World

Presented by Pete Southwood, AutoDesk

What do Parks and Recreation, Water Treatment, Transportation, and Solar Energy projects (to name a few) have in common in the early stages of their lifecycle? They all require at some stage or another, approvals from the client, governing/regulatory bodies or interested stakeholders. Easy…right? I have all of this 'GIS Stuff' and other information from the web, what can I do with it? Will this help with my BIM for Infrastructure based projects?

In this session the speaker will share how his clients are maximizing on the wealth GIS information available from the Internet. Enabling them to accelerate the planning & approval process and to differentiate themselves on project pursuits. With the ultimate goals of better communication and improved efficiencies, helping you move towards better and more informed decisions.