The Internet of Things West 2015

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Conference Program

Exhibit Hall Hours -
Thursday, Nov. 5th – 10:00 am – 6:00 pm
Friday, Nov. 6th – 8:00 am – 12:00 pm

Thursday, Nov. 5th – 2015

7:00 am – Registration Opens/Continental Breakfast

8:00 am – Welcome/Keynote Session
Transforming Advanced Connectivity with the Internet of Things – Road Map for Achieving Massive Adoption and Application…..1
As has been well reported in business and industry media, Internet of Things (IoT) is the next technology revolution that will have the greatest impact on advanced connectivity and cloud-based control of devices, equipment and enterprise operations. However, for all the hype, the reality is that less than one percent of "things" in the physical world are currently connected to the Internet. This means that there is an incredible opportunity to connect the unconnected and truly change the world.

What will it take to scale IoT solutions and the ecosystem to support it to achieve this degree of real-world impact? What will it take to realize the true value of the Internet of Everything? The presentation will cite case-study results from on-the-ground IoT implementations in discussing what must happen next in order to deliver the benefits of IoT on a more massive scale.

Marc-Andre Oriani, Product Management Executive - Cisco Systems

8:45 am -
Is it Really IoT? Developing a Methodology…..20
The Internet of Things seems to be everywhere & everything…but is it really? As the industry tries to sort the wheat from the chaff, determining what is and is not IoT can be a challenge. In fact, there are more than 40 IoT definitions that have been published. The University of Memphis, along with AIM has been working on a tool that may help you to determine what is IoT and how it can help you. As you take the first, or even the hundredth step down the IoT road, arm yourself with the right tools by joining us for a discussion on how to determine if it really is IoT.

Kevin Berisso, PhD, Internet of Things Committee Chairperson- AIM Global, and Asst. Professor – University of Memphis

9:30 am
Constructing an Internet of Things Strategy…..33
Planning for the Internet of Things has become a competitive necessity. Pundits have endlessly heralded the arrival of an IoT mega-trend. Yet creation of a workable

organizational strategy around connected devices has not received nearly as much attention.

In this presentation we'll share the key factors that IoT-ready organizations should consider, the essential people and roles to get involved and the tremendous real-world advantages that a successful strategy can offer. We will begin by reviewing how IoT methods can address previously intractable problems and the pathways to inventive solutions. Attendees will learn the key elements of an IoT strategy, how each can be put into action, and how to create IoT business cases with valuable outcomes. Hard benefits, soft benefits, customer advantages, social rewards, priorities and timing considerations will all be covered. Need to author a documented IoT strategy that provides immediate benefits for your organization? Here's how to get started!

Robert Faludi, Chief Innovator, Office of the CTO – Digi International

10:00 am – Exhibit Hall Opens/Networking Break

11:00 am

Industry 4.0; What Does This Mean for You, Your Company and Your Future?…..68

Industry 4.0 and the Internet of Things is an evolution and not a revolution where smart connected products and systems operate as part of larger systems of systems. The plants of tomorrow will be connected and sustainable ecosystems where plants and machines work together in a secure and collaborative way to enable technology at the service of people for greater empowerment and efficiency. This presentation will explore the mega trends, explore technology examples and the challenges of today's complex market drivers.

How will you leverage Industry 4.0 and the Internet of Things to differentiate yourself and uncover the inefficiencies in your processes and turn them into working capital. The Internet of things is here to stay and to the winner goes increase efficiency, lower costs and an improved competitive position and ultimately providing better chances to survive and prosper in the 21st century.

Ralf Neubert, Senior Director of Innovation and Technology - Schneider Electric

11:30 am

The Industry 4.0 Communication Standard: OPC UA…..77

We all know the potential benefits of increased connectivity, the IoT, or Industry 4.0. What is holding things back are secure and trusted communication protocols. A standard, OPC Unified Architecture (UA), has been solving these problems for years. Platform and OS independent, an accepted security layer, node discovery, RPC's, historical data, and a rich data model. It has existed in its current form for six years and is solving problems for many industries. What is OPC UA? The presentation will include a live controller to cloud to phone/tablet demo accessible via any QR code reader.

Bob Trask, Senior Systems Engineer - Beckhoff Automation

12:00 pm – Networking Lunch

1:00 pm
The Promise of SWARM Intelligence: Distributed Intelligence at the Network Edge…..92
SWARM intelligence is the collective behavior of decentralized, self-organized systems (like ants or bees in nature) that accomplishes a single goal even if no individual is in charge. Simple components accomplish sophisticated tasks by following simple rules and working together.

Many SWARM principles are replicated in the enterprise IoT, but to realize its full potential, edge devices must mature beyond simple data aggregation and filtering. They must collaborate, making decisions on information gained from each other without relying on upstream resources to push intelligence and decision making further to the edge.

This presentation will explain how SWARM can be applied in the industrial IoT. A collective of physical devices, each performing relatively simple tasks, can operate as a single SWARM edge which has expandable physical interfaces, processing and memory resources. The presentation will compare conventional architectures to a SWARM edge processing architecture, demonstrating how SWARM makes it easier and more cost effective to develop, deploy, manage and maintain highly-scalable edge device networking solutions.

Mike Fahrion, VP of IoT Technologies - B+B SmartWorx

1:30 pm
IoT Edge Processing and More IoT West…..103
In the coming years, several industries will begin to expand their capabilities for retaining end point data at the edge in order to better utilize the range of data types and sheer volumes of M2M data generated by the Internet of Things. While operational analytics will continue to play an important role in IoT analytics, companies in fast growing verticals (health, industrial, manufacturing, energy, etc.) will move from closed-loop message response silos based exclusively on central cloud processing to longer-term and more comprehensive data retention and aggregation at the edge. By retaining the data at the edge, companies will leverage capabilities for investigative and predictive analytics with a long-term goal of machine learning.

In this presentation, Don DeLoach and Jeff Kibler will discuss the likely evolution of edge computing analytics and long-term data retention. In doing so, they will explain why operations, data scientists, and executives should begin incorporating an edge computing architecture into their IoT strategies. Reasons include:

Don DeLoach is CEO and president – Infobright
Jeff Kibler, Vice President, Field Services – Infobright

2:00 pm
Connected Vehicles: Gearing Up for Security…..N/A
Connected cars top the list on consumer Internet of Things (IoT) wish lists, and automakers are already delivering the first wave of products. As quickly as the automakers are adding features, security researchers are finding and exploiting flaws, largely for notoriety and attention from the press. But it won't be long before cyber criminals find a financial motive for hacking vehicles, the surveillance value of installing malware is identified and hacktivists realize the potential as well. This session will cover the flaws already presenting themselves in connected vehicles, what automakers are doing to get ahead and how everyone can influence the safety and privacy of not just connected vehicles but the Internet of Things.

Attendees will learn:

- The weaknesses inherent in today's connected vehicles.
- What is being done to build security to protect safety and privacy.
- The motivation of threat actors.

Milan Patel, Program Director - IBM Security

2:30 pm
Is IoT Security Even Possible?…..111
In the hyperconnected world of the Internet of Things, what does security really mean? How much security do you need? How do you know when you've developed a secure product for the IoT?

Security for the IoT is different than security for other technologies in a number of ways, including the sheer number of connections and devices that have to be protected. Unlike the computers and smartphones designed to connect to the Internet, most of the millions of devices joining the IoT lack the technological foundation to support sophisticated security measures. And yet, as part of the IoT, devices such as water heaters, electronic door locks, and lighting fixtures need to be made as secure as our laptops.

Executives from Ayla Networks and LockState will discuss IoT security from multiple perspectives, including:

- The technology needed by product manufactures to design and deliver secure connected products for the highly fragmented world of the IoT
- How IoT security measures are handled from the embedded chip and device levels to the application and cloud levels
- Some common mistakes and misconceptions regarding the security of connected devices
- An overview of the latest security trends and vulnerabilities

Sudha Sundaresan, Director of Software, IoT PaaS – Ayla Networks
Nolan Mondrow, Founder & CEO – LockState

3:00 pm – Networking Break

3:30 pm
Staying Safe and Secure in IoT…..117
KORE will speak about how the Internet of Things (IoT) has taken center stage in our increasingly technological world. Connected devices are becoming more practical and a-ffordable for mainstream consumers, as well as an integral part of many businesses. Connor will explain how security needs to be integrated into each product that is a part of the IoT in its design from the beginning. We trust M2M applications to transmit confidential and personal information, monitor valuable assets, and control mission-critical devices. However, as we are beginning to witness the limitless potential to save time, cut costs, increase efficiency, and improve quality of life, we are also made aware that with all these potential benefits, there is also potential for new instances of data vulnerability and security breaches.

During this session, Brisbourne will explain that as a growing number of players enter the market with new connected devices and applications, security will not be viewed as a point of differentiation – it will be an expectation.

Ken Connor, Director of Business Development - KORE

4:00 pm
Getting 'Smart' About Connected Device Privacy…..125
The full potential of the Internet of Things requires the trust of American consumers. Regulators and legislators call for adoption of "best practices" to provide consumers the protections they want and allow full realization of the benefits of the Internet of Things. Yet, few are saying what those best practices are. The FTC has issued reports and cautions that connected devices raise numerous privacy and security concerns. At the same time, state and federal regulators and lawmakers have issued a raft of consumer protection, health and safety legislation.

This presentation covers the latest issues and regulations, with an eye toward developers and IT managers, such as 1) what issues surround information gathering, data flow from device, to app to, third party and how is it shared? 2) Are platform level controls sufficient? 3) What role does self-regulation play? This presentation will look at recent developments across consumer and commercial technologies and discuss legal and regulatory reactions and trends.

David Adler, Esq. Attorney/Founder – Adler Law Group

4:30 pm
Design and Engineering the THINGS in IoT…..132
There is a great deal of focus in the emerging IoT industry on cloud connectivity and Big

Data analytics. The device that sits at the edge is the crucial link between the user/environment and the cloud. The engineering of this device is vital for several reasons. First, it is the initial interface for the end user, and must be designed with this user's needs in mind. Secondly, IoT devices in many applications are intended to be "set and forget", so reliability and ruggedization is important, especially in outdoor environments. Finally, it is an electronic device, so the complex task of integrating the physical, software, and design aspects deeply impact the overall quality, performance and user experience.

This seminar will cover the hardware development process, important points to keep in mind when melding both the aesthetic design and the technology solution of an IoT device, as well as insight into successful methods and case studies developed by Optimal Design.

Sajid Patel, CEO – Optimal Design

5:00 pm – Cocktail Reception

Friday, Nov. 6th – 2015

7:30 am – Registration Opens/Continental Breakfast

8:00 am

From Top Floor to Shop Floor: Transforming Your Supply Chain, Manufacturing and Maintenance with IoT…..143

When changes happen on a manufacturing plant floor, how quickly a company can react and how they react is crucial. Today not only are sensors more widely available but they are also more cost-effective. These sensors can detect a wide variety of situations so manufacturers can be proactive and adjustments can be made before they become problems. The use cases for IoT in supply chain and manufacturing are endless – from better predictability to capturing production completion information, monitoring environmental values and many other scenarios. Additionally, the role of maintenance is also evolving. By bringing this data into enterprise asset management systems, the information captured provides a valuable historical asset profile that can be leveraged in on-going maintenance. In this session, we will discuss best practices and review several use cases and case studies on how leading companies are leveraging IoT across supply chain, manufacturing and maintenance processes.

Maha Muzumdar, Vice President, Supply Chain, Product Business Group – Oracle
Margie Steele, Principal Consultant – Oracle

8:45 am

Core M2M Platform Service Offerings…..166

Since it's inception as a transport service for M2M, cellular has been following a path of square peg in a round hole. This translated into fixed pricing airtime plans, no peak/off peak plans, limited developer tools and little to no carrier certification support. The entire

ecosystem gets a black eye in regards to getting a M2M device to commercial release. A lot of money and effort is going into not seeing much success.

In this session the speaker will go into how to start the development process, starting from an idea for a new M2M product to completion. A common mistake is more often than not they are looking at the hardware first. However the best place to start is understanding the OEM/developer and what their device application needs are, while keeping the wireless ecosystem in mind. Lastly the speaker will go over the three key elements to achieve success with your M2M/IoT application.

Eric King, General Manager — IoT Smart Labs

9:30 am

Testing Internet of Things Applications…..174

With the expected onslaught of connected devices, what is the best means of making sure applications are ready to meet the demands that this will make upon them? What are the unique testing characteristics concerning applications that work with connected devices? In this session, we will cover the use of known testing techniques and tools, applying those to the emerging world of connected devices. Device simulation, generating test data, dealing with multiple device (and firmware versions) and many more topics will be discussed.

Milan Patel, Program Director - IBM Security

10:00 am – Networking Break

10:30am

Connected, Protected, Secure…..185

The rise of the micro app ecosystem for niche markets and the connected car cropping up daily, and wearables are practically de rigueur in the workplace. However, without the necessary tools to help support these new, unique ecosystems, whether on your wrist or in your car, consumers will be left in the dark or be forced to wade through the tides of the Google and Apple app stores.

Users today are inundated with millions of unhelpful apps from Google and Apple, so it's no wonder that many are now seeing the need for the availability of micro app stores and developer ecosystems, especially when it's to ensure the safety of a driver in a connected car. For example, within the burgeoning connected car market, car manufacturers are looking for applications, digital media and cloud services to meet the requirements for their in-vehicle infotainment offerings that exceed the needs of their users, without putting their drivers in danger.

Terry Hughes and Peter Virk will discuss why, with apps and content now a prominent source of differentiation and added value for companies, the new normal requires that these new gadgets and cars build their own mini app worlds for their products to provide just those services that their customers and partners crave.

Terry Hughes is the Managing Director – AppCarousel
Peter Virk is Head of Connected Technologies & Apps – Jaguar Land Rover

11:00 am

Get Your Head Out of the Clouds and Into the Fog…..196

So many IoT solutions to choose from. What criteria should you use to select the right solution? Just as you are embracing the benefits of IoT Cloud computing, now solutions are transitioning to the Fog. Should you? This session will clear the air on this murky topic and get you the answers you are searching for. An overview will be provided with key tradeoffs between various technologies. Development guidelines will be discussed to help differentiate between cloud and fog. You will likely be surprised with how easy solutions can transition from one model to another, and even support multiple models simultaneously. Development effort and strengths and weaknesses will be presented and compared.

Robert Lutz, Director of Product Management – Systech Corp.

11:30 am

The Enterprise Internet of Things – The Roadmap to M2M Communications…..205

Wireless controls are part of the roadmap for smart buildings and foundation for the Enterprise Internet of Things. The E-IoT is the next frontier for wireless networked building controls and energy management. The wireless capability helps organizations drive their E-IoT initiatives, enabling them to manage all M2M communications throughout their networked enterprise. As a result, the E-IoT is the road to achieving M2M communications.

By implementing a platform built around an easily monitored network, users can make actionable decisions based on the information being transmitted and collected. This is vital to ensuring the value of our growing connectedness, as well as protecting the integrity of the massive amount of data being passed across the building enterprise. The right open standards-driven wireless technology can help organizations implement their E-IoT initiatives, enabling them to manage all M2M communications throughout their networked enterprise.

Mandeep Khera, Vice President of Marketing and Channels – Daintree Networks, Inc.

12:00 pm – Networking Lunch

1:00 pm -

Smart City Innovation…..N/A

The impact of new technologies has significantly changed our everyday life in many aspects as mobility, energy, environment, social networks and governance. The development of new IoT products applying to all means of transportation, the integration of services, the availability of real time data, and shared services can help to improve the

management of citizen's mobility and freight within our cities, to reduce traffic and CO2 emissions. Besides, city planning focused on private vehicles is being reoriented into a more adapted city for pedestrians, bicycles and public transportation. It is estimated that 50% of the world's populations lives in cities, by 2050 this figure will rise to nearly 75%. The pressure is on to sustainably provide energy, housing, transportation, security, food, and water. Creating intelligent urban environments that efficiently support this growth requires vision, efficient use of technology and resources, an enabling infrastructure, and an environment that attracts a supporting and talented workforce.

This session will detail how the smart city will revolutionize every day life with two real world examples in smart garbage collection and smart trail management.

Shivakumar Mathapathi, Co-founder and COO - Dew Mobility

1:30 pm
A Dev Guide: Connectivity and Wearables…..219
The wearable device market is taking off and in doing so, has set off a chain reaction of opportunity for developers. A core technology pillar for any wearable device is wireless connectivity, which makes choosing the right technology and development route essential. So, what are the best wireless options for connecting to these wearables? NFC, BT, BT Smart, WiFi? How do you determine the best option for a given use case? In this informational session, Cary Bran, VP of Innovation and New Ventures for Plantronics, will outline the various wireless connectivity options, including pros, cons, tradeoffs and benefits as they relate to the emerging wearables market, and deliver practical guidance on the advantages and disadvantages a developer may encounter based on what connection method they choose and how it might affect different use-case scenarios.

Erik Perotti, Senior Associate of Innovation and New Ventures, Plantronics

2:00 pm
Going Beyond Wearables: Ingestible Sensors…..233
As diseases mutate and evolve, so should the practices and medicines used to diagnose and treat them. Some innovative companies have begun to integrate medicines that treat chronic conditions with mobile technology – via ingestible sensors – to bring further innovation, efficiency, and effectiveness to healthcare. By providing the right technology to individuals who deliver and receive healthcare, wearable and ingestible device makers can build a more robust healthcare system.

Ensuring the quality and functionality of mobile apps – particularly within the healthcare ecosystem – is vital. A bug or quality issue can literally mean the difference between life and death. To complicate things further, the testing and quality assurance process becomes more complex as unique sets of industry and regulatory compliance and FDA approvals across every phase of the product lifecycle are required.

Ingestible device makers must guarantee that their digital health feedback system works properly from one device, network and OS to the next while ensuring that the ingestible

device functions as intended while it's inside a patient's body. In this presentation, Sanket Mehta will discuss developing and quality-assuring a revolutionary digital health feedback system. From ideation and development to testing and monitoring, Sanket will highlight the real-world challenges of creating and quality-assuring a completely new segment of digitized and mobilized healthcare.

Sanket Mehta, IoT Evangelist/Account Manager – InfoStretch Corp.

2:30 pm – Conference Conclusion