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Presentations

The Industrial Internet in 2020 and Beyond ….. 1
The Industrial Internet is a term that has risen to prominence starting with its introduction by GE. Yet even with all its hype, it lacks clarity in the application segments, technologies, ecosystem challenges and the industry verticals most apt to benefit. In this presentation, ABI Research will provide its assessment of the Industrial Internet as well as address questions such as: Is healthcare an "industrial" market segment? What role do wearables play in the Industrial Internet? Will the Industrial Internet become closed, siloed and proprietary, or open, standardized and horizontal? All of this will be presented in the context of the most important industry trends, the Industrial Internet value chain and the overall Internet of Things ecosystem and markets.

Dan Shey, Practice Director – ABI Research

IoT and Value Chain of Things: Challenges & Opportunities for Enterprises….. 12
According to Gartner, there will be nearly 26 billion devices on the Internet of Things by 2020. ABI Research estimates that more than 30 billion devices will be wirelessly connected to the Internet of Things by 2020. The IoT is expected to revolutionize how products are developed, manufactured and delivered to customers in the near future through M2M connectivity, smart devices and instant communications. This session will discuss key principles and best practices for a modern IoT-enabled supply chain – such as predictability, adaptability, innovation, alignment and sustainability. Additionally, this session will present a framework for enterprise transformation though technology to impact growth, harness enterprise data and deliver new capabilities. Eaton Corp. will share their vision and perspectives on IoT-enabled enterprise transformation.

Maha Muzumdar is Vice President, Supply Chain – Oracle
Tom Black, Vice President, IT & Enterprise Information Management – Eaton Corp.

How Will Your IoT Application Outlive the Hype?…..29
The Internet of Things is a land grab, and while it's a savvy strategic move to build an IoT offering, how do you structure your technology and business model to outlive the hype?

Andrew Cronk, CEO of TempoIQ, will share his experiences working with businesses to launch successful IoT initiatives and his years of experience building sensor data projects. You'll learn why service models are key to sustainable IoT businesses, and how data and analytics can enable these transformations. You'll also learn the important considerations to make when building a sensor analytics offering. Finally, Andy will discuss pricing strategies that will align your pricing model with your customer's success.

Andrew Cronk, CEO – TempoIQ

Start Small, Build Fast and Connect What Matters….. 37
This session will cover pragmatic strategies to move forward with building connections and intelligence from the important things in your environment. Taking a case study approach, we'll share how a telemedicine firm, an F1 sports team and a dairy farm in India were able to create IoT solutions to improve on the business drivers that matter in their respective industries. For each case, we'll examine their approach, some of the key technologies used, and key learnings from the experience.

Kirsten Billhardt, Strategist for Internet of Things – Dell OEM Solutions

IoT Security Primer…..43
This primer on IoT security will cover the basics of securing the IoT at the device and network level by presenting the most significant issues from both the consumer's and the developer's point of view. Look beyond the noise of big data breaches and learn some of the common pitfalls even seasoned professionals fall into, and how to avoid them from the executive level to the developer level. No prior knowledge of security is required, but experts and neophytes alike will benefit from the information.

Eric Uner, CTO – Redwall Technologies

Model for Data Equity: Capture Value and Calculate Risk…..58
A model for data equity is an attempt to solve the monetary value of our big data in its forms such as financial, behavioral, demographic, and personal. Only upon bench marking the value of data, as a strategic asset, can we hope to improve upon its valuation and calibrate the necessary costs to maintain it. Not to be confused with Privacy Impact Assessments/Audits (PIA), we're looking beyond compliance or privacy protocols associated with personally identifiable information and focusing on data and its valuation as an asset. Utilizing accounting concepts and financial models, similar to those for defining brand equity; we look to certain data types with unique use, replacement time/costs, and competitive advantage so firms can ultimately attribute goodwill to the business and hedge potential losses.

Matthew Mikell, Big Data Manager – IBM

Talking SMAC (Social, Mobile, Analytics, Cloud)…..70
Organizations know there is insight to be gained from social intelligence, and that the information employees need is still locked in silos. Add to that the global proliferation of smart tech, and we're entering into a transformational time. This discussion will cover top trends in social, mobile, analytics and cloud, including how the convergence of SMAC is now becoming business as usual. Consumers count on customized content, how are orgs creating exceptional, digital experiences for consumers? How are orgs using social, mobile, analytics and cloud to create the workplace of the future? Smart tech continues to flirt with each other as wearable tech just might transcend 'cool' to become 'productive.'

Beverly Macy, Instructor, Center for MEMES - UCLA Anderson School of Management

IoT and Security – Connectivity and Security Does Not Have to Be a Choice of One…..76
As the Internet of Things enables new connectivity opportunities to devices such as automobiles, monitoring equipment, medical devices, and machinery, integrators of M2M should be designing these systems with security in mind. Adding security afterwards is costly and with proper security design, planning ahead for how to create fast, efficient communications between devices and also protect those devices and communications with secure chip technology is wise consideration. This session will examine ways to make the IoT both secure and trusted by looking at examples from other markets and discussing some security principles that have a proven track record in more mature industries.

Randy Vanderhoof is the Executive Director – Smart Card Alliance

10 Things to Consider When Developing IoT Devices…..80
The Internet of Things (IoT) was named the most hyped technology of 2014 by Gartner, and designers are responding by feverishly working to add connectivity to products in all industries, especially in the connect home, medical devices, industrial automation and transportation. Connected products require a new approach to design. This session will dive into the 10 things designers need to consider when developing IoT devices.

Adam Justice, Vice President and General Manager – Grid Connect

When IT Meets OT in the IoT – The Practical Application of Overlay Networks…..93
Machines have talked to machines for decades, but IoT technologies have inserted more intelligence and complexity into the conversation. While companies desire the promises the IoT brings, many struggle with and even stop short of adoption due to the complexity of integrating legacy assets into the IoT vision. Languages spoken by OT (operational technology) assets in the field differ from those spoken in the IT world; bridging the gap between them is the challenge.

This presentation will discuss solutions using overlay networks that can grab data from existing equipment, assets and networks without disrupting already established programming, processes and people. Learn to bridge conflicting technical requirements between IT and OT disciplines that rarely see eye to eye. Other topics discussed include data vs. information and the need to transform raw data into consumable information where the action is, at the edge of networks, as well as technology considerations for industrial IoT WSNs: Edge intelligence, power management and self-forming, self-healing wireless mesh technology.

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

Building a Business Model for IoT…..107
According to reports, there are currently about 10 billion connected devices and by 2020, that number is projected to be 75 billion. To bridge that gap over the next few years,

developers and businesses can take steps now to build a viable business model to succeed in this growing market. Using strategies like crowdfunding and partnering with established brands in the consumer service, retail and IoT spaces, as well as planning for global expansion, are just a few of ways to build a solid platform for innovation and growth for burgeoning IoT businesses.

Mark Bryan, Executive Director – Icontrol Networks

Attunity – Better Data Movement For The Internet Of Things…..114
In the age of the Industrial Internet how do you ensure that your business can keep its competitive edge? Do you have a plan for incorporating ALL of your enterprise data for analytics initiatives, considering a) the high volume and demand of data today b) the various types of data you'll need to support and c) the various sources you'll need to access the data from – ie sensors, machines, clouds and more? Moving the data from one platform to another, for business intelligence (BI), analytics, distribution or migration, is often rife with challenges. Put plainly, "Big Data" often becomes a "Big Headache".

At this session, attendees will learn best practices for driving real-time reporting with ever-changing data, automating data integration set up and configuration from multiple sources, and speeding the data replication and loading process to and from major platforms.

Kevin Petrie, Senior Director & Technology Evengelist – Attunity

Connecting the IoT: Virtual Networks, Physical Devices, and the Era of Software Defined Everything…..127
Concepts and architectures around the Internet of Things (IoT) are driving significant innovations in communication, network connectivity, data analytics, cloud computing, multicore processing, and sensor technologies. The IoT will generate entirely new types of data – with much more frequent updates of much smaller size and on unpredictable schedules. To provide the dynamic control over performance and scale of applications that connected devices will require, the industry will have to move toward software-based solutions like Network Functions Virtualization (NFV) and Software Defined Networking (SDN).

As we enter the era of "software-defined everything" and the world connects tens of billions of devices over the next decade, the demand for flexibility, agility, and adaptability will only grow, resulting in new services and revenue streams, enhancing productivity and efficiency, improving real-time decision making, and more.

Jeff Fortin - Director of Product Management, IoT Solutions Group - Wind River

Social Machines: Achieving Preventative Maintenance, Eliminating Downtime…..144
Machine downtime equates to hundreds of thousands of lost dollars per day. Ensuring that machinery and critical equipment downtime is minimized through preventative

maintenance drives efficiency gains, reduces costs and increases revenue. Efficiency gains as small as 1 percent can change entire industries including power, health care, aviation, rail and the oil and gas industry. GE estimates that over 15 years, a 1 percent efficiency gain could result in $63 billion in healthcare, $27 billion in rail and $90 billion in savings in the oil and gas industry. In this session, we'll discuss how social machines power these efficiency gains and take a look at use cases for two vastly different industries.

Liz Presson, Resident Intrapreneur – Digi International

The Impact of IoT on Semiconductor Companies…..160
Early IoT opportunities have centered on the Consumer, Home and Automotive segments. Advancing technologies will result in the evolution of IoT functionality from simple connected devices to more intelligent, distributed and autonomous systems. The real growth of IoT is still to come with an increase in applications in other markets e.g. Retail, Healthcare, Energy, Industrial and Construction.

The IoT phenomenon is expected to have a profound impact on the overall growth and stability of the semiconductor industry. Semiconductor companies function as enablers of core technologies and services and for creation of IoT related infrastructure. Semiconductor companies need to develop specific ecosystem, product portfolio and operational strategies to take advantage of the opportunities presented by IoT.

Rajesh Mani, Director Strategy and Operations – PricewaterhouseCoopers

Saffron…..167
The Industrial Internet of Things (IIoT) is creating the opportunity for massive disruption across the manufacturing and supply chain industry by making assets more "intelligent". At Saffron, we envision an IIoT ecosystem where sensors, data management and advanced analytics work collaboratively to reduce operational inefficiencies and optimize assets.

An intelligent IIoT platform should be adept at solving problems and instantly learning about each asset, component, part and operating condition and their connections and frequencies interacting with other things, leading to an enduring knowledge layer of connections and counts between things. Manufacturers integrating cognitive analytic solutions into their business will not only learn what assets are succeeding or failing, but also gain insights into how, when, where and why and be able to integrate this knowledge back into the supply chain automatically and in real time.

Gayle Sheppard, CEO – Saffron

IoT, Cloud, and DevOps – Bringing Them all Together…..176
Think these things are independent? Think again. They are intertwined and all dependent upon one another. In this session we will discuss the architecture for IoT-related solutions, including devices, gateways, cloud-infrastructure and user interface

elements. Also, we will describe the Information flow across the architecture, including considerations for device manufacturers, users, and interested third party data consumers. We will show how enabling agile and DevOps-based systems and application development applies across embedded systems, application server-based software, databases, and visualization components, resulting in continuous engineering. And we will reinforce how IoT will rely upon cloud, analytics, mobile, social, and security technologies.

Tim Hahn, Chief Architect for Connected Vehicle and Internet of Things – IBM Software

The One Standard you Need to Enable the Factory Floor for the Internet of Things…..186

The Factory Floor is on the cusp of revolutionary transformation. Where there used to be a rock-solid, sturdy wall between the Enterprise and the Factory floor you won't even find an invisible line in the near future. Soon you won't be able to design an automation system without considering how you'll deliver data to Enterprise systems and the Internet-of-Things. There is only one globally accepted technology that can provide the reliability, security, data modeling and sophistication to support IoT communications with the factory floor and that is OPC UA. This presentation focuses on what OPC UA is and why it's the perfect technology to meet this important need.

John Rinaldi, President – Real Time Automation

Building Energy Management – the Killer App for Enterprise Internet of Things…..206

Enterprise. Wireless networking. Open standards. These terms are being taken to a new level in the era of smart buildings, where the building is *becoming* the enterprise. To add the 'smart' in smart buildings, we need to unify these capabilities to monitor, measure and manage a multitude of energy-related applications in order to realize operational and energy-saving benefits across the enterprise.

In this presentation, Daintree Networks CEO Danny Yu will delve further into the E-IoT and its potential, providing real-world examples of how enterprises are able to execute on the E-IoT through networked wireless open standards-based energy control and management solutions. Danny will also illustrate overall trends and how building energy management is playing a critical role as a pragmatic solution for the E-IoT for both the commercial and industrial facilities as well as the residential markets.

Danny Yu, CEO – Daintree Networks, Inc.

Practical Implications of Web-Enabled Devices and Cloud-Based Services in Industrial Automation…..217

This presentation provides a comprehensive overview of: Industry 4.0, compared and contrasted with the Internet of Things (IoT); and how the concepts of each provide a foundation for practical implementation of web-enabled devices in industrial

applications; the acquisition of industrial “Big Data”; and use of the Cloud as an industrial connectivity enabler.

PC-based automation solutions offer an ideal solution for “sensor to cloud” connectivity, bridging the gap between AT and IT and driving plants toward the smart factory. This functionality is accomplished through such features as lean and centralized PC-based control architectures, open communication standards such as OPC UA, and Cloud-based systems. Robust PC-based control systems represent a comprehensive solution engineers can use to implement results-oriented Industry 4.0 and IoT applications today.

Daymon Thompson, TwinCAT Product Specialist - Beckhoff Automation

Without App Standards, There’s No Internet of Anything’…..234
According to Gartner, there will be nearly 26 billion devices on the Internet of Things by 2020. A critical component of ensuring the IoT is successful is making sure devices can connect seamlessly to foster a collaborative environment across multiple industries. However, the complexity of systems can become a major roadblock to implementation.

This presentation will discuss the importance of classifying different device types and functionalities while also exploring technical solutions for integrating any device into existing systems. Interoperability is the name of the game and attendees will learn how to achieve it while continuing to build a competitive advantage.

Guy Martin, Senior Strategist – Samsung Open Source Group/Head of Digital Marketing, Open Interconnect Consortium (OIC)

How Edge Analytics and Demand-Oriented Data Communication Help to Prevent Data Flooding…..263
Sensors are the basis for IoT applications. They enable us to take decisions and are also necessary to automate industrial processes or to evaluate the operational performance of companies. In order to do so, sensors produce tremendous amounts of data every day. But not every single data point has the same information value and is hence important enough to be sent across the communication networks. Only sensor data, which indicates a change has an added value for its recipients / consumers. Therefore, it is necessary to analyze data before it is sent in order to prevent data flooding and a congestion of the communication infrastructure.

In this session, we will discuss the necessity of demand-oriented data communication approaches with a special focus on monitoring industrial infrastructures in the telecommunications market. The speaker will mainly highlight the concept of Intelligence @ the edge, its application in industrial environments and how it can benefit the substantial growth of the IoT market.

Christopher Mott, Vice President Strategic Partnerships, North America – azeti Networks

Great Mobile Apps Require Context…..278
In this session we'll discuss current trends in mobile app design and development. A central theme will be the importance of leveraging unique mobile characteristics to make apps more productive for users by making them more contextual. Participants will come away with an understanding of best practices for app design and what key capabilities from IBM Bluemix and the IBM MobileFirst Platform will help them accelerate achieving these new design goals.

Dustin Amhrein – Technical Evangelist; Software Developer – IBM

The Internet of Things and Manufacturing: How to Gain a Competitive Edge…..292
IoT and big data analytics bring tremendous automation potential to the factory. With these technologies we can merge and correlate rapidly growing data sets to improve product quality, gain insights into root causes of manufacturing issues, increase throughput, and reduce machine failures and downtime. This session will discuss how to integrate interoperable platforms, multilayer security, and data services to accelerate the creation of Internet of Things (IoT) solutions that generate new services, improved productivity and efficiency, and speed time to market.

In this session, we will delve into how Manufacturers need to think of the IoT not merely in terms of technology, but rather in terms of the business case. How can the IoT help you be more competitive by producing with higher quality, lower cost and less environmental impact?

Thomas Burns, Director for IOT Analytics Software - Intel

Adding Context to the Web: Bluetooth APIs and Device Integration…..299
Though in its infancy, Bluetooth device access from web browsers is opening up new opportunities for web developers to integrate a multitude of sensing devices into their web applications. When coupled with emerging real-time communication standards, such as WebRTC, device access will create opportunities for delivering truly contextualized communications. But how? In this session, Erik Perotti will walk through the coding of device connectivity with the latest browser-based Bluetooth APIs from Google and show how developers can leverage the IoT to create deeply contextual web applications.

Erik Perotti, Senior Manager of New Ventures – Plantronics

An Efficient workflow for Implementing Public Key Cryptography (PKC) in Constrained Devices…..312
In the IoT area, security is difficult to achieve due to many factors, and one of the main factors is related to constrained computational power of the edge devices and sensor nodes. If public key cryptography (PKC) is used, then the computation is expensive to encrypt and decrypt messages and this proves to be a bottle neck for the said constrained devices. If symmetric key cryptography is used, then the key management, which includes secure distribution of key becomes a problem. This key distribution problem

becomes complex, when the number of nodes becomes huge, which is the case with any IoT deployments.

Hence, a complete different approach is needed to solve these problems. The PKC is an attractive approach since the key management problem is not present. However, for the constrained devices to have a public key and a private key, the key generation is a challenge since two prime numbers are needed.

Shanmugasundaram.M, Associate Director – Happiest Minds Technologies Pvt Ltd.

Business Apps and IoT-A Magical Combination…..320
IoT is increasing at a terrific pace. Business application software has been lagging. The core of this presentation is meant to evaluate their progress to date, identify where they are deficient, and create a vision of the future. This presentation is meant to stretch business leaders beyond the current use cases toward the methods, challenges, and value of the mixture of IoT and business applications.

The presenter will address the business application market as a whole in a more general discussion of their capabilities and shortcomings.

Paul Demes, Partner – WhiteLight Group, LLC

Timing: When will Connected Cars be an Important Market?…..343
We are heading down a new road in vehicle technology. Connected vehicles are already here by some definitions, but much more connectivity is on the horizon for crash avoidance, infotainment and communication. Soon most vehicles sold in the developed world will have some generation of connectivity technology on board, and within 15 to 20 years all vehicles will be rolling off assembly lines with some connectivity.

The diffusion of various generations of technology through the fleet and technology aimed at different markets will take decades to unfold. Hence the implications for business plans and strategies must be developed now but be aware of the time frames for diffusion and monetization. This session will illustrate the modeling platform and address the timing of the fast developing connected vehicle opportunity.

Tom Gage, CEO and Managing Director – Marconi Pacific, LLC

Transform Building Efficiency and Comfort in Smart Buildings…..351
With the proliferation of connected sensors that integrate greater compute capabilities, intelligent gateways to aggregate and filter data, and big data analytics, the Internet of Things (IoT) is transforming building efficiency and tenant comfort. Buildings that adjust to their occupants, weather and energy usage patterns, and security needs are the building automation realities made possible by IoT.

This session focuses on applications of Intel's Internet of Things (IoT) technology in smart buildings. It highlights how Intel solutions can be applied to commercial and multi-dwelling residential buildings.

Thomas Burns, Director for IOT Analytics Software - Intel

Secure Software Updates via Integrity Protection…..358
Software for embedded systems is based more and more on open system platforms – Linux Embedded, VxWorks, Windows Embedded, QNX and many others. The open platforms provide many benefits and can simplify software development between several teams within a large enterprise or even in different software companies. However, these new open system platforms are also vulnerable to attacks from hackers who know these platforms as well.

This presentation will demonstrate a technology that guarantees code protection by securing the running code itself against any modifications and also preventing the loader of the operating system to start any unauthorized code. The technology also protects the open system platform itself to prevent a hacker from installing his or her own loader. And finally, the technology prevents the BIOS of the embedded system from loading an unauthorized platform.

Marcellus Buchheit – Wibu-Systems

A 360-Degree App Quality Approach to Developing Winning Apps for the Internet of Things…..376
This session will lead the audience in a discussion on the issues that developers of the digital experiences that make up the Internet of Things need to be aware of and navigate in order to succeed as the apps economy expands to life beyond mobile, including connectivity and API issues, interoperability challenges, proprietary discussions and development decisions, dramatically increased fragmentation issues and more. Since the IoT is still in its infancy, there are many big brands that have yet to be exposed to the space; everything from development and testing challenges and best practices, to user behavior and adoption rates.

Ben Gray, Lead Enterprise App Evangelist - Applause

Connecting Cars to the Cloud: A Roadmap…..388
As the IoT begins to encompass everything from watches to microwaves, it's only natural that vehicles will become connected too. However, with connected vehicle technology comes new business challenges: How can we ensure connected devices are compatible with connected vehicle models? And how do we manage identity and access for not only the connected vehicles, but the things connected to the vehicles too? As the cloud platform provider powering connectivity for top automotive brands, Covisint is at the center of all things data and IoT. Covisint CSO Dave Miller will share how millions of connected car identities are secured and managed through its platform citing examples from customers.

Dave Miller, Chief Security Officer – Covisint

You Versus the Sensors – Six Requirements for Visualizing the Internet of Things…..396

You can't do air traffic control with a spreadsheet and you can't get value from the Internet of Things (IOT) with traditional business intelligence and analytic tools. Fleet managers with squadrons of highly instrumented transport vehicles streaming data, for instance, need in-the-moment insight, not a rearview mirror dashboard report, to predict and prevent maintenance issues. Similarly, RFID tags affixed to items headed to stores on those trucks holds similar insight potential for product marketing managers and retail inventory managers alike.

A new analytic approach is clearly required. Where traditional BI was based on query-and-response systems looking at static, historical data, the streaming data that characterizes the IoT creates a "continuous query" environment that can only be understood and managed in a visual manner. This session will take a deep dive into the emerging requirements for creating an effective data visualization platform for the Internet of Things.

Dan Potter, Chief Marketing Officer - Datawatch Corp.

Modernizing M2M Analytics Strategies for the Internet of Things…..411

To cope with the expansive amounts of data coming our way thanks to the Internet of Things (IoT), businesses need to understand how to best leverage the power of analytics. A combination of tools and talent are required to effectively gather, store and pull useful knowledge from data. This session will explore what components are necessary to draw advantageous insights by executing faster, smarter analytics in an ever-expanding connected world.

Don DeLoach, President and Chief Executive Officer - Infobright