# INTERIOR THE STREET TO THE SEXHIBITION APRIL 10-12, 2018

# 

GUIDE





**iPHONE** 

Download the RFID Connect mobile app to access event information on the go. See page 44 for details.

Share your experiences—#RFIDLIVE

CONVENTION CENTER MAP	4-5
EXHIBIT HALL MAP	6-7
AGENDA AT A GLANCE	9-13
FAST-TRACK TRAINING	15
PRECONFERENCE SEMINARS	16-23
GENERAL SESSIONS	24-25
TRACK SESSIONS	26-39
SOLUTION PROVIDER SESSIONS	29
RFID JOURNAL AWARDS SESSIONS	40-41
POST-CONFERENCE PROGRAM	42-43
SPONSOR PROFILES	45-53

Presentations will be available after the event at rfidjournallive.com/conference/presentations/





# CHANGING THE GAME WITH INTELLIGENT LABELING

**Booth #1115** 

rfid.averydennison.com @AvyDenRFID





Mark Roberti Founder and Editor, RFID Journal

Mark Roberti has reported on business for major publications worldwide since 1985. In 2002, he launched RFID Journal on the web as an independent source of news and information for business executives looking to tap RFID's enormous potential. He is widely regarded as a thought leader in the RFID industry.

Dear Attendee.

Welcome to RFID Journal LIVE! 2018, our 16th annual conference and exhibition, and the largest event worldwide focused on radio frequency identification. We present more than 100 hours of educational sessions this year, including an impressive lineup of end users who will share detailed case studies. What's more, our exhibit hall features leading technology companies showcasing their latest solutions to solve your unique business problems.

### **Smartphone App**

The RFID Journal LIVE! smartphone app will help you find the sessions you want to attend, exhibitors you want to visit and other attendees you want to meet. Click on Tracks to see all of the preconference seminars, track sessions and post-conference training classes.

Select Exhibitors to see a list of exhibitors in alphabetical order. You can also tap the By Product Category tab to see a list of popular product categories, such as "active RFID systems" and "manufacturing solutions." Select the category you are interested in and you will get a list of exhibitors offering those products.

Click on Maps to see a map of the exhibit hall. Click on a booth to see a profile of that exhibitor. You can request a meeting with that company by clicking the meeting icon in the upper left-hand corner of the screen.

You can search the agenda on your phone by keyword, as well as highlight exhibitors on the app's interactive floor plan by the products they offer, and by the industries for which they offer solutions. You can request meetings right through your phone. All speaker bios and exhibitor profiles are listed in the app. I encourage you to download it (see page 44) and check it out.

### RFID Journal LIVE! on Social Media

Allah Kobati

- If you are not already connected to us, you can find us on Facebook, Twitter and LinkedIn.
- Use the hashtag #RFIDLIVE for all event-related tweets and posts.

I'm confident you will learn from those already employing RFID to achieve real business benefits, and I know you'll be impressed by the technology advances being exhibited this year on the show floor. If there is anything we can do to assist you during the next three days, please do not hesitate to contact me or any other members of the RFID Journal staff. Thank you. I hope you enjoy the conference.

Yours,



Tweet about the event using the hashtag #RFIDLIVE

# **PROGRAMS**

### **TUESDAY, APRIL 10**

### **WEDNESDAY, APRIL 11**

General Se	ession Keynotes24
11:15 AM	Track Sessions
12:05 PM	Solution Provider Sessions 29
3:00 PM	Track Sessions
3:50 PM	Track Sessions
4:40 PM	Track Sessions34

### **THURSDAY, APRIL 12**

9:00 AM	Irack Sessions
9:45 AM	Track Sessions
10:30 AM	RFID Journal Award Sessions 40
Post-Confe	erence Program:
	g Class: Benchmarking FID Hardware
	g Class: RFID Applications



### **EDITORIAL**

Mark.Roberti@rfidjournal.com Rich Handley, Managing Editor Rich.Handley@rfidjournal.com Claire Swedberg, Senior Editor Claire.Swedberg@rfidjournal.com Ed Perin, RFID Journal Brasil Editor Ed.Perin@rfidjournal.com Letters to the Editor

editor@rfidjournal.com

Mark Roberti, Founder and Editor

### SALES

(212) 584-9400 ext. 03915 Alan.Mcintosh@rfidjournal.com Matthew Singer, Senior Director of Sales (212) 584-9400 ext. 03916

Alan McIntosh, Senior Director of Sales

### **EVENTS**

Debbie Hughes, Senior Editorial Director of Events Debbie.Hughes@rfidjournal.com

Matthew.Singer@rfidjournal.com

### CORPORATE

Mark Roberti, Founder and Editor Mark.Roberti@rfidjournal.com

RFID JOURNAL, LLC P.O. Box 5874 Hauppauge, NY 11788 www.rfidjournal.com

### **REGISTRATION HOURS**

The RFID Journal LIVE! registration area will be open during the following hours:

Monday	12:00 PM – 7:00 PM
(exhibitors only)	
Tuesday	7:00 AM – 8:00 PM
Wednesday	7:00 AM – 5:00 PM
Thursday	7:00 AM – 3:00 PM

### **EXHIBIT HALL**

The exhibition features more than 170 of the leading RFID hardware, software and integration vendors showcasing the latest technologies and product demonstrations, plus the latest innovations from RFID startup companies. See pages 6 and 7 for Exhibit Hall map and a list of exhibitors.

### **Exhibit Hall Hours**

Tuesday	6:30 PM – 8:15 PM
Opening Reception	6:30 PM – 8:15 PM
Wednesday	10:45 AM – 5:30 PM
Thursday	10:30 AM – 3:00 PM

### MEAL FUNCTIONS

### **Preconference Luncheon**

Tuesday ......12:15 PM – 1:00 PM Lunch will be provided to all RFID Journal LIVE! preconference attendees.

### **Conference Luncheon**

Wednesday	12:45 PM – 3:00 PM
Thursday	11:30 AM – 3:00 PM
Lunch will be provided,	in the Exhibit Hall, to all
conference pass and all-	-access pass holders.

### **HOTELS**

### Hilton Orlando Hotel Information

Tel: (407) 313-4300 Fax: (407) 313-4301

### **Rosen Centre Hotel Information**

Tel: (407) 996-9840 Fax: (407) 996-0865

### ORANGE COUNTY CONVENTION CENTER BUSINESS CENTER

The OCCC has onsite FedEx Office business centers located in both the West Building and the North/South Building. These business centers offer the following services exclusively to event participants: faxing, packing, shipping & receiving, computer rentals, email & internet browsing, office supplies, photocopying, signs/posters/banners, business cards and copy machine rentals. They also serve as the pick-up and drop-off point for wheelchair and electric scooter rentals.

The FedEx Office and Print Centers are open seven days a week from 8:00 AM to 5:00 PM.

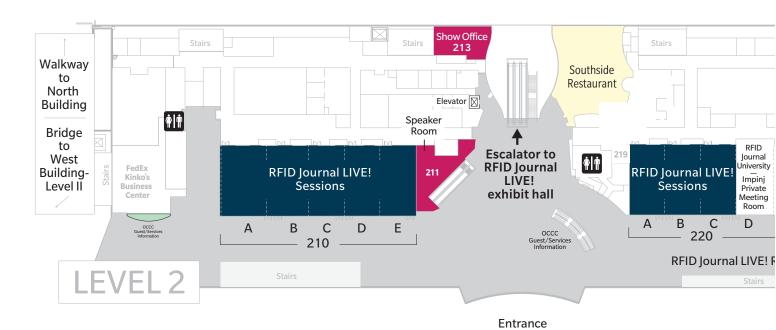
### **ONSITE POLICIES**

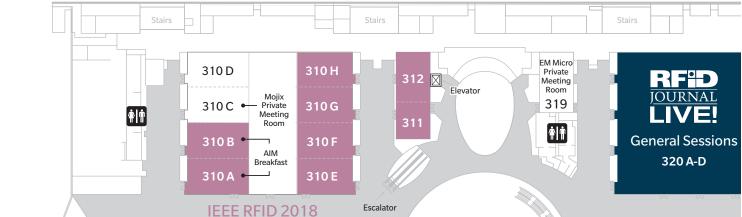
- Recording devices and cameras, including still and video, are prohibited.
- Sorry, no one under 18 admitted, including infants.
- Prohibited items: firearms, or other weapons; explosives and/or hazardous materials or articles.

### QUESTIONS?

Please do not hesitate to ask any member of the RFID Journal LIVE! Event Team should you have questions or need assistance. We can be easily identified by our RFID Journal Event Team badges.

### **ORANGE COUNTY CONVENTION CENTER | LOCATIONS**





### Registration

Convention Registration Foyer, Lobby Level

### **General Sessions**

320 A-D

### Offices

Speaker Ready Room 211

### Co-located event

IEEE RFID 2018: 310 A-B, 310 E-H, 311, 312

### Preconferences

RFID Basics 210 B, C

Item-Level Retail and Apparel Workshop 210 A

RFID/IoT for Warehouse

and Inventory Management 210 B, C

RFID Strategy and Best Practices 210 D

Bluetooth Beacon Applications Workshop 210 E

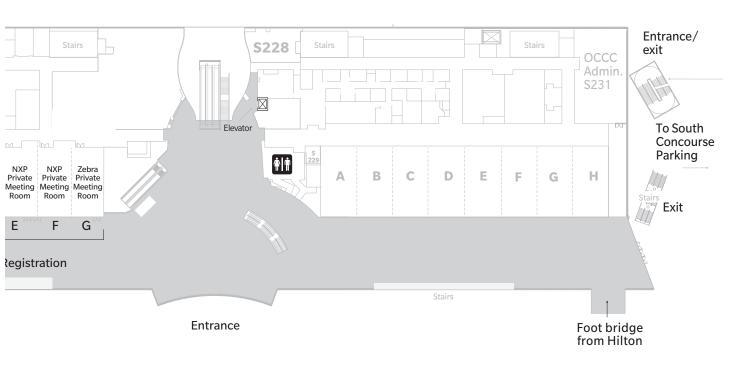
RFID and the Future of Intelligent Labels 220 A

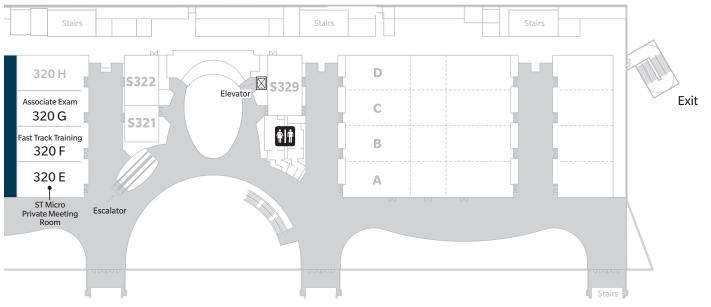
RFID for IT Professionals 220 B

Asset Tracking Essentials 220 C RFID Journal University 220 D

### **Training**

Fast-Track RFID Professional Institute 320 F, G **RFID Professional Institute Certified** Associate Exam 320 G





### **Industry Tracks**

Health Care/Pharmaceutical 210 A Retail/Apparel 210 B Defense/Aerospace 210 C Manufacturing 210 D Supply Chain/Logistics 210 E Innovation 220 A Internet of Things 220 B Technology and Infrastructure 220 C

### **RFID Journal Awards**

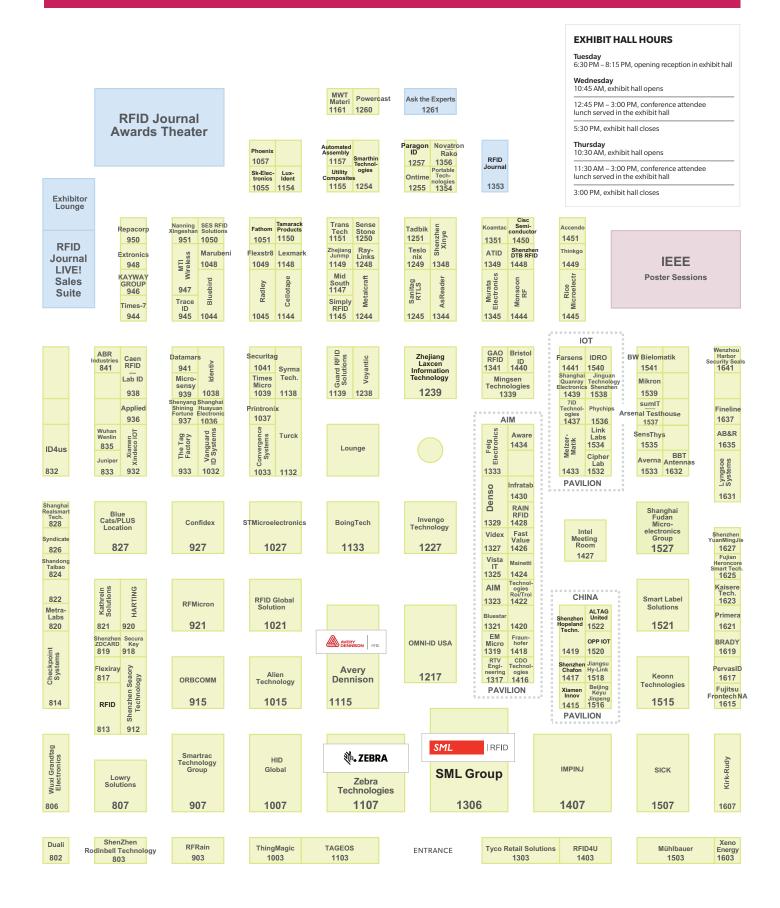
Presentations Exhibit Hall, Awards Theater

### Post-conferences

Benchmarking UHF RFID Hardware 210 C RFID Applications Developers Training 210 D

### **Private Meeting Rooms**

AIM Breakfast 310 A EM Microelectronics 319 Fujitsu 310 D (Thurs.) Impinj 310 D (Tues.) Impinj 220 D (Wed./Thurs.) Mojix 310 C NXP 220 E, F STMicroelectronics 320 E Zebra 220 G



### **EXHIBITOR BOOTH NUMBERS**

sumIT 1537 7iD Technologies 1437 Guard RFID Solutions 1139 Phychips 1536 AB&R (American Barcode and RFID) 1635 Harting USA 920 Portable Technology Solution / Syndicate Printers 826 ABR Industries 841 HID Global 1007 Tracer Plus 1354 Syrma Technology 1138 Accendo 1451 ID4us 832 Powercast 1260 Tadbik 1251 AIM 1323 Identiv 1038 Primera Technology 1621 Tageos 1103 Alien Technology 1015 **IDRO 1540** Printronix Auto ID 1037 Tamarack Products 1150 **ALTAG 1522** Impini 1407 Radley 1045 Technologies ROI (TROI) 1422 Applied Wireless Identification Group Infratab 1430 RAIN RFID Alliance 1428 Teslonix 1249 (AWID) 936 Intel Meeting Room 1427 Rako Security Label 1356 The Tag Factory 933 Arsenal Testhouse 1537 Invengo Technology 1227 Ray-Links (Beijing) Technologies 1248 Thingmagic, a JADAK brand 1003 Ask the Experts 1261 Jiangsu Hy-Link Science Repacorp 950 Thinkgo Technology (Beijing) 1449 AsReader 1344 & Technology 1518 **RFID Global Solution 1021** Times Microwave Systems 1039 Times-7 944 ATID 1349 Jinguan Technology Shenzhen 1538 RFID Inc. 813 Automated Assembly 1157 RFID Journal 1353 Trace ID 945 Juniper Systems 833 Averna Technologies 1533 Kaisere Technology 1623 RFID4U 1403 TransTech Systems 1151 Avery Dennison 1115 Kathrein Solutions 821 RFMicron 921 **Turck 1132** Aware Innovations 1434 KAWAY GROUP 946 RFRain 903 Tyco Retail Solutions 1303 BBT Antennas 1632 Keonn Technologies 1515 Rice Microelectronic 1445 Utility Composites 1155 Kirk-Rudy 1607 RTV Engineering 1317 Vanguard ID Systems 1032 Beijing Keyu Jinpeng Automation Equipment 1516 Koamtac 1351 Sanitag RTLS 1245 Videx 1327 BlueCats/Plus Location 827 Lab ID 938 Secura Kev 918 Vista IT Systems 1325 Bluebird 1044 Lexmark International 1148 Securitag Assembly Group 1041 Voyantic 1238 Link Labs 1534 Bluestar 1321 SenseStone Technologies 1250 Wenzhou Harbor Security Seals 1641 BoingTech 1133 Lowry Solutions 807 SensThys 1535 Wuhan Wenlin Technology 835 Brady 1619 LUX-Ident 1154 SES RFID Solutions Asia 1050 Wuxi Grandtag Electronics 806 Bristol ID Technologies 1440 Lyngsoe Systems 1631 Shandong Taibao Anti-Counterfeiting Xeno Energy 1603 BW Bielomatik 1541 Mainetti-USA 1424 Technology Products 824 Xiamen Innov Information Caen RFID 938 Marubeni and NiGK 1048 Shanghai Fudan Microelectronics Science & Technology 1415 CDO Technologies 1416 Melzer-Matik 1433 Xiamen Xindeco IOT Technology 932 Group 1527 Cellotape 1144 Metalcraft 1244 Shanghai Huayuan Electronic 1036 Zebra Technologies 1107 Checkpoint Systems 814 MetraLabs 820 Shanghai Quanray Electronics 1439 Zhejiang Junmp Technology 1149 Cipherlab 1532 Microsensys 939 Shanghai Realsmart Technologies 828 Zhejiang Laxcen Information Cisc Semiconductor 1450 Mid-South RFID 1147 Shenyang Shining Fortune Technology 1239 Confidex 927 Mikron America 1539 Container Seal 937 Convergence Systems 1033 Mingsen Technologies 1339 Shenzhen Chafon Technology 1417 Datamars 941 Monsoon RF 1444 Shenzhen DTB RFID 1448 Denso 1329 MTI Wireless Edge 947 Shenzhen Hopeland Technologies 1419 Mühlbauer 1503 Duali 802 Shenzhen Rodinbell Technology 803 EM Microelectronic 1319 Murata Electronics 1345 Shenzhen Seaory Technology 912 MWT Materials 1161 Extronics 948 Shenzhen Xinye Intelligence Card 1348 Farsens 1441 Nanning Xingeshan Electronic Shenzhen Yuanmingjie Fast Value Global 1426 Technology 951 Technology 1627 Shenzhen ZDCARD Tech 819 Fathom 1051 Newave Sensor Solutions 1521 Feig Electronics 1333 Novatron Electronics 1356 **SICK 1507** 

Simply RFID 1145

SML Group 1306

Sk-Electronics 1055

Smart Label Solutions 1521

Smarthin Technologies 1254

STMicroelectronics 1027

Smartrac Technology Group 907

Fineline Tech 1637

Fraunhofer IPMS 1418

Fujian Heroncore Smart Technology 1625

Fujitsu Frontech North America 1615

Flexiray 817

Flexstr8 1049

**GAO RFID 1341** 

Omni-ID USA 1217

OPP IOT Technologies 1520

Ontime 1255

**ORBCOMM 915** 

Paragon ID 1257

Phoenix Solution 1057

PervasID 1617

Select Exhibitors in the Mobile App menu to see a list of exhibitors in alphabetical order. You can also tap the By Product Category tab to see a list of popular product categories, such as "active RFID systems" and "manufacturing solutions." Select the category you are interested in to get a list of exhibitors offering those products. Click on the exhibitor name to see their profile and booth number.

# CHINA PAILION

# EXPERIENCE THE MOST INNOVATIVE RFID SOLUTIONS FROM LEADING CHINESE ORGANIZATIONS

# **EXHIBITORS INCLUDE:**

**BOOTH 1516** 



**BOOTH 1522** 



**BOOTH 1518** 



**BOOTH 1417** 



**BOOTH 1520** 



**BOOTH 1419** 



**BOOTH 1415** 



	Training and Preconference Seminars and Workshops PRESENTED IN PARTNERSHIP WITH
8:00 AM – 4:45 PM	Fast-Track RFID Professional Institute Certified Associate Training 320 F, G Session details on page 15
10:30 AM – 11:15 AM	<b>Preconference General Session: RFID Basics</b> 210 B, C
11:30 AM – 4:15 PM	Item-Level Retail and Apparel Workshop 210 A Session details on page 16
	RFID/IoT for Warehouse and Inventory Management 210 B, C Session details on page 17
	RFID Strategy and Best Practices 210 D Session details on page 18
	Bluetooth Beacon Applications Workshop 210 E Session details on page 19
	Understanding the Value of RFID and the Future of Intelligent Labels  220 A  Session details on page 20
	RFID for IT Professionals 220 B Session details on page 21
	Asset Tracking Essentials 220 C Session details on page 22
Y	RFID Journal University 220 D Session details on page 23
	General Session Keynotes and Opening Reception
5:00 PM	Boeing Deploys RFID In-House for Assembly Management 320 A-D Speaker: John Yu, Senior Manager, Automated Identification, Boeing Session details on page 24
5:45 PM	RFID Strategies and Best Practices for Today and Tomorrow 320 A-D Moderator: Mark Roberti, Founder and Editor, RFID Journal Panelist: Henry Nisiobincki, RFID Program Manager, American Woodmark Gary Tattersall, Director of Asset Protection & Risk Management, Jack Wills Kenneth Morgan, SAF/CIO, Enterprise IT Integration Division, Mobility, Information Dominance and Chief Information Officer, Office of the Secretary of the Air Force, Pentagon, U.S. Air Force Session details on page 24
6:30 PM- 8:15 PM	Opening Reception in Exhibit Hall

### AGENDA AT A GLANCE | WEDNESDAY

7:00 AM	Registration Opens, Morning Coffee				
8:00 AM	Welcome and Introduction 320 A-D   Speaker: Mark Roberti, Founder and Editor, RFID Journal				
8:30 AM	RFID Brings New Level of Dat 320 A-D   Phil Savage, Executive Dire Session details on page 24	ta to Understanding Performa ctor, The Reese's Senior Bowl	ince		
9:00 AM	Panel Discussion: Benefit of I 320 A-D   Moderator: Dean Frew, CTC Session details on page 24		Spo	onsored by SML	RFID
9:45 AM		<b>D is Helping the Aviation Indu</b> Market Development Manager, Aviatio		onsored by AVER	RY NISON RFID
10:15 AM	Ronald Mills, Dire	Eith RFID  ID - Vendor Tooling Asset Managemer ector of Asset Services, General Motor urg, GBS Asset Management – Manag	s;		
TRACKS	<b>⊗</b>	<b>③</b>		0	
	Defense/Aerospace	Health Care/ Pharmaceutical 210 A	Innovation 220 A	<b>Manufacturing</b> 210 D	Internet of Things 220 B
11:15 AM Detailed agenda on pages 26-27	RFID Reduces Costs, Scheduling Impacts for NASA JWST Mission	Mettler-Toledo Rainin Uses RFID to Reduce Out-of-Service and Specification Related Costs For Labs	TransLink Leverages RFID for Universal Access for Customers Who Have Limited Use of Their Hands	RFID System Brings Visibility to Industrial Components	The Current State of the Internet of Things
12:05 PM Detailed agenda on pageS 28-29	Solution Provider Session (see box, right)	Solution Provider Session (see box, right)	Solution Provider Session (see box, right)	Solution Provider Session (see box, right)	Solution Provider Session (see box, right)
12:45 PM	Lunch in RFID Journal LIVE! E	xhibit Hall			
1:00 PM	M Exhibitor Spotlight Sessions, Awards Theater: 1:00 PM – 3:00 PM				
3:00 PM Detailed agenda on pages 30-31	BAE Systems Improves Manufacturing and Inventory Capability With RFID	St. James's Hospital Tracks Assets, People and Surgical Samples via RFID	RFID-Enabled Vending Machine Brings Automation, Security to Library Disk Loans	Vitamix Improves Customer Experience and Safety With RFID	IoT 2021: Connectivity on Your Terms
3:50 PM Detailed agenda on pages 32-33	MRO Company Uses RFID to Increase Efficiency and Productivity	Wayne HealthCare Uses RFID to Enhance Patient Satisfaction	Using Small Drones to Read RFID Tags Indoors	Pardon the Disruption: A New Generation of RFID Laser Printing	City Launches IoT Lab for Technology Innovation
4:40 PM Detailed agenda on pages 34-35	Using Business Optimization to Maximize the ROI of IIoT and RFID	Improving the Delivery and Management of Medical Devices via RFID	Weapons of Mass Disruption: The Innovations Revolutionizing Our Industry	RFID Cuts Risk and Reduces Costs for Weatherford	Bluetooth and RFID Merge to Link CPG to IoT

Retail/Apparel	Supply Chain/ Logistics 210 E	Technology and Infrastructure 220 C	
Jack Wills Deploys RFID to Drive Stock Accuracy	Project Zipper: RFID ROI to Brands and Manufacturers	Design and Implementation of a UHF RFID Solution	
Solution Provider Session (see box, right)	Solution Provider Session (see box, right)	Solution Provider Sessions (see box, right)	

Kevingston Uses RFID to Increase Efficiency	Daimler Uses RTLS, Drones and RFID to Manage Warehouse Inventory	Grid-Based RFID Localization Using Easily Obtainable Measurements: Tag Read Count and Received Signal Strength
Marks & Spencer Broadens and Deepens Its RFID Use	Weir Oil & Gas Improves Visibility and Functionality via RFID-based Asset- Management System	RFID Infrastructure Marking for a Connected World
Sonae Uses RFID to Improve Sales Floor Availability	Hellenic Army Uses RFID to Improve Tracking and Logistics	HP LATAM Uses Digital Supply Chain Program to Improve Efficiency

12:05 PM Solution Provider Sessions

## **BW** Papersystems **BW** Bielomatik

220 B

**Enabling IoT and RFID Tag Mass Production for the** Requirements of the Next Decade



210 B

The Ultimate RFID Solution Has Arrived: PervasID Launches a Fully Integrated Remote Inventory, **Portal** 



220 C

Critical Drivers for Success: Harness the Power of **Identification and Sensing Technology** 

### **AGENDA AT A GLANCE | THURSDAY**

TRACKS	<b>(</b>	<b>(S)</b>			
	Defense/Aerospace	Health Care/ Pharmaceutical 210 A	Innovation 220 A	Manufacturing 210 D	Internet of Things 220 B
9:00 AM Detailed agenda on pages 36-37	Leveraging AIT and RFID to Increase Asset Visibility	RFID in Health Care: The Cure for Costs, Not a Costly Cure	Smart-Shelf Solution Reduces Out-of-Stocks	RFID Helps Blue Bird Find Buses in Yard	loT and RFID Working Together in Brazil
9:45 AM Detailed agenda on pages 38-39	DOD Enhances Asset Visibility for Warfighters	Managing Field and Consignment Inventory Using RFID, Mobility and Cloud Platforms	The Good, the Bad and the Wireless	Developing an RFID Strategy for Manufacturing	The Industrial Internet of Things: Entering the Digital Era of Life-Cycle Traceability
10:30 AM Detailed agenda on pages 40-41	RFID JOURNAL AWARDS Best New Product, Group 2	RFID JOURNAL AWARDS Best Health-Care Implementation	RFID JOURNAL AWARDS Best RFID Implementation (Other Industry)	RFID JOURNAL AWARDS Best Manufacturing Implementation	RFID JOURNAL AWARDS Best New Product, Groups 1
11:30 AM	Lunch in Exhibit Hall				
1:00 PM	2018 RFID Journal Awards Ceremony in Exhibit Hall  Awards Presentation  Each year, RFID Journal selects a panel of independent judges to choose the best RFID projects and new products being exhibited at LIVE!. The winners and runners-up will be presented with their crystal awards during a ceremony to be held in the Awards Theater located in the Exhibit Hall.				
2:00 PM Detailed agenda on pages 42-45	Post-Conference Training Classes in Breakout Rooms  Benchmarking UHF RFID Hardware   210 C  RFID Application Developers Training   210 D				

Retail/Apparel 210 B	Supply Chain/ Logistics 210 E	Technology and Infrastructure
From Farm to Finished Products: Traceability of Cotton Using RFID	Tracking Containers via RFID and the IoT	RFID and the FCC: Why the New Regulations Matter to Everybody
New GS1 Specification Web-Connects Bar Codes, QR Codes, NFC and RFID	Fire and Rescue District Increases Visibility Via RFID	Using Blockchain Technology in Supply Chain Traceability Systems
RFID JOURNAL AWARDS Best Retail Implementation	RFID JOURNAL AWARDS Best Logistics/Supply Chain Implementation	RFID JOURNAL AWARDS Best Use of RFID to Enhance a Product or Service



# Your End-to-End Solution for RFID

## **Solution Analysis**

Configure your RFID solution to meet your unique workflow. Radley provides a comprehensive analysis of your processes to develop a just-right solution.



Maximize on your RFID investment. Without software you're simply reading tag data, not utilizing it.

## **Hardware**

Easily collect, manipulate and analyze your RFID data from portals, tags & readers. Radley can help you select the best hardware for your needs.



See us in <u>Booth 1045</u> or visit our website for more information.

www.radley.com/RFID.htm 616.541.6010



### **Fast-Track RFID Professional Institute Certified Associate Training**

Presented in partnership with RFID4U 320 F, G

This advanced, one-day fast-track course, featuring the latest equipment and relevant RFID deployment scenarios, provides a solid foundation to design, install, configure, monitor and troubleshoot an RFID deployment and prepare participants for the RFID Professional Institute Certified Associate exam. The exam will be delivered onsite at RFID Journal LIVE! 2018, so you can get trained and certified during the event.

The course is a combination of lectures and hands-on lab exercises. It provides a functional understanding of the use of RFID readers, tags, printers and general-purpose inputoutput devices. Participants will develop a working understanding of proven troubleshooting methodologies, based on best practices, industry-proven processes and the instructor's practical experiences.

After a brief technical overview of RFID concepts related to the design and deployment of RFID solutions, attendees will learn how to identify the key architectural components necessary to deploy a scalable RFID solution. The instructor will also explain how to use various tools and techniques to design and manage the entire deployment process.

Students will learn how to configure RFID hardware in order to maximize functionality. This includes setting specific RFID reader parameters, antenna deployment, read-zone optimization and dwell-time calculations. RFID tag characteristics and factors affecting tag read performance will also be covered.

### Trainers:

Sanjiv Dua, CEO, RFID4U Gene Donlan, Senior Solutions Architect, RFID4U Eva Zeisel, Senior Instructor, RFID4U

The course material provides a functional understanding of the nine Certification Exam test domains, including:

- What Is RFID?
- Architecture Components
- · Privacy, Safety and Security
- Standards and Regulations
- Provider Roles
- Applications
- Evaluation and Selection
- System Design
- Deployment Steps

8:00 AM Introduction 8:10 AM **RFID Course and RFID Professional** Institute Certification Exam Review 8:20 AM **RFID Technology Review** 10:00 AM **RFID Physics** 11:00 AM **Protocols and Middleware** 11:45 AM **Working Lunch** 12:15 PM RFID Design, Evaluate & Select, **Deploy, Test & Troubleshoot** 2:30 PM **Regulations and Standards** 3:30 PM Locating, Positioning and Related **Technologies to RFID** 4:00 PM

**RFID Ecosystem and Providers** 

4:30 PM **Review and Questions** 



### **Item-Level Retail and Apparel Workshop**

210 A

Retailers worldwide are employing RFID to track individual items, thereby improving inventory accuracy and enabling them to have products on shelves when customers want to buy them. During this workshop, you will hear where the benefits are and how to achieve them and how RFID enables true omnichannel retailing.

10:30 AM

RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. Speaker:

Mark Roberti, Founder and Editor, RFID Journal

11:30 AM

### Preparing for the Technology-Enabled **Future of Retail**

Retail is changing. Social media and ubiquitous connectivity are driving new shopping habits and new consumer expectations. This session will focus on how companies can manage the transition to a new retailing paradigm in a way that is both meaningful and doable. Gain an understanding of the technologies that will enable this change, including RFID, as well as how stores will be reconfigured to serve new shopping habits and how the data-integrated supply chain is going to change. Dr. Hardgrave will share logical, business-driven steps to meet customer expectations and achieve real transformation. Speaker:

Bill Hardgrave, Provost and Vice President, Auburn University

12:15 PM

Lunch

1:00 PM

### Tahari ASL Uses RFID for Internal Benefits

Fashion firm Tahari ASL is implementing RFID at its distribution center. The company sells products online and via major clothing retailers, such as Nordstrom and Macy's. Its goal in using RFID is to speed up receiving

and packing processes. Currently, 100 percent of its garments are being tagged at the source of manufacture, and goods are being received into inventory using RFID. The company aims to reduce, if not eliminate, shipping errors. Learn how Tahari ASL, which was asked to tag for customers, is using RFID internally to achieve benefits as well.

Speaker:

Nihad Aytaman, VP of Information Technology, Elie Tahari

### **Item-Level RFID Industry Adoption** Update

The adoption of EPC-enabled item-level RFID has continued its steady growth, with the apparel and general merchandise sectors leading the way. Manufacturers are tagging at the source, distribution centers are becoming RFID-enabled at an accelerated rate and retailers continue to push the envelope of what they can do with RFID technology. In 2018, this effort continues with additional peer-sharing, leveraging blockchain technology. These research programs continue to support the supplier ROI model. Hear how RFID is being used to power today's frictionless unified commerce strategies, and how it provides the foundation for inventory-management efficiency and future business growth.

Michelle Covey, VP, Retail Apparel and General Merchandise;

Patrick Javick, Sr. Director, Industry Development, Apparel and General Merchandise, GS1 US

2:30 PM

Break

2:45 PM

Improving Inventory Accuracy With RFID Following a successful pilot of handheld RFID technology, G-Star, an international fashion brand operating more than 300 stores, conducted an open tender involving head-to-head live store comparisons among leading vendors, and the assessment of overhead sensor technology. The result was the selection of a next-generation IoT sensor solution to achieve greater accuracy with less effort than handheld-only solutions. The rollout is now well under way and is projected to exceed 100 stores this year. The prime benefit is true, real-time in-store inventory accuracy to support unified commerce SFS and BOPUS, without cancellations or safety stock. Increased on-shelf availability, better replenishment, fast item location, fitting room conversion analysis, loss detection and return fraud alerts are among the host of other benefits realized by the firm.

Speaker:

Erin Diekstra, CEO, G-Star/FIFTYSIX

3:30 PM

### Insights From a Major RFID Deployment: **Interview With Target**

Kevin O'Dare, Target's lead business partner, will sit down with Dr. Bill Hardgrave, Auburn University's provost and VP, to discuss his unique insights into the development and implementation of the retailer's RFID program. During this session, O'Dare will explain how RFID is being used by Target, as well as share best practices that the company honed on the front lines. Speakers:

Bill Hardgrave, Provost and Vice President, Auburn University;

Kevin O'Dare, Lead Business Partner, Target

4:15 PM



### **RFID/IoT for Warehouse and Inventory Management**

210 B. C

RFID represents an opportunity to greatly improve inventory visibility and management, and to automate some common tasks, such as receiving. During this preconference, you will learn about specific RFID technologies for warehouse and inventory management within the supply chain. You'll also take home some practical tools, methods and implementation best practices to get your project started on the right path immediately.

10:30 AM

### RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. Speaker:

Mark Roberti, Founder and Editor, RFID Journal

### Linking RFID to Inventory-Management **Best Practices**

RFID has finally reached a level of maturity at which a critical number of end users are benefiting from the technology at the warehouse level. This session will discuss practical examples of how these companies are using RFID to benefit from real-time visibility into their operations, and to improve their supply chain and inventory-management performance. Speaker:

Ygal Bendavid, Professor & Director of the IoT Lab, University of Quebec, Montreal (UQAM) School of Management (ESG); Co-founder, RFIDAcademia, ESG-UQAM, University of Quebec, Montreal (UQAM) School of Management (ESG)

12:15 PM

Lunch

1:00 PM

### Targeting the Correct RFID Technology for the Right Project

This session will present proven methods used to discover profitable challenges that can be addressed with RFID, and specific tools for selecting the proper technology for your

particular project. Wisely selecting the correct RFID candidate projects and the proper technology will help your organization minimize its investment, while improving supply chain efficiency more quickly.

### Speaker:

Ygal Bendavid, Professor & Director of the IoT Lab, University of Quebec, Montreal (UQAM) School of Management (ESG)

### 1:45 PM

### Key Steps in Building an Inventory-Management RFID Solution: Build Your **Own RFID Portal**

You've probably seen an RFID implementation that demonstrates the tracking of incoming and outgoing inventory at the warehouse dock door in the blink of an eye, and that automatically triggers events, warnings and processes. If you've ever wondered how to implement such a system, then this session is for you. We will assemble the solution from bare components, test the complete RFID-enabled portal and start conducting supply chain transactions (automated receiving and shipping, for example). This session will help you understand how to move from simple RFID data capture to realtime transactions, and enable the basis of building a smart supply chain easily and at a low entry cost. The next step will be for you to create your own RFID portal.

Ygal Bendavid, Professor & Director of the IoT Lab, University of Quebec, Montreal (UQAM) School of Management (ESG)

### Contributor:

Samad Rostampour, Post-Doctoral Researcher, University of Quebec in Montreal (UQAM) School of Management (ESG); Researcher at the IoT lab. ESG-UQAM University of Quebec, Montreal (UQAM) School of Management (ESG):

2:30 PM

**Break** 

2:45 PM

### **Designing Your RFID Solution**

RFID is not just about tags and readers. It's a multilayer system comprising different hardware and software technologies, integrated with your existing enterprise's backend systems and connected to communication networks. Many scenarios can be envisioned to address an RFID initiative, each of which will have an impact on the solution's design, as well as its benefits—thus suggesting a trade-off analysis. This session will help you understand how to leverage RFID's ability to automatically identify objects, enable real-time inventory tracking and facilitate the tracking and tracing of products and related information throughout the supply chain—and how to design a solution accordingly.

### Speaker:

Ygal Bendavid, Professor & Director of the IoT Lab, University of Quebec, Montreal (UQAM) School of Management (ESG)

### Contributor:

Dr. Yasmina Maïzi, Associate Professor, University of Quebec, Montreal (UQAM) School of Management (ESG), Researcher at the IoT Lab, ESG-UQAM University of Quebec, Montreal (UQAM) School of Management (FSG):

### 3:30 PM

### **Building Your RFID Business Case**

One of the keys to developing a successful RFID packaging or label-converting business is to deliver transponders that work consistently. Quality control after the converting process is critical. Learn best practices on how your company can ensure products are 100 percent verified to provide high reliability in the converted products it delivers.

Speaker:

Ygal Bendavid

4:15 PM



### **RFID Strategy and Best Practices**

210 D

This workshop, presented by RFID Journal Founder and Editor Mark Roberti, is designed for senior executives of companies that have already deployed—or currently seek to deploy-RFID systems. It will focus on helping businesses formulate an RFID strategy that will lead to greater competitive advantage and shareholder value, and to adopting best practices that will ensure a successful outcome.

### Presenter:

Mark Roberti, Founder and Editor, RFID Journal

10:30 AM

### RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology.

11:30 AM

### An Overview of RFID Today

Senior executives will hear the truth about where RFID adoption currently stands, where it is making a difference for companies in specific industries, and how smart businesses have developed strategies to deploy the technology in a way that enhances their business goals.

12:15 PM

Lunch

### 1:00 PM Taking a Strategic Approach to RFID

Learn the difference between short-term tactical applications of RFID and a long-term strategic approach that can enhance your company's major goals and reduce costs in a variety of areas. The benefits of taking a strategic approach will be explained.

1:45 PM

### A Step-by-Step Approach to Developing a Strategic RFID Plan

To be successful, companies need to set clear goals for their RFID deployments; map existing business processes; determine where data needs to be collected, as well as how that information will be used; and then select the technology that will achieve the desired goals. The presenter will walk participants through this process...

2:30 PM

**Break** 

2:45 PM

### **RFID and Change Management**

RFID represents a new and potentially threatening way of conducting business, and some people will resist any changes. This session will discuss the common employee reactions that companies face when deploying RFID, as well as how to avoid typical problems. Learn how to build a team that can execute on a strategic RFID plan, and how to convince senior management to fund RFID projects.

3:30 PM

### **Next Steps**

You believe RFID can help your company but what do you do when the event is over and you return to your office? This session will explain some concrete steps you can take to begin working toward developing a strategic RFID plan, and executing on it.

4:15 PM



### **Bluetooth Beacon Applications Workshop**

210 F

The Bluetooth beacon market is growing rapidly and offers products that compete with, complement and incorporate RFID technology. This one-day, hands-on workshop will teach participants how to design and deploy BLE solutions.

10:30 AM

### RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. Speaker:

Mark Roberti, Founder and Editor, RFID Journal

11:30 AM

### Introduction to Bluetooth Beacon Basics

The workshop begins with an orientation of how the technology is driving digital-physical convergence and how it relates to the Internet of Things (IoT), as well as key concepts, applications, opportunities and market trends. What is Bluetooth Low Energy (BLE)? Why should you care? Who is using it, and to what result? Join AIDC industry analysist Michael Laird as he sets the landscape and use case for BLE. Find out where the technology is headed and why you need to be ahead of the curve in its use and adoption.

### Speaker:

Michael Liard, Industry Analyst, Liard Research & Consulting

12:15 PM

Lunch

1:00 PM

### Anatomy of a BLE Message

You want to jump into BLE with both feet, but how does it really work? Join Jeff Dungen as he walks you through the technical mumboiumbo in a down-to-earth, understandable discussion of how BLE messages actually work and can be used to your application's advantage.

Speaker:

Jeffrey Dungen, Co-founder and CEO, reelyActive

1:45 PM

### **Antennas and Site Surveys**

Now that you have BLE beacons, why can't you see them? Or, why are you seeing beacons that you shouldn't be seeing? This session will discuss the ins and outs of how to ensure that your solution is physically set up in a manner that will allow for success. Types of antennas, placements and best practices for hardware deployment will be covered.

Speaker:

Jeffrey Dungen, Co-founder and CEO, reelyActive

2.30 PM

**Break** 

2:45 PM

### Developing a Do-It-Yourself System for Use as a Pilot

OK, you're all set! Now all you have to do is put it all together in a way that will solve your problem. How hard could that be? Break out your laptop and join Kevin Berisso as he walks through the coding of an Arduino 101 board to provide motion detection, product orientation, item identification and other common uses of BLE. All source code will be made available to attendees.

Speaker:

Kevin Berisso, Ph.D., Director, AutoID Lab, University of Memphis

3:30 PM

### Interactive Demonstration and General O&A

Now, you can use your BLE devices to find products, warn you of problems and provide near-real-time updates regarding the status of your assets and products. This final session will demonstrate some of the advantages and limitations of the technology, as well as address the pros and cons of vendor-provided solutions versus bring-your-owndevice systems. In case you have any questions that haven't yet been answered, the workshop will conclude with a general question-and-answer session.

Speaker:

Kevin Berisso, Ph.D., Director, AutoID Lab, University of Memphis

4:15 PM



### **Understanding the Value of RFID and the Future** of Intelligent Labels

These days, RFID-enabled intelligent labels are catching on in many industries. Radio frequency identification technology is increasingly prevalent in the apparel market segment and its benefits are well established. RFID is delivering a growing level of efficiency and traceability, making it increasingly important for companies around the world to adopt this transformative technology. This workshop, presented by Avery Dennison, will offer advice on how to enter and understand the RFID ecosystem. The company's experts will explore the trends and demands shaping the future of RFID, provide insights into selecting appropriate inlays, share best practices for converting processes, and review testing methods to ensure whether converted labels are functioning properly before they are shipped to customers. Join Avery to discover how intelligent labels can unlock new business opportunities.

10:30 AM

### **RFID Basics** (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. Speaker:

Mark Roberti, Founder and Editor, RFID Journal

11:30 AM

### **RFID Basics and Market Opportunity**

This session will cover several key components of the RFID ecosystem, the terms you need to understand, and other fundamentals that will help you get more out of RFID technology. Learn the differences between the various types of RFID tags and inlaysactive, passive and battery-assisted - different frequencies and how they behave as well as other critical aspects of RFID.

Speaker:

George Dyche, Director, RFID Innovation & Product Management, Avery Dennison

12:15 PM

Lunch

### **Solutions Portfolio and Inlay Selection Process**

Choosing the right inlay and deciding on the right microchip to power the RFID tag are two of the most critical decisions converters need to make for each customer. The right chip depends on the amount of memory, privacy features and other capabilities your customer might need. The right inlay depends on the application needs, the read distance required and other factors. Learn how to sort through the options and select the correct transponder and inlay for your customer's needs.

### Speaker:

1:00 PM

Elizabeth Sowle, Manager, RFID Applications Test, Avery Dennison

1:40 PM

### Market Growth Segments: Beauty

Learn about the market potential for RFID and intelligent labels in the beauty industry. Avery Dennison's experts will demonstrate how these field-tested solutions are proven to increase inventory accuracy, reduce shrinkage and aid in loss prevention.

### Speaker:

Bob Pernice, Director Market Development -Intelligent Labels, Avery Dennison

2:00 PM

### **Market Growth Segments: Food**

RFID technology is beginning to play a significant role in helping to reduce food waste while increasing consumer safety. Avery Dennison's experts will provide a detailed overview of its UHF RFID portfolio and inlays designed to deliver a true end-to-end solution, as well as recent product innovations for the fast-changing food industry. Speaker:

Peter Jackson, Global Market Development Manager

RFID, Food, Avery Dennison

2:20 PM

### Market Growth Segments: Aviation

With the IATA 753 resolution coming into

SPONSORED BY



force and customer demands increasing, baggage handling and traceability are more important than ever. Hear from Avery Dennison's experts regarding some of the key benefits of RFID and how the company's solutions are helping airlines to achieve their ambitious goals.

Speaker:

Mark Summers, Market Development Manager, Aviation, Avery Dennison

2:40 PM

**Break** 

3:00 PM

### RFID for the Pharmaceutical and **Health-Care Industries**

Hospitals, pharmacies and other health-care providers are looking for ways to better manage costs, increase efficiencies and ensure the well-being of their patients. This session will address RFID solutions for the pharmaceuticals industry, as well as inventory efficiency and use-by dates

Speaker:

Doug Bourque, Business Development Manager, RFID, Avery Dennison

3:20 PM

### **Intelligent Labels Tomorrow**

Within a relatively short span of time, the internet of things (IoT) has transformed the way in which people live, work, travel and interact with countless products and services. Discover how RFID enables the future of connected products, how it improves data management, and the solutions available that will allow every item to be digitized. Speaker:

George Dyche, Director, RFID Innovation & Product Management, Avery Dennison

4:00 PM

**O&A Session** 

4:15 PM



### **RFID for IT Professionals**

220 R

This seminar will explain how to build a complete software architecture, including the structure of RFID-based visibility data that enterprise applications consume, the datacapture software that creates this information, and the various architecture and product choices that an IT architect faces in building and deploying a successful system.

### Presenter:

Craig Alan Repac, Senior Manager, Supply Chain Visibility, EPCIS & RFID, GS1

10:30 AM

### RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. Speaker:

Mark Roberti, Founder and Editor, RFID Journal

11:30 AM

### **RFID Visibility Data for Business Applications**

To many, RFID data is what comes out of an RFID reader, but routing the raw information from a reader directly to a business application is a sure path to problems. The business application is locked into the way that information is captured, and the capture operations on the factory floor cannot be upgraded without disturbing the business applications. This session will show how to design RFID visibility data in a way that decouples data capture by RFID readers and other devices from information used by business applications. The role of the EPC Information Services (EPCIS) standard will be discussed, and the presenter will explain how that standard can be used effectively, even in closed-loop applications and by those not utilizing Electronic Product Codes.

12:15 PM Lunch

1:00 PM

### **RFID Data-Capture Software**

RFID allows for data capture without human intervention, and for many tags to be sensed at once. This makes RFID data capture significantly more complex than reading bar codes or human data entry. Capturing meaningful data often requires the development or customization of software in order to orchestrate RFID devices with other sensors, human interaction and back-end systems. At the same time, the data-capture infrastructure must manage many RFID interrogators and keep them running, even if unattended. This session will explore how to architect a well-layered software system that separates these concerns, and illustrates typical RFID data-capture paradigms. The presenter will also introduce several data-capture standards, including LLRP, ALE, RM and DCI.

1:45 PM

### Putting It Together: Architecture, Product **Selection and IT Governance**

This session will outline how to put together the elements described in the preceding two sessions, in order to create complete enterprise-scale software architecture for RFID-based visibility. With such a setup, an enterprise can define architectural plans that meet business requirements and provide for growth and change, and then use those plans to drive the selection of commercial hardware and software products, rather than the other way around. The presenter will also explain the role of IT governance, and describe a design methodology to ensure that RFID is implemented consistently, and with scalability across an enterprise and the supply chain.

2:30 PM

**Break** 

2:45 PM

### **RFID Tag-Data Standards**

As RFID tags grow in capacity and sophistication, the possible methods for storing information on them becomes ever more complex. Whereas tags carried just a simple "license plate" identifier in the past, they now have a full random-access "user memory" that can be employed by applications to store a variety of business data. This session will provide an overview of the many data standards that have evolved to take advantage of these features, including the popular Electronic Product Code (EPC); the ISO/IEC 15962 standard for user memory and its variations, including the latest "packed objects" standard; and the different data systems, including GS1 Application Identifiers (Als), ANSI Data Identifiers (DIs) and aerospace Text Element Identifiers (TEIs).

3:30 PM

### **RFID Data-Capture Standards:** LLRP and ALE

The first task in many RFID implementations is to interface with RFID interrogators which is significantly more complex than interfacing with a bar-code scanner. Fortunately, there are widely adopted standards that can help ease the task, and that enable developers to focus on the business problem they are trying to solve. The Low Level Reader Protocol (LLRP) provides a standardized interface to RFID interrogator devices, while the Application-Level Events (ALE) standard defines a standardized way for application business logic to obtain the data it requires from a network of RFID devices. This session will explore these two standards in detail, outline their use in commercial products, and show how developers can utilize them to rapidly build robust, vendor-independent RFID systems.

4:15 PM



### **Asset Tracking Essentials**

220 C

Most companies have tools, jigs, prototypes, reusable containers, IT equipment and other assets that they struggle to track. RFID makes the job much easier and reduces the capital expenditure required to replace lost or misplaced assets. This seminar is designed to help companies use RFID to track assets more efficiently.

10:30 AM

### RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. Speaker:

Mark Roberti, Founder and Editor, RFID Journal

11:30 AM

### **Determining Whether You Need Active** or Passive RFID

Both active and passive RFID technologies use radio frequencies to communicate information. However, each possesses different qualities and there are pros and cons for either option. Passive RFID systems use tags with no internal power source, resulting in a lower price point, making them more economical. Active RFID systems utilize batterypowered RFID tags, providing a much longer read range than passive tags, but they are also costlier. Learn how to evaluate the best technology to address your needs.

Speaker:

Ed Nabrotzky, Chief Solutions Officer, Omni-ID

12:15 PM

Lunch

1:00 PM

### Choosing the Right Tags : Key Factors to Consider

There are many factors that go into selecting the right passive RFID tags to help an organization meet its objectives. Understand the common factors to consider in the decisionmaking process for any RFID installation, such as whether you need passive HF or UHF tags, and whether they need to be special on-metal tags, or protected against extreme temperatures, vibrations or pounding and so on. This session will help you make sense of the wide variety of options available for asset tracking.

### Speaker:

Richard Aufreiter, Director, Product Marketing, Identification Technologies, HID Global

1:45 PM

### **Evaluating Software Options**

The variable in any RFID project is the type of software used to support the system. If the software does not align with business processes and operating objectives, it will be neither efficient nor effective. Learn how to choose the best software tools to make an informed choice as to which one provides the best return on investment.

Speaker:

Chris Pritchard, Systems Analyst / Applications Architect, Lowry Solutions

2:30 PM

Break

2:45 PM

### Migrating from Barcodes to RFID — What You Need to Know

Most companies have bar codes or some other identification system on their existing assets. How do companies seamlessly transition to RFID without retyping a lot of data into a database. In this session, learn smart strategies for transitioning from a bar code asset identification system to an RFID asset identification and tracking system.

Speaker:

Brad Horn, CEO and Co-Founder, Portable Technology Solutions LLC/Tracer Plus

3:30 PM

### **Choosing the Right Readers**

RFID readers are emerging from a trend of specialized equipment to becoming easy to install, configurable, plug-and-play appliances, leading to faster, easier and troublefree deployments. Yet, choosing the right option implies an awareness of what options are available. Begin your visit to RFID Journal LIVE! by attending this presentation to understand the variety of equipment placed at your disposal and exhibited on the show floor.

Speaker:

Mike Hrabina, Executive Vice President, Feig Electronics Inc

4:15 PM



### **RFID Journal University**

220 D

RFID Journal University is designed to provide those new to radio frequency identification with the foundational knowledge needed to begin understanding how RFID can be applied to solve specific business problems, so that you can choose the right option for a specific application and select the proper vendors to achieve a successful outcome.

### Presenter:

Ultan McCarthy Ph.D., MBA, Professor Waterford Institute of Technology

10:30 AM

### RFID Basics (210 B, C)

New to RFID? This optional session for all preconference attendees provides an introduction to the fundamentals of the technology. The differences between the various classes of tags will be explained, including active and passive systems, and the need for additional IT systems to build upon RFID in real-world applications will be highlighted. The session will also include a brief overview of the EPCglobal network, the future of ISO standards, ETSI reader regulations and the latest standardization efforts worldwide. Finally, the relationship between different standards in the area of EPC RFID, including the latest EPC Gen 2 standard, will be presented.

### Speaker:

Mark Roberti, Founder and Editor, RFID Journal

11:30 AM

### The Physics Behind RFID

Obtain a fundamental understanding of RFID hardware. This session will cover the different frequency bands used: LF (125 KHz), HF (13.56 MHz) and UHF (860 to 960 MHz and 2.45 GHz). The instructor will explore the nature of RF fields and radio propagation, including the complex areas of null spots, reflections, polarization and other issues. By explaining many buzzwords common within the RFID community, we will provide delegates with the terminology they need to understand the technology, and to work with systems integrators and other RFID vendors.

12:15 PM

Lunch

1:00 PM

### Legislation and Standardization

Legislation regarding the use of RFID varies around the world and is subject to almost constant ongoing review. Standards will ensure compliance with legislation, and also guarantee interoperability between RFID systems manufactured by different technology providers. This session will offer an update on the latest developments by legislative and standardization bodies around the world.

1:45 PM

### Live Demo: RFID in the Real World

Theory is nice, but wait until you experience RFID in action and see its potential—as well as the potential challenges you might encounter while deploying the technology. Our live demonstration of a UHF RFID interrogator with a variety of products will highlight many real-world issues that arise when deploying RFID. In addition, the instructor will demonstrate how antenna polarization and the presence of metal and liquids can affect the ability to read a tag on products, as well as various approaches to alleviating this problem.

2:30 PM

Break

2:45 PM

### **Real-World Considerations**

The instructor will discuss some of the important practical issues that must be considered when embarking on an RFID deployment. These range from the all-important cost of tags and interrogators to practical approaches to ensuring high operational reliability. Example application areas will be presented, in order to highlight how to apply these insights in the real world.

3:30 PM

### **Building an RFID Business Case**

Developing a strategy and business case is the first step toward understanding how RFID technology can develop high-performance results. The presenter will discuss various scenarios for RFID strategy and business-case development, and provide an in-depth look at components and output. Emphasis will be placed on defining the value of information, and on how to evaluate various pricing strategies for RFID deployments.

4:15 PM

### TUESDAY | 320 A-D



John Yu

### 5:00 PM

### **Boeing Deploys RFID In-House for Assembly Management**

Global aerospace company Boeing has deployed a radio frequency identification system for internal manufacturing purposes at four facilities since 2016, using recently released RFID labels. Boeing's deployment of the RFID-integrated label is consistent with the aircraft company's use of passive UHF RFID technology for its own purposes, as well as those of airlines. Before the RFID system's deployment, the management of parts during assembly was a matter of performing visual checks and manually entering data in order to confirm where specific parts were located and in which assembly they were used. Learn how the use of RFID has enabled the firm to save labor time and prevent the incidence of errors. Speaker:

John Yu, Senior Manager, Automated Identification, Boeing





5:45 PM



Gary Tattersall

### **RFID Strategies and Best Practices for Today and Tomorrow**

RFID technologies have evolved dramatically throughout the past five years and are delivering value across a variety of industries. In this session, a panel of representatives from organizations that have already deployed RFID solutions successfully will

explain how to develop an approach to implementing the technology that can deliver real business value. The panelists will discuss some of the challenges organizations face when deploying RFID, as well as how to overcome them, and will look at how to plan for additional applications of RFID as the technology continues to evolve during the years ahead.

### Moderator:

Mark Roberti, Founder and Editor, RFID Journal Panelists:

Henry Nisiobincki, RFID Program Manager, American Woodmark;

Gary Tattersall, Director of Asset Protection & Risk Management, Jack Wills

### WEDNESDAY | 320 A-D



Mark Roberti

### 8:00 AM

### **Welcome and Opening Remarks**

Speaker:

Mark Roberti, Founder and Editor, RFID Journal



Phil Savage

### 8:30 AM

### **RFID Brings New Level of Data to Understanding Performance**

This year, the Reese's Senior Bowl, an annual all-star football game for graduating college athletes, used radio frequency identification technology during practices and the game to understand player participation, exertion and movement, as well as how practices and

team strategies might be improved. Active ultrawide-band (UWB) tags and readers fed data to software that calculated details such as how fast each player was running, how close other players were to that individual, and the velocity and rotation of a thrown ball, as well as how high, fast and far the ball traveled. The system used is an example of how RFID can provide big data that can optimize performance and is directly relevant to the optimization of business processes.

### Speaker

Phil Savage, Executive Director, The Reese's Senior Bowl



Dean Frew

### 9:00 AM

### **Panel Discussion: Benefit of RFID** in the Retail Industry

320 A-D

RFID technology can be used for daily cycle counts, replenishment, promotions management, customer engagement and other instore applications, while delivering value to retailers. The retailer and brand owners panel speakers will address how they are using RFID to achieve operational benefits and lessons learned from their deployments.

### Moderator:

Dean Frew, CTO and Senior VP, RFID Solutions, SML Panelists:

Retailers and brand owners

### **WEDNESDAY** (continued)



Mark Summers

### 9:45 AM

### **Driving Innovation: How RFID is Helping** the Aviation Industry

Discover how RFID is transforming the aviation industry and improving the consumer experience,

### Speaker:

Mark Summers, Market Development Director, Aviation, Avery Dennnison RFID









Robert Blankenburg

### 10:15 AM

### **GM Transforms Tool Tracking With RFID**

General Motors has played a pivotal role in the global auto industry for more than 100 years. From the first Buick horseless carriages to technological marvels like the Chevrolet Bolt to the evolution of a world with zero crashes, zero emissions and zero congestion, its products and innovations have always excelled at putting the world on wheels. Thousands of parts are manufactured for each vehicle using tens of thousands of vendor tools – tools that have been manually tracked by GM's more than 3,000

suppliers at their own production facilities. Each tool has a life cycle of about 20 years. Managing this massive tooling database is an ominous task for both GM and its suppliers. Using RFID and Bluetooth Low Energy (BLE) technology, GM is transforming the tracking of its assets. Inventories that used to take days and weeks can now be accomplished in hours or minutes without the installation of extensive infrastructure. Learn how GM and its suppliers are benefiting from this groundbreaking system.

### Speakers:

Lloyd Luettke, RFID - Vendor Tooling Asset Management, General Motors; Ronald Mills, Director of Asset Services, General Motors;

Robert Blankenburg, GBS Asset Management, Manager, Vendor Tooling, General Motors



**DEFENSE/AEROSPACE** 210 C

### **RFID Reduces Costs. Scheduling Impacts for NASA IWST Mission**

The National Aeronautics and Space Administration (NASA) is using RFID technology to track the various components used to assemble the groundbreaking James Webb Space Telescope, a large infrared telescope with a 6.5-meter primary mirror. Due to the size and scale of the project, NASA is utilizing a number of domestic and worldwide teams to build the necessary components. As the work progresses, it is necessary to track the location and status of every single component. Learn how NASA is using RFID technology to reduce labor costs while tracking and maintaining asset inventory and schedule integrity.

### Speaker:

Basil Jeffers, JWST Lead Parts Engineer, NASA/AS&D



### HEAITH CARE / **PHARMACEUTICAL**

210 A

### **Mettler Toledo Rainin Uses** RFID to Reduce Out-of-Service and Specification **Related Costs For Labs**

Pipettes are used by researchers in academic, biotech and pharmaceutical labs around the world. They are used hundreds of times a day in scientific experiments to transfer micro volumes of liquid from one vessel to another. Mettler-Toledo Rainin, a manufacturer of precision instruments and services for use in laboratories and manufacturing environments. has developed the SmartStand together with the EasyDirect Pipette Asset Management software solution, which integrates an RFID reader into a pipette stand. The system reads the RFID chip that is in every Rainin XLS and XLS+ pipette, then instantly displays the compliance status. Learn how the technology can help labs adhere to their standard operating procedures and maintain compliance, while reducing out-of-specificationrelated costs.

### Speakers:

Hans Bergmann, Sr. Embedded Systems Engineer, Mettler-Toledo Rainin, LLC

Sicco Drion, Marketing Program Manager, Mettler-Toledo Rainin, LLC



### INNOVATION

220 A

### **TransLink Leverages RFID** for Universal Access for **Customers Who Have Limited Use of Their Hands**

The South Coast British Columbia Transportation Authority, TransLink has launched a tap-less access system for those with mobility issues at 23 of the 56 Greater Vancouver area SkyTrain and SeaBus transit stations. The system employs radio frequency identification technology to prompt gates to open for those carrying UHF RFIDenabled badges so that they don't need to use their hands. In 2016, TransLink replaced the old ticketing process with a gate system featuring passive 13.56 MHz RFID tags built into reloadable cards that commuters can tap against a gate to pay their fares and access stations. But for some passengers with mobility issues, this was an obstacle. Learn how TransLink leveraged the RFID-enabled system and is providing tapless automated access to disabled passengers.

### Speaker:

Nadia Krys, P.Eng., P.E., PMP, Senior Project Manager, Engineering & Project Services, TransLink, South Coast British Columbia Transportation Authority



### MANUFACTURING

210 D

### **RFID System Brings Visibility** to Industrial Components

O-Ring Sales & Service, a Kansas City-based distributor of O-rings and specialized components, has developed an RFIDbased solution to manage its industrial manufacturer customer's inventory at manufacturing sites. The system, known as ShelfAware, allows the supplier and its customers to track which components are onsite at any given time, via an RFID tag on each part, as well as readers at the storage area to identify when parts arrive at and leave that area. The system is designed to capture data about the receipt and consumption of parts, thereby ensuring that products are automatically reordered as needed, while also helping the manufacturer to understand its inventory levels and reduce labor costs. Learn how ShelfAware has boosted O-Ring's sales as customers see value in the service.

### Speaker:

Andrew Johnson, CEO, ShelfAware



INTERNET OF THINGS

220 B

### The Current State of the **Internet of Things**

In this session, get a brief summary of the status of the Internet of Things and learn how connected devices are making a real impact across a growing number of industries. Hear some examples of the IoT in use today, as well as the technology's impact and where it's headed in the near future. Speaker:

Steve Halladay, President, High Tech Aid



RETAIL/APPAREL

210 B

### **Jack Wills Deploys RFID to Drive Stock Accuracy**

British retailer Jack Wills is using RFID to improve visibility into its stock movements. After a successful proof-of-concept at two of its stores, the chainwhich operates more than 90 locations in the United Kingdom, Ireland, Asia, the United States and the Middle East—is expanding the deployment. The firm is utilizing a plug-and-play solution that has enabled employees to count stock on a weekly or daily basis, allowing it to immediately experience the benefits of a highly accurate stock inventory. Learn how the plug-and-play system enables the chain to deploy the technology quickly. Speaker:

Gary Tattersall, Director of Asset Protection & Risk Management, Jack Wills



### SUPPLY CHAIN/LOGISTICS

210 F

### **Project Zipper: RFID ROI to Brands and Manufacturers**

RFID technology is rapidly moving up the supply chain to distribution centers and fulfillment centers. Some users have found a variety of ways in which to leverage RFID, from operational changes to the earliest emergence of item-level data exchange between supply chain partners, focusing on such high-cost issues as claims and electronic proof of delivery. Learn how Project Zipper focuses on the brand owner's return on investment value of EPC/RFID tagged items. Speaker:

Justin Patton, Director, RFID Center, Auburn University



### **TECHNOLOGY AND INFRASTRUCTURE**

220 C

### Design and Implementation of a UHF RFID Solution

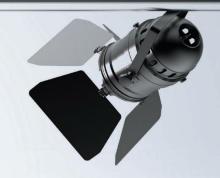
Many businesses enter into an RFID design plan hoping to realize significant cost savings, as well as supply chain visibility and efficiency gains. But achieving those goals may be difficult, as there are many design and deployment challenges. This session will discuss the technical aspects of designing passive UHF-based RFID solutions to ensure successful product implementation. Topics covered will include antenna design factors, workflow design considerations, implementation factors, best practices, solution scalability and more.

### Speaker:

Akshay Bal, Global RFID Technology Expert, Abbott Diagnostics



# **EXHIBITOR SPOTLIGHT**



WEDNESDAY, APRIL 11

These special sessions in the Awards Theater highlight some of the great solutions available at RFID Journal LIVE! Grab some lunch, take a seat and hear from some of our leading exhibitors.

1:00 PM **Easy Wins in RFID:** 

Avoiding the "Science Project" Scenario

RFID has a lot of potential and promise, yet comes with considerable hype and unrealistic expectations that often cloud easy wins and attainable ROI. This session will focus on finding the low-hanging fruit value propositions that simple, effective RFID solutions offer, and on avoiding the pitfalls and complexity that can turn simple implementations into never-ending science projects.

Speaker: Christian Huff, **ORBCOMM** 



1:20 PM

**How RAIN RFID Can** Help You Manage Your **Data Center and Mission-Critical Assets** 

Today's data centers face many challenges. As facilities grow, the ability to manage inventory, asset utilization and power consumption becomes increasingly difficult. Omni-ID, RFID Global Solution and Impini will discuss how customers are benefiting from RFID partnerships. By working together, partners can provide complete solutions to manage data centers and their valuable assets. Learn why Cisco and other firms have turned to RAIN RFID systems to better track their IT assets. Speakers: George Reynolds, Omni-ID; John Rommel, RFID Global Solution; John Frederiksen, Impinj







1:55 PM

### ST SmarTAG: NFC-Enabled Sensor Node

STMicroelectronics' SmarTAG is a sensor node that can sense temperature, humidity, pressure and motion levels, and then transmit that data when triggered by an NFC reader. It can be scaled down based on the requirements of several applications, ranging from supply chain, asset tracking and medical to predictive maintenance, smart apparel, packaging and agriculture. Learn about the ST SmarTAG evaluation kit. and find out how its deliverables can help firms accelerate their own designs.

Speaker: John Tran, **STMicroelectronics** 



### 2:30 PM Smart Label Highway

As the scale of RFID deployments continues to grow. how can current smart label production methods be improved to meet the increasing demand? Voyantic will provide an expert view into various alternatives for how to deliver a higher capacity from current and future production lines. In fact, the presenter will demonstrate a label personalization factory without a factory. Speaker: Juho Partanen,

Voyantic



### SOLUTION PROVIDER SESSION

220 B

### **Enabling IoT and RFID Tag Mass Production for the Requirements** of the Next Decade

The past 15 years of RFID tag production for the Internet of Things (IoT) and identification industry were characterized by processes that needed extreme attention in terms of quality control and process stability. Nonstandardized and nonupgradeable solutions have mostly been applied. With the current breakthrough situation, the industry is looking for new ways to deal with the situation. With a highly standardized approach, taken from the semiconductor industry, a revolutionary new path opens up for those who want to play a major role in the market. Unprecedented speed, as well as quality, is the value proposition of the successfully operating solution, which will be introduced during this session. This new and easy-to-handle method will dramatically reduce downtimes and allow the use of simpler and cheaper materials at the same time, to build RFID and NFC tags for the Internet of Things in the future.

### Speaker:

Jürgen Rexer, Global Technical Sales Manager, RFID, BW Papersystems



### SOLUTION PROVIDER SESSION

210 B

### The Ultimate RFID Solution **Has Arrived: PervasID Launches** a Fully Integrated Remote Inventory, **Portal and Checkout System**

Following the company's recent launch of its patented "world first" 99%+ accurate wide-area passive RFID detection Space Ranger 9200 technology, PervasID has now launched a complete customer solution which includes an anti-theft RFID system using its Gate Ranger 9200 technology and a point-of-sale RFID system (POS Ranger). This allows retailers and other industries to not only see the stock that they have throughout a shop or building at the click of a button in real time, but also to monitor items entering and leaving the building and being checked out. It uses a network of revolutionary new flat ceiling tile antennas which are located discretely at intervals across a shop floor or stock room, and which reduces the required number of antennas by a staggering 75%. Learn how this groundbreaking ceiling tile antenna RFID reader system now achieves 99%+ detection accuracy and responsiveness, in a very cost-effective way, delivering a 12-month ROI.

### Speaker:

Sithamparanathan Sabesan, Founder & CEO. PervasID



### SOLUTION PROVIDER SESSION

220 C

### **Critical Drivers for Success: Harness the Power of Identification** and Sensing Technology

There are several critical elements to implement smarter cross-functional processes across an organization. Industries are realizing the benefits of RFID technology beyond asset tracking—harnessing the power of trusted RFID, NFC and BLE technologies, coupled with cloud services, to manage, monitor and measure the operational ecosystem. HID will provide a guided roadmap of industry game-changers, technologies and advanced applications that are rapidly changing the industrial and commercial landscape of how organizations operate.

### Speaker:

Richard Aufreiter, Director, Product Marketing, Identification Technologies, HID





**DEFENSE/AEROSPACE** 210 C

### **BAE Systems Improves** Manufacturing and **Inventory Capability** With RFID

BAE Systems, an international defense, aerospace and security company, has deployed three RFID-enabled projects in its Electronic Warfare Integrated Manufacturing Center (EW-IMC): automated point-ofuse (POU) material inventory replenishment, automated asset and tool tracking, and automated work-in-process (WIP) tracking. The projects increased production capacity and capability in its supply chain and its factories, thereby ensuring the success of current and future production programs for its customers. Learn how the firm improved the utilization of existing capacity across its sites, boosting manufacturing capability and product flow, while creating a process to accelerate production transitions. In addition, hear how the use of RFID technology may be expanded to other factories and sites in the future.

### Speaker:

Deirdre Schmidt, Operations Excellence Leader, BAE Systems



### HEAITH CARE / **PHARMACEUTICAL**

210 A

### St. James's Hospital Tracks **Assets, People and Surgical** Samples via RFID

St. James's Hospital (SJH), a 60acre medical campus with 1,085 beds and more than 4,500 employees, located in Dublin, Ireland, is using GS1 EPC RFID technology to track the location and identification of people and assets on their journey through the hospital. SJH also monitors the locations of precious samples (biopsy tissues) taken from patients during theatre procedures and sent to the Central Pathology Laboratory (CPL) for analysis, following a successful trial. Relevant personnel are contacted via SMS and email if the samples do not arrive by a specified time, enabling staff to quickly locate them. Following the successful conclusion of the precious samples trial, the facility implemented RFID technology to track fine art, public wheelchairs and vulnerable patients in strategic areas of the campus. Learn how SJH has successfully introduced RFID technology as a means of tracking and tracing all entities throughout the hospital campus, thereby improving patient care and efficiency based on the collected data. Speaker:

Greg Magrane, Project Manager, St. James Hospital



### INNOVATION

220 A

### **RFID-Enabled Vending Machine Brings Automation, Security to Library Disk** Loans

Franklin County's Coyle Free Library, in Chambersburg, Pa., has installed two high-frequency (HF) RFID-enabled vending machines to check out or rent DVDs and CDs to patrons. The system provides automated borrowing of movies and games, while tags on books, laptops and other media, as well as portals at the door, ensure that library property is checked out before leaving the premises. Learn how the deployment is reducing some of the more mundane tasks of employees so that they can spend more time helping patrons. The library gained state and federal grants to help pay for the machines, which cost approximately \$90,000 in total. Also hear how other money is going toward the RFID-tagging of library titles, the installation of RFID reader gates at the door, and a locking laptop kiosk.

### Speaker:

Denice Bigham, Director of Library Services/Library Director, Coyle Free Library, Franklin County Library System



### MANUFACTURING

210 D

### **Vitamix Improves Customer Experience** and Safety With RFID

Vitamix, a blending equipment manufacturer, has integrated **Near Field Communication** (NFC) technology into its new ASCENT Series of blenders, with the goal of improving customer convenience and safety. The company is installing NFC RFID readers into the bases of its machines and providing accompanying food containers with embedded tags, air-coil wire antennas and NFC chips. The result is a feature that Vitamix calls SELF-DETECT. When a user places a SELF-DETECT container on an ASCENT Series blender's base, the appliance reads the container's embedded NFC tag and can automatically change multiple operating parameters. The parameters change accordingly once the container on the base is identified. Learn how the use of the technology improves convenience, and how it helps to reduce unsafe operating conditions. Speaker:

Dave Kolar, Senior Engineering Manager, Technology, Vitamix



### INTERNET OF THINGS

220 B

### IoT 2021: Connectivity on Your Terms

Thirty-six billion Internet of things (IoT) devices are expected to be in use by 2021 at least four for every person on the planet. Commissioning, connecting and controlling these devices, which will encompass everything from household items to health care to sports, will be a handful of technologies already in use. These technologies will interact with the devices, as well as with RFID or NFC tags embedded in IoT objects, to provide connectivity on our terms. This presentation will look ahead three years and offer a perspective on what the world will look like and how it will function, and also discuss what IoT connectivity using NFC and RFID tags could mean for all of us and our businesses in the technology industry. The Internet of Things is exploding, and in this session you'll find out how NFC tags and mobile handsets can help developers and manufacturers bring the benefits of the IoT to where we all live, work and play.

### Speaker:

Paula Hunter, Executive Director. NFC Forum



### RETAIL/APPAREL

210 B

### **Kevingston Uses RFID to Increase Efficiency**

Fashion brand Kevingston is employing an RFID system to improve its supply chain, boost speed and productivity, and reduce operating costs, while offering better service to its customers. Based in Argentina, the firm operates 300 stores throughout eight countries, as well as a 200,000-square-foot distribution center. Merchandise is tracked as it leaves the DC via an RFID tunnel. Once the goods arrive at the store, the staff can verify the shipment using a handheld reader. Learn how the system has reduced out-of-stocks and enabled employees to focus their time on customer service, resulting in increased sales.

### Speakers:

Roberto Blazquez, CEO, Kevingston; Matias Sklar, CIO, Kevingston



### SUPPLY CHAIN/LOGISTICS

210 F

### **Daimler Uses RTLS. Drones** and RFID to Manage Warehouse Inventory

Daimler, a German multinational automotive corporation, is using RFID technology to perform automated inventory counts within warehouses, including third-party locations, for "empties" (pallet structures, racks or containers that hold manufactured parts, but without having those parts in the unit). The RFID-enabled technology, in combination with an autonomous flying drone, has enabled the firm to use an alternative to fixed RFID gates at the warehouse entrance, thereby bringing greater accuracy to inventory counts. Learn how the deployment is providing a consistent and accurate permanent inventory count, as well as cost savings.

### Speakers:

Süleyman Karakurt, Manager, Mercedes Benz Cars, Daimler; Thorsten Weiler, Manager, Mercedes Benz Cars, Daimler



### **TECHNOLOGY AND INFRASTRUCTURE**

220 C

### **Grid-Based RFID Localization Using Easily Obtainable Measurements: Tag Read Count and Received Signal** Strength

Passive ultrahigh-frequency (UHF) radio frequency identification (RFID) systems have gained immense popularity due to groundbreaking advances in wireless devices and technologies for their wide-scale industrial applications in inventory tracking and management. This session will explore the potential of passive RFID systems for indoor localization by developing a grid-based experimental framework using two standard and easily measurable performance metrics, including received signal strength indicator (RSSI) and tag read count (TRC). The presenter will create scenarios imitating real-life challenges, such as placing metal objects and other RFID tags in two different read fields to analyze their impacts on location accuracy. Learn the prediction potential of RSSI and TRC, both independent and collaborate, and hear how both signal metrics can be used for localization with sufficient accuracy. The experimental results show an average error of as low as 0.286 (with consecutive grid distance defined as unity), which satisfies the gridbased localization benchmark of less than 0.5.

### Speaker:

Dr. Ismail Uysal, Director of RFID Lab for Applied Research and Assistant Professor, University of South Florida



**DEFENSE/AEROSPACE** 210 C

### **MRO Company Uses RFID** to Increase Efficiency and **Productivity**

Maintenance, repair and overhaul (MRO) company Hong Kong Aircraft Engineering services more than 200 aircraft in heavy maintenance every year. Most of its mechanics possess their own tools and toolboxes. and at the end of each shift, mechanics are required to carry out inventory checks to ensure no tools were left unattended on any aircraft. The firm is using RFID technology to reduce inventory checking times per mechanic, from 20 minutes to less than three minutes, thereby saving more than 17 minutes per mechanic, per day. Learn how the system contributes to staff productivity, while ensuring that no personal tools are left behind on the aircraft, thereby helping to eliminate the possibility of foreign object damage (FOD), and to manage the maintenance of the tools themselves. Speaker:

Patrick Wong, Executive General Manager, Line Services, Hong Kong Aircraft Engineering



### HEAITH CARE / **PHARMACEUTICAL**

210 A

### **Wavne HealthCare Uses RFID to Enhance Patient** Satisfaction

Wayne HealthCare, a 100-bed hospital in Greenville, Ohio, is employing radio frequency identification to lower the cost of managing IT assets and improve patient services. After successfully deploying an RFID asset-management solution that achieved an ROI within a year, the facility implemented an RFID patient-tracking system the following year. Learn how Wayne HealthCare is using the technology to effectively communicate with patients and their families, by providing frequent updates regarding surgical status, without making changes to existing surgical processes.

### Speaker:

Shelton Monger, Chief Information Officer, Corporate Compliance Officer, Wayne HealthCare



### INNOVATION

220 A

### **Using Small Drones to Read RFID Tags Indoors**

The MIT Media Lab has developed an RFID system that would allow users to capture tag reads with a small drone carrying a virtual antenna array to forward data between tags and a reader. The UHF RFID tagreading system, known as RFly, keeps the RFID reader on the ground, while deploying relays to capture the device's RF signal, forward it to tags and send responses from those tags back to the reader. Learn how the system enables small, lightweight drones to operate in a large environment, such as a distribution center or warehouse, flying over tagged items to capture ID numbers and approximate the tags' locations within about a foot.

### Speaker:

Fadel Adib, Assistant Professor, MIT



### MANUFACTURING

210 D

### **Pardon the Disruption: A New Generation of RFID Laser Printing**

Global printing solutions company Lexmark International has developed two models of UHF RFID-enabled color laser printers designed to enable customers to quickly encode and print RFID labels. The printers are being used by manufacturing and logistics companies to print and encode color labels with built-in UHF RFID functionality. Learn how manufacturing companies are using RFID technology for monitoring work-in-progress (WIP), and how logistics firms are tracking inventory boxes, pallets and other items, as well as yard management, with some organizations utilizing RFID labels to track assets or documents. In addition, hear how the company, upon request, partners with businesses to provide solutions for end-to-end RFID systems.

### Speakers:

John Linton, Senior Director, Global Industries, Lexmark; Tom D'Andrea, Product Manager Lexmark



### INTERNET OF THINGS

220 B

### City Launches IoT Lab for **Technology Innovation**

The city of Fishers, Indiana, together with ClearObject as anchor tenant and consulting partner Indiana University, is launching a laboratory facility dedicated to research and development of Internet of Thingsbased technologies. The new laboratory, known as IoT Lab-Fishers, is part of an existing project known as Launch Fishers, aimed at bringing opportunities and business solutions to the city. Learn how the facility will bring together key components to IoT solutions: ideation, cloud data, edge hardware, and development. Speaker:

John McDonald, CEO, ClearObject



### RETAIL/APPAREL

210 B

### **Marks & Spencer Broadens** and Deepens Its RFID Use

A pioneer in the use of radio frequency identification, Marks & Spencer (M&S) is one of the United Kingdom's leading retailers, with some 760 stores. In 2001, M&S began using RFID to track deliveries of fresh food into distribution centers. In 2004, the company launched its RFID effort, deploying a solution to tag and track some clothing items at several locations. From 2012 to 2014, M&S saw a massive expansion in its deployment, to include 380 of its largest U.K. stores and more than 95 percent of its apparel and homeware. Since then, M&S has been busy investigating and trialing new uses of the technology across the entire scope of its operations. Learn why the firm expects the technology's future benefits to provide even greater merchandise visibility and accuracy, from suppliers through DCs and into stores, to support their omnichannel efforts. Hear how RFID will be used to reduce costs, make processes more efficient, improve accuracy and ultimately enhance top- and bottom-line performance. Speaker:

Zarah Adato, Project Manager, RFID Strategic Development, Marks & Spencer



### SUPPLY CHAIN/LOGISTICS

210 F

### Weir Oil & Gas Improves **Visibility and Functionality** via RFID-based Asset-**Management System**

Weir Oil & Gas, an upstream provider of pressure-pumping and -control equipment and services, has combined RFID technology with its Asset Management Program, bringing greater visibility and functionality to the way in which service companies manage iron assets from the field. Weir's SPM RFID technology streamlines inspection processes, providing the ability to easily review the current or historical inspection status and other relevant information. Learn how iron equipped with SPM RFID tags can be quickly scanned to efficiently manage inventory, thereby reducing labor and minimizing human error during inspection.

### Speaker:

LJ Howell, Warranty and Special Projects Manager, Weir Oil & Gas



### **TECHNOLOGY AND INFRASTRUCTURE**

220 C

### **RFID Infrastructure Marking** for a Connected World

With a greater emphasis on damage prevention, litigation avoidance, regulations to improve the quantity and accuracy of infrastructure records, and new equipment and technological advancements, RFID continues to improve the way we mark, identify and locate underground assets. Berntsen's InfraMarker solution suite seamlessly links physical markers with field-collection devices and enterprise-management systems. Learn how the firm is employing RFID technology in a system that benefits users by saving time workers would otherwise spend locating utilities, and by providing better data, while increasing safety.

### Speaker:

Mike Klonsinki, Business Development Director, Berntsen International



**DEFENSE/AEROSPACE** 

210 C

### **Using Business Optimization** to Maximize the ROI of IIoT and RFID

Aerospace manufacturing organizations can significantly improve operational efficiency by undergoing systemwide business analysis before implementing an RFID or Industrial Internet of Things (IIoT) program. A proper implementation of a business-optimization strategy can provide immediate cost savings, capacity improvements, productivity gains and a clear definition of requirements for the IIOT or RFID deployment. This can ensure cost savings to pay for an IIoT or RFID implementation, while maximizing the long-term benefits. This session will demonstrate how using a holistic approach that analyzes order-to-delivery product and information flows typically results in more than 20 percent improvements in labor productivity, production capacity and operating margin, compared with levels prior to the investment in the IIoT or RFID. Implementing such a business-optimization strategy, as well as an IIoT or RFID program, future-proofs an organization by ensuring its cost and cycle-time competitiveness. Speakers:

James Crean, President/CTO Crean & Associates: Cris Frusina, Technical Program Manager, Crean & Associates



### HEAITH CARE / **PHARMACEUTICAL**

210 A

### Improving the Delivery and Management of Medical **Devices via RFID**

The process of providing orthopedic medical devices to health-care facilities can carry health risks, as well as inefficiencies. In order to improve the safety and effectivity of delivering such devices to those facilities and their patients, Gramercy Extremity Orthopedics has developed a computerized mobile implant and instrumentation inventory system utilizing RFID technology. The system, called Geo Cart reduces delays in surgery, decreases sterility risks to patients, and eliminates billing mistakes and the need for handwritten forms. Learn how Geo Cart removes the cost of cleaning and sterilizing components and instrumentation, and how it reduces facility operating expenses.

### Speakers:

Michael Nugent, Chief Revenue Officer, Gramercy Extremity Orthopedics;

Paul Vasta, Ph.D., Chief Technology Officer, Gramercy Extremity Orthopedics



### INNOVATION

220 A

### **Weapons of Mass Disruption:** The Innovations Revolutionizing Our Industry

When the assortment of emerging technologies associated with the fourth Industrial Revolution (RFID-enabled sensors, the Internet of Things, blockchain, artificial intelligence, robotics and more) come online, our industry-and the world—as we know it today will be transformed in unprecedented ways. While it may be impossible to predict exactly which trends will become the most disruptive over time, there are a number of developments that will shape solutions, services and strategies. Do not let these weapons of mass disruption take your organization by surprise. Attend this session to learn about the innovations most likely to revolutionize our industry.

### Speaker:

Michael Liard, Industry Analyst Liard Research & Consulting



### MANUFACTURING

210 D

### **RFID Cuts Risk and Reduces Costs for Weatherford**

Weatherford, one of the largest oilfield services companies providing technologies and services for formation evaluation, well construction, completion, stimulation and production, has expanded its existing RFID technology programs to manage the operation of downhole tools, during the hydraulic fracturing and stimulation processes. The firm is integrating LF RFID readers in its downhole tools and tags are pumped into wells to trigger such actions as closing or opening valves to control the flow of fluids. Learn how the system reduces operational costs and risk by cutting the amount of time, surface equipment and personnel required to achieve the drilling, completion and stimulation of a well in an ultrahigh-cost environment. Speaker:

Euan Murdoch, RFID Completions Product Line Manager, Weatherford



INTERNET OF THINGS

220 B

#### **Bluetooth and RFID Merge** to Link CPG to IoT

With Bluetooth radios shrinking to be smaller than RFID tags, smartphones and Wi-Fi routers can now provide gateways between the worlds of consumer packaged goods (CPG) and the Internet of Things (IoT). Understanding this new technology is not enough when changing the whole life cycle of products that weren't previously connected. Adding Bluetooth and ARM processing to pharmaceuticals, cosmetics and apparel means they can be manufactured differently and tracked through the supply chain in new ways. Products can help sell themselves, and their functionality is changed. This presentation explains how Bluetooth and RFID technologies are merging, the new functionality that is available, and the business opportunities and threats.

#### Speaker:

Steve Statler, Senior VP of Marketing and Business Development, Wiliot



RETAIL/APPAREL

210 B

#### **Sonae Uses RFID to Improve Sales Floor Availability**

Sonae, based in Portugal, is primarily a retail company, operating a number of brands in the specialized retail market, including the electronics, sports and fashion sectors. The firm also operates hypermarkets, supermarkets and shopping centers, and has a presence in more than 60 countries worldwide. Sonae is using RFID in some of its retail operations to reduce out-of-stocks and improve sales. Learn how the sales floor replenishment process has been improved, and how the firm plans to use item-level RFID inventory management to support its future omnichannel supply chain initiatives.

#### Speakers:

Marco Cunha, Supply Chain Director, Sonae



#### SUPPLY CHAIN/LOGISTICS

210 F

#### **Hellenic Army Uses RFID** to Improve Tracking and Logistics

The Hellenic Army, the land force of Greece, is using RFID capability to provide oversight of its global defense supply chain, as well as to support efficiencies both in military operations and at the supply depot. Learn how the implementation of RFID technology throughout the Hellenic Military Logistics System is achieving complete traceability of materials throughout the supply chain. Hear how the system is ensuring timely information, from the movement of the freight and its intermediate stations to its final destination, unloading, unpacking and placement in appropriate position.

#### Speaker:

Colonel Theodoros Zikos, Director, C-Branch (Logistics), Hellenic Army



#### **TECHNOLOGY AND** INFRASTRUCTURE

220 C

#### **HP LATAM Uses Digital Supply Chain Program to Improve Efficiency**

Hewlett-Packard LATAM has been among the most aggressive companies in embracing new technologies, such as RFID, as a business driver to leverage its supply chain to a new degree and to take its business to the digital world. This has included the adoption of RFID in 100 percent of the product lines manufactured in the LATAM region, the development of robots to increase efficiency for customer order processing, and the deployment of an online mobile app for execution management and decision-making support. Learn how the firm is using technology and innovative tools (AI, ERP adoption, blockchain, etc.) to lower operation costs and improve factory automation, as well as to provide an improved customer experience.

#### Speaker:

Rafael Rapp, Business Operations Manager, LATAM SC OPS, HP



**DEFENSE/AEROSPACE** 

210 C

#### Leveraging AIT and RFID to **Increase Asset Visibility**

This session, taking place before the Expert Panel: DoD Enhances Asset Visibility for Warfighters, will provide an overview of how AIT and RFID technologies can be leveraged across the entire spectrum of military operations. Gain an understanding of how the U.S. Department of Defense is using the technologies across all business processes at the same time, including in-process, in-use, in-hand, in-transit and inwarehouse/inventory. Following this presentation, the panel of experts will discuss the topic in greater detail (see page 38). Speaker:

Hal Casey, Director Navy AIT, IUID and Joint Solutions, U.S. Navy



#### HEAITH CARE / **PHARMACEUTICAL**

210 A

#### **RFID in Health Care: The Cure** for Costs, Not a Costly Cure

Tracking medical devices, equipment, supplies, personnel and patients is serious business. Such critical assets are associated with key operational processes and exceptional care delivery within health-care environments of all types. Selecting the optimal RFID technology for the correct application for the right business problem in health care has become much easier, thanks to technology innovation, price declines and increasing deployments. In this session, the speaker will discuss how the RFID conversation has progressed in the health-care sector to become more focused on RFID's value and less about its cost.

#### Speaker:

Michael Liard, Industry Analyst Liard Research & Consulting



#### INNOVATION

220 A

#### **Smart-Shelf Solution Reduces Out-of-Stocks**

Compass Marketing, a consumer goods marketing company, has developed a one-cent ultrahigh-frequency (UHF) RFID tag for its Powershelf brand that will work with its smart-shelf solutions to track products stocked on RFID-reader equipped shelves. The Powershelf technology is designed to enable stores to electronically update prices on small LCD screens mounted on product shelves. With a weight sensor, the system can detect if a shelf is empty, and forward an alert to store personnel or management indicating that status. Learn how the firm is using RFID technology to reduce the rate of out-of-stocks and improve the customer experience.

#### Speaker:

John White, Chairman/CEO, Compass Marketing



#### MANUFACTURING

210 D

#### **RFID Helps Blue Bird Find Buses in Yard**

Blue Bird, an American bus manufacturer, needed a realtime yard-management solution that would enable it to monitor the locations of its vehicles on a 40-acre lot. In addition to its vast size, the project also posed technological challenges, because the system needed to be able to read the tags inside of all-metal buses, and the yard itself is located within a valley, making RFID tracking difficult. Learn how the firm is successfully using RFID to provide realtime visibility in its outdoor yard, and to effectively manage production flow.

#### Speaker:

Matt Walker, Manufacturing Engineering Specialist, AWS Certified Welding Inspector, Blue Bird



INTERNET OF THINGS

220 B

#### **IoT and RFID Working Together in Brazil**

Leading companies across all industries in Brazil are deploying radio frequency identification and Internet of Things (IoT) technologies to track assets, manage inventory levels, improve customer service and much more. Brazil is the largest country in Latin America and the fifth largest country in the world. Recently, the nation's federal government unveiled a report (the "IoT Action Plan") that will serve as the basis for the development of a national strategy for the IoT. In this presentation, RFID Journal Brazil's Editor, Edson Perin, will bring attendees up to date on the state of adoption in the country, share insights into which industries are adopting RFID and IoT solutions most quickly, and explain which factors are currently driving adoption.

#### Speaker:

Edson Perin, Editor, RFID Journal Brazil



RETAIL/APPAREL

210 B

#### From Farm to Finished **Products: Traceability of Cotton Using RFID**

Customers often want to authenticate and verify the products they buy. Toward this end, Welspun, one of the world's largest home textiles manufacturers, has developed a revolutionary and industrydefining track-and-trace solution that delivers traceability of cotton from the farm at which it was grown to the finished product being shipped to customers (big-box retailers) and used by consumers. The tracking starts with RFID tags being applied to cotton bales at the farm and ends with a QR code on a product. The system covers everything in between, resulting in end-to-end information being available to customers at the click of a button. The manufacturer gains insights from the data collected that can boost productivity, and a key byproduct of traceability is the automation it enables. Learn how the process benefits the manufacturer by providing visibility and empowers the consumer to track the fiber used in the product back to its source.

#### Speaker:

Vipin Ghandi, Group CIO, Welspun



#### SUPPLY CHAIN/LOGISTICS

210 F

#### **Tracking Containers via RFID** and the loT

Many cities throughout South America, particularly those located in Argentina, face serious problems in urban solid waste management. These difficulties are due to several factors, including the absence of parameters for measurement, as well as obstacles to tracking usage. One way to collect waste is through containerized routes. These routes have established frequencies, and trucks often pick up containers before they are full. Learn how RFID and Internet of Things technologies are being used to create visibility and traceability, as well as to reduce operating costs by public and private operators. Speaker:

Ernesto Castagnet, Prof. Ind. Eng., MSc. IMSE, Associate Professor, AutoID Evangelist, Universidad Nacional del Sur (UNS)



#### **TECHNOLOGY AND INFRASTRUCTURE**

220 C

#### RFID and the FCC: Why the **New Regulations Matter to Everybody**

The Federal Communications Commission (FCC) has imposed a set of new regulations for RFID technology, including authorization, marketing, importation and even the labeling of low-power RF devices, as well as increasing enforcement of its RF equipment authorization rules. These rules apply not only to RFID equipment manufacturers, importers and vendors, but to end users of the technology as well. Gain an understanding of the pertinent FCC rules and how they apply to RFID equipment. The mandatory postmarket telecommunications bodies' surveillance will be discussed, as well as the FCC's practice of trolling websites, looking for violations. Learn why all RFID stakeholders should have good quality control and a solid compliance plan, including working with knowledgeable professionals to prepare a best practices guide. Speaker:

Ronald Quirk, Jr., Esq., Head of IoT Practice, Marashlian & Donahue



**DEFENSE/AEROSPACE** 210 C

#### **DoD Enhances Asset Visibility for Warfighters**

This panel will focus on the importance of the U.S. Department of Defense, industry and academia partnerships for effective use of automatic identification technology (AIT) to enhance many of the DoD's business processes. The panelists will discuss the AIT efforts of their company or agency, their role in supporting the DoD's AIT program and potential future AIT technologies of interest to the DoD.

#### Moderator:

Hal Casey, Director Navy AIT, IUID and Joint Solutions, U.S. Navy

#### Panelists:

Dominique Rhines, Lead USMC Distribution Systems Functional Advocate and RFID Co-lead, USMC; James Alexander, Product Director, Automated Movement and Identification Solutions, U.S. Army/AMIS; Michael Crawford, Transportation Specialist, U.S. Transportation Command;

Sauna Marshall, AF/A4 CIO Support to Logistics, Engineering, & Force Protection for Mobile Technology, U.S. Air Force

Dawn Fiorentino Izzi, Consultant, Department of Defense/AMPIO



#### HEAITH CARE / **PHARMACEUTICAL**

210 A

#### **Managing Field and Consignment Inventory** Using RFID, Mobility and **Cloud Platforms**

Limited visibility to field and consigned inventory has significant impacts on business decisions for medical device manufacturers and their distributors. RFID, as well as cloud platforms and consumer smart devices, gives an opportunity to manufacturers to get real-time visibility of field inventory, gaining control of their inventory, improving sales efficiency and engagement and increasing operational efficiency, while reducing costs with improved cash flow. Cycle counts can be easily integrated into back-end systems like SAP, Salesforce or homegrown ERP to do near real-time billing. Understand the benefits. including par levels, inventory utilization, product expiration, inventory transfers, freight optimization, service levels and customer segmentation.

#### Speaker:

Sanjiv Dua, CEO, RFID4U



#### INNOVATION

220 A

#### The Good, the Bad and the Wireless

Come with us on a fun, lighthearted, yet informative review of RFID-related patents that were awarded during the past year or so. Which seem like duds? Which may change the world with their innovations? The presenter is a college professor with a specialization in technology management. Join him as he provides insights into the latest developments in RFID technology—see what others are doing and gain valuable information about the patent process.

#### Speaker:

Kevin Berisso, Ph.D., Director, AutoID Lab, University of Memphis



#### MANUFACTURING

210 D

#### **Developing an RFID Strategy** for Manufacturing

RFID can deliver a great deal of benefits to manufacturers in many different areas, but without coherent strategies, companies often wind up deploying the technology piecemeal, only to find that it fails to meet their longer-term needs. This session will explain how to create a long-term strategy that can enable businesses to choose technologies that will best meet their ongoing needs across a wide variety of applications, as well as how to prioritize projects in the near term.

#### Speaker:

Mark Roberti, Founder & Editor, RFID Journal



INTERNET OF THINGS

220 B

#### The Industrial Internet of **Things: Entering the Digital Era of Life-Cycle Traceability**

Construction, defense, engineering, railways: these industries face many of the same challenges, such as cost pressures, counterfeiting and the race to digitize their physical worlds. All share a mutual need for transparent processes to optimize their supply chains from raw materials to final customer. Standardization and globally unique identification of parts, components, assets and locations are also influencing operational processes, allowing life-cycle traceability from design to disposal. Learn why and how GS1's standards are increasingly being implemented in these sectors as part of companies' Industrial Internet of Things (IIoT) strategies regarding master data and data quality; digital certificates; maintenance, repair and overhaul (MRO); building information modeling (BIM); and more. Speaker:

Enzo Blonk, Director Industry Engagement Technical Industries, GS1



RETAIL/APPAREL

210 B

#### **New GS1 Specification** Web-Connects Bar Codes. **QR Codes, NFC and RFID**

GS1's Mission Specific Working Group is developing a specification that would enable a single web identity for every product label, whether it's a 2D bar code, a QR code, a Near Field Communication (NFC) tag or an ultrahigh-frequency (UHF) RFID tag, or any combination of those technologies. The new spec would enable a single QR code or NFC tag to support smartphone interaction for consumer-facing applications, as well as access to Global Trade Item Numbers (GTINs) for point-of-sale transactions. With a web address for each product item, data and applications in the cloud can connect with QR codes, NFC and RFID on the same item. Learn how the specification can aid in the organization and consolidation of transaction data, and in driving direct-to-consumer applications. Hear how it can provide consumers with increased visibility into a product.

#### Speaker:

Niall Murphy, Co-founder and CEO, **EVRYTHNG** 



#### SUPPLY CHAIN/LOGISTICS

210 F

#### **Fire and Rescue District Increases Visibility Via RFID**

The Bonita Springs Fire Control and Rescue District has reduced its inventory spending by 30 percent through the use of RFID technology to prevent duplicate ordering and expirations. The district's crews and equipment (including eight vehicles) are located at seven different stations, and it stores medical equipment and supplies within its vehicles, as well as station storage areas and a central medical supply room that acts as a distribution center for all stations and trucks. Before the RFID technology was installed, inventory management was performed manually, which made the process both labor-intensive and errorprone. Learn how the organization continues to tag assets, including approximately 6,000 medical items and 1,500 pieces of equipment, and how its longterm plan is to tag almost every item that passes through its stations.

#### Speaker:

Richard Scott, Deputy Chief, Bonita Springs Fire Control and Rescue District



#### **TECHNOLOGY AND INFRASTRUCTURE**

220 C

#### **Using Blockchain Technology** in Supply Chain Traceability

Blockchain enables companies to record every event or transaction within a supply chain. This information can then be shared in a secure, transparent and efficient manner. What are the challenges of implementing a blockchain system? AIM has put together an expert panel that will answer that question and more. This group of experts will share their experiences in utilizing blockchain applications with AIDC technologies, such as IoT and RFID, and discuss how blockchain improves the traceability and reliability of information.

#### Moderator:

David Krebs, Executive VP, Enterprise Mobility & Connected Devices, VDC Research

#### Panelists:

Chuck Evanhoe, Aware Innovations; Jeanne Duckett, Manager, Technology Development, Avery Dennison

#### RFID JOURNAL AWARDS FINALISTS PRESENTATIONS | THURSDAY 10:30 AM

#### BEST NEW PRODUCT, GROUP 2

210 C

This award will be given to the company that exhibits the best new RFID product or service. the 10 finalist have been split into two sessions.

Phoenix Solutions' PMT-06W passive UHF RFID tag Speaker:.Koji Wada, Deputy CEO, Phoenix Solution

**Powercast's** batteryless electronic UHF Retail Price Tag Speaker:

Charlie Greene, Chief Operating and Technical Officer, Powercast

**Seeonic's** SIghtWare X Untethered RFID Reader
Speaker:

Harley Feldman, Co-Founder, Seeonic

**SMARTRAC's** MIDAS FLAGTAG for use on challenging materials Speaker:

Roelof Koopmans, Vice President Global Product Marketing, SMARTRAC

#### SensThys/Alien Technology

for their SensArray - Next Generation RFID Reader system Speaker:

Jo Major, PhD, CEO, SensThys

#### BEST HEALTH-CARE IMPLEMENTATION

210 A

This award will be given to the end-user company that has demonstrated the best use of RFID technology to improve its health-care operations.

#### Adana Integrated Health Campus

#### **AUM Cardiovascular**

Speaker:

Jason Yao, AUM Cardiovascular

#### St. James's Hospital

Speaker:

Greg Magrane, Project Manager St. James Hospital

#### BEST RFID IMPLEMENTATION (OTHER INDUSTRY)

220 A

This award will be given to the end-user company that has demonstrated the best use of RFID technology in an industry not specified in other categories.

#### Codelco

#### **Gate Gourmet**

#### Hong Kong Aircraft Engineering

Speaker:

Patrick Wong, Executive General Manager, Line Services, Hong Kong Aircraft Engineering Company Ltd.

#### BEST MANUFACTURING IMPLEMENTATION

210 D

This award will be given to the end-user company that has demonstrated the best use of RFID technology to improve its manufacturing operations.

#### **BAE Systems**

Speaker:

Deirdre Schmidt, Operations Excellence Leader, BAE Systems

#### **General Motors**

Speakers:

Lloyd Luettke, RFID - Vendor Tooling Asset Management, General Motors Ronald Mills, Director of Asset Services General Motors

Robert Blankenburg, Manager of.GBS

Asset Management – Vendor Tooling
General Motors

#### **Marzotto Group**

Speaker:

Andrea Spanevello, IT & Outsourcing Manager, Marzotto Group.

#### RFID JOURNAL AWARDS FINALISTS PRESENTATIONS | THURSDAY 10:30 AM

#### **BEST NEW PRODUCT, GROUP 1**

220 B

Avery Dennison's AD-250r6-P microwaveable UHF label Speakers:

George Dyche, Director, RFID Innovation & Product Management Avery Dennison

#### EM Micro's em aura RAIN RFID crypto tag ICs Speakers:

Paul Muller, RFID Business Unit Leader, EM Micro

#### HID Global's Bluetooth sensor beacon

Speakers:

John Sailer, Chief Operating Officer Bluvision/HID Global

Infratab's Freshtime freshnessmonitoring solution

PervasID's fully integrated, hands-free inventory, portal and checkout solution Speakers:

Sithamparanathan Sabesan, Founder and CEO, PervasID

#### **BEST RETAIL** IMPLEMENTATION

210 B

This award will be given to the end-user company that has demonstrated the best use of RFID technology to improve its retail operations.

#### River Island

#### SportZone, a unit of Sonae

Speaker: Marco Cunha, Supply Chain Director, Sonae

#### Visa

#### **BEST LOGISTICS/SUPPLY** CHAIN IMPLEMENTATION

210 E

This award will be given to the end-user company that has demonstrated the best use of RFID technology to improve its logistics or supply chain operations.

#### Daimler

#### Speakers:

Thorsten Weiler, Manager, Mercedes Benz Cars, Daimler Süleyman Karakurt, Manager, Mercedes Benz Cars, Daimler

#### **ShelfAware**

Speaker:

Andrew Johnson, CEO, ShelfAware

#### Ternium

#### **BEST USE OF RFID TO ENHANCE** A PRODUCT OR SERVICE

220 C

This award will be given to the end-user company that has best used RFID technology to enhance an existing product or service.

#### Information Mediary

Speaker:

Joanne Watters, General Manager, Intelligent Devices SEZC Inc.

#### **National Company of** Kazakhstan for Air Navigation

Speaker:

Azat Bekturov, CEO, National Air Navigation Company of Kazkahstan

#### Vitamix

Speaker:

Dave Kolar, Senior Engineering Manager, Technology, Vitamix



#### TRAINING CLASS: **Benchmarking UHF RFID Hardware**

210 C



For any successful RFID deployment, a proven approach involves conducting a site and workflow analysis, based on the principals of RF physics and good system design. After these steps are undertaken properly, the correct hardware and software must be chosen before a pilot or rollout is planned. This instructor-led master class, presented by RFID4U, will provide an introduction to developing a set of common benchmarks for comparing the performance of UHF RFID readers and tags based on specific applications of the technology. After a quick overview, the presenter will discuss the top 10 recommendations for benchmarking UHF hardware.

#### Speakers:

Gene Donlan, Systems Architect, RFID4U; Sanjiv Dua, CEO, RFID4U

#### Benchmarking Passive UHF RFID Tags, Part 1

Understanding how passive UHF tags perform and why some tags do so better than others is critical to achieving high read rates in any RFID deployment. This session will explain the types of tag antennas, and how different antennas perform with linear and circular polarized reader antennas, tag detuning and shadowing. Participants will learn how to create test plans, procedures and metrics to measure read speeds for tags in isolation, or in a population of other tags.

#### 2:45 PM

#### Benchmarking Passive UHF RFID Tags, Part 2

In this session, the presenter will explain how to test tags' orientation sensitivity, and will explore ways to test the efficiency of tags and their ability to harvest energy and respond to readers. Participants will learn how to measure tag performance in free air and on different types of products and materials, as well as how to identify improperly tagged items..

3:30 PM

**Break** 

3:45 PM

#### Benchmarking Passive UHF RFID Readers, Part 1

Readers are the other critical element in any passive UHF RFID system. This session will explain how to create test plans, procedures and metrics to determine essential benchmarking parameters, including reader sensitivity, when picking up signals from passive UHF tags. The presenter will also explore RFID reader interfaces and the importance of being able to adjust the gain of reader antennas in order to read tags in a variety of applications.

4:30 PM

#### Benchmarking Passive UHF RFID Readers,

The performance of an RFID system can be optimized by the types of antennas you choose. In this session, the presenter will demonstrate types of antennas for stationary and handheld readers, as well as parameters like directive gain, and show how antenna performance can be measured.

#### 5:15 PM

#### **Open Discussion**

Participants will have the opportunity to question the presenter and ask about specific applications, in addition to the use of passive UHF RFID systems in different environments.

6:00 PM

Master Class: Benchmarking UHF RFID **Hardware Concludes** 



#### TRAINING CLASS: **RFID Applications Developers Training**

210 D



This instructor-led course, part of RFID4U's Fast-Track series, teaches software application developers how to build the next generation of rich, interactive RFID applications for passive UHF readers and peripherals. Live presentations and demonstrations provided throughout the course are designed to offer students an opportunity to gain practical experience with the skills and concepts covered during the lectures, and include such topics as how to optimally capture reads in different scenarios, like conveyor belts, door portals, forklifts and handheld devices. In addition, participants will learn how to make decisions regarding performance and scalability, by selecting native API programming (including vendors' SDKs) versus middleware. Participants will also understand structures such as ROSpec, AlSpecs AccessSpec and RFSurveySpec, available via EPCglobal's Low Level Reader Protocol (LLRP).

#### Speakers:

Archit Dua, Project Manager, RFID4U; Rajesh Subramanian, Project Manager, RFID4U

#### 2:00 PM

#### **Brief Introduction and Overview** of RFID Concepts

This session will focus on a brief introduction and overview of RFID concepts. including the components of an RFID system, standards and regulations, tag memory and tag operations. It is suggested that attendees review RFID concepts in preparation of attending this session. RFID4U has created a comprehensive resource center that contains the relevant concepts and may be accessed on the RFID4U website.

2:30 PM

#### **RFID Programming With Fixed Readers**

This module will kick off by explaining how to connect and configure an out-of-the-box fixed RFID reader, and then proceed to RFID programming concepts. The presenter will discuss and provide an overview of available SDKs and EMDKs for major RFID readers and the associated RFID programming concepts with code examples, including:

- Connecting to a reader
- Reader and antenna configuration
- Inventory
- Data filters and aggregations
- Tag access operations (read, write, lock, kill)
- · Disconnecting from a reader

The session will conclude with a discussion regarding Low Level Reader Protocol (LLRP) and Inventory Triggering Options.

3:00 PM

#### Tag Access Operations (Read, Write, Lock and Kill) Demo

The presenter will conduct a live demo of the tag access operations (read, write, lock and kill), along with code explanation.

3:30 PM

Break

3.45 PM

#### Handheld and Mobile Readers

The session will provide an overview of handheld and mobile readers, as well as a live demonstration of some of the capabilities and advantages of integrating RFID handhelds and mobile readers into an RFID system and how to write applications on them.

4:30 PM

#### **RFID Middleware**

The session will kick off with an overview of RFID middleware concepts, deployment steps and functionalities, and will conclude with a live demonstration of incorporating and integrating RFID middleware.

5:30 PM

#### **RFID Peripherals and GPIO**

Continuing, this module will provide an overview of RFID peripherals, including printers, relay controllers and digital I/O adapters. The session will include a demonstration of RFID peripherals in an RFID solution.

6:00 PM

**Master Class RFID Applications Developers Training Concludes** 

# GET THE MOST OUT OF RFID JOURNAL LIVE! 2018

DOWNLOAD THE OFFICIAL RFID JOURNAL LIVE! 2018 MOBILE APP! LOG IN TO THE MOBILE APP WITH YOUR BADGE NUMBER TO:

- > SYNC YOUR EXHIBITOR & SESSION SELECTIONS ACROSS MULTIPLE DEVICES
- > SYNC YOUR PLANNER WITH YOUR PROFILE ON THE EVENT WEBSITE



- View Schedule to browse sessions and select those you plan to attend, or click Tracks to see sessions in individual preconference or conference tracks.
- Search for Exhibitors, mark your favorites, request meetings, add notes, and map booth location.
- Browse Products to view full-color pictures of the latest products & innovations from exhibitors.
- Use Maps to locate your favorite booths on the show floor.
- > Create a **Personalized Planner**.



**iPhone Version** 

Scan the QR code to download the Google Android or iPhone version, or search for "RFID Journal LIVE! 2018" on the App Store or Google Play.



**Android Version** 





CORNERSTONE SPONSOR

#### SML RFID | Booth 1306

As a leading technology provider for this new era in retailing, SML is a trusted RFID solutions partner to the world's largest retailers and top fashion brands. RFID solutions from SML deliver proven results and rapid ROI's. SML brings the industry's broadest set of RFID offerings from cost-effective, high-performance RFID tags and a global network of encoding solutions to enterprise-class RFID software applications for retail stores and distribution centers. SML's RFID software application suite, Clarity™, is the technology behind some of the most successful retail deployments of RFID in the world. ▶ www.sml-rfid.com



SIGNATURE SPONSOR

#### Avery Dennison | Booth 1115

Avery Dennison is a global leader in Radio Frequency Identification (RFID)-enabled solutions with more than 800 patents, and applications and global manufacturing capabilities that have produced more than 10 billion RFID tags and labels. Avery Dennison has an industry-leading solution development team that supports customers from business case development to complete solution rollout. For more information, visit averydennison.com/RFID, and follow Avery Dennison RFID on LinkedIn. ▶ www.rbis.averydennison.com



REGISTRATION SPONSOR

#### Zebra Technologies Corporation | Booth 1107

A global leader respected for innovation and reliability, Zebra offers technologies that illuminate organizations' operational events involving their assets, people and transactions, allowing them to see opportunities to create new value. We call it the Visible Value Chain. Zebra's extensive portfolio of marking and printing technologies, including bar code, RFID, GPS and sensoring, turns the physical into the digital to give operational events a virtual voice. This enables organizations to know in real time the location, condition, timing and accuracy of the events occurring throughout their value chain. Once the events are seen, organizations can create new value from what is already there. ▶ www.zebra.com

SILVER SPONSOR

#### **BW BIELOMATIK** | 1541

From the pioneer days of the RFID technology in the late 1990s, the BW Bielomatik brand name has been synonymous with RFID related reel-to-reel converting technology. We offer the complete range of manufacturing process solutions for the production of all the various form factors and layer constructions of Smart Labels and Tags required today and in the future. ▶ www.bwpapersystems.com



SILVER SPONSOR

#### **HID Global** | 1007

HID Global is the trusted leader in solutions for the delivery of secure identity with more than 2 billion transponders in the field. The HID Identification Technology (IDT) business unit (formerly Sokymat) designs and delivers a full range of RFID system components in LF, HF and UHF. Headquartered in Austin, Texas, HID Global has more than 2,500 employees worldwide and operates international offices that support more than 100 countries. HID Global is an ASSA ABLOY Group brand. ▶ www.hidglobal.com



SILVER SPONSOR

#### **PervasID** | 1617007

PervasiD

PervasID, a spin-out company from the University of Cambridge, provides unique long-range accurate passive radio frequency identification (RFID) real-time tracking solutions for several applications, including retail and logistics. The PervasID solution is fully automated using nextgeneration fixed ultrahigh-frequency (UHF) RFID readers that are based on the company's patented passive RFID reader technology. The system can achieve an outstanding >99% detection accuracy, while being capable of scaling to cover large buildings. The Company is rapidly growing and has secured several customers including a major blue chip retailer who is looking at utilizing



#### **Orbiter Sensor Solutions**

Whether the subject is missiles, trucks, people or grocery items, Orbiter has the solution. Orbiter has the unique ability to construct systems, including planning and permitting, for installation of trenching, conduit, concrete as well as operation of systems of multi-sized supercomputer databases. Our people know satellites because they have designed, deployed, and managed arrays. We have completed more than thirty RFID applications for all lines of military service, and for national police forces, schools, aerospace, agriculture, oil services and others. ▶ www.orbiter.com





**EXHIBITOR SPOTLIGHT SPONSOR** 

#### **ORBCOMM** | Booth 915

ORBCOMM (Nasdaq: ORBC) is a global leader and innovator in the industrial internet of things (IoT), providing solutions that connect businesses to their assets to deliver increased visibility and operational efficiency. The company offers a broad set of asset monitoring and control solutions, including seamless satellite and cellular connectivity, unique hardware and powerful applications, all backed by end-to-end customer support, from installation to deployment to customer care. ▶ www.orbcomm.com



**EXHIBITOR SPOTLIGHT SPONSOR** 

#### STMicroelectronics | Booth 1027

STMicroelectronics is a global semiconductor company with net revenues of US\$8.35 billion in 2017. Offering one of the industry's broadest product portfolios, ST serves customers across the spectrum of electronics applications with innovative semiconductor solutions for Smart Driving and the internet of things. By getting more from technology to get more from life, ST stands for life.augmented. ▶ www.st.com



EXHIBITOR SPOTLIGHT SPONSOR

#### Voyantic | Booth 1238

Voyantic, established in 2004 in Finland, is the global leading provider of RFID testing and measurement solutions targeted for routine use both in the laboratory and on production level. We also provide installation, training and maintenance services to make our systems true turn-key tools with no uncertainty or your-mileage-may-vary disclaimers.

▶ www.voyantic.com



# **Building Intelligent Supply Chains**



EXHIBITOR SPOTLIGHT GROUP SPONSOR

#### IMPINJ | Booth 1407

Impinj is a leading provider of RAIN RFID solutions. Its platform, comprising both hardware and software, uses RAIN RFID to wirelessly connect everyday items to the internet, delivering digital life to the physical world. ▶ www.impinj.com

#### OMNI-ID | Booth 1217

Omni-ID is driving the Industrial Internet of Things (IoT) revolution in IT, manufacturing and industry by establishing reliable, connected environments for end-to-end asset management, in-process visibility and real-time control, right down to the individual asset level. ▶ www.omni-id.com

#### RFID GLOBAL SOLUTION | Booth 1021

RFID Global Solution is the leading provider of asset management solutions for the data center and enterprise markets with 3 million assets under management and growing.

▶ www.rfidgs.com

# IOTON PAVIDAN

# EXPERIENCE THE MOST INNOVATIVE RFID SOLUTIONS FROM LEADING INTERNET OF THINGS COMPANIES

### **EXHIBITORS INCLUDE:**

**BOOTH 1437** 



BOOTH 1540



**BOOTH 1433** 



**BOOTH 1532** 



**BOOTH 1538** 



**BOOTH 1536** 



**BOOTH 1441** 



**BOOTH 1534** 



**BOOTH 1439** 





ASSOCIATION SPONSOR

#### AIM

AIM is an industry Alliance that represents any organization that uses, implements, resells, or develops technology around barcode, RFID or mobility technology. The Alliance is essential to enabling adoption, growth, and interoperatbility related to Automatic Data Capture technologies and the enterprises that use this technology. AIM acts as an industry activist presenting industry views, issues, & opportunities to governments around the world. Join today! ► www.aimglobal.org



ASSOCIATION SPONSOR

#### **RAIN RFID ALLIANCE**

RAIN RFID is a wireless technology that connects billions of everyday items to theinternet, enabling businesses and consumers to identify, locate, authenticate, and engage each item. ▶ www.rainrfid.org



MEDIA SPONSOR

#### Barcode.com

Now in its 8th year with over 3,000 articles and one half-million visitors annually, The Bar Code News (Barcode.com) covers news of barcodes, RFID, supply chain and more.

▶ www.barcode.com



MEDIA SPONSOR

#### Conference Guru

Conference Guru has great deals on some of the best conferences in the world, all in one place. ▶ www.conferenceguru.com



MEDIA SPONSOR

#### IOT Journal

IoT Journal was launched in 2014, as an independent website devoted solely to covering Internet of Things technologies and their many business applications. IoT Journal's mission is to help companies use IoT technologies to collect data on their environment, enhance products, automate processes and so much more. ▶ www.iotjournal.com



TECHNICAL TRAINING PARTNER

#### RFID4U | Booth 1403

RFID4U offers a catalog of courses and training programs customized to fit an organization's needs. Content is delivered in a variety of formats, including elearning, handbooks and ebooks. Courses are provided at RFID4u's education facilities, or onsite.

▶ www.rfid4u.com.org



### Visit the AIM Pavilion in the 1300 section!

































AIM Breakfast | 310 A, B

**EM Micro** | 319



Fujitsu | 310 D (Thurs.)



**Impinj** | 310 D (Tues.), 220 D (Wed./Thurs.)



Mojix | 310 C



NXP Semiconductors | 220 E, F



STMicroelectronics | 320 E



**Zebra Technologies** | 220 G

## RFID Journal LIVE! 2018 Sponsors and Partners...



CORNERSTONE AND REGISTRATION SPONSOR





REGISTRATION SPONSOR

SILVER SPONSOR







**EXHIBITOR SPOTLIGHT SPONSORS** 



ASSOCIATION SPONSOR



ASSOCIATION SPONSOR

# Thank you for your support!





SIGNATURE SPONSOR



SILVER SPONSOR



SILVER SPONSOR



SENSOR SPONSOR



TECHNICAL TRAINING PARTNER







MEDIA SPONSOR

MEDIA SPONSOR

MEDIA SPONSOR



# Experience the Latest in RFID Technical Research Join an IEEE RFID session during RFID Journal LIVE!

Keynote Panel: RFID-The Past, Present and Future
Featuring Auto-ID founder Sanjay Sarma and RFID Experts

10:30am-12:00 Wednesday, April 11 310 E-F

#### **IEEE RFID 2018 Poster Session and Live Demonstrations**

2:45pm-4:15pm Wednesday, April 11 Exhibit Hall

#### **IEEE RFID 2018 Smart Cities Mega-Challenge Competition**

4:15pm-5:00pm Wednesday, April 11 RFID Journal Awards Theater

#### Workshops/Tutorials and Peer2Peer Roundtables

8:30am-4:30pm Tuesday, April 10 S310 E-H

#### IEEE RFID sessions are open to all registered attendees and exhibitors



The newest addition to IEEE's assemblage of technical societies, the Council on RFID or CRFID provides a focus for RFID technology across the technical spectrum of IEEE. Comprising 15 member societies, CRFID's goal is to EDUCATE about the theory and practice of matters relating to RFID (radio frequency identification) and RFID-related systems. These systems have demonstrated significant impact in healthcare, retail, transit, automotive, payments, security and logistics applications, quick retrieval of

For additional information on the IEEE Council on RFID, please visit: www.ieee-rfid.org

# SAVE THE DATES

FOR THESE UPCOMING RFID JOURNAL EVENTS!



# RFID JOURNAL LIVE! 2019

APR. 2-4, 2019 | PHOENIX, ARIZONA



RFID IN RETAIL AND APPAREL

ост. 3 **2018** 

NEW YORK NEW YORK



RFID
JOURNAL LIVE
EUROPE

NOVEMBER **2018** 

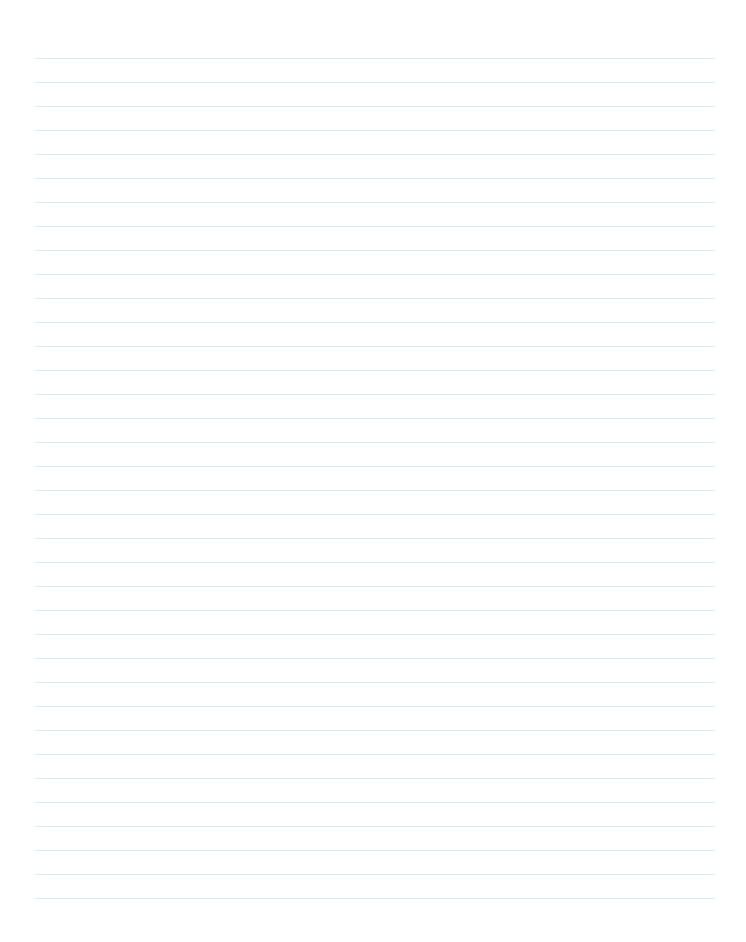
LONDON ENGLAND



RFID IN AEROSPACE AND DEFENSE

**2018** 

ARLINGTON VIRGINIA





## Simply More Connected

Discover our ST25 series

Tags, Dynamic tags and Readers

Learn more about our

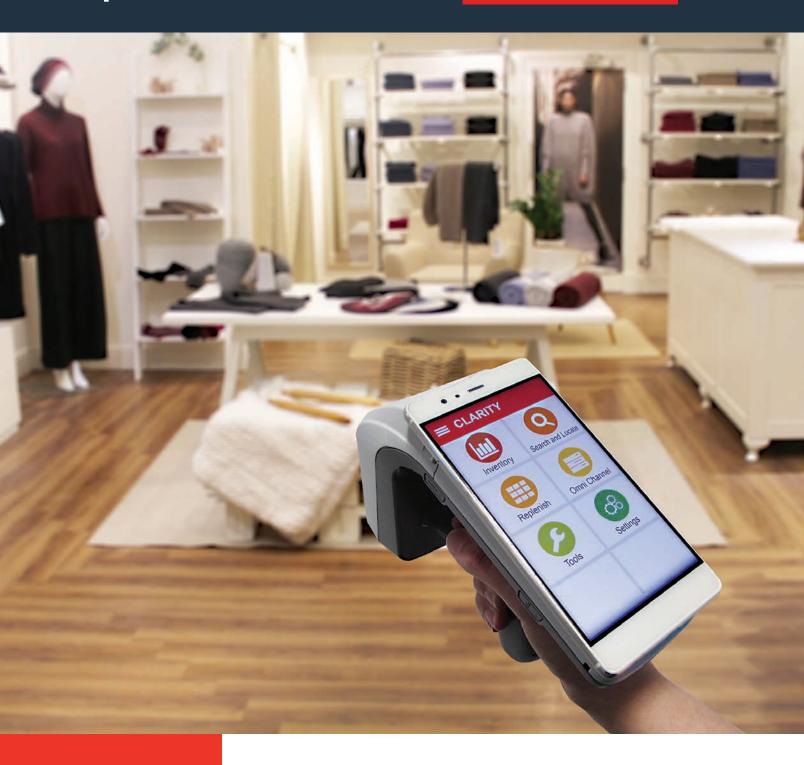
SmarTAG - NFC Sensor Node

During the Exhibitor Spotlight in the exhibit hall's Presentation Theater from 1:20-1:50 PM on Wednesday

Interact with our Experience Wall

To see how NFC RFID technology is augmenting experiences in Smart Home and Smart Retail

Visit STMicroelectronics in Booth #1027



Manage items through their entire life-cycle, from the factory to the sales floor – and everything in between.

VISIT SML BOOTH #1306 www.sml-rfid.com

#### **Proven Results**

SML's proprietary RFID item-level inventory management solution enables simple retail RFID deployment and puts real-time management of inventory in the associates' hands.