

# Welcome and Logistics

engage again 9-10 December 2020 RAIN

ALLIANCE



#### Welcome





### AIM Inc.



#### **RAIN RFID Alliance**





#### **RAIN Alliance**





RAIN Alliance was founded in 2014 and is a subsidiary of AIM

- Increase awareness and understanding of passive UHF RFID (GS1's EPC Gen2 protocol and ISO's 18000-63 standard)
- About 160 global members and annual meetings in Americas, Asia and Europe
  - Alliance members include hardware and software companies, solution providers, academics, and end-users



#### What is RAIN RFID?



- RAIN RFID is a wireless technology that connects billions of everyday items to the internet, enabling businesses and consumers to identify, locate, authenticate, and engage each item.
- RAIN RFID makes it possible to network *things* without power.
  - >18.5 billion things tag chips sold in 2019
  - > 20 billion annually by 2020





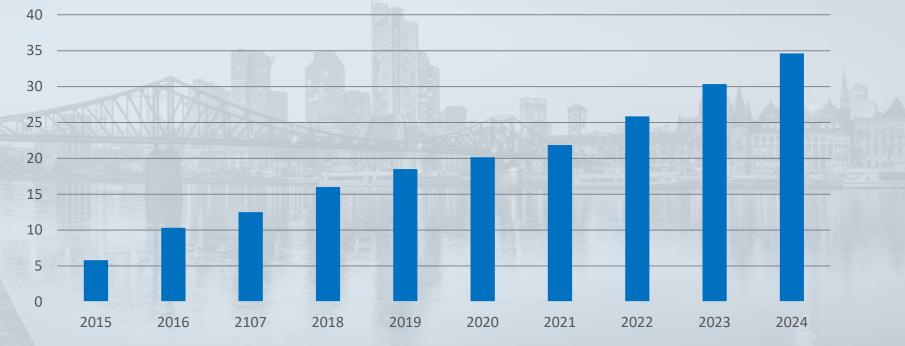
#### **RAIN Brand**

- **RFID** is a generic acronym to describe different types of wireless technologies different frequencies, different standards, passive vs. active, etc. *This creates confusion*.
- RAIN is a brand for a specific passive UHF RFID wireless technology
  - GS1's UHF Gen2 protocol
  - ISO/IEC's 18000-63 standard
- The ultimate goal is for "RAIN" to be <u>THE</u> UHF RFID brand
  - To transition companies and consumers to the RAIN brand, RAIN RFID is currently being used for the technology
  - RAIN Alliance is the organization
- Other wireless technology brands, easier for end-users to understand:
  - WiFi, instead of IEEE's 802.11 versions
  - NFC, instead of HF RFID or ISO/IEC's 14443
  - Bluetooth, instead of IEEE's 802.15.1



#### Tag IC Volume

Tag IC Volume (Billion)

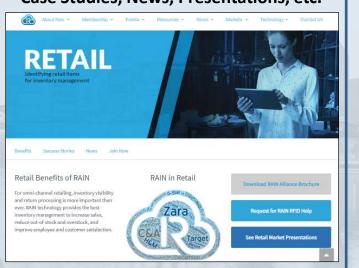


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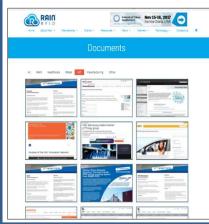
Data Collected by RAIN 2015-2019: Forecast 2020-2024 – RAIN Market Research Report 2020

# www.RAINRFID.org

#### **Market Pages** Case Studies, News, Presentations, etc.



#### **Documents & Videos Organized by Markets**





- Current markets Aviation, Healthcare, IOT, Retail, & Smart Manufacturing
- Lists of >100 retailers and >40 healthcare end-users worldwide



### **Requests for Help**



#### Request for Help

f you are looking for help to implement a RAIN RFD system, please fill out the form below with details of your request. The details will be sent to the RAIN members who will respond directly to you.

Please provide details of your request. Include sufficient information to allow a member to respond: *  Insert Info here (unlimited text) Company *  First Name *  Country *  Country *  Email *  SUBMIT Home  About RAIN  Site Map  Privacy Policy		
Insert Info here (unlimited text) Company*  First Name*  Last Name*  Country*  Email*  Phone	Home     About RAIN     Site Map     Privacy Policy	
Insert Info here (unlimited text) Company*  First Name*  Last Name*  Country*  Email*  Phone		
Insert Inio here (unlimited text) Company *  First Name *  Last Name *  Country *  Email *	SHBMIT	
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Insert Info here (unlimitéd text)	First Name *	
Insert Info here (unlimitéd text)	Company *	
	Please provide details of your request. Include sufficient information to allow a member to respond: *	

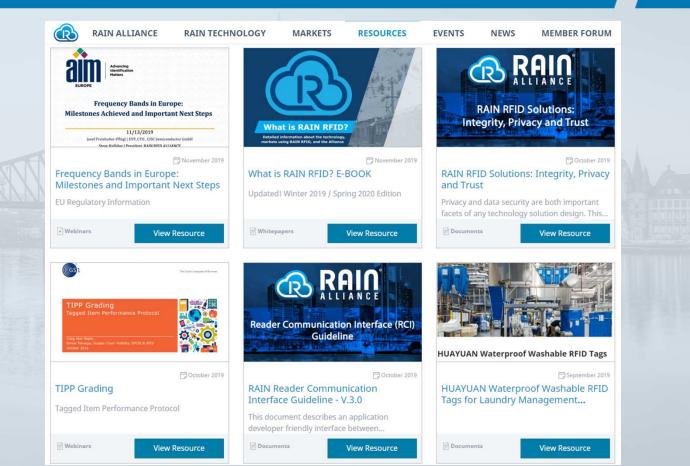
 Great way to get help on your project

End users can post on the web site
Sent to all member companies for their attention

Post your requests for help with your project <a href="http://rainrfid.org/resources/request-for-help/">http://rainrfid.org/resources/request-for-help/</a>



#### **RAIN** Resources



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### **E-Book**

#### What is RAIN RFID?

Detailed information about the technology, markets using RAIN RFID, and the Alliance

- Two versions English and Chinese
- Details about RAIN RFID
  - Tags, Readers, Antennas, Software, and Data
- Standards and Numbering System
- Markets | Industries | Applications
  - Applications and benefits of using RAIN
  - Case studies
- Request for Help
  - How end-users can find the RAIN Alliance members they need to work with
- RAIN Alliance
  - Workgroups and Meetings
  - List of Members and Categories for the companies







#### Market Research – RAIN RFID

#### • NEW

- Research through 2024
- Scenario based forecasts
- Regional and Global information
- Trends by industry and application
- Effect of COVID-19 pandemic discussed



Global Markets and Applications for RAIN RFID Solutions A Market Research Report

RAIN RFID Alliance Market Research V.1.0 October 2020



https://rainrfid.org/rain-rfid-market-research-report/

#### RAIN RFID Industries Include...



#### Why RAIN?

#### Retail

- 2 to 20% sales boost
- Reduction in out of stocks
- 96% time reduction with smart inventory
- Over 9% decrease in shrinkage
- Over 98% inventory accuracy results



#### Aviation

- Improve end to end tracking
  - Improve asset inventory control and life cycle management
  - Higher customer satisfaction fewer delays, cancelations, mishandled bags
    - Rapid return on investment
  - Easier bag handling



#### Healthcare

- Higher inventory accuracy
- **Reduced product expiration**
- Effective recall management
- Improved patient safety and care
- Automated payments and increase profitability
- Decreased supply chain and equipment costs



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## **Smart Retail**

- Growing at a fantastic rate Over 100 retailers currently using RAIN
- Losses Over 9% decrease in shrinkage
- Increases in sales 2 to 20% sales boost
- Reduction in out of stocks
- Big savings in inventory management
  - 96% time reduction with smart inventory
    - Over 98% inventory accuracy results





## Aviation

- Enable hands-free scanning of baggage throughout the handling process
- Track passenger's baggage in real-time
  - Automate freight tracking and increase accuracy
- Reduce mishandling of baggage by 25-50%
- Ease tracking of airplane safety equipment and reduce errors
- Authenticate and track repair parts for maintenance







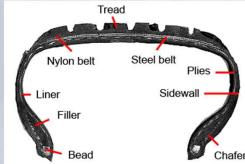




#### **Examples of RAIN RFID** Tyre Identification and Data-Sharing



- Today: Identify and authenticate every tyre to meet government and/or consumer demand
- Tomorrow: use RFID as a sensor (pressure, temperature, mechanical stress)
- No RFID-friendly way to embed tag in a tyre today
- Data-sharing amongst many stakeholders
- SGTIN for tyre identification offers traceability, etc.
- EPCIS for data-sharing
- Application Identifiers for user-memory data encoding



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# Healthcare/Pharma

- Digital Health/Telehealth/Telemedicine
- Smart watch/fitness band
- Smart pill bottles
- Smart operating theaters
- Integrated Clothing
- Smart asset tracking





### **RAIN RFID Alliance**

- Questions about the Alliance?
- Check the website <u>www.rainrfid.org</u>
- Get the E-Book
- Contact Steve Halliday steve@rainrfid.org





# App name:CrowdCompass EventsEvent name:AIM/RAIN engage again 2020 - <a href="https://crowd.cc/s/3EiwQ">https://crowd.cc/s/3EiwQ</a>





# DOWNLOAD OUR MOBILE APP NOW!



9-10 December 2020











- We value your opinions about the event
- Please remember to take the survey on your phone after each session



# Getting around the world

- Three presentation tracks in Rooms A, B, and C
- Exhibit Hall
- Places to sit and talk (blue circles)
- Walk or teleport
- Find colleagues/ friends
- 🕑 Go to the Beach!



 Wednesday 9 December (All times US Eastern) AM Sessions: 9:00 - 11:05 PM Sessions: 1:30 - 3:30 Evening Sessions: 5:00 - 7:05 Thursday 10 December (All times US Eastern) AM Sessions: 9:00 - 11:05 PM Sessions: 1:30 - 3:30 Evening Sessions: 5:00 - 7:05



	Title	Speaker	Time
Room A	Welcome to engage again	Steve Halliday – RAIN /Chuck Evanhoe - AIM	0900
	RAIN in Space: A Review of the use of RFID in the International Space Station	Patrick Fink - NASA	0940
Wednesday	From There to Here and Beyond: A look at the AIDC Market	David Krebs – VDC Research	1020
9 Dec	Coexistence of multiple RFID systems in hospitals	Teemu Ainasoja - Voyantic	1330
	How RAIN RFID technology transforms the healthcare supply chain by automating UDI data capture	Lana Makhanik - Vuemed	1410
	AIDC Point of Care Technologies – Innovations and Best Practices	Chris Sullivan - Zebra	1450
	Repeat of Welcome to engage again	Steve Halliday – RAIN /Chuck Evanhoe - AIM	1700
	Repeat of RAIN in Space: A Review of the use of RFID in the International Space Station	Patrick Fink - NASA	1745
	Repeat of From There to Here and Beyond: A look at the AIDC Market	David Krebs – VDC Research	1825

#### Room B Wednesday 9 Dec

Title	Speaker	Time
Tamper Evident RFID: When Security matters	Richard Aufreiter – HID Global	1330
Contextual Mobility - Better Way to Deliver Data	James Huysentruyt- PcVue	1410
75,000 Truckloads shipped without a single Error using Forklift Mounted RFID and the System Directed	Kenneth Schoening – A-1 Packaging Solutions Roger Fields - Fiberteq	1450



#### Room C Wednesday 9 Dec

Title	Speaker	Time
RAIN RCI Version 4: Regulations, tag filters, crypto and sensors	Bertus Pretorius - LicenSys	1330
RAIN in Action	Scott McMillan – Clairvoyant Technology	1410
The European Commission take radio regulations even more seriously	Josef Preishuber-Pflügl – CISC Semiconductor	1450



	Title	Speaker	Time
Room A	Cannabis: Traceability, Trends, and Technology	Elizabeth Sinclair – Seagull Scientific	0900
	FDA Blueprint and FSMA 204: Win-Win for Proftability, Transparency and Consumer Safety	Jeanne Duckett – Avery Dennison Julie McGill - FoodLogiQ	0940
Thursday	Using Variable Color and Images; Helping Customers and Employees Identify Correct SKUs	Guy Mikel – Color Label Solutions	1020
10 Dec	Blockchain & Drug Supply Assurance in the Coronavirus Era	Ben Taylor - LedgerDomain	1330
	Sensor Based Packaging Platform for Pharmaceuticals	Bahar Aliakbarian – Axia Institute – Michigan State University	1410
	UHF RFID in Healthcare	Giuliana Gilges-Richards – Times-7 Ashlea Bitanga – Rollex Medical	1450
	Repeat of Coexistence of multiple RFID systems in hospitals	Teemu Ainasoja - Voyantic	1700
	Repeat: How RAIN RFID transforms the healthcare supply chain automating UDI data capture	Lana Makhanik - Vuemed	1745
R	Repeat of UHF RFID in Healthcare	Giuliana Gilges-Richards – Times-7 Ashlea Bitanga – Rollex Medical	1825

	Title	Speaker	Time
Room B	Transforming the global supply chain with RFID	Debangana Mukherjee - CISC	0900
	Higher sustainability enabled by RFID systems and sustainable tags	Tyler Chaffo – Avery Dennison	0940
Thursday	Sustainability with IoT Applications   Panel Discussion	Scott Austin – Everledger Sprague Ackley – Digimarc Justin Patton – RFID Lab at Auburn University	1020
10 Dec	RFID Adoption and Partnerships: How to create a more robust ecosystem together	Jonathon Aitken – Avery Dennison	1330
	An Overview of the Physics of Supply Chain Impact Damage Events and the Role of RFID in Detecting It	Jan Van Niekirk - Spotsee	1410
	RAIN at the jewelry counter	Kevin Berisso – University of Memphis	1450
	Repeat of Higher sustainability enabled by RFID systems and sustainable tags	Tyler Chaffo – Avery Dennison	1700
	Repeat of Transforming the global supply chain with RFID	Debangana Mukherjee - CISC	1745
R	Repeat of 75,000 Truckloads shipped without Error using Forklift Mounted RFID & the System Directed	Kenneth Schoening – A-1 Packaging Solutions Roger Fields - Fiberteq	1825

	Title	Speaker	Time
Room C	RFID Tag Chip Types for Use with an RFID Printer	Chris Brown – Printronix Auto ID	0900
	Label Information Density Driving Verification	Douglas Seitz – Printronix Auto-ID	0940
Thursday	Conductive Thermal Transfer Printing	Dan Harrison - IIMAK	1020
10 Dec	RAIN RFID tire tagging: a major step toward end to end traceability	Philippe Lallement – Michelin Claude Tetelin – GS1 Global Office	1330
	Embracing passive and active RFID as ambient data	Jeffrey Dungen - reelyActive	1410
	Wireless Power in RFID	Charles Greene – Powercast Corp.	1450
	Repeat of RAIN RCI Version 4: Regulations, tag filters, crypto and sensors	Bertus Pretorius - LicenSys	1700
	Repeat of The European Commission take radio regulations even more seriously	Josef Preishuber-Pflügl – CISC Semiconductor	1745
	Repeat of RAIN RFID tire tagging: a major step toward end to end traceability	Philippe Lallement – Michelin Claude Tetelin – GS1 Global Office	1825

### **Exhibit Hall**

- Open Hours
  - Wednesday 9 December (All times US Eastern) Expo Hours: 11:00 am to 1:30 pm 3:30 pm to 5:00 pm
     <u>Thursday 10 December (All times US Eastern)</u> Expo Hours: 11:00 am to 1:30 pm 3:30 pm to 5:00 pm



Column A		Colun	nn B	Columr	nC
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12	Printronix			CAEN RFID	16
			CISC Semi-	1	Avery



Entrance

Entrance



# Thank you to our sponsors

A Virtual Conference presented by AIM & RAIN 9 - 10 December 2020



#### Platinum



# Logistics

- Check the tips document we sent for help
- Feel free to walk around
- Join the presentations in Rooms A, B, and C
- Visit the exhibitors in the Expo Hall
- Chat to your friends/colleagues/customers/suppliers

# ENJOY







A Virtual Conference presented by AIM & RAIN 9 - 10 December 2020



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