Do You Know What the "RAIN Alliance ISO Numbering System" Is? Part 1

If you work with or use RAIN RFID, you need to know about the RAIN Alliance ISO Numbering System. Unfortunately, people use many different terms for this. Personally, I prefer the term "RAIN AFI Encoding," but you will also hear "RAIN CIN Numbering System" (which is not an accurate term!), the "RAIN Number," the relatively formal "RAIN Alliance ISO Numbering System" and other terms.

Regardless of what someone calls this Numbering System, you need to know about it, understand when it should or could be used, and the basics of implementing it. As you hopefully know, when you encode RAIN RFID tags, the data you encode must use a standards-based Numbering System. RAIN tags are essentially a blank slate of memory, so many users simply encode their own data without considering consequent Tag Clutter. To avoid Tag Clutter, you must encode tags with a standards-based Numbering System.

Standards-based Numbering Systems fall into one of two categories: GS1 EPC "Encoding Schemes" or ISO-based Numbering Systems. GS1 Encoding Schemes are in widespread use for open, interoperable solutions in Retail, Logistics, Healthcare, Foodservice and other industries. ISO-based encodings are often used in the Automotive industry, particularly in Europe, for both parts marking and vehicle identification, Airline Baggage tagging, Road Tolling, and closed-loop solutions.

RAIN RFID is increasingly being used for closed-loop solutions, such as internal Asset or Tool Tracking, and there are ISO-based "wrappers" to enclose a proprietary numbering system (intentionally not capitalized) within a standards-based format to preempt Tag Clutter issues. Traditionally, ISO wrappers for closed applications have had a few speedbumps. One set of wrappers was, frankly, not designed well and therefore does not guarantee unique encodings – which is a cardinal sin with RAIN tags. The other sets of wrappers are technically sound, but they are relatively complex.

Enter the RAIN Alliance ISO Numbering System. This system is easy to understand, easy to implement and requires only a token financial investment. It offers users of RAIN RFID an ideal standards-based wrapper for closed-loop, proprietary encodings. In our next newsletter, we will dive into how to actually generate a RAIN Alliance ISO Numbering System encoding.

RFID Tags Reduce Restocking Errors Of Anesthesia Medications

Radiofrequency identification (RFID) tags can help decrease errors when restocking medications on anesthesia workstation carts, according to research conducted at the University of Utah.
Implementing the tags led to better identification and replacement of expired medications and enabled one person to restock the carts instead of the two people needed for manual restocking

"Using RFID in anesthesia workstations, to the best of our knowledge, has not been published about before," said study author Carlie Wilke, PharmD, MS, BCPS, who is

now a pharmacy manager for University of Wisconsin Health Pharmacy Services, in Madison. "It takes longer, but it's a safer process."

Dr. Wilke completed this project as part of a recent postgraduate residency in health-system pharmacy and leadership at Utah, where the health system began using RFID to track medications for cardiac resuscitation cart trays and intubation kits in 2021. These materials generally are found outside an operating room. Dr. Wilke's project evaluated whether manually placing RFID tags on anesthesia medications used in an OR led to fewer restocking errors and better tracking of expired medications.

Amazon - Just Walk Out Technology

Amazon has been developing their Just Walk Out technology for well over five years, with the first store being opened in 2018. In a nutshell, Just Walk Out technology allows customers to enter a mode of payment, walk into a store, grab their items, walk out and be billed automatically – all without any traditional check-out and time-consuming payment process. The Amazon technology has been based on a mix of vision systems (cameras), scales built into the shelves and AI. You will notice that I did not mention RAIN RFID.

Meanwhile, various companies in the RAIN RFID space have been attempting to develop RAIN-based solutions to accomplish this same "frictionless" shopping experience. And there has been some "friction" (pun) between proponents of RAIN solutions and Amazon's approach.

Neither approach is perfect - both have pros and cons - and developing solutions has proven to be extremely difficult. Could the future lie in a mix of the various technologies?

[Indeed, Amazon recently added RAIN to their suite of technologies behind Just Walk Out](#). This means that Just Walk Out solutions can now blend RAIN, vision systems, shelf sensors (such as scales) and AI to solve very complex mixes of product types, store layouts and customer behaviors.

"At computer vision-based checkout-free stores, products are arranged on shelves or tables so the system can see which items are being taken. This means products like clothing need to be packaged in bags or boxes—but that's not always the way people shop for soft goods. Customers want to see clothing on hangers, pick them up, feel the fabric, try them on, and may even return the items to other shelves or locations in the store. To address the unique nature of shopping for softlines, I'm happy to announce a new offering that combines the power of Just Walk Out technology and RFID."

Amazon operates their own stores using Just Walk Out, but they also license the technology suite. The long-hoped-for dream of using RAIN for frictionless check-out just got a major boost from a traditional rival.

News:

XERAFY + TSC Printronix AutoID Webinar: Printable RFID On-Metal Labels for Asset Tracking and Inventory Management

We want to extend our gratitude to everyone who joined us for an enlightening webinar co-hosted by TSC Printronix and Xerafy. We explored the fascinating world of printable on-metal RFID tags and their diverse applications.

Watch Webinar

In a rapidly evolving business landscape, efficient asset identification solutions were more critical than ever. During the webinar, we discussed how printable on-metal RFID tags paved the way for tracking assets in challenging environments, revolutionizing asset management across various industries.

Our expert speakers, **Chris Brown** from TSC Printronix and **José Dager** from Xerafy, delved into the intricate technology behind on-metal tags and shared their experiences in overcoming complex identification challenges. It was an opportunity to stay ahead in the world of asset management.

Wireless IoT Show in Germany

We will be at Wireless IoT show in Germany, which is not just another tech event; it's a dynamic platform where thought leaders, industry experts, and technology enthusiasts converge to explore the cutting edge of IoT with heavy focus on RFID

Explore the latest RFID solutions, devices, and technologies showcased by leading companies. Witness firsthand the groundbreaking innovations that are revolutionizing industries.

Avery Dennison Launches Plastic-free AD Pure RFID Inlays and Tags

The AD Pure line launches with AD Belt U9 Pure, inlays and tags which are ideally suited for global apparel, retail, industry and supply-chain applications. They are

compact in size and offer excellent performance on difficult-to-tag or low-detuning materials such as cardboard and plastic.

Through innovative antenna manufacturing, the AD Pure range has a 70-90% lower carbon footprint compared to inlays and tags using traditional etched antennas (based on third party Life Cycle Analysis, type III EPD - ISO 14020).

Removing plastic can reduce the weight of a label format by up to 44%, meaning less raw materials and waste. Extensive third party testing based on the PTS-RH 021:97/2012 method shows that AD PureT inlays and tags are recyclable within the paper and cardboard items.

"The new AD Pure product line is an important step towards our goal to further reduce plastic across our fiber-based inlays," said Mathieu De Backer, VP innovation & sustainability, Avery Dennison Smartrac. "The advanced manufacturing process ensures that not only are fewer materials used to make the range, but any excess can be recycled so that very little goes to waste.

Read our recently published series of blogs on RFID and e-commerce

1. **The Supplier's Ultimate Guide to Retailer RFID Mandates: From Surviving to Thriving** — As a supplier, we hope you are ready to begin applying RFID labels to your products for your retail customers. In this blog, we'll detail the steps you need to follow to properly tag your items with RFID.
2. **Tips to Comply with Retailer RFID Mandates** — Do you supply products to a major retailer? If so, your customer might have mandated you begin RFID-tagging your products. What are some RFID basics to help you comply with this requirement?

3. **[RFID Tips to Support In-Store E-Commerce Operations](#)** — Items with RFID labels are now arriving at your brick-and-mortar stores. Hopefully, you view this as great news. What do you need to keep in mind to take advantage of these newly tagged items?

4. **[The Importance of RFID Standards for E-Commerce Solutions](#)** — Successful RAIN RFID implementations in the retail industry depend on global standards to ensure that products are trackable across the value chain from the manufacturer through logistics partners and ultimately to the retailer.

5. **[How RFID Can Help Optimize E-Commerce Operations](#)** — From inventory management to choosing the most efficient labeling supplies, there's a lot to consider when integrating e-commerce operations into your enterprise.

6. **[Implementing an E-Commerce Strategy Can Pose Challenges for the Value Chain, Can RFID Help?](#)** — RFID has played a significant role in supporting e-commerce operations for major retailers like Walmart, Target, and Macy's. Even smaller retailers are adapting to the trends and putting up websites supported by RFID.

Find more blogs at https://usca.tscprinters.com/en/blog/rfid

Getting Into RFID

Are you a reseller just getting into RFID? If so, TSC Printronix Auto ID and our sister company, [Diversified Labeling Solutions](#), recently hosted an introductory webinar to explain the basics of RFID printers and labels, and how resellers can begin joining the revolution.

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