



## ***EPC and EAS Questions and Answers***

### ***Patrick Javick of GS1 US comments on the release of the GS1/EPCglobal RFID-based Electronic Article Surveillance (EAS) Strategic Overview and Technical Implementation Guides***

On Oct. 14, 2009, GS1 EPCglobal Inc. released the Strategic Overview and Technical Implementation Guides for Electronic Product Code (EPC)-based Electronic Article Surveillance (EAS), the culmination of a development process that began in March, with about 100 manufacturers, retailers, solution providers and organizations contributing. The guides were approved unanimously by the EPCglobal Inc board in September.

In a Q and A, Patrick Javick of GS1 US, a member of the development team, boils it down:

#### **Q: What is RFID-based EAS?**

**A:** RFID-based EAS is a technological method that basically brings two functionalities together on one tag. You have Electronic Article Surveillance (EAS) security and loss prevention functionality, along with unique-item-identification functionality through the Electronic Product Code (EPC), which contains a GS1 Serialized Global Trade Identification Number (SGTIN). Companies that use this new two-for-one approach will encode EPC “Manager Numbers” onto RFID tags to uniquely identify their items within the supply chain and retail settings.

#### **Q: What are the Guides exactly, and for whom are they intended?**

**A:** The Guides address how to implement an RFID-based EAS solution within a retail environment using existing GS1 EPCglobal standards. The focus for the Overview and Implementation Guides is on RFID tags that can be reused or easily disposed of by the consumer or sales associates after purchase. The Guides concentrate primarily on Point of Sale, Point of Entry, and Goods Receiving. We also have added a few elements include fitting rooms, entries/exits and restrooms.

The Overview and Implementation Guides were intended for a broad range of individuals and organizations but were focused on those people deploying RFID-based EAS within a retail setting. Within the guides, we do have considerations for the use of the technology within a company’s 4 walls. The typical user of the documents will come

from a variety of areas within an organization. These people would be responsible for loss prevention, store operations, supply chain and logistics. Of course, system integrators who are working with the suppliers and retailers would also use the guides.

**Q: How are the tags used?**

A: The tags are based on the widely adopted EPCglobal Gen 2 standard and attached to an item or to the item's packaging. The tags can be easily removed after purchase and either reused or disposed of. Currently you see companies using a variety of EAS and EPC tags such as swing tickets, hard plastic tags, or labels, and attaching them to items or item packaging. The tags are then interrogated by handheld and fixed readers for both inventory and loss-prevention purposes.

**Q: What does this ability represent to a manufacturer, a retailer?**

A: Basically, the guidelines and RFID technology provide both the ability (and more importantly a standardized manner) of using one tag type for both supply-chain management and theft deterrence. This combination of theft deterrence with item-level visibility allows, for the first time, the ability to identify what was stolen, how many items, and react accordingly. The technology provides an easier way for store personnel to manage the inventory to assist consumers, making shopping more convenient for the consumer, who has a better chance of finding items in stock and on the proper shelf or rack.

**For manufacturers** of goods these guidelines are a potential major leap forward in reducing costs within the supply chain. In many cases prior to now, in order to secure products (EAS-enable them) with their major retail partners, they were required to hold two sets of inventory. The retail partners chose one of the two proprietary EAS systems on the market today. In order to send those secured items, the manufacturer had to know who the product was going to at point of manufacturing or hold those two sets of inventory separate. In an RFID-based EAS system, one tag can be used to both secure the product and identify the product uniquely regardless of the retail trading partner. This will give many manufacturers more incentive to source-tag items.

Manufacturers also benefit from the ability to "see their products" in the retail store. As each item is uniquely identified, they have the ability to protect the brand from counterfeiting. They will know what has been shipped to the retailers and, with the use of EPCIS, have the ability to know which store their products went to.

For retailers, RFID-based EAS can be used to deter and detect theft, with the added benefits of RFID visibility throughout the supply chain. These benefits can be found in areas such as Product lifecycle management, Inventory management, Loss prevention, Dressing room management, Point of sale execution, and Returns management.

**Q: How does EPCglobal US fit into the picture?**

A: In 2009, the estimated amount of retail shrink was over \$100 billion worldwide due to theft, waste, and organized crime. This is having a major impact on retailers' profit margins, which can also impact manufacturers. By becoming a member of EPCglobal US, businesses have access to the standards development process. They also have the ability to use both the EPCglobal Seal (indicating that they are following the EPCglobal Consumer Privacy Guidelines) and register unique EPC Manager Numbers for encoding on the EPC Tags.

We can help ensure both retailers and their suppliers properly encode RFID tags with EPC Manager Numbers based on their unique GS1 Company prefix. This is the most successful way for you to starting the path of securing your products uniquely and building the groundwork for traceability and use of EPCIS. We can also help them address overall inventory accuracy issues, increasing supply chain visibility.

**Q: What is EPCIS?**

A: EPC Information Services (EPCIS) is another standard that was developed within EPCglobal. It is used to track the movement of objects as they travel through the supply chain. The EPC tag reads at each point of the supply chain provides the What, When, Where and Why of each read. EPCIS provides the Information Services necessary for the storage, communication and dissemination of EPC data. The key is that it provides standard event capture and query interfaces for obtaining and sharing data about these unique objects in the supply chain within and across organizations. Put another way, EPCIS enables the secure sharing of real-time information between trading partners.

**Q: Why are standards based approaches so important for manufacturers and retailers?**

A: By providing open standards for tags, readers, and middleware, GS1 EPCglobal has enabled the creation of a standards-based industry where tags applied in one country can pass through many different organizations to their final destination and the identity of the object understood and authenticated at each read point. These standards permit businesses to maximize efficiency and profitability by allowing for real-time reaction to problems within the supply chain, reducing complexity, lowering inventory and costs, and increasing return on investment. They no longer have to focus on the technology working and can put a greater effort into the business problem.

**Q: Was consumer privacy an important part of the new RFID-based EAS Guides?**

A: The group was well informed by GS1 EPCglobal's Public Policy committee throughout the process. This document follows the GS1 EPCglobal "Guidelines for Consumer Products" to protect consumer privacy and enhance consumer confidence.

In addition the Guides are focusing on those tags that are easily removed and disposed of.

**Q: Will these Guides help the adoption of EPC-enabled RFID in the retail industry?**

A: Focusing on the single reason companies use the traditional EAS systems, RFID-based EAS does much more. They now can get that increased inventory visibility to take action. A common guideline is designed to increase source tagging as only one tag type is needed.

By implementing RFID-based Electronic Article Surveillance, an opportunity is created to take significant cost out of the supply chain for both retailers and suppliers. In addition, manufacturers would no longer need separate inventories. This is a major business improvement for the retail community by streamlining the POS process and validating return merchandise. It provides the retail industry with the business benefits associated with serialization. RFID-based Electronic Article Surveillance will help drive the adoption of EPC item level tagging while offsetting the cost and can be leveraged for other applications. As companies start to release the added benefits of the technology adoption should increase drastically especially in light of the major retailers in Apparel, General Merchandise, Grocery and Electronics using it around the world. Increasingly businesses will see trading partners making requests to participate in EPC tagging programs.

**To learn more:**

Please visit the EPCglobal website at [www.epcglobalinc.org/standards/implementation\\_guidelines/](http://www.epcglobalinc.org/standards/implementation_guidelines/) or contact:

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