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Winning the Toughest Battle

There has recently been enormous growth in the illicit market for essential and branded goods. In addition to plaguing the music, software and luxury goods industries, counterfeit products are increasingly finding their way into other sectors, such as pharmaceuticals, automobile spare parts and fast-moving consumer goods. Counterfeiting and illicit trade in general constitute the most challenging problems a secure

supply chain has to fight. That is why we at the Auto-ID Labs chose “Anticounterfeiting and Secure Supply Chain” as our first flagship project.

The project’s goal is to provide the government and industry with ideas, concepts and concrete measures they can use against illicit trade, leveraging the potential of RFID and the EPCglobal Network. To meet these goals, we’d learn the toughest set of requirements an RFID-based secure supply chain must fulfill, which could then be used to advance the overall security of the EPCglobal Network.



Our research started a year ago with an industry-supported Special Interest Group. At the end of 2005, the initiative turned into a global project, combining the strength of all the Auto-ID Labs around the world. We attacked the anticounterfeiting problem by dividing it into four clusters.

1. **Understand the mechanics of illicit trade.** We modeled the licit and illicit supply chains of specific industries. Through numerous workshops, interviews and surveys, as well as with data available from industry and customs, we verified and quantified the flow of goods. We found that the importance of two gatekeepers—customs officials and end users—cannot be overstated.

2. **Research the economic impact.** To see how much an industry would be willing to spend to fight illicit trade, we calculated the economic impact of counterfeit products on the

revenue and margin of the legitimate brand owner.



3. **Derive the requirements for a global solution.** We translated the security needs and budget restrictions of an industry into system requirements of a global RFID-based authentication network that would destroy the business case of fake producers.

4. **Specify and prototype the solution.** We are currently working on this cluster and have already demonstrated some scenarios. Solutions range from putting simple unique serial numbers on products at the item level to using existing high-security infrastructures. For example, we started prototyping the use of NFC-enabled Nokia phones and the EPCglobal Network to authenticate products as fast as possible.

We have learned that RFID can be very powerful in fighting illicit trade. And we learned what the EPCglobal Network has to look like to secure the supply chain.

This piece of research also helps us develop an open source platform, based on EPCglobal Network standards, which will be available to the public for free in June. The platform will help to disseminate knowledge and encourage the exploration of novel applications and educational projects at universities and research institutions.

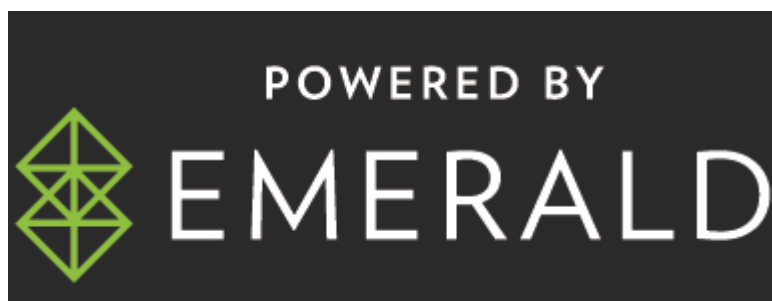
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