



# Xerox fights product counterfeiting

## A Smart Packaging Use Case



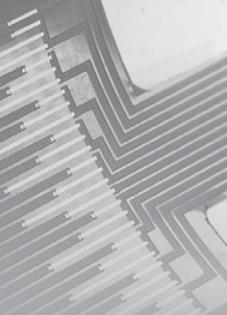
image © Xerox

# intelliPACK

## LEADERSHIP COUNCIL



Copyright © the Canadian Printable Electronics Industry Association (CPEIA), intelliPACK Leadership Council and the Packaging Consortium, PAC May 2016.



A [report in April 2016 by the OECD](#) and the EU's Intellectual Property Office concluded that imports of counterfeit and pirated goods are worth nearly half a trillion dollars a year, or around 2.5% of global imports. U.S., Italian and French brands the hardest hit, with many of the proceeds supporting organized crime.

Last fall, Xerox unveiled two new weapons in this war (see [Manufacturing Minute video segment](#)), its Xerox Printed Memory and Xerox Printed Memory with Cryptographic Security labels.

Traditional anti-counterfeiting methods such as invisible ink, holograms and RFID tags can be copied, and are often expensive to implement. These two new printed electronic labels from Xerox, on the other hand, give brand owners a solution that is inexpensive and difficult to counterfeit because every label is uniquely encrypted.

Xerox's labels were developed with Thinfilm's proprietary printed memory, the only printed, rewritable memory commercially available today.

## How the technology works

Here's how they work:

1. Xerox Printed Memory is a highly secure, printed label containing up to 36 bits of rewritable memory which can store up to 68 billion points of data. It can be used to determine if a product is genuine and to track how it's been handled during distribution.
2. Xerox Printed Memory with Cryptographic Security adds a unique, encrypted printed code (such as a QR bar code) to the memory. This can only be read by authorized personnel using a reader which interfaces with a secure smartphone application. This combination of printed memory with an encrypted printed code creates one of the most secure anti-counterfeit solutions on the market.

## Securing the supply chain

These labels are designed to secure the supply chain and prevent counterfeiting of consumables/ refillable items, fashion items and accessories and other consumer goods, to protect brands and consumers alike from knock-offs that are potentially harmful and of lower quality.

For example, rewritable data within each tag can identify if a medication refill has been authorized, a shipping tax has been paid, or whether a package passed through an authorized distributor.



The system is also protected from hacking. Xerox Printed Memory does not need an Internet connection for a reading device to extract the data, which means there is no possibility of incursions.

Patrick de Jong, marketing manager, Xerox Printed Memory, told industry magazine Printed Electronics Now:

“With Xerox Printed Memory with Cryptographic Security, the reader can be attached to a smart phone, and will deliver an authentication code. When it reads the code, it will generate an algorithm, and the smart code will compare the two codes. These labels can be used on applications ranging from pharmaceuticals to tax stamps for liquor and the tobacco industry.”

### **Massive potential market**

While it remains to be seen how the market will take to this new technology, Xerox Printed Memory and similar new technologies built with printable and flexible electronics have the potential to be a global industry worthy billions of dollars.

Major brands the world over are eager for new technology solutions that can add intelligence to everyday objects for at a low cost point, to fight piracy and counterfeiting, reduce product loss and waste, and better engage with consumers. Trillions of products and everyday objects could be equipped this way at a cost point low enough for mass adoption to be financially viable.

## About

### **intelliPACK** LEADERSHIP COUNCIL

#### **IntelliPACK Leadership Council**

The IntelliPACK Leadership Council is a joint program between the Canadian Printable Electronics Industry Association (CPEIA) and PAC, Packaging Consortium to speed the adoption of intelligent packaging solutions, based on the needs and capabilities of these two industry associations' members. Under the guidance of its Executive Committee, the Leadership Council serves as a focal point for activities and events in the industry and develops a product and tech roadmap that helps industry understand how to best adopt intelligent packaging. Based on the roadmap, the Council will also foster and showcase technology development and applications projects between R&D providers, brand owners, packaging companies, agencies and end-users to speed market adoption. Members also enjoy business development and networking opportunities.

**Learn more at: [cpeia-acei.ca](http://cpeia-acei.ca)**

**Learn more at: [pac.ca](http://pac.ca)**



#### **CPEIA**

Established in 2014, the Canadian Printable Electronics Industry Association (CPEIA) brings together key Canadian and international players in industry, academia and government to build a strong Canadian PE sector. The Association is the united voice for the sector and implements critical development strategies to facilitate growth through networking, stimulate R&D and investment, build a strong PE supply chain and drive the broad adoption of PE by end customers.

**Learn more at: [cpeia-acei.ca](http://cpeia-acei.ca)**



#### **PAC**

PAC, Packaging Consortium is a not-for-profit corporation, founded in 1950. PAC is North American centric with global access. We advocate for all materials and for package neutrality through an all-inclusive, transparent and collaborative process. Our 2,200 members come from all sectors of the packaging value chain, from start of life to next life. Our networking process includes PAC webinars, seminars, conferences, competitions, facility tours, education programs, trade shows, technical work groups and social activities. From PAC NEXT, our initiative to eliminate packaging waste, to PAC FOOD WASTE and now with this interest in Blue Events Inc., our industry is on a deliberate path to sustainability.

**Learn more at: [pac.ca](http://pac.ca)**