**Checkmate!**: New strategies to beat counterfeitors

The problem facing those who are fighting against counterfeitors is the lack of coordination between different players internationally. Technologies are being developed which should remedy this.

**Everyday knows about counterfeit goods, but brand owners play it very close to the chest as regards their actions to combat it. Apart from the exceptional case of Pfizer and its RFID labels for Viagra, few manufacturers are prepared to reveal anything on this subject. When we see what is at stake, this is all too understandable...**

Brand owners are different from sector to sector, but they all have two objectives in common: to find the right technology for their type of product, and to secure the entire supply chain associated with the tools being used. Take for example the initiative of the World Health Organization (WHO) which last November set up the "Impact" group which aims to stem the flow of counterfeit medicines, a market estimated at 20 to 30 billion $ annually by the Manufacturers’ Union Unitaf. From the technological point of view, the debate is likely to be lively, since on the other side of the Atlantic the Food and Drug Administration (FDA) recommends the use of RFID while in Europe the Data Matrix code leads the way (see example n° 2). This glimpse into what is going on is sufficient in itself to summarise the difficulties for any given tool to supply an adequate solution. Production lines and distribution networks are so complex that any number of Mafia-style gangs have got in on the act. The situation has become so bad that the World Bank, the Organisation of Customs Officials and the World Trade Organisation are all supporting the pharmaceutical manufacturers in this measure initiated by the WHO.

**The Law is the key**

The problem at present is to measure the degree of effectiveness of the authentication systems on offer. In reply to this question, the leading lawyer Vincent Fauchoux (cabinet DDG) gives a very clear answer: "These techniques are more designed to facilitate the fight against product piracy rather than to provide legal proof in court. For this reason a whole arsenal of legal measures – complex but necessary – are deployed in each application in order to facilitate the work of customs officials, judges and brand owners representatives in the field.

For Vincent Fauchoux "As soon as all genuine products of a company are marked, it is sufficient for anyone to establish the absence of such mark on any identical or similar product in order to render it suspect and to lead to a presumption of product piracy”. The absence of marking is thus a proof of suspicion, but not a suspicion of proof, since the resources employed by counterfeitors are such that they can reproduce the barriers themselves. The Paris lawyer explains "That it is highly probable that we will over the next few years see a rise in counterfeiting aggravated by a rise in counterfeiters’ expertise in forging security elements.”

**Levels of authentication**

Copies are becoming more sophisticated, as are “genuine fakes” on grey markets. This raises the question of the threshold of security proposed by technology suppliers. For this, visible elements like simple holograms cannot be recommended, and it is better to move to non-visible solutions or to combinations like holograms + data matrix + alphanumeric code to provide a truly secure answer while at the same time measuring the consumer. This is the goal of a group of French label converters who offer their customers the option of printing unique and invisible alphanumeric codes on their barcode labels. This approach is close to that of the Direction of Surveillance du Territoire (DIST), Commandant Eric Jallet of the DIST speaking at the "Traceability Assises" in Valence in 2006, pronounced in favour of bringing together traceability and authentication solutions.

This could be the way forward…

The French consumer protection, taken up by Pôle Traçabilité, organiser of the event and a fierce proponent of total strategic solutions involving companies and organisations, who will all be soon be confronted with this problem.

**A future of standards?**

Establishing a standard is what Pierre Delval hopes to achieve. He was delegated by the French government to set up a policy of prevention and technical dissuasion of counterfeiters. After several years of work he has managed to set up the AFNOR agreement AC 260-100 which defines legal technical and administrative solutions for combating product piracy. This document does not have the force of law, "because that is not its intention" says Eric Baloean of the French Standards Authority (Association Française de Normalisation) "but does give specifications and serves as a frame of reference”. This approach does not entirely convince Lucien David Langman, president of the National Company of Experts: "I take the point of view of people in the field who do not want us to be too restrictive. Such people are reticent at the idea of sharing information with their competitors, even if such sharing is secure. It would be wise to set up more practical measures”

G.B.

---

**Des solutions innovantes**

Les technologies d’authentification reconnues sont de plusieurs natures : signature numérique ; nano traces ; ADN synthétique ; biomètre ; etc. Voici quelques exemples de solutions disponibles sur le marché.

**Alp Vision**

Avec un emballage sécurisé au moyen de la technologie brevetée de marquage invisible Cryptoglyph, une simple image prise par un téléphone mobile suffit à identifier le produit. L’image est envoyée à un serveur qui confirme ou non son authentification.

**ATT**

ATT propose des solutions industrielles qui utilisent des technologies de dissimulation d’informations embarquées applicables sur les produits et ses divers composants : conteneurs, packagings, etc.

**Signoptic**

Le procédé se base sur l’empreinte intrinsèque de la matière qui lui permet de définir une signature unique pour chaque objet. Il compare ensuite la signature lue à l’originale et valide son authenticité.

**Tesa Scribos**

La solution Holopost s’appuie sur la capacité des rubans adhésifs à stocker une importante quantité d’informations sous forme holographique. Chaque étagère contient quatre degrés d’information, crypétries ou non, et plusieurs clients dont Nivea et Siemens l’ont déjà adoptée.

**TraceTag**

Leader mondial sur le marquage des produits en vrac, les solutions TraceTag sont basées sur l’utilisation de traces chimiques luminescents et l’ADN de synthèse, détectable en laboratoire.

---

**Innovative solutions**

There are various established authentication technologies: digital signatures, nano-tracers, synthetic ADN, biometrics, etc. Here are a few examples of solutions now available on the market.

**Alp Vision**

With a secure packaging using patented marking technology Cryptoglyph, a simple photo taken with a mobile phone is sufficient to identify the product. The picture is transmitted to a server, which can immediately check authenticity.

**ATT**

ATT offers industrial solutions using different technologies for concealing information printed on the contents or the packaging of a product.

**Signoptic**

This procedure is based on the intrinsic “footprint” of any substance which can be used to define a unique signature for any object. By comparing this signature with the original the authenticity of the object can be validated.

**Tesa Scribos**

The Holopost solution is based on the capacity of adhesive ribbons to store large quantities of information in holographic form. Each label contains four degrees of information, encrypted or non-encrypted. This technique is already being used by several brand owners including Nivea and Siemens.

**TraceTag**

World leader for marking bulk products, the Trace Tag solution uses luminescent chemical markers and synthetic ADN which can be detected in laboratories.