Protecting The Brand
Invisible Digital Security Technology

The Cryptophylx invisible brand protection solution is a breakthrough in fighting counterfeit products, as it does not require any additional equipment such as special inks, holograms, taggants or special labels. The Cryptophylx (Cryto=encryption, phylyx=helmet) is simply integrated and printed during the standard process of the packaging production with standard inks. It is therefore a cost effective solution, accessible to all brands and is easy to implement. It protects documents and packaging against counterfeiting and identifies tampered re-importation (grey market).

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Visible and Invisible Security Processes

Security features, such as holograms, embossing, special inks and 2D bar codes are visible features that offer lower security and also require training for effective authentication. One example of low security is that hologram duplication is available at very low prices through various Asian companies. Many "security" duplication services are easily accessible with a few clicks on the internet.

Unlikely invisible security features, which are not visible to the naked eye, require dedicated detection means to place even small print material, such as paper, carton, aluminum or polymer films for blister packs. The data contains information that is encrypted with an unbreakable 128-bit key and key. It makes every single Cryptophylx-protected package unique as a fingerprint (fig. 1). This camouflaging feature, using the imperfections of the unique material, is one of the unique aspects of Antiphylx technology. The detection software is based on digital signal detection capabilities that have very low signal-to-noise

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Fig. 1. Marked packaging surface with Cryptophylx

in hands of the field controllers. The most popular solution is invisible ink, such as UV ink (visible under ultra violet light) or IR ink (visible under infrared light). To authenticate these inks, the inspector needs a lamp emitting light with the required wavelength. The drawback of these inks is that they can be bought very easily on the market by anyone. There are other chemical tracers or ink additives providing counterfeiting security, such as DNA or magnetic tracers. The problem with such special inks or ink additives is the related logistics and manufacturing procedures, such as press cleaning temperature and pressure sensitivity, as well as interaction with other chemicals. Although sometimes efficient and effective, these implementations and secure deployment are quite costly. Also, adding these special inks to the related logistics and manufacturing procedures can be much more difficult to integrate and the Etchlon process may alter or even destroy packaging.

Considering the latter problem of identifying invisible or covert solutions without damaging the product for sale, the Cryptophylx covert security technology represents a breakthrough. It only requires affordable and easily available consumer electronics equipment that can be used by any person who can click a mouse or button on a screen.

How It Works

The Cryptophylx is formed by printing a large number of very small dots (20-90 pts), which are invisible to the naked eye. The dots are not easily identifiable with magnifying equipment because they are hidden in the imperfections of the printed material. The dots are invisible to the naked eye, require dedicated detection means to place even small print material, such as paper, carton, aluminum or polymer films for blister packs. The data contains information that is encrypted with an unbreakable 128-bit key and key. It makes every single Cryptophylx-protected package unique as a fingerprint (fig. 1). This camouflaging feature, using the imperfections of the unique material, is one of the unique aspects of Antiphylx technology. The detection software is based on digital signal detection capabilities that have very low signal-to-noise attached to the product. This information is hidden inside a very large amount of insignifi- cant data or "noise," but the Antiphylx authentication software is capable of retrieving it. This process is protected by international patents filed by Antiphylx. When comparing various solutions in terms of ease of deployment, efficiency, and cost effectiveness, it is important to consider the whole chain of events and not simply the per-purchase of a single security element.

A security policy should be seen as a chain of processes that involves internal management expertise as well as suppliers. This breakdown link of this chain determines the quality of the whole chain. Therefore a solution is better and more secure with fewer people or organizations involved in its deployment.

The Cryptophylx solution does not require any management, purchase and stocking of sensitive security elements. It is also an easy way to minimize the number of people and organizations involved in the deployment.

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