The Next Generation of Brand Protection Technology— Smartphone Authentication

With millions of dollars of lost revenue left on the table, counterfeiting continues to be a major issue for many global brands.

It has been estimated by the OECD (Organisation for Economic Cooperation and Development) and the EU's Intellectual Property Office that 2.5 percent of all global imports are counterfeit, and pirated goods cost brand owners nearly half a trillion dollars a year.

The problem of counterfeit products is international and cuts across multiple industries, affecting a wide range of products including pharmaceuticals, spirits, electronics, consumer products, personal care, fashion, beverages, machine parts, apparel, and more.

While there is no single "silver bullet" solution, there are strategies and options in common use across various industries for dealing with brand protection (product anti-counterfeiting). One of the very best new approaches to combat counterfeiting is the use of smartphones.

The primary responsibility for combating counterfeiting lies with brand owners, but it can be a struggle to stay ahead of the counterfeiters. Brand owners can take control of this battle by using smartphone authentication technology combined with the power and reach of the consumer.

Smartphone ownership has grown at a phenomenal rate. According to the Groupe Speciale Mobile Association (GSMA), smartphone ownership is forecast to reach approximately 65 percent by 2020 with connections rising to almost six billion. Furthermore, the continued development of apps and the increasing acceptance of the public to use their smartphones for a host of services make this everyday technology an exciting next-generation authentication approach.

Smartphones facilitate a direct link between the product and the consumer, offering almost instant verification of products and the capture of invaluable, real-time data for brand owners.

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Authentication by smartphone use can work based on one of several mechanisms: i) incorporation of a copy-resistant mark, ii) use of a hidden image and/or iii) the use of a barcode such as a QR code that, when placed onto packaging or products, can be read and verified by a smartphone with the correct corresponding app. The system typically records the specific product and geographical information while also signalling the user if the product is authentic or nonauthentic.

This is arguably one of the first times a brand protection (anti-counterfeiting) technology encompasses both mass consumer empowerment and physical security robustness, particularly when the mark also incorporates a security taggant.

Taggants are uniquely encoded materials or chemistries that are virtually impossible to duplicate. A taggant is like a fingerprint—a unique signature of identity to which brand owners and customers assign meaning.

While already offering an extensive portfolio of brand protection solutions, Sun Chemical recognised the significant potential benefits that smartphone authentication could bring to brand owners and their brand protection efforts. As a result, Sun Chemical partnered with DSS (Document Security Systems, Inc.) to add its AuthentiGuard smartphone validation technology into Sun Chemical's brand protection portfolio. Three years later, it is clear that AuthentiGuard has given Sun Chemical customers an even greater choice, flexibility and potential for protecting their products.

AuthentiGuard comprises three elements that all work together. The first is a mark containing an embedded code that is printed onto the product or packaging during the normal printing process. The second is a fully

customisable app that validates the mark to determine its authenticity. The third is a cloud-connected portal which captures the scanned data and provides the brand owner with end-to-end control (see Figure 1).

By tapping into the use of smartphones for product authentication, not only is there no need to provide specific verification devices, which offers significant cost advantages, but the smartphone app captures real-time data anytime, anywhere.

For the brand owner, this provides a large data set which is generated by customers using the app in the field. The availability of the data, as well as a historical record built over time, is invaluable for analysis and modelling to find the source of the counterfeit and fraud threat (think global radar).

As the smartphone app can also be used for messaging and marketing purposes, it provides brand owners with direct access to consumers— something that can be extremely difficult in certain sectors, such as prescription drugs.

This direct-to-consumer engagement adds a whole new value and benefit to the use of smartphone authentication, one that opens up further potential for ongoing marketing activity.
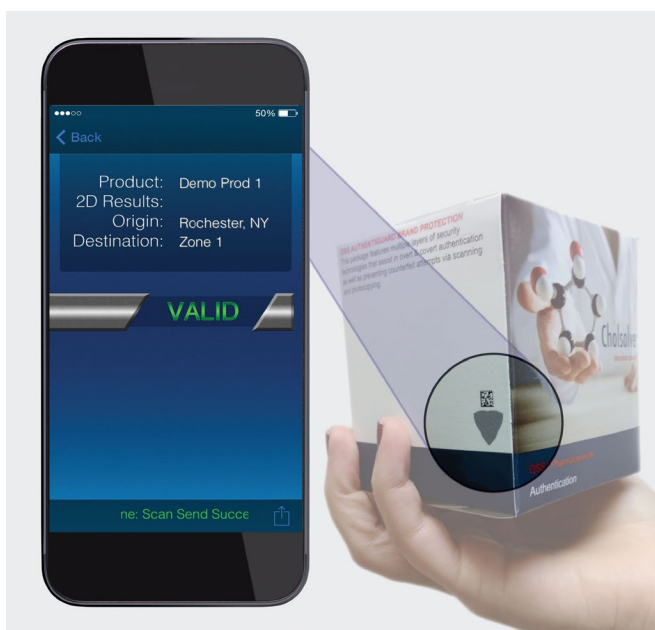

Figure 1: The AuthentiGuard System.

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One further benefit of using smartphones for authentication is that the phone in turn can connect to the internet cloud, which allows for the collection, correlation and high-end analysis for a variety of data, such as GPS location, photos of the scan, who scanned, and the time and date of the scan. These features are inherent to the AuthentiGuard system (Figure 2).

Enlisting the power of the consumer and their smartphones in the war against counterfeiting presents a huge step forward, extending the battlefield beyond the limited reach of the brand owner, to cover almost every corner of the globe.

As smartphone ownership increases across the globe, technology and user acceptance will continue to rise, empowering brand owners to take on counterfeiting criminals with a broader range of technology resources.
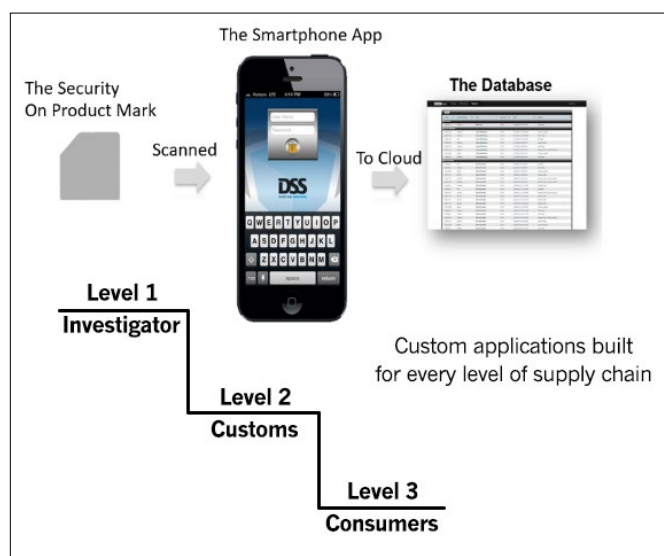
Figure 2: Example of how a smartphone authentication system can work.

Smartphone authentication technology allows brand owners to empower the consumer, facilitate a direct link between the product/brand owner and the consumer, and offer almost instant verification of products in the field while at the same time enabling the capture of invaluable real-time data which brand owners can put to ready use.

Smartphone authentication is one of many brand protection technologies that Sun Chemical offers to combat counterfeiting.

Benefits of AuthentiGuard:

- Provides high-security-level consumer authentication.

- Protection against warranty fraud, counterfeiting, diversion and other costly schemes.

- Customisable smart phone application supports marketing functions like product registration, product offers, and other customer engagement efforts.

- Access data from the AuthentiGuard portal or integrate with business intelligence platforms and other systems for greater field insight.

- Note that the security mark can't be copied or reproduced with typical high-resolution duplication methods.

To learn about Sun Chemical's full array of anti-counterfeiting technologies and strategies for packaging, download our white paper, *Anti-counterfeiting Technologies for Packaging*.

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