

# PROTECTING YOUR BUSINESS THROUGH LAYERED SECURITY

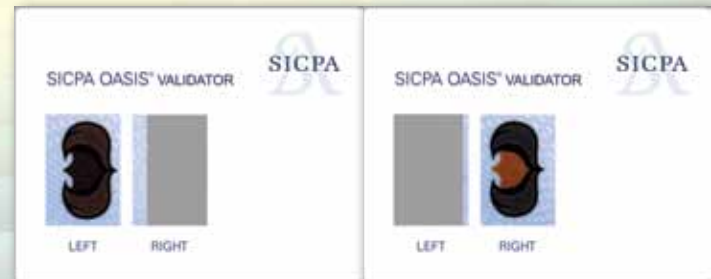
*By John LaBrant, Regional Account Manager, SICPA Securink Corporation*

In this age of mass globalization, information available to everyone at the touch of a button and lightning-speed technological innovation, the integrity of the products and documents that are part of our everyday life are constantly under threat. Criminals and counterfeiters use the simplest to the most complex technologies to counterfeit anything and everything on the market along with a multitude of value documents such as ID cards and banknotes.

With governments and businesses across the globe losing billions of dollars each year due to counterfeiting, it is imperative that proper security features are used to authenticate genuine products and documents, and protect the population at large. While there are many different security features used to protect products and documents, it is only through combining these features in a layered approach, that it is possible to successfully fight the counterfeiters.

#### **Color Shift – Overt-Covert**

The first such security feature utilizes liquid crystal pigment technology giving you the best of both worlds. There is a distinct, overt color shift when viewed at different angles. This same application has a unique covert feature that can be viewed through a polarized filter. The view through the filter will show a different color through each side of the filter, giving the verifier an easy, fast secondary covert verification.



The polarizing affect can be dual or singular. The dual feature, will display a different color through each side of the filter. The single polarization will drop out the image on one side of the filter and show color on the other side. These affects can be combined to create unique designs to create special affects that are specific to your own branding. The polarization affect can also be detected by a hand-held reader providing a yes-no response by simply placing the reader on the area and pressing a button. This gives three different, easily detectible security features.

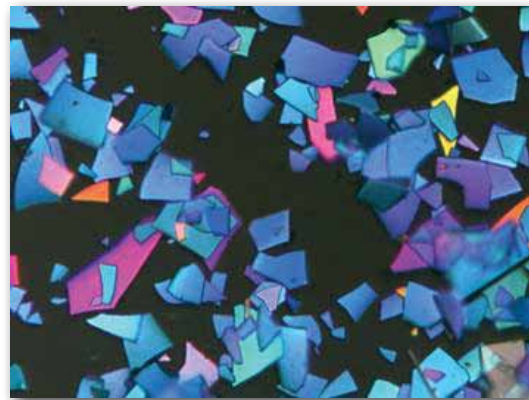
Liquid crystal pigments are printed in UV, water based or solvent-based screen and stand up to the heat and pressures from the lamination process. This can printed on PVC, PET, PETG and PC.

#### **Up-Converter – Covert**

This security concept employs a quasi-optical electromagnetic scattering taggant which is detected by a hand held reader that would give a yes-no instant verification. This readable taggant can be specific to your application and the reader is calibrated to the special signature on your specific taggant. This technology can be incorporated into a clear varnish anywhere on your document or incorporated into your design. Up-converting taggants can be incorporated in any ink vehicle, including offset and screen. This technology can be added to the above mentioned liquid crystal pigment as yet another added feature with just one printing application.

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### Micro-Taggants – Covert – Forensic

Micro-taggants are a more sophisticated forensic level of security markers within a varnish system. No special readers are needed as these markers are identified by 100X to 300X microscope. What is most unique about these markers is that they can be designed with specific readable text, logos, seals or trademarks.

There are different types and sizes of these markers, which can range from 5 to 45 microns in thickness and 20 to 120 microns in diameter. Different size and loading options, as well as custom designs make it possible to make each marker unique to a specific customer. With careful design, and using the proper marker size, it is even possible to apply these markers in an offset system. The markers can have a UV response to long or short wave excitation as well as visibility to white light.

This forensic technology can be identified at point of entry as well as evidentiary authentication in for the purpose of prosecution. Micro-taggant markers can also be incorporated into the above mentioned color-shift ink.

With careful consideration of design you can virtually use all of these technologies together in one screen application to form five high level security features with a mix of overt and covert security.

The sophistication of today's counterfeiters compels us to develop as many deterrents as possible. ID cards, for instance, in recent years have been manufactured using polycarbonate material which fuses together to make it virtually impossible to separate the card in order to alter the information or picture on the card. Unfortunately, this is not enough anymore due to the simple fact that the "bad guys" are manufacturing the cards themselves.

The only way to defeat that is to layer multiple overt and covert features that, in many cases, will elude the knowledge of the counterfeiter. Many of the features available, including the items mentioned in this article may do just that, or at the very least, make it more difficult to reconstruct. 📍

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