Authentix®

Anti-Counterfeiting
Brand Protection
Program Integrity

The Need for Level 3 Features

The barriers to entry for establishing a large-scale counterfeiting operation are shrinking. High performance desktop scanners, image editing software and digital printers have made it easier and less costly to create effective counterfeit banknotes. Today's counterfeiters are able to complement these capabilities with holographic and optically variable elements to create fake notes that deceive the public and retailers. The same equipment used by retailers and banks to detect counterfeits is readily available on the internet and can serve as a test bed for counterfeiters.

As the technology hurdle is lowering, the range of targeted denominations is growing. When access to a large and expensive print operation was a pre-requisite for counterfeiting, higher value notes were primary targets for the counterfeiters to get a return on their investment in crime. Today's lower cost of entry has brought on an opportunistic counterfeiting approach that targets lower value, transactional notes of the local currency. Numerous news stories in the last year have highlighted this as more daily-use denominations are identified as counterfeit by central banks in major economies around the world.

These trends mean that more counterfeits are bypassing the public, retailers and banks — increasing the importance of central banks as the final line of defense and Level 3 features as the ultimate arbiter of authenticity. Level 3 machine readable features serve to remove counterfeits from circulation while providing a constant monitor of counterfeiting activity. Particularly adept at detecting high-quality counterfeits that have successfully copied or mimicked the other features, Level 3 features enable central banks to take necessary steps before a counterfeiting issue erodes confidence in the currency.

Considerations in Selecting a Level 3 Feature

Level 3 machine readable features are the ultimate safeguard in banknote security. What makes a Level 3 feature is the advanced, secret technologies and the highest security quality for the production, storage and distribution of materials. Central banks have sole access to and control over the implementation and final authentication of these features, making replication next to impossible.

All Level 3 suppliers provide features that meet the security standards of a central bank, but other factors should also be considered in selecting a Level 3 feature.

- Banknote design

- Substrate selection

- Feature selection

- Integration with banknote production and processing equipment

Banknote Design

Banknote design is a challenging exercise in balancing form and function. If aesthetic decisions are made without careful regard to security features, the security of the note can suffer. Similarly, if the functional design drives the process, the final appearance may not be acceptable. With many features competing for a limited amount of space on a banknote, the ability to integrate a Level 3 feature in ink, varnish or substrate gives central banks maximum control over banknote security and cost. Flexible features improve performance because a central bank can pinpoint an optimal location and layout that is also compatible with the print design and decrease implementation costs with the ability to use the most efficient application method.

Substrate Selection

There is a growing trend in the industry to adopt alternative substrates for some or all denominations in a banknote series. A flexible Level 3 feature is independent of substrate type, enabling a central bank to use one feature for all denominations or retain the same feature should a re-designed note switch from paper to an alternative substrate, or vice versa. Using a substrate-independent Level 3 feature also means a central bank can change substrates in the future and keep the existing detectors.

Feature Selection

A Level 3 feature is typically viewed as a necessary banknote component that provides the ultimate security at an acceptable cost. The cost may bundle feature expenses and license fees or royalties. When selecting a Level 3 feature it is important to consider how the additional costs may impact future printing decisions. Those that order-in notes may select multiple printers over a banknote series' lifetime. A central bank can eliminate extra costs by selecting an independent Level 3 feature with a license-free and royalty-free pricing model, maintain flexibility regarding printer selection, and increase competition in the tender process to lower the overall banknote cost.

Integration with Banknote Production and Processing Equipment

The final dimension of a flexible Level 3 feature is seamless integration with inspection equipment used during production and used note sorting. Suppliers of high speed note sorters promote the ability to incorporate central bank detectors provided by third parties. A Level 3 supplier must not only be able to demonstrate familiarity with the integration requirements and process, but they should provide a universal sensor design to cost-effectively operate on the central bank's current and future equipment. If note sorters are ever upgraded, the central bank can protect their capital investment by transferring their current sensors onto the new sorting equipment.

There is an industry-wide focus on improved quality systems as the technical challenges associated with banknote production continue to increase. Since there are many ways to execute a robust quality program, a flexible Level 3 solution should offer a range of QC equipment options — offline readers, online readers that can be mounted onto a press or paper mill and high speed sensors for single note inspection systems such as a BPS2000, X9 or 9000.

Summary

The changing threat profile of counterfeiting is raising the importance of Level 3 features. A flexible Level 3 feature allows central banks to maintain control over the design, application, printing and processing of their banknotes. This flexibility serves to increase the feature's effectiveness and thus optimize the banknote's security and cost.