Guilloche Graphics

Guilloche graphics refers to complex line patterns formed of two more curves lines plotted according to mathematical principles. Guilloche patterns provide such effective anti-counterfeiting protection that they are used on virtually all banknotes throughout the world. Normally used to create ornamental boarders and emblems, they are effective, and beautiful.

Micro-border

Many may not realize that both Visa and American Express employ micro-boarders in their credit card designs to deter counterfeiting. Micro-borders appear to be solid lines at first glance, but upon closer inspection with a magnifying glass, you will find that they are actually repeating text. Because of the difficulty of capturing and recreating this effect, micro-borders offer good anti-counterfeiting protection without adding significant cost to the card.

UV Printing

UV inks "fluoresce" or appear to glow when exposed to ultraviolet light (black light). In normal lighting however, they are invisible to the naked eye. An example of UV printing can be found on the face of every Visa MasterCard or American Express card issued. Standard UV ink glows blue but custom security inks can be created for individual card issuers to fluoresce in a variety of colors or only under specific wavelengths of UV light. The security of the technology lays in the difficulty of producing it as well as its limited distribution.

環豐有限公司
Grand Pond Limited

Hologram

Holograms are recognized worldwide as effective anti-counterfeiting tools for plastic cards. Visa and MasterCard rely on holograms to reduce fraud and have their use has become one of the most commonly recognized features of a credit card. Many customers are surprised then to find that a wide variety of holographic foils and images are offered to customers in order to protect and enhance the appearance of their plastic cards. In addition, customer can be aided in the design of their own custom designed holographic foils.

Anti-copy Feature

Modern counterfeiters have used color copiers and electronic scanners quite effectively to counterfeit currency, bank notes, credit cards and identification cards. To combat this fraud, security printers created design features that cannot be easily captured and reproduced through scanning. Anti copy features are generally composed of fine lines or dots and often have the word "VOID" or "FAKE" embedded within them. If copied, these features are reproduced in a "distorted" form compared to the original, throwing up secret messages or interference effects. Anti-Copy technology is implemented entirely at the design stage and requires no changes in the manufacturing process.

Optical Variable Inks (OVI)

This is a special kind of security ink, which changes in color depending on the angle at which it is viewed. In our example, the ink appears to shift in color from Green to Blue. Another example of OVI ink can be found on all US currency printed after 1996. Upon examination you will notice that the denomination of the bill in the lower right corner has been printed with OVI ink

and will change from green to black when viewed from different angles. OVI applied by screen-printing and works best when the design allows for an area of solid unbroken coverage. The security of this technology rests primarily in the fact that OVI inks very difficult to produce and are made available only to security printers who have undergone extensive qualification and demonstrate the ability to handle it in a secure environment.