

B T R

ISSUE  
04.18

# BANKNOTE TECHNOLOGY REPORT

## CONTENT

KURZ  
CRANE CURRENCY  
CCL  
KOMORI  
ARJOWIGGINS SECURITY

With special reports from...



The World's Resource for  
Currency Knowledge

Created by

 Banknote Industry News  
[www.banknote-industry-news.com](http://www.banknote-industry-news.com)





CRANE CURRENCY

REIMAGING  
BANKNOTE SECURITY –  
MOTION SURFACE™



# Reimaging Banknote Security – MOTION SURFACE™

CRANE CURRENCY

We see our industry poised at the threshold of a new and historic technological milestone. A technological leap that reimagines our relationship with currency. The introduction of a new class of security feature that has the power to reshape the public's relationship with its currency. A security feature that is a dynamic display capable of generating surprise and curiosity. A feature that is obvious and intuitive and as remarkable as the banknote's value.

This feature is MOTION SURFACE™, a new security feature applied in the printing works that provides endless opportunities to engage the public by bringing to life the security and value of a banknote.

MOTION® micro-optics have evolved significantly since its first use in the Swedish 1000 SEK banknote over ten years ago. Like the US\$100 FRN, the new Swedish series utilizes MOTION Switch, a more complex version of MOTION which was also chosen by the Bank of England and most recently the Saudi Arabian Monetary Authority for protecting all of its new high value banknotes.

Crane's RAPID® micro-optic feature has created a new array of secure, visual effects on the back of MOTION's proven security, sparking great interest by central banks. MOTION, MOTION Switch and RAPID are all integrated into the banknote design as a windowed feature. Today, the ability to apply MOTION as a large feature to the surface of the banknote is now possible with MOTION SURFACE.

Crane Currency's micro-optics based security features are now used in over 85 denominations around the world.



## THE PUBLIC – FIRST LINE OF DEFENSE

Counterfeiters rely heavily on a public that is not interested in looking at their banknotes. They use distractions such as poor lighting and loud sounds and target busy and inattentive sales people. They understand that the public is sparing in the attention it pays to checking its banknotes. This is our industry challenge – to create banknotes that can be authenticated quickly and definitively, even by an uninterested public.

MOTION SURFACE discourages counterfeiting in two ways. First, it counters distraction by providing the public with an easily verifiable element that is an integral part of the banknote's identity. MOTION SURFACE images are not two-dimensional – they have depth, a past and a personality that can tell a story in a glance. MOTION SURFACE provides designers with an entirely new and flexible collection of visual effects to build an identity aimed at maximum public recognition. Second, the technological foundation provides no easy starting point for the potential counterfeiter. Unlike holograms, the miniature lenses and ultra-micro printing used to produce MOTION SURFACE have no counterparts in other industries.

## BRINGING IMAGES TO LIFE

MOTION SURFACE is a new micro-optics feature platform built on the technology behind MOTION®. Crane Currency's micro-optics technology is widely recognized as the state-of-the-art counterfeit deterrent technology for banknotes.

The customizable display area of MOTION SURFACE security features brings images to life, allowing security designers to imaginatively present the banknote's story of value, permanence and trust. With more pixels per area than is used by even the most advanced smartphone, MOTION SURFACE masks the feature's complexity behind stunning three-dimensional effects that can provide quick assurance to everyone that the banknote is authentic and valuable.

The number of MOTION SURFACE effects is substantial and can be combined into an overall message which itself can be seamlessly integrated into the banknote. This new medium of expression allows central banks to communicate important cultural and national stories in a manner once impossible, while resting on the uncompromising security of MOTION micro-optics.



## ENGAGING VISUAL EFFECTS

Only a few of the effects that MOTION SURFACE is capable to display have been made known to the industry in the form of the MOTION® and RAPID® products. MOTION SURFACE is thinner than its predecessors and has made it possible to apply it to the surface of the banknote paper during printing. This has paved the way for larger and highly detailed visual effects to be created and combined, rendering striking and beautiful banknotes.

Larger display areas give designers unique options and abilities to integrate the micro-optic security features with the print design – thereby enhancing public engagement and interest.

Highly detailed visual effects stem from the incredibly high resolution of the MOTION SURFACE technology. Designers can capture in exquisite detail true life characteristics of form, shading and texture.

Three-dimensional effects are also possible, giving an impression of floating images that have the power to surprise and delight, and give life to symbols and objects that can appear to come right out of the banknote! These effects on MOTION SURFACE includes Flicker (with a highly-controlled switch between on and off), Shimmer (a controlled shine), Sliding Bands (with high contrast movement along pathways to highlight underlying symbols), Deep (in which objects appear to sit below the surface of the banknote) and Topo (topographic – in which objects appear to rest on the surface of the note).

## STATE-OF-THE-ART ENGINEERING AND DESIGN

MOTION SURFACE is a big leap in security technology for the banknote industry. Engaging three dimensional effects open up completely new ways to relay cultural stories and build public trust. The technology and security is here. The rest is up to the imagination of designers, artists and other creators.

Our commitment to MOTION micro-optics is demonstrated by MOTION SURFACE, a technological leap that is built on over ten years of proven effectiveness in stopping counterfeiting. «







▼  
MOTION SURFACE FACTS

- Display technology that projects one or more visual security effects
- Super high resolution renders high definition, precise images
- Applied in the printing works via proven Opti-Nota H application equipment\*
- Unparalleled ability to integrate and create
- No shiny metalized appearance
- Fluid and dynamic movement effects
- Miniaturized form of MOTION micro-optic technology
- Supports forensic features traceable only by law enforcement or the central bank issuer

\* Opti-Nota H is a product of KBA-NotaSys SA

CRANE CURRENCY

Mr. Craig Conrad  
E-Mail: [craig.conrad@cranecurrency.com](mailto:craig.conrad@cranecurrency.com)  
Website: [cranecurrency.com](http://cranecurrency.com)

