

CURRENCY NEWS™

THE BANKNOTE CONFERENCE 2018 – THURSDAY

SPECIAL ISSUE

De La Rue and PNO Global Announce Partnership



Sealing the deal, from left to right, are Doug Brooks (De La Rue), Selva Selvaratnam (CTO of De La Rue), Bart Goeman Borgesius (PNO Global) and Dr Thomas Quirke (De La Rue).

De La Rue announced yesterday that it has entered into a joint development agreement with PNO Global, the producer of the *Snowfish*®SP fitness deck generator. The partnership will incorporate joint product development and related sales execution on a global basis.

Commenting on the new partnership, Nikki Strickland, De La Rue's Product Marketing Manager said: 'the data-driven philosophy of PNO Global perfectly aligns with that of De La Rue, and the Snowfish SP brings a new dimension to our *DLR Analytics*™ offering.'

'The fitness decks and reports generated by the Snowfish SP will provide ways to support central banks in their clean note policies and open up the possibilities to drive global standardisation of fitness decks in the same way that DLR Analytics has driven standardisation of cash cycle analysis.'

Following on from this announcement, De La Rue is inviting central banks to participate in the Global Fitness Standards project, whereby they can anonymously benchmark their fitness standards against regional and global references.

'As well as increasing our collective knowledge of fitness standards and clean note policy approaches, this will provide central banks with a wealth of information on how banknotes and features wear during their lifetimes' the company said.

PNO Global, founded in 2014, specialises in innovative tools and services for the currency industry. The Snowfish SP, invented by Tom Buitelaar (formerly of the Dutch National Bank and the European Central Bank), combines unique banknote inspection, image capture and algorithms, which can be applied to help central banks optimise their sorting machines, sorting algorithms and banknote properties, thus leading to an improved circulation quality and lower costs for replacement of prematurely destroyed notes.

More information about the Snowfish product range, and the role that fitness decks can play, is available from Bart Goeman Borgesius (goemanborgesius@pnoglobal.com) and Jan-Dirk Enschedé (enschede@pnoglobal.com).

For those interested in the global Fitness Standards project or to see how the Snowfish SP can bring an additional experience to DLR Analytics usage, contact Nikki Strickland (Nikki.Strickland@delarue.com).

Standardisation Drives Efficiency

'Central banks are responsible for ensuring that the processing of banknotes is done in the most efficient and effective way, guaranteeing clean and authentic notes and the integrity of banknotes in circulation.'

So said Christian Jüttner, Head of Business Line Management in the Currency Management Solutions division at G+D Currency Technology, in yesterday's panel on sensor development and evolution.

He is convinced that standardisation is driving efficiency for central banks and the industry alike, improving mechanical components, electronics, software and the eco-system that complements solutions. This is also true for the open interface for sensors on G+D Currency Technology's system: '25 years ago, we started integration of our level 3 sensors for third party systems. Five years later we provided a standard interface for third party sensors on our systems. And for five years now, we have been offering a CDI interface on our modular systems. We will continue this line with the adoption of CDI2 in the future,' he said.

In addition, Jüttner pointed out that the trend towards the delegation of cash processing by central banks to the commercial space will continue in many countries. Cash processing increasingly happens at CITs, commercial cash centers and even in retail.

There are, however, still huge numbers of smaller processing systems, where 'CDI2 will not be applicable'. In his opinion, data management and data analytics 'will be key to enable central banks to stay in control and thus ensure the integrity of the entire cash cycle.'

Baldwin – a New Powerhouse in Print Quality

A sponsor for the first time at the Banknote Conference is Baldwin Technology Company – a world leader in process automation solutions for the printing industry – which has recently has acquired PC Industries and QuadTech.



PC Industries (PCI) and QuadTech are global leaders in the design and manufacture of inspection systems that helps security printers improve their performance and productivity. Headquartered in Gurnee, Illinois and Sussex, Wisconsin, they maintain a worldwide network of sales and service operations in nine countries and sell automated systems in more than 100 countries. With their acquisition, Baldwin now offers technical and strategic locations across the Americas, Europe, China, Japan and India.

Baldwin will unite QuadTech, Web Printing Controls, PCI (which previously combined with Verification Systems Ltd, also known as Vision Assurance Systems). These divisions, it says, will create a global platform that will operate as Baldwin Vision Systems. The resulting combination of businesses and technology will represent the industry's most comprehensive portfolio available for print process automation, inspection and related services.

Karl Fritchen, current QuadTech President, will lead the new Baldwin segment. Product technologies will span 100% print quality inspection for security printing, closed-loop automation for registration, inking, colour management, web handling, commercial, newspaper, labels, packaging, converting and publication gravure industries.

'The combination of products and expertise held within both companies will enable us to reach areas of the market we were unable to reach individually,' he commented. 'From an international operations and market perspective, each party's strengths are highly complementary. This is definitely a situation where we can accomplish much more together than we could have as independent companies.'

Arjo Reinforces Value of Composite Substrate and Embedded Security

Arjo Wiggins Security, one of the leading producers of banknote paper, has always promoted the value of embedded security. Given the challenges presented by the durability of polymer and the demand by central banks for cost savings, the company has set about upgrading its offerings to meet the challenge.

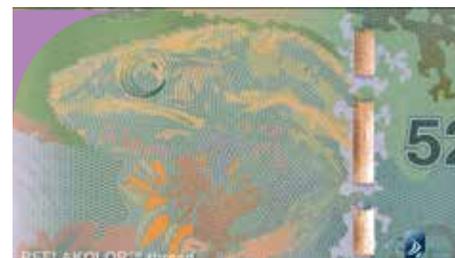


The introduction of synthetic fibres into the traditional cotton substrate led to a range of papers under the *Diamone*™ brand. Now Arjo is offering *Composite* paper, also with synthetic fibres and enhanced mechanical properties. But it does not have a surface coating, leaving users free to decide whether or not to use a post print varnish.

Arjo has also enhanced the best known level 1 security feature in banknote paper, the embedded watermark. As well as traditional watermarks, Arjo has developed brighter more secure versions – its *Pixel* and *Vision* watermarks.

These provide higher definition and clarity; they can even be used to greater effect in combination. Some 30 billion banknotes in 10 countries have so far benefitted from this development.

Launched at the Banknote Conference, meanwhile, is *Reflakolor*™, a new pigmented colour changing thread which is robust in harsh environments.



What is also novel about this thread is that it allows authentication from either side of the banknote. From the front, like other colour-shift threads, on tilting it provides a distinctive colour change. The thread can include text and a range of colour shift pairs is available.

On the back of the note the thread displays a customised black text, which in transmitted light becomes transparent and shows as white text, much in the manner of the well-known *Cleartext* threads. Fluorescence and magnetism can also be included.

Data Analytics' Time has Come

In 2016, 7 Layer Solutions attended the Banknote Conference for the first time. It spoke to many people and did one demonstration of its software. Two years later, the company has attended again. And, it says, it is evident that the time for data analytics has come. By the afternoon of yesterday, it had spoken to 31 companies and presented its software to 15 central banks.



For the last two years, 7 Layer has worked with a Eurozone national central bank, using their data to answer key questions. Incorporating the learnings of this work, it has launched its 2.0 version of *NoteChain*®, as reported in the May issue of *Currency News*™.

An interesting development has been its Desk Pilot programme, with 7 Layer inviting central banks to give it data sets to run, free of charge, through its *NoteChain* product. This allows central banks to 'taste' the power of the software simply, easily and at no cost.

According to the company, 'with 25 years of product development under our belt, 7 Layer can confidently state that *NoteChain* offers comprehensive solutions to managing the currency cycle'.

Botswana P10 – a First for New Gemini Design Variant

A new 10 pula note launched this year by the Bank of Botswana, designed in collaboration with De La Rue and printed on its *Safeguard*[®] polymer substrate, is the first circulating note to feature *Gemini*[™]-*Microtext*.



The Bank of Botswana announced the decision to introduce the new 10 pula on polymer to help increase durability of the banknote in circulation. Its design remains in keeping with the current series, but the introduction of polymer has enabled advanced security features to be incorporated. These include *MASK*[™], a complex design variant of *Gemini*[™] and *Tactile Emboss* – a feature designed to aid the visually impaired identify the denomination.

Gemini is a widely used Level 2 security print features, having been used by over 45 issuing authorities on over 150 denominations.

The combination of two colour matched inks that fluoresce under UV illumination as different colours, printed in tight tolerances, provides enhanced counterfeit protect over standard UV fluorescent features.

Building on the synergy of its design and manufacturing capabilities, De La Rue developed three new *Gemini* design variants that were launched at the Currency Conference last year in Kuala Lumpur.

The P10 uses *Gemini*-*Microtext*; through careful design integration, this complex print feature is hidden under normal light but revealed under UV illumination. The Bank's name lights up blue and yellow under UV in microtext, seamlessly integrated into the banknote design.

Examples of the feature and the Botswana P10 can be seen on De La Rue's stand or in its meeting room.

Packing a Punch in Africa

Hunkeler Systeme, which is attending the Banknote Conference this year, has announced that it has secured an order for 25 compact banknote destruction systems for a central bank in Africa, which will be installed in several of its branches this summer.

There are a number of reasons why banknotes are destroyed, some on a daily basis and others intermittently, because they are unfit, or when a new series is introduced and co-circulation is not chosen. Needless to say, waste is generated during the process, which then requires disposal.

Whatever the reason, says Hunkeler, banknotes determined as waste need to be securely, safely and professionally disposed of and there are many different methods used for this. The most common involves the incineration of the notes or production waste. Although that method remains today in some countries, the modern approach is the prior use of sophisticated systems involving machinery that shreds or granulates the notes or production waste prior to incineration, landfill or recycling.

Banknote waste systems must be able to guarantee product quality, production safety and continuous transparency during the entire process; every step has to be monitored and managed. No one size fits all – secure disposal systems require custom designed solutions invariably involving engineering and software development – but their common requirement is that they are totally secure.

The solutions can consist of inline or offline components or the combination of both. For decentralised systems, secure solutions such as banknote punching devices can be provided and it is in this sphere that Hunkeler, which is based in Wikon in Switzerland, has recently been successful – as evidenced by its latest contract in Africa.

Hunkeler's systems can deal with all types of substrates, including cotton, polymer and hybrids. The company expects to expand its current central bank and commercial customer base as recycling gains in importance with security.



ZincSecure Pushing the Boundary

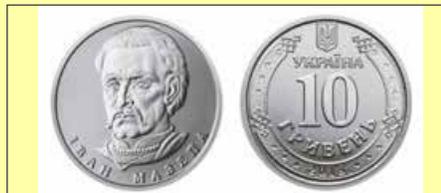
As reported in the Tuesday special daily, Jarden Zinc Products (JZP), a US coin blank manufacturer, is using its latest technology, *ZincSecure*[™], to expand the coin-banknote boundary. *ZincSecure* is a non-magnetic high security coinage product that differentiates itself from banknotes and other coinage products due to its seigniorage value and performance.

ZincSecure is a zinc-based coin that comes in different alloy compositions, each with a different electromagnetic signature (EMS), and provides high-relief images due to the softer nature of zinc in comparison to other coin materials. The intricate designs on the limited-edition circulation *ZincSecure* coins made by the National Bank of Ukraine (NBU) is evidence to this fact.

NBU improved their relief on coins by 2.5 times compared to other coinage materials. According to the presentation by NBU on Tuesday, the tonnage to *ZincSecure* coin was at least 35% less than that required by high-cost solid alloy coins, increasing the die-life by 2,400%.

ZincSecure coins provide not only high security but longer life – typically 20+ years compared to 1-1.5 years for a banknote. This translates to 15-banknote cycles for one cycle of *ZincSecure*, creating tremendous savings for central banks and mints without compromising security.

Additionally, JZP has the capability to produce two-piece or bi-metal coins in various combinations of its *ZincSecure* and other alloys. This amplifies the security feature for the coins and propels it into the space for other denomination banknotes.



UAH 5 and 10 *ZincSecure*[™] circulation coins.

Banknote 2018 Sponsors

Primary		
Supporting		
Other Sponsor		

Editor: Astrid Mitchell

Annual subscription rate:
£1,045 plus postage

Ask about multiple/corporate subscriptions.

Currency Publications Ltd, 10 Windmill Business Village, Brooklands Close, Sunbury, TW16 7DY, UK

Tel: +44 (0)1932 267 232;
Fax: +44 (0)1932 780 790

www.currency-news.com

No part of this publication may be reproduced, stored in a retrieval system or translated in any form or by any means – electronic, mechanical, photocopying, recording or otherwise – without the prior permission of the publishers. While every effort has been made to check the information given in this publication, the publishers cannot accept any responsibility for any loss or damage arising out of, or caused by the use of, such information. Opinions expressed in Currency News are those of the individual authors and not necessarily those of the publisher.

COPYRIGHT 2018. ALL RIGHTS RESERVED

New Window Features from Fabriano

Italian substrate and security feature manufacturer Fabriano, part of Fedrigoni which was acquired by Bain Capital earlier this year, has been showcasing a variety of features for registered application on banknotes with windows.

First is *VISTA™*, a double holographic image, monolayered and overlapped, which provides striking images on the front and back of the note in reflected light. Highly detailed demetallisation crossing patterns provide strong forgery resistance and hence the security level of the holographic image in transmitted light. This feature is the same as appears in the new Europa euro series.

Second is *ColourShift Window* – first showcased at the Currency Conference last year – which provides a striking and immediate colour shifting effect simply by moving the banknote (and hence window) from a clear to a dark background. The feature is created by manipulating the molecular structure of ink pigments.

The feature is applied to the banknote as part of a foil stripe, with the colour shift patch laid over the window in register. The rest of the foil can provide other security elements, such as diffractive effects. It can also be printed with fluorescent inks detectable under UV light.

And third is *Reflex Window*, which is similar to *ColourShift Window* in providing a colour shifting effect, but this time when viewed in reflected and transmitted light. A wide range of customisation opportunities are available through a combination of different colour effects and window designs. The examples available on Fabriano's booth show a gold-to-blue and a green-to-magenta colour shift.

Reflex Window is also applied as a part of a foil stripe, with additional holographic effects, *Multilevel™* demetallisation and machine-readable features, including UV. But it, like *VISTA* and *ColourShift Window*, is first and foremost a Level 1 feature for public recognition.

Directory of Currency Suppliers

The sixth edition of the *Directory of Currency Suppliers* has been made available to all delegates at the Banknote Conference. First published in 2004, the *Directory* has proved enduringly popular, even in this digital, so-called paperless age.

The latest edition has been expanded and now includes 600 companies. They are divided into six categories on currency components and features, producers (mints and printers), production equipment and systems, cash processing and handling, cash circulation and management, and support services.

The first copy is free not only to Banknote delegates, but to all central banks and *Currency News™* subscribers. But if you need additional copies, these are available to purchase – £75 for central banks and *Currency News* subscribers, and £200 for non-subscribers.

Please contact the *Currency News* team to place your order, or to discuss the latest developments and products. These include *Currencies of the World* – an online database of all the world's banknotes and coins, as well as *Mint News Quarterly™*, *Payment News Quarterly™*, periodic special reports, and regular updates delivered to your inbox in the form of *Currency News Weekly*.

Coming soon, meanwhile, will be a new special report – *Diffractive Features on Banknotes* – as well as details of a new newsletter in the sphere of the cash supply chain and payments.

Currency News is the only publication that covers the entire cash cycle – from notes and coins to the management of cash in circulation – with a specific mission to support and cement the position of cash as a vital payments method. Please feel free to contact us during the conference, or at info@currency-news.com, to find out more, share your news and views with us and become part of the currency community that is it our objective to foster.



The *Currency News* team in Dallas, from left to right, are Sam Burns, David Tidmarsh and Astrid Mitchell