



## Editor's Foreword

### Caveat Emptor

*It has been known for some time now that fake chips were threatening the world's electronics industry. The US Department of Defense's procurement system for avionics and communications systems has suffered a number of embarrassing incidents of late where fake chips have compromised servcability.*

Several recent prosecutions also illustrate just how serious this matter has now become. It is not just the military that's at risk either. Chips perform key roles in countless commercial products too, as well as phone systems, banking networks, electricity grids and nuclear power plants.

Modern life depends on the computer chip as much as it does on oil. Every day every one of us relies upon silicon chips to control almost every aspect of our existence from keeping us warm, to managing our finances and organising our travel. Imagine the effect that failures brought about by fake chips could have on our businesses too.

This fact hit home at the same time as I received a number of SPAM e,mails from Chinese manufacturers of Smart Cards and RFID enabled products such as wrist bands and access cards. The e,mails concerned were heavily promoted by the use of illustrations and references to well known brands that are renowned for such products. Infineon, Atmel and NXP's logo's were used to indicate the 'reliability' of such products as was the functionality which quoted MiFare, I.Code and a number of other references used to describe the attributes of each product on offer.

If I had purchased some of these products could I have realistically have expected them to perform in exactly the way the OEM intended? Indeed were the inlays acquired from the original equipment manufacturer or some 'other' source?

I put the question to a good friend at a leading supplier of RFID security inlays that are used in travel and financial cards. "You are correct to be suspicious" he told me. "The Chinese market for such products is a bit of a 'fog' at present. Some cards will use chips which are clones, some will be legitimate you have no way of knowing. So even if you get a legitimate sample when you first enquire there's no real guarantee that any bulk order will function as anticipated".

Just the thought of a rogue batch of cards hitting a mass transit system or a financial card network makes the mind boggle.

Never before has the phrase 'buyer beware' been more appropriate.

## Rolling Optics' unique optic 3D labels feature on professional hair care products

### *Grazette of Sweden adopts the 'rolling image'*

The Swedish hair care company Grazette of Sweden are re launching XL, a series of professional hair care products, which will be the first in the world within the cosmetics sector to display Rolling Optics' optic 3D labels on the package. The label does not only make the merchandise stand out on the shelf but it helps create a unique brand identity.

"I have worked over 25 years with package design for cosmetics, and I know how important it is to capture the consumer's interest in the store. This is why we spend more time and money on the actual look and feel of the package than on traditional advertisements. I am always on the hunt for new products and possibilities, and when I saw Rolling Optics' 3D material, I was fascinated", says Patrick Koch, Art Director at Grazette of Sweden.

Grazette of Sweden's and Rolling Optics' design teams worked together with the innovative labels manufacturer, Rotakett to produce a 3D label with the circles that signify the XL series. They worked to get the materials thin enough to suit a label on a rounded surface.

"It has been an exciting process where we, together with Grazette of Sweden, have created a unique brand identity to help their product catch the eye of the consumer. For us, it's been a learning process – we have now delivered our first commercial cosmetic label, 700,000 products on the shelf is a proof on our ability to deliver also at higher volumes", says Fredrik Blomquist, CEO at Rolling Optics.

Grazette of Sweden's products have been awarded for both design and quality. As an example, their product Crush 22 Waxflow was awarded Swedish product of the year at the Swedish Beauty & Cosmetics Awards 2010 with the motivation 'A Swedish company that not only beautifies hair with attitude and fresh ideas, but whose design and quality match the industry's international business'. Grazette of Sweden's products are only available for purchase at hairdressing salons.

[www.rollingoptics.com](http://www.rollingoptics.com)

*Rolling Optics featured in the September '09 issue of Product & Image Security Newsletter.*

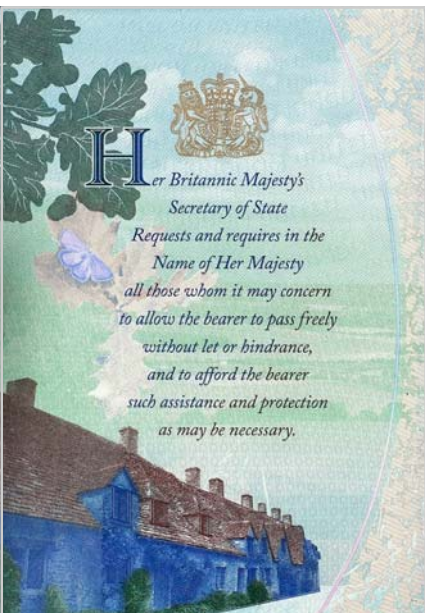


<< from page 1. protecting the bearer detail page include an upgraded laminate, latent intaglio created images, multi colour fibres randomly embedded in the paper and pin-hole numbering to detect page substitution.

The use of these images, strengthened by security printing techniques such as close register working, anti-scan inks and page-to-page registration on each folded section are just some of a number of enhanced security features contained in the passport. Such intricate security devices should make it easier for border agencies to quickly identify counterfeit and forged documents.

New security measures include:

- moving the chip which stores the holder's details to the inside of the passport cover where it will no longer be visible. This gives additional physical protection as well as making it much harder to replace the chip without damage to the passport cover being spotted;
- a secondary image of the holder printed onto the observations page;



The intaglio printed end-paper in the new UK passport carries optically variable inks, a latent image and tactile intaglio print as well as intricate line work designed to defeat scanners



Close register between visa page sections and the use of multicoloured security fibres in the paper along with weather symbols and complex background security offer complex protection

- new designs now stretching across two pages; and
- a new transparent bearer page laminate which includes several holograms to protect the holder's personal details.

Sarah Rapson, the chief executive of the Identity and Passport Service said in a press release. "The new passport features a host of scenes from across the UK. Through its combination of physical and electronic security features, the UK passport remains one of the most secure and trusted documents in the world, meeting rigorous international standards. The new design is part of our strategy to stay ahead of criminals who look to fraudulently alter or copy passports."

The new passport will replace the current UK ePassport, which was upgraded in 2006 with the addition of an electronic chip to hold the owner's details, and to comply with the US Visa Waiver Programme.

The personal details page of the passport will be moved to the second page in the passport booklet, in common with other passports in Europe and around the world, to help speed up travellers' passage through border controls.

This year's redesign represents the 15th different version of the passport since the modern passport was introduced in 1915. The electronic e-passport was launched in 2006 and featured a microchip and facial biometrics and there are now 25m in use.

It had been planned to move to the next generation of biometric passport which would have included electronic fingerprints, but those plans have been shelved by the new Government.



The movement of the chip to within the cover and the addition of an additional bearer photograph should prevent substitution attacks. Note the pinhole numbering

## Many Happy Returns

*New system halts retail return fraud*

For those that are concerned about fraud and theft in the retail sector, the introduction of a novel technology called TCAT (To Catch A Thief) introduced by Barcode Security Systems will strike a note of interest.

Shoplifting or stock loss to give it its official title, along with returns fraud continues to plague retail outlets on both sides of the Atlantic. During the last few years retailers have reported increases in theft from both customers and employees alike as the recession continues to bite.

In the USA, the National Retail Federation recently reported that retailers across the country spend about \$11 billion annually on loss prevention measures. According to a survey, conducted by the Federation most retailers (88.9%) have had stolen merchandise returned to stores within the past year.

Being able to track merchandise throughout the supply chain and identify where and when products are sold legitimately is seen as an important management function in reducing stock loss and returns fraud in particular.

Barcode Security Systems (BSS), a US technological solution provider, has developed a line of defense by providing a system and method for verifying the purchase of a retail item via post-purchase machine-readable markers placed on the label when that item is presented for return.

At the point of purchase, an encoding device writes or otherwise provides a machine-readable mark onto the product label and locks the data into an RFID tag that can also include a Universal Product Code (UPC). The process creates a secure and unalterable code that can be used to identify each item legitimately purchased.

When a customer returns the item for refund or exchange, a detecting device/reader analyses the label for the presence of the mark. Presence of the indicia can verify that the item was validly purchased, whether or not the item is eligible for a refund or exchange, where the item was purchased, the date and time of purchase and the method of payment, – all without the requirement of a customer provided receipt.

The process of source tagging products is now common at the point of manufacture. Adding electronic article surveillance (EAS) tags to at risk products saves retailers the time and trouble of adding such tags themselves.

The BSS process promotes the additional use of memory to the tag which still carries its EAS functionality. By adding a small memory, capable of storing a number of transactions in the form of codes each tag can be identified and traced through the system.

An encoding device writes or otherwise provides a machine-readable indicia (Marker) on the label and locks the data into the RFID tag, including a Unique Identification (UID) and the Product Manufacturer Identifier (PMID) number, to create a secure and unalterable code.

When the coded item flows through the supply chain it can be read at each point to ensure it is the same product that was shipped out from the manufacturer. Final coding at point of sale identifies data such as date, location and time in order to effectively 'stamp' each product in order to secure the transaction. At this point the code could be locked to ensure that it is not altered.

Customers returning goods that are legitimately purchased can be identified and separated from those making fraudulent returns. The system could also be used to certify guarantee claims when retail receipts are lost as long as

the original packing is still present. The BSS process can also be used in counterfeit sensitive applications such as protecting Pharmaceutical, Automotive and Electronics product supply chains to ensure that drugs, parts and other at risk items are not fakes.

### **Call for Partners**

David Cox, the CEO of BSS is looking for partnership in order to take the idea to market. "The Company was granted US Patent No. 7,108,183, B1 in September 2006 and since then is looking to build software and systems in order to support the idea" Cox informed *Product & Image Security*.

"We will be looking for channel partners to develop and adopt the process as strategic partners such as RFID tag suppliers, retail partners which include businesses like WalMart and Global Brand Owners whose products are at risk from counterfeiting". Cox continued.

The wider adoption of RFID at item level and more sophisticated supply chain management systems are expected to contribute to the success of the idea.

This tagging process will work with any RFID tag and be the perfect fit for the new and popular Hybrid tag that includes EAS/RFID for retailers. That way the retailers will have covered all areas of theft and product return fraud. This will make the store complete and fully protected.

No retailer these days wants to lose business to competitors and many offer a 'no quibble' refund system to customers in order to secure their custom. Customers who try to take advantage of this goodwill by returning stolen goods in the future may well find themselves tagged as well as the goods they purchased!

*Contact information:*

[david@tcat4safereturns.com](mailto:david@tcat4safereturns.com)

## Cutting edge of card security

*Gemalto Launches Enhanced Visual Security Features for Official Documents*

Gemalto has recently announced the launch of a series of new laser-personalised innovations designed to further increase the security of official identity documents. These advanced security features are available immediately as additional options in the Gemalto Sealys line of secure identity products.

The new security features can be applied on the polycarbonate card bodies of documents such as ID cards, healthcare cards, driver's license, vehicle registration, voting and resident permit cards. The technology is highly sophisticated and designed to counter forgery while remaining easy for officials to verify their authenticity, hence providing more convenience to legitimate holders.

Unique in the market, Sealys Edge Sealer is a laser engraving process applied during the personalisation stage. Documents

are laser-etched with markings along the edge which relate to the holder's personal information, such as their name or ID number. Sealys enhanced Changeable Laser Image (CLI) enables a third field of visible information to be immersed within the secure document. Depending on the angle with which the document is read, the information changes.

Sealys Coremark is a semi-transparent window within the polycarbonate card body. Using complex laser engraving techniques, it enables deeper markings into the core of the card and provides a watermark effect. This makes checking the super secure plastic document as natural as verifying a banknote.

"The development and integration of these new advanced features are part of our ongoing commitment to constant improvements of the security of our products," Frédéric Trojani, Senior Vice President of Government Programs, Gemalto, told Product & Image Security Newsletter.

[www.gemalto.com](http://www.gemalto.com)

*Gemalto has launched a new suite of security devices designed to enhance card security.*

*The edge sealer product seen (bottom right) engraves the card holders details on the edge of each card.*

*Changeable laser images seen (top) offer a shifting check whilst an embedded ultra violet core mark embedded in the base material provides a covert check on alteration fraud*



Sealys enhanced Changeable Laser Image



Sealys CoreMark



Sealys Edge Sealer

## VIN Scanner Identifies U.S. Stolen Vehicle on First Day of Use in Mexico

*System identifies counterfeit VIN's*

Bender Enterprises Inc., a leading auto theft detection and prevention company, recently released a new handheld barcode VIN scanner (VINtrack-Live) to assist law enforcement in identifying stolen vehicles and wholesale car buyers in capturing the true identity and value of a vehicle.

Mexican Federal authorities were testing this new technology at a check point just across the California border when the VINtrack software identified a stolen vehicle that would have otherwise slipped through the cracks.

Nearly one million vehicles are stolen every year in the United States and it has become increasingly difficult to recover them. Over 400,000 stolen vehicles are not recovered every year in the United States and most of them end up back in commerce with their identity changed.

The sophistication of organised car theft rings has increased dramatically over the last decade making it very difficult for even a seasoned auto theft detective to distinguish a VIN-switched stolen vehicle or clone from a good vehicle.

Auto thieves have used fraudulent Vehicle Identification Numbers (VIN) to pass off stolen cars to an unsuspecting marketplace using techniques that law enforcement call "VIN-switching," and "Cloning." VINtrack operates in conjunction with barcode scanners so that investigators can tell if a car has been stolen or if the VIN number has been modified. VINtrack is the only software in the world specifically designed to detect counterfeit vehicle identification numbers.

[www.VINtrack.com](http://www.VINtrack.com)

## Magnadata Group Ltd Secures £24m UK Rail Ticket Contract

Magnadata Group Ltd, whose Headquarters are based in Boston, Lincolnshire, UK is one of the world's largest suppliers of passenger transport ticketing, whose customers include New York Metro, Dublin Bus, Valencia Metro, Sydney Rail and London Underground.

Stephen Green Head of Operations at RSP issued a statement on August 18<sup>th</sup>. "Following a competitive process run strictly under European Union procurement rules, the ticketing contract has now been awarded to Magnadata. They are an experienced magnetic ticket supplier and we are confident our partnership will provide rail passengers with the best value for money".

The contract with ATOC (Association of Train Operating Companies) is for the supply of approximately 750 million magnetic striped tickets per annum which will be distributed to over 2,500 rail stations throughout the UK.

All products will be manufactured in Boston, Lincolnshire, where 220 people are employed at one of the largest ticketing and labelling printing companies in the UK.

Each ticket has a magnetic stripe applied to the surface which carries data that enables passengers to use automated barriers at stations.

Roy Colclough, Magnadata Group CEO said "We are delighted that we have been awarded this major UK contract. This complements our future investment programme in terms of magnetic and RFID product development. We look forward to working closely with ATOC and the train operating companies in order to ensure that passengers continue to receive the best possible service both now and in the future.

Magnadata Group, incorporates Magnadata International Ltd, Magnadata Inc, Magnadata PTY and Norprint Ltd. Collectively they form one of the largest magnetic/smart (RFID) ticket and labelling solutions providers in Europe.

[www.magnadata.co.uk](http://www.magnadata.co.uk)

## BemroseBooth moves into administration

One of the oldest security and general printers in the UK has moved into administration. BemroseBooth, with manufacturing sites in Derby, Teeside and Hull had previously held the contract for the UK rail tickets that has been a prime target for many manufacturers because of the considerable value and prestige associated with the order.

Manufacturing in Derby largely ceased in March 2010 when the old Wayzgoose Drive HQ was vacated and the building sold to a local property developer. BemroseBooth then moved into 2 buildings elsewhere in the city and some finishing of products mainly for the retail and secure mailing sectors continued until June 2010 when the remaining workforce of around 160 people was told that there were insufficient funds to pay their June salaries.

This was meant to be a precursor by the existing management team to pre-pack the business and establish a new company to carry on trading without the burden of the significant debt hanging over the business.

This plan was scuppered by leaks to the media, and eventually the administrators accepted a bid from Paragon Group to acquire the remaining business operations in Hull and Thornaby on Teesside.

BemroseBooth, which been built on acquisition and organic growth since the early 1800s, acquired Kenrick & Jefferson (*K&J-The Editor's previous employer*) in

1997. Sadly, as happens these days, the Company became a victim of rising costs that could not be passed on to its clients.

The old Henry Booth part of the business was acquired by Paragon in an unsuccessful attempt to acquire the rail contact.

The thread that links these stories is that K&J themselves held the British Rail and London Underground ticket contracts for a number of years supplying at the time a magnetic transfer tape in the interests of providing accurate reading. The tape was later substituted by a magnetic ink stripe in a move to save cost.

With alternative methods of ticketing at their disposal, such as those delivered through mobile phones, the contact for conventional tickets will come under continued pressure from new technology.

## New RFID Printer-Encoder for Advanced Item-Level Tagging

*Close pitch encoding allows for more cost sensitive inlays*

Zebra Technologies has announced a new RFID printer-encoder designed to address the RFID market for high-volume item-level tagging, asset tracking, inventory management and more across retail, manufacturing, health-care and distribution channels.

The RXi4 is a UHF EPC Gen 2 printer-encoder that features new adaptive encoding technology that enables the printer to auto-configure to the inlay and enables the variable inlay placement feature.

Typically, RFID printer-encoders have a very stringent specification as to where to place the inlay in the label, to ensure the encoding of only one tag at a time. This placement specification is also very specific to inlays. Once media

*Continued page 7 >>*

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are converted for particular inlays and printers, Zebra says, it is very difficult to use them on other printers.

Zebra's printer-encoders, the company explains, always had the ability to do this through a complex printer configuration command.

Thanks to the variable inlay placement feature, however, the RXi4 detects the location of the inlay as it is fed through the printer and then adjusts the power and encoding position without any user intervention.

This ability enables the RXi4 to accept media that have been converted for another make and model of printer. The RXi4 also features Zebra's on-pitch capability, first introduced with the RZ400 printer-encoder, which enables the printing and encoding of small tags very close together with a distance as narrow as 16 millimeter (0.6 inch).

By spacing inlays closer together, label converters use less material, resulting in a lower cost per label, fewer media roll changes and faster printer-encoder throughput, according to Zebra.

Printing and encoding inlays with a 16-millimeter pitch is very difficult within a printer, which is a very unfriendly RF environment and cannot be done by many printer-encoders available on the market today.

For most other printer-encoders on the market, users needed to specify the spacing from inlay to inlay to ensure proper encoding within the printer. This spacing, depending on printer model, could be as great as 50 millimeters, resulting in fewer inlays per roll with increased liner waste.

The cost of converting these labels could be up to 10 percent greater than being able to convert them with inlays on their native pitch.

[www.zebra.com](http://www.zebra.com)

## **SICPA has Acquired Meyercord Revenue Inc. from Illinois Tool Works**

*Revenue Losses on Tobacco  
Estimated at \$5 Billion  
Nationwide*

SICPA Security Inks and Systems USA, Inc., a leading provider of integrated government security solutions on high excise tax products, announced on September 8<sup>th</sup> that it has acquired Meyercord Revenue Inc., previously a wholly-owned subsidiary of Illinois Tool Works Inc.

The transaction will combine SICPA's international government tax platform expertise with Meyercord's experience in producing and distributing tobacco tax stamps for U.S. states and municipalities. The transaction closed on September 2nd. Financial terms were not disclosed. ITW has retained a related business that manufactures and services tax stamp application equipment.

Charles Finkel, SICPA's Executive Vice President said, "The combination of SICPA and Meyercord technology has already proven itself in California, where our companies work together to produce high-tech, paper-based cigarette tax stamps that help prevent counterfeiting and recover lost revenue on untaxed product. We have recently signed a similar contract in Massachusetts and implementation is currently in progress. Our goal is to make this technology as widely available and easily implemented throughout the United States, as well as to enhance existing state and federal tobacco tax collection systems."

According to 2009 statistics from the Bureau of Alcohol, Tobacco, Firearms and Explosives, the United States loses \$5 billion per year in state taxes due to counterfeit tobacco - a figure which some sources view as conservative. California, which in

2005 implemented a program to enhance its cigarette-tax enforcement practices, including use of high-tech stamp technology, estimates the state has already recovered more than \$150 million in additional tax revenue each year since the program began.

Meyercord currently provides 250 different tax stamps to 47 states, approximately 140 municipalities and Native American tribes. As a part of the acquisition of Meyercord, SICPA plans to retain the current employment level at Meyercord's facility in Carol Stream, Illinois, near Chicago.

"We are committed to Meyercord, its management and employee base," said Jim Bonhivert, President and Chief Executive Officer of SICPA North America. "We plan to profitably grow the current operation and its reach while moving forward with technology that contributes to the public good."

SICPA is the leading global provider of banknote security inks and integrated government security systems on high excise tax products in both state and federal jurisdictions currently securing over 40 billion tax stamps worldwide.

The Company has successfully deployed nation-wide and state-operated product tracking and tracing systems in several countries in South America, North America, Europe and Asia. SICPA is a Swiss company, founded in 1927, with headquarters in Lausanne, Switzerland.

At the core of SICPA's security expertise are high-technology security inks which protect the majority of the world's banknotes, identity documents as well as many other value documents from counterfeiting and fraud.

*More Details:*

[www.meyercord.com](http://www.meyercord.com)

[www.sicpa.com](http://www.sicpa.com)

## Agents of Change

*New security images from API designed to 'foil' counterfeiters*

A new generation security images from API Holographics is expected to make it much easier to distinguish genuine high quality items from their inferior counterfeit imitations in future.

Sold under the marques HOLOGUARD and HOLOSHIELD both are examples of Optically Variable Devices (OVDs) which, when applied to the packaging of a product or directly onto a document, provide instant verification that something is genuine.

Holograms continue to dominate the authentication market because few other competing print technologies work on so many levels of security (overt, covert and forensic), nor combine decorative, eye-catching appeal and kinetic effects.

A key competitive advantage is the creation of increasingly impressive optical effects such as parallax, which appear 3D and change form when viewed from different positions. The creative options are limitless and difficult to simulate which is why demand for this dynamic technology is growing so rapidly.



*HOLOSHIELD from API contains a number of difficult to replicate security features*

In order to continually stay ahead of the game and maintain the image of the hologram as the quality benchmark against which other authentication devices are compared, it is essential to invest in research and development to improve on the existing technologies and to launch new unique features. Development enables new and higher barriers to be built against counterfeiter attacks at both brand and security document level.

As a direct result of continuous research, API is now launching its new generation HOLOGUARD and HOLOSHIELD devices with some unique, complex and very difficult to replicate features.

These features are both overt and covert. Overt features are easily verifiable by potential consumers of a product without the need for additional equipment giving an instant yes or no as to whether a product is genuine or not. Covert features are more for brand owner inspectors or customs officials and generally do require the use of additional equipment. It is a combination of both overt and covert features combined with design that makes a good security hologram.

Whilst overt features are required for consumer verification they can be seen by would-be counterfeiters and attempts can then be made to compromise them. Therefore overt features require highly difficult to replicate effects. Covert features on the other hand are not visible and therefore not highlighted to potential imitators. In this respect covert features need to combine secrecy with stealth. The addition of forensic features in the form of proprietary technology that is only identifiable through definitive testing completes the strategy.

The unique features include:

### **Sculptre™ (Overt)**

A unique feature that gives an appearance of relief and structure but is actually smooth and flat when touched.

### **90 Degree Switch Image (Overt)**

A simple two channel image with a clearly defined 90 degree switch rather than a right to left or top to bottom tilt. (below)



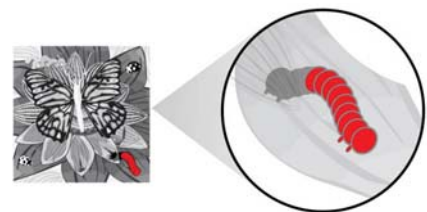
### **Positive/Negative Matt White (Overt)**

Another extremely easy to verify feature. Sections of an image are both matt white and metallic silver and when tilted these areas change from metallic silver to matt white and from matt white to silver metallic. (below)



### **Hi-Colour™ (Overt)**

A colour shifting feature which changes from a plain metallic to a vivid blue when tilted to an acute angle. (below)



### **Duo-Screen™ (Covert)**

A new covert option that requires the use of a thin film plastic decoder for verification which reveals two hidden images.

### **Nanomap (Covert)**

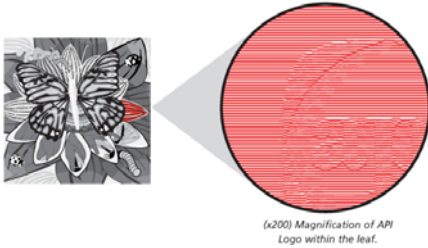
A hidden map of a country or province secluded within a 0.5mm dot. The size of the text incorporated within the map is around 4 micron (~0.004mm). (below)



(x200) Magnification of map detail within the butterfly wings.

## Nano-Hatching & Nano-Watermark (Covert)

Two further covert features that are revealed with the aid of x200 magnification. The Nano-Hatching feature reveals a hidden honeycomb design and the Nano-Watermark a hidden watermark effect. (below)



(x200) Magnification of API Logo within the leaf.

API Holographics Limited is a business unit of API Group plc and is one of the world's leading manufacturers of holographic products including secure holographic devices. The company has over 20 years experience in the hologram manufacturing arena and was one of the first holographic companies to commence production back in 1989.

API operates from a secure manufacturing facility in Salford, Manchester in the UK and is capable of both large and small volume production of up to 30 million square metres per year.

The Company offers a complete range of products and Security Laminates. They also offer a full in house design, origination and recombination service.

[www.apigroup.com](http://www.apigroup.com)



## Oberthur Technologies installs new card personalisation and security system

*Demand for cost-effective and secure personalised cards*

Oberthur Technologies has chosen Cardline Versa from Atlantic Zeiser as a 'production powerhouse' for complete card personalisation, maximum flexibility in configuration and the ultimate advantage of UV ink-based DoD printing.

Jim Swain, Oberthur's Vice President of Process Improvement, Engineering & Quality in North America tells us: "We recognise huge growth in the demand for secure, personalised cards. Major card suppliers such as American Express, MasterCard and VISA have all acknowledged the ultimate cost effectiveness of UV drop on demand (DoD) printing, with its ability for high production speeds and high levels of print quality. Oberthur is now installing the latest innovative technologies from Atlantic Zeiser as they believe this company offers the best inkjet printing technology for card production on the market today." Swain continues, "Our purchasing decision was based on our ROI analysis of the equipment – its LED drying and integrated camera systems with in-line grading of bar codes for immediate prepaid card transactions, its modular nature and its capabilities to print on both sides of the card, monitor bar code quality and print in white ink as well as black."

*Competitive Market Demands Innovation*

Like many segments of the printing industry, the security card manufacturing market is changing rapidly. Card issuers and card manufacturers face cost pressures, short delivery schedules and the need for increased flexibility and personalisation particularly as demand grows for open loop

prepaid cards. Oberthur Technologies has stepped up to this challenge as it continually seeks ways to meet the changing needs of its customers and offer solutions that exceed expectations.

Swain points out that Atlantic Zeiser's Cardline Versa provides very high quality print for runs of personalised and secure prepaid cards. "The equipment is a versatile and highly efficient personalisation solution," states Swain. "For pre-paid applications the system is designed to run at up to 32,000 cards per hour in combination with high capacity card input and output devices and a high capacity X-core labeller reducing operator intervention and changeover time, allowing the highest possible net production."

With such machinery, magnetic encoding can be rotated for top down or bottom-up and the magnetic encoding head can be freely positioned across the card or product. Accurate personalisation is provided using a fixed reference edge along with card alignment units for exact product alignment. Optionally the system can be equipped with additional inline camera verification for an accurate audit trail report.

**Transponder Processing Systems / RFID**  
Radio Frequency Identification

- Inlay conditioning equipment.
- Multi-web lamination.
- Finishing systems for smart products. (Labels, tags, tickets, documents ...)
- High speed read and write units for RFID.

**bielomatik**

bielomatik Leuze GmbH + Co KG  
Daimlerstraße 6-10  
D-72639 Neuffen · Germany  
Phone: +49 (0) 70 25 / 12- 0  
Fax: +49 (0) 70 25 / 12- 1117  
E-Mail: info-rfid@bielomatik.de  
Internet: www.bielomatik.com

## On the right track

### *Verify Brand Receives US Patent*

Verify Brand is a widely known and respected innovation leader in the emerging and fast-growing field of authenticating, tracking and tracing "serialised" end products, their components, assets and security documents using hosted Web-based software applications and related data that is created, accessed and managed in a secure and central repository. The Company has just received a United States patent (No. US 7,752,137 B2) for an "Authentication and Tracking System."

Government entities from revenue authorities to customs agents and manufacturers are expanding their traditional security materials strategy by adopting authentication and "track and trace" solutions based on secure serialisation. This accelerating activity is driven by expanding government regulations, world and national health organisations, standards organisations and the related increased emphasis on consumer safety, crime reduction and prevention, brand value protection, revenue maximisation, supply chain efficiency and other factors. The acknowledged fact is that product counterfeiting and other unauthorised activities are now a global, still growing and painful epidemic with multiple and drastically negative effects on consumers, manufacturers, suppliers and governments.

"We are very pleased with this development and, while a patent was over 6 years in the making, it affirms our long-standing commitment to and leadership in the field of serialisation-based solutions for Digital Authentication, Track and Trace® across government and manufacturer supply chains," said Kevin Erdman, President of Verify Brand. "We are continuing our patent strategy with currently outstanding applications in the U.S. and abroad."

Verify Brand specialises in providing manufacturers and governments with single-source, highly configurable and complete solutions for component, end-product, asset and security document serialisation, secure data management, authentication, track and trace, logistics and brand promotion. The VB Enterprise Web-based software suite is enabling these services for multiple customers in over 18 countries and a dozen languages.

*For more information:*  
<http://www.verifybrand.com/>

## Flint Group develops antimicrobial coatings

*Technology can be applied to labels and packaging in ink*

With the ever increasing focus on preventing infections from harmful bacteria, Flint Group is developing an active antimicrobial coating suitable for application on most substrates and via all major printing methods.

Proven in hospital real time studies and supported by full independent laboratory data, the Biomaster technology from Addmaster works via a release of silver ions on demand which in turn safely inhibit bacteria growth.

The inorganic nature, small particle size and high temperature tolerance of the product makes it ideal for use in the production of antibacterial coatings.

Biomaster products contain typically 10 times more silver than any other silver biocides which are on the market, and consequently they only need to be used at very low concentrations. With a minimal loading level required, the on-cost is not significant but the results are impressive – reducing bacteria levels by 99.99%.

More details:

[www.flintgrp.com](http://www.flintgrp.com)  
[www.addmaster.co.uk](http://www.addmaster.co.uk)

## New Fasson® Label Specification Programme

*Saves converters time and costs*

Avery Dennison has made the specification of its Fasson® Durables labelstocks easier and more cost-effective for label converters. With the new Fasson Specification Programme, converters outsource – to Avery Dennison -- the complex and often expensive compliance and performance testing process. This is of particular relevance in the challenging and labour-intensive electronics and automotive label markets.

Specifying new label materials for the durable goods market entails multi-level compliance process steps – whether to win new business or retain current business. With the Fasson Specification Programme, converters can now fully outsource this specification procedure. Avery Dennison technical consultants, and the company's state-of-the-art testing facilities will define the most appropriate labelstocks for end users' specific technical requirements – at the right price. Converters also benefit by saving the substantial time and costs involved in managing the specification process in-house, or via commercial testing facilities. Avery Dennison offers in-depth support within the context of a defined project plan and a joint confidentiality agreement if appropriate.

### **In-depth customer support**

Materials for testing are provided free for every project. Testing to ensure that specification and material performance also meet compliance requirements, and even certification to UL, CSA, or other safety standards, is also possible.

Full details are available from Avery Dennison Roll Materials Europe sales representatives, or visit the website at:  
[www.europe.fasson.com](http://www.europe.fasson.com)

## Patently evident

### *RFID Consortium Expands to Eight Industry Leaders with the addition of ETRI*

Sisvel US and the RFID Consortium have announced that ETRI has joined the RFID Consortium and will participate in the Consortium's joint licensing program for patents essential to the UHF RFID standard. ETRI joins other patent owners 3M, France Telecom, HP, LG Electronics, Motorola, ThingMagic, and Zebra Technologies to promote rapid adoption of UHF RFID technology by offering a single license to patents essential to the practice of the UHF RFID standards owned by the participating companies.

Sisvel is the administrator of the licensing program. It is hoped that this development will offset the negative effects caused by other players in the RFID market demanding royalties for their IP and complicating the process through multiple claims for fees.

"There are many essential patents covering various aspects of UHF RFID technology in multiple countries around the world, creating complex and costly licensing requirements for anyone who wants to manufacture or sell UHF RFID tags or readers," said Jim O'Hagan, a spokesperson for the RFID Consortium and Director of Patents and Technology for Zebra Technologies. "Through the RFID Consortium, manufacturers will have access to a single low-cost license to essential patents from multiple leading global firms."

"As a leader in information and communications technology research, ETRI is a great addition to the Consortium and their participation will enhance the value of the Consortium's patent portfolio license for manufacturers and sellers of UHF RFID products," O'Hagan explained.

Participation in the UHF RFID licensing program and the RFID Consortium is open to all holders

of patents essential to the UHF RFID standards. Holders of patents interested in participating in the RFID Consortium and parties interested in obtaining a portfolio license under the joint licensing program are encouraged to contact Sisvel's representative Sean Corey at the address below.

Sisvel has a long history of managing successful patent portfolios including those related to the audio compression standards known as MP3 and MPEG Audio, and widespread technologies such as OSD (On Screen Display), ATSS (Automatic Tuning & Sorting System), and WSS (Wide Screen Signaling - for automatic switching of television image formats). Most recently SISVEL has been appointed as the administrator of patent pools for the UHF-RFID, CDMA 2000 and DVB-T standards.

The RFID Consortium, LLC is a limited liability company that licenses patents essential to the practice of ultrahigh frequency radio frequency identification (UHF RFID) standards. The RFID Consortium's goals are to promote rapid adoption of UHF RFID by facilitating easier access, by manufacturers and customers alike, to essential UHF RFID patents and to provide patent owners the opportunity to receive fair compensation for those patents, all at a reasonable cost to the end-user.

The current Members of the RFID Consortium are: 3M Innovative Properties Company, a subsidiary of 3M Company (MMM); Electronics and Telecommunications Research Institute (ETRI); France Telecom (FTE); HP (HPQ); LG Electronics; Motorola, Inc. (MOT); ThingMagic, Inc.; and Zebra Technologies Corporation (ZBRA). The UHF RFID standards referred to above are the standards announced by EPCglobal Inc. and ISO/IEC.

Information: [www.sisvel.com](http://www.sisvel.com); [www.rfidlicensing.com](http://www.rfidlicensing.com) or email [uhf-rfid@sisvel.com](mailto:uhf-rfid@sisvel.com)

## Payment that sticks

### *e-Payment Labels allow Rabobank Employees to make Contactless Payments*

Multicard, a business unit of Identive Group, Inc. has been selected by Rabobank to provide personalisation and fulfilment services for the Dutch bank's latest application of its MiniTix cashless e-payment solution. Multicard will manage product delivery, encoding and customer support for a program that allows Rabobank's employees to make cashless payments using the e-payment labels on their mobile phones.

Rabobank's MiniTix solution provides a more convenient alternative to the "chipknip" electronic cash system currently used throughout the Netherlands. Like chipknip, MiniTix is intended for small retail payments where credit card fees do not make economic sense. The MiniTix virtual wallet can be managed over the Internet rather than having to be loaded with value at special banking terminals, and payments can be made using a mobile phone or a contactless token such as a key fob or wristband.

Currently Rabobank is allowing its employees to use their MiniTix accounts to make purchases at canteens and cafeterias in the workplace. Over time the bank plans to sign up additional merchants and facilities such as football stadiums to participate in the program, at which time employees will be able to use their existing phone stickers or a more portable RFID token to pay for food, beverages, event programs and the like.

"Rabobank is taking the lead in introducing some of Europe's most innovative schemes for contactless and mobile payments. We are very pleased to once again work with Rabobank to bring the convenience and security of MiniTix to Rabobank employees," said Pieter Kooistra, chief executive officer of Multicard NL.

[www.identive-group.com](http://www.identive-group.com)

## Passport Cover Story

*Country issues EAS enabled travel documents*

Gemalto has announced the delivery of a complete passport solution to the Moroccan Mint: Dar As-Sikkah (Bank Al Maghrib), for the Kingdom of Morocco's biometric passport program.

The Gemalto solution includes the highly secure operating system Sealys eTravel, that supplies access to the integrated contactless microprocessor, containing the holder's digital fingerprint and photo laminated into the cover.

For citizen data acquisition, Gemalto also provides the Ministry of Interior with its Coesys Enrolment solution in cooperation with its Moroccan partner Netopia, a leading integration services company for the public sector. In addition, Gemalto has implemented a skill transfer process for Netopia in order to accompany the project's start-up.

With this program, the Kingdom of Morocco is now the first country outside of the European Union (EU) to issue new-generation biometric passports including Extended Access Control (EAC) in accordance with European specifications.

"A long-term partnership between Dar As-Sikkah, Gemalto and Netopia has been created through this program," commented Lahcen Hadouni, Head of Dar As-Sikkah.



"The project's success reflects the close fit between the various players and the sustained commitment shown by a multidisciplinary team."

"Netopia is delighted to have contributed, alongside Gemalto, to this project's outstanding success," said Zaki Narjisse, Chairman and Chief Executive Officer of Netopia. "This partnership will open up greater possibilities for cooperation both in Morocco and other countries."

"This is the first time electronic passports have been issued in the Maghreb Region, and this initiative highlights Morocco's commitment to establishing itself at the forefront of technological innovation," added Jacques Seneca, Executive Vice-President, Gemalto. "By supplying an end-to-end solution, cooperating with its partner Netopia, Gemalto takes full responsibility for its delivery and implementation, enabling our customers to focus on their core business."

Moroccan citizens can apply for a passport anytime, anywhere thanks to a new enrolment system linked to a web portal. Once proof of identity has been gathered the applicant can fill in an online form to print and submit the application.

Gemalto's initial contract is for the supply of inlays and covers and lasts for three years. According to projections that predict future passport use issuance will take place at a volume of 1.5 million passports every year.

Gemalto's references for electronic travel documents include the following countries: Cote d'Ivoire, Denmark, Estonia, France, Hong Kong, India (diplomatic), Italy, Latvia, Malta, Norway, Portugal, Qatar, Singapore, Sweden, Turkey and the United States.

For more information:

[www.gemalto.com](http://www.gemalto.com)

## Item-level RFID adoption accelerating in apparel industry

Avery Dennison, the pioneer in RFID-based solutions, reports an acceleration in item-level adoption in the apparel industry as companies seek more accurate and efficient solutions from supply chain to point of purchase. Adoption is being spurred by the significant improvements RFID item-level tagging makes to retail operations with inventory accuracy increasing up to 99%, compared to 70-80%.

"RFID item-level tagging helps retailers realise greater overall productivity," said Dean Scarborough, Avery Dennison chairman, president and chief executive officer. "Avery Dennison is uniquely positioned through our experience and leadership in both RFID and apparel branding, packaging, labelling and information solutions to lead and support the retail industry globally as adoption accelerates."

The world's leading producer of RFID inlays, tags and tickets, Avery Dennison is partnering with the majority of leading apparel retailers and brands globally in the adoption of RFID item-level tagging.

"Retailers are looking to solve the number one complaint of shoppers 'You don't have this item in my size or my colour,' and to improve their overall inventory productivity," said Shawn Neville, group vice president, Avery Dennison Retail Information Services. "Item-level RFID tagging systems provide retailers with improved inventory visibility, accuracy, loss prevention and operational efficiency, and an improved shopping experience for their consumers."

RFID is a key component that enables companies to simplify and accelerate their inventory management and logistics processes.

[www.averydennison.com](http://www.averydennison.com)

## Appleton to Sell Its Performance Packaging Operations

*Company now focused on specialty paper and Encapsys® microencapsulation*

Appleton has entered into an agreement to sell its Performance Packaging operations to a newly formed company named NEX Performance Films Inc. which is owned by Mason Wells, a Milwaukee-based private equity firm.

The sale of the Performance Packaging operations is a strategic move to consolidate Appleton's offerings and to allow Appleton to focus on its core business. The purchase price to be paid in the transaction is approximately \$58 million. Appleton intends to use proceeds from the sale to reduce debt and for general corporate purposes.

Appleton's Performance Packaging operations produce high-quality single and multilayer polyethylene films and are comprised of two wholly-owned subsidiaries: American Plastics Company, Inc., located in Rhinelander, Wis.; and New England Extrusion Inc., which has facilities in Turners Falls, Mass., and Milton, Wis.

Appleton's chief executive officer, Mark Richards, said the Performance Packaging operations no longer complement the company's long-term strategic direction which is to focus on its specialty paper and Encapsys microencapsulation businesses.

"Our core strengths in specialty paper production and microencapsulation have been the foundation of our company's success for more than a century, and they will be the focus of our growth strategy in the future," said Richards. He added that Appleton will leverage the operational strengths of the company and its recent capital investments in its thermal and Encapsys businesses

to expand Appleton's market leadership positions in specialty paper and encapsulation.

Appleton simultaneously acquired American Plastics Company and C&H Packaging Company, Inc. in April 2003. C&H Packaging, located in Merrill, Wis., prints and converts flexible plastic packaging materials for companies in the food processing, household and industrial products industries. Appleton sold C&H Packaging to The Interflex Group, Inc. in December 2009. Appleton acquired New England Extrusion in January 2005.

Appleton creates product solutions through its development and use of coating formulations, coating applications and encapsulation technology. The Company produces carbonless papers, thermal papers and Encapsys products.

*For more information:*

[www.appletonideas.com](http://www.appletonideas.com)

## Ticketless Travel

### *Payne Security Awarded Three-Year Transport Contract*

Payne Security, a leading supplier of brand protection, document authentication and personal ID solutions, told *Product & Image Security Newsletter* that West Yorkshire Passenger Transport Executive (Metro) has signed a contract with Payne Security to personalise and issue English National Concessionary Travel (ENCTS) smart cards for approximately 150,000 concession holders across the region over the next three years.

Under the terms of the contract, Payne Security receives data twice daily from Metro's card management system, processing it immediately into ITSO-compliant, personalised smart cards. All cards are dispatched direct to concession holders' home addresses either the same or the following day. As well as 150,000 ENCTS

cards for senior and disabled concession holders, Metro also expects to issue smart cards to 80,000 school children during the life of the three year contract.

Metro chose Payne Security on the strength of its high-quality, durable card, which it subjected to some rigorous physical testing. Personalisation by bulk digital methods ensures the card-holder's details are encapsulated and protected within the card construction.

"Quite simply, Payne Security offered us the best quality card and service at the best value," said John Keady, Metro's Fares & Pricing Systems Manager.

Payne Security's card manufacturing and digital print capability combines the benefits of secure personalised ID cards together with contact chip, contactless smart card technology and proximity inlays. This personalisation service provides cards to the highest quality with all the print features 'locked' into the core of the card, ensuring durability and security. Payne Security offers short-run personalised smart cards for the security, access control and card application industry, as well as card encoding and fulfilment options.

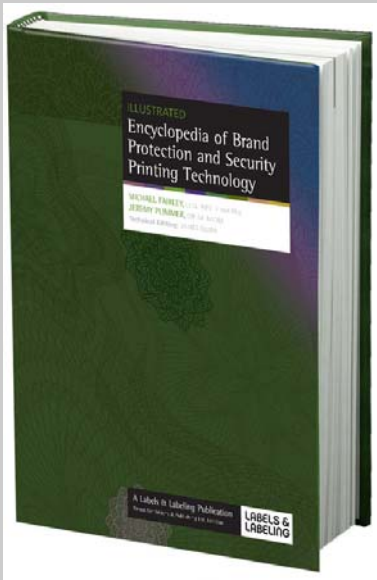
Payne Security is one of the world's leading providers of brand protection, personal ID and document authentication solutions, with a large range of products designed to beat counterfeiters and prove personal identity.

[www.payne-security.com](http://www.payne-security.com)



*West Yorkshire Metro cards to be supplied by Payne Security in three year contact*



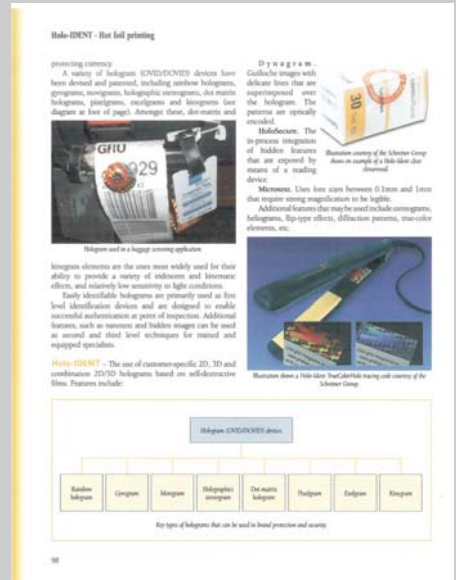


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## Inksure Helps Ukrainian Govt. Recover \$200M in Tax Revenues

Inksure Technologies has teamed up with EDAPS Consortium in Ukraine to combat the ongoing problem of alcohol and tobacco fraud.

"Verifying the authenticity of tax stamps is quickly becoming a cat and mouse game between security experts and sophisticated networks of criminals," said Tal Gilat, CEO and President of Inksure. "As a result, increasingly complex technologies are necessary to combat the latest developments in forgeries."

Tax or Excise Stamps are usually issued by a country's finance ministry. Alcohol and tobacco manufacturers and importers are obliged to buy the tax stamps and affix them to their packaging to prove that the appropriate duty has been paid. Modern tax stamps use holograms and other anti-counterfeiting measures to prevent

distribution of contraband goods. But many of these overt security measures have been compromised by sophisticated counterfeiting operations.

Together with Centro Grafico DG and EDAPS Consortium, Inksure has developed a new method of inserting optical codes into holograms that can be verified in real-time with a hand-held opto-electronic device.

Since these measures were added to the Tax Stamps issued in Ukraine for use with Alcohol and Tobacco, the government was able to recover over \$200M in additional taxation income that had previously been lost to counterfeiters. "One of the key elements to any authentication technology is ease of use," said Andriy Tymoshenko, who is the Manufacturing Director of EDAPS Consortium. "A technology is only as strong as the humans using it. The combination of visual holograms with a chemical signature has struck a harsh blow to the black and gray market

economies."

Inksure's security solution uses a chemical compound that emits a unique spectral signature per implementation. While invisible to the naked eye, Inksure's pen-sized, hand-held reader can instantly identify these spectral signatures and verify the authenticity of the product with forensic accuracy.

INKSURE Technologies is an industry leader in brand protection, product diversion and document security. Inksure's taggant technology is applied to tens of billions of consumer items and high-value documents annually. The verification process provides instant, reliable, forensic-quality results. The company targets a number of industry sectors, including the financial and pharmaceutical fields, branded products, transportation, and government projects.

[info@inksure.com](mailto:info@inksure.com)

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