Volume 25 Issue 6

Labels & Labeling

25th Anniversary

The wider world of Narrow Web

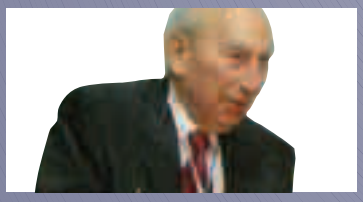
Technology

Drent Goebel brings revolutionary offset system to market

Analysis

Solutions to product counterfeiting and diversions were discussed at Pisec 2003

Case study



Tuwiya Drory, now aged 90 is a remarkable label industry pioneer

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Labels Group Product Manager:
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Designers:
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Production Executive:
Dan Taylor

Circulation Manager:
Michael Hatton

Publishers:
Tarsus Publishing Ltd,
Commonwealth House, 2 Chalk Hill Rd,
Hammersmith, London, W6 8DW, UK
Tel: **+44 (0)20 8846 2700**
Fax: **+44 (0)20 8846 2801**
E-mail: **athomas@labelsandlabeling.com**

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USA Office:
Tarsus Publishing Inc,
16985 West Bluemound Road, Suite 210, Brookfield, WI 53005, USA
Tel: **+1 (262) 782-1900**
Fax: **+1 (262) 782-8474**
E-mail: **publications@tarsus-inc.com**

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Leader

This month another labels exhibition was announced in Europe, to be held in Germany in December 2004. This raises the question, are there already too many exhibitions related to this industry, and does another one make any sense?

Firstly, we must declare an interest, as L&L is the lead sponsor of the global Labelexpo series of exhibitions and events. Nevertheless, it seems clear that this industry does not want another exhibition, and already Mark Andy, Gallus and Nilpeter have come out strongly against it (see news story on p.7 of this issue).

The fact is that this industry operates on a roughly two year technology cycle, and the timing of the Labelexpo shows reflects this. Thus the Europe show alternates with the Chicago show, which allows the new technology to be seen by converters throughout the Americas. In Asia-Pacific, Labelexpo China alternates with the Labelexpo show in Singapore. Both these shows cover different geographical market areas.

There are also smaller Labelexpo shows in Moscow, and now there will be a Labels & Labelling pavillion at the India Labels show. But both these exhibitions cater for geographically clearly defined regions, both of which are growing very fast and attract visitors who would probably not travel more widely.

Now the Labelexpo organisers have added two major conference-related events in Latin America and in Eastern Europe in 2004. But these are networking and informational events and will not feature major displays of working machinery. So there is a sound logic to the machinery shows in the Labelexpo series, driven by the very real demands of an industry where globalisation is happening with extraordinary rapidity.

> "Given the comprehensive coverage, technically and geographically, of the Labelexpo series of events, do we need yet another show? The answer in our opinion is a firm No"

L&L has also responded to these pressures by globalising our readership, and we will launch a Chinese language news-sheet in 2004 as well as translating the magazine into different languages via the electronic version of L&L (see www.labelsandlabelling.com). So back to the original question.Given the comprehensive coverage, technically and geographically, of the Labelexpo series of events, do we need yet another show? The answer in our opinion is a firm No.

Andy Thomas
Group Managing Editor

Grandma's cookies taste the best!

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The smell of Christmas is in the air again, the end of another year is coming around. We would like to thank all of you who sweetened your production with dies and tools from Kocher + Beck in 2002, and wish you a great start to the New Year. So now – go ahead and enjoy Grandma's cookies.

Kocher+Beck GmbH+Co.
Rotationsstanztechnik KG
Dieselstraße 6
D-72124 Pliezhausen
Tel. +49(0)7127-9785-0
Fax +49(0)7127-978555
info@kocher-beck.de
www.kocher-beck.de

Kocher+Beck UK Ltd.
Brunel Way
Stephenson Industrial Estate
Coalville, Leicestershire LE67 3HF
Tel. +44(0)1530-812400
Fax +44(0)1530-815055
info@kocher-beck.co.uk

Kocher+Beck USA L.P.
10308 W. 79th Street
Shawnee, KS 66214
Tel. +1-913-529-4336
Fax +1-913-529-4343
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KOCHER + BECK

e No.124

A Different Kind of Forum

Presenters from companies including Smirnoff, DIAGEO, Dannon, Miller Brewing, Heinz and Gillette, got together to discuss packaging strategies with their key brands at the recent Applications in Market Research for Package Design conference. **Jennifer Dochstader** was there

The Institute for International Research (IIR) recently held their annual Applications in Market Research for Package Design conference in Chicago. At this year's information-packed forum, big name speakers presented company case studies to a standing-room only audience that provided insight into the strategic packaging decisions they're currently making with key brands, and those research and design methodologies implemented throughout the process.

'Just a second,' you may be thinking. 'I print labels. What does a bunch of presentations on packaging given by brand managers, research personnel and designers have to do with my business?' Plenty.

Consumer products companies' research dollars are primarily channeled in one direction: tracking consumer behavior. The success (or failure) of a brand is wholly dependent upon the whims and impulses of people just like you and me. People who buy shampoo, squeeze ketchup, spoon yogurt, drink vodka and pour motor oil.

Two-thirds of all product-purchasing decisions are made at the point of purchase, in ten seconds or less. Let's say you fancy some nachos. You head to the supermarket to pick up some salsa, and if you're like the vast majority of consumers who might also be craving a Mexican snack, you won't have any specific salsa brand in mind. You're going to make your purchasing decision in a matter of seconds while standing in front of shelves lined with a wide range of salsa SKU's, and it's highly likely that you're going to select the brand with the packaging that appeals to you the most.

Your salsa purchasing behavior is what keeps brand managers up at night, fixated on why you made the purchasing decision you did. Was it because you used the product two years ago, were satisfied with it, and reached for that same brand again? Or, was it that new squeezable PET container, shaped like a tortilla chip donning a shrink sleeve label with irresistible flexo-printed neon graphics that led you to the selection? Welcome to the constantly churning craniums of brand managers, package designers and consumer products company research departments.

A little r-e-s-p-e-c-t, please

Several months ago I had the opportunity to speak with John Hickey, President of Minnesota-based Smyth Companies, Inc. During our chat, John made an insightful comment I've frequently thought about since. He identified the need for the label printing industry to have some type of entity that brands and promotes the importance of a label to the end-user universe. In many end-use sectors, the label has fallen to commodity status as brand owners continue to implement cost-cutting measures that decrease the label's value in the overall packaging proposition. John Hickey brought up the example of the Dairy Council as an example of an industry-wide entity that effectively brands a product in the eyes of the most influential element of the supply chain. Of course in the case of the Dairy Council, that would be the consumer. And in the case of the pressure sensitive labeling industry, that would be the end-user. We might not have our Label Council yet, however if the Applications in Market Research for Package Design conference is any indication, we're beginning to see some long overdue respect paid to what you and I really care about – that precious piece of printed paper or film that

"survival for converters in this market will mean that they not simply deliver labels to their customers, but labeling solutions for the total package concept"

decorates, categorizes, describes and/or tracks a product.

In every end-user presentation at the Applications in Market Research for Package Design event, the increasing importance of the label was identified and discussed. True, other topics were touched upon such as package contour and shape, closures and caps, easy-grip elements integrated directly into the injection molding process, etc. However, it's important to note that according to many of the conference's presenters, the road to visual one-upmanship, brand line extension success, and on-the-shelf visibility is one increasingly paved with a redesigned-for-heightened-aesthetic-appeal label.

- Conquering consumer psychology, 4
- Creating a more aesthetic package, 4
- Designing a better looking label, 4
- Return on investment, huh?

One of the highlights of the Applications in Market Research for Package Design event was a presentation given by Rob Wallace, Managing Partner of Wallace Church, Inc., a Manhattan-based global design and brand strategy consultancy. Throughout his presentation, Wallace touched upon those forces driving packaging design strategies in today's 'demand' economy.

Wallace explained that consumer products companies are acutely aware of what the human brain emotionally responds to, and lists them from most significant to least as follows:

- Color
- Shape
- Numbers
- Words

These fundamental elements loom over the minds of those creating, and managing, new package design strategies for their products. And, as Wallace frequently noted during his presentation, 'Products are made in factories. Brands are made in stores.' And while marketing managers and designers get really excited when, for example, they see the visual bang they could achieve with a gravure or flexo printed opaque PS label compared to the duller quality of dry offset on their yogurt containers; at some point in the process management steps in and compares projected sales increases to the total applied cost formula the proposed packaging and labeling application changes would require. And guess what? Say good-bye to potentially seeing PS labels on yogurt containers in the near future.

According to Wallace, 'For some of these consumer products companies the margins are so low, that if the profits aren't guaranteed, they won't make the migration.' Wallace argues that there's been a critical paradigm shift that has occurred, and that in today's marketplace brand management cares more about a product's return on investment than its positioning.

Stay tuned for case studies

Over the course of coming year, Labels & Labeling International will be featuring case studies stemming from the Applications in Market Research for Package Design conference. These articles will examine topics such as Castrol's search for the packaging answers to launching their flagship auto oil brand; Heinz' label challenges when launching a ketchup and spaghetti sauce brand; Snapple's recent migration away from clear PS labels with their Elements brand line; amongst others.

As Rob Wallace put it, consumer products companies are striving to 'innovate the consumer experience.' In doing so, they're not simply delivering ketchup, yogurt, motor oil, or iced tea to retail shelves, they're delivering packaged solutions to their customers. And survival for converters in this market will mean that they not simply deliver labels to their customers, but labeling solutions for the total package concept. No.504

IoPP and Tarsus Group have announced the Smart Packaging conference during Labelexpo Americas 2004

Smart Packaging 2004 will take place on 14-15 September 2004 at the Donald E. Stephens Convention Center in Chicago, Illinois, USA.

Developed in co-operation with the Institute of Packaging Professionals, the two-day keynote conference will cover all aspects of smart packaging and is expected to attract in excess of 200 delegates from the label, packaging and end user sectors.

For further information, please contact:szelesnik@iopp.org.

Modular labeling technology offers label line flexibility

Modular labeling machines that can apply four different types of labels on one machine are now providing significant benefits for brand owners and bottling plants – but what will this mean for label printers? **Mike Fairley** reviews the changing world of labeling

The evolution of bottle and can labeling can be traced back over many years and, historically, was always associated with wet-glue paper labels applied on dedicated label application lines. Indeed, in the late 1960s over 70% of all labeling in Europe was undertaken with wet-glue paper or paper-based label materials.

Today the picture has changed quite significantly, and looks set to change even more in the future. Little more than 40% of all labeling in Europe is with wet-glue applied labels – even less if only Western Europe is considered. In volume terms, annual growth of wet-glue applied labels in Europe is around 1 – 2%. Something like 80 million square metres of new growth last year.

Compare this with self-adhesive labeling, which achieved a staggering 279 million square meters of new growth in Europe in 2002. Even the newer, predominately bottle, labeling technologies of sleeving and wrap-around film that were only introduced in the 1980s and 1990s are already growing at similar volumes to wet-glue. While in percentage terms, both these newer technologies are growing in excess of 15% per annum, and generally nearer to 20%.

The more recent bottle labeling solutions, such as cut-and-stack film and patch film are also now beginning to create a significant impact on the product decoration market, with in-mold labeling additionally carving out its own niche solutions in both bottle and tub decoration.

Much of this growth has come from the quite dramatic explosion over the past to years or so in the use of PET and other plastic bottles and containers, where label performance demands (product resistance, water resistance, scuff and rub resistance, oil or chemical resistance, etc) and a container/label recycling capability have driven demand for all kinds of filmic labeling solutions in recent years.

However, up until fairly recently, all these labeling solutions required their own dedicated labeling lines using a wet-glue applicator, self-adhesive applicator, wrap-around film applicator or sleever, etc, as required. Consequently bottling and packaging plants had to make investment decisions which committed them to one label technology on a label application line. This limited the plant or label line flexibility, inhibited the launch of new products, minimized label/pack decoration options and made it harder to introduce creative marketing or promotional capabilities on packs.

Now, new developments in modular label application technology are beginning to have a major impact on the bottle and product decoration market place, simplifying label line investment decisions yet offering complete flexibility to designers, marketing and brand managers and packaging technologists – all with the option to process different label decoration solutions in one production line, and with short changeover times.

Only introduced in 2000 by Krones, a world leader in labeling technologies for the beverage and packaging industries, the new modular machines were already making up some 10% of the company's labeling machinery sales by January 2003. And it's not difficult to see why end-users are so attracted to this modular label line technology when such benefits are apparent. Certainly, no other label application solution has been able to achieve such dramatic growth in such a short period of time.

Indeed, look at the statistics for labeling machines sold by Krones in 2000 and 2003 (presented at one of the conference sessions at the recent Labelexpo Europe) and it soon becomes apparent that there has been a significant change of emphasis in how label end-user plants are investing. Comparison of the two years shows a quite dramatic slow down in the sales of cold glue labeling machines, while sleeve and reel-fed labeling machines are increasing in market share – but not to the extent that

modular technology has grown.

So what does modular label line technology offer end users? Undoubtedly a revolutionary concept, the Krones modular labeling machine offers different combinations of cold-glue labeling, hot-melt cut-and-stack labeling, hot-melt reel-fed labeling, and self-adhesive labeling – all on just one machine. And there are different models for labeling speeds ranging from as little as 6,000 up to some 72,000 containers per hour.

In operation, a simple connection of any of the different modular labeling stations to the basic machine provides complete marketing flexibility for the introduction of new bottle/container dressings - without investing in a new labelling machine. All that is required to change over a labeling process is

> "the basic machine provides complete marketing flexibility for the introduction of new bottle/container dressings - without investing in a new labelling machine"

to simple plug in a new labeling station. Change-over time is short, and operation and maintenance of the modular machine is relatively simple due to optimum accessibility.

In addition, the modular machine is smaller and takes up less space than conventional labelers. This is because labeling stations that are not required are simply replaced. Even installation and commissioning of the machines can be undertaken rapidly. Little wonder that take up and installation of modular labeling machines has been so rapid.

For Krones, the development of their modular machine approach has enabled them to adapt to a label market in which the growth of cold-glue applied paper labels is virtually stagnant. At the same time there is a continuously growing requirement for technologies to apply all kinds of plastics labels, and an increasing demand for 'No-Label-Look' labels. Additionally, brand owners are looking to use self-adhesive labels – either on their own or in combination – in a variety of new market applications.

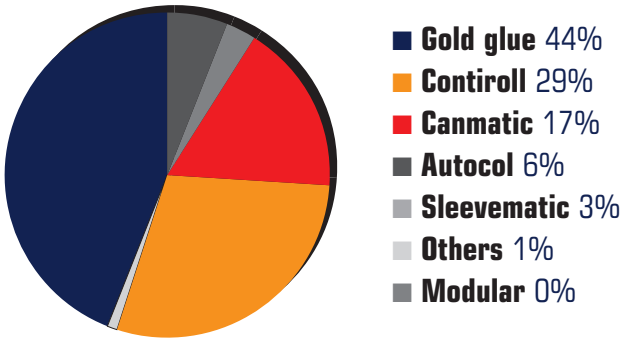
Bottle shapes are also changing, with Krones experiencing more demand for sleeve labels, especially full-body sleeves, used with, say, convex or concave bottles. Sleeves are also being used to add back strength and performance in applications where glass bottles have been light-weighted.

Modular labeling technology provides Krones with an ideal solution to all these changing demands. One modular, flexible, machine can meet all these challenges and offer end-users design, decoration, investment, cost, space and marketing benefits. With such benefits it seems almost certain that modular labeling machine technology will continue to grow rapidly.

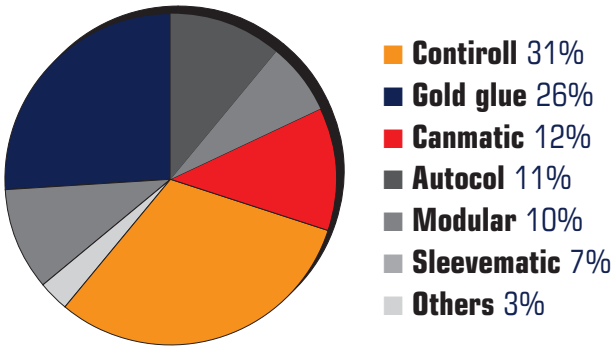
However, it is not only companies like Krones that will have to adapt to changes in end-user requirements for design, decoration, label process and marketing flexibility.

It seems likely that label printers and converters will also be expected to change. If a bottling plant for example, can apply four different types of labels on one machine – from wet-glue to self-adhesive, sleeving and wrap-around – will they want to deal with four different label printers, each producing a different kind of label?

Kromes Machines sold in 2000



Kromes Machines sold in 2003



No, more likely they will start to look for one label supplier that can provide all four different types of labels. Now there's a challenge for the label industry – and a threat to those label printers not prepared to adapt to the changing world of product decoration and labelling.

e No.406

GiDue pushes label boundary

At Labelexpo Brussels GiDue launched a 730mm-wide press which challenged the boundaries of conventional 'labels' thinking. But GiDue joint managing director Federico d'Annunzio believes label converters can attack new market sectors in film and cartons using their skills in in-line converting and UV flexo. Interview by **Andy Thomas**

The launch of the 730mm wide Unipro press by GiDue at Labelexpo Brussels presented a challenge to the way we view the narrow/mid-web label converting industry.

Unfortunately the press was not running at the show, but converters will be able to assess the stability and print quality at Drupa next year, when the press will be officially launched.

So what is the philosophy behind the machine? L&L spoke to Federico d'Annunzio, chief designer and joint owner of GiDue.

GiDue came from nowhere in 1999 and astonished the labels industry with the Combat flexo press, a machine designed for a high level of print stability and ease of changeover with the unique Flower print unit design. The success of this system has been confirmed with well over 110 press orders from label printers since the launch of the Combat.

But the label converting landscape has today changed out of all recognition and d'Annunzio believes the industry is facing a crisis. 'UV flexo has become the market killer in labels', states d'Annunzio boldly. 'In 1993 the price of a 6-color letterpress was some €700,000. Today you can buy a UV flexo press for €300,000. For €200,000 you can buy an entry level machine. But while the entry level price has fallen by one third, the productivity has increased, from 40-60 to 80-100 metres/minute. Presses have increased in width from 200mm to 330mm and 410mm, raising productivity further. This has to led to a crash like we have seen in the carton industry. This must lead to a fight and overcapacity in which only the most efficient companies will survive.'

As a defensive move, GiDue will now reconfigure its entry-level 4-color Quadra UV flexo press as a 6-colour machine. 'We are forced to this because other press manufacturers have come to market with very low prices in the last three years and will help kill the market in three years time. I do not want to do it, but others are making suicidal price policies.'

The only way out, for converters and press manufacturers, is to specialize in the labels sector and to find new markets where they can apply their existing expertise, d'Annunzio believes.

'We must gain an advantage in the label market with in-line ➲

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Show Review

technologies which are not easily accessible. This is our strategy with the Combat range with its differentiation to F-Combat for film, C-Combat for cartons and E-Combat for multiple substrates.'

But d'Annunzio believes that current trends in the global packaging market hold out exciting possibilities for label converters - if only they recognize them.

'There is an important trend in global packaging for brands to appear in all packaging types, including shrink and PS labels, cartons and flexible packaging. Brands change their marketing strategies very quickly. If we can change our mentality as narrow web converters, we have big advantages. We have a multi-process culture. In fact we underestimate our skills. We're not scared of multiple converting and when added to UV flexo, we have a decisive advantage over the rest of the industry.'

So the key combination is Multi-process converting plus UV flexo. 'Where can we look to apply these skills and make profit? The easiest areas are carton, films and flexible packaging.'

Unipro

This was the background to the development of the Unipro press, built from the ground up for multi-substrate UV flexo and to be as easy to operate as a Combat press at similar crewing levels. The machine is 730mm wide, but the press frame is scaleable up to 830 mm.

The biggest design challenge for an in-line press this size is maintaining print stability. Flexography is an impression process in which 'plate bounce' is generated both by the relief plate and the plate gap, an effect magnified at higher speeds and wider widths.

To ensure a stable platform, the Unipro is built around a single 50mm wide metal backframe, instead of the more usual system of tie-bars holding smaller sections together.

The Unipro printing head is based around the 'three point' Flower design developed for the Combat press, with the plate cylinder forming the upper part of a pyramid with the impression and anilox cylinders. It incorporates two new design concepts: the UNI-Lock cylinder clamping system and the Spider inking

> "We're not scared of multiple converting and when added to UV flexo, we have a decisive advantage over the rest of the industry"

unit enabling fully automatic print unit wash-up.

The UNI-Lock concept permits the use of both solid cylinders and printing sleeves. Sleeves of any diameter can be inserted into the Spider head and are immediately print ready. Plate pressure, register and pre-register control are pre-set for reduced set-up and consistent print quality irrespective of printing skills.

UNI-Lock clamps the print cylinder within the press frame where it becomes an integral part of the print unit. The UNI-Lock head absorbs the shocks passed thru the press frame, and is claimed able to resist 1,000kg of torque pressure.

During a job change, a 'gear rail' system lifts the print cylinder clear of the press frame so the sleeve can be changed. After the new sleeve has been pushed onto locating pins on the cylinder, the gear reverses and the plate cylinder locks back into place.

Federico D'Annunzio says the press has been tested at speeds up to 250 metres/minute without the plate cylinder bouncing back. 'This is the first non-reversible print head on a mid-web press in the industry.'

In contrast, D'Annunzio points out that CI presses have three potential points of movement: print and anilox cylinders are on separate guides and the print unit itself is cantilevered ➲

Spider system delivers inking unit to press-side washer

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No.148

Hot foil application unit

in one direction.

The Unipro has some unique design features intended to make it easier to operate. Most striking is the 'accordion' print unit, which allows the operator to safely lean into the press to view the web while making adjustments. The print unit controls are located below the operator's line of sight, under the fingers of both hands, in the same way one plays the accordion. 'When you drive a car, you don't need to look at the gearstick,' points out d'Annunzio.

The decision to put dedicated controls on each print unit replaces the more normal practice of having a single, moveable control panel.

The Unipro takes the concept of press-side wash-up a stage further than the Combat. On the Combat, the operator manually lifts the inking assembly out and places it in the washing machine. On the Unipro, the Spider inking unit is mounted on a rail, allowing the whole unit to be pulled out and placed directly into the press-side washing machine. After washing, the Spider is guided back to impression via guides built into the rear press frame.

Flexo CI and gravure presses require trolleys to take away the inking units for washing and an area away from the printshop floor to wash them. CI presses which wash inside the machine use a lot of solvents, and the machine needs to be stopped during cleanup.

'With the Unipro you do not stop the machine. The Spider inking units are ready to be exchanged immediately,' notes d'Annunzio. 'The washing quality is also different. With solvents you can never get a perfect wash. We use multiple cleaning methods. We pre-wash with solvents, then use two different ultrasonic washes and programmes optimized for the plate and anilox.'

Is there an intention to use anilox sleeves? 'No,' answers d'Annunzio. 'Sleeves would have to be taken out by hand, and our whole purpose is to eliminate this. Remember the anilox sleeve is full of ink. This technology is good for wide web, but we take away the whole inking unit at the same time.'

The Unipro press uses the same Siemens servo drives and control networks as the E-Combat press, allowing remote diagnostics and downloading of new software programs. GiDue is now developing its own register control system, including pre-register, to integrate tightly into this control network.

The press can be configured with multiple webs, and incorporates independent temperature and tension control, as on the E-Combat. 'Also we can control the print length, so we have unlimited flexibility you could not get with a mechanical press,' says d'Annunzio. 'You can control and adjust tension for different substrates then store these settings.' Options include the AVT closed loop inspection first seen on the E-Combat.

The combination of pre-setting, servo and UV flexography means makeready waste is just one machine length, ➲

Converting cartons

Federico d'Annunzio is not advocating a frontal assault on Fortress Carton. 'You do not have to target the whole carton market, but find the niche where you can add value. It's not a question of run length, but of adding value to the product, and this means multiple process plus UV flexo. The carton market is 15-20 times bigger than the labels market and you want just a very small part of it. You can double your turnover if you can take five per cent of the market share.'

In the carton market there are many added-value possibilities on web-fed presses for enhanced graphics and decoration including hologram deposition, foil and security features, all produced in-line, that are not possible with sheet-fed printing. The Unipro is designed to handle folding carton boards up to 450gsm and GiDue now has a heavy-duty carton cassette which can be exchanged between the E-Combat and Unipro utilizing the same digital networking. Optionally it can include an in-line hologram/foil applicator.

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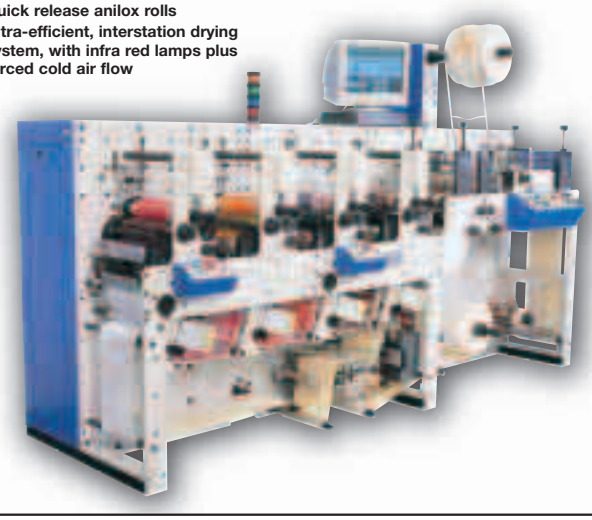

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e No.147

The Self-adhesive Label Market in Western Europe

A Techno-Economic Market Review and Evaluation of Business Opportunities

Who should buy this report - packaging converters, label converters, raw materials suppliers, packaging/labels equipment suppliers, consumables suppliers, brand owners, financial institutions.

This report is a comprehensive update of the existing multi-client report published by Labels & Labeling Consultancy in February 2000. Since then, there has been a great deal of change going on in the labels sector. The market for self-adhesive labels in Western Europe has risen to over 4 billion sq. metres p.a and is continuing to grow at 5 to 6% annually, while filmic label materials continue to achieve double digit annual growth. Although overall label growth has slowed since the mid 1990s, significant opportunities (and also threats) exist for label converters, raw materials suppliers, equipment builders and investors. In the face of increasing competition and tighter margins label companies can look for niche opportunities and ways to create added value in terms of product offerings and also enhanced levels of service.

The Self-adhesive Label Market in Western Europe

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e No.159

Labelexpo Europe 2003
Show Review

according to tests conducted by GiDue. Flexible packaging

'I do not want to sell the Unipro press to flexible packaging converters, but to label converters skilled in the use of in-line converting with UV flexo,' states d'Annunzio. 'The door to flexible packaging is open, it's easy to enter and the customers are the same. Going wider is not hard to handle for a label converter – it's not like buying a big CI machine. It's like buying a big Combat with sleeves instead of print cylinders.'

D'Annunzio says the mid-web range of 500mm to 800mm will be the most important growth area in flexible packaging and that wider web outside this range will suffer from the demand for short run jobs.

The Unipro can print and convert virtually any kind of substrate from PE, BOPP and PET to paper, aluminium and laminates. Coating and laminating stations are under development, as are projects for cold seal and hot seal systems, and these will he shown, along with a modular gravure head, at Drupa.

e No.407

UV flexo verses the rest

Wide web CI press manufacturers have steered clear of using UV flexo because they claim an even cure cannot be guaranteed across the web - and because the inks are too expensive for an industry still based around long runs. For d'Annunzio this is a big opportunity. He cites the following advantages of mid-web UV against solvent and water-based wide-web flexo:

- Solvent inks are under attack from legislators and require expensive exhausting systems and explosion-proofing
- UV flexo press operators can be trained in a matter of weeks. 'Servo adjustment added to the 'on-off' nature of UV curing, reduces the need for operator intervention, so there's not a lot the operator can do to change the print quality,' says d'Annunzio
- An in-line UV flexo press, even at the mid-web size, needs only one operator, rather than the crew of 2-5 operators necessary to man and service a CI press
- UV flexo is a standardised process. 'With solvents and water-based inks the consistency of the result varies with the operator and with the room temperature. UV flexo takes these things for granted, but they do not,' says d'Annunzio.
- UV inks, though more expensive, are inherently more productive than solvent or WB. 'Solvent and water-based inks dry on the plate, so you have to stop the machine and clean the plates. With solvent inks you get ink build-up on the plate – three per cent dries on the plate at each revolution. Then only 50 per cent of the ink transfers to the plate. After a while you can't keep the highlights without regular cleaning of the plate'
- UV inks also have a natural gloss, so you can use less expensive paper. Adhesion on film, especially with cationic, is as good as solvent and much better than water-based
- Heat management is superior. 'With cold UV systems, chill rollers and servo motors we have great control over web tension which combats heat problems,' notes d'Annunzio
- Ink is available straight away with UV flexo, even after being left overnight in the ink tray, while you have to wait some revolutions in WB and solvent, increasing make-ready waste
- UV flexo inks are food accepted with both the new cationic systems and for free radical. 'Cationic means 100 per cent polymerization of the inks, and the free radical 98 per cent. So you avoid all the tests for solvent retention in flexible packaging. There's always a chance that these products will be recalled,' states d'Annunzio
- While it's true that UV flexo inks are more expensive, ink consumption is less than half because it's a solid

Industry at the crossroads

The wet glue sheetfed sector is reeling under the combined shocks of overcapacity, globalization and reverse auctions. The LPIA, North America's premier association for the sheetfed label industry, tackled these issues head on at its 2003 management conference in Florida. **Andy Thomas** reports

The Label Printing Industries of America (LPIA) held its Fall Management Conference in the Florida resort of Amelia Island Plantation, an excellent venue to network and do business for North America's key sheet-fed label converters and their suppliers.

The LPIA conference sessions, themed around Packaging in the 21st Century, looked at emerging threats and opportunities for this audience.

Opportunities first of all. Despite the overall decline in the share of wet glue labels against pressure sensitive (PS) and other competitive technologies, there are niche opportunities for sheetfed converters: filmic cut & stack (see TOPPcure boxout), in-mold labels (IML) and pressure-sensitive sheets. However, all these technologies are under attack from the roll-fed sector.

One delegate pointed out that wet glue is also mounting a rearguard action on returnable containers, where there is a demand for the washing solution to penetrate the label and dissolve the adhesive.

The trend against wet glue is undeniable, however, as noted by a succession of speakers including this writer.

'Dedicated wet glue applicator sales are fading,' said John Muha, vice president sales, Eastern division at label applicator manufacturer Krones, who presented figures on what systems his big end-user customers are buying. Drivers include the downtime involved in cleaning glue from the machines, as well as a push to take glue out of 'food sensitive' areas. 'At the same time pressure-sensitive applicator machines have become cheaper and faster,' he adds. In the pharmaceutical market, Muha pointed out that end users demand 100 per cent adhesion, which further tilts the balance to PS labels.

Krones' sales of PS applicator machines is healthy, particularly for clear labels. But the biggest growth is for shrink sleeve label applicators. 'We initially thought shrink would be a fad, but it's the fastest growing market we see,' said Muha.

North American Label Industry Market Segments – projected annual growth rates. Source Krones

Technology	2002	Projected 2005
PS	*4%*	*5-6%*
Glue applied	*–1%*	*–2-3%*
IML	*4%*	*7-9%*
Shrink sleeve	*7%*	*20-22%*
Roll fed	*8%*	*10-12%*
Other	*4%*	*4-5%*

Krones' best selling label applicator today is a modular system which allows rapid changeover between hot melt, cold glue and pressure-sensitive applicator heads on the same machine (they cannot yet handle sleeves). 'This is the future for the whole packaging industry,' said Muha. 'Increasingly end users are looking to mix different label types on the same container.'

This points up the dilemma faced by today's marketing managers: nobody can be sure which way the consumer will jump. Will pressure-sensitive labels prove more effective than wet glue? Will sales increase if you move from PS to shrink sleeves? ➲

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e No. 101

Paul Vilser, creative director at Fort Dearborn company, Virtual Color, speculates on design possiblities

Another speaker pointed out that Costco stores are now like 'treasure hunts', with the packaging changing each time you enter the store to keep consumers alert to new branding.

The result, as Muha noted, is that his customers are 'scared to invest capital in dedicated systems. One day they might want to run metallized paper and clear PS ice-beer labels and the next cut & stack labels.' This trend is most pronounced in Europe – of the 300 Krones machines installed in Germany, for example, half are modular – but it's now hitting the US.

Analyzing shrink sleeves further, Muha noted a move away from PVC for 'environmental' reasons, despite its superior shrink properties of 40 per cent, or up to 60 per cent in a steam tunnel.

Design in a competitive world

A stimulating session on label design and workflow was ably moderated by Tony Parker, COO Smyth Companies, with a panel which included Jim George, senior editor at BrandPackaging magazine; Kim Cooper, VP Southern Graphics; Paul Vilser, creative director at Fort Dearborn company, Virtual Color; and this writer.

Jim George kicked off with the startling observation that Walmart insists the 'message' of a label is understood in just three seconds at 15 feet. As the population of Europe and the US continues to age and their eyesight deteriorates, this will present an interesting design challenge.

Key label design trends picked out by George included:

- Raising the 'visual temperature' thru the use of effects such as gloss and metallics
- Achieving 360 degree impact using shrink sleeves
- Personalization and mass customization
- Providing more information thru foldout and multi-layer labels.

Mass customization of labels is certainly more advanced in the US than Europe. George presented the example of labels for Trinity brand bottled water, which incorporate scratch-off panels featuring unique winning text. Products sold with self-design labels sold over the Internet are already a reality for cosmetics products.

Factors unique to the future US design environment include the growing Hispanic population, which will soon account for 25 per cent of the US population. As well as presenting dual-language challenges, it opens up possibilities for carrying 'ethnic' brand messages across the whole population (above).

The design panel next looked at project managing the pre-production stage of the product cycle. Converters should aim to be present at the pre-design conference, said Paul Vilser. 'It's hard to sit down with your competitors in a pre-design meeting and share your capabilities, but it's better than waiting until a bad file is delivered. At that stage there is very little room maneuver if things go wrong. In one case, we reduced cycle times by 30 per cent by getting involved early when there are more opportunities to streamline the process so files are produced once and produced right. 'This means we don't have to re-charge work – even when we CAN recharge it – and we don't put undue constraints on the creativity of the designer. This is where project management and accountability come into the equation. Brands actually want somebody to control the process.'

This is particularly true where the label is part of a range of different packaging types and color consistency has to be maintained across cartons, flexible packaging, PoS displays and labels. Vilser stressed the importance of obtaining physical samples of each product and using spectrophotometers to measure colors scientifically. More brands are now insisting these measurements are made.

It was pointed out that the average incumbency for a brand manager is around 18 months, so the process of education and communicating is a work-in-progress!

The panel also noted the increasing importance of private label brands, a sector that in Europe has visual values as high as the major global brands.

Uncertain future?

Marketing and brand managers' inability to predict which form of product decoration will succeed is reflected in the tough equipment choices facing ➲

converters. Ideally, we should aim for a flexible production capability. At Labelexpo we saw roll-fed presses which can handle a wide range of substrates with minimal adjustment. Mark Andy Comco – one of the sponsors of the LPIA conference and represented by Gary Gates – has long been pushing this message thru its MSP Proglide press. Some LPIA members have already taken the plunge into setting up flexographic roll-fed divisions with Proglide presses to complement their sheetfed operations, and other delegates expressed to this writer an interest in the new generation of roll-fed offset machines.

Nobody put the new mindset better than Kim E Cooper, regional vice president of Southern Graphic Systems, who set out to challenge the industry's preconceptions with a number of pithy stabs: 'Firstly, do not pitch to the end user the latest version of your press. They are not interested. Secondly, change before you have to.'

e No.307

What is the LPIA?

The LPIA is an 84-year-old association dedicated to printers engaged in the manufacture of federally regulated labels, wrappers and packaging for food, beverages, household products, personal care products, hardware products and appliances. The membership produces individually cut, glue-applied cut & stack labeling products.

The LPIA today incorporates some of the most powerful and influential sheetfed label converters in North America. The president of the 2003 executive committee is Hammer Litho's Jack Turan and the vice president is Dick Macy from Fort Dearborn. LPIA secretary/treasurer is Mark Glendenning, president of Inland Printing Company. Converters represented on the executive board include Renaissance Mark (John Nicely), JW Moore (Gary Moore) and Smyth Companies (Anthony Parker). A group of key suppliers are also involved as associate members, currently including Vacumet Corporation (Tom Glas), Smart Papers (Paul Simpson) and Flint Ink (Jeff Alexander). For more information contact executive director Laurie Reynolds (lreybolds@printing.org).

The LPIA benefits from being a special interest group of the Printing Industries of America (PIA) organization, which lobbies on behalf of the wider US print industry.

The PIA's executive vice-president/public affairs Benjamin Y. Cooper, updated the conference on the group's lobbying commitments, including postal service reform – vital to the future of the US print industry – the 'growing threat' from China, and the current favorable taxation regime for capital investment.

On trade issues, Cooper identified the threat of end users moving to China and Mexico for their print requirements. 'A two to three day turnaround is important for end users now, but that might not be the case much longer for some of the big box stores.'

Cooper accused some manufacturers of cynically printing 20 per cent of their requirements in the US to gain the coveted 'Made in the US' mark, while the rest of the job goes abroad.

'The government does not know how to protect manufacturing industry while finding markets for manufacturers outside this country,' said Cooper.

Cooper said that NAFTA is not causing a loss of US printing business – rather it is fluctuations in exchange rates between the participating countries.

On a more positive note, Cooper pointed out that recent taxation changes for capital investment mean 'this is a wonderful time to be in manufacturing, just as soon as the economy starts to turn and overcapacity ends.' There are some blackspots. For example in Illinois the PIA is fighting a battle to reinstate printers' exemption from taxation on print-related consumables.

LPIA will be holding its 2004 Spring Technical seminar from 25-27 April at the Adolphus Hotel in Dallas, Texas, with the 2004 Management Conference between 23-26 October at the Silverado County Club & Resort in Napa Valley, California.

During the delegates' reception dinner, Jim Vest, former president of Smyth Companies/Bedford was inducted as the fifth recipient into the LPIA Hall of Fame.

Technology change

Krones' John Muha was heavily promoting ToppCure, a cut & stack technology which uses a UV-curable adhesive to apply the OPP label on a modified cold-glue station. Developed jointly by AET and Krones, ToppCure is claimed to give a clear PS look at half the cost, since there is no liner. Muha said it was initially a challenge to overcome the milky appearance of the cured adhesive. 'We're about there now,' he added. Presentations of new technology developments were made by Kelvin Tritton from UK-based research institute PIRA, and Len Shaffer, director of global technology at Flint Ink.

Shaffer looked at the range of value-added inks and coatings available to label converters, with a particularly interesting focus on progress made in printing RFID antennae – the one factor that could decisively cut the per-unit cost of this exciting technology (See the article on p48. of this issue of L&L for a more in-depth analysis).

Kelvin Tritton asked why digital print has not taken off in the labels sector, despite the presence of shorter runs, JIT, customization and centralized digital brand management. He concluded that, the quality of digital print is perceived as relatively low compared to offset (although not necessarily to flexo), while the systems remain slow compared to conventional presses. Tritton pinpointed restrictive color rendition – for specials, metallics and fluorescent – narrow machine widths below 20in (not for inkjet), high consumables and maintenance costs and substrate and imaging restrictions. 'These factors have limited digital presses to prototyping, marketing samples, ad-hoc short runs and customization, which are all a long way from mainstream volumes,' concluded Tritton, who conceded that all these limitational factors are improving on the new generation of machines. 'The future is digital, but what form and what timescale?'

e No.308

Rotary offset Revolution

Drent-Goebel has brought to market a revolutionary sleeve-based system claimed to overcome rotary offset's limitations with changing repeat lengths. **Andy Thomas** reports from Holland on one of the first production machines

Changing sleeves during makeready on Drent Goebel's VSOP press

Drent and Goebel were companies with a long heritage before they merged under a holding company two years ago. Dutch-based Drent Graphic Machines has been manufacturing rotary offset printing presses since 1938, while Germany's Goebel was founded way back in 1851.

More recently, both companies were major players in the business forms market, selling between them thousands of offset print units and ancillaries. When the bottom fell out of that market in the 1990s with the advent of on-demand digital color print, the new, combined company started looking for wider markets for its in-line offset technology.

Some Drent customers had already begun looking at printing film on their forms presses using UV curing offset inks, leading to the realisation that here was a market, dominated by CI flexo and gravure, ready to be opened up to offset.

This led Drent to develop the shaftless Vision press six years ago. Thousands of Vision print units have now been sold into applications as diverse as paper, foil, film, stamps and banknote production.

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When it comes to packaging, however, there is a major obstacle for offset to overcome: the inability to change plate and blanket cylinders with a change in repeat length.

On the Vision press, for example, it is necessary to exchange the whole plate, blanket and impression cylinder assembly when the repeat is changed. Apart from the cost of buying multiple inserts, it can take up to one hour to change over print units.

The solution was found in the flexo market's use of sleeves. In Drent-Goebel's Variable Sleeve Offset Plate (VSOP) concept, plates and blankets are mounted onto different size sleeves which match the required repeat lengths.

There are already six orders for the VSOP press, one from a German label printer and from converters in Switzerland, France, Turkey and Belgium. L&L was lucky enough to catch one machine before it was shipped.

This VSOP press was configured as a UV offset machine with six printing towers and two UV curing units after the final print station (inter-station UV units are optional). The press was using Opaltone inks supplied by Sun Chemical, but without the Black (CMY+RGB). The black was printed out of six colors. 'We're not especially promoting these inks, but it's worth pointing out that with a 7-unit press using CMYKRGB Opaltone inks a printer will never need to change the colors,' commented Rob Meij, VSOP product manager.

The VSOP press widths are 520mm (20.5ins) and 850mm (33ins), with a repeat range infinitely variable between 381-762mm (15-30ins). Maximum speed is 400 metres/minute (1,300 ft/minute). The VSOP will handle material in a range between 10 - 350 micron and was shown changing between 20 micron unsupported OPP, folding carton and self-adhesive labelstock.

The press is shaftless – with all axes driven by servo motors – and modular, so UV flexo or Screen units can be inserted at any point for coating, varnishing or metallics. Drent Goebel has already supplied a press with five offset units, two Screen units and a laminating unit with two flexo heads to apply adhesives. The printing order can be changed in a matter of minutes.

During the demonstrations, plate and blanket sleeves were exchanged in less than a minute per unit. When the changeover process is initiated, the operator-side supporting frame moves down and air is pumped thru the pneumatic cylinders,

VSOP Press

unlocking the plate and blanket sleeves, which are then easily removed. The sleeve weighs in at less than 10 kilograms.

After the new plate and blanket sleeves have been positively located onto the cylinders, they are locked in place by vacuum and the servo registers the plates to a datum point. The inking rollers move automatically into contact with the new plate sleeve. If the substrate is to be changed, the thickness is input at the press console and the web is automatically moved up to the new impression settings.

The press consol has a CIP3 link which pre-sets the ink ducts from pre-press screening data, including a learning function which helps optimize ink coverage each time a job is repeated.

The offset plates are prepared outside the machine on a special sleeve mounting unit. The operator bends the plate ends and locates them into grooves in the sleeve using a pressure roller, registering to special marks which ensure the plate is mounted square. The plate is then locked up. With practice a plate can be mounted in around 30 seconds. So tight is the fit that it takes a vacuum pump to release the plate.

Drent-Goebel is now working on the direct imaging of plate cylinders sprayed with photopolymer and a gapless blanket. Advantages will include tighter register control with the elimination of plate 'bounce', and the ability to print to the edge of the pack. Plus, of course, you no longer need plates!

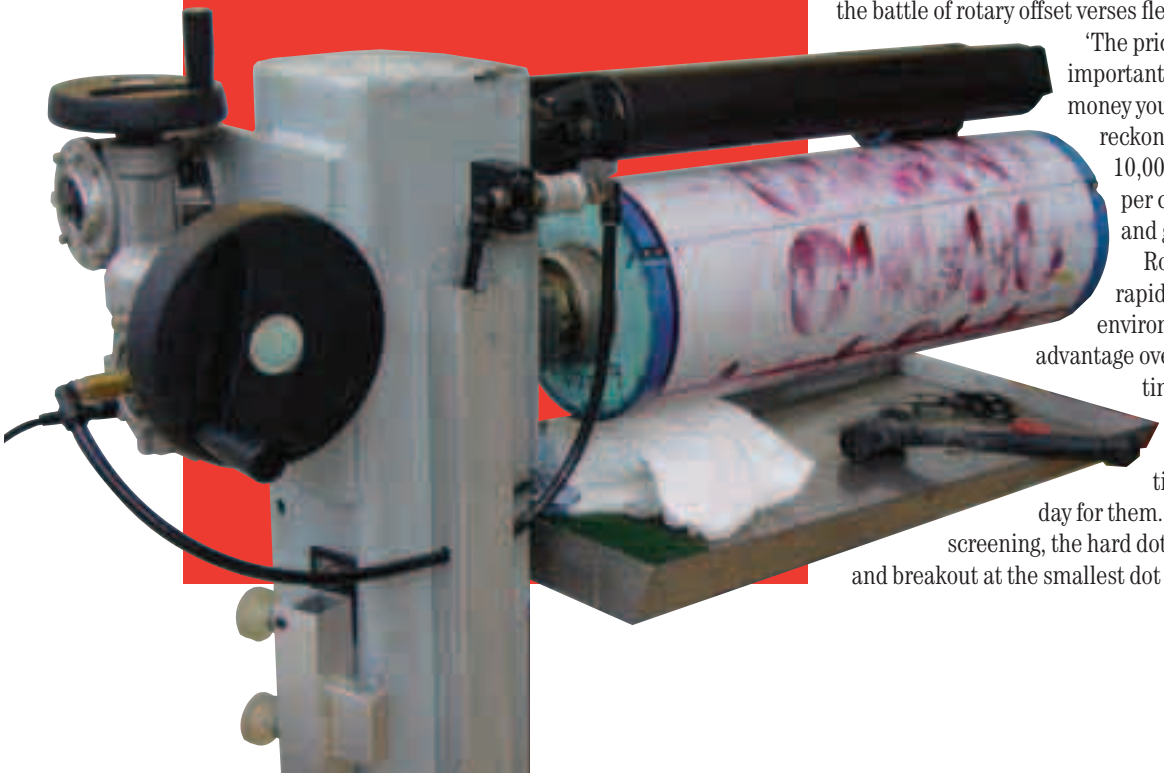
Rotary offset vs flexo and gravure

The packaging sector is a battleground for competing print processes, and is unique in this respect. Rob Meij himself came from selling flexo ancillary equipment to labels, film and carton converters, and came to appreciate the advantages of in-line, one pass production over sheet-fed offset. Now he is fighting the battle of rotary offset verses flexo and gravure.

'The price of a machine is not important – rather it's how much money you can make from it. We reckon that at a run length of 10,000 sq metres this press is 40 per cent cheaper than CI flexo and gravure.'

Rob Meij points out that in a rapid turnaround, short run environment, rotary offset has the advantage over flexo of greatly reduced time and complexity in plate making and mounting. 'We can produce plates just-in-time and not have to wait a day for them. Then flexo has limitations in screening, the hard dot limitation with vignettes, and breakout at the smallest dot size.'

Unit for mounting offset plate onto lightweight sleeve.



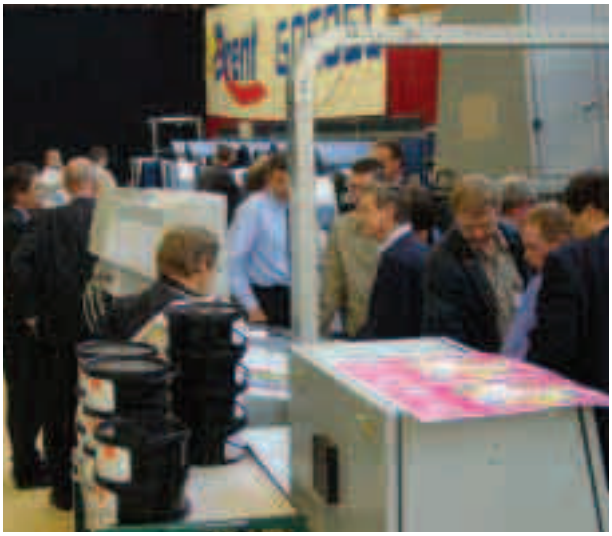
Meij pushes hard the advantages offered by standardisation in the offset process, which helps retain color consistency across a range of substrates: 'Today as runs get shorter and the price paid by the end user decreases, you have more chances with a one-stop shop that has the ability to convert a wide range of materials. But in flexo and UV flexo there is different repro for a carton, label and flexible films. With offset it is the same repro curve and the same quality. There are two different worlds between offset and flexo. Flexo has no rules.'

Meij gives the example of one VSOP purchaser who was printing pressure-sensitive (PS) labels on a 330mm-wide water-based flexo press. 'Sixty per cent of the work for one customer was PS. But when they changed to IML he was not able to convert IML on WB flexo and on a narrow web press. He needed the greater width of 500mm and went for our machine although it was much more expensive.'

Meij concedes that offset press operators are more expensive and require specialist training. 'A taxi driver could operate a flexo machine. Offset printers need to be educated – they need to have the 'offset eye'. It's better for print to invest in educated people. Also the VSOP press can be run with just 1.5 operators.'

Start-up waste is always seen as a problem with rotary offset, particularly when running expensive laminates.

But Rob Meij says that with improved ink and water pre-setting systems make-ready time is getting shorter and shorter, particularly for repeat jobs. 'We print 100 meters/minute then store the results. Then we print 200 meters/minute and store the results. The system is self-learning and keeps the same ink/water balance as the speed ramps up and down. Also, we save waste at the matrix rewind by using the correct diameter sleeve.'



Visitors to VSOP open house

Drent-Goebel is currently working with the TNO Nutrition and Food Research institute to ensure that the UV offset printing process is approved on any food packaging substrates, flexibles included.

Xeikon returns

In the dark days of 2001, digital press manufacturer Xeikon filed for bankruptcy in a move that shocked, but did not surprise industry observers. Now Xeikon is back under strong new ownership and seems to have learned the lessons. **Andy Thomas** reports

Competition is good for any industry, not least on the cutting edge of digital label printing. So it was bad news for the labelling industry as a whole when one of its digital pioneers went bankrupt in 2001.

Xeikon's technology was saved by one of its key component suppliers, Punch International. Despite the fact that not many in the labels industry had heard of Punch, the group is a major global player in the supply of electronics subsystems. It supplied Xeikon with its paper conditioning units. Besides this Punch, is a major OEM supplier of imaging systems to the newspaper pre-press industry, including Strobbe and Agfa's Polaris CTP system. The €200M turnover group is also a major subcontractor to the consumer electronics industry. It has some 3,000 employees worldwide with manufacturing units in Belgium, UK, Mexico, China and Eastern Europe.

Speaking to Xeikon's top management today gives one the impression that lessons have been learnt from the bankruptcy and a clear and credible strategy forged. Here are the highlights:

- The black & white Nipson division is gone. The costs of the acquisition were a factor in Xeikon's initial financial troubles
- work on the CSP cut sheet press has been stopped so development can be focussed on the roll-fed product
- the only OEM relationship remaining is with IBM.

In the past OEM partners in the labels sector have included Nilpeter, Mark Andy, Agfa and MAN Roland, while Xeikon sold its own badged machine. Nilpeter, the most successful developer of digital presses with the Xeikon engine, has reduced its commitment to servicing digital press finishing lines. The relationship with MAN Roland is 'as good as halted' as the company focuses on its core offset business. The technical support situation for existing users will be dealt with on a country-by-country basis. Xeikon UK, for example, is now a separate company which operates with the support of MAN Roland.

In key European countries – Scandinavia, Germany, UK, France and Italy – it will be direct sales operations and in secondary but important markets independent distributors who can demonstrate a high level of expertise. Subsidiary operations will distribute and support the presses in Japan, Australia and the US.

Xeikon now has the resources of the global Punch International group behind it

"The Labelsprint was shown with an in-line D-Coat modular finishing system with UV coating, lamination unit, digital rotary die cutter, slitter and matrix rewind. Interestingly, a BST Vision video inspection system was also incorporated"

Labelexpo and beyond

Xeikon announced its comeback at Labelexpo Europe last September, where it was showing the LabelSprint line based around the DCP 320 S press first introduced at Labelexpo 2001. 'We were really impressed by the attendance at the show and by the level of familiarity printers showed with the machine,' says Jef Stoffels. 'It convinced us that we should concentrate resources on the labels sector.'

The Labelsprint was shown with an in-line D-Coat modular finishing system with UV coating, lamination unit, digital rotary die cutter, slitter and matrix rewind. Interestingly, a BST Vision video inspection system was also incorporated. One One Xeikon customer in the US already has a press specially set up with an on-line camera to inspect pharmaceutical labels, scanning every image against a master within a certain error range. The camera is linked thru to the digital die cutting unit. If the computer 'fails' a label, that label is not cut, and a message is sent back to the press to print it again.

An interesting innovation on the D-Coat line is Supergloss, a varnishing system which eliminates the raster generated by an anilox roll and creates a smooth surface. The system works by 'ironing' a roll of material against the substrate, which is then rewound and reused.

Labelexpo saw continuing development of laser die cutters, but Jef Stoffels does not believe the technology is yet right for his customers. 'It is still too ➲

Labelexpo Brussels marked Xeikons return

Buffer zone on Xeikon Sprint

expensive, and there are some defects, like on some materials the toner is blistered and burned round the edges. Ultimately, however, laser cutting has to be the solution for digital presses.'

The Labelsprint is driven by the Intellistream front end, inherited by Xeikon when it acquired Agfa's Digital Printing Systems division. Enhancements in the latest 3.6 version include professional imposition, step & repeat, color management and managing cut marks for the digital die cut station.

The Xeikon presses can be supplied in 22 and 50 cm widths. The Simplex DCP 320 S is specially developed for pressure-sensitive labels applications and differs from the Duplex (two side printing) press by a 'pre-fix' unit which heats the backside of the web to reduce the amount of time the material spends on the heated fixing drum.

This points up a continued limitation of the press in dealing with heat-sensitive substrates, since the suspended toner particles have to be heat fused to the substrate. Thermal papers and polyethelenes are particular problems.

One Xeikon press user, Lerchmueller, has found an interesting way round the problem by applying a silicone coated backing liner to the heat sensitive PE face film. This reduces the amount of heat which reaches the face material from the fixing drum. The company is also pioneering post-application of a heat transfer gold to the labels.

Xeikon maintains a specialist solutions unit called ISIS, which designs solutions for specific applications in terms of substrates, finishing and workflow, as well as trouble-

shooting. It work has included installation of a cooling fan inside a 320S to lower the temperature of the web.

There were early reports of arcing caused by metallic substrates, but this has not proved to be a problem.

Another limitation which has caused some users to hesitate over the Xeikon press is its five-unit configuration of CMYK plus a White, while HP Indigo, for example, has moved to a seven-color system (although printing seven colors severely reduces the speed of the press). 'Our print engine delivers consistency and a wide gamut which can be more important than printing Pantones,' says Jef Stoffels. 'In the pharmaceutical sector and big brands Pantones are very much negotiable.'

Where spot colors are an issue, Xeikon announced at Labelexpo the availability of special or spot colors for bespoke applications. The first customer to make use of this facility is Straub Druck, which prints for Deutsche Post and needed a warm yellow house color. The warm yellow simply replaces the yellow toner, then the press is programmed with a compensation curve for the CMK stations. The spot color can be used either as a fifth print unit – replacing the white – or as a replacement on any CMYK color station. In either case, the press is not slowed down. Xeikon reckons that 95 per cent of the Pantone range can be covered.

Other new consumables developments include UV reflecting toner for security applications and UV-curable toner with increased scratch and solvent resistance. Xeikon owns the toner manufacturing operation, which came as part of the Agfa DPS acquisition, putting it in a unique position to respond rapidly in R&D.

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Experiences from the field

Xeikon has amassed a considerable amount of data from label printers over the seven years the presses have been in the field. 'In the experience of our users the breakeven point for digital presses against flexographic printing is 500 sq metres, or 25 – 50,000 labels,' says Filip Weymans. 'You don't have to sell the added value, it is purely cost driven.'

Neither Weymans or Stoffels have yet noticed a big move towards variable data label printing, although they confirm the interest is starting and 'quite a few' interesting projects are under way. For example, one Xeikon user has two machines for printing carpet labels which feature complete variable data, including different color images for each carpet design.

Things may be about to change. Xeikon is part of the PODI consortium, which includes big hitters like IBM, EFI and Xerox and aims to increase the penetration of industrial-scale variable data information printing by developing standardised software tools for content creators. Xeikon's IntelliStream 3.6 front end now includes the new PODI data standard PPML. This should be a real help where printers are having to cope with jobs which include large volumes of different barcodes, for example, which can be a nightmare of incompatible database systems.

A comprehensive review of product and image security

With PISEC 2003 regarded as the 'best yet', **Mike Fairley** reviews some of the convention speaker and exhibition highlights at this premier global event in Prague

With continuing growth in globalization, product branding and population migration have become major issues that governments, brand owners and the commercial and security worlds are looking to address. Product counterfeiting, ID cards, asylum controls, secure logistics and global supply chain security are just some of these key issues.

It was to review and discuss these important and topical areas that PISEC 2003 – the international conference and exhibition for the brand protection, product authentication and document security industries – took place in Prague, Czech Republic, from the 20-22 October. Some 44 expert speakers and 215 delegates from 17 countries attended this premier global security event.

Opened by Zdenek Vorlicek, deputy Minister for Industry and Trade in the Czech Republic, the three-day conference, exhibition and awards dinner, was highly praised by all attendees for its wide range of knowledgeable speakers and informed discussion. Displays by some of the world's leading brand owners – including Adidas, Burberry, Celtic FC,Rangers FC, Levi Strauss, Puma, Timberland and Umbro – also complemented the event. During the first day much of the program was devoted to issues of brand protection and intellectual property rights (IPR), examining the scale of the problem and how both brand owners and security technology providers are addressing the issues of theft of intellectual property, fakes (pirated goods, copies, look-alikes, imitations, etc.), and unauthorized usage (stolen).

Bill Duffy of the Image Supplies Coalition – the trade body that represents the intellectual property interests of all the leading manufacturers of inkjet and toner-based imaging systems – reviewed how the industry was now fighting back against widespread piracy through education, investigations, raids and seizures, criminal and civil actions and PR and advertising. This was proving to be highly successful, with millions of illegal products removed from commerce and tens of millions of US dollars worth from retail.

For Microsoft, Cris Skupen, outlined how the software industry suffers from unauthorized sharing and replication across all sectors of the market – with little or no assistance from governments in the form of enforcement. Again, the software sector was fighting the problems in innovative ways.

'Within the EU, particularly with enlargement next year, the challenges of product piracy need to be faced now if brand owners are to protect themselves against the threats of copyright infringements and counterfeiting,' said Doris Moeller of APM, the German Action Group against Counterfeiting.

'In the European Commission Action Plan of November 2000,' explained Doris, 'some five to seven per cent of world trade consisted of counterfeiting and piracy, with €200-300 billion a year lost in revenue and more than 200,000 jobs lost worldwide. Some of the more interesting cases of counterfeiting included chewing gum, shampoo, Vaseline, expectorant (decongestant), cream, cigarettes made of tobacco and newspaper, CD and DVD labels, cake mixture,

215 delegates from 17 countries joined 44 expert speakers at PISEC 2003

> "some five to seven per cent of world trade consisted of counterfeiting and piracy, with €200-300 billion a year lost in revenue and more than 200,000 jobs lost worldwide"

▲ Mike Fairley

condoms and chocolates.' Indeed almost anything that has a brand name and value, that can be counterfeited, is counterfeited.

For companies, the consequences of product and trademark piracy are:

- Lost revenues
- Brand image damage
- Product liability issues
- Legal costs
- Cost of security technologies

While for governments, states and societies the consequences include:

- Tax losses
- Loss of jobs
- Organized crime
- Loss of foreign investment
- Hostility to innovation

Even the consumer, at the end of the day, suffers from a lack of quality in products they purchase, a lack of redress from the counterfeiter, as well as possible health or safety issues with fake pharmaceutical, automotive or electrical goods.

With such major issues and problems with counterfeiting and piracy it is 'unrealistic to wait for governments and supra-national institutions to successfully eliminate the problem,' explained Dr Marietta Ulrich-Horn of Securikett. Therefore, 'brands must help themselves. There are many intelligent solutions offered nowadays, especially in packaging. Both overt and covert.'

'Overt features such as hologram embossing, OVI ink, microtext and fancy screen-printing are integrated into the design of the labels, filmic packaging materials, carton board or sleeves. Tamper-evident closure seals and authentic decorations go hand-in-hand.'

Possible packaging solutions discussed by Dr Ulrich-Horn ranged from a transparent hologram covering some or all of the specific design, to a registered image hologram, a tiny holographic mark – including nanotext and 'authentikett', the complete integration of image and hologram.

In providing a lawyer's perspective, Steven Philippsohn of Philippsohn Crawfords Berwald, looked at how terrorists make use of counterfeiting and piracy, then went on to explain what's being done to stop terrorist funding.

Quoting extracts from the 2003 editions of the *Economist* and *Financial Times*, ➲

Steven said that the 'estimated cost of counterfeit clothing, toys, cosmetics, sports equipment and pharmaceuticals within the EU cost 17,120 jobs and reduced GDP by eight billion Euros. Also, that piracy has cost the music industry £7 billion in the past two years, whilst US film studios have lost $3-4 billion.'

Steps being taken to stop terrorist funding through counterfeiting and piracy now include:

- Ratification and implementation of relevant United Nations instruments
- Criminalization of the financing of terrorism
- Freezing and confiscation of terrorists assets
- Reporting of suspicious transactions linked to terrorism
- Provision of assistance to other countries' law enforcement and regulatory authorities
- Imposition of anti money-laundering requirements
- Strengthening of customer identification measures
- Ensuring that entities, particularly non-profit organizations, cannot be misused to finance terrorism

Specific technical papers covered during the first day of the conference were primarily related to the use of OVD and smart authentication features in product protection.

Haroun Malik, Hueck Folien, reviewed 'Holographic foil protection for pharmaceuticals and other products – an holistic answer to counterfeit protection'. His paper discussed blister as the base material for security features, high security hologram technology, the combination of security printing and foil properties, as well as identification and examination of security elements.

The amazing assortment of devices that now exist, or are under development, to address the special needs of brand owners, was discussed by Sjaak Elmendorp of Avery Dennison. 'Smart' features presented included freshness indicators, damage warnings and temperature recording monitors on-pack.

From Japan, Takao Yokote of the National Printing Bureau looked at how art and technology can be merged to provide innovative security devices developed for product authentication and enhancement of elegant products – thus providing security and assisting the sales process.

Other papers on the first day of PISEC assessed 'the uses of OVD's in high value product protection', 'new DNA stegonography for security marking', 'Nanobarcodes particles' used to provide useful features for brand owners that wish to identify diversion and dilution, as well as product authenticity, and 'Pearlprotect', a novel proprietary authentication technology for use in brand protection.

An overview of tracking, authentication and tracing with RFID provided a further day of presentations and discussion at PISEC, initially with papers covering the latest developments and trends in RFID and 'Smart Tags' in Product Protection and ID Applications.

Opening the program, Jeremy Plimmer, secretary-general of the Product and Image Security Foundation, talked about 'the myths and miracles of RFID', with a paper that covered recent RFID success stories, the business case for RFID and where it will go in the future.

Some of the successes of RFID to date reviewed by Jeremy included:

- Wal-Mart announcing a mandate to suppliers insisting on RFID for cases and pallets
- Texas Instruments doubling its 13.56MHz smart label capacity – 300 million Texas RFID transponders produced to date
- Seven million contactless tickets from ASK used in 40 cities throughout Europe
- A full Electronic Product Code Standard developed for RFID

The successes ranged from access control through the automotive and tire markets to document tracking, product authentication and retail and supply chain management.

Some of the more novel and new uses for RFID were discussed by Trevor Crotch-Harvey of Innovation Research & Technology. These included applications in garment retailing, smart vending and medical devices.

For the garment retailer, credit card size 'dangly' tags were proposed as a way of reducing supply chain shrinkage, improving customer choice by ensuring a complete range of sizes on show and reducing false refund claims. In this application, explained Trevor, 'the client business case demanded a tag for under 5¢, with a range of up to 0.5m, multiple tags in the field, small, label-friendly, form factor, application in a mass production environment and with an unpredictable orientation.'

Other papers in the RFID program included a holistic view of source tagging and the role of RFID in delivering savings into the retail environment – presented by Ronnie O'Callaghan of the Retail Tagging Organisation (RTO). Guido Schelhove of Schreiner ProSecure explained how the linking of databases with RFID product validation and tracking technologies provides unique benefits to brand owners and manufacturers alike.

An interesting presentation on the development of printed batteries to power disposable RFID tags and increase the read range of these devices was given by Nitzan Calik of Power Paper. Seen as an exciting innovation, Nitzan explained how printed batteries are produced and can be integrated into the manufacturing chain.

Papers by Appleton Papers and Rafsec looked at the challenges faced by RFID in product protection and the supply chain and logistics sectors.

Alex Boellard of Rafsec said he was confident that the 5¢ tag was achievable in the retail supply chain market once the major retail groups committed to volume production. This now looks feasible within the next few years.

Although not specifically related to the label or tag sector, one day of the three-day PISEC program was devoted to Identification and Document Protection and was particularly ➲

concerned with currencies, checks, security documents, identity fraud, passports and electronic authentication.

This day provided interesting insights into a range of new developments in digital watermarking, biometrics, holograms, plastic smart circuits and magnetic/electromagnetic solutions. Such solutions may also have interesting technology transfer possibilities to the label and packaging sectors. Aside from the conference and exhibition, the PISEC Awards were presented at the PISEC Gala Dinner held at the Municipal House in Prague.

Certainly PISEC 2003 was highly praised by the many attendees. Mark Rowley of Umbro International Ltd said: 'This was my first time at PISEC, and I believe the first time brand owners have had displays. I have found PISEC very productive, with good interaction with service providers – and also from the respect of having the chance to clearly show and explain the problems within the football apparel industry.'

Glyn Roberts, Pentland Group plc, commented: 'PISEC delivered a good balanced conference which allowed me to look at new security devices to protect our premier brands', while Cris Skupen of Microsoft added, 'the best PISEC yet!'.

The next PISEC convention is being scheduled for June 2005. Date and venue to be confirmed.

e No.300

Fake? or Genuine?

Winners of the PISEC 03 Awards:

Outstanding Achievement in the Development of Authenticity Products

Winner:

B'Secure — for work securing product veracity using novel methods of recognition and inspection systems in a variety of sectors, including telephony and inspection systems.

Highly Commended:

Rako — for authentication OVD's used in product decoration.

Inksure — for covert taggants and tracers used in automatic authentication systems for high speed processing.

Outstanding Achievement in Tamper Evidence Innovation

Winner:

Hueck Folien — for work in securing drugs from dilution and substitution with appropriate packaging protection in the form of security foils and films.

Highly Commended:

AOT — for decals developed to protect vehicle registrations in the USA.

Avery Dennison — for tamper evident label substrates.

Outstanding Achievement in Anti-forgery Technologies

Winner:

Security Transfer — for check protection systems specially developed to help banks identify alterations on machine-readable credits.

Highly Commended:

MediaSec — for digital watermarking devices.

Crown Roll Leaf — for lamination systems for ID cards and drivers licenses.

Outstanding Achievement in RFID for Product Protection

Winner:

Power Paper — for developments in printed battery powered labels to assists in product identification.

Highly Commended:

Bielomatik — for work in integrating RFID inlays with labels and documents.

CCL Smartlabel Solutions — for smart wristbands for use in hospitals and theme parks.

Trade Award for Promoting 'Best Practice' in Product and Brand Protection

Winner:

Image Supplies Coalition — for organizing raids where necessary and advising on protective issues where applicable.

Highly Commended:

REACT UK — for liaising with customs, brand owners and trading standards to make the task of product piracy as difficult as possible.

Intel — for innovative methods of deterring product remarking scams.

The PISEC Awards are selected annually by the Trustees of the Product and Image Security Foundation and are determined by reviewing all published information and conference papers over the previous twelve months. More than 100 companies' products are studied each year to determine those that merit Awards.

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High intelligence on conductive Inks

Printing antennae onto RFID labels could significantly lower the unit cost, as L&L discovered in this Q&A with **Dan Lawrence**, director of technology and commercialization, Precisia LLC.

Speculation about radio frequency identification (RFID) abounds, but one thing is clear: RFID is set to become the bread and butter of the global supply chain. Business and industry pundits agree that companies that miss the boat on RFID have much to lose. Cost constraints, however, have inhibited company investment in RFID technology, particularly at the retail level.

Flint Ink, the world's largest privately owned ink manufacturer, is actively developing conductive inks aimed at reducing the per-unit cost of RFID tags. Cost-effective RFID tags offer tremendous benefits for real-time retail supply chain management, and for smart labeling and packaging applications. In January, Flint Ink announced a multi-million dollar commitment to developing conductive ink technology. In August, the conductive ink group became an independent entity with its own name: Precisia LLC.

We spoke to Precisia's director of technology and commercialization, Dan Lawrence, to gain a better understanding of the current uses and future potential for conductive inks in RFID applications. Lawrence has been actively working on conductive ink technology since 1999 and spearheaded Flint Ink's participation in MIT's Auto-ID Center, which along with its global counterparts, has become the premier research center in the development of RFID retail supply chain solutions.

What are conductive inks?

Conductive inks allow electricity to flow, so the inks can act either as wires, resistors, or antennas. They may be comprised of either finely dispersed conductive particles, or more exotic materials such as conductive polymers. The inks are used to produce conductive patterns on both flexible and rigid substrates. For RFID, conductive inks serve as antennas that receive the wireless flow of information from an RFID-enabled computer.

What applications can conductive inks be used for?

The most well known application for conductive inks has been in circuit boards where using etched copper is not an option. Our efforts have been focused on using high speed printing processes to print antennas for RFID. RFID is the tool used in automatic identification and data collection systems (AIDC or auto-ID), the next generation of barcoding technology for supply chain management systems. It is also used in smart labeling and packaging applications.

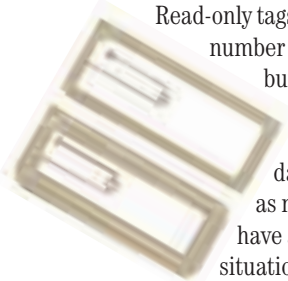
Let's step back for a minute. What exactly is an RFID tag?

RFID tags are comprised of two essential components: a silicon chip and an antenna. The chip receives and transmits data, such as a product identification number, using the antenna. These components may exist either as a separate label, or may be integrated directly onto packaging material. The data on the chips can be accessed by a radio frequency signal created by a 'reader,' which is an electronic module connected to its own antenna and a computer network. The reader sends a specific signal from its antenna to the RFID tags in the immediate area. These tags then respond with an answer, again such as their unique identification number, which the reader processes and conveys to a computer network. A salesperson interested in knowing which and how many products are on a shelf, can check through the store's inventory network to determine product availability, in real-time, through a reader assigned to that shelf.

What is the difference between active and passive RFID tags?

RFID tags fall into three broad categories: passive, semi-active and active. Passive tags are the most simple and consist of the components described in my previous answer. They obtain power from the radio frequency field of the reader and, therefore, do not require an integrated power source. This makes them the most inexpensive form of tag. Semi-active and active tags utilize an on-board power source to achieve either greater range or the ability to record data from some sort of sensor. These tags are usually of greater complexity and, therefore, greater cost; although this can be offset by greater functionality.

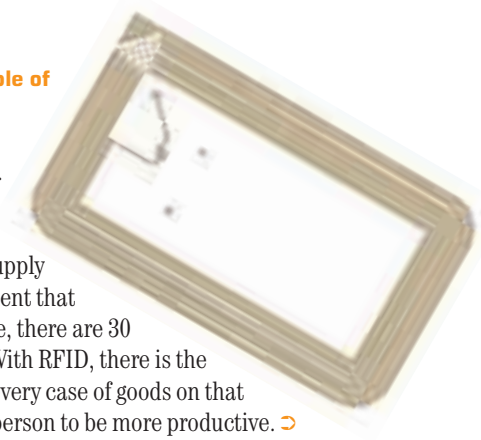
Another difference between tags is whether they are read-only or read/write.



Read-only tags are given an identification number that cannot be changed, but in most cases can be read multiple times. Read/write tags allow the data on the tag to be updated as necessary. Both approaches have advantages in certain situations.

Are RFID antennas printed with conductive inks as powerful as traditional copper coil antennas?

Precisia is exploring the use of inks in place of stamped or etched metal antennas at the various frequency bands used for RFID. For instance, we have seen that ink antennas compare very favorably to copper at ultra high frequency, UHF (860-950MHz) and Microwave (2450MHz) frequencies. At high frequency, HF (13.56MHz) the physics means that an additional processing step, such as elevated temperature or electroplating, can be used to make an ink work as efficiently as the coil antennas presently used.



Can you provide a concrete example of how RFID is being used today?

One of the most talked-about uses of RFID is in supply chain management. With barcodes, a direct line of sight to the scanner is usually required to track an object at points within the supply chain. This requires human involvement that can be time consuming if, for example, there are 30 cases of product to scan on a pallet. With RFID, there is the opportunity to automatically record every case of goods on that pallet in seconds or less, freeing the person to be more productive. ➲

> "Solution' is the key word in business these days. Successful companies partner with the best thinkers, researchers, and technicians in particular areas to collaborate on single-source solutions"

Additionally, as cases are removed from the pallet and placed on a store shelf, the system can automatically update the inventory and order more as necessary. As tags become practical for individual items, out-of-stock items – a headache for both retailer and customer – will become a thing of the past. Auto-ID significantly reduces the cost of supply chain management because it allows for faster, more detailed inventory control.

What are the benefits of using conductive inks for RFID?

One of the major challenges in the widespread use of RFID for retail solutions is cost. Today, RFID tags cost between 30 and 60 cents each. For luxury products that can easily absorb a 50 cent per unit cost, RFID is an excellent inventory-tracking device. The search for cheaper tags, however, is critical for RFID use in lower-cost consumer goods. A 50-cent tag on a $2.00 tube of toothpaste, for example, is cost-prohibitive.

Conductive inks are a cost-effective solution to the unit cost of RFID in two ways. First, the material cost of conductive ink can be much lower than that of traditional stamped or etched metal antennas. Stamping and etching processes are referred to as subtractive, because they disregard unused metal. Second, and more importantly, because high speed printing processes are both fast and additive, applying a conductive ink antenna or circuit can be significantly cheaper and faster than the alternatives.

Conductive inks have traditionally been applied using screen printing. As a member of the Auto-ID Center, Precisia is actively working with leading technology companies specializing in offset lithography, flexography, gravure, and screen printing for conductive ink applications. In January, Flint signed an exclusive agreement with R.T. Circuits to license its lithography technology for printing conductive inks.

This is an important development because we expect many companies, particularly large-scale retailers, to ask suppliers to put RFID tags on products before shipping them.

What are 'smart' labels or packages, and what role do conductive inks play in this technology?

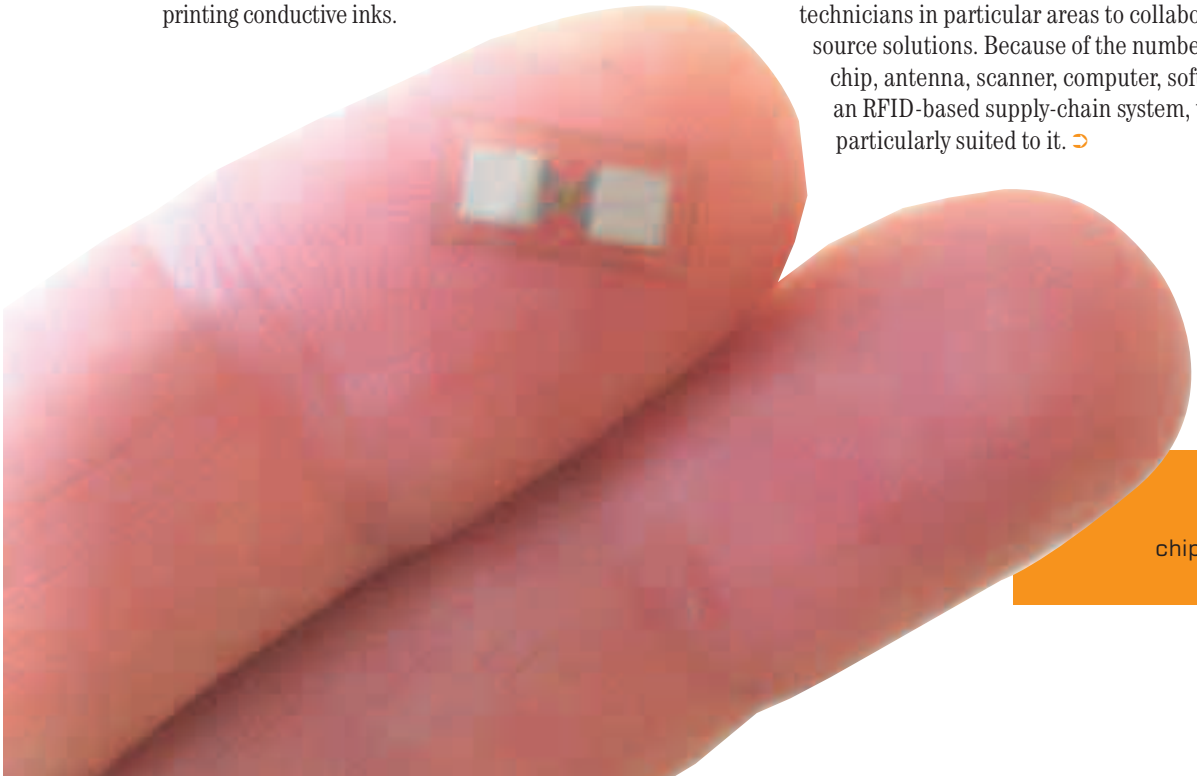
Smart labels have functionality beyond that of traditional information labels. They may contain RFID tags, covert or overt brand protection indicators, or sensors that alert the user as to the status of the product. Depending on the application, inks can be integrated to interconnect label components, act as sensor arrays, and function as RFID antennas. Smart labels provide manufacturers, distributors and customers with real-time visibility in inventory, and can help a manufacturer monitor conditions and location anywhere in a supply chain system.

What industries stand to benefit from these smart labeling and packaging technologies?

Smart labels can be used to monitor the temperature of perishable goods in shipment. Many packaged foods and pharmaceuticals must be stored and shipped at precise temperatures or risk contamination. A smart label using a special chip, conductive ink antenna and sensor would be able to gauge the temperature in shipment and alert a supplier to harmful shifts in temperature. There is also tremendous potential for smart labeling applications in anti-counterfeiting strategies, of particular importance to the pharmaceuticals industry.

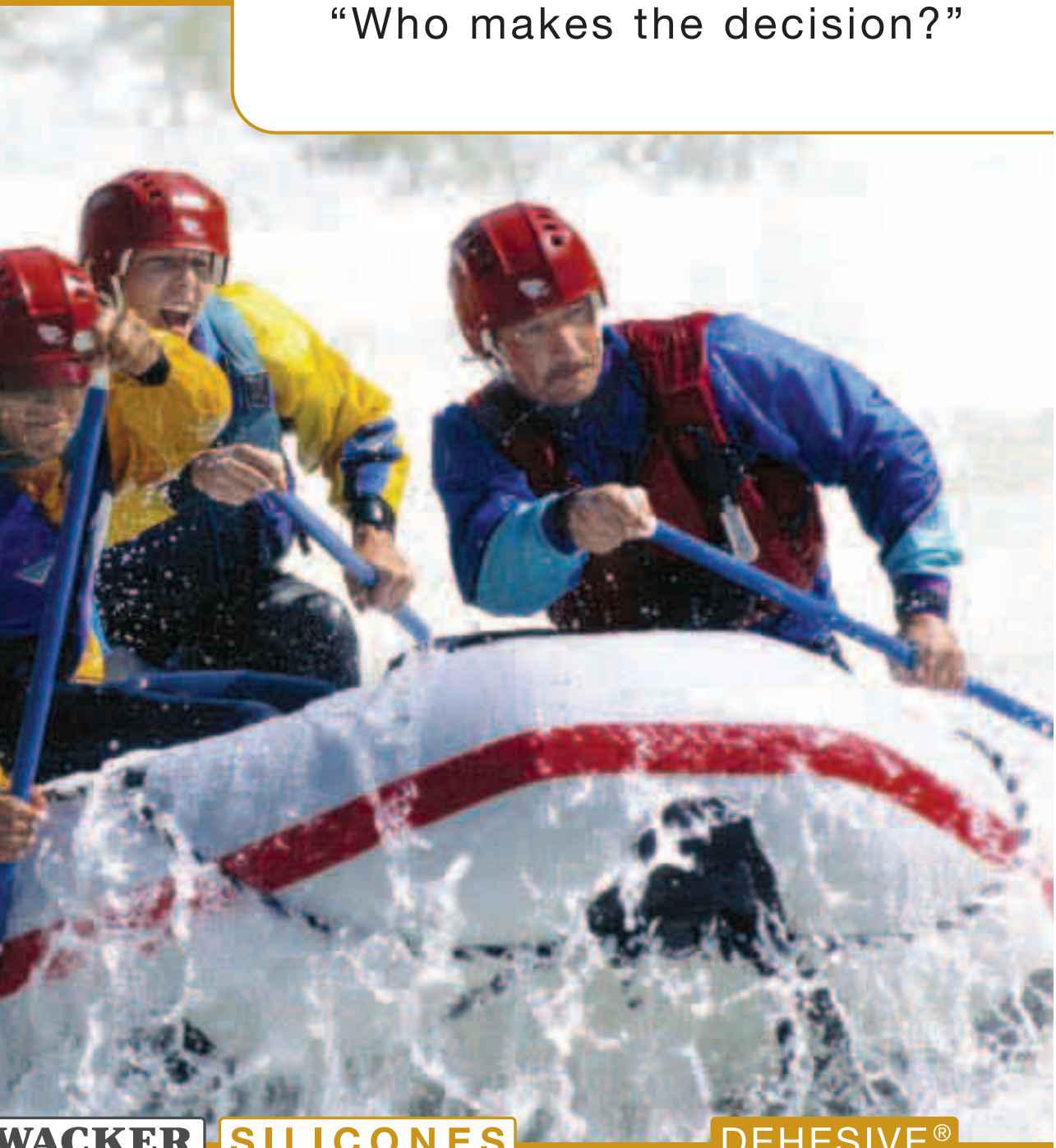
So conductive inks are part of an integrated RFID supply chain solution?

'Solution' is the key word in business these days. Successful companies partner with the best thinkers, researchers, and technicians in particular areas to collaborate on single-source solutions. Because of the number of elements – the chip, antenna, scanner, computer, software – that make up an RFID-based supply-chain system, this approach is particularly suited to it. ➲



At your fingertips: RFID chips can receive and transmit data.

“Who makes the decision?”



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Straight to the point: RFID solutions the size of a pin

> "because high speed printing processes are both fast and additive, applying a conductive ink antenna or circuit can be significantly cheaper and faster than the alternatives"

In the past year, Precisia and Flint Ink have formed a number of strategic alliances to help move passive and active RFID technology from the lab into the real world. We are developing relationships with chip manufacturers, reader companies, integration firms and tag manufacturers to find the best solution for our customers. In addition, we will be able to work closely with Flint Ink's core printing and packaging customers to help broaden the application of the technology.

What's in store for the future, in a world with RFID technology?

There is a lot of talk about the future with RFID, but I do want to be clear. Precisia's conductive inks are already being used in RFID applications for smart labeling and packaging, warehousing and are being tested for retail inventory. And, yes, the future does look bright. So let's talk about the 'smart' retail outlet of the future.

Suppose a store shelf is nearly empty of a popular product. Today, a store clerk must notice the shortage and restock the item. With RFID, a computer could send an e-mail or page the clerk to alert her of the shortage. The store could then automatically forward a notice to the distributor and manufacturer of the product, requesting that more be produced or shipped earlier. Everyone benefits: the consumer (desirable products are available); the store (greater sales volume); and the manufacturer (better production scheduling, more accurate marketing and higher profits).

With conductive inks, and the right partnerships, this reality is much closer than you think.

Dan Lawrence joined Flint Ink in 1994 (Precisia LLC is a separate business unit of Flint Ink Corporation). His research background includes electron and photon microscopy, polymer crystallization, surface science, image analysis, and electronics. He is Flint Ink's and Precisia's representative to the global Auto-ID Center initiative, and has conducted research related to RF propagation at the Center's labs at MIT.

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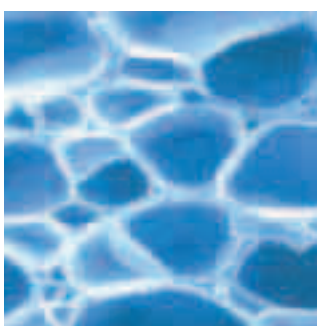

variation in tape thickness in each roll. This means consistent and reliable print repeat length. With high density foam tesa 52015 is suitable for combination printing while a low density foam makes tesa 52017 ideal for process and vignette work.

With safe fixing and the ability to remove plates without damage as a result of the same adhesive technology found in

The role of silicone in the pressure sensitive market

Silicone release coatings should not be seen as mere commodities, argues **Luc Dusart**, Global marketing manager for release coatings, from the Pressure Sensitive Industry group of Dow Corning

With so much attention today on innovative facestocks and liner substrates, it's tempting to believe that silicone release coatings are becoming a mere commodity. However unglamorous these material may be, they do not share the common characteristics of commodities:

- Large choice of alternative solutions
- Virtually no cost of substitution
- Negligible Time to change
- Limited service associated with the product
- Price the key decision criterion

In fact, there are no real alternatives to silicones, either from a cost or performance standpoint. No organic material can match the performance. Some materials such as chromium stearates (known commercially as Quilon) and Teflon have been evaluated as potential 'silicone-free' replacement materials, but the overall release performance cannot match silicone. Silicone release coatings play a key role in the processing and performance of pressure-sensitive constructions.

Global silicone release coating market

The market for silicone release coatings is unusual in the industry because silicone is one of the few products that are not captive, as opposed to paper or films. What follows is Dow Corning's appraisal of silicone release coating consumption for 2002*.

We estimate that the total market for silicone release coatings is in the region of $270M. Markets in Europe and the Americas each account for a little over a third while Asia accounts now for more than 25 per cent of global silicone consumption.

Demand for silicone release coatings should grow throughout 2004 and 2005, as laminators and trade coaters continue to invest in machine upgrades. New coaters, particularly those using solventless silicone technology, are in the pipeline and will soon be commissioned.

Solventless silicone technology dominates globally with approximately 65 per cent of the market. Over the years, thermal solvent-free systems have gained share on every continent. However, a good portion of solvent based products still remains – about 17 per cent of the market – largely due to the strong presence of solvents in the Asian area. Emulsions represent 13 per cent of the market and are mainly used in specific applications such as bakery release, sanitary napkins and envelopes. UV continues to progress but at a much slower rate than anticipated five years ago.

Factors affecting the silicone market

The best place to begin examining trends impacting the pressure-sensitive label industry is with consumers. Everything we do in our day-to-day life is driven by consumer behaviors. Fast moving consumer-goods companies like Procter and Gamble, Unilever, Nestle and Colgate have to turn consumer needs into product and packaging requirements.

Once the label requirements are defined, then comes the time to define which facestock and adhesive will be used, followed by the liner choice and ultimately which silicone will be chosen.

This is only the beginning of a long value chain where many conversion steps will take place like slitting, printing, die cutting, matrix stripping and label dispensing. Any issue for ➲

one of these steps has potentially an impact on the choice of the raw materials, as all the steps are inter-dependant.

Besides technical requirements, there are important external factors like cost, the ability to supply customers on a global basis, the effects of certain technologies on environment and compliance with different countries' regulations.

Silicone is robust and versatile, so it is not necessary to develop a new product for every combination of factors. The key challenge for the most demanding process conditions is to develop a very fast curing system with minimal impact on bathlife, thin film bathlife, anchorage stability and release stability. This is really the core expertise of silicone producers.

industry consolidation

One industry trend that impacts everyone is consolidation. There have been various acquisitions and mergers in the last three years. This has considerable impact on silicone producers. In 1999, the top three customers together purchased about 40 per cent of the total volume of solventless silicone release coatings in Europe. In 2002, those top three bought over 60 per cent. The top 15 customers accounted for 90 per cent of the solventless silicone consumption in 2002 as opposed to 80 per cent in 1999.

This consolidation has many consequences for the supplier-customer relationship. As major buyers consolidate they are becoming global and trying to move to global sourcing. They are using their increased influence to control suppliers and improve the supply-chain efficiency. This means that for suppliers to succeed, they must align with market leaders; make products, especially new ones that are available globally; qualify systems with local production managers and plant personnel around the world; and reduce costs by improving productivity and eliminating steps that do not add value.

There are also market related consequences of consolidation. First of all, with large companies growing, there is much faster technology transfer and harmonization than before. Secondly, as customers become bigger, they will inevitably have to be very efficient with their mega-plants to leverage their economy of scale. This will accentuate the gap between high volume applications and specialty markets. Third, information management and information protection will become more critical. It will be very important to build good trust and co-operation to generate growth and innovation together.

Pressure to reduce costs

It would be much too narrow to summarize cost reduction as simply price reduction as there are many ways to optimize costs.

- Increased coating line speed:
  Some of the fastest industrial coaters run above 800 or even 1,000 meters/minute. This trend for higher line speeds has led to interesting silicone innovations like efficient anti-misting additives, design of continuous mixing systems and new fast curing polymers.
- Energy savings:
  Customers are trying to achieve energy cost reductions by reducing curing temperatures.
- Increased converting and dispensing speed:
  Today's filling machines and labeling units are able to go up to 1,200 bpm. This trend has implications on the release profile of the coatings and may necessitate developments in release modifiers as small labels require a tighter release and larger labels require an easy release.
- Substrate downgauging and lower silicone coatweight:
  Not only are customers looking for higher yield on the facestock and the liner (more square meters per kilogram), but there are also efforts to reduce the silicone coatweight. This raises questions of coverage and impact on the release force as well as potential die cutting issues. Often the marginal material cost savings of a lower coatweight do not outweigh the risks further down the value chain. Interestingly, some of our customers are also considering using emulsion silicones for certain applications in order to reduce the coatweight.
- Lower prices:
  There is always the debate of value for money. As silicones are a strategic raw material for our customers, they represent a significant cost in total purchase, but they contribute a relatively small percentage of the total cost of the structure per square meter. In recent years some customers have involved suppliers earlier in their development programs to look at total construction cost, rather than the cost per kilo of silicone.

Silicone technology developments

In order to meet the demand for increased line speed, very fast curing systems are being developed with new polymer architecture, new cross-linkers and new inhibitors. There are still many avenues to explore.

High speed coating processes can result in the formation of a fine mist. This occurs with solventless silicone release coatings at line speeds usually above 400 meters/minute. Dow Corning has developed a family of anti-misting additives that significantly reduce mist without impacting release properties.

Work proceeds on low-temperature curing systems. This will give customers energy savings but more importantly, it will help to provide a viable alternative to UV for thermally sensitive filmic substrates like OPP and PE.

In response to the growing popularity of filmic substrates, Dow Corning has also introduced a new system (Syl-Off 9102 polymer) for polyester that works particularly well on unprimed PET.

Last but not least, new release modifiers are being developed for solventless and emulsion coatings. These show noticeable improvement in efficiency compared to previous release modifiers.

Future challenges

To grow business for our customers, silicone suppliers must create value through technical innovation, services and solutions. We must also develop cost-effective solutions so that pressure sensitive constructions increase share over other technologies like glue labeling.

Secondly, we are very conscious that there is a tremendous cost pressure on the whole value chain. However, price decreases alone are not a viable long-term option. There are many synergies across the supply chain that can be built to eliminate unnecessary costs.

Silicones are a specialty chemical used in varied applications like antifoams for detergents, sealants in constructions, softeners for shampoos and protective coatings in electronics. Silicone release coatings account for only 5 per cent of the total silicone market. These coatings must remain profitable to retain the commitment to long-term innovation, investment in R&D resources and new ideas.

Release coating suppliers can add value in deeper collaboration with co-suppliers. There is a tremendous cumulative knowledge in each organization which is not currently optimized across all organizations. We anticipate our role in the future to move very strongly from raw material supplier to a true solution provider and partner.

*The data also include sales of silicones into applications like bakery and cooking paper as well as casting paper, which are not pressure sensitive applications.

Luc Dusart joined the Pressure Sensitive Industry group of Dow Corning in January 1999 as Marketing Manager for Europe. In 2001 he became Global Marketing Manager for Release Coating

Luc Dusart

No.310

No.158

“Choose the difficult label jobs – and successfully grow your business”

One of the most remarkable label industry pioneers talks to **Mike Fairley** about his 58 years running a label business

‘I like to take on the more difficult label printing jobs; that way you have fewer competitors – and it constantly stretches the business and the staff into new challenges. Taking the easy option only leads to weak people and a weak business.’

Such is the philosophy of the owner of one of Italy’s leading label companies, Tuwiya Drory of Drorys Etichette. Made up of three associated companies – Drorys Import/Export, Packlist and Drorys Sud, the company has been in business since 1945 and can claim many ‘firsts’ in Italy over the years: the first to import Dennison machines into the country; the first to become an agent for WAM label overprinting machines; the first to introduce Meto price marking labels; and one of the first to print self-adhesive labels by gravure in Italy.

Printing of labels in the roll at Drorys Import/Export began in 1945 with the purchase and installation of the company’s first specialized label press. In 1946 they added the ability to print SOABAR labels for garment manufacturers and the first rotogravure press was added in 1972, the same year that Packlist was set up. At the end of 1991 construction of the building and installation was completed for Drorys SUD. Now the Group is in its 58th year as a label producer with sales worldwide. There are few label plants in Europe that can claim that remarkable achievement – and all are quality certified UNI en ISO 9001-2000 issued by Det Norske Veritas.

The thing that possibly makes the Drorys Group the most remarkable, is not so much the highly specialized label plant that it has established, nor the global sales success, or even the company’s unique business philosophy. No, its that the owner and day-to-day manager of the whole business is now actually 90 years old, yet is still in his office every day at 7am – and still puts in a full days work running the company.

The main hall in Palomonte

Tuwiya Drory is a remarkable man. Virtually penniless after the end of the Second War in 1945, his only work option at the time seemed to be to form a general trading company which exported and imported a range of products. Very soon, the trading activities were complemented by certain label related industrial activities. These became the principal business of the company, whilst still maintaining a trading department. Today, the Drorys group that he has built up over nearly 60 years is amongst the top ten label producers in Italy (there are over 500 in total). It is still the leading self-adhesive label producer printing by gravure in the country, it’s one of the biggest converters of aluminum foil in Europe and exports 50 per cent of its production worldwide into countries as widespread as Canada, Hong Kong, Kuwait, Poland, Puerto Rico, Hungary, France and the USA. And it achieves all this without a sales organization in any of those countries. Repeat business is the key to this success.

In practice, the group is three consolidated companies all devoted to the construction of label overprinting machines, pressure-sensitive label applicators and fully-automatic labeling lines, print-apply applicators for Zebra thermal transfer printers, the printing of high quality pressure-sensitive labels in the roll by virtually all printing processes – including digital – and the printing of certain types of packaging films.

Key customers for the company are in the food, confectionery, household or motor oils sectors and include such well-known names as the Ferrero Group, Agip, Evian, Kraft, Lindt & Spungli, Bauli, Volvic, Kerr, Witor’s, Cosmoline, Alimarca and Saipo L’Oreal. Global group turnover last year was Euro 11,381,000.

Much of the company’s export business around the world is for metallic gravure or gravure solutions for difficult label jobs – and this is not necessarily for long runs. As Mr Drory points out, ‘Italy is the cheapest country in the world for producing gravure cylinders which,’ he says, ‘are not much more expensive than for originating plates for other processes, and the process can be used for printing on almost any substrate.’

Three rotogravure presses form a key part of the label



Above, left to right. Gallus Arsoma, Gallus TCS offset machine and the Grafomac press

production facilities. These include an 8-color, 700mm wide Grafomac press with two in-line rotary die-cutting units, UV-varnishing and laminating stations, Bobst Registron register control, automatic roll change and automatic splicing. A 500mm wide 7-color CMR press again has two rotary die-cutting stations, UV-varnishing, sheeting, electronic register control and the most modern AVT (Advanced Vision Technologies) automated inspection system for the detection of printing defects on flexible materials. The final rotogravure press is a 300mm wide 4-color CMR machine with rotary die-cutting, sheeting and electronic register control.

Outside of gravure, the Drorys' group stable of Gallus group machines includes three Gallus R200 5-color and 6-color presses, an R300 6-color press – all these machines with Bobst touch screen and electronic register – a Gallus TCS 8-color offset press with interchangeable screen, hot-foil stamping, sheeting and rewinding and an Arsoma 8-color flexo, with interchangeable screen and hot-foil. A 508mm wide 2-colour IMER press with rotary die-cutting and sprocket-hole punching produces EDP labels – either fan-folded or wound in rolls – while a 4-color Markem hot-foil press with insetting register has the possibility to apply holographic labels onto a pre-printed web in close register. Six German or Japanese flat-bed letterpress machines complement the gravure, offset, flexo, rotary letterpress and foil presses. All labels are inspected through the company's range of four Rotoflex inspection machines.

For their Xeikon machine, Drorys constructs its own special shaftless off-line digital print finishing equipment, which incorporates chambered flexo varnishing and a laminating station, together with UV-drying, hot-foil printing and close register hologram application, dry lamination with pressure-sensitive film, flat-bed die-cutting, waste stripping and a rotary double arm tension controlled rewind. All these operations are visualized and controlled through a touch screen.

Now past his 90th birthday, Tuwiya Drory says he has no intention of stopping work. Indeed, he is currently moving the company to a real-time computerized management information system that will provide him with up-to-date and immediate information on how the business is performing. He is also actively looking at how the group might encompass RFID and smart label technology.

'Not bad,' he says, 'for a mind that's still 90 years young.'

As for succession, 'that's something I don't really think about,' he adds. 'In any case, I have a younger partner [he's only 60] who runs the business with me. He could take over if required.' Considering Tuwiya Drory's remarkable life to date, his partner may have a good few more years to go before he takes on the challenge himself.

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Fedrigoni Group

A strategy for the future

Leading label industry association FINAT, has completed a strategic re-think to make its activities and services better reflect the changing nature and structure of today's label industry. **Mike Fairley** reports

The world of labels has been undergoing quite considerable change in recent years, undoubtedly becoming more global, more diverse, more service orientated, with more electronic trading requirements – and with cost and price pressures becoming ever more important.

Historically long dominated by wet-glue and self-adhesive label technologies, the industry has experienced the development of new label solutions for the decoration of plastic bottles and containers throughout the 1980's and 1990's. Today, the leading label technologies have been supplemented by wrap-around film, cut-and-stack film, patch film, shrink and stretch sleeves and in-mould label solutions, all based on filmic materials. This brings new suppliers and converters into the label sector.

The growth of new label markets and opportunities in Eastern Europe, Latin America, China, India, and the like, also creates new challenges for the industry – for both industry suppliers and converters, while the global brand owners are seeking consistent, quality sources of label supply almost everywhere in the world, and increasingly using their considerable and ever-growing buying power more effectively.

Customer and industry change

A more diverse market, customer and supplier base in turn brings a demand for more attention to organisational matters, to service, to new management systems and to the use of the Internet and e-commerce. Changes which start to move the label industry away from a historical technical focus to one where a service orientated focus comes to the fore.

Consolidation and globalisation throughout the value chain – particularly at the supplier and end-user ends of the chain - are also having a significant impact on the label industry. Rationalisation of products and brands, global branding, global house and brand colors, global buying standards and specifications, and much more, all have a role to play in how the industry develops for the future.

New technology solutions – especially using digital imaging, archiving, downloading and transfer – are also changing the world of labels. Digital design, digital artwork, digital proofing, digital direct-to-plate or direct-to-press, digital printing, digital file transfer; all create a need for investment and training at unprecedented levels.

This year will see further change in the European label market, with 10 new countries joining the European Union. Is that a threat to existing Western European label producers, or an opportunity to be exploited?

And what about price and cost pressures? Overcapacity, e-auctions and e-procurement, rationalisation of brands, increasing business taxes, environmental requirements, and many other pressures, have made it harder for the label industry to generate sufficient margins and profits to invest for the future.

Certainly, label converters and industry suppliers have not found it easy in recent years. But what is the impact of all these changes on the leading label industry associations? How are they having to adapt to a new world of labels and where do they see themselves in the next five or ten years?

It was to try and understand the answers to these trends and the questions raised that Labels & Labeling recently talked with a group of FINAT board members and the Association's Managing Director at a meeting in London.

Originally set up to promote the interests of the self-adhesive and heat-seal label industry in Europe, FINAT has increasingly found that its converter and supplier members are involved in not only self-adhesives but also in other forms of ➲

Fritz Beglinger, FINAT President

labeling – even other forms of packaging. At the same time heat-seal labels have all but disappeared.

Additionally, individual national label associations have over the years been formed in many of the leading Western European countries – France, Germany, Italy, UK, Denmark, etc – again having an impact on FINAT's role within the European label sector.

As a consequence of the way the label business and industry environment now operates and is changing, some of the original definitions, aims and activities of FINAT were perhaps perceived as becoming somewhat outdated, or not inclusive enough of new developments and opportunities. It was therefore to re-fine or re-define the FINAT infrastructure, vision and values that the FINAT Board and the Managing Director recently completed a major review of strategy.

Strategic focus

'Today', explains FINAT President, Fritz Beglinger, 'we define ourselves as 'the leading umbrella organisation for the European labeling industry', with strategic initiatives that focus on industry development, securing strategic political and market conditions, and supporting member companies.

'Many of our members are now involved in almost all aspects and types of labeling technology, no longer just self-adhesives. Although self-adhesives are still the dominant technology, the Association nevertheless needs to reflect that change. Many of the issues and requirements across all label types are the same or similar.

Environment and waste, international standards, global branding, growing use of film materials as against paper, e-procurement, etc, and it is by providing a common industry language and knowledge in these areas that FINAT can best support its members. Indeed, FINAT is eager to help develop innovative product identification technologies and spend time investing in the future of the label industry.

'Already, the FINAT Technical Handbook and the Test Methods that it contains are recognized as the international reference standard for suppliers and users of self-adhesive materials. Certainly, more and more companies worldwide continue to subscribe to the FINAT Test Methods. This work will continue in the future.

'From our strategy think tank review we know we need to define credible industry standards covering product specifications and performance, best practices, quality, terms and conditions of sale, payment terms, intellectual property rights, technical recommendations – and get the industry to apply them.

And, as far as the individual national label associations are concerned there is increasing co-operation between these and FINAT. We are there to provide them with a central resource for key industry information. In other words, we are looking to add value for all our individual member companies and to member associations.

'In the political arena, we need to present a collective industry view at EU and government level, and provide a source of information to individual members and member associations on pan European and international legislative and political issues – from waste legislation to registration of chemicals, food contact, environment, etc.

'Here, we are establishing a pro-active network of politicians, affiliated industry associations and packaging and label buyers, as well as a pro-active reference database to support members in the implementation of regulatory measures.

Pro-active forum

'Increasingly, we also provide a pro-active global meeting forum for members as the industry itself becomes ever more global. Indeed, we now have within FINAT a wide selection of converter and supplier members from many countries outside Europe, as well as regular joint member meetings with TLMI'

Undoubtedly the introduction of 10 new countries into the EU will bring its own challenges for FINAT. 'As an Association, we need to establish a presence in some of the new countries coming in to the EU' says Jules Lejeune, recently appointed Managing Director of FINAT 'but we have to take care in how we achieve this. In countries such as Poland, Hungary or the Czech Republic, many of the key emerging printing and label converting groups may be looking to compete with our existing Western European members. What we need to do for the future is develop products and service for the benefit of all members – whatever country they are in - not help one to compete against another.'

'In terms of supporting and promoting the industry FINAT has now put together a pro-active external PR and media strategy, which will be introduced over the early part of 2004. The aim is to take the FINAT message to label end-user markets, using their own trade press - whether food, cosmetics, pharmaceutical, chemical, drinks, etc – so as to enhance the visibility of the industry and the association in relevant publications around the world. The FINAT International Labelling Competition will also be used to support that programme.

'In addition, a 'new look' is being defined for both FINAT Labelling News and the FINAT website, while adopting more cost-effective methods of disseminating our message to a wider audience than just the membership. Our aim is to raise the awareness of FINAT and how it benefits the label industry.'

Investing in the future

To build a healthy future for the label industry FINAT recognizes that there needs to be a way of developing new generations of label managers. Already the Italian label association, GIPEA, has established a 'Young Entrepreneurs Club' to bring together new generations of label converters, while Iban Cid, the Past-President of FINAT, considered it as his mission to raise the profile of FINAT towards a younger generation of executives in the label sector. These activities will continue within the new FINAT strategy.

Certainly there is a need to develop, inform and educate management at all levels in the label industry, as well as to improve technical knowledge. FINAT has an important role to play in this. 'The FINAT events – congresses and seminars – are already much appreciated by the members, both new entrants and experienced managers alike' comments Jules Lejeune 'as are our publications, from the End User Study to our trends analysis, benchmarking and technical handbooks.

'We are also looking at introducing regional 'chapters' and end-user related 'focus groups' to bring members with specific interests or requirements together to be more dynamic in our approach to advancing the label industry. FINAT too, is uniquely placed to gather and disseminate market information, building up a common knowledge base so that we can respond to members' queries much faster and more helpfully.'

At the end of the day, FINAT has recognized that it needs to provide a payback to its members in terms of business-related value. 'That's what our strategic rethink has all been about' added Jules Lejeune. 'It's no longer about paying an annual subscription for access to a social club, it's about belonging to an international labeling community and enrolling as a part owner in the future of the label industry.'

Undoubtedly the label industry will continue to change in the future. FINAT too. But for now, they have an organization and strategy to take them into the future with confidence.

Service not price

In strategic partnerships, additional costs must be accepted to produce increases in productivity, as the relationship between OPM and Intercolor demonstrates

Over the past 30 years, OPM has grown from a small company that originally made label-printing machinery, to a group that regularly wins awards for its self-adhesive labels and flexible packaging. With factories in Keighley (labels), Bradford (labels and flexible packaging), and Bromsgrove (servicing the South), the company includes within its company objectives;

- To ensure the highest quality levels of print utilizing the most advanced presses in the world
- To help remove costs from the supply chain
- To ensure accurate color management and color consistency

Supplier partners

At the Keighley head office, OPM Group chairman Chris Ellison explains that a key element in his approach to fulfilling those objectives is a commitment to supplier partnerships. Once the best supplier in each sector has been established, OPM commits to them for a period and works closely and confidentially with them to ensure the optimum outcome. They expect the supplier to support their growing business in a way that adds value for both parties.

This is established in the pressroom with the continued investment in Nilpeter as the sole supplier of presses and printing ancillaries. When necessary, Nilpeter will construct a bespoke machine to meet OPM's requirement and has, on occasions, used OPM's facilities to test and develop ideas. This relationship remains strong, allowing OPM to produce a wide variety of products to an exacting standard.

Ink supply partner

Establishing this same relationship with an ink manufacturer had proved difficult, but OPM has now settled on a long term relationship with Intercolor.

OPM uses flexo technology, with the most demanding work reserved for UV flexo. It was necessary that Intercolor prove the performance of their products before the matter of service could even be considered. Darren Kaye, technical manager says, 'It was a gratifying start to see Intercolor's products perform on press exactly as promised. We quickly established that our quality of work could be achieved with Intercolor's standard inks, most notably on the film work at Bradford. No time was required for new product development, which dramatically speeded up the changeover to Intercolor, as we had been expecting that adjustments would be needed'.

The support package

Intercolor proposed what they considered the right package to allow OPM access to the latest technology in ink management and color control – but at a price! The proposal included equipment and technology that is not common to the label printer but one that provides real savings in press downtime, ink consumption, waste reduction (most notably in quicker make-ready times, as ink goes to press right first time) and stock holdings.

A key element was the provision of a sophisticated 'ink lab' to support OPM's company objective, 'to ensure accurate color management and color consistency'. In hardware terms, this included a desktop weighing system, spectrophotometer, laboratory UV-curing unit and a laboratory proofer, but that was just the start.

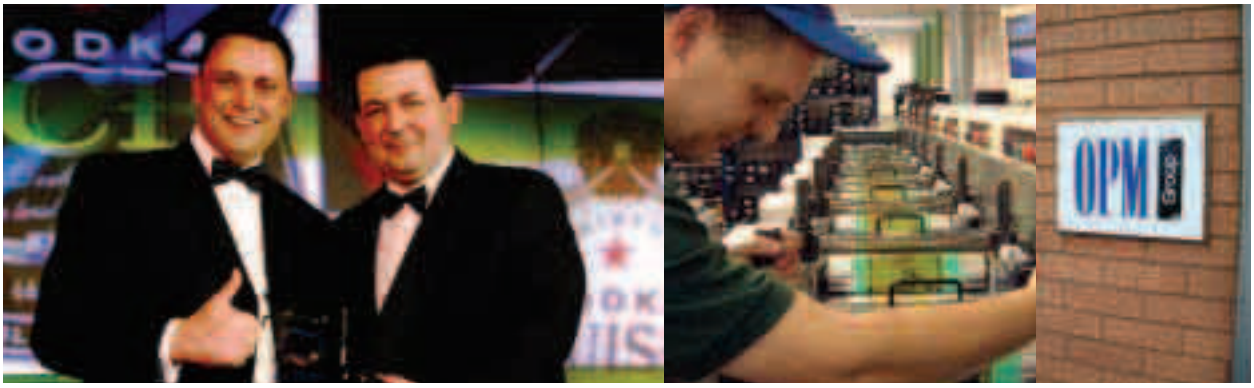
The system was loaded with a full PMS database, stock control and work-away package with an MIS link and a full remote color-matching link to Intercolor's headquarters at West Thurrock. When first installed, the Intercolor staff spent as much time as was needed at OPM to methodically train the OPM staff in the operation of the systems. 'The emphasis on training was important as it was continued until all staff fully understood the systems,' says Chris Ellison.

Cost problem

Intercolor was prepared to face a problem. The cost of providing these things free in an industry operating on low margins, as some ink makers do, would mean that insufficient resource would be available to properly support them, or even fund the correct equipment in the first place. Once Intercolor had adequately demonstrated that real savings were available to OPM, Chris Ellison accepted that the extra investment was needed on their part if they were to get, not just what they wanted, but what they truly needed.

Ellison is now fully confident in the system and has even requested that Intercolor move on to the next stage, allowing his team to function day-to-day, more independently of Intercolor.

"I would rather have quality than a ten per cent saving on price"



The manufacturing process employed by Intercolor guarantees a consistency of product that has now been proven. Also, the effectiveness of the systems installed means that OPM has become more self-reliant, removing more than just the time taken for ink to be delivered with the implementation of a true 'just in time' supply chain.

Financial benefits

With contracts agreed and Intercolor now firmly installed, OPM are already seeing benefits, although Chris Ellison adds, 'the real benefits will only become clear when we have been running for a while and we learn the best way of doing things in our own operation. It is already clear, however, that Intercolor spends less time on administration and problem solving than we had previously experienced'.

Money saving benefits are becoming apparent. Inks are matched off press and are correct for color 99 times out of 100. Any adjustments are minimal so there is much less make-ready time and less lost machine time correcting color. Crucial is Ellison's admission that, 'I know the inks are not the cheapest but they are consistent and the best value, so I am happy to make the investment given the savings provided. I would rather have quality than a ten per cent saving on price. Without commitment and resource we cannot get the best'.

The range of industry award certificates that line the walls of his office, and the impressive portfolio of print samples endorse the insistence of OPM on quality. The company is not afraid to enter new markets with a new product. Some bear fruit, whilst others have yet to find their niche or are found not to be commercially viable. However, if the company is to press ahead with new approaches it knows that it needs to be able to trust its supply partners for their products and support. e No.312

Raflatac rolls out film to US converters

North America's top PS film converters attended Raflatac's Film Festival held at company headquarters in North Carolina. L&L contributing editor **Jennifer Dochstader** reports

Raflatac's Film Festival marked the company's recent entry into the North American pressure sensitive film-manufacturing marketplace. More than 100 label converters from across the United States and Canada gathered at the historic Biltmore Estate to attend a day of technical presentations focusing on current trends in the North American PS film sector across the supply chain.

As PS film growth continues to far outpace that of paper labelstocks, Raflatac has positioned itself as a leading film supplier, and a company technologically attuned to the heightening performance requirements and converting challenges of the North American PS film labeling sector.

Raflatac's primary goal in holding the Film Festival was to announce the company's North American film strategy, and to sponsor a technical venue from which label converters could take away something to provide their own internal production and strategic planning efforts. Jouko Lähepelto, senior vice president, Americas, comments, 'Our target is to be a leading supplier of film products in North America, just as we are in Europe. With our global resources, we're able to develop new and innovative products, including excellent release liners for films. We're strengthening our role as a full product line supplier and a truly global player.'

The Festival opened with a formal welcome by Raflatac, Inc. president, Dan O'Connell, followed by technical presentations given by Raflatac personnel including Jouko Lähepelto; Kari Virtanen, business development manager, Films; and Mark Pollard, development director. Lähepelto provided an overview of Raflatac's overall product and service strategies for the North American PS film marketplace. Following was a presentation by Virtanen, discussing the size and film construction parameters of the North American film marketplace, additionally touching upon general, and product-related trends. Virtanen unveiled the company's new film product introductions, discussing present labelstock offerings broken down into facestock, adhesive and liner technologies.

Pollard concluded the Raflatac personnel presentations by discussing the current advancements made in supply chain collaboration, and its effects on product consistency, lead-time reduction and responsive manufacturing. Following the morning's presentations, Film Festival attendees were transported to Raflatac's manufacturing center, where label converters had the opportunity to tour the facility and to witness up-close Raflatac's production of pressure sensitive film labelstock. Highlights of the facility tour included the opportunity to see Raflatac's automated slitting machines, proprietary inventory automation technology, and custom-designed coating line converting 2.0 mil. clear BOPP on PET liner at high speeds.

(Left) Mike Hague, President of Water Ink Technologies, discusses ink lay down challenges in converting PS filmsubstrates. (Right) A standing-room only crowd gathered for Raflatac's Film Festival

(left) Mary Ellen Reis, Packnology, Inc., presents end-user trends, and how label converters can exceed their customers' expectations. (Centre) Mark Pollard, Development Director for Raflatac, discusses supply chain collaboration. (Right) David Walsh, LPC, Inc., outlines the scope of the TLMI's upcoming North American Label Study

RFID, the end-user, inks and dies:

Film Festival guests returned to the Biltmore Estate for an afternoon of industry expert presentations, beginning with a discussion on RFID given by Randy Stigall, VP of business unit asset & inventory management for Rafsec, a subsidiary of UPM-Kymmene, and sister company to Raflatac. Stigall offered an in-depth look at the recent Wal-Mart RFID mandate and its implications for North American label converters.

Stigall commented on his opinion of RFID's imminent place in the label-converting sector. 'I don't believe simply offering RFID technology will be a competitive advantage for label converters. Only the efficient execution of RFID integration can be a competitive advantage. What I say to label printers is – be cautious of assuming you'll find savings in the RFID tags you do for customers. Did bar codes help save you money? RFID has vast technical and operational benefits that will lead to cost decreases at the end-user level. RFID will have an effect on the way labels are printed. It's only a matter of time.'

Following Stigall's presentation was the afternoon's keynote address, delivered by Mary Ellen Reis, president of consulting firm Packnology, Inc. Reis has directed the packaging design and new product development for name brands such as Snapple, Mistic, Royal Crown, Schweppes, Canada Dry, A&W Root Beer, Vernors and Squirt. She examined the key challenges label converters face daily including end-user requirements and how to be better partner with their customers. She also presented retail and consumer trends shaping the labeling industry and where future opportunities can be discovered.

Jennifer Dochstader and David Walsh, managing directors of industry research and communications firm, LPC, Inc., followed Reis' exploration of the end-user's mindset by presenting some preliminary findings of the North American Label Study '04, commissioned, and published by, the Tag & Label Manufacturers Institute (TLMI). They focused on those PS label industry trends end-users view as the most significant in their respective market sectors. LPC has polled more than 900 end-user personnel, and asked them to choose the one trend they view as the most significant from the following list:

- Intelligent label technologies (RFID, temperature, time, etc.)
- Migration to film substrates (from paper)
- Increased usage of shrink labeling
- Customization of products (ethnicity, religion, health, age)
- Increased use of pressure sensitive labels overall (migration from cut and stack, glue-applied, dry offset, etc.)
- Elimination of a secondary label (using a pre-printed package)

Raflatac's Virtanen comments on his company's commitment to meet end-user requirements. 'End-users are demanding high quality products worldwide. We're able to offer the same product around the globe. For example, our film customers in Europe have been using a high-density glassine liner and we're now offering the same liner to our customers in North America. Besides being a more cost-effective solution than a polycoated kraft or PET liner, the high-density glassine liner has excellent die cutting properties and enables high line dispensing speeds.'

Additional presenters included Bob Pelletier and Kevin Frydryk of Exxon Mobil, highlighting advances in OPP labeling; Michael Hague, president of Water Ink Technologies, discussing technical issues surrounding ink lay down on film substrates; and Roger Stebbings, sales manager at Kocher & Beck, discussing die cutting challenges in processing PS film constructions on press.

As PS film labeling requirements move toward a globalized standard, and end-users increasingly opt for films over other decoration methodologies, it's up to labelstock suppliers to heighten production standards and effectively educate the marketplace on trends, technologies, and the total applied cost value equation. Raflatac's Film Festival has raised the bar on effectively branding a growing decoration process, and sharing information with the market's film-converting leaders.

Market report

A new report into the european self-adhesive market has just been published. **Andy Thomas** reports

Late 2003 has seen the publication of a new Market Report: "The Self-adhesive Label Market in Western Europe".

According to the findings of the report, the market for self-adhesive labels in Western Europe has risen to an estimated 3.9 billion sq. metres annually in 2002 and is forecast to continue to grow at between 5% and 6% annually to reach around 5.2 billion sq. metres annually by 2007.

Although overall self-adhesive label growth has slowed since the mid 1990s, significant opportunities (and also threats) exist for label converters, raw materials suppliers, equipment builders and investors.

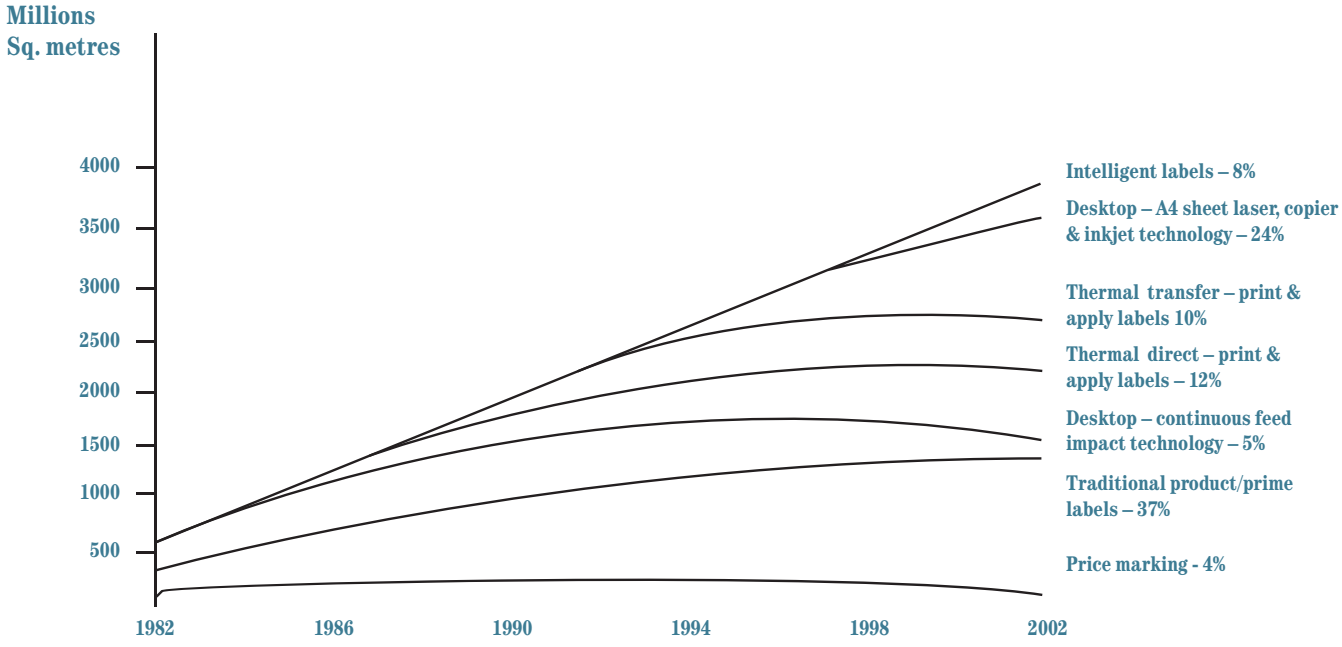
In the last few years, the rate of change has been accelerating – globalisation and industry consolidation in the label / labelstock sectors and also in the supplier and customer (Brand Owner /Retailer) sectors; developments in narrow web press technology; competition from alternative label technologies (eg: wrap-around labels, sleeving); the emergence and dramatic rise of the Internet as an essential business tool for e-procurement; RFID smart label electronic barcodes poised to take off in retail supply chains as the largest retailer in the world gets behind the technology; soaring product related crime brings brand protection packaging / labels into the spotlight; an additional 10 countries will join the EU in 2004. This is to mention just some of the major drivers.

In the face of increasing competition and tighter margins label companies can look at a number of potential strategies, from exploiting niche opportunities to create added value product offerings, through achieving enhanced service levels in the supply chain, to entering new geographical markets and / or merger acquisition activity.

Within the overall market for self-adhesive labels, a number of high growth or potentially high growth market segments have been identified.

Traditional product / prime labels have been overtaken by a series of new applications and types of usage for self-adhesive labels highlighting growth areas (see fig1 below).

Fig 1. Growth Patterns for Self-adhesive Labels Usage in Western Europe (1982 to 2002)



Source: Vandagraf International Limited / Labels & Labelling Consultancy.

As for labelstock materials, filmic materials will continue to see strong growth, as will paper based VIP labelstock materials, while demand for uncoated commodity paper grades stagnates:

Table1. Evolution of Market Share and Relative Annual Growth Rates for Self-adhesive Labelstock Materials in Western Europe from 1998 to 2002

	2002 Share %	2007 Share %
Variable imaging – Paper based	41	45
Uncoated and coated – Paper based	36	27
Sub-total - All Paper based	77	73
Filmic / synthetic	23	27
Total - All types of Labelstock	100	100

Source: Vandagraf International Limited / Labels & Labeling Consultancy.

Demand for Security labels and RFID smart / intelligent labels are forecast to achieve very high growth over the next several years:

Table2. Self-adhesive Intelligent Labels / Special Constructions

Label type	Annual growth rate %
Labels with special coatings/treatments for VIP printing	Up to 30
Labels incorporating security features	22 – 27
Promotional label constructions	20 – 25
EAS tag / labels	16 - 21
Special form/labels	17 – 22
Chip / Chip-less RFID smart labels	Potential for double digit annual growth

Source: Vandagraf International Limited / Product & Image Security Foundation.

New consultancy:

Vandagraf International Limited is a progression from Labels & Labeling Consultancy Limited. This new Consultancy Group has been set up to specialise in multi-client and single client market studies with technology inputs for the Labels & Packaging sectors. In addition to seeking new clients and business, Vandagraf aims to maintain strong links with the existing business of Labels & Labeling Consultancy. James Bevan, who worked with Labels & Labelling Consultancy for several years is Managing Director of Vandagraf, while Mike Fairley, founder of Labels & Labeling Consultancy is Chairman.

Companies wishing to order the new report can visit the web-site: www.vandagraf.com (contains Full Table of Contents of the new report, Electronic Order Form).

Sleever's magic number

Sleever International has developed a range of four collector bottles designed to recreate the mythic 1664 number on Kronenbourg beer bottles. The sleeves feature one of the four numbers on the opposite side to the brand logo on each bottle.

The 50 micron film SI-PET/TG-050 developed by Sleever allows a shrinking ratio over 80 per cent, necessary for a bottle where diameter differences can reach 68 per cent.

The sleeve was printed in 7-color reverse gravure and the application was made on a SleeverMachines Powersleeve Evolution with a Powersteam shrink tunnel, at Sleever International's co-packing division Decosleeve.

No.412

Labeling news

Japanese prove laser ablation promise

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ZED Instruments' managing director Bruce Knox adds: 'We hope that this print will help to dispel the myths that direct laser ablation is only suitable for low quality flexo and that fine highlight dots at high line-screens cannot be achieved using laser ablation systems incorporating a CO2 laser.'

The test image was printed on a Gallus EM510 using T&K UV500 ink, Tesa softprint 0.38mm tape and anilox rolls with line screens of 800lpi and cell volumes of approximately 4.0g/m2. The latest Fulflex plate for UV applications LaserFlex FP4003 was engraved to 0.3mm on a ZEDMini at Hishigen. The image was printed with four process colours plus silver.

No.413

Labeling news

New reader enquiry service from Labels & Labeling magazine

A new system for submitting reader enquiries to L&L has been introduced to help speed up response times to your enquiries.

By far the simplest way to submit your reader enquiries is to visit us online at **www.labelsandlabelling.com/re.htm** and simply fill in the online reader enquiry card as indicated.

Alternatively you may e-mail us at **readerenquiry@labelsandlabelling.com** providing us with your name, company name and address, telephone/fax numbers, and e-mail address. Please state the magazine issue number that the advertisement or selected news item is featured in (found at the top right hand corner of the front cover), and the reader enquiry number, which is positioned at the bottom of each item and advertisement or in the advertisers index at the back of the magazine.

Tarsus enters joint venture with India Label Show

The Tarsus Group, owner of the Labelexpo series of exhibitions and conferences and publisher of L&L, has entered into a joint venture agreement with the India Label Show. Tarsus will be responsible for organising a Labels & Labeling International Pavilion, which will run alongside the next India Labels Show in Delhi on 3-6 December 2004.

Labels & Labelling magazine will jointly organise the three-day InfoLabel conference programme which will run alongside the show. According to Anil Anora, organiser of the India Labels Show, a key theme of the conference sessions will be the place of the Indian labels industry in the global economy – and particularly its potential as an outsourcing operation for multinational organisations. 'The Indian market is suddenly booming and we need to send that message to a bigger international cross-section of label suppliers and printers.

We believe that Tarsus' international expertise will help us achieve that goal.' It is expected that the 2004 show will be three times bigger than the first India Label Show, held in Mumbai in 2002. Douglas Emslie, managing director of the Tarsus Group, said the joint venture was well timed to take advantage of India's rapid economic growth. 'The Indian economy is growing at 7 per cent, and is the second fastest growing economy in the world after China.

The country has a population of over 1 billion which represents a vast potential market for printers producing high quality decorative and informational labels.' Emslie said the JV is just the first step in an ongoing partnership. 'The Indian exhibitions market is underdeveloped. If everything goes well we could see a fully fledged joint venture covering the whole of the packaging sector going forward.'

The JV comes as the Indian government announced plans to set up special economic development zones – modelled on China's highly successful system - and as Walmart announced it would be ploughing $10 billion worth of investment into India.

Roger Pellow, managing director Labels Group, comments: 'this news will allow Labels & Labeling to bring its expertise and knowledge gained over 25 years to the India Label Show and will enable International exhibitors to profile themselves in this up and coming market.'

e No.400

M&S completes RFID clothing trials

Intellident Ltd has been awarded a sole supplier contract by Marks & Spencer to design ,develop and supply the RFID reading equipment and "chip based" label inlays that are then converted by their main label contractor Paxar Europe. Marks & Spencer has completed a trial of UHF radio frequency ID (RFID) tracking tags on clothing items at one of its UK stores as part of plans to improve stock accuracy and product availability for customers.

The tags were contained within throwaway paper labels called Intelligent Labels attached to, but not embedded in, a selection of men's suits, shirts and ties at the High Wycombe store in the UK. The trial lasted for four weeks.Aware of growing public unease around gathering information on RFID chips, Marks & Spencer has gone to great lengths to ensure a transparency to its trials and to limit the data that will be collected and to restrict what the tags were used for. The tags hold the number unique to each garment.

The information associated with this number is held on Marks & Spencer's secure database and relates only to that product or garment's details, for example, the size, style and colour. The tags only release their unique identification number in the presence of a Marks & Spencer scanner.

e No.401

News analysis

What? Not another label show!

The promotion of a new label show in Europe prompts some interesting questions. Report by **Barry Hunt**

Disregarding the pros and cons of attending or exhibiting at trade shows, it is generally agreed that they serve an invaluable role in reflecting an industry's technical and commercial trends. Once established, they follow a clear and ordered frequency pattern. Everyone knows when the next show in the cycle takes place and plans accordingly. But sometimes the status quo is challenged, as is happening right now.

The fact is, a three-day show called Interlabel 2004 is scheduled to open at the Messe Stuttgart in December. Advance publicity says the event will display a comprehensive range of equipment and services covering all aspects of the labelling sector, including the latest industry trends in everything from new press technology to materials, converting equipment and flexible packaging. As such, most people will see it as competing head on with the Labelexpo Europe series of biennial shows, although as seen later the organiser refutes this.

In a close-knit sector like labelling, the prospect of another European label show obviously creates ripples. For a start, these are challenging times and there is an obvious limit to how far marketing budgets can be stretched to fund further public outings. More to the point, Labelexpo Europe and its related seminars are generally seen to deliver the goods.

The last one, the fifteenth no less, was held in September 2003 in Brussels - the usual venue - and attracted around 400 exhibitors. Furthermore, it posted an all-time record of some 20,000 visitors – 2,500 of whom came from Eastern Europe and Russia – so reversing the trend for all types of recent print related shows. Underpinning the Brussels event are the other biennial Labelexpo shows organised by the Tarsus Group and held in Chicago, Singapore, Shanghai and now Mexico.

From its standpoint, Mack Brooks Ltd, the UK-based organiser states that Interlabel will be the only dedicated label show taking place in Europe in 2004. Besides being a 'gap' year to that of Labelexpo Europe (the next takes place in September 2005), the Stuttgart location is an important point of differentiation, since it is located in a key industrial region of Germany and is served by good transport links. 'It may be perceived that we are launching against Tarsus, but we are really catering for the German market, as well as the growing Eastern European economies', says Mark Bridger, exhibition manager. He expects 50 per cent of visitors will come from a radius involving up to three hours' travelling time. The rest are expected from established Western European markets, as well as Asia and the USA.

It sounds feasible, but begs the question as to who will support the show? All types of exhibitions fail or prosper on the strength of the list of their exhibitors. Invariably this means gaining the support of the recognised industry leaders, including the trade associations like FINAT and the TLMI, which Labelexpo has in spades. Therefore, we can reasonably ask wahether an untried and untested show like Interlabel can attract the movers and shakers? In its defence, Mack Brooks Exhibitions Ltd was founded in 1965 and has bags of trade show experience, including Germany and the USA. According to Mark Bridger it is not company policy to release lists of exhibitors until some four months before a show takes place. He claims, however, that the response to initial mailings has been 'excellent'.

> "In fact, rather than attending any more shows, we would much rather invest in the one key event that helps our business and gives us a clear picture of what is happening"

And yet, this initiative is already condemned by key crowd pullers, including Mark Andy/Comco, Gallus and Nilpeter. Their unanimity in giving the thumbs down to Interlabel is typified by Jakob Landberg, sales director of Nilpeter: 'Labelexpo is such a strong brand and it has our full support. In fact, rather than attending any more shows, we would much rather invest in the one key event that helps our business and gives us a clear picture of what is happening. The Interlabel people have no real contacts in our industry.'

Issues of loyalty

This raises the unsung issue of loyalty. Whatever the show, it takes much time and effort to gain and retain the support of key exhibitors. By the same token, they are not necessarily closed to new promotional ideas, as Mary Sullivan, a marketing executive with Mark Andy/Comco explains. 'The new show was discussed and reviewed among many in our global organization. First and foremost, many years have been spent building the Labelexpo trade show brand around

Labeling news

> "How many shows can a niche market like labelling have? We would rather invest a lot in a few shows, than invest a little in many shows"

the world to become this industry's premiere event. The show's success stems directly from those founding fathers who shared a common interest and vision in the label and narrow web industry, not show promoters.

'When you consider the consolidation taking place among narrow web suppliers and label producers the need for another show becomes unnecessary. Attempting to re-create what already exists in this industry seems fairly risky, in my opinion. Therefore, Mark Andy has declined any participation in this event. After speaking with several other suppliers and many other press manufacturers, they are all weighing in their opinions with an absolute, "No, we do not need another show."'

Klaus Aarestrup, sales and marketing director of Gallus, stresses the pragmatic angle: 'How many shows can a niche market like labelling have? We would rather invest a lot in a few shows, than invest a little in many shows. Compared with selling ink for example, all shows represent an extraordinary extra cost for press manufacturers, especially when installing and running equipment that may have to be moved out of regular demonstration facility.'

No challenge

Not surprisingly, Clive Smith, founder of the Labelexpo series, dismisses any challenge to the exhibition's hegemony: 'I would have thought the label industry needs another show in Europe like a hole in the head.

'Anyone launching a show in Germany in December in a Drupa year is either highly misinformed or badly researched. The technological and sales cycle of the labelling industry is already well served by the biennial pan European series of Labelexpo events.'

Finally, as a freelance writer who has reported on Labelexpo shows for various publications over the past 13 years I must declare an interest in their well being, while recognising that the old order is always being challenged in any field. However, Interlabel is a distraction which the industry can do without.

GiDue sets flexo standards benchmark

GiDue has announced the development of three test printing plates in cooperation with the University of Wales, Swansea, Welsh Centre for Printing and Coating.

The test plates are set flexographic print standards that provide measurable data of print quality and performance from the time of press purchase and throughout its working life. Testing can be completed in less than four hours. States Federico d'Annunzio, 'We have been working towards our Auto-Certification Test (ACT) programme for the past two years. These tests record the 'health' of a press during its working life with the objective of scheduling effective and timely maintenance procedures and optimising press performance.'

Testing can be carried out on any press at any location and the results forwarded to Swansea Welsh Centre for Printing and Coating for measurement and certification. Test Plate 1 is a complete measure of all aspects of the printing quality of the flexographic print head. Test Plate 2 measures the print stability of the print head. Here strong mechanical stress is induced by printing a full solid image on half of the web and no image on the other half, resulting in measurable stability values. Test Plate 3 uses a dedicated algorithm in the press scanning equipment in combination with the specifically designed test plate to identify and accurately measure gear marking.

The University supports the GiDue ACT Program by providing a third party, non-aligned measurement and certification facility that will monitor and up-date the certification process for the benefit of standards in the flexographic printing industry. Any repro house can make the plates to the specifications provided by the University.

e No.404

Sleever's magic number

Sleever International has developed a range of four collector bottles designed to recreate the mythic 1664 number on Kronenbourg beer bottles. The sleeves feature one of the four numbers on the opposite side to the brand logo on each bottle.

The 50 micron film SI-PET/TG-050 developed by Sleever allows a shrinking ratio over 80 per cent, necessary for a bottle where diameter differences can reach 68 per cent.

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No.412

Labeling news

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No.413

Label life

Desai Brothers Limited, India
KDO Flexo Model 500

Desai Brothers Limited, Panvel, India, has installed a 20 inch KDO nine-unit Flexo Model 500 and commissioned a B. Bunch in-line variable size sheeter. Desai Brothers has an $85 million business in beedis, specialty chemicals and ethnic-Indian food products.

Nitin Desai, vice-chairman of the Desai Group says: 'Our purpose for entering the printing line is to print our own labels, as counterfeiting is a major problem faced by the beedi industry and we would like to increase the shelf appeal of our products.

'We decided to go for KDO and B. Bunch machines, which are simple to operate and could meet our requirements at an economical cost. This needed a lot of development work to suit local requirements with local raw materials suitable for our specific needs.'

The Model 500 has a print width of 500mm and is equipped with air-shafts on the winders, air brake tension control, digital web tension control, electronic web and edge guides, 2-roll non-foam-splash inking systems with ink pumps and auto-print impression. It also features constant turn laser engraved ceramic anilox rollers, adjustable infra-red dryers with fans and across and along the web running register control. A rotary die-cutting station is standard.

On top of the nine units, the press can also base-coat, varnish, infra-red dry, rotary die-cut, emboss, waste-strip and rewind, using a very wide range of base materials from film and paper to self-adhesive stock and board, at speeds of up to 300 feet/minute, in a single pass.

The B. Bunch 20" variable size sheeter is connected in-line with the KDO press and sheets with a shear-type cut-off. It is also equipped with a shingle delivery, timing belt drive, electronic counter with marking device, de-curl bar assembly and static eliminator, leading to a High Pile Delivery, for easy collection of sheets, at a speed of up to 500 feet/minute. e No.409

What is a beedi?

A beedi (also spelled bidi) is a traditional Indian cigar made of tobacco rolled into a leaf. The entire product is hand-made and estimates put daily production at about one billion sticks per day, of which the Desai Group make around 65-70 million sticks daily.

Desen Matbaacilik, Turkey
Mark Andy LP3000

Desen Matbaacilik, one of the largest printing companies in Ankara has ordered its first flexo press – the LP3000. The sale was secured at Labelexpo Europe.

Engin Gürel from the Turkish Mark Andy and Comco agent Pres Ltd Sti says: 'We have sold a variety of equipment into Ankara and Anatolia, but the new Mark Andy LP3000 sold to Desen Matbaacilik is particularly satisfying as its is one of the first to be sold in Europe.' e No.410

Karico Oy, Finland
Rapid servoFLEX

Karico Oy, a Finnish label printing company located in Espoo has purchased the first export Rapid ServoFLEX UV Flexographic press from Australian machinery manufacturer, Rapid Machinery Company.

The order was placed during a visit to Rapid by Karico managing director Kari Gronholm earlier this year and delivery was planned to coincide with the LabelExpo Europe. Karico has a number of Rapid products and were looking to expand their business into the upper end of the label market.

'We trusted Rapid to give us the same reliable, cost-effective machinery that we had come to expect from them,' says Gronholm. 'Even though Rapid is half a world away we have confidence in their products as in the ten years we have been buying from them they have never let us down.'

The new press has been under development for six years and was finally released for sale worldwide at Labelexpo in Brussels, before it was delivered to the Karico plant. It was up and running in one day and in trials ran from 20m/min up to 130m/min without needing to touch a print or register adjustment.

Karico has successfully used the press to print on very difficult substrates such as aluminium burst foil for pharmaceutical blister packs and they report that the press can handle carton board and plastics with ease.

e No.411

New products

Raflatac
Duoface labelstock

The Duoface labelstock is made of two face layers, both of which can be used. The face layers are mutually supportive, each performing the role of release liner for the other. Silicone and adhesive are applied in alternate stripes to the two face layers. These are applied together so that each silicone strip meets its adhesive counterpart. This makes it possible to use the material like a normal labelstock.

Raflatac has two products that are ready for customer projects. Jetlaser Duoface is an uncoated machine-finished paper for multifunctional information labeling and Raflasilk Duoface is a coated, white mid-gloss face paper used for high quality multicolour labels requiring good print definition and fine detail. Duoface currently uses a permanent acrylic, but other types may be used in the future.

Test runs have found that the labels are particularly beneficial in logistics – where the labels work well for marking goods both on the packing lines and in storage – but the possibilities don't end there.

Development manager Marko Tiainen explains: 'Duoface is suitable for a variety of end-use areas. Duoface A4 laser labels can be printed on both sides, with the reverse side pre-printed, for example, and the front left for printing later on. Alternatively, collectable stickers could be printed on both sides.'

In A4 end uses involving copiers and laser printers equipped with a duplex unit, the Duoface material can be printed on both sides in one run. But, for end users who don't have a duplex unit, one side of the labelstock can be pre-printed while the other is left printable. Obviously end users can use the Duoface labels like normal ones, but the double-sided labelstock always provides the possibility to print on both sides when extra information would be beneficial.

The labelstock produces less waste, saving money on disposal and also helping the environment. Duoface also uses significantly less adhesive than standard labelstock. e No.374

Creo
Tokens file sharing software

Creo has launched its Tokens software, a file-sharing solution for delivering large files by e-mail. This new technology enables users, such as business and creative professionals, to exchange files easily, securely and efficiently through e-mail.

The application allows users to create an alias or shortcut – called a Token – that can be sent via e-mail or instant message. The Token itself is only a few kilobytes in size, even when the files are many megabytes. The recipient simply opens the Token to retrieve the files. e No.373

Continued on page 76

New products

Inprint
Inset single-leaflet parent label

Inprint has introduced Inset, a new single-leaflet parent label that contains a series of sub-leaflets. All of the sub-leafets contained within Inset have identical information and can be removed from the parent label individually. They can be transferred to another container or given to an end user.

Inset has been developed to meet new legislation which demands that every dispensed drug must contain a patient information leaflet. However, many pharmaceutical companies are producing larger bulk packs from which medicine is dispensed. Inset provides a neat folder of sub-leaflets which contains exactly the same information as the master pack. Each label can be dispensed with the drug, providing each patient with the necessary information.

Inset is printed in the same way as a traditional Extended Text label with the base flexo printed where required and the leaflet printed using sheet-fed litho. The manufacturing process ensures that the complete inset label is created from a single piece of paper. This is essential to guarantee the integrity and security of the data, which could be jeopardised if any collation was necessary.

Andrew Walker, business development director at Inprint says: 'It will provide a cost-effective labeling solution for pharmaceutical companies, particularly as drug patents become open to generic manufacture.' No.457

Inprint
Reverse-cut

Inprint has introduced Reverse-cut, a development of the company's traditional Extended Text leaflet label that has been designed for the accurate documentation of pharmaceutical records.

Reverse-cut includes a sub-label within the base of the parent label that can be overprinted with product details. This can be detached and transferred to supplementary documentation, providing a carbon copy of the product details. This is particularly suited to pharmaceutical applications where accuracy and security of information are prerequisites.

Reverse-cut has been designed to meet two key market demands. Firstly, in the clinical trials arena, Reverse-cut allows essential information to be taken from the pack and placed on the case report form (CRF) without any transcription errors. The Reverse-cut Extended Text label conforms to the clinical trials industry's standards. Importantly, it also allows the leaflet/label to include multiple languages, which means that there is no requirement for expensive re-labelling or separate production runs for each country involved in a study.

Reverse-cut also provides a solution for a very specific labelling problem in continental Europe, where a reimbursement system is employed by governments for prescription pharmaceuticals. This system, which is used in countries such as France and Italy, which currently demands

that the label is removed from the packaging and used as a record of the medicine purchased for reimbursemer No.458

ADM Tronics
Santel flame retardant coating

ADM Tronics of Northvale, New Jersey has developed a protective overcoat – Santel Flame Guard – which reduces charring and improves flame support of the coated surface. It is an effective aqueous protective coating with high adhesion levels for both porous and non-porous surfaces, including PVC, other films, paper and board.

Santel Flame Guard can be used as a clear, low-gloss overcoat. The dried surface is durable, surpassing most product resistance specifications, as well as being scuff and abrasion resistant. No.459

IGT Testing Systems
AIC2-5 2000 printability test

IGT Testing Sytems, a manufacturer of printability testers from the Netherlands, has launched an updated model of the AIC2-5. The succeeding model, the AIC2-5 2000, is digitally controlled and a single-phase 115/230V main connection replaces the old three-phase power supply.

IGT claims that performance is increased due to the electronic controls, a menu-driven operation, improvement of the different accessories and optimised alignment of light-weight printing discs.

'Reproducibility and accuracy are important conditions when executing tests. That is why IGT Testing Systems is always looking for ways of improving the testers that may enhance this even further,' says Wilco de Groot, managing director and head of the R&D department at IGT Testing Systems. 'The AIC2-5 2000 is a good example of that.' No.460

Isopak Ltd
Rotomac RTC 125 high speed rewinder

Isopak Ltd is targeting the UK's converting market with the Italian manufactured Rotomac RTC 125 rewinder. It is already sold in 40 countries and is ideal for rewinding rolls of foil, plastic film and paper. The fully electronic clutch control enables easy adjustment for different materials, and the menu driven system allows for easy recall and setting of different programs. A self-diagnostic system allows for rapid fault diagnosis, minimizing downtime. No.374

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New products

Avery Dennison
Fasson Rapid-Roll product swatchbook

Avery Dennison has introduced an updated swatchbook for their expanded non-adhesive product line. Converters can see and feel more than 100 coated and uncoated papers, C1S and C2S boards, variable imprint and laser-imprintable products, along with an expanded synthetic tag offering.

The coated paper grades are designed for glue-applied labeling, promotional applications and wet-strength beverage labeling, while the uncoated tag and paper stocks are ideal for industrial and manufacturing applications. Materials specifically designed for thermal transfer receptivity are included, along with products ideal for variable and desktop laser imprinting.

Fasson digital product

Avery Dennison has developed a line of Fasson-brand digital paper and film in partnership with HP Indigo. They include super-calendered semi-gloss products and vellum-smooth uncoated wet strength papers. An assortment of clear and white BOPP films are also available, with metallized films for mirror-like reflectivity. Designed for printing on HP Indigo WS2000 and WS4000 presses, the portfolio offers a guaranteed one-year shelf life. **No.450**

API Foils
Holofoil holographic range

API foils UK has re-launched its Holofoil Decorative Patterns range, supported by new literature and a customer response service.

The holographic patterns, for use in hot stamping, laminating and dieless transfer, are available in two distinct collections. The Core collection has eight of API's most popular Holofoil patterns, while the Connoisseur collection has eight new effects. E-mail marketing@api-foils.co.uk for a free copy API Foils' Holofoil Collection brochure. **No.451**

Hostmann-Steinberg
Rapida Optima QK advanced inks

The Rapida Optima QK 1765 range of high-speed offset inks for sheetfed production is the latest launch from Hostmann-Steinberg's HiT (highly improved technology) ink series. The series is a medium-tack range, suitable for a broad spectrum of paper stocks and press conditions.

The QK 1765 ink uses specially developed varnish components, enabling the inks to set rapidly to a hard, scuff and mark-resistant film surface, making it possible to back up press-runs within only five minutes. They also claim to lower the amount of spray powders required, while reducing offsetting and blocking to a minimum. The inks are wax-free and can be UV coated or laminated and have been compounded to stay open on the press for extended periods of time. **No.452**

Appleton
Smart label-specific substrate

Appleton has begun beta testing the first labelstock specifically engineered for RFID smart labels. SmartStrate overcomes chip inlay failures associated with mechanical damage and electrostatic discharge, as well as issues related to printing on an uneven label facestock.

'Substrates play a critical role in the viability of RFID systems,' says Vince Reese, business development manager for Appleton. 'As an electronic component, how an RFID inlay is packaged dramatically impacts its overall performance. SmartStrate reduces, or in some cases, eliminates the issues that lead to RFID system failure.'

SmartStrate is being tested by RFID-label end users and is a thermal transfer labelstock that features special coatings that dissipate static electricity. Common electrostatic discharges can corrupt information stored on an RFID chip, or even render the chip non-readable. In laboratory tests, RFID chips on SmartStrate functioned normally after receiving discharge voltages three times higher than those that damaged or destroyed chips on conventional labelstock.

SmartStrate uses a proprietary cushioning material that protects the inlay (chip, antenna and lead) against physical damage. Throughout the converting, printing and handling processes, RFID labels encounter mechanical pressures that can damage the inlay and lead to failure. Appleton's tests on SmartStrate revealed that they could withstand mechanical pressures that were 20 to 40 times higher than those that caused failure in RFID inlays on conventional label stock.

In addition to providing mechanical protection, the cushioning layer of SmartStrate provides a uniform surface for printing of both human-readable information and error-free barcodes. This makes it possible to print over the entire label surface, which also helps reduce overall label size by eliminating the need for a no-print zone. **No.453**

Cham Paper Group
Adicar S4 paper

Cham Paper Group presented the industry with its new Adicar S4 high-gloss, double-coated label paper at Labelexpo Europe. The paper achieves a high level of whiteness, highlighting the trend towards paper 'purity' – whiter papers with high gloss levels – which allows label printers to produce high-brilliance color prints.

Adicar S4 can be printed using all traditional printing processes and has been specially treated on the reverse for optimum adhesive application. **No.454**

API Foils
Expanded dieLESS color range

API Foils has advanced its dieLESS range with the introduction of a new selection of specialised metallic colored foils, offering an alternative to traditional gold and silver shades.

API has also produced a new brochure offering an introduction to dieLESS foil printing. The literature has been specifically designed to inform customers about the potential of the new colored collection and shows 16 varieties of gold, silver, copper, metallic coloured and holographic dieless foils. **No.455**

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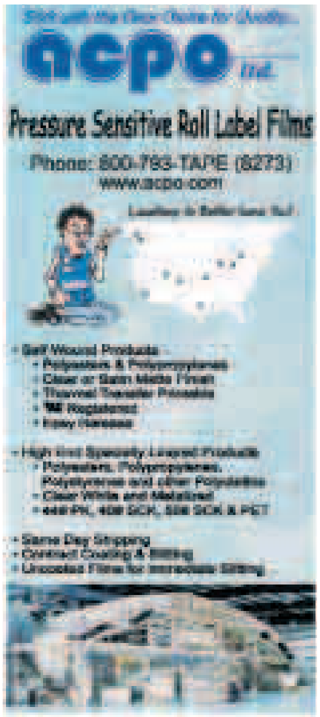

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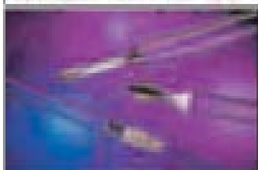

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