



Year 17 • issue 4

## HEXIS Protective laminates

The role of Sensors in Digital Signage

Wintertime overcrowded with Exhibitions

Durst 2500HS installed at VPK Packaging Group Courcelles

UK's first HP Stitch S1000 excels at Manchester Print Services

ATC leading sponsor of Lyons 15th Biennale of Contemporary Art



# THE ALL-IN-ONE SOLUTION THAT LEAVES NOTHING ON THE TABLE.



With the EFI VUTEk FabriVU 340i, you no longer have to pass up premium soft signage opportunities because of high demands in space and cost. We've invented a production-quality fabric printer with one continuous process of printing and fixation. Inline fixation eliminates the space and cost needed for a separate heat calendar. You can even drive it with a Fiery® proServer and integrate it with the productivity-boosting EFI ecosystem. Get one and get the jobs you want.

Learn more at [vutek.efi.com/340i](http://vutek.efi.com/340i)

 LET US BE THE FUEL

**efi**

Nothing herein should be construed as a warranty in addition to the express warranty statement provided with EFI products and services. EFI, FabriVU, Fiery, the Fiery logo, and VUTEk are trademarks of Electronics For Imaging, Inc. and/or its wholly owned subsidiaries in the U.S. and/or certain other countries. ©2019 Electronics For Imaging, Inc. All rights reserved.



## 2020 set to become a 'sensorable' year

By **Ton Rombout**

We at SignPro Europe always aim to provide you with a mix of different articles on diverse and interesting subjects in the field of sign and digital wide format printing. However, this 'field' is so immeasurably wide that we sometimes wonder: where do we stop?

This issue of SignPro Europe, the last one of the 'old' year, looks ahead to the New Year and covers different topics relating to printing, analogue and digital signage. We certainly have many exhibitions and trade fairs in front of us (why do organizers feel the need to organize these events when we should be sitting in front of the fire staring into space with a coffee and/or nice glass of cognac, thinking about what will happen in the coming year??).

Nevertheless, we cannot avoid the fact that the January and February exhibitions, be it viscom, WETEC, ISE or CIPrint, all have digital signage on their programme. That is why my intro focuses on a case study originating from JCDecaux Australia (where it is actually quite warm at the moment...) on Yoplait Yoghurt Smoothies. What's happening?

JCDecaux Australia uses unique OOH facial recognition to launch Yoplait Yoghurt Smoothies. The company has featured unique out-of-home facial recognition technology to determine whether passers-by have happy or 'hangry' expression, in order to dispense vouchers to sample the new range of Yoplait Yoghurt Smoothies. JCDecaux has collaborated with Lion Dairy & Drinks and its agencies AJF Partnership and Starcom to develop this unique out-of-home experience for the launch

of the Yoplait Yoghurt Smoothie "Fix your Hanger" campaign.

Fascinating! A specially built panel located in George Street in Sydney uses face tracking technology to assess consumers' facial reactions. A voucher is then dispensed to redeem for a FREE Yoplait Yoghurt Smoothie in a partnered store located in close proximity to the panel. Handy really, you don't have to travel halfway around the world, so to speak, to get your 'earned' Yoplait Yoghurt Smoothie. It's there, immediately available in your local neighbourhood.

How does it work? When a face is detected in proximity to the panel a message is displayed asking the passer-by to "smile or frown for a free smoothie". The concept is based on facial tracking technology, which is incorporated into a specially built panel in order to trigger and dispense an item. Ashley Taylor, Head of Creative Solutions at JCDecaux, explained: "The panel feeds image data from a camera to a machine learning algorithm that is trained to detect face orientation and assess the user's emotions. A custom made vending machine is then triggered to dispense the appropriate voucher, depending on whether the consumer is deemed to be happy or 'hangry'. It's a fantastic way to engage with busy CBD consumers [I don't know yet what a CBD consumer is, but we will find out during the upcoming Integrated Systems Europe exhibition in Amsterdam]."

Daryn Wallace, Marketing & Innovation Director at Lion Dairy & Drinks, told us he was extremely

excited about the concept: "Yoplait has always been a great innovator in new yoghurt offerings and it's all about joyful interactions. It's exciting to think that we will be engaging with our consumers on such a fun and interactive new platform - we know the Yoplait Yoghurt Smoothies will satisfy even our most happy or hangry consumers," he commented. "This out-of-home idea will literally stop people in the street and create a value exchange anchored in whether they are happy or hangry, two very real category need states. Their attention will then be rewarded with a voucher to redeem for their Yoplait Yoghurt Smoothie of choice nearby."

**Ton Rombout, Editor-in-Chief**  
**SignPro Europe**  
[www.signpro-europe.com](http://www.signpro-europe.com)

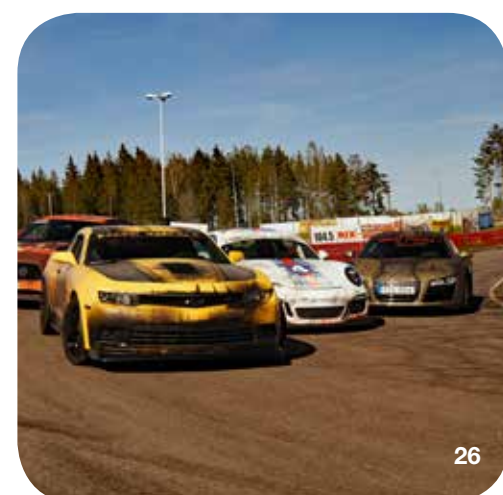


Ton Rombout

### Intro

SignPro Europe December 2019





## Content

- 03 Intro
- 06 Journal
- 07 Océ is now Canon Production Printing
- 09 Viscom, PSI and PromoTex Expo
- 10 TV TecStyle Visions, WETEC, GiveADays all at Messe Stuttgart
- 12 ISE returns to Amsterdam next February
- 14 The role of sensors in digital signage
- 16 FESPA Global Print Expo 2020
- 17 Caldera announces Version 13 of Raster Image Processor
- 18 International packaging supplier VPK Packaging Group puts its trust in Durst
- 20 Manchester Print Services moves away from standard signage substrates
- 23 TTS: your partner in transfer printing media and printable textiles
- 26 Hexis to market advanced tear-off windscreen laminates
- 29 McLaren Packaging and the Swanline Group invest in sustainability
- 30 Developments in 3D printing in close-up
- 35 HP Multi Jet Fusion technology
- 39 A visit to AnnieShape
- 42 Introduction of full colour 3D printer
- 44 IMI Europe 2019 Digital Printing Conference
- 46 ATC leading sponsor of the 2019 Lyons BCA
- 48 J&A Imaging Station acquires a Durst Rho 512R LED
- 49 Debut of P5 350 in North America
- 50 Adara Pakkaus expands into POP
- 51 New Kongsberg X Edge delivers even more functionality
- 53 Nozomi C18000 awarded Fogra Certification



### COLOPHON

**Publisher** Publimore Media B.V. / John ter Meer, Avignonlaan 33, NL-5627 GA Eindhoven, The Netherlands, T +31 (40) 293 25 25, info@signpro-europe.com, www.signpro-europe.com **Editorial** Mr. Ton Rombout (The Netherlands), Editor-in-Chief, Mrs. Sonja Angerer (Germany), Mr. Loet van Bergen (The Netherlands), Mrs. Alicia Bernal (Spain), Mrs. Ingrid Birtwistle (United Kingdom), translations, Mrs. Cristina Rossi (Italy), Mrs. Andrea Edan (United Kingdom), Mr. Koen Goederis (Belgium), Mr. Herman Hartman (The Netherlands), Mr. Rob Haak (The Netherlands), Mr. Szilárd Bévárdi (Hungary), Mr. Martin Kugler (France), Mrs. Kaisa Salminen (Finland), Mrs. Angela Starck (Germany) **Advertising** T +31(0)40 293 25 255, advertise@signpro-europe.com **Design** www.mulareclamebureau.nl, info@mulareclamebureau.nl (The Netherlands) **Printing** Grafisch Perfect, Valkenswaard (The Netherlands) **Subscriptions** Europe: € 54,50, Outside Europe: € 74,50, subscribe@signpro-europe.com

SOFTWARE

PRINTERS

INKS

P5™

CONSULTANCY & INTEGRATION

TRAINING

SERVICE AGREEMENTS

# TECHNOLOGY PLATFORM FOR DURST LARGE FORMAT PRINTING SYSTEMS

Learn more about our P5 technology platform on [durst-group.com/p5](http://durst-group.com/p5)





New this year at C!Print Lyon: C!WRAP

On February 4, 5 and 6, C!Print Lyon will open its doors for three days of meetings and exchanges dedicated to the graphics industry markets. The leading trade fair in France confirms its status as a key event with a growing number of exhibitors, including about forty new exhibitors. The show will welcome more than 250 exhibitors from the world of large format digital printing, signage, graphics, finishing, media, textile printing and marking.

Prominent names in the digital printing and large format market confirmed that they will be present and exhibit at the show, including Roland DG, HP, Mimaki, Agfa Graphics, swissQprint, Epson, Fujifilm, Canon, Hexis, Antalis, Avery, 3M, etc. as well as all the major distributors from the sector. The graphics industry is once again welcoming the participation of Konica Minolta, Xerox, Riso, Ricoh, Inapa, Duplo, and Oki as well as Blue Crest amongst the new exhibitors. On the web-to-print side, leading names in the sector will be present and the adhesive label specialist Adesa will be amongst the new arrivals.

For visitors - more than 16,000 professionals in 2019 - C!Print is the place to be to see the latest machines on the market, test new personalised supports and discover innovative finishing solutions. In line with its development strategy, C!Print continues to offer spaces with diverse and varied content to provide professionals from all visual communication sectors with even better support.

New this year is C!Wrap, an adhesive application competition organized in partnership with HEXIS, ARLON and 3M. 6 teams of 5 professional installers will compete during the 3 days of the show. The objective: to produce an original and creative design to completely cover a car, wall or other elements stipulated by the organization (furniture, various objects) - to be judged by a neutral jury composed of professionals from the sector.



HP has announced a major investment in water-based ink technology for textile and corrugated packaging

The \$200m spend – the equivalent of £155m – is part of HP’s ‘Sustainable Impact’ commitment to create sustainable digital printing solutions. The move was announced during Printing United show in the States. The traditional textiles industry is a big polluter, with HP citing figures from the World Resources Institute stating that some 20% of industrial water pollution is derived from garment manufacturing. HP said that its existing water-based inks for corrugated packaging had already made a big impact in ‘sensitive’ markets such as food packaging.

Santi Morera, general manager and global head of graphic solutions at HP, said sustainability was an increasingly important issue for the firm’s customers. A number of customers backed the move, including UK-headquartered DS Smith which uses HP PageWide T11000S inkjet presses to pre-print digitally for corrugated applications. HP has made a commitment that all its own-brand paper and paper-based packaging will come from certified and/or recycled sources by 2020.

city of Como for already many years.

More info: [www.texo-trade.com](http://www.texo-trade.com)



Famous brand name disappears

Océ is now Canon Production Printing

By Sonja Angerer



Michele Tuscano is Vice President EMEA – Large Format Graphics Printing, Canon Europe, the Middle East & Africa. Photo: Canon.

**On 4 October 2019 Canon Inc. and Océ Holding B.V. announced that Océ would be renamed Canon Production Printing. Sign Pro Europe talked to Michele Tuscano, Vice President EMEA – Large Format Graphics Printing, Canon Europe, the Middle East & Africa - about the reasons for and impact of this decision.**

When Canon Inc. took over Océ in late 2009 it seemed a logical decision. Whilst Océ had been struggling for some time, the Japanese corporation wanted to gain a stronger foothold in the professional printing segment it ventured into in 2006. Ever since integration and reorganisation had been an ongoing process.

Many changes

In 2018, for example, Vancouver Océ Arizona production was consolidated into the Poing (near Munich) plant, with plans to raise building capacity to up to three Arizona printers per day. Michele Tuscano confirmed that Océ is currently undertaking another cost-cutting programme, but insisted that this is not related to the name change. Still, it will have been a bit of a surprise for the Océ community, when it

was announced on 30 September 2019, followed by the official press release on 4 October.

Canon employs approximately 17,000 people across Europe, only a small fraction of its global workforce of approximately 194,000. Océ has been a household name appreciated by many for decades, particularly near its headquarters in Venlo (the Netherlands) and the Poing plant in Germany. When the Canon acquisition was announced a decade ago there was no mention of giving up the Océ brand in the near future. However, as Michele Tuscano, who joined Canon in 2008, explained “the business environment has (since) changed,” and added “as a fully integrated company, we will benefit more from economies of scale in order to continue to develop our products and core technologies.”

Aiming for a fully integrated printing business

“Overall the reaction to the name change was positive,” Michele Tuscano claimed and this appears to be correct. “It feels a bit like a promotion – we are now able to carry the precious Canon brand name,” a (non spokes-person) senior professional recently commented at a conference when asked about the new situation. Canon ranks 35th in the 2013 Interbrand Top 100 list of most valuable global brands. Michele Tuscano certainly appears to see it that way too: “Changing the

company name is the final stage of the integration with Canon. By combining the company and brand names, we plan to create brand unity across all areas of our printing business and improve synergies,” he stated, adding that there will be no organisational changes as part of the rebranding process.

From Océ to Canon

In the wide format printing business the Image Prograf series has always been sold with a Canon name tag. The UVgel Colorado and roll-to-roll / flatbed Arizona family is now set to follow suit. “Nothing will change for legacy owners and service contract holders,” Michele Tuscano explained. “Océ’s business operations are already managed by Canon legal entities in countries across Europe, the Middle East and Africa, so there’s no need to change contracts and involve our customers in unnecessary administration.”

He does anticipate a positive impact on sales as a result of the brand integration. “The integration of Océ technology has enabled Canon to significantly improve its position in the graphic art and commercial printing industry, becoming a market leader in cut sheet, continuous feed, wide format and developing a new UV Gel technology in the R2R segment, a future high potential segment for Canon.” •



Aerial view of Océ Printing Systems plant at Poing near Munich. The plant will be renamed Canon Production Printing on 1 January 2020. Photo: Canon



# TTS

printable textiles &  
transfer printing media



## TTS is your supplier for dye-sub transfer papers, printable textiles and protection paper

- Dye-sub transfer papers up to 320 cm roll width from 45 gsm up to 150 gsm
- Printable textile media for Dye-Sub Direct, UV and Solvent inks up to 5 meters wide
- Calendar protection paper up to 5 meters wide



4\_5\_6 FÉV.  
2020 | LYON

IMAGE  
PERSONNALISATION  
NUMÉRIQUE

Come & visit us! Stand 2M2

Visit us on Heimtextil - Hall 3.0 Monti Stand G75



Explorers welcome from 7-9 January 2020

# Viscom, PSI and PromoTex Expo

By Ton Rombout



An impression of the viscom show.

Gazing and marvelling at things may well be a traditional trade fair activity, but being able to participate and actually experience things gives it another dimension. Showcasing ideas and innovations, alongside the necessary technology, with an eye on applications is part of the concept of the Trifecta trade show involving viscom, PSI and PromoTex Expo. The next viscom will take place from 7-9 January 2020 in Düsseldorf, alongside PSI (Europe's leading promotional product trade fair) and PromoTex Expo (the international trade fair for promotional, sports and work wear).

Together they form the largest trade fair affiliation in Europe devoted to sales and advertising. More than 1000 exhibitors and approximately 30,000 trade visitors from all over the world are expected to attend, giving them the opportunity to get involved, network and create their own experiences. A total of approximately 200 manufacturers and distributors, originating from more than 40 countries, will showcase their newly developed products, including visual communication solutions from across the globe, with a special focus on digital large format printing, advertising technology, textile finishing machines and POS communication.

### Workshop for doers

Trade visitors from sign making, print services, textile finishing, illuminated advertising, media

production, stand building, shop fitting and foil wrapping will find an exciting experimentation lab at the viscom live sign making workshop. Professionals from the sign making network Signforum-24 will explain processes and procedures, answer questions and share their knowledge.

Epson will be a key returning exhibitor and sponsor in 2020, joining companies such as Thyssen Krupp, DP Solutions, Chaki Signs, Berger Textil, Comhan, Mutoh and pullPIX. Mimaki will be represented at both PSI and viscom.

### Making contacts

Being a digital organiser, the matchmaking platform ([www.reed-matchmaking.com/viscom](http://www.reed-matchmaking.com/viscom)) will help exhibitors and visitors plan a perfect day at the show. Referring to their individual interests, it will help them find the right contacts and set up appointments with them. The new Job Exchange will bring together companies looking for new employees and skilled employees looking for a change. Offers and requests can be entered online ahead of viscom or dropped off in the matchmaking area during the show.

### Custom shirt

Smack in Hall 13 also leverages the advantages of digitalisation to open the door to the future of textile finishing. When the company from Castrop-Rauxel (Germany) puts embroidery and prints on apparel, it doesn't just do so in a personalised way and for a single piece on demand, it has also developed software solutions to make the finishing process scalable and cost efficient. It will invite visitors to come to its special 'Make your own shirt' area and take them on a special journey. Taking on the role of customer, they will configure their very own garment and generate a barcode at the same time. Using this barcode, they will then be able to track every single stage the order passes through, from placing the order to receiving, finishing, quality control and shipping.

**Viscom traditionally offers its visitors an extensive support programme. What will be the focus this year?**

Petra Lassahn, Director of viscom: "In addition to presenting products and solutions, we offer visitors numerous opportunities to take part and try out machines and materials themselves. Another focus, which links viscom to the PSI and PromoTex Expo trade fairs taking place at the same time, is sustainability. Health and environment friendly materials have gained considerable importance, particularly in furnishing and design. One example is non woven fabric for wallpapers, which consists of FSC certified wood. Having said that, sustainability not only covers the handling of raw materials and efficient production processes, but also corresponding business models in which the social component plays an increasingly important role." •

[www.viscom-messe.com](http://www.viscom-messe.com)



Viscom poster for the January 2020 issue.

## Exhibition

SignPro Europe December 2019



# TV TecStyle Visions, WETEC, GiveADays all at Messe Stuttgart

By **Ton Rombout**



Project Manager, Nicole Dalkolmo, and Project Consultant, Theresa Börsig, aim to enhance the leading position of TV TecStyle Visions with on trend topics.

GiveADays - will showcase new products and innovations in textile finishing, advertising technology and promotion. Every two years international exhibitors meet up with trade visitors, mainly from Germany, Switzerland and Austria, in Stuttgart. Most recently, in the spring of 2018, the trade fair alliance clocked up a total of 566 exhibitors from 28 countries and 13,700 trade visitors from 41 countries.

The slogan Print.Produce.Promote clearly reflects what's on offer. Textile finishing, print wear and workwear exhibitors present their solutions at TV TecStyle Visions. WETEC covers innovations in advertising technology, digital printing, light advertising and digital signage. GiveADays features innovations relating to promotional items and haptic advertising. The exhibited technologies and range of products are increasingly overlapping. This synergy produces genuine value-added content for both users and suppliers.

## WETEC – hands-on advertising technology

In the Jacques Lanners Hall (Hall 3) WETEC will exhibit innovations in advertising technology, digital printing, light advertising and digital signage. This international trade fair will no doubt impress visitors with its colourful complementary programme. The WORK AND DO Area



TV TecStyle Visions 2018, overview of the exhibition floor.

**Messe Stuttgart has expanded its Industrial Solutions Business Division by taking over the Expo 4.0 trade fair alliance. TV TecStyle Visions, Europe's leading trade fair for textile finishing and promotion, and two other trade fairs GiveADays and WETEC, are now Messe Stuttgart's own events, managed directly from Stuttgart.**

Most recently, i.e. in the spring of 2018, the trade fair alliance recorded a total of 566 exhibitors from 28 countries and 13,700 trade visitors from 41 countries. The objective: to consistently expand the trade fair alliance's international appeal and establish it as the leading event in advertising technology, promotion and textile finishing. The next EXPO 4.0 will be held in Stuttgart from 30 January to 1 February 2020. It will comprise an interesting framework programme with special technical shows, stages and lecture programmes covering 25,000 m<sup>2</sup> of exhibition space and will be easily accessible by plane, car, S-Bahn and train.

## Powerful trade fair trio

Because the Dach+Holz trade fair will be taking place in parallel, TV TecStyle Visions 2020 will be held in the L-Bank Forum (Hall 1), the largest hall at the Stuttgart Trade Fair Centre. Unlike previous years, the entire trade fair and complementary programme will consequently be staged in a single hall. The parallel events,

WETEC and GiveADays, will be held alongside in the Jacques Lanners Hall (Hall 3) and Hall 5. These three international fairs will be an ideal focal point for all visual and haptic communication fields, and all under one roof as EXPO 4.0. Synergy across technologies and products will provide genuine added value for both users and suppliers.

## EXPO 4.0 – Print.Produce.Promote

EXPO 4.0 is the leading platform for visual communication and haptic advertising. The three fairs - WETEC, TV TecStyle Visions and

will demonstrate an advertising technician's entire workflow and participation will definitely be encouraged. As part of this complementary programme, the WRAPandSTYLE Area will present best practice demonstrations and technical hacks on how to optimise car wrapping during relevant talks.

## TV TecStyles Visions has a lot to offer

TV TecStyle Visions is Europe's leading trade fair for textile decoration and promotion. Being part of the powerful EXPO 4.0 trade fair network, TV TecStyle Visions, GiveADays and WETEC will cover all areas of visual communication and haptic advertising. Exhibitors will show technology and accessories for all textile printing processes, including textile embroidery, flocking, applications and laser engraving. Well-known textile manufacturers and distributors of corporate fashion, promotional wear and functional workwear will round off the product range.

## Leading position in Europe

Nadine Dingert, Project Manager for TecStyle Visions and Overall Project Manager for EXPO 4.0 at Messe Stuttgart, summarised as follows: "Over the past few years TV TecStyle Visions has systematically enhanced its prominent position in Europe as the ultimate trade fair for textile finishing and promotion. Increasing internationalisation was reflected in the 18% international visitors at the last event. The extensive range of exhibits in technology and accessories for all textile finishing processes is rounded off by textile manufacturers and retailers of corporate fashion, print wear and functional workwear. The exhibited know-how can be experienced first hand in the L-Bank Forum (Hall 1). The 2020 programme will include daily fashion shows, a special technical show in the micro-factory in cooperation with the German Institute for Textile and Fibre Research and the proven Technical Forum." Roland Gruber, GMK Fachmessen, commented: "We have been cooperating successfully with Messe Stuttgart for many years. As far as we are concerned, the sale to the future general event organiser is the next logical step in the expansion of the TV TecStyle Visions format as the leading trade fair for textile finishing and promotion. We will also continue to support Messe Stuttgart as a media partner with our specialist media."

## Virtually full house

At the publication of this magazine two months before the actual event (30 January - 1 February 2020), TV TecStyle Visions more than deserves its status as the leading European trade fair for textile finishing and promotion. Although the available exhibition space is currently almost booked up, further registrations are still expected.



WETEC car wrapping still a popular profession.



GiveADays 2018, overview of the exhibition floor.

## Eleventh edition

The Stuttgart fair will again be attracting its regular exhibitors from around Germany for this eleventh edition. The number of foreign exhibitors also continues to increase. The number of international exhibitors from both the technical market segments and the textile sector have continued to rise during the previous three fairs. French, Italian and British companies in particular appreciate the quality on show at TV TecStyle Visions, and the number of visitors from the Benelux also continues to increase. The 2018 exhibition in Stuttgart attracted exhibitors from 28 countries. The directory of current exhibitors at TV TecStyle Visions can be viewed online.

## Hands-on technology

Highlights in the TV TecStyle Visions programme include daily fashion shows by renowned textile manufacturers. The special technical show in the micro-factory, in cooperation with the German Institute for Textile and

Fibre Research, gives visitors the opportunity to gain hands-on experience. Charlie Taublieb, alias Doctor Print, will be on hand to answer any questions. The programme will be rounded off with technical talks on currently trending topics in textile finishing and on materials and techniques. The Fair.Eco.Bio stand will focus on the significant issue of sustainability.

## GiveADays – focus on sustainability

At GiveADays leading manufacturers and retailers will present innovations and products relating to promotional items and haptic advertising for the fourth time. Experts will present ingenious ideas and inspiration for trade visitors from a marketing, agency and specialist promotional item retail background at the Technical Forum. Obviously the omnipresent topic of sustainability will be the focal point of the exhibited products and complementary programme in 2020. ●



## Making Deeper Connections at ISE 2020

# ISE returns to Amsterdam

By **Ton Rombout**



Impression of ISE-2019: interactive table screen.

**Tuesday 11 February 2020 sees Integrated Systems Europe – the world's largest exhibition for AV and systems integration – return to the RAI Amsterdam. The event runs over four days, occupying 15 halls, and is home to everything the professional audiovisual and digital signage industry has to offer – including the latest developments and technologies that will influence almost every industry's future.**

ISE 2020 is produced by Integration Systems Events on behalf of international trade associations and co-owners AVIXA and CEDIA. Continuing a long tradition, this year's event will be bigger than last year's: more than last year's 81,000 visitors are expected; there will be more floor space; and more conferences and learning opportunities on the agenda.

### Deeper Connections

Visitors will be 'Making Deeper Connections' with the newest technologies, the latest ideas – and the global AV and Digital Signage

lighting and shutter control, security systems, heating, ventilation, monitoring, alarming and many others; and

- Unified Communications, with innovative new platforms designed to facilitate collaborative working and enhanced productivity across sites and countries.

### Innovation Zone

A new initiative for ISE 2020 is the Innovation Zone, a specially designed area for first-time ISE exhibitors to showcase their technology. Also in Hall 14, the ISE Main Stage theatre relocates from Hall 8. The Main Stage will offer thought leadership and best practice sessions from ISE, AVIXA, CEDIA and AV Magazine. These sessions are free to attend, and no advance booking is required. Hall 14 will also be the location of an exciting technology feature, details of which will be announced in the coming weeks. Another show floor development sees an even bigger Hall 5; 2019's temporary extension has been upgraded to a larger permanent one. This will help to accommodate the growing number of exhibitors and visitors looking to take advantage of the opportunity presented by ISE.

### Conference and professional development programme

Something that has characterised the development of ISE over the years is that it has attracted a growing proportion of end-users anxious to see and hear the latest technologies and solutions for themselves. ISE 2020's conference and professional development programme runs over five days – will once again be presented with the tagline 'Learn, Discover, Be Inspired'. ISE 2020 will see the return of long-standing fixtures the Digital Signage Summit ISE and Smart Buildings Conference ISE, along with more recent additions such as the XR Summit ISE and the 2019-inaugurated Digital Cinema Summit ISE and Hospitality Technology Summit ISE by HTNG. Two major new conferences have been added for ISE 2020 in the shape of the Control Rooms Summit and the CEDIA Design & Build

Conference. The latter is targeted at architects, interior designers and other design and build professionals in the residential space. The AVIXA Enterprise AV Conference will highlight the growing availability of data and the opportunity that data analytics provides to enable better business strategies and work-space/system design. Many of the conferences will take place at the nearby Okura Hotel – a move that proved very popular with visitors when introduced last year. A free shuttle bus will run between the RAI and the conferences.

### Innovation Awards

The Innovation Awards return for the fourteenth time to recognise the best in global AV projects and technology, as well as outstanding distributors, project managers and consultants. The 2020 venue is the architecturally unique Beurs van Berlage. And following 2019's projection onto the nhow Amsterdam RAI Hotel, a spectacular projection mapping showcase involving another part of the RAI complex will catch the attention at ISE 2020. ISE's Opening Address will be given by Duncan Wardle, a former Disney executive who will show how innovation can become part of the



Managing Director of ISE Mike Blackman.



LED-floor of Dutch company LedGo during ISE 2019.

### Mike Blackman's view

ISE is owned by AVIXA and CEDIA, two trade associations with a focus on professional development – so education and training have always been an important part of the show. Another priority for both associations is reaching out beyond the industry, to other stakeholders within AV projects. Establishing and awarding professional qualifications plays an important part in establishing the expertise of the industry as a whole, as well as demonstrating the competency of the individuals who work in it.

**Regarding trends in technology we will see at ISE 2020,** I think we'll start to see Artificial Intelligence permeate a number of AV applications. It's already being used in digital signage, but many see opportunities for it in other customer-centric applications, such as hospitality. AI is also being used to improve the quality of meetings and collaboration. And ISE 2020 will, I think, provide evidence of the rise of LED-based screens. They have advantages over LCD – and prices are dropping rapidly. It will also be interesting to see the progress that OLED technology has made. Visitors should look out too for new generations of application-specific projectors.

day-to-day working culture in our businesses. The Opening Address will take place the evening before the ISE 2020 exhibition opens, and be followed by the Opening Reception.

### Next year

ISE 2020 will be the final edition of the show to be held at the RAI Amsterdam; in 2021, ISE will relocate to the Fira de Barcelona. To prepare attendees for this change, the walkway between Halls 7 and 8, formerly known as the Business Lounge, will have a Barcelona theme. Here attendees can find information about how to get to ISE 2021 and what to expect once they are there. Additionally, to mark this significant moment in ISE's story, the traditional Closing Keynote will be replaced by an invitation-only event on the Friday. Here ISE will say thank you and goodbye to Amsterdam and the RAI, and look ahead to what Barcelona and the Fira have to offer. "The event will mark the end of an era," said Mike Blackman, Managing Director of Integrated Systems Events, "and the beginning of an exciting new one." •

## Exhibition

SignPro Europe December 2019

13



# The role of sensors in digital signage

By Ton Rombout



Example of remote triggering of sensors.

**One of the most interesting parts of the ISE show for sign makers and wide format printing companies are the halls where digital signage is being showcased, nowadays attracting many exhibitors. Whilst large and medium sized sign making companies have been focusing on digital signage for some years, their customers have now also started to ask 'what's in it for me?'**

And yes, moving signage is a major issue for sign making companies in terms of how they can cope with the concept and development of digital signage. However, the imminent role and significance that sensors will play is even more interesting.

## Sensors

Amazon Go convenience stores, for example, are packed to the rafters with sensors giving customers a checkout-less shopping experience. The ceilings and shelves are covered in hundreds of sensors tracking customers' every

move in store whilst picking up merchandise. Sensors are also increasingly becoming a commodity in digital signage. Today's sensors, mainly used in digital retail, are standard close-range sensors with an operating range of a few centimetres. They usually sell for a few euro and are widely available. The challenge with sensors in general is not the hardware itself, but the platform to connect and efficiently manage the data recorded by them, particularly now that more and more of them are operated wirelessly. This article sets out an example of how these sensors can be used.

## Nexmosphere

The Eindhoven (NL) based company Nexmosphere developed a low cost, easy to deploy and manage sensor platform, which is quite popular with digital signage integrators. These Dutch experts offer light, touch, video, audio, pick-up & presence sensors for customized experiences controlled by a single platform. Whilst remotely managing sensors and data can be facilitated by platforms such

as Nexmosphere, another challenge is much more difficult to master.

## Trending topic in retail

Shopper experience is the current trending topic and challenge in retail. Nexmosphere builds the platforms that deliver it. These days retail is all about experience, feeling the brand and discovering new items. Retailers and brands have to deliver an engaging shopper experience and invite the customer to take the next step. Nexmosphere develops products that enable an enriching and intuitive shopping experience that will change the way we shop. Combining elements such as light, touch, video, audio, pick-up & presence sensors on one Xperience controller, it will control your journey step by step. The versatile range of elements offers the flexibility to create unique shopper experiences that are cost effective for large scale implementation. The robust and clever system design of the easy to set up scalable platforms guarantees rapid and hassle free implementation. It is referred to as plug and smile!



Formerly done by hand, now with the eyes.

## Xperience controllers

Nexmosphere develops products that enable an enriching and intuitive shopping experience that will change the way we shop. Combine all the elements such as light, touch, video, audio, pick-up & presence sensors to develop a tailor made shopper journey and enjoy the benefits of them being controlled by a single Xperience controller. The portfolio is in fact divided in two categories, i.e. elements & Xperience controllers. Choose a variety of elements, connect them to one of the Xperience controllers and determine how the elements will drive the shopper experience in a way that suits your style and purpose.

## Nano controllers

The company works, for example, with nano controllers. Their ultra small form factor and smart design makes them ideal for use in virtually any application where space is at a premium and integration with other systems is key. Connect your Nexmosphere elements of choice, such as presence sensors, pick-up detectors, touch buttons or LEDs, and build your own unique shopper journey. LED lighting that lights up when a shopper approaches, product information displayed when a product is placed on an 'info platform'. Whatever your approach to interactivity to suit your brand narrative, create a lasting impression using the XN Xperience controller. The Nexmosphere XY range offers a variety of sensors that detect and analyse the presence, distance and demographics of the people in front of your interactive display or signage installation.

## An enriching interactive experience

The Nexmosphere Xperience Controller can easily be interfaced with a digital signage media player, e.g. a BrightSign, using a serial or USB connection. There is no need to install special software as the Nexmosphere components communicate instantly after connection to the player. When your audience interacts with the connected sensor elements, a serial command is automatically sent to the media player, which in turn can trigger content as desired. Process the standard serial commands provided into the media player of your choice and design the exact interactive user experience required for your project.

## Rfid triggered content

The X-Eye presence sensor is a narrow beam IR sensor that can detect when an object or person is present and indicate the distance between the person and the sensor. This enables the implementation of multiple trigger zones, such as head turning lighting effects on connected LED lighting when a person is some distance away, the appearance of call-to-action video content when they approach and touch buttons when the person is standing right in front of your display. Nexmosphere pick-up technology generates a trigger in your set-up as soon as a product is picked up by a shopper. The wired pick-up sensors are easy to mount on any product and can be used as a security device as well. Connect any of the Nexmosphere pick-up sensors to the Xperience controller and use them as a trigger to start a video or slideshow. An ideal tool to provide more detailed information on the merchandise on display.

## Not too much!

Hubert Van Doorne of Nexmosphere stated that digital signage concepts are all too often build on unrealistic and not necessarily accurate expectations. They are frequently created and tested in laboratory conditions rather than in real life. For example, sensors only need to detect certain ranges – similar to temperature. It is more important to know whether it is generally cold or hot to play out relevant content. Is it relevant to the customer experience that the temperature drops by 0.2°C? Not really. Integrators tend to over engineer sensor driven projects. Whereas they merely spend 50 euro on sensors, they will spend 50,000 euro on the control systems around them. The value of sensors is to enhance the experience of the 80%, not to optimise it to cover all possible exceptions. With a sensor investment of 500 euro integrators can enhance the customer experience twice over.

This article is based on an excerpt from the Invidis digital signage 2019/20 yearbook. It can be downloaded free of charge at <https://invidis.de/magazin-download-archiv/> Digital Signage Summit ISE (DSS ISE) consists of a half day conference organised by Integrated Systems Events in association with Invidis Consulting. DSS ISE will be held during ISE on 12 February 2020 at the Okura Hotel. •



Sharp face-up touch-signage.



FESPA launches its visitor campaigns

# FESPA Global Print Expo 2020

By Ton Rombout

**FESPA recently launched its visitor campaign for FESPA Global Print Expo 2020 and its co-located exhibitions, European Sign Expo 2020 and Sportswear Pro 2020, which will all take place 24 to 27 March 2020 at IFEMA – Feria de Madrid in Spain.**

The campaign strapline, 'Where Colour Comes Alive', highlights the vibrant, creative range of print and signage applications, processes and materials that will feature at the show and emphasises FESPA Global Print Expo's role as an annual hub of innovation and ideas for the wide format graphics, industrial and textile print sectors.

## Powerful theme

"'Where Colour Comes Alive' is a commanding theme that expresses the boundless opportunities within our industry," Neil Felton, FESPA CEO, stated. "'Colour' has multiple connotations – it refers to media, inks, finishing, colour management, as well as the vivid end products being created using print. I am confident it will resonate with the whole spectrum of our visitors and exhibitors, whether their focus is on graphics, signage, décor or textile." 2020 marks the return of FESPA Global Print Expo to Madrid, where the exhibition was last

held in 2002. Covering five halls of the Feria de Madrid, the event is expected to host 600 exhibitors and will provide an international platform for the latest innovations that the digital wide format, screen and textile printing markets have to offer.

## Printeriors - Print Make Wear - World Wrap Masters - Trend Theatre

The event's popular educational features are all set to return, including Printeriors for interior and exterior décor, Print Make Wear for garment printing, World Wrap Masters for vehicle wrap, Trend Theatre and the Colour L\*A\*B\* colour management showcase, which was first introduced at FESPA Global Print Expo 2019 in Munich.

## European Sign Expo 2020

Part of the comprehensive offering for visitors to Madrid will be European Sign Expo 2020, Europe's largest exhibition for non-printed signage and visual communications. A dedicated showcase of technology solutions and materials for non-printed signage applications, the event offers brand owners and visual communications professionals the possibility to explore untapped opportunities beyond print, including channel lettering, engraving and etching, LED and neon as well as digital signage.

## Sportswear Pro 2020

Making its debut alongside FESPA Global Print Expo 2020 will be Sportswear Pro 2020, a brand new exhibition that capitalises on FESPA's roots in textile printing. Dedicated exclusively to sportswear manufacturing, Sportswear Pro will focus on the latest technologies in on-demand and customised sportswear production, bringing together suppliers of solutions for design, production and garment decoration.

Neil Felton concluded: "The annual flagship FESPA Global Print Expo continues to be the key destination for speciality print and signage professionals looking for the tools and inspiration to enhance their output and grow their business. In the coming months we look forward to seeing what our exhibitors plan to launch at the show. It is always invigorating to see the rich potential and colourful possibilities that they open up to our global print community." •

*For more information on FESPA Global Print Expo 2020 and to register, visit [www.fespaglobalprintexpo.com](http://www.fespaglobalprintexpo.com) and use code FESM201 to gain free entry.*



Car wrapping at FESPA 2019.



End of 2019 FESPA: see you next year.

Certification and support for the HP STITCH Series

# Caldera announces Version 13 of Raster Image Processor

By Ton Rombout



**Caldera, the French RIP and workflow software developer, recently released its latest RIP software version. Version 13 (V13) came to market in October with a range of new features and several improvements to existing features. There will also be support for HP's Stitch Series printers.**

The new version will be showcased at a number of upcoming print conventions, including CPrint in Lyon next February, FESPA in Madrid in March and ISA in Orlando in April.

## Benefits

A clear benefit of V13 is that users can expect to save considerable time during prepress, reprinting and mounting/installation in the field, and save on media in certain areas. The 5 main new features include Print&Cut Mirror, Tile Order, Caldera Jobs – Detailed View, Custom Annotations and Alpha-to-Spot. Industry 4.0 is here!

## Print&Cut Mirror and Tile Order

Print&Cut Mirror has been designed to streamline mirror workflows, when printing the back side of backlit applications and for print-to-cut dye sublimation transfer applications. It enables printers to manage the mirroring of the image, the cut marks and the cut file directly from the RIP interface, resulting in prepress time savings. Tile Order lets users

choose the printing order of tiles to reduce the onsite mounting time for large tiling jobs. Printing can be started from a corner of choice and the feature can deliver time savings on mounting times for building graphics, blueback posters and building wrapping.

## Caldera Jobs, Custom Annotations and Alpha-to-Spot

Another new feature, CalderaJobs, makes managing large volumes of jobs and multiple printers more efficient. With the ability to archive, save or delete past jobs more effectively, users will save time spent searching for reprint and will have a clean overview of all work to date. The Custom Annotations feature allows printers to choose which information they print in the annotations, which saves media space and optimizes data searching and pertinence. Alpha-to-Spot automatically converts files with transparent backgrounds into white channels in automated workflows, generating prepress time savings.

## And more

As well as the new features, V13 boasts a number of improvements to existing features. InkPerformer now offers a choice of V2 (Legacy) and V3 engines. The latter delivers savings of up to 30%, maintaining colour quality with improved grey neutrality printing. New version Light Installers save time, while OS support has been extended to MacOS

Catalina 10.15. V13 itself can be downloaded directly from CalderaDock, as can new ICC profiles and printer drivers. The new version incorporates updated Pantone Libraries, including 210 swatches in Pantone FHI Cotton TCX, and there's a new 2xCMYK Print Mode for finer prints with duplicated heads.

## Certification and support for the HP STITCH printers

Caldera has announced RIP certification and support for the new HP STITCH series of printers, having developed TextilePRO printer drivers specifically for this range. The new and intuitive workflow suite has been designed to enable fast, precise textile printing that will cut down on waste and errors, resulting in more profitable production. TextilePRO is Caldera's intuitive production suite for textile printers. It will give HP STITCH users the ability to control colour, ink and substrates at the touch of a button and includes features that create a more efficient workflow by minimising waste. The TextilePRO RGB Workflow keeps all colours in RGB to guarantee full fidelity to the original, and there is a choice of generation methods for blacks to achieve the richness and texture required by the fashion market. •

CalderaRIP  
Version 13



Caldera RIP version 13.



# VPK puts its trust in Durst

By Ton Rombout

**Patrick Leclercq, head of the Belgian corrugated board division of VPK, is confident: the Courcelles site will both increase production and further improve quality with this new Durst Delta 2500HS printing system.**

VPK, an international packaging supplier, employs in excess of 6100 people at more than 65 plants across 20 countries. The company offers a wide variety of products, services and applications, serving the most diverse industries with bespoke packaging solutions.

## Sites all around the world

Originating in Belgium and headquartered in Aalst, the company also has plants in other parts of Belgium and a wide geographical reach with its worldwide subsidiaries. However, it still maintains a local approach, fostering close customer relationships.

The largest corrugated packaging production site in Belgium VPK Packaging, which is based in Oudegem near Dendermonde, employs 600 people and produces a range of customized corrugated cardboard packaging solutions. The high quality packaging is made from recycled papers and papers such as Testliner, fluting and greyboard, which are ideal for consumer goods, food & beverages, e-commerce and industrial packaging. The company also produces corrugated sheets, corrugated board and solid board packaging. VPK has two production sites near Aalst. One of them is a box plant, one of them a display plant. The site in Courcelles operates as a so-called sheet plant, having the flexibility to service several customers – both within the display range and packaging range. The VPK Packaging Group also has subsidiaries in countries including the UK, Ireland, France, Germany, Poland, Sweden, Finland, Denmark, the Czech Republic, Hungary, Turkey and Russia, as well as China and the USA, with its cores and tubes division Corex. VPK offers an extensive range of sustainable, strong and protective packaging products - all made from recycled fibres - and services adapted to your specific requirements.



Delta 2500HS in full production at VPK.



Durst Delta 2500HS at the back side.

## Standard boxes, and more

VPK probably delivers the most widely used corrugated packaging worldwide. Its standard boxes, which are available in many different dimensions to suit individual requirements, are used to transport all kinds of products and can be filled manually or mechanically. The packaging protects what is important, prevents product damage and is kind to the environment. Corrugated packaging is an ideal option to protect goods and minimise damage during transport, storage and even display. Packaging keeps products safe, clean and protected. It

also provides mechanical protection to prevent breakage and avoids spoilage/contamination by creating a barrier to moisture, gas, light, flavours and aromas. Some types of corrugated packaging can even be specifically designed to be tamper and theft proof.

## Built-in flexibility

Because of its built-in flexibility, corrugated packaging can be tailored to the type of product being transported. Certain types are ideal for the shipping of heavy items. Other types have a high level of puncture resistance to reduce potential damage.



Rail to move the substrate over the flatbed.



Some examples of boards printed by the Delta 2500HS.

Patrick Leclercq emphasised that VPK has extensive experience in the following logistical solutions:

- Optimisation of the board grades of specific packaging, wherever possible. This will enable you to save space and raw materials, and generate both environmental benefits and cost efficiency.
- Optimisation of palletisation, including the pallets VPK delivers to you. Once the goods have been packed in our packaging, we can help optimise palletisation from your site to your customer's site.
- Not only the product and its palletisation, but also the truck loading process has a significant impact on the logistics chain. VPK consequently makes every effort to make the entire process run like a well oiled machine.
- Warehousing: VPK offers a make to stock service for just-in-time delivery. Its dense network of production sites facilitates local deliveries.

## Durst equipment

The Durst equipment purchased for the corrugated board division of VPK was recently installed at the Courcelles site. Cartonneries de Wallonie (CDW) in Courcelles used to work with another large format printer, but currently uses the Durst Delta 2500HS printing system. It can now produce the same material and products but in even larger

formats, at a faster speed, resulting in increased production and even better quality. The Delta is a six colour printing system that can print an even more extensive range of colours than was previously the case with a four colour press. Many functions have been automated using the six colour printing system Delta 2500HS. The Delta Multi-Pass UV printing system prints with a resolution of 1000 dpi and offers additional process colours such as light cyan, light magenta, orange and purple or orange and green, delivering the most subtle print results. The system can be configured with the extra colour option of "White Underprint", making it a perfect option for printing on brown corrugated materials.

## Flagship Delta 2500HS

The Delta 2500 HS is a flagship in the Durst Delta UV flatbed printer portfolio with Multi-Pass technology. These machines combine superior print quality and print speed with unrivalled versatility. The printing system features a maximum print width of 2500 mm, which also makes it eminently suitable for dual track printing. The productivity of the Delta 2500 HS reaches 190 boards/h in high quality 2 pass mode and can be raised up to 370 boards/h in Draft mode.

New feeder onto full automation  
Next year the configuration is set to be extended with a new feeder with Multi-Pass technology to achieve full automation. Why this intermediate stage and what are the additional benefits of such an upgrade?  
Patrick Leclercq: "The installation of the new digital printer is indeed the first step in a completely new digital line with a ZUND digital cutting machine and a reverse installation. To ensure that everything runs smoothly, we work in steps in accordance with our project charter. In this regard, it is important to have a step-by-step understanding of the various production



Patrick Leclercq, head of the Belgian corrugated board division of VPK.

phases and to give our employees the opportunity to get used to and learn. "

## Why Durst?

Why did you – VPK – decide to contact Durst about this system? Did you already have a Durst installation or is this system your first introduction to Durst?  
Patrick Leclercq: "Based on the predefined criteria in the specifications, Durst came as the best option. In addition to the technical specifications, where dimensions were essential, much attention was paid to the follow-up post-installation, guidance, after-sales service and language (Dutch (Belgium) of the technicians for local support. " •

## Separate packaging workflow system

NB: information added by Durst

Durst offers a separate packaging workflow system for the Delta Series. This comprehensive solution covers all processes from data management and print data preparation to output on the printer and reporting. Access to the software is browser based and can also be managed from mobile devices without requiring any additional installations. The Durst Workflow system can be extended at any time with a range of modules for variable data printing, ink consumption calculation, high speed RIP, grid charts & colour book compilation, operating several printers at the same time and much more. The Durst Concerto communication server facilitates the integration of external MIS/ERP systems and web-to-print portals.





Printed on the HP Stitch S1000.

## UK's first HP Stitch S1000 super-wide dye sublimation printer

# Manchester Print Services moves away from standard signage substrates

By Ton Rombout

**Manchester Print Services (MPS) has taken delivery of the UK's first HP Stitch S1000 super-wide dye sublimation printer, following its much anticipated launch at the FESPA show in May 2019. Manchester Print Services, which was set up in 2009 by Andy Lambert and Lee Egan, has quickly established itself as a leader in digital print in the Manchester area.**

As a specialist supplier to the retail POS and exhibition markets, MPS recently recognised a shift in the industry towards fabrics/materials that are easier to transport and can be finished to a higher standard, away from standard signage substrates.

### Choice in favour of HP Stitch S1000

The company consequently decided to invest in the most cutting-edge textile printing and finishing technology from HP to meet the increasing demand for long runs of exceptional quality work. The new 3.2 m wide HP Stitch S1000 printing system brings a new level of

innovation to high production companies, enabling them to meet deadlines more easily with fast speeds, high uptime and unattended shifts. Designed for high productivity and simplified operation, this printer has been developed to meet the rising demand for polyester based textiles for the sportswear, fast fashion, home décor, soft signage, and potentially even more, markets.

### HP user for many years

With a workroom already running an HP Latex 360 and two HP Z6100 aqueous systems for smaller work such as poster printing, MPS once again turned to HP to prepare for a significant new project. Starting this autumn a four year contract will see the company supply substantial quantities of backlit displays to one major customer, with other offshoot work also expected. Work using an older textile printer actually secured the job, but MPS wanted to ensure that it had the fastest, most up to date equipment from day one right up to the end of the project.

MPS now has the facilities and experience to fulfil its customers' complete exhibition and display graphic requirements. The company's expert printers produce large format results to the size and style the customer demands. MPS offers advice and support throughout the process, combined with flexible pricing and fast turnarounds, to cater for any business no matter their needs. They are specialists in large format POS and Retail graphics and digitally printed fabrics, with more than 20 years experience in the industry.

### About Manchester Printing Services

Andy Lambert and Lee Egan both started as apprentices at the age of seventeen, working on analogue photography and photographic re-touching. Moving into the digital era, they became experts in high quality digital print manufacture. "Our comprehensive in-house production and finishing capabilities, driven by a highly technical and experienced team, enable us to meet the tightest deadlines with



Print produced on the HP Stitch S1000.

full quality control," they explained. MPS serves many sectors of the industry, including construction (shop fitting, engineering, architectural), leisure (gaming, vending, hotels), retail and POS, display and exhibition. Its machinery includes a 3.2 m wide UV curable direct to substrate printer, a 64 inch latex printer, a 60 and a 42 inch pigmented ink printer, 1500 mm wide laminators and a 1600 mm wide cutter/router. In November 2017 MPS also installed a Blackman & White VersaTech cutter-router, followed by a 3.2 m wide Mimaki JV5 printer and a 3.2 m wide Monti Antonio heat press in early 2018. At FESPA 2019 the company decided to invest in the HP Stitch S1000 super-wide dye sublimation printer. Having started in a 93 m² unit, the company gradually expanded and purchased a new 836 m² facility in late 2016.

### Why the HP Stitch S1000?

Lee Egan, a director of MPS, explained that the company identified an increasing demand for long runs of exceptional quality work and decided to move away from standard signage



Andy Lambert and Lee Egan, the management of Manchester Printing Services.

substrates to materials that are easier to transport and can be finished to a higher standard.

"That is why we went to the HP Graphic Arts Experience Center in Barcelona in July 2019 to see the new HP Stitch in operation," he explained. "We were given a full demonstration, including profiling and material changes. We could see that the Stitch could do everything we need it to do and decided to have it installed straightaway."

### Delivery and installation

The HP Stitch S1000 was delivered by RA Smart to the MPS HQ in Middleton at the end of August. Being the exclusive supplier of Stitch in the UK and based in nearby Macclesfield, RA Smart supported MPS throughout the purchasing process, including the visit to Barcelona, and provided post installation training.

### More than satisfied

"Since its installation the Stitch's output has been superb," Lee Egan commented. "It is easy to load and very user friendly. The colours

are extremely vibrant and the automatic adjustments have done away with any signs of banding in all the tests we've run and jobs we've already completed since its installation." The system is designed to enable unattended printing for hours at a time - meaning users can load a 100 m roll of fabric onto the machine at the end of a day shift and leave it running until the next morning. "It gives you the confidence to leave it overnight to increase capacity when needed," Lee Egan continued. "The HP Stitch's ability to print on both transfer paper and direct-to-fabric on a single device also gives us more options. Because we are renowned for our quality, having these options is a real bonus." •

For more information on Manchester Print Services visit:  
[www.manchesterprintservices.co.uk](http://www.manchesterprintservices.co.uk)

For further information on HP visit:  
[www.hp.com](http://www.hp.com).



(print produced on) the HP Stitch S 1000.



Sample print produced on the HP Stitch S1000.



# 20 FESPA GLOBAL PRINT EXPO

Madrid  
24-27 March 2020

## WHERE COLOUR COMES ALIVE

AT EUROPE'S LARGEST FOCUSED PRINT EXPO

24 - 27 MARCH 2020 | MADRID

REGISTER NOW [FESPA2020.COM](https://www.fespa2020.com)

FREE ENTRY PROMO CODE **FESA230**

GOLD PARTNERS:

**brother**  
at your side



**Mimaki**



Worldwide delivery from stock

# TTS: your partner in transfer printing media and printable textiles

By Ton Rombout

**Over the years Texo Trade Services (TTS) has continued to expand and become a well-known brand across Europe. Why? Because the company concentrates on a superior and detailed range of transfer printing media, digital printable textiles and related articles, with expertise as the buzzword.**

"If you are looking for anything printing related, you can rely on our experience," is the company's credo. It gives customers in any number of application fields, across Europe and in more than 60 countries worldwide, access to more than 22 years of experience in textile and transfer printing.

### Worldwide delivery from stock

"Because we focus to supply a wide range of products from stock, we are able to quickly react and fulfil your requirements and demands," TTS Managing Director Floris Jan van den Heuvel explained. "Our in-house production and converting capabilities enable us to offer customized solutions and competitive pricing based on long term relationships. We always aim to be the first to deliver groundbreaking, innovative products and cost saving technology, which is why we frequently add new products to our assortment. The commitment of our workforce helps us make this possible day by day and has made TTS the company it is today."

### Printable textiles

#### 1- Printable textiles

The Texofabrics range comprises digital printable textile media that can be printed with sublimation transfer, direct dye sub (disperse inks), solvent inks (eco/mild/straight), UV curable or latex inks. We can offer the right textile for almost any application and printer from stock, in

widths ranging from 155 to 505 cm. Applications include art reproductions, front lit banners, beach chairs, gambling tables, bed linen, curtains, flags, carpets, textile frames, furniture, pillows, inflatables, light boxes, pop up systems, roll up banners, bean bags, shower curtains, sky tubes, sound absorbing material, sports-wear, pendants, sun umbrellas, tablecloths, tents, wall covering, block-out and economic banners. Visit [www.texofabrics.com](http://www.texofabrics.com) for technical bulletins/specifications.

### Overview - What we offer in general:

**Printable textiles:** printable textiles for transfer or direct printing with dye-sub, UV or Latex inks

**Sublimation paper:** a complete range of dye sublimation transfer papers for every possible application or printer, mats and Carpet for promotional use, blankets and towels.

**Protection paper:** protection paper and release coated protection paper

**Textile finishing:** accessories for finishing flags, strips for textile frame finishing (SEG) and acoustic solutions

**Garment decoration:** silkscreen transfer papers and polyester films, laser transfer paper and reflective transfer films

All these categories include sub categories enabling you to choose an option that exactly fits your requirements.



Floris-Jan van den Heuvel, director of TTS, in the new warehouse at Moordrecht, the Netherlands.

### New products in this range include:

#### PVC-free alternative to PVC mesh

PES Mesh: the PVC-free alternative to PVC mesh. Outdoor banners and fence tarpaulins made of PES mesh look great and very professional. This new textile is 100% polyester, making it a PVC-free alternative to PVC mesh. PES mesh can be printed using UV, direct sublimation or transfer. Weighing only 230 gsm, it has a very high tensile strength and an open structure that makes it extremely permeable to air. PES mesh is available in widths of up to 505 cm.

Read more -->>

**Media**

SignPro Europe December 2019





Textiles for Interior.

**Textile for interior use**

Furniture Soft Heavy is a stronger version of our Furniture Soft. The back is reinforced so that it retains its shape when used for furniture covers. Very soft to the touch and non-fraying Furniture Soft is ideal for pillows, whereas Furniture Soft Heavy is more suitable for upholstery. Poplin Canvas is a new economical polyester fabric for transfer with canvas structures. Being very soft to the touch and with an attractive "poplin woven" structure, it is ideal for furniture upholstery.

**2-Carpets and Mats**

Carpets for exhibitions, catwalks and other promotional events and purposes.

**3-Towels and blankets**

TTS added a new range of ready-to-print promotional products, including towels (with a cotton and a polyester side) and fleece blankets. Both textiles are also available on a roll. These products, which are suitable for dye sublimation transfer printing, have very deep and vivid colours and are ideal for numerous promotional textile based purposes.

**Sublimation paper**

**Light, medium or heavy weight paper**

The range of TexoTrans SX Sublimation papers covers any possible application, including: sportswear, Viscom, fashion, interior textiles, aluminium or mugs printing. Available from DIN A4 Available from DIN A4 up to 320 cm wide rolls and everything in between.

**Protection paper**

**1-Protection paper**

The best and most economical paper to protect your calender belt. TTS keeps more than 20 different SKUs in stock for immediate delivery from 17 gsm to 28 gsm and from 15 cm to 504 cm wide rolls and everything in between.

**2-Release coated paper**

PPX-S2S is a release coated protection paper that will protect your calender belt and does not stick to coated textiles. This paper has a release coating on both sides, which prevents coated textiles from sticking to the paper.



Carpet for exhibitions and other applications.

**Textile finishing**

**1-Flag finishing**

We offer a range of accessories for flag and textile finishing, including beach flag band elastic, flag band with fold, extra firm flag webbing, ribbed flag webbing, unfolded hem band, velcro strip hook & loop, velcro strip self-adhesive hook & loop, solid braided flag rope, flag lead cord, flagpole halyard rope, round banner elastic rope, snap hook, snap hook with webbing, d-ring and flag hook.



Mats.



Interior-sofa.

**2-Textile frame finishing**

Aluminium textile frames with easy tensioning for printed textile prints are becoming increasingly popular. The textile is stretched in to the frame and fixed with a strip. TTS offers a range of different sized PVC, TPE and silicone strips that can be sewn onto textile. We also offer strips that don't need confection such as a self-adhesive and hammer-in strip.

**3-Acoustic solutions**

Acoustic sound absorbing felt or Soundtex printable textile can be used in textile frames to improve the acoustics in a noisy room or office. The felt and textile can easily be applied in standard aluminium textile frames.

**Garment decoration**

**1-TextoTrans & PolyTrans silkscreen transfer media**

The TextoTrans and PolyTrans range offers transfer papers and polyester film for silk screen printing with plastisol, water based and polyurethane (PU) inks from every established ink manufacturer.

**2-Laser transfer**

TTS offers a polyester transfer film suitable for laser printing with Ricoh and Xerox. . PolyTrans HCS100/1C-DPH is a new one side matt and one side release coated, 100 micron cold-peel transfer release film with good dimensional stability and perfect matt finish, suitable for digital laser printing with Xerox / Ricoh.

**3-Reflective transfer**

TTS joined forces with coating specialists to develop a range of reflective polyester transfer films that meet the highest requirements in the market. These reflective products cover any techniques currently available on the market to make reflective transfers for sportswear, fashion, work and safety wear, including films that are EN471 Class II certified. •



Interior-things.



Warehouse.



Printer with sublimation paper.



Sublimation Paper.

**About Texo Trade Services (TTS)**

Texo Trade Services is Europe's leading manufacturer and distributor of sublimation transfer paper, calendar protection paper, printable textiles and textile finishing products for the fashion, visual communication, interior design and sports industries. For 22 years its customers have benefited from its extensive experience in the field of textile and transfer printing. With a wide range of products in stock the company can respond quickly to market demand. Having its own production, cutting and winding facilities it can successfully offer custom solutions at competitive prices, as demonstrated by the many satisfied customers in more than 60 countries worldwide. TTS always aims to be the first to offer groundbreaking, innovative and cost-cutting technology. The company, which is based in Moordrecht (the Netherlands), has subsidiaries and warehouses in France, Germany, UK and Italy and agencies worldwide. For more information visit: [www.texo-trade.com](http://www.texo-trade.com)

**TTS Headoffice & main warehouse**

Oostbaan 601  
2841 ML Moordrecht  
The Netherlands  
T: +31 182 62 39 44  
E: [sales@texo-trade.com](mailto:sales@texo-trade.com)



Hexis High-tech films to keep your windscreen clear

# Come rain or shine

By Martin Kugler



Full wrap with windscreen laminate.

**HEXIS recently added two new layered tear-off windscreen laminates to its range of protective films, particularly for the automotive market.**

Hexis sticks to a proven strategy, building its market position on a clever combination of solid product base and efficient sales organisation. Having its roots in the traditional sign making and marking trade, Hexis has kept a steady eye on, and interest in, the motor racing and general automotive markets from the outset.

## Extensive experience

The company even ran its own GT championship racing team, Hexis Racing, between 2001 and 2013, and the experience gained during that time has definitely influenced its outlook on products for the automotive and racing markets. Being able to formulate and produce cast films in-house, Hexis has become a major player in vehicle marking and wrapping film

applications.

Its range of conventional car wrapping media comprises cast tinted films and digital media, complemented by the Bodyfence range of advanced protective laminating films.

## Automotive laminates

The Bodyfence line of automotive laminates is one of the company's leading technology innovations: a clear self-adhesive PU film with enhanced surface gloss to protect vehicles from environmental wear and tear, including scratches, stone chipping, abrasion and UV rays. Bodyfence also makes cleaning more convenient as it helps to prevent dirt from sticking to the vehicle body. Bodyfence is self-healing and particularly suitable for water based paints, which are more environmentally friendly but also more sensitive to impact and climatic fluctuations, providing excellent protection without altering the vehicle's appearance.



Pit stop with windscreen tear-off.



Clear laminate adhesive coating at Hexis.

## Hexis tear-off laminates

Tear-off films are commonly used in motor-sports as multi-layered disposable lenses on visors or windscreens. When the top layer starts to wear away and accumulates dirt from contaminants, the driver's vision will eventually become obscured. The driver can then remove the top layer, revealing the next clean layer and thus temporarily restore clear vision. This process can be repeated until the number of tear-off layers is exhausted.

Originally tear-off films were made of clear polyester. However, simply increasing the number of layers in the tear-off stack in order to extend visibility for longer periods was not a viable solution, as layering multiple tear-offs actually reduced vision to the point where stacking ever more layers became impractical and even unsafe.

The new Hexis tear-off laminates are based on a more advanced technology, achieving characteristics found in camera lenses and optical devices. The two new products use only the highest quality optical grade Mylar®, manufactured by DuPont, to avoid distortion and achieve unimpaired vision. Mylar boasts excellent optical properties, resistance against moisture, chemicals and mechanical wear and tear, and is able to withstand considerable temperatures fluctuations. Stacked layers of protection can easily be removed, leaving behind a fresh clean surface. The adhesive remains on the discarded layer and doesn't leave any residue on the layer below.

## Hexis 3333SHIELD

The initial launch includes Hexis 3333SHIELD, which is specifically designed for windscreens on passenger vehicles. It is a high-end solution, combining protection and optical comfort and clarity. This film consists of three removable,



Windscreen laminate application on a bus.



Tear-off windscreen laminates for racing cars.



Protective vehicle laminates specifically for harsh conditions.

optically clear layers of film with a thickness of 75µm each. It provides enhanced protection from damage caused by UV rays, scratches and cracks. The manufacturer claims that in racing applications the product will safeguard windshields exposed to projectiles, scratches, mud marks etc.

## Hexis 4444RACING

The second product, Hexis 4444RACING, is an extreme protection solution targeted at the luxury sports and motor racing market. It is made up of four optically clear, removable layers with a thickness of 100µm each. Each protective layer can easily be removed in seconds, revealing a new clean layer.

## Hexis and Racing Optics

The introduction of windscreen laminates is the result of a new strategic partnership announced in November between Hexis and Racing Optics, Inc., an American manufacturer based in Las Vegas. Racing Optics specialises in multi-layer tear-off laminates for racing, automotive, medical, military and industrial applications. The company was founded in 1999 and holds a number of patents for the technologies it has developed.

## Initial launch in Las Vegas

The first two Hexis windscreen laminates were initially launched at the SEMA (Specialty Equipment Market Association) show in Las Vegas last November. In a joint statement to the press, Clément Mateu, CEO at Hexis, and Bart Wilson, President of Racing Optics, underlined their strong heritage in automotive racing and their enthusiasm about the partnership between the two companies, emphasising their

commitment to provide the best in high-performance multi-layered optical protective films.

## Hexis: 30th anniversary

Hexis, the French vinyl manufacturer, celebrated its 30th anniversary in 2019. The company can look back on three decades of success in the self-adhesive media industry, having built a prominent position in sign vinyl, wrapping film and digital printing media. Over the years pioneering innovations such as anti-graffiti laminates, self-healing wraps, textured decorating films and many other unique products were added to the range. The Hexis headquarters are based in Frontignan, near Montpellier in the south of France. The company serves a loyal customer base from its two manufacturing sites and has subsidiaries and distributors spread across five continents. Having the capability to master all production, distribution and training operations, Hexis is able to provide a wide range of adhesive solutions to suit its clients' businesses needs. •

[www.hexis-graphics.com](http://www.hexis-graphics.com)  
[www.racingoptics.com](http://www.racingoptics.com)  
[www.semashow.com](http://www.semashow.com)





International trade fair for signmaking, large format printing, light advertising & digital signage

Key to Markets

Messe Stuttgart



**January 30 – February 01, 2020**  
**Messe Stuttgart, Germany**

**Get your free admission ticket now!**  
Redeem promotion code **WETEC20your-ticket** right here:  
[www.wetec-messe.de/ticket](http://www.wetec-messe.de/ticket)

## Let your message shine.

Experience how advertising technology, digital printing, illuminated advertising and digital signage let your marketing shine! The industry meeting in Stuttgart offers a wide range of products and exciting special shows such as the WORK AND DO AREA and the WRAPandSTYLE event.

**Note the date already now!**

#wetec [www.wetec-messe.de](http://www.wetec-messe.de)



**Print.  
Produce.  
Promote.**



### New CorrBoard Bioenergy joint venture

# McLaren Packaging and the Swanline Group invest in sustainability

By Ton Rombout

**McLaren Packaging and the Swanline Group decided to invest in sustainability by entering into a joint venture, CorrBoard Bioenergy (CB Bio), in order to facilitate the manufacture of carbon neutral corrugated material to be used at its respective manufacturing plants in Staffordshire and Port Glasgow.**

The joint venture between the packaging and display trade specialist, Swanline Group, and the paper based packaging producer, McLaren Packaging, led to an investment of £5.5 million in the construction of the world's first sustainable energy generation facility fuelled by organic waste, in order to provide heat and power for the manufacture of corrugated sheet board.

#### What's it all about?

Some of the waste needed for the 6,400 megawatt/annum energy plant will be sourced from Swanline and McLaren's packaging users, who require compliant food waste disposal in order to maintain a successful circular economy. Remarkably, the by-product from the plant is a quality fertiliser, pasteurised and certified to PAS 110 and suitable for spreading on local farmland to aid crop growing.

#### Where is it based?

CB Bio is located next to CorrBoard UK, a consortium owned independent corrugated producer based in Scunthorpe, which is part owned by Swanline and McLaren. Although they are autonomous businesses in neigh-

bouring premises, this innovative facility effectively makes CorrBoard UK's production carbon neutral, a major advantage for its customers and partners.

#### How does it work?

The concept of the CB Bio plant evolved after a chance meeting five years ago between Nick Kirby of Swanline and Robert Greenow of BioG-UK, an established operator of renewable energy facilities that use anaerobic digestion to generate energy. Once the feasibility of the plant had been demonstrated, Greenow designed the scheme and agreed to become an operational partner. BioG-UK also acts as a network for the collection of organic waste, the fuel needed for this type of plant. It has the capacity to divert 25,000 tonnes of biological waste from landfill, generating more than twice CorrBoard UK's energy consumption, or enough electricity and heat to sustain 1,500 homes. The plant is modular in construction, which means that its output capacity can be increased at a later date.

#### Any other benefits?

Both Swanline and McLaren expect CB Bio to substantially offset their own carbon footprints using the excess energy not consumed by CorrBoard UK, which is fed to the National Grid and allocated back to them in carbon credits.

#### What is the attraction for Swanline?

Nick Kirby, CEO of the Swanline Group, commented as follows: "CB Bio is a bold



Cardboard printing sample at Swanline.

statement to our customers, who want to procure corrugated packaging with genuine ecological credentials. This is a timely venture, providing greener solutions and industry leading benefits for paper based packaging consumers. Swanline is committed to making a difference for its customers and this investment fulfils that pledge."

#### What is the attraction for McLaren Packaging?

Donald McLaren, Managing Director of McLaren Packaging, added: "This world first, sustainable energy generation facility is a game changer in the paper based packaging sector. It demonstrates how, through investment, collaboration and innovation, McLaren Packaging is rising to meet pressing environmental challenges through sustainable solutions."

#### Other advantages

Using BioConstruct's advanced processing and software technology, the CB Bio plant can be operated remotely out of hours to maximise the uptime efficiency of the 800KwHr CHP units. Reassuringly, CorrBoard UK has the ability to switch seamlessly between electricity from CB Bio and the National Grid, thus providing protection against outage from either source. Although the CB Bio plant has an automated de-packing line, provisions have been made to accommodate waste delivered in tankers, on pallets or in specialist skips. In addition to vegetable food waste, the company is also certified to process category 2 and 3 animal by-product waste. •

The new company seen from the air.



## Recycling

SignPro Europe December 2019

29



The origins of the term 'additive manufacturing'

# Developments in 3D printing in close-up

By Ton Rombout



Data courtesy of Triple Eight Race Engineering

Steering wheel mold printed with HP JF 4200 3D and HP 3D HR PA 12 - Data courtesy of Triple 8 Race Engineering.

**The 3D printing process builds a three-dimensional object from a computer-aided design (CAD) model, usually by successively adding material layer by layer. That's why it is also referred to as additive manufacturing, unlike conventional machining, casting and forging processes, in which material is removed from a stock item (subtractive manufacturing) or poured into a mould and shaped by means of dies, presses and hammers.**

This article aims to demonstrate why additive manufacturing, i.e. to build up a model using a 3D printing device, has some significant advantages over these conventional methods and to establish whether 3D printing is interesting for 'conventional' 2D printing companies.

## Developments in material use

The term '3D printing' covers a range of processes in which material is joined or solidified in a computer controlled process to create a three-dimensional object, with material being combined (e.g. liquid molecules or powder grains being fused together), typically layer by layer.

During the nineties 3D printing techniques were only considered suitable for the production of functional or aesthetic prototypes, hence the more appropriate term of rapid prototyping. As of 2019 the precision, repeatability and material range have increased to the point that some 3D printing processes are considered viable as an industrial production technology, whereby the term additive manufacturing can be used synonymously with '3D printing'. One of the key advantages of 3D printing is the ability to produce very complex shapes or geometries,

in which a prerequisite for producing any 3D printed part is a digital 3D model or CAD file.

## Layer by layer

A digital 3D model can be built using different – vector based- software design programmes, mostly described as a CAD (Computer Aided Design) files. The term '3D printing' originally referred to a process that deposited a binder material, layer by layer, onto a powder bed using inkjet printer heads. More recently, the popular



Certification and support for the HP STITCH Series



Image of the complete HP Jet Fusion 5200 Series 3D Printing Solution.

vernacular has started using the term to encompass a wider variety of additive manufacturing techniques such as electron beam melting and selective laser melting. The official term 'additive manufacturing' is used in the US and in global technical standards in this wider sense. The most commonly used 3D printing process (46% as of 2018) is a material extrusion technique referred to as fused deposition modelling (FDM).

## Range of processes

The umbrella term additive manufacturing (AM) gained popularity in the 2000s, inspired by the concept of material being added together (in any number of different ways). The term subtractive manufacturing, however, appeared as a retronym for the large range of machining processes with material removal as the common theme. For most people the term 3D printing still merely referred to polymer technologies and the term AM was more likely to be used in metal working and end use part production contexts rather than amongst polymer, inkjet or stereo lithography enthusiasts. Until recently the term 3D printing has been associated with low price or limited capability machines. 3D printing and additive manufacturing reflect that these technologies share the concept of material addition or joining together throughout a 3D work envelope under automated control. The term 3D printing originally referred to a powder bed process employing standard and custom inkjet print heads. In



HP Jet Fusion 5200 3D Processing Station - left side view.

HP Jet Fusion 5200 3D Printer - Right side view.

2012 Filabot introduced a system to close the loop with plastic, allowing any 3D printer to print with a wider range of plastics.

## CAD model used for 3D printing

3D models can be generated from 2D pictures taken in a 3D photo booth. 3D printable models can be created using a computer-aided design (CAD) package, via a 3D scanner, or with an ordinary digital camera and software. 3D printed models created with CAD reduce the number of errors and can be corrected before printing, to verify the design of the object before it is printed. The manual modelling process of preparing geometric data for 3D computer graphics is similar to plastic arts

such as sculpting. 3D scanning collects digital data on the shape and appearance of a real object in order to create a digital model. CAD models can be saved in stereo lithography file format (STL), a de facto CAD file format for additive manufacturing that stores data based on triangulations of the surface of CAD models. STL is not suitable for additive manufacturing, because it generates large sized files of topology optimized parts and lattice structures due to the large number of surfaces involved. A newer CAD file format, the Additive Manufacturing File (AMF) format, was introduced in 2011 to resolve this problem.

[Read more -->>](#)

## 3D Printing

SignPro Europe December 2019





### Printing

Before printing a 3D model from an STL file, it must be examined for errors. Most CAD applications generate errors in output STL files. The ‘repair’ stage in the STL generation fixes such problems in the original model. STLs produced from a model obtained through 3D scanning tend to contain more of these errors. This is due to the fact that 3D scanning is often based on point to point acquisition so that in most cases 3D reconstruction will include errors. When complete the STL file needs to be processed by software, which converts the model into a series of thin layers and produces a G-code file containing instructions tailored to a specific type of 3D printer (FDM printers). This G-code file can then be printed with 3D printing client software.

### Constructing a model

Constructing a model using contemporary methods can take from several hours to several days, depending on the method used and the size and complexity of the model. Additive systems can typically reduce this time to a few hours, although it varies widely depending on the type of machine used and the size and number of models being produced simultaneously. 3D printers give designers and concept development teams the ability to produce parts and concept models using a desktop size printer.

### 3D printing processes

There are many different branded 3D printing processes. In the schematic representation of the 3D printing technique known as Fused Filament Fabrication a filament of plastic material is fed through a heated moving head that melts, extrudes and deposits it, layer upon layer, in the desired shape. A moving platform

lowers after each layer is deposited. With this kind of technology additional vertical support structures are needed to support overhanging parts.

### Differences between processes

The main differences between processes relate to the way in which layers are deposited to create the parts and in the materials used. Each method has its advantages and drawbacks, which is why some companies offer a choice of powder and polymer for the material used to build the object. Others may use standard, off the shelf business paper as the build material to produce a durable prototype. The main considerations when choosing a machine are generally speed, the cost of the 3D printer and printed prototype, the choice and cost of materials, and colour capabilities. ISO/ASTM52900-15 defines seven Additive Manufacturing (AM) process categories, i.e. binder jetting, directed energy deposition, material extrusion, material jetting, powder bed fusion, sheet lamination and vat photopolymerization.

### Fusing methods

Some methods melt or soften the material to produce the layers. In fused filament fabrication, also known as fused deposition modelling (FDM), the model or part is produced by extruding small beads or streams of material,

which harden immediately to form layers. A filament of thermoplastic, metal wire or other material is fed into an extrusion nozzle head (3D printer extruder), which heats the material and turns the flow on and off. FDM is somewhat restricted in the variation of shapes that can be fabricated. FDM has recently expanded to 3D print directly from pellets to avoid the conversion to filament. This process is referred to as fused particle fabrication (FPF) or fused granular fabrication (FGF) and has the potential to use more recycled materials. Powder bed fusion techniques (PBF) include several processes such as DMLS, SLS, SLM, MJF and EBM. Powder bed fusion processes can be used with an array of materials and their flexibility facilitates geometrically complex structures, making it a go to choice for many 3D printing projects. These techniques include selective laser sintering, with both

metals and polymers, and direct metal laser sintering. Selective laser melting does not use sintering for the fusion of powder granules, but will completely melt the powder using a high-energy laser to create fully dense materials in a layered method that has mechanical properties similar to those of conventionally manufac-

tured metals. With laminated object manufacturing thin layers are cut to shape and joined together. In addition to the above

mentioned methods, HP has developed Multi Jet Fusion (MJF – also refer to the article on HP 3D printing equipment elsewhere in this issue), which is a powder based technique, although no lasers are involved. An inkjet array applies fusing and detailing agents, which are then combined through heating to create a solid layer.

### 3D printing applications

In December 2017 additive manufacturing

systems ranging in price between \$99,000 and \$500,000 were introduced to the market and employed in industries including aerospace, architecture, automotive, medical replacements, etc. General Electric, for example, uses high-end 3D printers to build turbine parts. Many of these systems are used for rapid prototyping, before mass production methods are employed. Higher education has proven to be a major purchaser of desktop and professional 3D printers, which industry experts generally view as a positive indicator. Libraries around the world have also become locations to house smaller 3D printers for educational and community access. Several projects and companies are making efforts to develop affordable 3D printers for home desktop use. In the current scenario 3D printing, or Additive Manufacturing, has been used in the manufacturing, medical, industry and socio cultural sectors, which is helping 3D printing to become a successful commercial technology. More recently, 3D printing has also been used in the humanitarian aid and development sectors to produce a range of medical items, prosthetics, spares and repairs. For example, rapid prototyping was one of the earliest additive variants. Its mission was to reduce the lead time and cost associated with developing prototypes of new parts and devices, which used to be done using subtractive tool room methods such as CNC milling, turning and precision grinding. In the 2010s additive manufacturing became much more prevalent in production. Today sign and (2D) print companies are starting to show an interest in 3D printing.

### Controlling potential hazards

Emissions from fused filament printers may include a large number of ultrafine particles and volatile organic compounds (VOCs). The emission toxicity depends upon the source material due to differences in size, chemical properties and emitted particle quantities. Excessive exposure to VOCs can lead to irritation of the eyes, nose and throat, headaches, loss of coordination and nausea. Some chemical emissions from fused filament printers have also been linked to asthma. Animal studies have shown that, in nano particle size, the carbon nano tubes and carbon nano fibres sometimes used in fused filament printing can cause pulmonary symptoms, including inflammation, granulomas and pulmonary fibrosis.

A National Institute for Occupational Safety and Health (NIOSH) study noted that particle emissions from a fused filament printing can cause pulmonary symptoms, including inflammation, granulomas and pulmonary fibrosis. A National Institute for Occupational Safety and Health (NIOSH) study noted that particle emissions from a fused filament printing can cause pulmonary symptoms, including inflammation, granulomas and pulmonary fibrosis.

their shoes, clothing and body, which may pose a hazard to the general public.

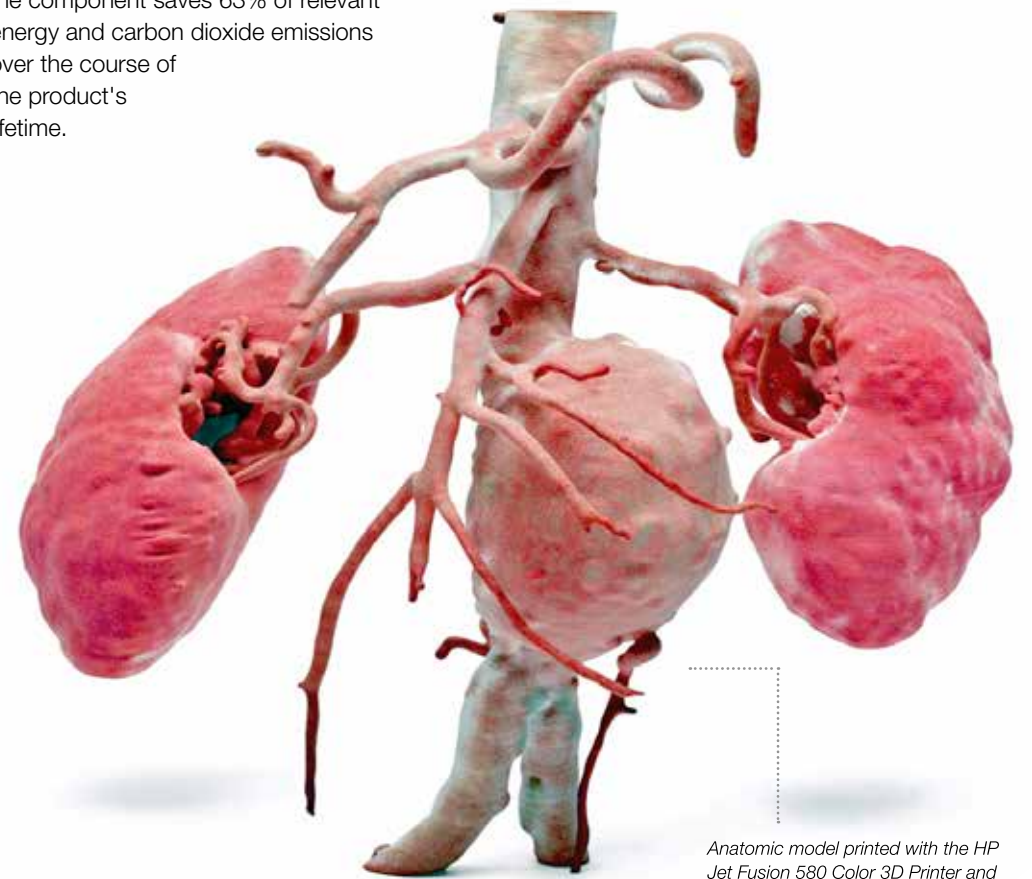
### Environmental change

The expansion of additive manufacturing could have a significant impact on the environment. Contrary to traditional manufacturing, where pieces are cut from larger blocks of material, additive manufacturing creates products layer by layer and prints only relevant parts, wasting much less material and energy in producing the raw materials needed. By making only the bare structural necessities of products, additive manufacturing could also make a significant contribution to light weighting, reducing the energy consumption and greenhouse gas emissions of vehicles and other forms of transport. A case study on an aeroplane component made using additive manufacturing, for example, found that the use of the component saves 63% of relevant energy and carbon dioxide emissions over the course of the product’s lifetime.

3D printed using raw materials, with no cutting down, leftover material or need to reprocess materials. It is, therefore, an additive rather than a subtractive process. Being an additive process, 3D manufacturing reduces material waste, processing time and cuts down on equipment.

### Cost calculation redefined

3D printing undeniably has an impact on the material and production cost in a production environment. The cost of a 3D printer can vary between \$5,000 and \$500,000, depending on the purpose and material requirements. In a huge manufacturing set-up, however, the ROI would certainly make up for the cost. An industry that has fully migrated to 3D printing would hit breakeven point significantly earlier than through the integration of other process technologies.



### Additive Manufacturing

Additive Manufacturing seems to be quite the buzzword in today’s manufacturing industry. The usual manufacturing process is mostly a subtractive process, where the raw material gets wasted and reused over and over again. For example, in a car factory sheet metal is cut and shaped into specific body parts. Leftover metal is later melted down again and formed into metal plates before they can be reused for any other processes. 3D printing on the other hand is a very precise manufacturing process. Whatever is designed is

### What does the future look like?

3D printing has a bright, albeit slightly unpredictable, future nonetheless. Its market share is increasing and more and more production industries are acquiring 3D printing units. Although 3D printing is likely to take over the R&D and maintenance sectors for production, taking over the entire production facility will most certainly take some time yet. •



## INTRODUCING CALDERA'S NEW RIP SOFTWARE VERSION!

# CalderaRIP v13

### New features:

- Advanced **Print&Cut mirror image Workflow**
- **Tile Order Management**
- **Enhanced Job Dashboard**
- **Customizable production Annotation**
- **Alpha to Spot channel conversion**



### COME VISIT US!

C!Print - Lyon Feb 4-6, 2020 | FESPA - Madrid Mar 24-27, 2020 | ISA - Orlando Apr 2-4, 2020  
DRUPA - Dusseldorf Jun 16-26, 2020 | Printing United - Atlanta Oct 21-23, 2020

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



4\_5\_6 FEB.  
2020 | LYON

IMAGE  
PERSONALISATION  
DIGITAL

**C!PRINT LYON:  
ENTER INTO  
ALL THE DIMENSIONS  
OF PRINT**

edition  
**8**

**250  
EXHIBITORS**  
All the latest printing  
and personalisation  
solutions

At the same  
dates and  
place as



**656** INFOPRO event

Get your free badge  
on [www.salon-cprint.com](http://www.salon-cprint.com)  
with the invitation code :  
**P-SIGNPCPL20**

Disruptive 3D printing technology heralds a new era of manufacturing

# HP Multi Jet Fusion technology

By Ton Rombout

HP Launches Multi-Jet-Fusion-3D-Printers.



**The three-dimensional printing of useful (or not so useful) objects and machine parts is now becoming a reality. 3D printing makes it possible to produce short run, or one of a kind, components quickly and cost effectively.**

HP's development of HP Multi Jet Fusion technology includes new HP Jet Fusion 3D printers such as the HP Multi Jet Fusion 580 and HP Multi Jet Fusion 4200. This also comprises an Open Platform that, according to HP, will revolutionize the design, materials, manufacturing and distribution of 3D parts - driving the digital transformation of manufacturing.

#### Introduction

HP Multi Jet Fusion technology leverages HP's assets in imaging and printing to take

the digital transformation of printing off the page and into a three-dimensional world of highly functional, high value manufactured items.

HP Management credo: "HP Multi Jet Fusion technology facilitates high build quality up to 10 times faster and at the lowest cost relative to competitive 3D printing solutions in the market place today. HP Jet Fusion 3D printers offer users HP's key benefits such as reliability, ease of use, versatility and an end to end digital workflow."

Whereas manufacturing by milling, grinding and cutting removes material from a work piece, additive manufacturing— '3D printing' —is a digital technology that creates objects by selective material addition. This makes each 3D printed part unique in the same way that each page printed by an inkjet or laser printer can have unique content.

100% customized content 'page to page' and 'part to part' is a capability digital technologies bring to 2D and 3D printing.

#### Targets

Key applications suitable for 3D printing include functional and aesthetic machine components, consumer and industrial products manufactured in short runs of typically less than 1000 units, highly customized and high value – possibly one of a kind - items (figurines, scale models of a house, decoration parts), and parts with complex internal and external 3D geometries. So far the adoption of 3D printing has been limited to niche markets and applications, because all of these attributes have not been available from a single technology or 3D printing

Read more -->>

**3D Printing**

SignPro Europe December 2019

35



solution. Until now... HP Multi Jet Fusion technology was conceived to overcome the trade-offs and constraints limiting current 3D technologies. It also has the unique ability to produce parts with controllable physical and functional properties at each point in a part. HP Multi Jet Fusion will accelerate the adoption of 3D manufacturing across a wide range of industries and applications. HP's vision is to revolutionize part design and manufacturing with streamlined workflows and new capabilities for 3D printing.

HP Jet Fusion: how does it work?



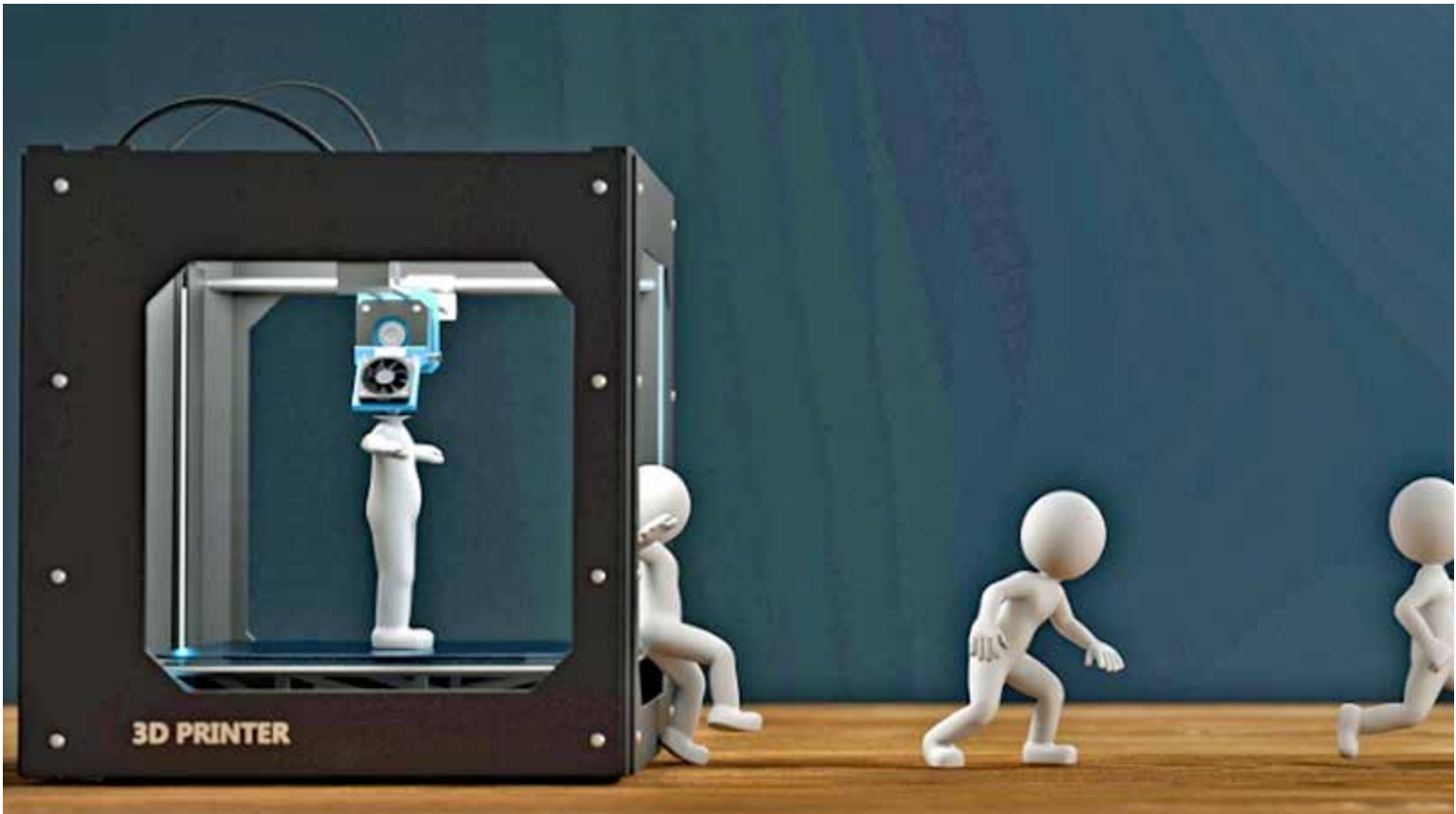
The technology is called HP Multi Fusion-colour.

With an HP Jet Fusion 3D printer a part, or a set of parts, is built up layer by layer over a working area inside an HP Jet Fusion 3D build unit. Once a job is complete, the build unit is rolled into an HP Jet Fusion Processing Station to cool and unpack the parts, and recover and refresh the build material. Whilst these processes are finalising, a build unit that has been refreshed by the HP Jet Fusion Processing Station can be rolled back into the printer for continuous production. The depth of the build unit and working area determine the dimensions of the largest part that can be produced. For specifications on the processing speed and working area of HP

Jet Fusion 3D printers, please refer to the product data sheets at [hp.com/go/3Dprint](http://hp.com/go/3Dprint). HP Multi Jet Fusion technology uses scalable HP thermal inkjet technology to make print bars of different widths by stacking print heads across the width of the scan. Similar to how this capability enables HP to scale up its 2D printing solutions from a desktop to more than 100 inches wide, HP can create a range of HP Jet Fusion 3D printing solutions with different sized working areas. HP print heads can also be stacked along the scan direction to add more nozzles to improve speed, functionality and nozzle redundancy and deliver reliable printing quality.

Building process

The build starts with a thin layer of powdered material deposited across the work area. The material re-coater carriage scans from top to bottom. The printing and fusing carriage with an HP thermal inkjet (print head) array and energy sources then scans from right to left across the work area. The leading energy source preheats the work area immediately before printing to maintain consistent and accurate temperature control as each layer is printed. The print heads now print functional agents in precise locations onto the material to define the part's geometry and its properties. The printing and fusing carriage then returns left to right to fuse the areas that were previously printed. At the end of the scans supply bins refill the re-coater with fresh material and service



From-concept-to-reality, production of 3D Images.

stations can test, clean and service the print heads on the printing and fusing carriage as needed, to ensure reliable operation. After finishing each layer, the surface of the work area retracts about the thickness of a sheet of paper and the material re-coater carriage scans in reverse direction to maintain optimum productivity. The process continues layer by layer until a complete part, or set of parts, is formed in the build unit. With HP Multi Jet Fusion each layer of a part is defined by an area that is fused (or transformed) surrounded by non fused powder. HP 3D high reusability printing materials are designed to minimize powder waste and can be reused in a later build.

HP Multi Jet Fusion versus CNC machining  
The main applications in which HP Multi Jet Fusion could offer better value over CNC machining include:

- 1 Prototypes: a preliminary design of a part or a product that is used in the development cycle to develop and validate a concept until the final design is achieved.
- 2 Internal parts: for some low volume products or machinery creating a mould does not really make economic sense, which is why some parts are manufactured using machining or sheet metal instead of injection moulding. In such cases different types of plastic parts, e.g. brackets or sensor supports that

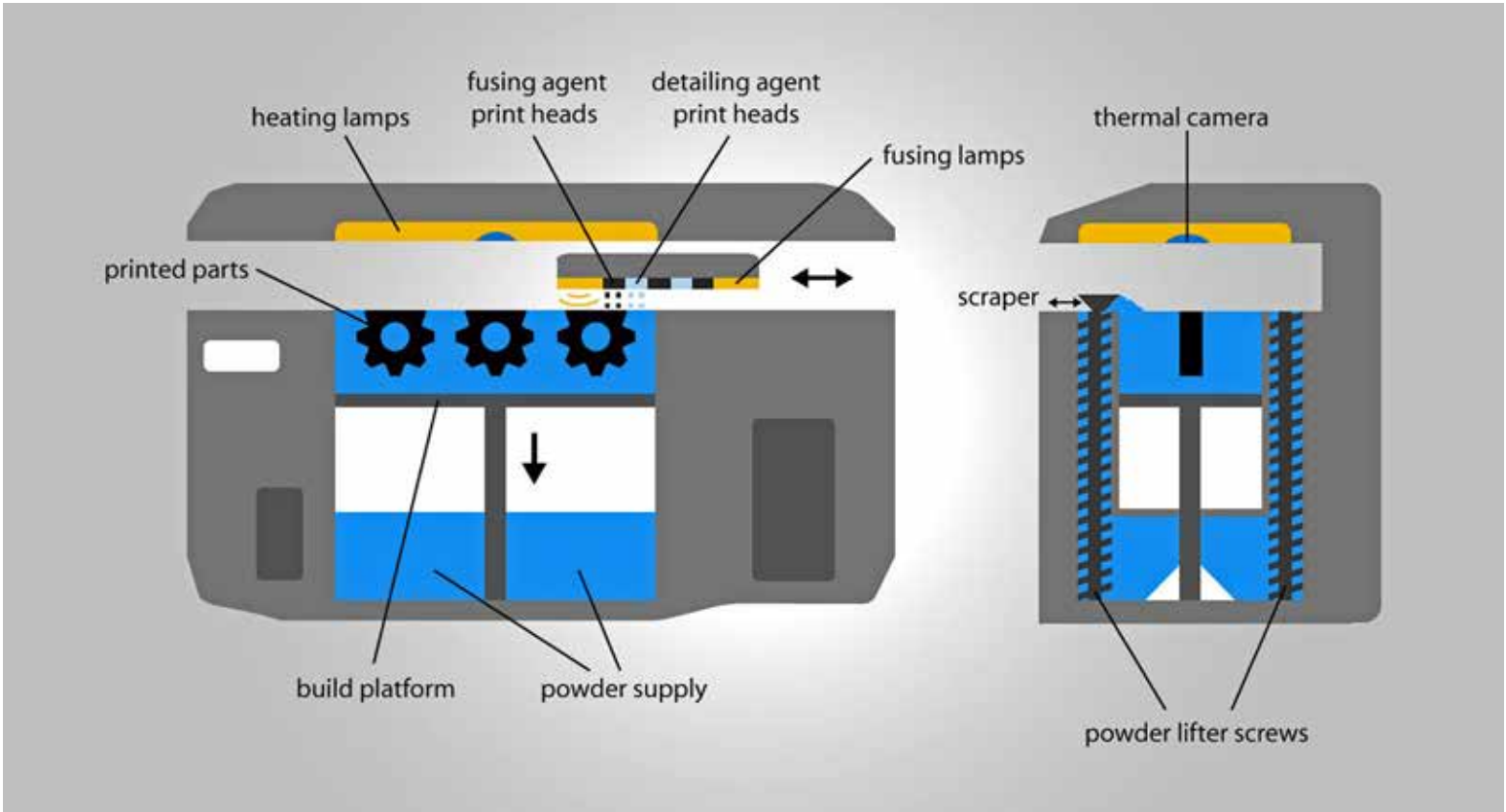
withstand small loads, can be produced using HP Multi Jet Fusion instead of other traditional manufacturing technologies.

- 3 Grippers/end effectors, i.e. the devices at the end of a robotic arm designed to interact with the environment. Depending on the annual volume, geometry and mechanical requirements, grippers can be made using metal (CNC machining or in sheet metal) or plastic (machining or injection moulding).
- 4 Fluid ducts, i.e. part pipes, tubes or canals, used to circulate fluid inside a system. Ducts are usually produced by extrusion, but some smaller ones are made using CNC machining. HP 3D High Reusability PA 12 material has a high chemical compatibility with several fluids, including water, brake fluid and alcohols.
- 5 Manufacturing aids, i.e. any kind of tool that is used in the production process to control quality or assist manufacturing. They facilitate repeatability, accuracy, productivity and inter-changeability throughout the process.

Full colour

With the introduction of the HP Jet Fusion 580 and 380 Colour 3D printers, HP has unleashed the power to innovate in full colour. By combining its colour inkjet technology know-how with its disruptive HP Multi Jet

Fusion technology, HP can now deliver three-dimensional printing in brilliant colour. Similar to how 2D colour printing revolutionized the printing market, HP Jet Fusion colour 3D printing has the potential to dramatically advance the progress of the digital manufacturing revolution and accelerate the widespread adoption of 3D printing. HP Multi Jet Fusion colour technology is designed to overcome trade-offs that have hindered 3D printing in colour for years, including limited part strength and material properties and expensive hardware. Furthermore, with fine detail and high dimensional accuracy for small features, HP Multi Jet Fusion colour parts can accurately portray form, fit and function. Finally, with a cost effective solution even small and medium sized companies can afford to take advantage of this cutting-edge colour solution. •



HP-Multi-Jet-Fusion-3D-Pr-AM-scheme.



11-14 February 2020  
RAI Amsterdam, NL

## CONNECT WITH THE DIGITAL SIGNAGE WORLD

You'll find a wealth of smart display solutions at ISE

### DISCOVER

Meet the world's leading innovators and solutions providers in the Digital Signage and DoOH Technology Zone

### EXPERIENCE

Be inspired by industry insights at our conferences, keynotes, presentations and masterclasses

### NETWORK

Join the conversation where the global systems integration market comes together

integrated  
systems  
europe

MAKING DEEPER  
CONNECTIONS

REGISTER NOW

11-14 February 2020  
RAI Amsterdam, NL

A JOINT VENTURE  
PARTNERSHIP OF

AVIXA

CEDIA

Diving deeper into the world of 3D Printing

# A visit to AnnieShape

By Ton Rombout



Teun Brookhuis amongst his 3D equipment.

**In the woods and meadows on the outskirts of Enschede, a city in the Netherlands near its eastern border with Germany, you'll find AnnieShape.**

I already met Teun Brookhuis, one of the three company owners, previously during an open house at MimakiEurope (near Amsterdam), where the latter was showcasing a new full colour 3D printer (there's another short article on this subject elsewhere in this issue of SignPro Europe). Reason to set up an appointment for a few weeks later.

#### AnnieShape

AnnieShape is a 3D print production company, supplying different services to different customers that include architects and consumers of cell phones. AnnieShape, obviously resembles 'AnyShape', pointing to

the fact that this company is able to print many different things in 3D, such as scale models of houses or cell phone covers. It also operates differently from other companies working in the same area. 'Annie' stands for 'we are here to help you understand what we do and how we can help you'.

#### Three enthusiastic young people

Teun: "AnnieShape is a young, vibrant company run by three committed young people, who all attended higher education courses at Saxion in Enschede, including mechatronics (Teun's preferred choice - a combination of mechanical, software and electrical engineering), applied psychology and mechanical engineering, and who were looking for a challenge in the 3D printing world. 3D print develops at a fast pace and we were eager to participate in this process. Our name

stands for 'any shape' and we aim to demonstrate that almost anything is possible with 3D printing. We were all educated, acquiring different technical skills, at universities in and around Enschede. It is the combination of these skills that is important."

#### Extensive range of activities

Looking at the range of activities the company is currently involved in, I noticed lamps, figurines, houses, 3D on textile prints and cell phone covers. Teun suggested we look at three of them in more detail. "The first and perhaps most important at the moment is 3D printing of scale models of buildings. We have developed a technique that enables us to easily convert digital architectural drawings into 3D printable files. The step we

Read more -->>

3D Printing

SignPro Europe December 2019



have added to make this even more interesting is to convert textures to 3D. Whereas in previous models the texture was glued/printed on, we can now produce a truly tangible effect. Using a 3D printer we can process the smallest detail in the models, producing a true image that makes our models unique. The use of a scale model enhances the customer/buyer experience and gives customers a better idea of what a house they bought or are going to buy will actually look like. We also offer a 'floor inlet' option, which allows the customer to remove any floor from the model home to view the layout and placement of, for example, the bathroom and stairs on each layer."

**Printing 3D on fabrics**

Teun: "The second aspect to come to mind when reading your SignPro Europe magazine is that in addition to printing 2D, we can also print 3D on fabric. 3D printing on fabric or parts of it, creates a very interesting effect in terms of how the fabric moves and drops, and this differs for each printed format. For example, printing a lower edge on a curtain can inject an extra accent and make the curtain hang better. This effect is really attractive as a decoration, but it can also be applied to suits or dresses." Teun showed some great examples to highlight what the possibilities are.

**Printing on cell phone covers**

The third branch of 3D printing Teun referred to focuses more directly on the end consumer market, i.e. with 3D printing of cell phone covers. Teun: "Customers can upload their designs online or create a design there and then. The process is in fact similar to that used by other companies that print 2D images on cell phone covers. The main advantage of 3D printing on cell phone covers is that the design is printed in multiple layers, which means it doesn't wear off! And of course it creates an extra special effect. He concluded: "In addition to these

three examples, we can do so much more, particularly because 3D printing offers virtually limitless possibilities."

**Handling the files**

AnnieShape currently operates a minimum of fifteen 3D printers, fourteen so-called open source printers and one large industrial 3D printer. With open source printers you can change or adapt the software by programming it yourself. Teun explained: "We can easily build our own components, similar to what we did when adding the possibility to print textures at the same time as the basic components of a scale model." Looking at the equipment in more detail, Teun explained: "The digital files are descriptions in the so-called Revit file format of Autodesk. When we work with architects, for example, they provide descriptions of the walls and blocks inside a house and we transform these into printable 3D CAD files. To produce a scale model we have to skip more detailed information in these files, such as outlets etc., but retain basic elements such as walls, floors, windows and doors to print the scale models. We do this using 3D modelling software, to keep the parts that need to be printed and convert them into textures for 3D prints." He concluded: "The files created by the architect actually relate to flat surfaces, which we are able to transform into textures."

**Adding colours**

Teun continued: "Adding colours, for instance for windows or doors in a house, is currently possible up to a maximum of five in one layer. These colours comply with the RAL library of colours for painters. In principle one can use more colours, but the best results are achieved with a maximum of five. The filament (material) we use to build up the 3D print is limited because we can add five rolls at a time to 'feed' the 3D printers." The best way to see how the system works is

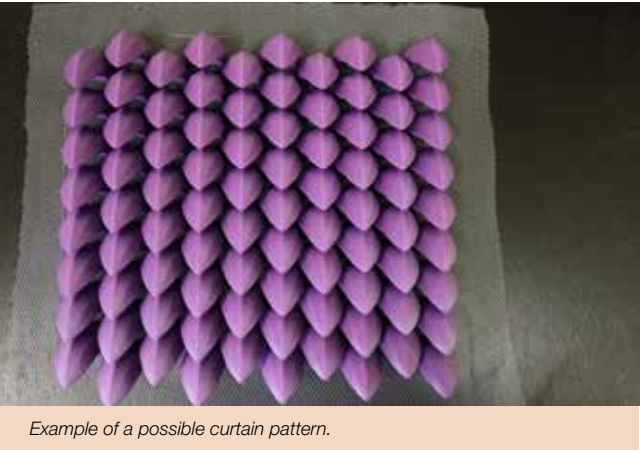


A scale model of a house, with the AnnieShape name on the box.

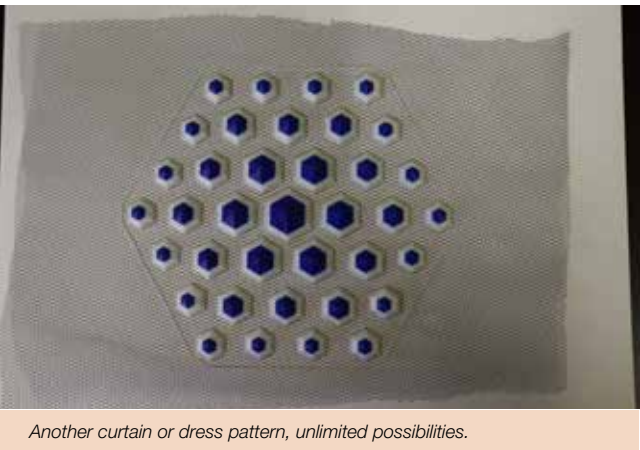
to observe it in a real 3D printing environment. The printers are not particularly expensive, but printing is relatively slow because of the time the printer needs to build up the overall shape, with a number of colours. Teun: "Looking at the Mimaki printer recently and what a user is doing printing figurines for Madurodam, for example, in full colour using this printer, we need to bear in mind that this is a printer costing approximately 200,000 euro. We have fifteen printers that cost a bit more than 20,000 euro, so we're looking at a very different business model. We can print a scale model of a house in a few hours for between 250 (terraced houses) and 450 (detached houses) euro. Moreover, customers can download our software, e.g. on the architect's website, enabling them to design their own house and then send the design to us for printing."

**Other equipment**

AnnieShape also has equipment to produce its own colours to add to the filament, making the rolls of thread that are the basic coloured filament material for the 3D printers. The company operates one larger 3D 'industrial' printer that works with two colours simultaneously and is much faster. Obviously this printer is more expensive but it can also handle larger objects. Teun concluded: "The possibilities of 3D printing are limitless. I quoted three examples but there are many more. We also produce 3D printed lamps and what about 3D printed wraps for a car or boat, one dimension up from car wrapping? The future is here already." •



Example of a possible curtain pattern.



Another curtain or dress pattern, unlimited possibilities.



From powder to canals to feed de printer with coloured filament.



A scale model ready for the architect to give away when someone had bought the house.



Building blocks for a scale model of a detached villa.



# viscom

europe's trade fair  
for visual communication


**7 – 9 January 2020  
Messe Düsseldorf**


**BOOK YOUR  
TICKET**

Live experience for  
**signmakers  
and digital printers**

[www.viscom-messe.com/signpro](http://www.viscom-messe.com/signpro)

THE WORLD  
OF ADVERTISING  
AND SELLING

 **viscom**



## 3D Open House at Mimaki Europe

# Introduction of full colour 3D printer

By Ton Rombout



Maikel de Wit with a full colour figurine.



The Mimaki 3DUJ-553 retails at approximately 200,000 euro.

**Mimaki Europe recently staged a 3D Open House, a full day programme focused on the possibilities of the newly released Mimaki 3DUJ-553 printer.**

Ronald van den Broek, General Manager Sales at Mimaki, provided attendees with background information on Mimaki and on how 3D printing came about as the next logical step following on from inkjet printing technology.

### Interesting market for growth

He told the audience: "Precision engineering is the key to everything we do and this 3D printer was developed with the same approach in mind. New product development is extremely important at Mimaki; approximately 8% is spent on R&D. The printing technology has been derived from 2D ink jetting, but in this case it involves jetting UV inks to build up objects. The 3D printer can be used with UV sensitive polymers principally in full colour." "The Mimaki 3D printer works with UV-cured polymer resin," Jordi Drieman, 3D specialist at Mimaki, explained. The Mimaki 3DUJ-553 will print photo-realistic colours with a choice of up to 10 million different colours.

### Our 3D markets

Ronald Van den Broek referred to a wide range of potential markets and products, including

scale models, design visualization, less time spent on creating scale models, easy re-editing and re-printing, prototyping, creating detailed models of the final product, faster turnaround times than with conventional 3D printing, tools and equipment design, figurines, medical & educational purposes, etc.

### Marketiger

Marketiger, an early adopter and first user also held a presentation. The Eindhoven based 3D printing company is unique in the Netherlands. It now exclusively prints full colour 3D objects, mostly figurines (statuettes) and models, using the Mimaki 3DUJ-553.

With a background in graphic design, commercial economics and marketing, Maikel de Wit bought his first 3D printer four years ago. He soon became obsessed with its creative possibilities and decided to explore whether he could use his fascination with 3D printing for business purposes. He decided to set up his own company: Marketiger. Initially he worked with regular 3D printers, but he recently came into contact with Mimaki, which had just launched its first 3D printer. Maikel was already familiar with full colour powder-based prints, but found them to be of poor quality and too slow.

"The Mimaki 3DUJ-553 is not only a superb machine, it also prints in millions of colours and



The Madurodam figurines.

with a base material that is way stronger and a lot more colourfast than with my former, smaller 3D printers. It is of course much more expensive, but happily Madurodam became one of our customers and we now print hundreds, even thousands, of figurines on their behalf. You need to scale up productivity in order to keep track of the costs associated with this kind of machine, but the end result is extremely satisfying." •

## 3D Printing

## GET CONNECTED FROM DESIGN TO FINISH

We guarantee to have the right solution for your large format needs: From designing in 3D to delivering high quality digital finishing.

Integrated solutions for packaging, printing and finishing.



NEW  
Kongsberg  
X Edge



ArtiosCAD  
3D Design



Automation Engine  
Workflow



Share & Approve  
Collaboration



iCut Suite  
Preflight



Kongsberg  
Digital Finishing

[www.esko.com](http://www.esko.com) | [info.eur@esko.com](mailto:info.eur@esko.com)

ESKO\*



WE PROUDLY PRESENT OUR PARTNERS!

Platinum  
Partner



Gold  
Partner



Bronze  
Partner



Steel  
Partner



GREAT OPPORTUNITIES IN ADVERTISING AND EDITORIAL CONTENT!

Call +31 40 293 25 25 or look at [signpro-europe.com/partner](http://signpro-europe.com/partner) package deals!



20<sup>th</sup> Anniversary in Berlin

# IMI Europe 2019

By Sonja Angerer

On the occasion of its 20th anniversary edition, staged 9-10 October, the IMI Europe 2019 Digital Printing Conference moved to a new location at the heart of Berlin. Whilst Extinction Rebellion tried, and failed, to halt the traffic in the German capital, high profile speakers presented new insights into the digital printing industry.

Despite the fact that digital printing considers itself a more sustainable alternative to analogue, a new environmental movement such as this may well have a serious impact on an industry longingly looking back at figures generated in the past.

## Irreversible change

Marco Boer, Vice President of Boston based IT Strategies consultants, set the pace for the 20th anniversary edition of the IMI Europe Digital Printing Conference in the Courtyard by Marriott City Center Berlin. His address, entitled "The irrevocable change in the world of commercial printing", was presented to approximately 60 delegates, who came to Berlin from all corners of the world representing leading global corporations such as Agfa, Fujifilm, Heidelberg, HP, Landa Digital Printing, Océ, Ricoh, Samsung, Sensient, Sun Chemicals and Tetra Pak.

Although Marco's presentation was solely based on US numbers, his address gave the audience pause for thought. The number of print service providers (PSPs) overall (analogue and digital) is shrinking at an alarming rate, i.e. approximately 3% per annum, and digital print PSPs are no longer the exception. Whilst these figures and this outlook match Bernd Zipper's (Zipcon Consulting) findings earlier this year at the Online Print Symposium in Munich, Marco Boer stated that, although Web2Print is often considered a viable future option for the printing industry, in reality electronic communication is going to eat away even more at their run lengths. Nevertheless, Marco Boer pointed out that, contrary to a longstanding belief in the industry, digital printing so commonplace today that even segmentation between digital and analogue PSPs has become pointless, will not



Approximately 60 delegates at the IMI Europe Digital Printing Conference represented global corporations such as Agfa, Fujifilm, Heidelberg, HP, Landa Digital Printing, Océ, Ricoh, Samsung, Sensient, Sun Chemicals and Tetra Pak.

even replace offset in the long term. However, short and medium run offset will remain a target for digital. IT Strategies estimates the global PSP's non-office document revenue between 2016 and 2018 at approximately 20 billion US-\$.

## Overall global growth

In terms of the global digital industrial & production print markets - including 3D, direct to shape digital printing, labels, corrugated, electronics, display graphics and decorative surfaces - consultants estimate a 21% growth rate for the period between 2017 and 2021. Although impressive, this is nowhere near the numbers generated by the industry in previous years. Event organizer and IMI Europe Managing Director, Tim Phillips, mentioned in his brief introduction to the event that "the uptake of industrial inkjet was slower than expected". Still, an increasing number of high profile industry players are including inkjet in their portfolio, usually for sample or short to medium run production.

## An industry networking event

The Berlin Digital Printing Conference was the



Bob Leahey, Director Color Digital Label and Packaging at Keypoint Intelligence / Info Trends, held a presentation on Wide Format Print Trend and Innovations.

last of a number of IMI Europe events to take place at the same venue between 7 and 10 October. With the Inkjet Academy focused on technology for a specialist audience, Market Reports Live and Mergers & Acquisitions were targeted at marketing and management executives. The conference also featured a number of high profile technical, strategic and marketing presentations and hosted panels focused on industry topics - including a packaging panel and a preview of Drupa 2020 presented by Heidelberg Druckmaschinen's



IMI Europe announced several new conferences and classes.

Senior Vice President, Montserrat Peidro-Insa. Marcus Timson (ex-Fespa, Imprint show and now director of FM Future) hosted a panel looking at the future of industrial inkjet and gave a presentation on the same topic. Providing a condensed overview of developments in the inkjet markets from both a technological and strategic perspective, regular refreshment breaks and the evening reception on 9 October were also ideal opportunities for networking at senior level.



Senior Vice President at Heidelberger Druckmaschinen, Montserrat Peidro-Insa (left), hosted a packaging panel and a review of Drupa 2020.

## PSP management expertise

Whilst some of the more technology based presentations, such as the one by Mike Willis (Pivotal Resources) on "The world of inkjet innovation as seen from patents", might be less interesting to PSP marketing, development and management executives, some strategic insights definitely provided valuable business input for this customer base. "Wide Format Print Trend and Innovations", for example, presented by Bob Leahey, Director Color Digital Label and Packaging at Keypoint Intelligence / Info Trends, provided eagerly awaited numbers with respect to global wide format print volumes. He estimates that by 2023 they will have reached 3.1 billion m<sup>2</sup> worldwide, rising by 1.1% year on year from 2019. Whereas solvent inks are already facing a steep decline resulting in -28.8% by 2023, sublimation and latex inks will see a moderate increase, whilst UV-curing inks will take on the lion's share of print runs, increasing by 7.1% by 2023. Interestingly, the share of aqueous ink production in wide format print production run lengths is almost stagnant, growing only 1.3%, despite recent efforts to introduce them for production print.

## Worldwide 2018 FESPA print census

Bob Leahey presented more figures from the worldwide 2018 FESPA print census. Although they should be taken with a pinch of salt, because the total number of 1,405 is relatively

small and focused on PSPs from the UK, Greece, Mexico and South Africa where the largest overall numbers of entries originate from, some interesting facts and figures were revealed. Two thirds of sign and display graphics businesses already own wide format printing equipment and more than 55% have already invested in fabric printers. Packaging still seems to have some interesting niches, as only a third of the companies that responded to the 2018 FESPA print census own this kind of equipment. However, 43% do not plan to invest in this particular segment in future, which might point to the fact that, whilst packaging may be a promising line of business, the wide format industry has not yet fully embraced it or found a revenue stream within it. Leahey's presentation also focused on eco friendly prints. A good 30% of the 2018 FESPA print census companies reported that their customers do not actively look for sustainable prints, i.e. only 69 % enquired about sustainable production and goods, or both. It is highly likely that in the light of the 'Fridays for Future and Extension Rebellion' protests this number is set to grow considerably.

## Conclusion

As was to be expected from the high profile of presenters at the IMI Europe Digital Printing Conference, the convention provided valuable insights into the latest industry trends. Unfortu-



Marcus Timson (ex-Fespa, Imprint show and now Director of FM Future) hosted a panel looking at the future of industrial inkjet and gave a presentation on the same topic classes.



A small desktop lobby presentation for delegates to look at during networking breaks.

nately PSPs were almost complete absent. The overall picture in Berlin was that of a mature industry, struggling slightly more than expected to get a rapid and secure foothold in identified growth areas such as home décor, industrial print and packaging. Although it may take somewhat longer than expected, we should not forget that today's new environmental movement may well have some, as yet unforeseeable, impact on the printing and packaging industry as a whole. •



“Creativity and know-how: our main assets”

# ATC leading sponsor of the 2019 Lyons BCA

By Martin Kugler

The 15th Biennale of Contemporary Art (BCA) is a major event in Lyons' cultural calendar and for the 2019 edition the ATC Group is once again one of the main sponsors, with support from Hexis as one of its principal suppliers of self-adhesive media.

ATC has been a partner of the Biennale for many years, producing signage, graphics and several unique works of art.

## Environmental concerns

Operating in an increasingly competitive market, the company experienced two major turning points. Firstly, the traditional craft of sign makers was profoundly changing as a result of the industry diversifying into digital printing with many new materials. Christophe Aussenac was quick to recognise the emergence of environmental concerns and started his “eco-attitude” project in 2008 to distinguish his business from competitors operating in the same field. He managed to recruit other large businesses, clients and same-minded companies, inviting them to join him in regular but informal eco-attitude coffee breaks. These meetings, which attracted prominent names such as Yves Rocher, La Poste and Generali, focused on ways of dealing with, and communicating, environmental issues. An immediate impact at ATC was the conversion to vegetable based inks on its Vutek printers.

## ISO 14001 certification

ATC is proud of the ISO 14001 certification obtained in 2013 for its environmental management system, covering production, administration and installation at their sites in Lyons and Paris. ATC certification under ISO 14001 encompasses a comprehensive range of environmental measures focusing on five areas:

- full compliance with environmental laws and regulations;
- control and reduction of energy consumption;
- educating and making staff, suppliers and customers aware of environmental objectives;



Christophe Aussenac and Robert Combes, associate directors at ATC.



Biennale tram stop made by ATC.

- reducing and correctly recycling waste materials;
- constantly innovating and investing in new technologies.

## Second strategic turning point

The second strategic turning point came in 2015 following profound changes in the sign

making and digital printing industries. The availability of low cost printing machines and new performing printing technologies attracted many new entrants to the market and led to a gradual fragmentation of the industry into smaller, low overhead businesses serving essentially local clients. ATC responded by professionalising its activities and making it an



Biennale building wrap made with Hexis vinyl by ATC.



Vinyl wall covering made by ATC.

all-inclusive offer to generate added value for both the company and its clients. The offer comprises:

- consultancy services
- creative design
- full installation
- comprehensive after sales service
- systematic quality control.

## Creative design department

The introduction of a completely new creative design department led to the recruitment of four product and graphic designers and the implementation of what ATC refers to as “integrated communication”: personalised imaginative designs for signage and visual brand communication.

## Re-board panels

In addition to the use of two Vutek large format UV printers (3.20 m wide flat bed and 5 m wide roll-to-roll) combined with Zünd cutting machines, ATC has also perfected the use of re-board panels. Re-board is a highly rigid paper board with a fluted core. It is lightweight, but at the same time exceptionally strong. It can be printed and is easily cut to any shape, making it extremely versatile and ideal for use in sign and display projects. Having integrated the re-board concept into its manufacturing process using large format printers and cutting machines, ATC masters a wide range of applications from signage and retail displays to interior design and exhibition stand building.

## Lyons Biennale of Contemporary Art

ATC's sponsorship of the Lyons Biennale of Contemporary Art dates back some 20 years. The idea of combining and producing both utilitarian signage and works of art is a challenge that ATC managed to take on with competence and enthusiasm. Applications include bus stops, directional panels and



VUTEK 5r inkjet UV at ATC.

signage, as well as works of art conceived and produced in close cooperation with the artist. The design stage incorporates the choice of materials, colour schemes and finishing, combined with an abundant use of re-board elements and Hexis self-adhesive vinyl films.

## Hexis as a specialist media provider

Being a specialist manufacturer, Hexis was able to provide plotter and digital media for target surfaces considered extremely difficult to achieve, such as heavily curved substrates or substrates with a distinctive surface grain. These high performance media use extremely conformable cast PVC films associated with reinforced adhesives. Hexis has been a supplier of ATC for more than 10 years and co-sponsored the Biennale, supplying the material used in signage and wall graphics.

## Prominent presence in the sign business

Today ATC is still run by its founding partners and associate directors, Christophe Aussenac and Robert Combes. Besides his management role at ATC, Christophe Aussenac is also an active member of Fespa. He is president of FESPA France and joined the board of Fespa International in 2014. He was elected vice president in 2017 and appointed president elect of Fespa International in 2019, with a view to taking office at the Fespa exhibition in Madrid in 2020. The ATC Group, which employs 65 people at their three sites in Lyons, Paris and Annecy, generates an annual turnover in excess of 10 million euro. •

[www.atc-group.com](http://www.atc-group.com)  
[www.hexis-graphcis.com](http://www.hexis-graphcis.com)  
[www.biennaledelyon.com](http://www.biennaledelyon.com)



# J&A Imaging Station acquires a Durst Rho 512R LED

By Ton Rombout



Work made by J and A Imaging.

**After finalising the first sale of its Durst Rho 512R LED production printer in the region, Durst has set out plans to strengthen its presence in the Asian market.**

J&A Imaging Station Sdn Bhd in Petaling Jaya Selangor, Malaysia, invested in the machine that will now support the Durst P10 320R device, which the company purchased 6 years ago.

## J&A Imaging Station

The high-end printing company, which is celebrating its 20th anniversary this year, produces a wide range of large format print work with a particular focus on soft signage. It had been seeking a new solution to help satisfy the increasing demand from retail brand clients. An important factor in the company's second investment in Durst technology is related to the fact that brands are increasingly requiring larger, 5 m wide, retail displays to be printed. Jason Chor, owner of J&A Imaging, stated that this decision will enable the company to produce work between 3 and 5 m that had previously been outsourced in-house. "We are saving considerable amounts by

printing in-house. The quality of the red colours in particular on the Durst 512R LED is amazing. Wider benefits include new opportunities for additional international contracts and partnerships with companies in other countries." He also highlighted another benefit: "In addition to increasing our established customer base in large format printing in Asia, we have been very active in the ceramics field across Vietnam, Malaysia and Korea for more than five years, and in digital label printing for three years."

Durst aims to build on its success in the region. Durst Chief Executive, Christoph Gamper, stated that the sale to J&A Imaging Station had special significance for the manufacturer as it seeks to build on its success in the region. He added: "Five years ago we launched a dedicated subsidiary, Durst Industrial Services Pte. Ltd, where Tomio Kiyose – who formerly worked from our Lienz (Austria) production centre – was promoted to managing director and is now based in Singapore." Tomio Kiyose, the Durst Group Managing Director for South East Asia, commented: "This investment marks a significant milestone for J&A Imaging, which was also the first company in our region to invest in the P10 320R six

years ago. It is another example of how a growing number of companies demanding the very best quality, increasingly rely on Durst to provide the technology to match their exacting requirements." He continued: "We wanted to make our service even better and demonstrate our commitment to our own customer base, which demands high productivity and photo-quality printing. We are involved in high-end printing for brands such as Gucci, Shiseido, Coach, Chanel and the Maxis Telecommunication Company in Malaysia, and our customers trust us to deliver exactly what they want."

## Asia a key market

"Asia is definitely a key target market for us," Christoph Gamper explained. "It is a growth market, particularly in large format printing, with lots of opportunities. Delivering exceptional reliability and quality is the key to success and J&A Imaging is a prime example of a business that needs to produce premium printing for international brands on a day to day basis. Customers have complete confidence in Durst and trust us to deliver what they want." Jason Chor concluded: "We have complete confidence in Durst. It has state-of-the-art equipment and facilities and we get excellent feedback and commitment from their friendly and helpful staff. As long as I am in business I am sure I will remain a loyal customer." •

For further information visit the website [www.jaissb.com](http://www.jaissb.com)



Christophe Gamper: Asia is definitely a key target market for us.

# Debut of P5 350 in North America

By Ton Rombout



Durst RHO 2500 printing system.

**Durst, the manufacturer of advanced digital printing and production technologies, used PRINTING United in Dallas (Texas) in the autumn of 2019 as the launch pad for the new Rho 2500 Series and showed the award winning Durst P5 350 printer for the first time in North America.**

Following on from the Rho 1300 Series, the newly designed Rho 2500 is a versatile modular industrial production printer, which is available in three different versions with upgrades possible at any time. They all come equipped with the new Durst Workflow Print production software and Durst Analytics monitoring tool. The machine was running alongside the Durst P5 350, launched at FESPA, which was also making its North American debut at the show.

## Durst Rho 2500

The Rho 2500's new 8 pl print heads with varidrop printing technology enable a higher

resolution of 1000x800dpi, fine printing quality and excellent sharpness with a productivity of up to 1,200 m<sup>2</sup>/h. Other features include volume production, high speed and a Smart 4 printing mode for the six colour version. The S model starts with six head rows, the next level - the Rho 2500 M - has eight head rows and the Rho 2500 L has 10 head rows. The can all have white. Other options include a stacker for ¾ or full automation, a dual track printing mode, a safe ink refill identification system and camera control on the outside of the printer whilst operating the monitor screen.

## Significant demand

Tim Saur, Managing Director of Durst North America, commented: "Order volumes have been exceptionally large this year, which meant that we had live systems running at PRINTING United. The P5 is an outstanding new technology platform and the launch of the Rho 2500 industrial production printer provides us with a modular system that can be upgraded at any time. All our machines benefit from the

comprehensive Durst software solutions, maximizing the potential of process automation and digitization." Christian Harder, Durst Global Sales Director Large Format Printing, explained: "PRINTING United was another perfect platform to showcase our world class production, software and service capabilities. North America is an extremely important market for us with abundant growth potential. The show's objective - to focus on the opportunities that convergence presents – resonated perfectly with our own business philosophy. We were really pleased with the exhibition." •



## Automated cutting with Elitron digital

# Adara Pakkaus expands into POP

By Ton Rombout

**Finland's third largest corrugated board manufacturer recently decided to digitalise its printing and die-cutting processes with the HP Scitex 15500 and Elitron Kombo TAV. Finland, a Scandinavian land of forests, is at the heart of the European paper industry in which prominent groups such as UPM and Metsä Board play a crucial role.**

However, the forestry and paper industry has a complex supply chain, involving many skills and industrial activities. The corrugated cardboard sector in particular is becoming especially lively and innovative. Adara Pakkaus is a spin-off of a leading paper mill and has been based in the town of Valkeakoski, 150 km north of Helsinki, since 1933.

### Flexibility a key ingredient

Adara is the third largest corrugated producer in Finland and the largest independent operator. Lari Seppälä, the group's printing manager, took us on a tour of its production facilities. The Valkeakoski site produces 60 million m<sup>2</sup> of corrugated cardboard per annum, employs a team of 140 people and generates a turnover of more than 40 million euro. The corrugator, which is capable of producing a wide range of products, supplies sheets for the entire plant, including the digital department. Even though it is connected to the main site, it is conceived as a completely autonomous unit. It has operated an HP Scitex machine, driven by Caldera software, and an Elitron Kombo TAV since 2016.

### Diverse customer base

Adara supplies different types of customers in a variety of markets, from industrial to pharmaceutical, logistics and the paper industry. The company serves the most important Finnish food groups, including breweries and numerous operators in the fruit and vegetable sector. Although a large share of the company's output involves unprinted standard cardboard boxes and secondary packaging,

the production of quality packaging and displays is growing. Point of sale materials, given their high graphic content, are almost all digitally printed and die-cut. "If quality demands it, we can also print thousands of sheets with the HP Scitex," Lari Seppälä explained. "Thanks to the automation of the cutting process introduced by the Kombo TAV and the possibility of working without an operator, we can also be competitive when a large number of pieces per order are required." One of the advantages of digital cutting is the absence of a physical die, combined with the ability to start production of the first piece in just a few clicks.



An operator picks up pallets of sheets die-cut with the Elitron Kombo TAV, ready for subsequent bonding, packaging and shipping.



Lari Seppälä, the group's printing manager

### Reliability and repeatability

As far as Adara is concerned, corrugated packaging and displays are industrial products that need to be produced quickly, cost-effectively and repeatedly. The fact that Finland is faced with extremely cold winters and a humidity level that can vary widely is quite a challenge, which is why the company maintains a controlled temperature and humidity environment. "The evenness of the carton is an important requirement when it comes to avoiding production problems, particularly in the digital printing process," Lari Seppälä continued. "We can actually use the same type and quality of cardboard on all converting lines."

### Dedicated warehouse

In order to deliver on demand processing in good time, Adara's digital department has its own dedicated warehouse, containing any type of sheet up to a maximum size of 3,200 x 1,600 mm, in various types and thicknesses. "Our relationship with Elitron and our suppliers is based on mutual exchange, cooperation and joint validation," Lari Seppälä concluded. "It gives us a competitive edge and enables us to outline technological and competitive scenarios for the future." •

### Adara Pakkaus

Adara is no different from other European corrugated producers. Yet here the production of premium printed materials has suddenly accelerated to the point that the Adara Display brand is now a force to be reckoned with in the great production ecosystem. That is why Adara recently opted to set up a new digital printing department, based on HP's inkjet printing technology and Elitron's industrial digital cutting in particular.

## Fully upgradeable quality and reliability

# New Kongsberg X Edge delivers even more functionality

By Ton Rombout



The Kongsberg X Edge from the front side.



The Kongsberg X Edge from the back side.

**Esko, the global supplier of integrated hardware and software solutions for leading display, signage and packaging customers, has extended its Kongsberg digital cutting table range with the Kongsberg X Edge - a completely new, fully upgradeable table design offering a perfect combination of productivity, flexibility and best in class reliability.**

Delivering speeds of 30 m/min with acceleration of 0.3G and able to handle the full spectrum of display, signage and packaging materials - from kiss cutting vinyl to heavy duty milling and every job in between - the Kongsberg X Edge means no longer being forced to compromise and choose between speed, precision or production power.

### Integrated ecosystem

Russell Weller, Product Manager at Esko, stated that as a further addition to the integrated ecosystem of award-winning Esko software and hardware solutions, the new Kongsberg X Edge combined the tried and tested heritage of the Kongsberg range with next generation upgradeability. "The Kongsberg X Edge has been specifically designed to ensure there is no sacrifice in machine configuration, with all the options you

would expect from the Kongsberg X Series available," Russell explained. "The difference is that as your company grows, the Kongsberg X Edge evolves with you. It can easily be upgraded in terms of both speed and acceleration to ensure that it keeps up with your business demands."

### Outstanding cutting quality

He continued: "The Kongsberg X Edge delivers this high production speed and outstanding cutting quality at a remarkable price. Moreover, its design avoids the impact of costly reinvestment when a business expands, not only delivering exceptional cutting quality but also unlocking future production flexibility and profitability." Incredibly versatile, the Kongsberg X Edge is as suitable for short run production, sample making and other packaging related jobs, as it is for signage and display production. "This new innovation has been developed to ensure great quality for any job or application," Russell added. "The extra fast tool loading, auto recognition and calibration features are ideal for short run jobs, with the added flexibility of an optional conveyor system available to support automated board and roll feeding when required."

### A variety of milling options

Delivering a variety of milling options to match throughput requirements, the Kongsberg X Edge also features perfect print-to-cut registration, even in cases of heavy distortion and jobs longer than the table. "The Kongsberg X Edge is the perfect tool for cutting flexo plates and patches, operating in tandem, both physically and digitally, with existing imaging devices," Russell told us. "Easily fitting into a truly tailored workflow, it can also be equipped to produce dedicated shipping boxes for finished plates."

The engineering of the rack and pinion drive, the construction of the tabletop and the quality of the motors and traverse all combine to ensure that the table provides the greatest cutting accuracy and consistency.

### Optimized from start to finish

"Esko connects hardware and software to streamline your production from start to finish, from design to shipping," Russell explained. "Having secured a reputation for delivering speed, precision and production power through superior engineering and build quality, Esko now brings next generation innovation to its portfolio with the Kongsberg X Edge." The Kongsberg X Edge is now available on the global market. For more information about the table and its complementary tools and software, please visit [www.esko.com/kongsberg-x-edge](http://www.esko.com/kongsberg-x-edge) •



DESIGNED FOR  
QUALITY  
AT THE  
BEST PRICE

Creating print jobs conforming to PSD

# Nozomi C18000 awarded Fogra Certification

By Ton Rombout

TEST

Nozomi  
C18000



SWJ-320EA

Meet Mimaki's innovative,  
cost-effective large format  
solvent printer –  
the new SWJ-320EA

Superior print quality, fast  
printing speeds and all at an  
accessible price – everything  
you need to win in the most  
competitive markets!

JOIN THE **EXPERIENCE**

**Mimaki**  
www.mimakieurope.com



Nozomi installation at Hinojosa in Spain.

**Dr Andreas Kraushaar, head of the prepress department at the Fogra Research Institute for Media Technologies in Germany, recently certified the Electronics For Imaging Inc. EFI Nozomi C18000 single-pass corrugated printer as Fogra compliant.**

The ultra high-speed, single pass, direct to board digital printer is the first of its kind to pass the Fogra Process Standard Digital Print Check. What does this mean?

**Industrial standardised procedure**  
EFI-Fogra DigitalPrint Expert (DPE) Programme

certification enables specialist dealers and consultants to set up standardized systems using Fiery Digital Front Ends in order to produce fogra•cert compliant proofs, validation prints and prints compliant with Fogra Process Standard Digital, thus guaranteeing superior quality and reliability. If requested, a dealer can also submit a reference proof or validation print to acquire fogra•cert 'Contract Proof Creation' or 'Validation Print Creation'. DPEs can also perform an audit and guide printing companies through the Process Standard Digital certification procedure.

#### EFI-Fogra DPE initiative

The EFI-Fogra DPE initiative was developed by EFI together with Fogra, the leading standardization body in the German-speaking and European printing industry, to keep dealers and consultants up to date and help them provide optimum support to printing houses and prepress businesses. Process Standard Digital (PSD), a concept originally developed by Fogra, is an industrial standardised procedure for the creation of digital print products.

Read more -->>

**Test**

SignPro Europe December 2019



### Benefits

With a PSD certificate, packaging converters and corrugated display manufacturers using the Nozomi C18000 printer have additional, proven verification of the quality and reliability of their digital production offering. Successful implementation of PSD can also help Nozomi C18000 users - which include many of the world's leading packaging companies - reduce manufacturing costs and waste, deliver better quality and time performance and improved overall sustainability in corrugated production.

Prepress, printing and end customer benefits

- Tells companies that a certified operator has demonstrable skills in the calibration and installation of Fiery DFEs.
- Simplifies the proofing/validation of prints and the Process Standard Digital printing process for businesses - saving time, money and resources.
- Offers providers a guarantee that they are working with a first class system.
- Delivers high quality prints to end customers.

### Tested in Spain

Andreas Kraushaar and his research team tested the LED inkjet corrugated printer last summer at the EFI Industrial Printing facilities in Almassora (Spain), verifying the Nozomi C18000 printer's output process control, colour fidelity and workflow. The Fogra team

tested against the FOGRA39 standard and the Idealliance (US industry association) GRACoL/SWOP standard and concluded that the printer successfully passed all the tests and requirements.

"EFI has been an active member of Fogra for many years and contributed to the development of the Fogra Process Standard Digital," Andreas Kraushaar explained. "That's why I am not at all surprised to see the Nozomi C18000 passing the Print Check Criteria for both the Fogra and GRACoL standards." Knowing the criteria beforehand is, of course, a particular advantage when it comes to complying with all the requirements of the standard.

### Creating print jobs that comply with PSD

The PSD Print Check is part of the ISO/TS 15311-2 based Fogra Process Standard Digital. This specification enables companies in the print and media industry to demonstrate their ability to create print jobs conforming to PSD. At EFI's facility in Spain Fogra reviewed a typical print job for colour consistency, uniformity, detail sharpness and print run stability, on the basis of the requirements stipulated by PSD.

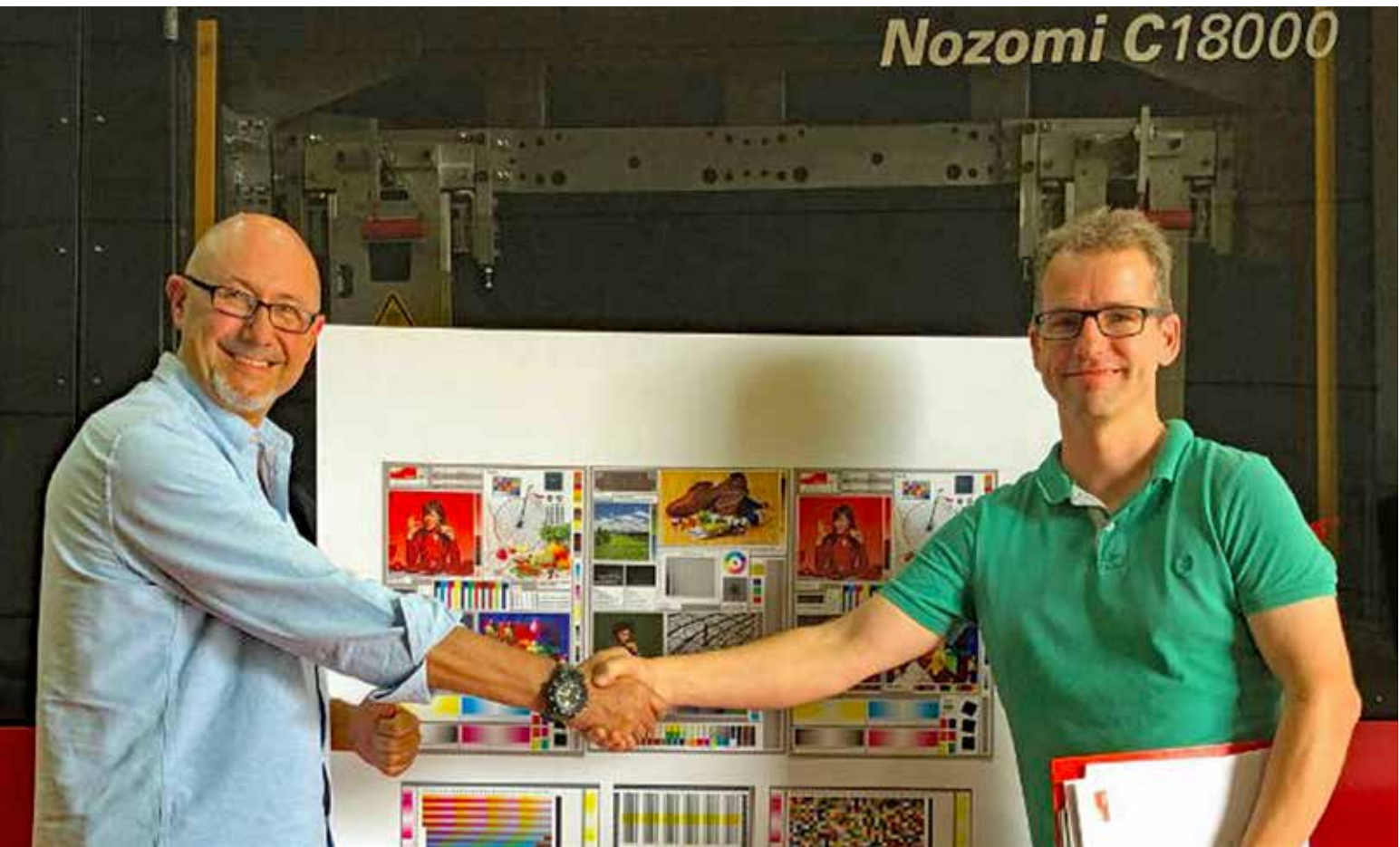
### Nozomi C18000 delivers superior quality

"Fogra's certification of the Nozomi C18000 printer's output quality once again highlights EFI's commitment to delivering superior quality

- which gives customers confidence in their day to day operations," José Luis Ramón Moreno, Vice President and General Manager EFI Industrial Printing, commented. "This certificate guarantees that the output of the Nozomi C18000 printer meets customer expectations in terms of gamut, fidelity, precision and repeatability - throughout the corrugated packaging and display industry." •

### Fogra leads the way

Fogra, a leading print research institute that has been serving the print and media industry worldwide since 1951, uniquely features a combination of applied research and qualifying software, hardware and "brainware". The organisation is also an active member of the ISO 130 technical committee.



EFI-Nozomi C18000 Certification.



THE REVOLUTIONARY R SERIES

## TRANSFORM ALMOST ANY SURFACE



HP's first rigid Latex printer, the revolutionary R series, can open your business to a whole new world of creative opportunities and offerings.

In your world, staying ahead means taking advantage of new technology and innovation. It's time your business moves to smarter printing - one able to print on rigid and flexible substrates - with water-based inks. Enter HP's revolutionary R series, HP's first rigid Latex printer. The HP Latex R series offers your customers the possibility to showcase their product or service in unique and inventive ways with the glossiest white<sup>1</sup> and the most vibrant colors<sup>2</sup> on rigid substrates. With a trusted brand like HP, your business can open a whole new world of opportunities.

<sup>1</sup> Glossiest white on transparent and colored media. Glossiest white based on internal HP testing in January, 2018 compared to the HP Scitex FB750/FB550 Printer using UV-curable ink technology. White ink measured for the level of gloss at 60 degrees on a rigid material (acrylic). Tested using Glossmeter BYK micro-TRI-gloss (20°, 60°, 85°), compatible with ISO 2813 and ASTM D523 relative to glossiness measure. White ink capability may be optional, requiring purchase of the HP White Ink Option Kit.

<sup>2</sup> Most vibrant colors based on internal HP testing, January 2018 compared to leading competitive printers under \$350,000 USD. Tested in High Quality print mode on rigid (white acrylic 12-pass, 6-color, 120%). Internal HP testing with HP GamutViewer, Alpha Shapes=50.000



# HEXIS offers more than just vehicle wraps!

GRAPHICS DIVISION.

HEXIS is expanding its product range to help you take your interior and exterior decoration projects even further.

The French company is known for its high-quality cast films for vehicle wraps (SKINTAC HX45000/HX30000/HX20000), its plotter vinyl for signs and banners signage (SUPTAC, ECOTAC, MICROTAC) and its range of films for wide-format printing (SKINTAC THE190EVO, HX190, HX200, V3000...), along with related laminates.

But HEXIS also offers a wide range of decoration products, including films for glass, floors and interior and exterior walls, to support your industrial and architectural projects.

Visit: [www.hexis-graphics.com/hexperience](http://www.hexis-graphics.com/hexperience)



HEXIS S.A. - Z.I. Horizons Sud - CS970003 - 34118 FRONTIGNAN CEDEX - FRANCE  
Tel. 04 67 18 08 88 - Fax 04 67 48 38 79 - [www.hexis-graphics.com](http://www.hexis-graphics.com)

